Local Agency Formation Commission
OF KINGS COUNTY

CITY MEMBERS	COUNTY MEMBERS	PUBLIC MEMBERS
Patricia Matthews	Joe Neves	Cheyne Strawn
Alvaro Preciado	Doug Verboon	Robert Ramos, Alternate
Kimber Regan, Alternate	Richard Valle, Alternate	

Chuck Kinney, Executive Officer, (559) 852-2674

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Community Development Agency at (559) 852- 2680 by 4:00 p.m. on the Monday prior to this meeting.

Agenda backup information and any public records provided to the Commission after the posting of the agenda for this meeting will be available for public review at the Kings County Community Development Agency, 1400 W. Lacey Blvd., Hanford, CA 93230.

AGENDA

REGULAR MEETING:
Wednesday, August 27, 2025 at 1:00 P.M.

The Local Agency Formation Commission of Kings County Special Meeting will be held in the Board of Supervisors Chambers in the Administration Building (Bldg. No. 1) of the Kings County Government Center located at 1400 West Lacey Blvd., Hanford, CA.

Members of the public who wish to comment may submit written comments on any matter within LAFCO's subject matter jurisdiction, regardless of whether it is on the agenda for Commission consideration or action, and those comments will be entered into the administrative record of the meeting. To submit written comments by U.S. Mail or email for inclusion in the meeting record, they must be received by the Secretary of LAFCO no later than 8:00 a.m. on the morning of the noticed meeting. To submit written comments by email, please forward them to Maryann.Sanchez@co.kings.ca.us. To submit such comments by U.S. Mail, please forward them to: Kings LAFCO, 1400 W. Lacey Blvd. Building #6, Hanford, CA 93230.

I. CALL MEETING TO ORDER – Chairman

A. Unscheduled Appearances:
Any person may address the Commission on any subject matter within the jurisdiction or responsibility of the Commission at the beginning of the meeting; or may elect to address the Commission on any agenda item at the time the item is called by the Chair, but before the matter is acted upon by the Commission. Unscheduled comments will be limited to five minutes.

B. Approval of June 25, 2025 Minutes

II. OLD BUSINESS - None

III. NEW BUSINESS

A. LAFCo Case No. 25-02 (City of Hanford Annexation No. 161)
1) **Executive Officer's Report**
2) **Public Hearing**
3) **Consideration of LAFCo Resolution No. 25-06**

B. 2025 CALAFCO Annual Conference
1) **Executive Officer's Report**
2) **Consider authorization to attend and designate a voting delegate.**

IV. LEGISLATION

None

V. MISCELLANEOUS

A. Correspondence –
B. Items from the Commission -
C. Staff Comments –

VII. ADJOURNMENT

A. Next Scheduled Meeting – September 24, 2025 at 1:00 p.m.

LOCAL AGENCY FORMATION COMMISSION
MINUTES

CITY MEMBERS	COUNTY MEMBERS	PUBLIC MEMBERS
Patricia Matthews	Joe Neves – Chair	Cheyne Strawn
Alvaro Preciado	Doug Verboon – Vice Chair	Robert Ramos - Alternate
Kimber Regan - Alternate	Richard Valle - Alternate	

CALL TO ORDER: A special meeting of the Local Agency Formation Commission of Kings County was called to order by Chairman Joe Neves, at 1:00 p.m., on June 25, 2025, in the Board of Supervisors Chambers in the Administration Building (Bldg. No. 1) of the Kings County Government Center located at 1400 West Lacey Blvd., Hanford, CA.

COMMISSIONERS PRESENT: Joe Neves, Doug Verboon, Patricia Matthews, Alvaro Preciado, Cheyne Strawn

COMMISSIONERS ABSENT: None

STAFF PRESENT: Chuck Kinney – Executive Officer
Noelle Tomlinson – Planner
Mary Ann Sanchez – Clerk
Jennifer Thompson – Legal Counsel

VISITORS PRESENT: Cynthia Baruch, Roger Reynolds

UNSCHEDULED APPEARANCES: None

APPROVAL OF MINUTES:

Commissioner Strawn wanted to discuss a correction on the May 28, 2025 minutes. He wanted to note for the record that he was not allowed to vote on the Public Member Alternate Appointment due to the policy and not because he didn't want to vote. Legal Counsel advised that an abstention is essentially removing yourself from the vote and that an abstention is the correct action for someone who is not going to vote because they have a conflict or for some other reason. Chairman Neves added that the minutes could be amended to read that Commissioner Strawn's abstention was due to the policy that the public member does not vote for other public members and that only the City and County Representatives are eligible to vote.

A motion was made and seconded (Verboon/Preciado) to approve the minutes of the May 28, 2025 meeting, as amended. Motion carried unanimously.

OLD BUSINESS:

None

NEW BUSINESS

A. Annexation No. 25-03 (Armona Community Service District TT 936) – Mr. Kinney provided a brief overview of the proposal to annex two parcels of land into the Armona Community Services District (CSD) service area and detach the same from the Kings River Conservation District, and the Excelsior-Kings River Conservation District. The proposed parcels for annexation (APN: 017-100-012 & 013) consists of 20.08 acres. The area is comprised of 20.08 acres and includes two parcels located approximately a quarter of a mile north of Front Street and a quarter of a mile east of 14th Avenue. This territory is adjacent to the Armona CSD service area and is within the District's

Primary Sphere of Influence as adopted by LAFCo and effective October 24, 2007. This proposed reorganization is not considered inhabited since fewer than 12 registered voters reside within the boundaries of the proposed annexation. 100% of the property owners have signed a document consenting to this area of land being annexed into the Armona Community Services District. The Commission may consider the proposal without notice, hearing, or election pursuant to Government Code Section 56662. Mr. Kinney recommended that the Commission adopt Resolution No. 25-03 approving the Armona Community Services District TT 936 Annexation.

Chairman Neves asked if there were any questions from the Commissioners for Mr. Kinney. Commissioner Preciado asked Mr. Kinney to provide more detail about the Kings River Conservation District and the Excelsior-Kings River Conservation District and how all three of them go together. Mr. Kinney responded to Commissioner Preciado's question. Chairman Neves asked if there were any other questions. Seeing none, he moved to the public hearing.

Chairman Neves opened the public hearing. Seeing no comments or anyone wishing to speak, he closed the public hearing.

Chairman Neves opened Commissioner discussions. Commissioner Strawn inquired about the 12 registered voters approving and not having any objection to the 109 units going in and whether that would have an effect on the EIR process or CEQA. Mr. Kinney provided an explanation.

A motion was made and seconded (Strawn, Verboon) to approve LAFCO Case No. 25-03 and adopt Resolution 25-03. Motion carried unanimously.

B. LAFCO Policies and Procedures – Mr. Kinney provided a brief summary of the Policies and Procedures update. Mr. Kinney stated that the 23-24 Kings County Grand Jury Report contained two findings for Kings County LAFCo. One of those findings was that the LAFCo Policies and Procedures Manual was last updated on March 22, 2006. A recommendation in the report stated that the Kings LAFCo Policies and Procedures Manual should be reviewed and/or updated every five years. Mr. Kinney stated that staff had gone through and updated the Policies and Procedures. Mr. Kinney recommended that the Commission adopt the updated Policies and Procedures Manual.

Commissioner Neves asked if the Commissioner's had any questions or comments. Commissioner Neves asked if it was going to be updated annually or bi-annually. Mr. Kinney stated that it would probably be updated every five years. Mr. Kinney added that should a state law change, it would be updated at that time.

A motion was made and seconded (Verboon, Strawn) to approve the 2025 LAFCO Policies and Procedures update. Motion carried unanimously.

C. LAFCO Municipal Service Reviews for Cities and Community Districts – Mr. Kinney provided a summary of the Municipal Service Reviews update. The 23-24 Kings County Grand Jury Report contained two findings for Kings County LAFCo. One of those findings was that the LAFCo MSRs for Cities and Community Service Districts was last updated on October 24, 2007. A recommendation in the report states that the Kings LAFCo MSRs should be reviewed and/or updated every five years. The Cities and Communities were consulted on the changes in the MSRs. Updates were made with information found on each agency's respective websites and recent reports. Mr. Kinney also stated that comments were received and incorporated into the update. Mr. Kinney thanked his staff member, Noelle, for all the work she did on the update. Mr. Kinney recommended

that the Commission adopt the updated Municipal Service Reviews for Cities and Community Districts.

Commissioner Neves asked for questions or comments from the Commission. Commissioner Preciado asked a question regarding the cost of a municipal water well. A brief discussion took place in response to Commissioner Preciado's question.

A motion was made and seconded (Verboon/Strawn) to adopt the updated Municipal Service Reviews for Cities and Community Districts. Motion carried unanimously.

LEGISLATION

Mr. Kinney stated that there was nothing to report regarding legislation. He did provide a brief update regarding CALAFCO internal issues.

MISCELLANEOUS

A. **Correspondence** – None
B. **Items from the Commission** – Commissioner Strawn shared information regarding a project he is working on in the city of Los Angeles. Commissioner Preciado shared about various projects coming close to fruition in the City of Avenal. He also shared that they are still working on the budget and they will continue to move forward with projects.
C. **Staff Comments** – None

ADJOURNMENT – With no further business before the Commission, the meeting was adjourned at 1:31p.m.

A. **The next meeting is scheduled for July 23, 2025 at 1:00 p.m.**

Respectfully submitted,

LOCAL AGENCY FORMATION COMMISSION
OF KINGS COUNTY

Chuck Kinney, Executive Officer

Local Agency Formation Commission
OF KINGS COUNTY

MAILING ADDRESS:
1400 W. LACEY BLVD. BLDG 6, HANFORD, CA 93230
(559) 852-2670, FAX: (559) 584-8989

STAFF REPORT
August 27, 2025

EXECUTIVE OFFICER'S REPORT

LAFCO CASE NO. 25-02
HANFORD Annexation
No. 161

I. BRIEF OVERVIEW OF PROPOSAL:

The proposal is to annex one area totaling 88.89 acres to the City of Hanford. The area will be detached from the Kings River Conservation District and the Excelsior-Kings River Resource Conservation District. The 88.89 acres is located South of Hanford-Armona Road, between 12th and 13th Avenues, Assessors Parcel Numbers 011-040-027, 038, 040, previously (011-040-008, 010 & 027). This territory is adjacent to the City of Hanford and is within the City's Primary Sphere of Influence as adopted by LAFCo and effective July 24, 2024. See Exhibit "A" for a location map of the project site. This proposed reorganization is not considered inhabited since fewer than 12 registered voters reside within the boundaries of the proposed annexation. 100% of the property owners have signed a document consenting to this area of land being annexed into the City of Hanford. The Commission may consider the proposal without notice, hearing, or election pursuant to Government Code Section 56662.

II. EXECUTIVE OFFICERS RECOMMENDATION

The Executive Officer recommends the LAFCO Commission consider the project without notice, hearing or election and adopt LAFCO Resolution No. 25-06 for approval of LAFCO Case No. 25-02 "City of Hanford Annexation No. 161". The application does represent 100 percent consent of land owners, and the Commission may consider approval without notice, hearing, or election.

III. ANALYSIS OF PROPOSAL:

A. Discussion of Proposal

A City of Hanford application for annexation of territory was received on April 2, 2025, and the property was in the process of a Lot Line Adjustment so the City asked to put the application on hold until the Lot Line Adjustment was recorded. The application was certified complete on July 23, 2025. The purpose of the

action is to annex one area containing two parcel totaling 88.89 acres into the City of Hanford. The property is privately owned and the city is the project proponent.

The area represents two parcel located South of Hanford-Armona Road, between 12th and 13th Avenues. Under the Kings County General Plan, the project area is designated as Limited Agriculture. The site is zoned AL-10 – Limited Agriculture. City Pre-Zoning is addressed in the City of Hanford Ordinance No. 25-02, attached as Exhibit "B".

C. Factors required by Government Code Section 56668:

1. Area as proposed for annexation & detachment

Project Site

Population Estimate:	0
Population Density:	0 per acre
Land Area:	88.89 acres
Land Use:	Agriculture.
Assessed Value of Annexation Area:	$1,826,929
Per Capita Assessed Valuation:	$0
Topography:	Flat land
Natural Boundaries:	None
Drainage Basins:	None
Proximity to other populated areas:	Within planned growth direction of the City of Hanford.
Likelihood of growth in area:	This parcel is currently vacant and may be developed.
Detachment:	Kings River Conservation District, and Excelsior-Kings River Conservation District.

2. Need for organized community services; the present cost and adequacy of governmental services and controls in the area; probable future needs for those services and controls; probable effect of the proposed incorporation, formation, annexation, or exclusion and of alternative courses of action on the cost and adequacy of services and controls in the area and adjacent areas.

The current land use surrounding the proposed annexation Area is primarily agricultural operations and residential uses. The Hanford General Plan designates the area as Low Density Residential with floating Future Educational Facility land uses. The area is comprised of mostly agriculture. Future development that may occur on the project area will result in a need for municipal services. The City of Hanford is the most logical provider of urban type services within the Hanford Fringe Area, and annexation is required for the City to provide services. The City of Hanford maintains standard rates for residential water and sewer services and connection fees throughout the City and sufficient capacity has been identified to exist to serve the annexed territory. Any additional development based upon the current General Plan on this property would be reviewed according to the City of Hanford Service Master Plans.

3. The effect of the proposed action and of alternative actions, on adjacent areas, on mutual social and economic interests, and on the local governmental structure of the county.

The proposal will result in minimal reduction in property taxes to the County, and have minimal impact on County government. The County will lose tax revenue ($1,958), but will no longer be primarily responsible for police, and fire protection on the project area. The property is adjacent to the City, and City services can be provided to the area.

4. The conformity of both the proposal and its anticipated effects with both the adopted commission policies on providing planned, orderly, efficient patterns of urban development, and the policies and priorities set forth in Section 56377.

The proposed annexation is a planned and orderly extension of the City of Hanford. The 2035 Hanford General Plan designates this area for Low Density Residential with floating Future Educational Facility. Therefore, the impact of this proposal upon patterns of urban development will occur as outlined in the City's General Plan. Since the City currently borders the project area along the northern, eastern and western borders, this territory would keep extension of services in line with the orderly development of the City. This proposal is in keeping with the intent of LAFCO as detailed in Section 56301, and is reflected in the Policies and Procedures manual for LAFCO of Kings County whereby it encourages the orderly formation of local governmental agencies.

All future development within the proposed annexation territory will require City services such as water, sewer, and storm drainage and a connection to these services can efficiently be added as development occurs and connects.

5. The effect of the proposal on maintaining the physical and economic integrity of agricultural lands, as defined by Section 56016.

The annexation territory is planned for Low Density Residential uses under the City's 2035 General Plan. The City of Hanford is primarily surrounded by prime agricultural land and farming is currently practiced along most of the City's existing edges. These properties, however, are within the planned growth pattern of the City and are within the adopted 2024 Primary Sphere of Influence for the City. This territory is planned for residential uses in the City's 2035 General Plan.

The City has planned for future growth to occur as outlined in their 2035 Hanford General Plan. As the City expands, impacts to prime agricultural land are considered unavoidable, and the 2035 Hanford General Plan Program EIR addressed this issue along with an adopted statement of overriding consideration. The City's General Plan recognizes the importance of prime agricultural land and the growth impacts to this valuable local and regional resource.

6. The definiteness and certainty of the boundaries of the territory, the nonconformance of proposed boundaries with lines of assessment or ownership, the creation of islands or corridors of unincorporated territory, and other similar matters affecting the proposed boundaries.

The boundaries are definite and certain (See Exhibit "A" of the Resolution). No islands or substantially surrounded areas will be created as a result of this annexation.

7. A regional transportation plan adopted pursuant to Section 65080, and its consistency with city or county general and specific plans.

The 2022 Kings County Regional Transportation Plan was adopted on September 14, 2022 pursuant to Section 65080 of the California Government Code. The annexation is consistent with the City of Hanford's General Plan

Current Zoning:	Limited Agriculture (AL-10)
City Prezoning:	Low Density Residential (R-L-5)
County General Plan Designation:	Limited Agriculture (AL-10)
City General Plan Designation:	Low Density Residential with Floating Future Educational Facility

8. The sphere of influence of any local agency which may be applicable to the proposal being reviewed.

This annexation is within the Primary Sphere of Influence of the City of Hanford as adopted by the Commission on July 24, 2024. It is also within the boundaries of the Kings River Conservation District, and the Excelsior-Kings River Conservation District. These districts' policies are to detach areas proposed for annexation to a city.

9. The comments of any affected local agency or other public agency.

No written comments have been received by the Executive Officer as of August 20, 2025.

10. The ability of the newly formed or receiving entity to provide the services which are the subject of the application to the area, including the sufficiency of revenues for those services following the proposed boundary change.

The City indicates that services such as water, sewer, storm drainage, fire and police can all be provided to the annexation territory. Sufficient capacity is available with the City to provide adequate service to these areas. The City's Plan for Service is attached as Exhibit "C".

11. Timely availability of water supplies adequate for projected needs as specified in Section 65352.5.

Any future development occurring in the subject territory would require connection to the City's main water and sewer lines. The development would be required to develop according to City Standards. The City indicates that sufficient water supplies are available to serve future development of the subject territory.

12. The extent to which the proposal will affect a city or cities and the county in achieving their respective fair shares of the regional housing needs as determined by the appropriate council of governments consistent with Article 10.6 (commencing with Section 65580) of Chapter 3 of Division 1 of Title 7.

The subject territory is planned for Low Density Residential use and will assist the City of Hanford in meeting their fair share of affordable housing. The City General Plan designated residential properties in the unincorporated fringe were relied upon as available residential land resources for the City under the 2014 Kings County Regional Housing Needs Allocation Plan, and included in the 2016 Housing Element update.

13. Any information or comments from the landowner or owners.

The City of Hanford provided notices and held public hearings to inform existing residents and land owners in the annexation area. All of the landowners of the area proposed for annexation have signed a consent form for the proposed annexation to the City of Hanford. No additional information or comments have been received by property owners or residents in regards to this proposal.

14. Any information relating to existing land use designations.

No other information is applicable.

15. The extent to which the proposal will promote environmental justice. As used in this subdivision, "environmental justice" means the fair treatment of people of all races, cultures, and incomes with respect to the location of public facilities and the provision of public services.

The proposed annexation will not result in inferior services being provided to areas of low income residents. The annexation does include project specific information regarding future development of the land to be used for 326 single-family residences and a 3.58 acre park. In addition, the proposal will not locate undesirable land uses within the proximity of low income residents.

IV. ENVIRONMENTAL ASSESSMENT:

On March 18, 2025, the City of Hanford determined that the project would result in significant impacts to the environment. The Environmental Impact Report (EIR) identified Transportation and Traffic as a significant unavoidable impact. The project's Vehicle Miles Travelled (VMT) and Cumulative VMT would exceed the City's VMT thresholds and is considered significant and unavoidable. LAFCO, as a Responsible Agency, may rely upon the EIR and Statement of Overriding Considerations for this action. A copy of City's Environmental Documentation is attached as Exhibit "D".

V. RECOMMENDATIONS:

The Executive Officer recommends:

1. That the Commission make the following determinations:

    a) It is a Responsible Agency under the California Environmental Quality Act Guidelines, Section 15096.

    b) The annexation is being taken pursuant to the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000.

    c) The distinctive short form designation of the annexation is "Hanford Annexation No. 161".

    d) The City requested annexation of one unincorporated area and all the property owners have given consent to the annexation.

    e) The proposed annexation conforms to the adopted sphere of the influence for the City of Hanford.

    f) The subject territory is considered uninhabited.

g) All property owners and registered voters within the subject territory and within a 300 foot radius were duly noticed of the public hearing.

h) All of the factors required by Government Code Section 56668 have been considered by the Commission before rendering a decision.

i) The reorganization is necessary to provide services to planned, well-ordered, and efficient urban development patterns that include appropriate consideration of the preservation of open-space lands within those urban development patterns

j) The regular county assessment roll will be utilized for this annexation.

K) The affected territory will not be taxed for existing general bonded indebtedness.

2. Find that the Commission has reviewed the Environmental Impact Report as described above and utilized by the City of Hanford for this project and has relied on the Statement of Overriding Considerations for this action.

3. That the Commission approve LAFCO Case No. 25-02, Hanford Annexation No. 161 by adopting Resolution No. 25-06 and order the annexation to the City of Hanford and detachment from the Kings River Conservation District, and Excelsior-Kings River Conservation District subject to the following conditions:

a) The Kings County Local Agency Formation Commission be designated as the conducting authority for the “Hanford Annexation No. 161” and be authorized to proceed with legal steps necessary to complete the annexation without notice, hearing or election.

b) The City prepare a final map for recordation with an accompanying legal description that meets Board of Equalization Standards.

c) The City shall provide a sufficient fee deposit with LAFCO to cover all administrative processing prior to final recording of the Certificate of Completion.

VI. APPROVED LEGAL DESCRIPTION

A legal description of the annexation territory is attached to the resolution.

ADDENDUM

A. Proponent:

City of Hanford

B. Affected Districts Whose Boundaries Will Change:

City of Hanford
Kings River Conservation District
Excelsior-Kings River Conservation District

C. Affected Districts Who's Boundaries Will Not Change:

County of Kings
Hanford Cemetery District
Hanford Joint Union High School District
Hanford Elementary School District
Kings Mosquito Abatement District
College of the Sequoias

EXHIBIT A

Site Location for LAFCo Case No. 25-02 (Hanford Annexation No. 161)

LAFCO of Kings County

Map prepared by
Alex Hernandez
August 21, 2025
Kings LAFCo
1400 W Lacey Blvd, Hanford, CA 93230 (559)852-2670

0 0.040.07 0.15 0.22 0.3 Miles

N W E S

LEGEND

Project Site

Exhibit B

ORDINANCE NO. 25-02
PREZONE NO. 0005-23

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF HANFORD PREZONING CERTAIN PROPERTY ADJACENT TO THE CITY OF HANFORD FROM COUNTY ZONING AL-10 LIMITED AGRICULTURE TO R-L-5 LOW-DENSITY RESIDENTIAL, IN ACCORDANCE WITH THE GENERAL PLAN. THE PROJECT IS LOCATED SOUTH OF HANFORD ARMONA ROAD, BETWEEN 12TH AND 13TH AVENUES (APNS 011-040-008, -010, AND -027).

The City Council of the City of Hanford does ordain as follows:

Section 1: The following described territory situated in the City of Hanford is hereby prezoned under the terms of Chapter 17.86 of the Hanford Municipal Code:

Annexation 161 filed by Silicon Valley Ranch, LLC

FROM: County zoning of AL-10 Limited Agriculture
TO: City zoning R-L-5 Low-Density Residential

On property described as follows:

Portions of the Northeast and Northwest Quarters of Section 3, Township 19 South, Range 21 East, MDB&M, in the State of California, County of Kings described as follows:

Beginning at the Northwest corner of said Northeast Quarter being a point on the existing city limits of the City of Hanford;

Thence along the existing city limits the following courses:

1. South 89° 23'35" East along the North line of last said Qua1 1er, a distance of l,057.40 feet to the Northwest corner of County Tract 876 as depicted on a map recorded in Book 24 at Page 88 of Licensed Surveyors' Plats in the Office of the Kings County Recorder;
2. South 00°33'03" West, along the West line of last said Tract, a distance of 2,866.68 feet to a point on the South line of said Northeast Quarter;
3. North 89°32'03" West along said South line of said Northeast Quarter, a distance of I 051.03 feet to the Center Quarter Corner of said Section 3;

4. North 89° 32'22" West along the South line of said Northwest Quarter a distance of 261.40 feet to an angle point in the city limits of the City of Hanford per LAFCO Resolution No. 05-1 7 as depicted on a map recorded in Book 21, at page 66 of Licensed Surveyors' Plats in the Office of the Kings County Recorder;

Thence leaving the existing city limits of the City of Hanford the following courses:

5. Continuing along said South line of the Northwest Quarter, North 89° 32'22" West a distance of 397.32 feet to the southwest corner of Parcel 2 as shown on a map recorded in Book 5 at Page 72 of Parcel Maps of Licensed Surveyors' Plats in the Office of the Kings County Recorder;
6. No1th 00° 44' 57" East, along the west line of last said Parcel 2 a distance of 646. 9 I feet to and angle point in said west line of said Parcel 2;
7. Continuing along the West line of said Parcel 2, North 02 °14'30" East, a distance of 656.86 feet to the Northwest corner of said Parcel 2, also being a point on the existing city limits of the City of Hanford;

Thence along the existing city limits the following courses:

8. South 89° 38'44" East along the North line of said Parcel 2 a distance of 634.20 feet to the Northeast corner of said Parcel 2, also being a point on the west line of said Northeast Quarter;
9. Thence North 00°25 '25" East, along last said West line, a distance of 1,564.66 feet to the Point of Beginning

Containing 88.89 Acres more or less, as depicted in attached **Exhibit A**; and

Section 2: The Council does hereby find as a fact that this Ordinance has been recommended for passage by the Planning Commission of the City of Hanford after public hearing before the Planning Commission after notice required by Section 17.70.100 of the Hanford Municipal Code and Government Code Section 65854. The City Council finds that the Final Environmental Impact Report (SCH #2024060956) is approved, in conformance with the California Environmental Quality Act. The City Council hereby finds that the prezoning is required to achieve the objectives of the zoning regulations as set forth in Section 17.06.010 of the Hanford Municipal Code, and that this Ordinance has been introduced by the City Council after public hearing held on the 18th day of March, 2025 at 7:00 p.m. of said day after notice required under the provisions of Section 65856 of the Government Code.

Section 3: This Ordinance shall take effect thirty (30) days after its passage and shall be published once in the Hanford Sentinel within fifteen (15) days after its passage, and the zoning will apply to such property in the event of subsequent annexation to the City under the provisions of Section 65859 of the Government Code.

Passed and adopted at a regular meeting of the City Council of the City of Hanford duly called and held on the 1 day of April, by the following roll call vote:

AYES: Martinez, Paden, Regan, Howze, Kairis

NOES: 0

ABSTAIN: 0

ABSENT: 0

APPROVED

ATTEST:

MAYOR of the City of Hanford

Natalie Corral

Natalie Corral
CITY CLERK

STATE OF CALIFORNIA)
COUNTY OF KINGS) ss
CITY OF HANFORD)

I, NATALIE CORRAL, City Clerk of the City of Hanford, do hereby certify the foregoing ordinance was duly introduced at a regular meeting of the City Council of the City of Hanford on the 18th day of March

2025 and it was duly passed and adopted at a regular meeting of the City Council of the City of Hanford held on the 1 day of April, 2025.

Dated: 4/1/25

Natalie Corral
City Clerk

Exhibit C

RESOLUTION 25-09-R

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF HANFORD APPROVING VESTING TENTATIVE TRACT 943, A REQUEST, BY SILICON VALLEY RANCH, LLC, TO SUBDIVIDE 75.02 ACRES PROPOSED TO BE PREZONED R-L-5 LOW-DENSITY RESIDENTIAL INTO 326 SINGLE-FAMILY RESIDENTIAL LOTS, A 3.58-ACRE PARK, AND THREE-ACRE STORM BASIN. THE PROJECT IS LOCATED SOUTH OF HANFORD ARMONA ROAD, BETWEEN 12TH AND 13TH AVENUES (APN 011-040-008, -010, AND -027).

At a regular meeting of the City Council of the City of Hanford duly called and held on March 18, 2025 by motion of Councilmember Paden, and seconded by Councilmember Howze, and duly carried, the following resolution was adopted:

WHEREAS, Vesting Tentative Subdivision Map No. 943, filed by Marc Freiler on behalf of Silicon Valley Ranch, LLC, a request to subdivide 75.02 acres, proposed to be prezoned R-L-5 Low-Density Residential into 326 single-family residential lots, a 3.58-acre park, and three-acre storm basin, as shown in **Exhibit A,** has been reviewed by the City Council of the City of Hanford, in accordance with the Subdivision Map Act and Title 16 of the Hanford Municipal Code; and

WHEREAS, the City Council has carefully considered recommendations and testimony presented at the public hearing of March 18, 2025, and

WHEREAS, all affected public utility companies, various governmental department agencies, staff, and the City Council, have given careful consideration to this tentative subdivision map and have made recommendations thereon; and

WHEREAS, the Final Environmental Impact Report and all notices related thereto were prepared in compliance with the California Environmental Quality Act ("CEQA") and the City of Hanford Municipal Code and Policies; and

WHEREAS, on the basis of the application, the documentation and information provided in the staff report and the evidence and testimony submitted at the public hearing, and the

Environmental Impact Report prepared for the Silicon Valley Ranch Residential Project, the City Council of the City of Hanford hereby makes findings in accordance with Section 15091 of the CEQA Guidelines and as specifically articulated in an appendix to the Final EIR and incorporated herein by this reference; and

WHEREAS, the Project's effect on Transportation and Traffic remains significant and unavoidable with mitigation incorporation, the Mitigation Monitoring and Reporting Program is attached – **Exhibit B**; and

WHEREAS, Section 15093 of the CEQA Guidelines requires the City to balance the benefits of the Project against its unavoidable environmental impacts in determining whether or not to approve the Project; and

WHEREAS, the City Council certified the Final Environmental Impact Report, which included findings and a statement of overriding considerations for the unavoidable significant environmental impacts identified by the Final Environmental Impact Report; and,

WHEREAS, the City Council has made the following findings, pursuant to Section 16.04.010 of the Hanford Subdivision Ordinance, Section 66474 of the Subdivision Map Act and Hanford's Zoning Ordinance:

1. Consistency Finding:

   ANALYSIS: That a consistency finding can be made, because the proposed subdivision map is consistent with the State Subdivision Map Act, General Plan, Zoning Ordinance, and Subdivision Ordinance. The subdivision is consistent with the General Plan Designation for the property, Low-Density Residential. All requirements of the R-L-5 Low-Density Residential zone district are met for lot size, frontage, width, and depth. Compliance with the regulations set forth in the Hanford Municipal Code for the R-L-5 Low-Density Residential zone district will be a condition of approval for the subdivision.

2. Design Finding:

ANALYSIS: That the design and improvement of the subdivision is consistent with the State Subdivision Map Act, General Plan, Zoning Ordinance, and Subdivision Ordinance. The subdivision is consistent with the General Plan Designation for the property, Low-Density Residential. All requirements of the R-L-5 Low-Density Residential zone district are met for lot size, frontage, width, and depth. Compliance with the regulations set forth in the Hanford Municipal Code for the R-L-5 Low-Density Residential zone district will be a condition of approval for the subdivision.

3. Type of Development Finding:

ANALYSIS: That the site is physically suitable for the single-family residential development proposed under Tentative Tract 943. The lots proposed meet the minimum lot size of the R-L-5 Low-Density Residential Zone District. All parcels have adequate street frontage on a public street and meet the minimum depth and width required for the district.

4. Density Finding:

ANALYSIS: That a density finding can be made, because the site is physically suitable for the proposed density of development. The General Plan prescribes a density range between two and 10 units per acre, with an expected average of four units per gross acre. The project has a density of 4.35 dwelling units per gross acre.

5. Environmental Finding:

ANALYSIS: That a focused environmental impact report was prepared for the project. On the basis of the Focused EIR, the City of Hanford, as the Lead Agency, has determined the project described above would have a significant effect on the environment based relating

to the project's transportation/traffic impacts and recommended a Statement of Overriding Considerations be adopted for the project's significant impact.

6. Public Health Finding:

ANALYSIS: That the design of the subdivision and type of improvements are not likely to cause serious health problems. The City of Hanford Building Division is responsible for ensuring that future construction of the site follows adopted building codes, thus reducing exposures to accidents to the general public. Consultation was sent for Tentative Tract 943 to interested agencies, including the County Health Department, Public Works Department, Fire Department, and Building Division. Any improvements or mitigations required for public health and safety were applied to the proposal and required in the conditions of approval and the mitigation monitoring and reporting program.

7. Improvements and Access Findings:

ANALYSIS: That the design of the subdivision and type of improvements will not conflict with easements acquired by the public at large for access through or use of the property within the proposed subdivision. All easements will be designated on the final subdivision map, as required by the utility companies and where needed for providing service to streetlights and landscape improvements, as designated by the City Public Utilities and Engineering Division. Additional easements are required, as follows:

a) A 20-foot easement established south of the centerline of Hume Avenue is required to be dedicated to the city for the purposes of street right-of-way.

b) An easement for storm drainage purposes is required to be dedicated to the City, where necessary, to facilitate installation of storm drainage facilities connecting the portion of the development located on the west side of Aquifer Drive to the proposed storm drainage basin located on the east side of Aquifer Drive.

c) All easements for irrigation ditches and/or irrigation pipelines will be legally abandoned or relocated to the satisfaction of the City Engineer prior to acceptance of the subdivision improvements.

d) An easement for sanitary sewer along the south side of Hume Avenue for gravity sewer pipeline, sewer lift station and force main is required to be dedicated to the city. This dedication requirement is contingent on whether Tract 943 develops before Live Oak West Tract 909.

e) All proposed landscape/public utility easements, as shown on the tentative map, are required to be dedicated to the City and be included on the subdivision final map.

NOW, THEREFORE, BE IT RESOLVED, the City Council of the City of Hanford finds the project to be consistent with the Final Environmental Impact Report (FEIR) (SCH 2024060956) associated with the Silicon Valley Ranch Residential Project, and for which said FEIR was certified precedent to its consideration of the annexation, consistent with the California Environmental Quality Act (CEQA) and the City of Hanford Municipal Code and Policies.

THEREFORE, BE IT FURTHER RESOLVED that the City Council of the City of Hanford hereby approves Vesting Tentative Tract 943, subject to the conditions of approval, attached as **Exhibit C,** and the following:

That this tentative subdivision map becomes null and void after 24 months has elapsed from the date of approval, if the above conditions have not been satisfied or bonded for, and a final map recorded. A time extension may be granted by the approving body upon written request by the applicant. The time extension, if approved, will be subject to the improvement standards and fees in effect at the time the extension for the tentative subdivision map is granted.

PASSED AND ADOPTED at a regular meeting of the City Council of the City of Hanford held on the 18th day of March 2025 by the following vote:

AYES: Martinez, Paden, Howze, Regan, Kairis

NOES: 0

ABSTAIN: 0

ABSENT: 0

Lou Martinez, MAYOR

STATE OF CALIFORNIA)
COUNTY OF KINGS)
CITY OF HANFORD) SS

I, **Natalie Corral,** City Clerk of the City of Hanford, do hereby certify that the foregoing Resolution was duly passed and adopted by the City Council of the City of Hanford at a regular meeting thereof held on the 18th day of March, 2025.

Dated: 3/15/25

City Clerk

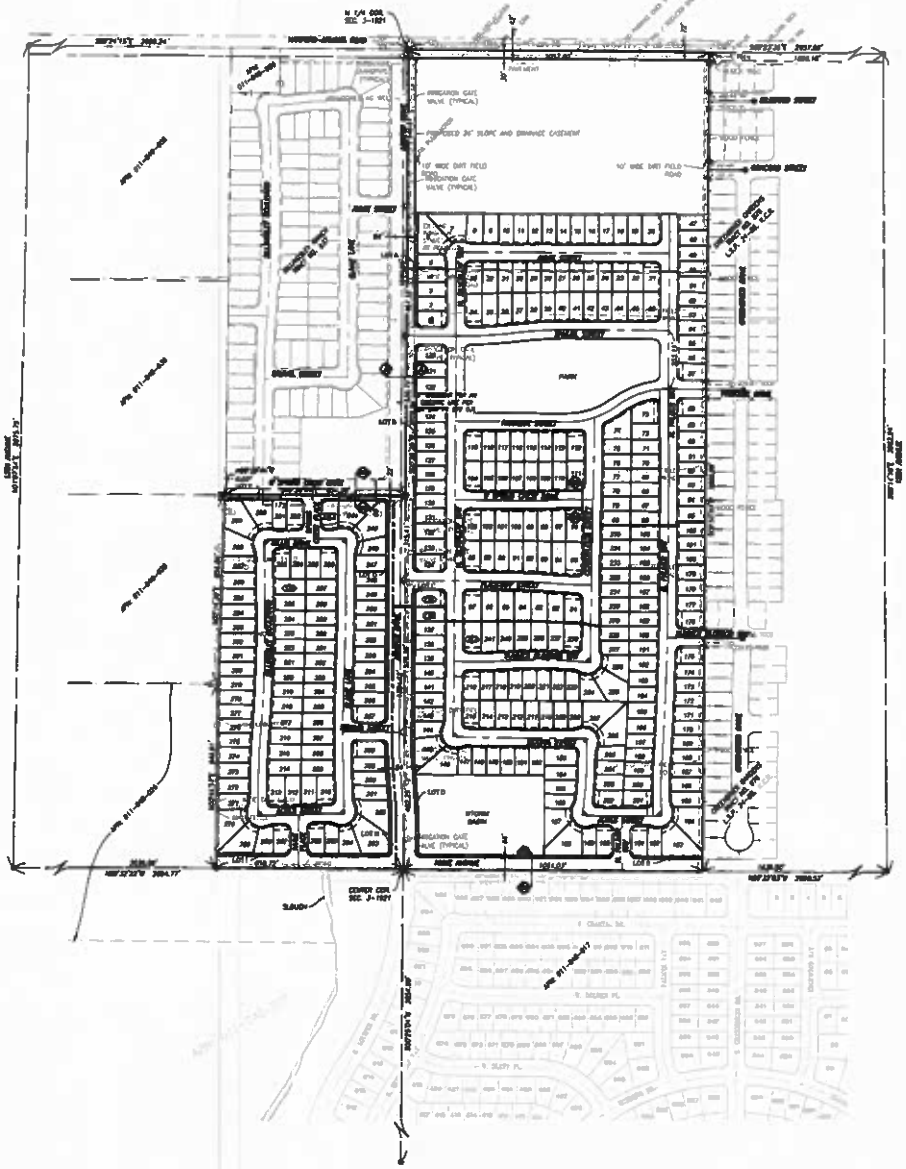
Exhibit A:

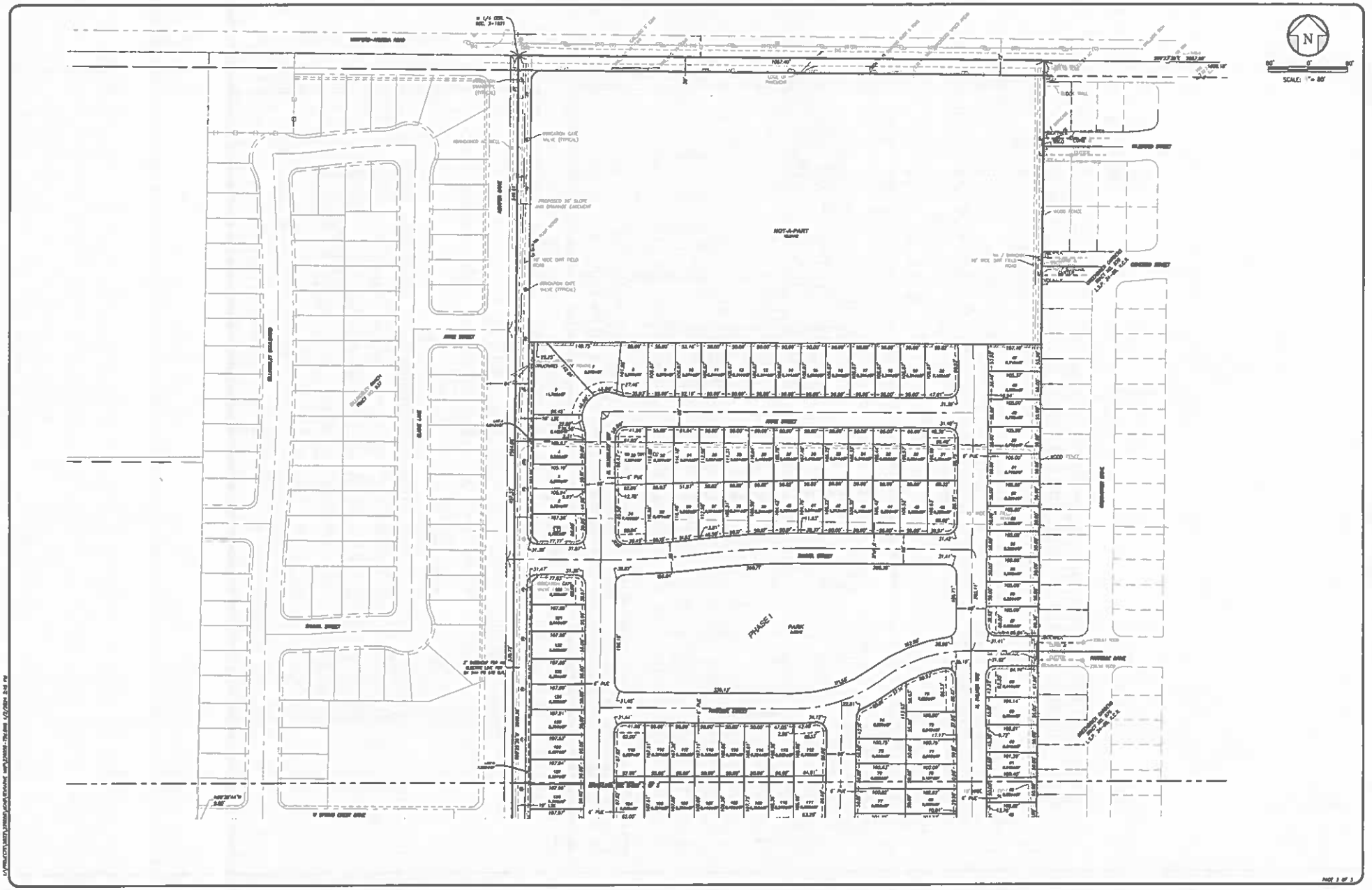
Vesting Tentative Tract 943

VESTING TENTATIVE SUBDIVISION MAP TRACT #943

SILICON VALLEY RANCH

A PORTION OF THE WEST HALF OF THE NORTHEAST QUARTER & A PORTION OF THE EAST HALF OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 3, TOWNSHIP 19 SOUTH, RANGE 21 EAST, MOUNT DIABLO BASE & MERIDIAN, IN THE CITY OF HANFORD, COUNTY OF KINGS, STATE OF CALIFORNIA




NOT-A-PART
PHASE I
PARK
SCALE: 1" = 80'

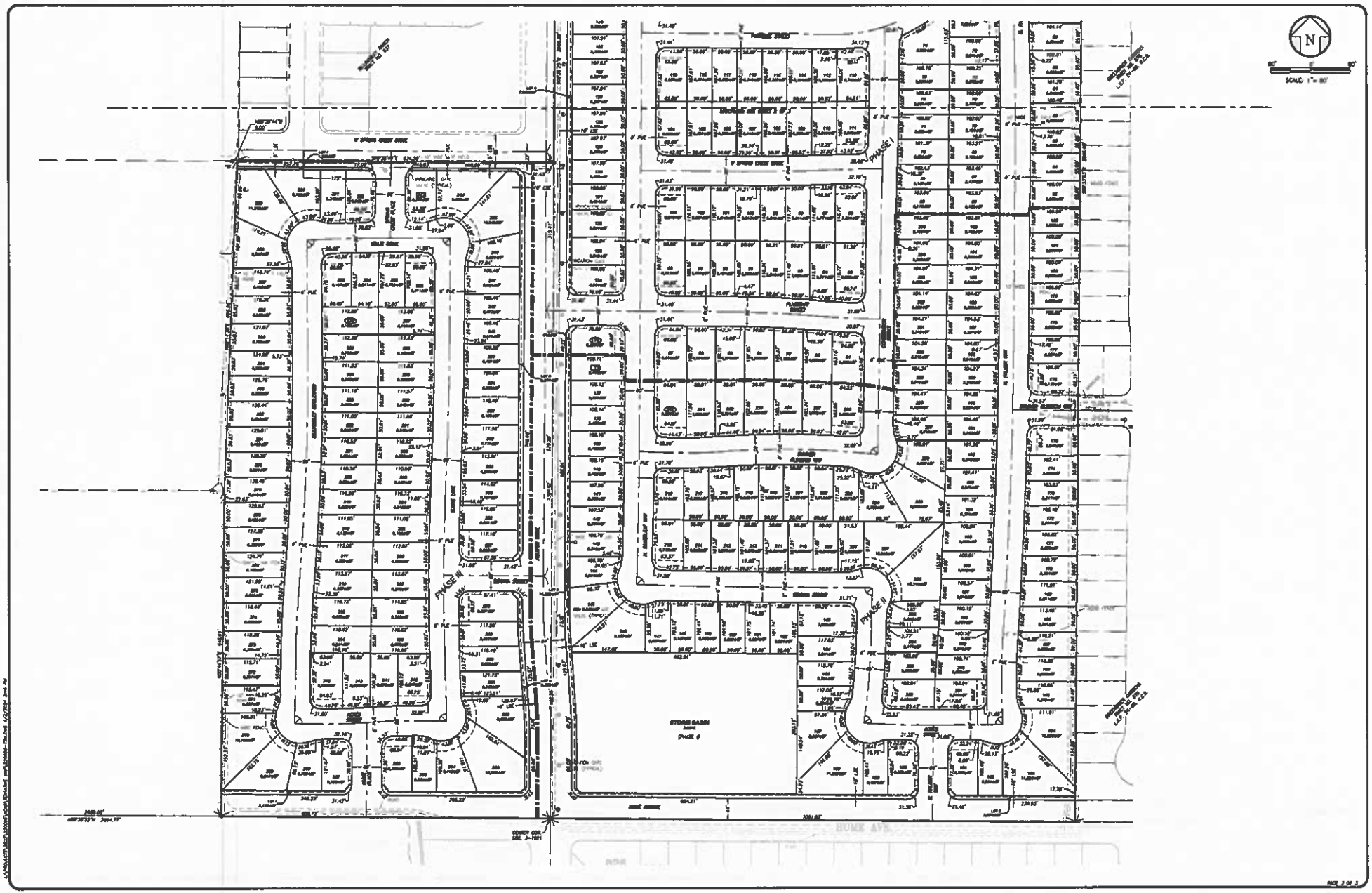

PHASE I
PHASE II
PHASE III
SCALE: 1" = 80'

Exhibit B:

Mitigation Monitoring and Reporting Program

Mitigation Monitoring Program					
Impact	**Mitigation Measure**	**Time Frame for Implementation**	**Responsible Monitoring Agency**	**Date**	**Initials**
	Aesthetics				
	No Mitigation required.				
	Agriculture and Forest Resources				
	No Mitigation required.				
	Air Quality				
	No Mitigation required.				
	Biological Resources				
	No Mitigation required.				
	Cultural Resources				
	No Mitigation required.				
	Energy				
	No Mitigation required.				
	Geology and Soils				
	No Mitigation required.				
	Greenhouse Gas Emissions				
	No Mitigation required.				
	Hazardous Materials				
	No Mitigation required.				
	Hydrology and Water Quality				
	No Mitigation required.				
	Land Use and Planning				
	No Mitigation required.				
	Mineral Resources				
	No Mitigation required.				
	Noise				
	No Mitigation required.				
	Population and Housing				

Mitigation Monitoring Program					
Impact	**Mitigation Measure**	**Time Frame for Implementation**	**Responsible Monitoring Agency**	**Date**	**Initials**
	No Mitigation required.				
	Public Services				
	No Mitigation required.				
	Recreation				
	No Mitigation required.				
	Traffic and Transportation				
#1	**MM 4.17-1:** The Project proponent or developer shall be required to pay their fair share costs for the needed improvements. This includes changing the 12th Avenue and Hanford Armona Road intersection eastbound right turn lane to an eastbound through lane and a right turn lane. The fair share cost for the improvement is calculated at 18.94% and shall be collected by the City of Hanford at the appropriate time.	Prior to issuance of building permit	Project Proponent/Lead Agency		
		A. The Lead Agency shall determine total improvement cost of intersections and provide it to the Project proponent. B. The Project Proponent shall pay their equitable share of the cost for intersection improvements as indicated in the Mitigation Measure and the Traffic Study prior to the issuance of building permits.			
	Tribal Cultural Resources				
	No Mitigation required.				
	Utilities and Service Systems				
	No Mitigation required.				
	Wildfire				
	No Mitigation required.				

Exhibit C:

Conditions of Approval

ADMINISTRATION DEPARTMENT

Contact the City Attorneys' Office: (559) 584-6656
Concerning questions that you may have on the conditions listed below:

Defense and Indemnification Provisions:

1. That the applicant shall defend, indemnify, and hold harmless the City of Hanford ("City"), its officials, officers, employees, representatives, agents and attorneys, from and against all claims, damages, losses, judgments, liabilities, expenses and other costs, including litigation costs and attorney's fees, arising out of, resulting from, or in connection with, the City's act or acts leading up to and including approval of any environmental document and/or granting of any approvals relating to the Project. Applicant's obligation to defend, indemnify and hold the City harmless specifically includes, but is not limited to, any suit or challenge by any third party against the City which challenges or seeks to set aside, void or annul the legality or adequacy of any environmental document approved by the City or any approval related to the Project.

PLANNING DIVISION
SITE PLAN REVIEW COMMENTS

TENTATIVE TRACT NO. 943
CONTACT: Gabrielle Myers, Senior Planner: (559) 585-2578

General Plan Designation: Low-Density Residential

Zoning: R-L-5 Low-Density Residential

Other Special Districts: N/A

Entitlements Required:

1. Annexation – the property is currently in the Kings County Jurisdiction

2. Prezone – the property is designated as Low-Density Residential in the General Plan, prezone proposed R-L-5 Low-Density Residential

Planning Division Recommendation ☒ Revise and Proceed ☐ Resubmit

General Requirements:

☒ That the applicant hereby agrees to hold the City of Hanford and all of its departments, officers, agents, and employees free and harmless of and from all claims of any kind or nature arising out of or by reason of the approval of this project.

☒ That approval of this project does not exempt compliance with all applicable sections of the Uniform Fire and Building Codes, Zoning Ordinance, Public Works Improvement Standards, and other City Ordinances.

☒ That the final map be submitted to the City Engineer and Community Development Department for compliance with the Tentative Subdivision Map approval prior to recording the final map.

☒ That all conditions of approval listed in this resolution by the City of Hanford be contained in the line drawing submitted for building permits.

☒ That in accordance with Title 16 of the Hanford Municipal Code, all conditions of this subdivision listed herein, and contained in subsequent improvement agreements, excluding the landscape district, must be completed and accepted for maintenance by the City Council prior to the final building inspection and occupancy permits being issued for the first house in the subdivision.

☒ That Vesting Tentative Tract 943 be developed consistent with the approved tentative tract map, attached as **Exhibit A.**

☒ That the tentative tract is subject to the mitigations cited in the Mitigation Monitoring and Reporting Program, attached as **Exhibit B.**

Right-to-Farm:

☒ Notwithstanding any other provision in this Chapter, agricultural operations are the principal and favored use of land in the areas of Kings County designated "Agricultural" in the Kings County General Plan and included in the agricultural zone districts of the Kings County zoning ordinance. In order to implement Policy LU 8.2 and Program LU 8.2-A of the city of Hanford General Plan, there is hereby adopted in the city of Hanford a policy to (1) protect agricultural land, operations, and facilities from conflicting use due to the encroachment of incompatible, non-agricultural uses of the land in agricultural areas of the county, and (2) to advise developers, owners, and subsequent purchasers of property in the city of Hanford within one (1) mile of the city's urban limit line of the inherent potential inconveniences and discomforts often associated with agricultural activities and operations, including, but not limited to, equipment and animal noise; farming activities conducted on a 24-hour a day, 7-days a week basis; odors from manure, fertilizers, pesticides, chemicals, or other sources; the aerial and ground application of chemicals and seeds; dust; flies and other insects; and smoke from agriculture operations.

☒ That no lawfully established and otherwise lawful agricultural activity, operation, or facility, or appurtenances thereto, conducted or maintained for commercial agricultural purposes in a manner consistent with proper and accepted customs and standards as established and followed by similar agricultural operations in the same locality, shall be or become a nuisance, private or public, due to any changed condition in or about the locality, including, but not limited to, the encroachment of non-agricultural uses such as residences.

☒ In order to carry out the goals and policies of the city of Hanford General Plan, and the provisions of this chapter, the following notices and disclosures shall be required:

☒ All approvals for improvement or development of property including without limitation application for rezonings, land divisions, zoning permits, and residential building permits, on property in the city of Hanford within one (1) mile of the city's urban limit line, shall include a condition that notice and disclosure of this agricultural land use policy be given by the applicant, or the owner if different from the applicant. The applicant, or owner if different from the applicant, shall also acknowledge the contents of the notice and disclosure, which includes a description of the property the notice and disclosure pertains to, in the Official Records of the Kings County Recorder, and recorded at the applicant's own expense.

Zoning:

☒ That all requirements of the R-L-5 Low-Density Residential district shall apply.

Dwelling Units per Lot (Section 17.10.050)

☒ That not more than one dwelling unit shall be allowed on each lot, unless approved as an accessory use to an allowed or approved conditional use, or approved as an accessory dwelling unit, in accordance with Section 17.60.030 of the Hanford Municipal Code.

Coverage (Section 17.10.060)

☒ That the maximum overage shall be determined by the combined building setback requirements, accessory structure limitations, and off-street parking requirements.

Building Setback Area (Section 17.10.070)

☒ That no structure shall be placed within a building setback area.

☒ The front building setback area shall be 15 feet from the front lot line for livable space and 20 feet for garages, carports, and other non-livable building space.

☒ That the rear building setback shall be 15 feet from the rear lot line, except where there is a landscape easement with a wall or fence on the rear of the lot, then the rear building setback shall be 20 feet.

☒ The rear building setback area shall be increased by 10 feet for buildings over one-story high.

☒ That where there is a landscape easement with a wall or fence on the street side of the lot the side yard setback area shall be measured from the easement area instead of the side lot line.

Distance between Structures (Section 17.10.080)

☒ The minimum distance between structures shall be 10 feet, except as provided by the building code.

Height of Structures (Section 17.10.090)

☒ The maximum structure height shall be 35 feet.

Driveways (Section 17.10.110)

☒ That the width of a driveway and any paved area shall not cumulatively exceed 40% of the width of the lot's street frontage on which the driveway and any paved area faces. In the case of "L" or "U" shaped driveways or other configurations besides perpendicular driveways, the paved area of these driveways shall not exceed 50% of the front building setback area.

☒ That on corner lots, the driveway shall be located on the side of the lot adjacent to the interior lot line.

☒ That on key lots, the driveway shall be located on the side of the lot, which is not adjacent to the rear lot line of the adjacent reverse corner lot.

Usable Open Space (Section 17.10.150)

☒ That each lot shall provide for a usable open space area of a minimum 400 square feet that is a minimum 15 feet wide.

Landscaping (Section 17.10.160)

☒ That landscaping be provided in accordance with Section 17.52 Landscape Standards of the Hanford Municipal Code.

☒ That except for driveways and approved parking areas all yard areas and setback areas visible from the street shall be landscaped with live plant materials and ornamentation common to the Hanford area or up to 100% of the yard and setback area may be landscaped with artificial turf and other permeable surfaces.

☒ That two street trees, a minimum 15 gallon size, shall be planted on all lots 6,000 square feet or greater. One of the two shall be planted 12 feet (no greater or no less) from the face of the font lot line street curb.

☒ That one street tree, a minimum 15 gallon size, shall be planted on all lots less than 6,000 square feet. The tree shall be planted in the parkway. If there is no parkway, the tree shall be planted four feet behind the sidewalk.

☒ That there shall be two additional street trees, a minimum 15 gallon size, planted on all corner lots in the parkway adjacent to the street side lot line.

☒ That all species of trees shall be selected from a list approved by the City Parks and Recreation Commission.

☒ That each lot owner within Tentative Tract 943 shall care for and maintain the trees and lawn area located in the parkway in front of their lot(s).

☒ For corner lots, the lot owner shall care for and maintain the parkway trees and land area along the street-side of their lot. The parkway is defined as that land area located between the street curb and the public sidewalk.

Noise:

☒ That construction equipment is muffled and construction activities be limited to the hours between 7:00 a.m. to 10:00 p.m., Monday through Friday, unless the construction is within the enclosed structure or approved by the Community Development Department.

☒ That noise from fixed mechanical equipment, when measured at the property line, meets the standard of the Hanford Noise Element.

Rooftop Equipment HMC Section 17.50.100

☒ That all elevator housing and mechanical equipment located on the roof of any building shall be screened from adjacent views and contained within a completely enclosed penthouse or portion of the same building having walls and roofs with construction and appearance similar to the building.

Outdoor Lighting Standards HMC Section 17.50.140

☒ That all lights and light fixtures, except public street lights, shall be located, aimed or shielded so as to minimize light trespassing across property boundaries or skyward.

☒ That no lights or light fixtures shall flash, revolve, blink or otherwise resemble a traffic control signal or operate in such a fashion to create a hazard for passing traffic.

☒ That building mounted lighting fixtures shall be attached only to the walls of the building. The top of a light fixture attached to a building wall shall not be higher than the top of the building parapet or the top of the roof eave, whichever is lower.

☒ That canopy ceiling light fixtures shall be recessed or the sides of the lens area shall be shielded in order to eliminate emission of horizontal light.

☒ That mercury vapor lamps shall be a fully shielded fixture with all light directed on-site.

☒ That freestanding light fixtures shall not exceed eighteen (18) feet in height measured from the top of a light fixture to the adjacent grade at the base of the support for that light fixture.

Tents, Tarps, and Other Coverings (Section 17.50.130)

☒ That no front or side building setback area shall be covered by tents, tarps, cloth, fabric, or a wood or metal covering or structure except for the following:

- ☒ Standard window and door awnings
- ☒ Ornamental covers, such as a sidewalk or entry awning trellis, or other similar improvement intended as an improved passageway or for aesthetic purposes providing architectural integrity with the building to which it is attached. Supports shall be ninety (90) percent open and shall not be enclosed.

Dust Control:

☒ That the appropriate dust-control practices of the San Joaquin Valley Air Pollution Control District shall be implemented.

☒ That the any necessary permits be obtained through the San Joaquin Valley Air Pollution Control District.

BUILDING DIVISION
TT 943

Contact Building Official: Tom Webb (559) 585-2584
Concerning questions that you may have on the conditions listed below:

Soils:

1. That a preliminary soils report, prepared by a qualified soil's engineer, be provided to the Engineering and Building Departments prior to approval of Subdivision Improvement Plans.

2. That a final soils report, prepared by a qualified soils engineer, be provided to the Engineering Department and Building Division prior to acceptance of the subdivision improvements by the City or issuance of building permits or whichever comes first.

3. That the developer retains the design engineer to inspect and verify that grading within the subdivision was constructed as per the approved design, and a copy of the report be provided to the Building Division prior to building permit issuance.

Street Names and Addresses:

1. That street addresses for each lot, as provided by the Building Division, be included on the subdivision final map.

2. That street names, as shown on the tentative subdivision map, be included on the subdivision final maps.

3. That all single family dwellings within the subdivision have illuminated address numbers 2-¼ inches high or be within an illuminated area with 3-½ inch high address numbers installed on the front most part of the building leading to the entrance. In either case the address numbers shall be of contrasting colors with the background.

4. That all landscaping requires permits and must meet requirements at time of installation.

5. That a map must be provided to show existing streets names of surrounding subdivisions that have City maintained streets.

City of Hanford Fire Department

Fire Prevention and Community Risk Reduction Division

Fire Marshal

Nikkie Chamberland

City Of Hanford Fire Department Plan Review

Approval of all projects does not exempt compliance with all applicable sections of the adopted Fire Codes and local city ordinances. All fire protection systems must be installed and operational prior to occupying the building. All permits shall be issued and paid for prior to scheduling any inspections with the fire department. Please contact the building department for the submittal process. To schedule an inspection please contact the building department at 559-585-2580

The scope of work shall be clearly stated on all the plans submitted for the permit. All deferred submittals shall be listed on the building plan page. All deferred submittals are required to be submitted within 30 days of building permit issuance.

Plan review number: TSM0009-23

Address: 12405 Hanford Armona Road, Hanford, CA 93230

Plan Reviewer: Nikkie Chamberland

Date: 9-30-2024

The following are comments that are applicable and pertain to the plans submitted: This project must comply with the latest California Fire Code.

- Project shall meet the minimum fire flow requirements per Appendix B & C of the CFC 2022; Provide the fire flows within one year
- New and existing residences that have an automatic sprinkler system, proposed accessory dwelling units shall have an automatic sprinkler system. A separate fire department permit will be required.
- Fire Riser Room:
    1. a separate room that contains the Fire Riser shall contain one man door, the room shall be a 2-hour rated room with adequate spacing to perform

maintenance, riser room shall be properly labeled with 4" lettering with contrasting background and a knox box shall be installed to contain the riser room key, fire sprinkler coverage required, emergency lighting and illuminated lighting required. The riser shall be interconnected with the fire alarm

- When a sprinkler system is required with more than 21 heads, the system shall be monitored by a central monitoring station. Fire alarm and fire detection systems required by Chapter 9 of CFC, CBC, shall be installed per NFPA 72.
- Knox FDC Locking Caps are required on all Fire Department Connections.
  A fire department access road is required for facilities that are protected by fire sprinklers and are more than 400 feet away; on-site fire hydrants and mains shall be provided where required by the AHJ. Provide a letter of certification from a licensed soil engineer on non-paved all-weather roads that provide fire access, which shall support a 40,000-lb fire apparatus at a minimum.
- All dead-end access roads of more than 150 must provide an approved turnaround or hammerhead and comply with city standards.
- All access roads shall not be less than 20 ft wide and 13 ft 6 inches
- Access road turning radius for fire apparatus/
  1. Inside turn: 20ft 10 inch
  2. Curb to Curb: 37 ft 3 inches
  3. Wall to Wal: 42 ft

- Temporary or permanent fire department access roads shall be constructed in accordance with City Standards ST-36. All weather access roads shall be in place prior to any combustible construction being brought onto the premises unless approved by the fire department.

- Additional Hydrants may be required, all hydrants shall be installed and accepted prior to combustibles being dropped on site. All hydrants shall be protected by bollards Hydrant spacing shall be as follows CFC 2022 Appendix C;
  1. Residential area- 500ft
  2. Commercial area-300ft
  3. A hydrant will be required within 50' of the Fire Department connection.
  4. Provide a turning template on Plan Review

- No traffic calming devices shall be installed without the Fire Department's approval
- Areas identified as "**Fire lanes**" must be identified as such per requirements set forth in the California Vehicle Code Section 22500.1.

  1. **Access roads 20-26 feet in width:** Fire lanes shall be on both sides of the fire apparatus access roads.
  2. **Access roads 26 to less than 32 feet in width**: Fire lanes shall be on one side of the fire apparatus access roads.
  3. **Access roads 32 feet in width or more:** No fire lanes required.
  4. **Markings shall include "No Parking- Fire Lane"**
- Locked gates installed across fire department access roads:

1. **Manual gates** with a chain lock require a **Knox Padlock** to be installed on them, or a **Knox Box** shall be installed on the exterior of the gate and a key to the lock on the gate must be placed in the Knox Box. **(See www.knoxbox.com for current models)**
2. **Electric Gates** shall be equipped with an electric **Knox Key Switch,** at the gate location.
3. In case of a loss of power, electrically operated gates shall have a means of backup power or shall default in the open position for immediate fire department access.
4. At no time shall the width of the fire department access road be reduced below **20 feet wide through or at any gates** along the fire department's emergency access roads due to protruding objects from gate supports, frames, signs, access booths, curbs, etc.
5. Provide a Knox Box for all structures and gates. In accordance with the 2019 CFC 506.1. Hanford Fire Department shall approve the location.
6. Ordering Knox Box products can be done directly at www.knoxbox.com. Click to choose your local fire department agency, enter "Hanford Fire Dept", and a list of products will populate for you to order.

- All address numbers shall be installed onto the building and shall be visible from the frontage street. The color of the address numbers shall be in a contrasting color to the building.
  Size of Address Numbers:

  1. Downtown area (existing buildings): 4 inch numbers
  2. Buildings 20 ft. or less from the street: 6-inch numbers
  3. Buildings 21- to 40-ft. from the street: 8-inch numbers
  4. Buildings more than 40 ft. from the street: 12-inch numbers
- Operational Fire Permit is Required

- Fire permits are required for all underground fire lines, overhead sprinklers, and fire alarms. These are all separate permits and will be charged accordingly. All deferred submittals shall be submitted, stamped, and approved prior to combustible on site.

- Refer to the 2022 California Fire Code in governing codes

PUBLIC WORKS DEPARTMENT

Contact Assistant Engineers: Steve Coodey or Robert Buchanan
Concerning questions that you may have on the conditions listed below:

Tentative Tract 943- Silicon Valley Ranch

Maps and Plans:

1. That the developer submit to the City Engineer a set of construction plans on 24" x 36" sheets for all required improvements. Plans shall be prepared by a registered civil engineer, and shall include a drainage and utility plan identifying sizes and location of sanitary sewer, storm drainage and water mains, curbs, gutters, sidewalks, masonry wall, street improvements and other infrastructure required for development. All plans shall be approved by the City Engineer and all other involved agencies before the release of the building permits.

2. That the developer shall submit to the City Engineer a set of construction plans on 24" X 36" size sheets for all required improvements. The plans shall be prepared by a licensed civil engineer and shall include a site plan showing all on-site and off-site improvements, including but not limited to, sanitary sewer, storm drainage, and water system infrastructure, refuse enclosure locations, public street & parking lot improvements, landscape & irrigation systems and all other improvements as required by the project conditions of approval and the City of Hanford Standards and Specifications. Improvement plans shall include all City of Hanford Construction Standard Detail's pertinent to the project. Plans must be approved by the City of Hanford and any other affected agencies before issuance of building or encroachment permits.

Easements:

1. That easements be designated on the recorded final map as required by the utility companies and where needed for providing service to streetlights as designated by the City of Hanford Engineering Department.

2. That a 20 foot easement established south of the centerline of Hume Avenue shall be dedicated to the city for the purposes of street right of way.

3. That an easement for storm drainage purposes be dedicated to the City where necessary to facilitate installation of storm drainage facilities connecting the portion of the development located on the west side of Aquifer Drive to the proposed storm drainage basin located on the east side of Aquifer Drive.

4. That all easements for irrigation ditches and/or irrigation pipelines be legally abandoned or relocated to the satisfaction of the City Engineer prior to acceptance of the subdivision improvements.

5. That an easement for sanitary sewer along the south side of Hume Avenue for gravity sewer pipeline, sewer lift station and force main shall be dedicated to the city. This dedication requirement is contingent on whether Tract 943 develops before Live Oak West Tract 909.

6. That all proposed landscape/public utility easements as shown on the tentative map be dedicated to the City and be included on the subdivision final map.

Dedications:

1. That all proposed streets and street extensions as shown on the tentative map be dedicated to the City, as public right-of-way, and any alterations of existing utilities be the responsibility of the developer.

2. That developer dedicate to the City, additional street right of way along the east side of Aquifer Drive, between Hanford Armona Road and the southerly ultimate alignment of W. Spring Crest Drive property frontage to facilitate an overall street right of way width of 84 feet in conformance with City Standard Detail ST-23 ("Major Collector Street").

3. That the developer dedicate to the City, full right of way between the southerly ultimate alignment of W. Spring Crest Drive and Hume Avenue, a width of 84 feet to establish the extension of Aquifer Drive in conformance with City Standard Detail ST-23 ("Major Collector Street"). Aquifer shall include offset as shown on the tentative map to align with the approved tentative map for Live Oak West Tract 909.

4. That the developer dedicate to the City, additional street right of way along the south alignment of W. Spring Crest Drive property frontage to facilitate an overall street right of way width of 68 feet in conformance with City Standard Detail ST-26 ("Minor Collector Street").

5. That the developer dedicate to the City, street right of way along the Hume Avenue property frontage to facilitate an overall street right of way width of 88 feet in conformance with City Standard Detail ST-23 modified for additional parkway strip equaling 12 feet for a total street right of way of 88 feet.

6. That developer dedicate to the City, the proposed onsite drainage basin for Tract 943 drainage purposes.

7. That the developer shall dedicate the park land to the City.

Park Improvements:

1. The applicant proposes a 3.58-acre park which shall be fully developed with Phase I of the subdivision.

2. That all park facility improvements shall conform to PUD master plan requirements and City Standards and Specifications. Developer shall retain the services of a landscape architect to design all park facility improvements. Improvements shall include, but not be limited to, installation of concrete walking path, covered picnic areas, decorative security lighting, drinking fountains, park benches and trash receptacles, landscaping and irrigation systems, play feature picnic table(s). Park improvements shall be constructed concurrent with the first phase of the development.

3. Park improvement reimbursement will not exceed Park Impact Fees for all phases combined.

Street Improvements:

1. That the improvements consisting of sanitary sewers, storm sewers, water mains, concrete curbs, gutters, sidewalks, street lights, street subgrading and surfacing, signage and striping and all other improvements be installed in accordance with Chapter 16.24 "Improvements" of the Hanford Municipal Code, and this resolution pertaining to subdivision improvements in effect at the time of filing the tentative map.

2. That all streets within the subdivision shall be developed to residential street standards (City standard ST-33 cul-de-sacs and ST-32 residential through streets), except the following:

    a) Aquifer Drive shall be developed as a Major Collector street with an 84 foot right of way width in conformance with City Std. ST-17 and ST-23 and a traffic index of 8. Developer shall be required to construct the remaining width of right of way on the east side of Aquifer Drive from Spring Crest to Hanford Armona Road. North of the project boundary, curb and gutter as well as the curb return at the southeast corner of Hanford Armona Road and Aquifer Drive shall be installed. Sidewalk can be deferred until such time as the Not A Part parcel is developed.

    b) Develop Aquifer Drive full width right of way (84 feet) street improvements in conformance with City Standard ST-17 and ST-23 along both east and west boundary of property being developed south of Spring Crest Drive to Hume Avenue. With a traffic index of 8.

    c) Spring Crest Drive shall be developed as a Minor Collector street with a 68 foot width in conformance with City Standard Detail ST-17 and ST-26 with a traffic index of 6. Developer shall be required to construct the remaining width of right of way on the south side of Spring Crest Drive from the west boundary of the development to Aquifer Drive.

    d) Hume Avenue shall be developed as a Major Collector street with an 88 foot right of way width in conformance with City Standard Detail ST-17 and ST-23, modified to allow for additional park strip behind curb with a traffic index of 8. Developer will only be required to construct two-thirds (2/3) road width along project frontage. The eastbound lane shall include

a 12 foot travel lane with a 4 foot paved shoulder and a 4 foot unpaved shoulder containing a swale. If Tract 943 develops prior to Live Oak West Tract 909, the striping for Hume Avenue shall consist of matching the centerline striping as installed with Live Oak North Tract 902. If Live Oak West Tract 909 develops Hume Avenue prior to Tract 943, then striping shall be removed and a 14 foot continuous left turn lane shall be installed from Aquifer Drive to 12th Avenue.

3. That streetlights be installed throughout subdivision in conformance with City standard GE-56. Streetlights shall be located as designated by City Engineer.

4. That the development is subject to a transportation mitigation impact fee as required by City Ordinance No. 90-09 and any revisions thereof. Developer shall be entitled to a credit against subject development fee for improvements constructed by developer within Hume Avenue and Aquifer Drive, consisting of 22 feet of asphalt pavement section as measured from centerline of road. Reimbursement are paid according to the City of Hanford Development Impact Fee Study dated September 2019.

Backup Parkway Improvements:

1. That the developer shall design and construct the following improvements along Hume Avenue, Spring Crest Drive and Aquifer Drive frontages of proposed subdivision.

   a. A six (6) ft. minimum high ornamental, masonry block fence with continuous footing. Wall shall be treated with an anti-graffiti repellent.

   b. A 4 ½ ft. wide sidewalk per City Standard Detail CO-14.

   c. Soil preparation, automatic irrigation and landscaping.

   d. Landscape plans for right-of-way and 12 ft. wide landscape easement area along Hume Avenue property frontage from the back of curb to the block wall.

2. The species of tree and plants are to be selected from a list approved by the City Street Tree Commission.

3. That the design location of the masonry wall and landscape plans shall be approved by the Community Development Department and City Engineering Department prior to recording a subdivision final map. And the approval of block wall and landscape improvements shall be submitted with initial submittal of project improvement plans.

4. All above ground pedestals and other utility boxes shall be located between back of sidewalk and masonry wall/fence.

Existing Wells:

1. That all existing wells on the property be abandoned in accordance with State of California standards.

Restricted Access:

1. That a one-foot reservation strip be established at the end or sides of the roads abutting unsubdivided property and indicated on the subdivision final map.
2. That all access be restricted from the Hume Avenue, Aquifer Drive and Spring Crest Drive right-of-way for lots backing or siding onto said rights-of-way. A restricted access designation shall be depicted on all recorded final maps.
3. That the developer construct a barricade to City standards at the end of each future through streets.

Sewer Improvements:

1. That the developer's engineer provide a sanitary sewer master plan complete with calculations for the entire subdivision that coincides with the Live Oak West Sanitary Sewer Master Plans for City review and approval prior to recording a subdivision final map for the first phase of development. Consideration shall be given for future areas of development located adjacent to proposed subdivision per the City Sanitary Sewer Master Plan.
2. That a minimum 8-inch diameter sanitary sewer main be installed within Aquifer Drive between Spring Crest Drive and Hume Avenue.
3. That in the event that the subdivision is constructed prior to the Live Oak West Tract 909 subdivision, developer shall install a sanitary sewer lift station per the Live Oak West Tract 909 Sanitary Sewer Master Plan, located at the southwest corner of Hume Avenue and Aquifer Drive.
4. That developer shall install a 12 inch sewer main in Hume Avenue from the west development boundary to Aquifer Drive. Applicant shall be entitled to a reimbursement for over sizing in accordance with City Municipal Code Section 13.08, or any revisions thereof.
5. That a 6-inch diameter sanitary sewer force main be installed within Hume Avenue from the sanitary sewer lift station west of Aquifer Drive along development frontage and connecting to an existing gravity manhole located near the east project boundary.
6. That developer is entitled to a reimbursement for the completion of the sanitary sewer lift station in accordance with City Municipal Code section 13.08 and in conformance with the City of Hanford Development Impact Fee Study dated September of 2019. The development will be eligible for reimbursement for lift station

costs beyond the proportional need of the development. Developer to provide calculations to the City for their portion of reimbursement.

7. That developer is entitled to a reimbursement agreement in accordance with City Municipal Code section 13.08 for sanitary sewer main improvements constructed within Hume Avenue, which also provides a benefit to others. Costs for sanitary sewer main improvements installed within Hume Avenue, if applicable, shall be per the City of Hanford Development Impact Fee Study document dated September of 2019. Reimbursement cost shall be per the Fee Study at time of acceptance.

Storm Drainage Improvements:

1. That the developer's engineer provide a storm drainage master plan complete with calculations for the entire subdivision for City review and approval prior to recording a subdivision final map for the first phase of development.

2. That the developer is required to complete construction of the storm drain basin with the first phase of the subdivision. The basin shall be designed in conformance with the City of Hanford's Storm Drainage Design Criteria specifications and shall include a six (6) ft. minimum high ornamental, masonry block fence with continuous footing along the Aquifer Drive and Hume Avenue frontages, a 24' wide drive approach per City Standard Detail CO-41 and access gates per City Standard Detail GE-26. A chain-link fence with continuous footing per City Standard Detail GE-23 shall be constructed along non street fronting basin boundaries.

3. That developer is required to comply with the State of California Water Resources Control Board requirements specifically related to the National Pollution Elimination System Permit process.

Water System:

1. That the developer's engineer provide a Water System Master Plan complete with calculations for the entire subdivision for City review and approval prior to recording a subdivision final map for the first phase of development. Consideration shall be given for future areas of development located adjacent to proposed subdivision, as shown on the city Water Master Plan.

2. That a minimum 18 inch diameter water main and appurtenances, be extended along property frontage within Aquifer Drive. Applicant shall be entitled to a refund for water main oversizing in accordance with City Municipal Code Section 13.04.

3. That a minimum 12 inch diameter water main and appurtenances, be extended along property frontage within Hume Avenue. Applicant shall be entitled to a refund for water main oversizing in accordance with City Municipal Code Section 13.04.

4. That all existing water wells be abandoned in conformance with State of California Department of Health Standards.

Assessment District:

1. That the developer enters into an agreement for the formation of a Community Facilities District (CFD) for the maintenance of landscaping, decorative block wall/ fencing, roadways, streetlights, curb and gutter, sidewalk, signage, storm drain system and basin and emergency services.

2. That prior to funds of the tax assessment district being obtained, the developer will be responsible for the maintenance of all items listed above.

Special Requirements:

1. That a right-to-farm provision be recorded with the recording of the final subdivision map to insure that future residents of the homes in the subdivision are aware of the adjacent agricultural uses and their right to continue to operate.

2. That each lot owner within Tract No. 943 shall care for and maintain the trees and lawn area located in the parkway in front of their lot(s). For corner lots, the lot owner shall also care for and maintain the parkway trees and lawn area along the street side of their lot. All species of trees shall be selected from a list approved by the City Street Tree Commission. The parkway is defined as that land area located between the street curb and the public sidewalk.

3. That the tree(s) and lawn area are to be properly pruned, mowed, sprayed, watered and fertilized on a regular on-going basis in order to preserve the health and life of the tree(s) and lawn area.

4. That should the tree(s) and lawn area become damaged, severely pruned, neglected, removed or die, the lot owner shall replace said tree(s) and lawn area within thirty (30) days after the date of written notice from the City of Hanford. The tree(s) shall be replaced with a 15 gal. size tree of the same species that was originally planted. The lawn area shall be replaced with lawn. Rocks, bark, ground cover, plants or paving are not allowed in the parkway

5. That the "NOTICE, DISCLOSURE, ACKNOWLEDGMENT AND AGREEMENT OF CONTINUED CARE AND MAINTENANCE BY LOT OWNER OF THE TREES AND LAWN AREA PLANTED IN THE PARKWAY" be recorded concurrent with the recording of the subdivision final map to insure that future residents of homes in the subdivision are aware of the obligation to maintain the landscaping within the park strip. Each lot owner is to be provided a copy of said Notice, Disclosure, Acknowledgement, and Agreement, attached as in Exhibit B.

Impact Fees:

1. That development is subject to a Police Development Impact Fee as required by City Ordinance No. 98-14, and any revisions thereof. Fee payable with each building permit.

2. That development is subject to a Fire Development Impact Fee as required by City Ordinance No. 98-14, and any revisions thereof. Fee payable with each building permit.

3. That development is subject to a Park Development Impact Fee as required by City Ordinance No. 90-10 and any revisions thereof. Fee payable with each building permit.

4. That development is subject to a Transportation mitigation impact fee as required by City Ordinance No. 90-09 and any revisions thereof. Fee payable with each building permit.

5. That the development is subject to a Wastewater System Development Impact fee as required by City Ordinance No. 98-14, and any revisions thereof. Fee payable with each building permit.

6. That development is **NOT** subject to a Storm Drainage Development Impact fee, as required by City Ordinance No. 98-14, and any revisions thereof. The development will be constructing a storm basin.

7. That development is subject to a Water System Development Impact Fee as required by City Ordinance No. 98-14 or any revisions thereof. Fee payable with each building permit.

8. That development is subject to a Sanitary Sewer area of benefit assessment fee in accordance with City Ordinance No. 92-03 and any revisions thereof. Subject fee shall be paid prior to recording a subdivision final map.

Exhibit D

DRAFT ENVIRONMENTAL IMPACT REPORT

CITY OF HANFORD

SILICON VALLEY RANCH RESIDENTIAL PROJECT

OCTOBER 2024

DRAFT ENVIRONMENTAL IMPACT REPORT

SILICON VALLEY RANCH RESIDENTIAL PROJECT

Prepared for:

City of Hanford
317 N. Douty Street
Hanford, CA 93230
Contact Person: Gabrielle Myers, Senior Planner
Phone: 559-585-2578

Consultant:

5080 California Avenue, Suite 220
Bakersfield, CA 93309
Contact: Jaymie L. Brauer
Phone: (661) 616-2600

October 2024

Project #220056

Table of Contents

List of Acronyms and Abbreviations v

CHAPTER 1 - Executive Summary *1-1*

1.1 - Introduction 1-1
1.2 - Project Summary 1-1
1.2.1 - Project Location 1-1
1.2.2 - Project Description 1-1
1.3 - Lead Agency, Responsible Agency, and Trustee Agencies 1-2
1.4 - Summary of Project Objectives 1-2
1.5 - Scope of the Environmental Impact Report 1-3
1.6 - Notice of Preparation 1-4
1.7 - Public Review of the Draft EIR 1-4
1.8 - Environmental Impacts 1-5
1.8.1 - Impacts Not Further Considered in This EIR 1-5
1.8.2 - Impacts of the Proposed Project 1-5
1.9 - Summary of Project Alternatives 1-16
1.9.1 - Alternatives Considered and Rejected 1-16
1.9.2 - Alternatives Considered and Evaluated 1-16
1.10 - Environmentally Superior Alternative 1-16
1.11 - Growth Inducement 1-17
1.12 - Irreversible Impacts 1-19
1.13 - Areas of Controversy 1-19
1.14 - Issues to be Resolved 1-19
1.15 - Executive Summary Matrix 1-19

CHAPTER 2 - Introduction *2-1*

2.1 - Overview 2-1
2.2 - Purpose of This Environmental Impact Report 2-1
2.2.1 - Issues to be Resolved 2-2
2.3 - Terminology 2-2
2.4 - Decision-Making Process 2-4
2.4.1 - Notice of Preparation (NOP) 2-5
2.4.2 - Scoping Meeting 2-5
2.5 - Availability of the Draft EIR 2-8
2.6 - Format and Content 2-8
2.6.1 - Required EIR Content and Organization 2-8
2.7 - Responsible and Trustee Agencies 2-10
2.7.1 - Local Agencies 2-10
2.7.2 - State Agencies 10
2.7.3 - Federal Agencies 2-11

2.8 - Incorporation by Reference 2-11
2.9 - Sources 2-11

CHAPTER 3 - Project Description 3-1

3.1 - Project Overview 3-1
3.2 - Project Location and Environmental Setting 3-1
3.2.1 - Regional Setting 3-1
3.2.2 - Local Setting 3-1
3.2.3 - Project Location 3-5
3.3 - Project Objectives 3-5
3.4 - Proposed Project 3-5
3.5 - Entitlements Required 3-7
3.5.1 - Other Responsible Agencies 3-8
3.6 - Cumulative Projects 3-8

CHAPTER 4 - Environmental Impact Analyses 4-1

4.1 - Land Use and Planning 4-1
4.1.1 - Introduction 4-1
4.1.2 - Environmental Setting 4-1
4.1.3 - Regulatory Setting 4-2
4.1.4 - Impacts and Mitigation Measures 4-16
4.2 - Transportation 4-52
4.2.1 - Introduction 4-52
4.2.2 - Environmental Setting 4-52
4.2.3 - Regulatory Setting 4-57
4.2.4 - Impacts and Mitigation Measures 4-68
4.3 - Approach to Environmental Analysis 4-75
4.4 - Environmental Topics 4-76
4.5 - Organization of Issue Areas 4-76
4.6 - Level of Significance 4-76
4.7 - Format Used for Impact Analysis and Mitigation Measures 4-77

CHAPTER 5 - Consequences of Project Implementation 5-1

5.1 - Environmental Effects Found to be Less than Significant 5-1
5.1.1 - Potential for Less than Significant Impacts to Occur 5-1
5.1.2 - Potential for Less than Significant Impacts to Occur with Incorporation of Mitigation Measures 5-8
5.2 - Significant Environmental Effects that Cannot be Avoided 5-8
5.3 - Growth Inducing Impacts 5-9
5.4 - Significant Irreversible Changes 5-9

CHAPTER 6 - Alternatives 6-1

6.1 - Introduction 6-1

6.1.1 - Significant Impacts of the Project 6-2
6.1.2 - Other Impacts of the Project 6-11
6.2 - Project Objectives 6-11
6.3 - Alternatives Considered but Rejected 6-12
6.4 - Alternatives Considered and Evaluated 6-12
6.4.1 - Alternative A - No Project Alternative 6-12
6.4.2 - Alternative B - Reduced Project Alternative 6-13
6.4.3 - Alternative C – Multi-Family Alternative 6-13
6.4.4 - Alternative D – Different Site Alternative 6-14
6.5 - Environmentally Superior Alternative 6-15

CHAPTER 7 - Response to Comments 7-1

CHAPTER 8 - Organizations and Persons Consulted 8-1

CHAPTER 9 - List of Preparers 9-1

CHAPTER 10 - References 10-1

List of Figures

Figure 3-1 Regional Location 3-2
Figure 3-2 Project Site 3-3
Figure 3-3 Sphere of Influence 3-4
Figure 3-4 Tentative Tract Map 943 3-6

List of Tables

Table 1-1 Summary of Significant Impacts of the Project 1-14
Table 1-2 Comparison of Alternatives Impacts 1-18
Table 1-3 Summary of Mitigation 1-20
Table 2-1 Summary of Written Comments on Notice of Preparation 2-6
Table 2-2 Summary of Oral Comments on Notice of Preparation 2-8
Table 4.1-1 Project Site and Surrounding Land Uses and Zoning Classifications 4-2
Table 4.1-2 Project Consistency with the Kings County General Plan and City of Hanford General Plan 4-20
Table 4.2-1 Existing Arterial Streets 4-52
Table 4.2-2 Existing Collector Streets 4-53
Table 4.2-3 City of Hanford VMT Thresholds 4-68
Table 4.2-4 Unsignalized Intersection Level of Service Criteria 4-70
Table 4.2-5 Signalized Intersection Level of Service Criteria 4-70
Table 4.2-6 Intersection Level of Service Weekday AM Peak Hour 4-70
Table 4.2-7 Intersection Level of Service Weekday PM Peak Hour 4-71
Table 5-1 Summary of Significant Impacts of the Proposed Project 5-8

Table 6-1 Summary of Alternatives Impacts 6-16

List of Acronyms and Abbreviations

ADT	Average Daily Trips
BMP	best management practices
BSA	Biological Survey Area
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CTC	California Transportation Commission
DTSC	Department of Toxic Substances Control
EBR	eastbound right turn lane
EBTR	eastbound through and right turn lane
EIR	Environmental Quality Act
ESA	Environmental Site Assessment
FAR	Floor Area Ratio
FMMP	Farmland Monitoring and Mapping Program
GHG	Greenhouse gas
HCM	Highway Capacity Manual
HERO	Human and Ecological Risk Office
HHRA	Human Health Risk Assessment
HJO	Hanford Municipal Airport
HSR	Highspeed Rail
IS	Initial Study
IS/NOP	Initial Study/Notice of Preparation
ITE	Institute of Transportation Engineers
KART	Kings Area Rural Transit
KCAG	Kings County Association of Governments
KCAPTA	Kings County Area Public Transit
LAFCo	Local Agency Formation Commission
LOS	Level of Service
MDB&M	Mount Diablo Base and Meridian
NHD	National Hydrography Dataset
NOA	Notice of Availability
NOC	Notice of Completion
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NWI	National Wetlands Inventory
NWS	National Weather Service
OCPs	Pesticides and Organochlorine Pesticides
OPR	Office of Planning and Research
PEA	Preliminary Endangerment Assessment
PG&E	Pacific Gas and Electric

PRC	Public Resources Code
RHNA	Regional Housing Needs Allocation
RTIP	Regional Transportation Improvement Plan
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCE	Southern California Edison Company
SCG	Southern California Gas Company
SCS	Sustainable Communities Strategy
sf	square feet
SJVAPCD	San Joaquin Valley Air Pollution Control District
SOI	Sphere of Influence
SOV	single-occupant vehicle
SR	State Route
STIP	State Transportation Improvement Program
SWPPP	Stormwater Pollution and Prevention Plan
TA	Technical Advisory
TIA	Traffic Impact Analysis
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VMT	Vehicle Miles Traveled
WSA	Water Supply Assessment

CHAPTER 1 - EXECUTIVE SUMMARY

1.1 - Introduction

This draft focused Environmental Impact Report (EIR) has been prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts associated with the construction of 326 single-family residences, internal roads, a 2.86-acre drainage retention basin, and a 3.58-acre park on an approximately 88.9-acre site (Project). An approximate 13.87-acre portion of the Project site is intended to be sectioned off from the Project via a lot line adjustment. The Project is located in the Sphere of Influence (SOI) of the City of Hanford, California, and an annexation of the land is proposed.

The purpose of this EIR is to inform public agency decision-makers, representatives of affected and responsible agencies, the public, and other interested parties of the potential environmental effects that may result from the Project. In addition to identifying potential environmental effects, this EIR also identifies methods by which these impacts can be mitigated, reduced, minimized, or avoided.

The study area for the analysis of the project and cumulative impacts is the Hanford city limits, the portions of Kings County located adjacent to the City. The applicable cumulative projections include growth projections from the Hanford General Plan and the Kings County General Plan.

1.2 - Project Summary

1.2.1 - PROJECT LOCATION

The Silicon Valley Ranch Residential Development Project is located south of Hanford Armona Road, in the SOI of the City of Hanford. The Project encompasses approximately 88.9 acres (APN 011-040-008, 010, and 027) and is bordered by undeveloped and rural residential lands on the west and south; a church and undeveloped land to the north; and residential uses to the east. The Project is located within Section 3, Township 19 South, Range 21, East Mount Diablo Base and Meridian (MDB&M).

1.2.2 - PROJECT DESCRIPTION

The Project proposes to construct a 326-lot residential subdivision within the City of Hanford SOI. The Project will be annexed into the City under a separate application. An approximately 13.87-acre portion of the site at the northeast corner of the property is intended to be removed via a lot-line adjustment. The Project will be developed with a 326-unit single-family subdivision, a 3.58-acre park, and a 2.86-acre retention basin. Lots will range between 5,000 to 7,000 square feet and will be developed with single-family residential units. Associated utility and right-of-way infrastructure would also be developed in accordance with City of Hanford standards and regulations.

Approvals include:

- Approval of Tentative Tract Map #943.
- Prezoning – Because the Project site does not currently have a City of Hanford zoning designation, prezoning of the site is required. The Project site would be prezoned to the R-L-5 zone (Low Density Residential, 5,000 square feet).
- Annexation into the city limits by Kings County Local Agency Formation Commission (LAFCo).

Development of the Project is anticipated to occur over a 12-month period. Construction equipment will vary over the course of development and will include the following:

- Excavators/earth-moving equipment
- Depending on the foundation system, auger rig, or pile-driving rig
- All-terrain forklifts
- A man/material hoist
- Truck cranes and potentially a tower crane (pending permit approval)
- Concrete trucks
- Dump trucks
- Street sweepers/water trucks for dust control
- Construction delivery trucks (typically box trucks or flatbeds)
- Small tools (generators, light plants, compactors, air compressors

1.3 - Lead Agency, Responsible Agency, and Trustee Agencies

The Lead Agency for the proposed Project is the City of Hanford. The City is the public agency that has the principal responsibility for carrying out or disapproving the Project.

The responsible agencies are State and local public agencies other than the Lead Agency that have the authority to carry out or approve a project or that are required to approve a portion of a project for which the Lead Agency is preparing or has prepared an EIR or Negative Declaration. A complete list of agencies that may have authority as a responsible or trustee agency is listed in Chapter 2, *Introduction*.

1.4 - Summary of Project Objectives

The Project has the following objectives:

- Provide a variety of housing opportunities with a range of styles, sizes, and values that will be designed to satisfy existing and future demand for quality housing in the area.
- Provide a sense of community and walkability within the development through the use of street patterns, parks/open space areas, landscaping, and other Project amenities.
- Create a successful and financially feasible Project by meeting the housing needs of the area.

- Provide a residential development that assists the City in meeting its General Plan and Housing Element requirements and objectives.

1.5 - Scope of the Environmental Impact Report

The scope of this EIR is based on the Project description outlined in Chapter 2, *Project Description* and the Notice of Preparation (NOP) (Appendix A), focusing review of environmental resources that could result in potentially significant impacts on environmental resources. Chapter 4, *Environmental Impact Analysis,* identifies two resources related to the Project that were determined to be subject to potentially significant impacts in the NOP scoping process, and these are addressed in the following sections:

- 4.1 – Land Use Planning- Potential conflicts with an adopted land use plan, policy, or regulation
- 4.2 – Transportation and Traffic- all impacts

Sections 4.1 and 4.2 provide detailed discussions of the environmental setting, regulatory setting, methodology for impact assessment for the resource, impacts associated with the Project, and mitigation measures designed to reduce significant impacts where required and when feasible. Cumulative impacts also are discussed.

This EIR examines the potential direct and cumulative impacts of the proposed Project. These impacts were determined through a rigorous process mandated by CEQA in which existing conditions are compared and contrasted with conditions that would exist once the Project is implemented. The significance of each identified impact was determined using CEQA thresholds informed by local thresholds of significance. The following categories are used for classifying impacts.

- **Significant and Unavoidable:** Significant impacts that cannot be feasibly mitigated or avoided. No measures could be taken to avoid or reduce these adverse effects to achieve insignificant or negligible levels. Even after the application of feasible mitigation measures, the residual impact would be significant. If the Project is approved with significant and unavoidable impacts, decision-makers are required to adopt a Statement of Overriding Considerations pursuant to CEQA Section 15093 explaining why the benefits of the Project outweigh the potential damage caused by these significant unavoidable impacts.

- **Less than Significant with Mitigation:** Such impacts can be reduced to a less-than-significant level with feasible mitigation, which can include incorporating changes to the Project. If the proposed Project is approved with significant but mitigable impacts, decision-makers are required to make findings pursuant to CEQA Section 15091, stating that impacts have been mitigated to the maximum extent feasible and the residual impact would not be significant.

- **Less than Significant:** These adverse but less-than-significant impacts do not require mitigation, nor do they require findings to be made.

- **No Impact:** Such impacts are considered to not exist with the implementation of the proposed Project or have been found to not apply to the proposed Project.

1.6 - Notice of Preparation

The contents of this EIR were established based on the findings in the NOP and attached materials, as well as public and agency input during the scoping period. The City issued a NOP on June 21, 2024, to request comments on the scope of the EIR. The NOP was published online at https://www.cityofhanfordca.com/1236/Current-Projects. The NOP was circulated to relevant agencies, community organizations, and interested individuals in the City. A public scoping workshop was held on July 8, 2024; a 30-day public comments period closed on July 22, 2024 (CEQA Guidelines §15082). A copy of the NOP and comments received during the NOP review period are included in Appendix A.

1.7 - Public Review of the Draft EIR

Upon completion and circulation of this Draft EIR, the City of Hanford prepared and filed a Notice of Completion (NOC with the California Office of Planning and Research/State Clearinghouse to begin the public review period (Public Resources Code, Section 21161). Concurrent with the NOC, the City of Hanford distributed a Notice of Availability (NOA) in accordance with Section 15087 of the CEQA Guidelines. The NOA was mailed to the organizations and individuals who previously requested such a notice to comply with Public Resources Code Section 21092(b)(3). This Draft EIR was distributed to the California Office of Planning and Research/State Clearinghouse, published in the Fresno Bee newspaper to comply with Section 15087 of the State CEQA Guidelines, and was distributed to affected agencies, surrounding cities and municipalities, and all interested parties. During the public review period, this Draft EIR, including the appendices, will be available for review at the following location:

City of Hanford Community Development Department
CIVIC CENTER BUILDING
317 N Douty St, Hanford, CA 93230

In addition, the Draft EIR, including the appendices, will be available for review at the following City of Hanford website:

https://www.cityofhanfordca.com/1236/Current-Projects

Agencies, organizations, individuals, and all other interested parties not previously contacted or who did not respond to the NOP or attended the scoping meeting currently have the opportunity to comment on this Draft EIR during the 45-day public review period. Written comments on this Draft EIR should be addressed to:

Attn: Gabrielle Myers, Senior Planner
City of Hanford Community Development Department
CIVIC CENTER BUILDING
317 N Douty St, Hanford, CA 93230

Email: gmyers@hanfordca.gov

1.8 - Environmental Impacts

Section 15128 of the CEQA Guidelines requires that an EIR contain a statement briefly indicating the reasons that various, possible, new significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR. The County has engaged the public to participate in the scoping of the environmental document.

The contents of this Draft EIR were established based on the NOP prepared in accordance with the CEQA Guidelines, as well as public and agency input that was received during the scoping process. The comments to the NOP are found in Appendix A of this document. Based on the findings of the NOP and the results of scoping, a determination was made that this EIR must contain a comprehensive analysis of Land Use and Planning as well as Transportation and Traffic related issues identified in Appendix G of the CEQA Guidelines.

1.8.1 - Impacts Not Further Considered in This EIR

As discussed in Appendix A, the Project was determined to have impacts with regard to each of the impact thresholds. Therefore, all environmental issues related to Land Use and Planning as well as Transportation and Traffic as they are presented in Appendix G of the CEQA Guidelines are analyzed further in this EIR.

1.8.2 - Impacts of the Proposed Project

No Potential for Impacts to Occur

The potential environmental effects of the Project and mitigation measures are discussed in detail in Chapter 4 of this EIR. After a full analysis, the following effects were determined to have no potential for impacts to occur:

Aesthetics

- Impact 4.1-1: Have a substantial adverse effect on a scenic vista
- Impact 4.1-2: Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway

Agriculture and Forest Resources

- Impact 4.2-2: Conflict with existing zoning for agricultural use or a Williamson Act contract

- Impact 4.2-3: Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), or timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Productions (as defined in Government Code Section 51104(g))

- Impact 4.2-4: Result in the loss of forest land or conversion of forest land to non-forest use

Biological Resources

- Impact 4.4-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance

- Impact 4.4-6: Conflict with provisions of an adopted habitat conservation plan, natural communities' conservation plan, or other approved local, regional, or State habitat conservation plan

Geology and Soils

- Impact 4.7-8: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater

Hazards and Hazardous Materials

- Impact 4.9-7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires

Hydrology and Water Quality

- Impact 4.10-6: In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation

Land Use and Planning

- Impact 4.11-1: Physically divide an established community

Mineral Resources

- Impact 4.12-1: Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State

- Impact 4.12-2: Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan

Noise

- Impact 4.13-3: For a Project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels

Population and Housing

- Impact 4.14-2: Displace substantial number of existing people or housing necessitating the construction

Recreation

- Impact 4.16-2: Include recreational facilities or require construction or expansion of recreational facilities that might have an adverse physical effect on the environment

Potential for Less than Significant Impacts

Potential environmental effects of the Project and mitigation measures are discussed in detail in Chapter 4 of this EIR. After a full analysis, the following effects were determined to have less-than-significant impacts to occur:

Aesthetics

- Impact 4.1-3: Substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality

- Impact 4.1-4: Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area

Agriculture and Forest Resources

- Impact 4.2-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use

- Impact 4.2-5: Involve other changes in the existing environment which, because of their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use

Air Quality

- Impact 4.3-1: Conflict with or obstruct implementation of the applicable air quality plan
- Impact 4.3-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or State ambient air quality standard
- Impact 4.3-3: Expose sensitive receptors to substantial pollutant concentrations
- Impact 4.3-4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people

Biological Resources

- Impact 4.4-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service
- Impact 4.4-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service
- Impact 4.4-3: Have a substantial adverse effect on State or federally Protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means
- Impact 4.4-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites

Cultural Resources

- Impact 4.5-1: Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5
- Impact 4.5-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5
- Impact 4.5-3: Disturb any human remains, including those interred outside of dedicated cemeteries

Energy

- Impact 4.6-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation

- Impact 4.6-2: Conflict with or obstruct a State or local plan for renewable energy or energy efficiency

Geology and Soils

- Impact 4.7-1(i): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving the rupture of a known earthquake fault as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42

- Impact 4.7-1(ii): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking

- Impact 4.7-1(iii): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction

- Impact 4.7-1(iv): Directly or indirectly cause potentially substantial adverse effects, including the risk of loss, injury, or death involving landslides

- Impact 4.7-2: Result in substantial soil erosion or loss of topsoil

- Impact 4.7-3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse

- Impact 4.7-4: Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property

- Impact 4.7-6: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

Greenhouse Gas Emissions

- Impact 4.8-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment

- Impact 4.8-2: Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases

Hazards and Hazardous Materials

- Impact 4.9-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials

- Impact 4.9-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment

- Impact 4.9-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school

- Impact 4.9-4: Create a hazard to the public or the environment as a result of being located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5

- Impact 4.9-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area

- Impact 4.9-6: Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan

Hydrology and Water Quality

- Impact 4.10-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality

- Impact 4.10-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin

- Impact 4.10-3(i): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site

- Impact 4.10-3(ii): Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river or through the addition of impervious surfaces, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site

- Impact 4.10-3(iii): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would create or contribute runoff

water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantially additional sources of polluted runoff

- Impact 4.10-3(iv): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows

- Impact 4.10-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan

Land Use Planning

- Impact 4.11-1: Cause a significant environmental impact due to a conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect

Noise

- Impact 4.13-1: Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies

- Impact 4.13-2: Generation of excessive ground-borne vibration or ground-borne noise levels

Population and Housing

- Impact 4.14-1: Induce substantial unplanned population growth in an area, either directly or indirectly

Public Services

- Impact 4.15-1(i): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection

- Impact 4.15-1(ii): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for police protection services

- Impact 4.15-1(iii): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or

physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service Ratios, response times, or other performance objectives for school services

- Impact 4.15-1(iv): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for park services

- Impact 4.15-1(v): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for other public facilities

Recreation

- Impact 4.16-1: Result in increased use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration would occur or be accelerated

Transportation

- Impact 4.17-3: Substantially increase hazards due to a geometric design feature or incompatible uses

- Impact 4.17-4: Result in inadequate emergency access

Tribal Cultural Resources

- Impact 4.18-1: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California register of historical resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)

- Impact 4.18-2: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Subdivision (c) of Public Resources Code Section 5024.1.

Utilities and Service Systems

- Impact 4.19-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects

- Impact 4.19-2: Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed

- Impact 4.19-3: Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments

- Impact 4.19-4: Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals

- Impact 4.19-5: Comply with federal, State, and local management and reduction statutes and regulations related to solid waste

Wildfire

- Impact 4.20-1: Substantially impair an adopted emergency response plan or emergency evacuation plan

- Impact 4.20-2: Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire

- Impact 4.20-3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment

- Impact 4.20-4: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes

Potential for Less than Significant Impacts to Occur with Incorporation of Mitigation Measures

The potential environmental effects of the Project and mitigation measures are discussed in detail in Chapter 4 of this EIR.

Land Use

- Impact 4.17-1: Cause a significant environmental impact due to a conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Transportation

- Impact 4.2-1 - Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

- Impact 4.17-2: Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Unavoidable Significant Adverse Impacts

Section 15126.2(b) of the CEQA Guidelines requires that the EIR describe any significant impacts, including those that can be mitigated but not reduced to less-than-significant levels. The potential environmental effects of the Project and proposed mitigation measures are discussed in detail in Chapter 4 of this EIR. The following environmental impacts were determined to be significant and unavoidable impacts (refer to Table 1-1, *Summary of Significant Impacts of the Project*).

Table 1-1
Summary of Significant Impacts of the Project

Resources	Project Impacts	Cumulative Impacts
Land Use Impact 4.1	As evaluated in detail in Table 4.1-2, the Project is consistent with the goals and policies of the City of Hanford General Plan and Kings County General Plan. The Project is consistent with both Kings County and City of Hanford General Plan policy. Therefore, impacts are considered ***less than significant***	Potential land use impacts require evaluation on a case-by-case basis because of the interactive effects of a specific development and its immediate environment. Other projects being proposed in the area would similarly be analyzed for consistency with the pertinent City General Plan and Kings County General Plan goals and policies. Therefore, as proposed the Project would be consistent with the goals and policies of the City's General Plan and would therefore not contribute to a cumulatively considerable impact regarding land use. Cumulative impacts are ***less than significant***.

Resources	Project Impacts	Cumulative Impacts
Transportation and Traffic Impact 4.1	The Project will impact the 12th Avenue and Hanford Armona Road intersection. It is recommended that the existing eastbound right turn lane will change to an eastbound through and right turn lane. Implementation of MM 4.2-1 would allow the studied intersection to operate at an acceptable LOS under City LOS standards and reduce impacts to ***less than significant.***	Cumulative impacts are assessed with the proposed Project and the 12 projects located within a one-half mile of the Project site as identified by the City of Hanford. Eleven of the 12 projects are entitled and either under construction or are anticipated to be under construction in the future. The projects that are entitled are included in and are consistent with the General Plan. Therefore, they are included in the KCAG travel demand model. The growth rates used to determine future traffic volumes would therefore reflect traffic from these projects. Cumulative impacts related to LOS would be ***less than significant with mitigation measures incorporated.***
Transportation and Traffic Impact 4.2	Due to the Project's location, it was determined that Vehicle Miles Travelled (VMT) would exceed the City of Hanford's adopted VMT per capita threshold. No applicable and feasible mitigation measures were identified to reduce VMT below thresholds. Therefore, impacts are considered ***significant and unavoidable.***	Because the proposed Project is determined to have a significant and unavoidable impact by exceeding VMT thresholds on a project level, the cumulative impacts would also be considered ***significant and unavoidable***.

Significant Cumulative Impacts

According to Section 15355 of the CEQA Guidelines, the term *cumulative impa*cts "refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Individual effects that may contribute to a cumulative impact may be from a single project or a number of separate projects. Individually, the impacts of a project may be relatively minor, but when considered along with impacts of other closely related or nearby projects, including newly proposed projects, the effects could be cumulatively considerable.

This EIR has considered the potential cumulative effects of the proposed Project. Impacts for the following issue areas have been found to be cumulatively considerable:

- Transportation and Traffic

This significant cumulative impact is discussed in the applicable section of Chapter 4, *Environmental Analysis*, of this EIR.

1.9 - Summary of Project Alternatives

Below is a summary of the alternatives to the proposed Project, that have been considered but rejected as well as those alternatives that have been considered and evaluated in Chapter 6, *Alternatives to the Proposed Project.*

1.9.1 - Alternatives Considered and Rejected

There are no Project alternatives that were considered and rejected.

1.9.2 - Alternatives Considered and Evaluated

- *Alternative A (No Project Alternative)*. Under the No Project Alternative, the Project area would remain unchanged, and there would be no residential units or parks constructed.

- *Alternative B – Reduced Project Alternative*. This alternative would decrease the number of single-family residential houses from 326 to 242.

- *Alternative C – Multi-Family Alternative*. This alternative would replace the proposed single-family residential with multi-family apartments at a density of at least 14.5 dwelling units per gross acre (1,088 units). The Medium Density Residential was utilized to follow General Plan designations north of the Project site.

- *Alternative D– Different Sites Alternative*. This alternative would relocate the Project to a different site in order to be located nearer to corridor mixed use where a mix of commercial and office uses would be available in addition to be located closer to major transit corridors. This alternative would place the Project on the east side of the City, bounded by Lacey Boulevard to the south, 9 1/4 Avenue to the west, State Route 43 to the east, and Grangeville Boulevard to the north.

1.10 - Environmentally Superior Alternative

CEQA requires that the City identify an Environmentally Superior Alternative. If the No Project Alternative is the Environmentally Superior Alternative, the City must identify an Environmentally Superior Alternative among the other alternatives considered in the EIR (CEQA Guidelines, Section 15126.6). This alternatives analysis includes three additional Project alternatives –Alternative B - Reduced Project, Alternative C - Multi-Family, and Alternative D - Different Site.

Based on the evaluation of the three alternatives, Alternative C – Multi-Family would reduce significant and unavoidable environmental impacts relating to VMT due to the increase in density. Alternative C increased density from 9.1 dwelling units/acre (du/ac) to 14.5 du/ac for a 13 percent VMT reduction, while fulfilling most of the objectives of the proposed Project and is therefore the Environmentally Superior Alternative.

1.11 - Growth Inducement

The City of Hanford General Plan recognizes that certain forms of growth are beneficial, both economically and socially. Section 15126.2(d) of the CEQA Guidelines provides the following guidance on growth-inducing impacts: a project is identified as growth-inducing if it "could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment."

Growth inducement can be a result of a new development that requires an increase in dwelling units or an increase in employment, removes barriers to development, or provides resources that lead to secondary growth. The Project would add new residential uses. It is anticipated that the construction workforce would commute to the site each day from local communities, and the majority would likely come from the existing labor pool as construction workers travel from site to site as needed. Construction staff not drawn from the local labor pool would stay in any of the local hotels in local communities.

With respect to residential land uses, the Project does not include the addition of any residentially designated uses, nor does it include typical elements that would directly or indirectly affect population or housing (i.e., extension of roads or other infrastructure). The Project would accordingly not directly result in population growth of the City.

Therefore, this Project would not result in a large increase in employment. In addition, the Project is situated in urbanized areas within the City of Hanford, where public services exist. The Project would accordingly accommodate planned growth and not induce unplanned growth.

With respect to removing barriers to development, such as by providing access to previously undeveloped areas, the Project is not anticipated to result in significant growth inducement. The Project does not include the construction of infrastructure that could provide for future residential development; it does not remove barriers to off-site development.

Although the Project accommodates planned economic growth at suitable locations, the net increase in population on the Project site would be less than significant.

Table 1-2
Comparison of Alternatives Impacts

Environmental Resource	Project	Alternative A	Alternative B	Alternative C	Alternative D
Land Use and Planning: Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect	Less than significant	Similar	Similar	Similar	Similar
Land Use and Planning: Cumulative Impacts associated with land use plan, policy, or regulation	Less than significant	Similar	Similar	Similar	Similar
Transportation and Traffic: Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities	Less than significant with mitigation incorporated	Fewer	Fewer	Similar	Similar
Transportation and Traffic: Cumulative Impacts associated with LOS	Less than significant with mitigation incorporated	Fewer	Fewer	Similar	Similar
Transportation and Traffic: Conflict or be Inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b)	Significant / Unavoidable	Fewer	Similar	Fewer	Similar
Transportation and Traffic: Cumulative Impacts associated with VMT	Significant / Unavoidable	Fewer	Similar	Fewer	Similar
Meet Project Objectives?	Yes	No	Yes	Yes	Yes
Reduce Any Significant and Unavoidable Impacts to No Impact or Less than Significant?	No	Yes	No	Yes	No

1.12 - Irreversible Impacts

Section 15126.2(c) of the CEQA Guidelines defines an irreversible impact as an impact that uses nonrenewable resources during the initial and continued phases of a project. Irreversible impacts can also result from damage caused by environmental accidents associated with a project. Irretrievable commitments of resources should be evaluated to ensure that such consumption is justified. Buildout of a project would commit nonrenewable resources during project construction and ongoing utility services during project operations. During project operations, oil, gas, and other nonrenewable resources would be consumed. Therefore, an irreversible commitment of nonrenewable resources would occur as a result of long-term project operations. However, assuming that those commitments occur in accordance with the adopted goals, policies, and implementation measures of the City of Hanford General Plan, as a matter of public policy, those commitments have been determined to be acceptable. The City of Hanford General Plan ensures that any irreversible environmental changes associated with those commitments will be minimized.

1.13 - Areas of Controversy

No areas of controversy were identified through written agency, and public comments received during the scoping period. Public comments received during scoping are provided in Appendix A and summarized in Section 2.4 of Chapter 2, *Introduction*. In summary, the following issues were identified during scoping and are addressed in the appropriate sections of Chapter 4, *Environmental Analysis*:

- Land Use and Planning
  - Consistency with the General Plan
- Transportation
  - Level of Service
  - Vehicle Miles Traveled

1.14 - Issues to be Resolved

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain issues to be resolved, which includes the choices among alternatives and whether or how to mitigate significant impacts. The major issues to be resolved regarding the Project include decisions by the Lead agency as to whether or not:

- The Draft EIR adequately describes the environmental impacts of the Project.
- The recommended mitigation measures should be adopted or modified.
- Additional mitigation measures need to be applied.

1.15 - Executive Summary Matrix

Table 1-3 below summarizes the impacts, mitigation measures, and the resulting level of significance after mitigation for the relevant environmental issue areas evaluated for the proposed project. Table 1-3 is intended to provide an overview; narrative discussions for the issue areas are included in the corresponding sections of this Draft EIR.

Table 1-3
Summary of Mitigation

Impacts	Mitigation Measures	Level of Significance
Section 4.1 Land Use and Planning		
4.1-2: Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect	No mitigation is required.	Less than significant
Section 4.2 Traffic		
4.2-1: Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities	MM 4.17-1: The Project proponent or developer shall be required to pay their fair share costs for the needed improvements. This includes changing the 12th Avenue and Hanford Armona Road intersection eastbound right turn lane to an eastbound through lane and a right turn lane. The fair share cost for the improvement is calculated at 18.94% and shall be collected by the City of Hanford at the appropriate time.	Less than significant
4.2-2: Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)	No mitigation is required.	Significant and Unavoidable

CHAPTER 2 - INTRODUCTION

2.1 - Overview

The City of Hanford (City) will be the Lead Agency pursuant to the requirements of the California Environmental Quality Act (CEQA) and will be responsible for preparing an Environmental Impact Report (EIR) pursuant to CEQA (Public Resources Code (PRC) Section 21000 et seq.) and the CEQA Guidelines. In accordance with Section 15082 of the CEQA Guidelines, the City published a Notice of Preparation (NOP). This EIR will be used by the City to evaluate the potential environmental impacts that could result from implementation of the Project and develop changes in the proposed Project and/or adopt mitigation measures that would address those impacts.

This EIR has been prepared pursuant to the following relevant State statutes and guidelines:

- CEQA (Public Resources Code, Section 21000 et seq.).
- CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, Section 15000 et seq.).

The overall purposes of the CEQA process are to:

- Identify the significant effects to the environment of a project, identify alternatives, and indicate the manner in which those significant effects can be avoided or mitigated.
- Provide for full disclosure of the project's environmental effects to the public, the agency decision-makers who will approve or deny the project, and responsible and trustee agencies charged with managing resources (e.g., wildlife, air quality) that may be affected by the project.
- Provide a forum for public participation in the decision-making process with respect to environmental effects.

2.2 - Purpose of This Environmental Impact Report

An EIR is a public informational document used in the planning and decision-making process. This project-level EIR will analyze the environmental impacts of the Project. The City of Hanford Planning Commission and City Council will consider the information in the EIR, including the public comments and staff response to those comments, during the public hearing process. As a legislative action, the final decision is made by the Board of Supervisors, who may approve, conditionally approve, or deny the Project. The purpose of an EIR is to identify:

- The significant potential impacts of the Project on the environment and indicate the manner in which those significant impacts can be avoided or mitigated.
- Any unavoidable adverse impact that cannot be mitigated.

- Reasonable and feasible alternatives to the Project that would eliminate any significant adverse environmental impacts or reduce the impacts to a less-than-significant level.

An EIR also discloses growth-inducing impacts; impacts found not to be significant; and significant cumulative impacts of the project when taken into consideration with past, present, and reasonably anticipated future projects.

CEQA requires an EIR that reflects the independent judgment of the Lead Agency regarding the impacts, the level of significance of the impacts both before and after mitigation, and mitigation measures proposed to reduce the impacts. A Draft EIR is circulated to responsible agencies, trustee agencies with resources affected by the project, and interested agencies and individuals. The purposes of public and agency review of a Draft EIR include sharing expertise, disclosing agency analyses, checking for accuracy, detecting omissions, discovering public concerns, and soliciting mitigation measures and alternatives capable of avoiding or reducing the significant effects of the project, while still attaining most of the basic objectives of the Project.

Reviewers of a Draft EIR are requested to focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the Project might be avoided or mitigated. Comments are most helpful when they suggest additional specific alternatives or mitigation measures that would provide better ways to avoid or mitigate significant environmental effects.

2.2.1 - ISSUES TO BE RESOLVED

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain issues to be resolved, which includes the choices among alternatives and whether or how to mitigate significant impacts. The major issues to be resolved regarding the Project include decisions by the Lead agency as to whether or not:

- The Draft EIR adequately describes the environmental impacts of the Project.
- The recommended mitigation measures should be adopted or modified.
- Additional mitigation measures need to be applied.

2.3 - Terminology

To assist reviewers in understanding this EIR, the following terms are defined:

- *Project* means the whole of an action that has the potential for resulting in a direct physical change in the environment. or a reasonably foreseeable indirect physical change in the environment.

- *Environment* means the physical conditions that exist in the area, and which will be affected by a proposed project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. The area involved is

where significant direct or indirect impacts would occur as a result of the Project. The environment includes both natural and manmade (artificial) conditions.

- *Impacts* analyzed under CEQA must be related to a physical change. Impacts are:
    - Direct or primary impacts that would be caused by a proposed project and would occur at the same time and place.
    - Indirect or secondary impacts that would be caused by a proposed project and would be later in time or farther removed in distance but would still be reasonably foreseeable. Indirect or secondary impacts may include growth-inducing impacts and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.
    - The California Supreme Court recently ruled that the environment's impact on a project falls outside the scope of CEQA except to the extent that impacts from a project exacerbate such impacts. This EIR includes the environment's impacts on a project for informational purposes and addresses the exacerbation component of the Court's decision.

- *Significant impact on the environment* means a substantial, or potentially substantial, adverse change in any of the physical conditions in the area affected by a proposed project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. An economic or social change by itself is not considered a significant impact on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.

- *Mitigation* consists of measures that avoid or substantially reduce a proposed project's significant environmental impacts by:
    - Avoiding the impact altogether by not taking a certain action or parts of an action.
    - Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
    - Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
    - Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
    - Compensating for the impact by replacing or providing substitute resources or environments.

- *Cumulative impacts* are two or more individual impacts that, when considered together, are considerable or that compound or increase other environmental impacts. The following statements also apply when considering cumulative impacts:
    - The individual impacts may be changes resulting from a single project or separate projects.

- The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over time.

This EIR uses a variety of terms to describe the level of significance of adverse impacts. These terms are defined as follows:

- *Less than significant*. An impact that is adverse but that does not exceed the defined thresholds of significance. Less-than-significant impacts do not require mitigation.

- *Significant*. An impact that exceeds the defined thresholds of significance and would or could cause a substantial adverse change in the environment. Mitigation measures are recommended to eliminate the impact or reduce it to a less-than-significant level.

- *Significant and unavoidable*. An impact that exceeds the defined thresholds of significance and cannot be eliminated or reduced to a less-than-significant level through the implementation of mitigation measures.

2.4 - Decision-Making Process

CEQA requires Lead Agencies to solicit and consider input from other interested agencies, citizen groups, and individual members of the public. CEQA also requires a project to be monitored after it has been permitted to ensure that mitigation measures are carried out.

CEQA requires the Lead Agency to provide the public with full disclosure of the expected environmental consequences of a proposed project and with an opportunity to provide comments. In accordance with CEQA, the following is the process for public participation in the decision-making process:

- **Notice of Preparation**. The City of Hanford prepared and circulated a Notice of Preparation (NOP) to responsible, trustee, and local agencies for review and comment on June 21, 2024. The NOP and responses to the NOP are included in Appendix A of this EIR. In conjunction with this public notice, a scoping meeting was held on July 8, 2024, at Hanford City Hall, located in the Training Room, 319 N Douty St, Hanford, CA 93230.

- **Draft EIR Preparation**. A Draft EIR is prepared, incorporating public and agency responses to the NOP and scoping process. The Draft EIR is circulated for review and comment to appropriate agencies and additional individuals and interest groups who have requested to be notified of EIR projects. Per Section 15105 of the CEQA Guidelines, the City of Hanford will provide for a 45-day public review period on the Draft EIR. The City will subsequently respond to each comment on the Draft EIR received in writing through a Response to Comments chapter in the Final EIR. The Response to Comments will be provided to each agency or person who provided

written comments on the EIR a minimum of 10 business days before the scheduled City Council hearing on the Final EIR.

- **Preparation and Certification of Final EIR**. The City of Hanford will consider the Final EIR and the Project, acting in an advisory capacity to the City Council. Upon receipt of the Planning Commission's recommendation, the City Council will also consider the Final EIR, and all public comments and take final action on the Project. At least one public hearing will be held by both the Planning Commission and City Council to consider the Final EIR, take public testimony, and then approve, conditionally approve, or deny the Project.

2.4.1 - NOTICE OF PREPARATION (NOP)

Pursuant to Section 15082 of the CEQA Guidelines, as amended, the City of Hanford circulated a NOP to the State Clearinghouse, public agencies, special districts, and members of the public for a public review period beginning June 21, 2024, and ending July 22, 2024. The purpose of the NOP is to formally convey that the City, as the Lead Agency, solicited input regarding the scope and proposed content of the EIR. The NOP and all comment letters are provided in Appendix A of this EIR.

2.4.2 - SCOPING MEETING

Pursuant to Section 15206 of the CEQA Guidelines, the Lead Agency is required to conduct at least one scoping meeting for all projects of Statewide, regional, or area-wide significance. The scoping meeting is for jurisdictional agencies and interested persons or groups to provide comments regarding, but not limited to, the range of actions, alternatives, mitigation measures, and environmental effects to be analyzed. The City of Hanford hosted a scoping meeting at 5:00 p.m. on July 8, 2024, at Hanford City Hall, located in Training Room, 319 N Douty St, Hanford, CA 93230.

NOP and Scoping Meeting Results

One comment letter was submitted during the scoping process. No oral comments were presented during the July 8, 2024, scoping meeting. Specific concerns raised in written and oral comments received during the NOP public review period are discussed below. The NOP and all comments received are included in Appendix A, along with the Summary of Proceedings from the scoping meeting.

NOP Written Comments

The City received one letter with substantive comments in response to the NOP. The comments are summarized in Table 2-1, *Summary of Written Comments on Notice of Preparation/Initial Study*.

Table 2-1
Summary of Written Comments on Notice of Preparation

Commenter	Summary of Comment
Federal Agencies	No federal agencies submitted comments in response to the IS/NOP.
California State Clearinghouse and Planning Unit (letter dated July 5, 2019)	Notifies reviewing agencies of their ability to review and provide comments on the NOP within 30 days of its receipt from the Lead Agency.
California Department of Toxic Substances Control (letter dated July 9, 2024)	The Department of Toxic Substances Control (DTSC) provided comments regarding the suitability of the site for residential use due to the past agricultural activities and potential past use of pesticides in addition to other potential contaminants. The comment letter is provided along with the IS/NOP in Appendix A. Responses to DTSC comments are provided below.
Local Agencies Members of the Public	No local agencies or members of the public submitted comments in response to the NOP.

1. California Department of Toxic Substances Control

Comment 1: That all imported soil and fill materials should be tested to ensure any contaminants of concern are within DTSC's and U.S. Environmental Protection Agency (USEPA) Regional Screen Levels for the intended land use. To minimize the possibility of introducing contaminated soil and fill material there should be documentation of the origins of the soil or fill material and, if applicable, sampling be conducted to ensure that the imported soil and fill material meets the screening levels outlined in DTSC's Preliminary Endangerment Assessment (PEA) Guidance Manual for the intended land use. The soil sampling should include analysis based on the source of the fill and knowledge of the prior land use. Additional information can be found by visiting DTSC's Human and Ecological Risk Office (HERO) webpage.

Response: The Hanford Municipal Code requires that a grading plan be submitted for review and approval. The contents of the grading plan include specifications covering construction and material requirements, and a soils engineering report, which shall include data regarding the nature, distribution, and strength of existing soils; conclusions and recommendations for grading procedures; criteria for corrective measures when necessary; and opinions and recommendations covering adequacy of sites to be developed by the proposed grading. Should imported fill be necessary for the Project, the grading plan to be approved by the City will address the use of clean soil and fill pursuant to State and local requirements including Municipal Code and California Building Code standards.

Comment 2: When agricultural crops and/or land uses are proposed or rezoned for residential use, a number of contaminants of concern can be present. The Lead Agency shall

identify the amounts of Pesticides and Organochlorine Pesticides (OCPs) historically used on the property. If present, OCPs requiring further analysis are Dichlorodiphenyltrichloroethane, toxaphene, and dieldrin. Additionally, any level of arsenic present would require further analysis and sampling and must meet Human Health Risk Assessment Note Number 3 approved thresholds outlined in the PEA Guidance Manual. If they do not, remedial action must take place to mitigate them below those thresholds.

Response: A Phase I and Phase 2 Environmental Site Assessment (ESA) was prepared to determine if actual or potential environmental conditions involving the subjects are present and has been included as Appendix A in this Draft EIR (GeoTeck, Inc., 2024). Phase I ESA included a reconnaissance survey of the site and surrounding properties, interviews with appropriate representatives and regulatory agency personnel, and review of environmental databases, public records, and historical documents. The Phase I and 2 ESA also provided limited soils sampling to determine if any soil contamination was present. With respect to OCPs, five soil samples contained detectable concentrations of OCPs, however, those concentrations are below the EPA Regional Screening Level for residential soils. The concentration of the metal arsenic in all of the soil samples was above screening levels for residential soils, as determined by DTSC. However, the USEPA and the DTSC have acknowledged that naturally occurring arsenic in southern California typically exceeds the maximum screening level, with levels recorded up to 12 mg/kg in many areas (Human Health Risk Assessment (HHRA) Note Number 11 - Southern California Ambient Arsenic Screening Level). The test results for all of the soil samples are below the typically detected levels of arsenic in the southern California area. Therefore, the Phase I and 2 ESA concluded that no recognized environmental condition or concern is present on the site.

Comment 3: Additional contaminants of concern may be found in mixing/loading/storage area, drainage ditches, farmhouses, or any other outbuildings and should be sampled and analyzed. If smudge pots had been routinely utilized, additional sampling for Polycyclic Aromatic Hydrocarbons and/or Total Petroleum Hydrocarbons may be required.

Response: The Phase I and 2 ESA site investigation concluded that no recognized environmental condition in connection with the subject site had been identified. The survey of the site and historic document research did not reveal any contamination of concern related to historic use of the site for agriculture.

IS/NOP Oral Comments

The City received no oral comments in response to the NOP at the scoping meeting. The comments are summarized in Table 2-2, *Summary of Oral Comments on Notice of Preparation*.

Table 2-2
Summary of Oral Comments on Notice of Preparation

Commenter	Summary of Comment
Federal Agencies	No federal agencies commented in response to the NOP during the scoping meeting.
State Agencies	No local agencies commented in response to the NOP during the scoping meeting.
Local Agencies	No local agencies commented in response to the NOP during the scoping meeting.
Interested Parties	No interested parties commented in response to the NOP during the scoping meeting.

2.5 - Availability of the Draft EIR

This Draft EIR is being distributed directly to agencies, organizations, and interested groups and persons for comment during a 45-day formal review period in accordance with Section 15087 of the CEQA Guidelines. This Draft EIR and the full administrative record for the Project, including all studies, is available for review during normal business hours Monday through Friday at the City of Hanford Community Development Department, located at:

City of Hanford Community Development Department
CIVIC CENTER BUILDING
317 N Douty St, Hanford, CA 93230

2.6 - Format and Content

This Draft EIR addresses the potential environmental effects of the Project and was prepared following input from the public and the responsible and affected agencies, through the EIR scoping process, as discussed previously. The contents of this Draft EIR were established based on the findings in the NOP and public and agency input. Based on the findings of the NOP, a determination was made that an EIR was required to address potentially significant environmental effects on the following resources:

- Land Use and Planning
- Transportation

2.6.1 - Required EIR Content and Organization

The content and organization of this Draft EIR are designed to meet the requirements of CEQA, the CEQA Guidelines, and the Kern County CEQA Implementation Document, as well as to present issues, analysis, mitigation, and other information in a logical and understandable way. This Draft EIR is organized into the following sections:

- Chapter 1, *"Executive Summary,"* provides a Project description and a summary of the environmental impacts and mitigation measures.

- Chapter 2, *"Introduction,"* provides CEQA compliance information, an overview of the decision-making process, organization of the EIR, and a responsible and trustee agency list.

- Chapter 3, *"Project Description,"* provides a description of the location, characteristics, objectives, and the relationship of the Project to other plans and policies.

- Chapter 4, *"Environmental Setting, Impacts, and Mitigation Measures,"* contains a detailed environmental analysis of the existing conditions, project impacts, mitigation measures, and unavoidable adverse impacts.

- Chapter 5, *"Consequences of Project Implementation (Mandatory CEQA Sections),"* presents an analysis of the Project's cumulative and growth-inducing impacts and other CEQA requirements, including significant and unavoidable impacts and irreversible commitment of resources.

- Chapter 6, *"Alternatives,"* describes a reasonable range of alternatives to the Project that could reduce the significant environmental effects that cannot be avoided.

- Chapter 7, *"Responses to Comments,"* is reserved for responses to comments on this Draft EIR.

- Chapter 8, *"Organizations and Persons Consulted,"* lists the organizations and persons contacted during the preparation of this Draft EIR.

- Chapter 9, *"Preparers,"* identifies persons involved in the preparation of the Draft EIR.

- Chapter 10, *"Bibliography,"* identifies reference sources for the Draft EIR.

- *"Appendices"* provide information and technical studies that support the environmental analysis contained within the Draft EIR.

The analysis of each environmental category in Chapter 4 is organized as follows:

- *"Introduction"* provides a brief overview of the purpose of the section being analyzed with regard to the Project.

- *"Environmental Setting"* describes the physical conditions that exist at this time and that may influence or affect the topic being analyzed.

- *"Regulatory Setting"* provides State and federal laws, the City of Hanford General Plan (GP) goals, policies, and implementation measures that apply to the topic being analyzed.

- *"Impacts and Mitigation Measures"* discusses the impacts of the Project in each category, including direct, indirect, and cumulative impacts, presents the

determination of the level of significance, and provides a discussion of feasible mitigation measures to reduce any impacts.

2.7 - Responsible and Trustee Agencies

Projects or actions undertaken by the Lead Agency, in this case, the City of Hanford, may require subsequent oversight, approvals, or permits from other public agencies in order to be implemented. Other such agencies are referred to as *"responsible agencies"* and *"trustee agencies."* Pursuant to Sections 15381 and 15386 of the CEQA Guidelines, as amended, responsible agencies and trustee agencies are defined as follows:

- A *"responsible agency"* is a public agency that proposes to carry out or approve a project, for which a Lead Agency is preparing or has prepared an EIR or Negative Declaration. For the purposes of CEQA, the term *"responsible agency"* includes all public agencies other than the Lead Agency that have discretionary approval power over the project (Section 15381).

- A *"trustee agency"* is a State agency having jurisdiction by law over natural resources affected by a project that is held in trust for the people of the State of California (Section 15386).

The various public, private, and political agencies and jurisdictions with a particular interest in the Project include, but are not limited to, the following:

2.7.1 - Local Agencies

- Pacific Gas and Electric (PG&E)
- San Joaquin Valley Air Pollution Control District (SJVAPCD)
- County of Kings
- Southern California Edison Company (SCE)
- Southern California Gas Company (SCG)

2.7.2 - State Agencies

- California Air Resources Board (CARB)
- California Department of Transportation (Caltrans)
- California Department of Fish and Wildlife (CDFW)
- California Integrated Waste Management Board
- Department of Water Resources
- Governor's Office of Planning and Research
- Regional Water Quality Control Board (RWQCB), Central Valley Region
- Department of Toxic Substances Control (DTSC)
- California Environmental Protection Agency

2.7.3 - FEDERAL AGENCIES

- U.S. Environmental Protection Agency (USEPA)
- U.S. Fish and Wildlife Service (USFWS)

2.8 - Incorporation by Reference

In accordance with Section 15150 of the CEQA Guidelines to reduce the size of the report, the following documents are hereby incorporated by reference into this Draft EIR and are available for public review at the City of Hanford Community Development Department.

- City of Hanford 2035 General Plan Update
- City of Hanford 2035 General Plan Update Master EIR
- City of Hanford Subdivision Ordinance
- City of Hanford Zoning Ordinance
- City of Hanford Housing Element
- City of Hanford Vehicle Miles Travelled Threshold and Implementation Guidelines

2.9 - Sources

This Draft EIR is dependent upon information from many sources. Some sources are studies or reports that have been prepared specifically for this document. Other sources provide background information related to one or more issue areas that are discussed in this document. The sources and references used in the preparation of this Draft EIR are listed in Chapter 10, *Bibliography,* and are available for review during normal business hours at the:

City of Hanford Community Development Department
CIVIC CENTER BUILDING
317 N Douty St, Hanford, CA 93230

CHAPTER 3 - PROJECT DESCRIPTION

3.1 - Project Overview

This Environmental Impact Report (EIR) has been prepared to identify and evaluate potential environmental impacts associated with the construction of 326 single-family residences, internal roads, a 2.86-acre drainage retention basin, and a 3.58-acre park on an approximately 88.9-acre site (Project). An approximately 13.87-acre portion of the site at the northeast corner of the property is intended to be removed via a lot-line adjustment. The Project is within the City of Hanford's Sphere of Influence (SOI) but will be annexed into the City (Figure 3-1 - *Regional Location;* Figure 3-2 – *Project Area*).

3.2 - Project Location and Environmental Setting

3.2.1 - REGIONAL SETTING

The City of Hanford (City) is located 30 miles south of the City of Fresno and 20 miles west of the City of Visalia in the northern portion of Kings County, California. Kings County is one of eight counties that comprise the San Joaquin Valley, which is bound on the west by the Coast Range Mountains, on the east by the Sierra Nevada, on the south by the Tehachapi Mountains, and on the north by the Sacramento River Delta area. Kings County is bordered by Monterey County to the west, Tulare County to the east, Kern County to the south, and Fresno County to the north. Like much of the greater San Joaquin Valley, Kings County has remained predominantly an agricultural area. There are four incorporated cities in Kings County. Hanford is the largest of the four cities in physical size and population. Figure 3-1 provides the regional location of Hanford.

3.2.2 - LOCAL SETTING

The City has a total area of approximately 17 square miles and, as of January 1, 2020, had a population of 57,339 residents, which was about 38 percent of the total population of Kings County. The City's elevation is approximately 249 feet above mean sea level, and the topography of Hanford is relatively flat, indicative of the floor of the San Joaquin Valley where the City resides. Armona, Home Garden, and Grangeville are unincorporated communities located near Hanford. The Naval Air Station Lemoore is located 16 miles west of Hanford. Santa Rosa Rancheria, the reservation of the Santa Rosa Indian Community, is located eight miles southwest of Hanford.

Figure 3-3 shows the current city limits. This figure also shows the City's current Primary Sphere of Influence (SOI) and Secondary SOI. A Primary SOI is defined as "the probable physical boundaries and service area of a local agency." The City's Primary SOI represents an assumption of the City's probable future physical boundaries and service. A Secondary SOI serves as an identification of the "areas of interest" between local agencies.

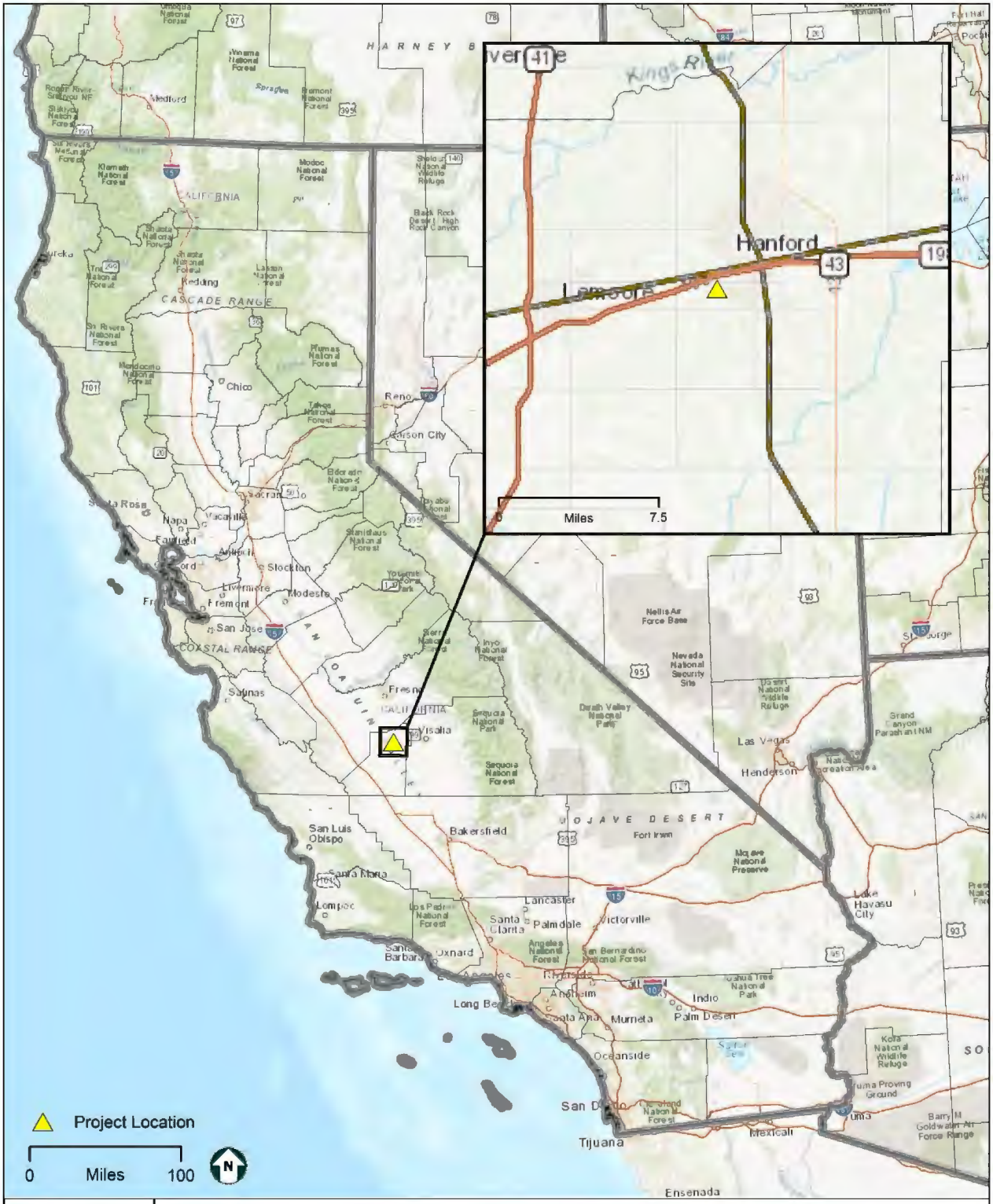


Figure 3-1
Regional Location

Figure 3-2
Project Site

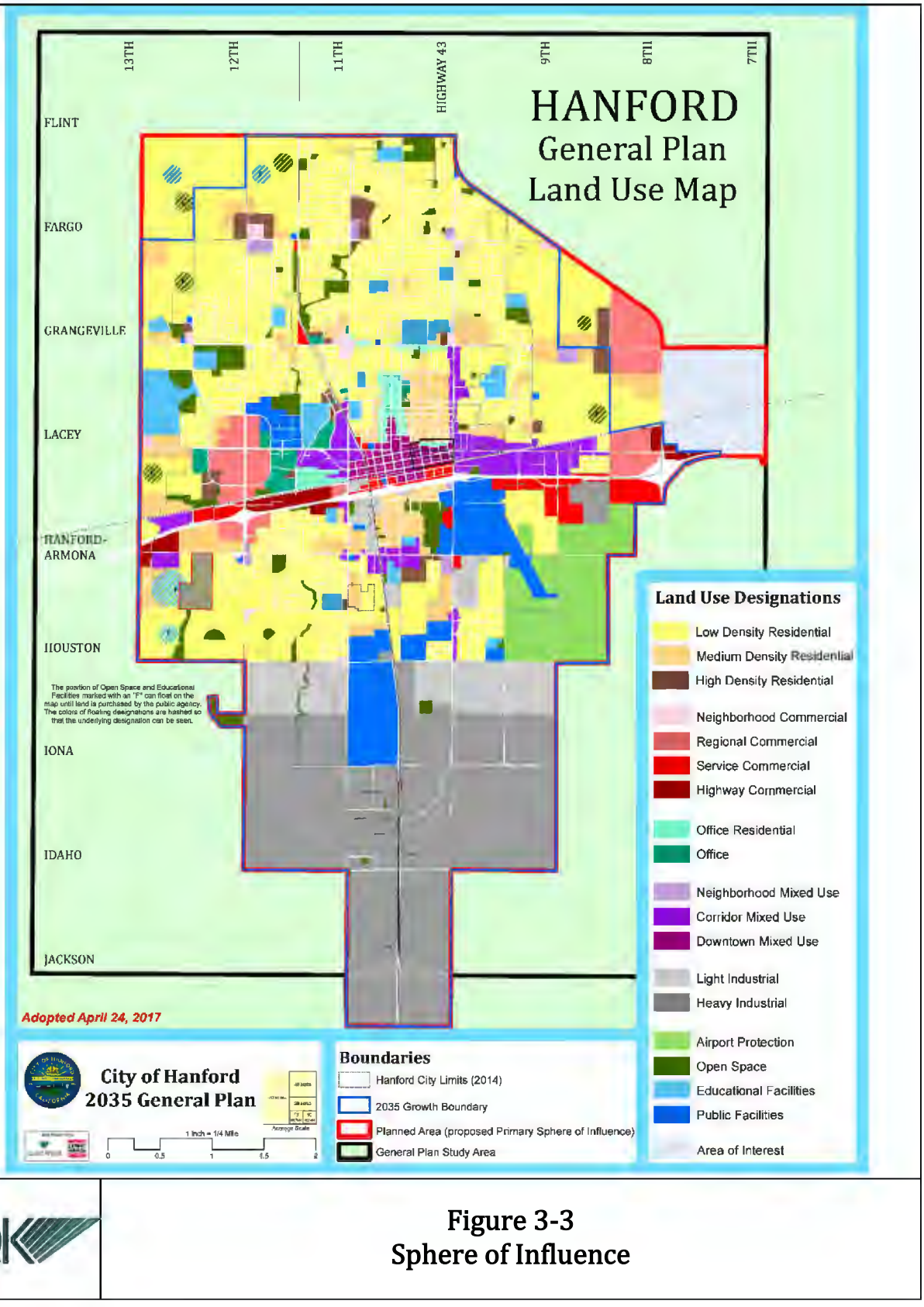


Figure 3-3
Sphere of Influence

3.2.3 - PROJECT LOCATION

The Silicon Valley Ranch Residential Development Project is located south of Hanford Armona Road, in the sphere of influence of the City of Hanford. The Project encompasses approximately 88.9 acres (APN 011-040-008, 010, and 027) and is bordered by undeveloped and rural residential lands on the west and south; a church and undeveloped land to the north; and residential uses to the east. The Project is located within Section 3, Township 19 South, Range 21 East Mount Diablo Base and Meridian (MDB&M). Figure 3-3 shows the location of the Project in relation to the city limits.

3.3 - Project Objectives

State CEQA Guidelines require that the EIR project description include a statement of the objectives of the proposed Project. The primary objectives of the Project are to:

- Provide a variety of housing opportunities with a range of styles, sizes, and values that will be designed to satisfy existing and future demand for quality housing in the area.
- Provide a sense of community and walkability within the development through the use of street patterns, parks/open space areas, landscaping, and other Project amenities.
- Create a successful and financially feasible Project by meeting the housing needs of the area.
- Provide a residential development that assists the City in meeting its General Plan and Housing Element requirements and objectives.

3.4 - Proposed Project

The Project proposes to construct a 326-lot residential subdivision within the City of Hanford Sphere of Influence (Figure 3-4). The Project will be annexed into the City under a separate application. An approximately 13.87-acre portion of the site at the northeast corner of the property is intended to be removed via a lot-line adjustment. The Project will be developed with a 326-unit single-family subdivision, a 3.58-acre park, and a 2.86-acre retention basin. Lots will range between 5,000 to 7,000 square feet and will be developed with single-family residential units. Associated utility and right-of-way infrastructure would also be developed in accordance with City of Hanford standards and regulations.

In order for the Project to be constructed, approval of the following actions is required:

- Approval of Tentative Tract Map 943.
- Prezoning – Because the Project site does not currently have a City of Hanford zoning designation, prezoning of the site is required. The Project would be prezoned to the R-L-5 (Low Density Residential, 5,000 square feet).
- Annexation into the city limits by Kings County Local Agency Formation Commission (LAFCo).

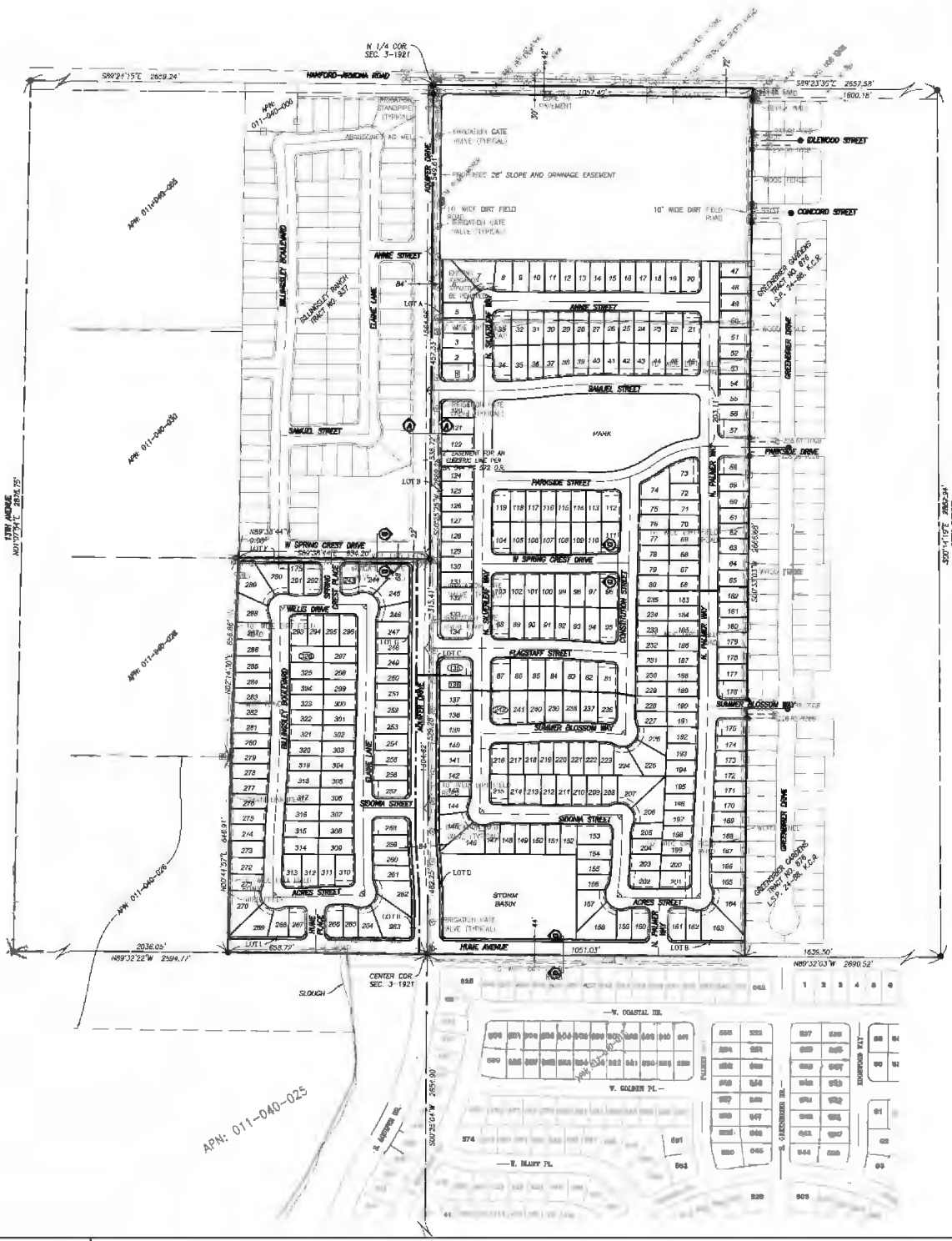


Figure 3-4
Tentative Tract Map 943

Development of the Project is anticipated to occur over a 12-month period. Construction equipment will vary over the course of development and will include the following:

- Excavators/earth-moving equipment
- Depending on the foundation system, auger rig, or pile-driving rig
- All-terrain forklifts
- A man/material hoist
- Truck cranes and potentially a tower crane (pending permit approval)
- Concrete trucks
- Dump trucks
- Street sweepers/water trucks for dust control
- Construction delivery trucks (typically box trucks or flatbeds)
- Small tools (generators, light plants, compactors, air compressors

3.5 - Entitlements Required

The City is the Lead Agency for the proposed Project, consistent with State CEQA Guidelines Section 15065(b). As such, this EIR will be used by the City to evaluate the potential environmental impacts that could result from implementation of the Project and develop changes in the proposed Project, and/or adopt mitigation measures that would address those impacts.

The Hanford City Council will consider the adoption of the Project after certification of the Final EIR. Pursuant to CEQA Guidelines Section 15093, the decision-makers must "*balance, as applicable, the economic, legal, social, technological, or other benefits of a proposed project against its unavoidable environmental risks when determining whether to approve the project. If the specific economic, legal, social, technological, or other benefits of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered 'acceptable'*."

If the City, as the Lead Agency, approves the proposed Project and significant, unavoidable environmental impacts have been documented, a Statement of Overriding Considerations must be written, which shall state the specific reasons to support the approval based on the Final EIR and/or other information in the record.

Implementation of the proposed Project would require the following regulatory and/or legislative actions by the Hanford City Council, following the recommendation from the Planning Commission:

- Certify the Final EIR.
- Consider and adopt Findings and a Statement of Overriding Considerations, as necessary.
- Approve Tentative Tract Map 943.
- Adopt an Ordinance approving the prezoning of the site as R-L-5 Low-Density Residential.

- Initiate Annexation by filing an application with Kings County LAFCo.

3.5.1 - OTHER RESPONSIBLE AGENCIES

Future activities related to development may require consideration and approval from a variety of agencies, who will be CEQA responsible or trustee agencies in this environmental process. The specific responsible agencies may vary depending upon the nature of the planned activity, location, and the resources impacted by the proposed subdivision. A preliminary list of potentially responsible and trustee agencies is provided below:

- Kings County LAFCo
- San Joaquin Valley Air Pollution Control District (SJVAPCD)

3.6 - Cumulative Projects

CEQA requires that an EIR evaluate cumulative impacts. Cumulative impacts are the Project's impacts combined with the impacts of other related past, present, and reasonably foreseeable future projects. As set forth in the CEQA Guidelines, the discussion of cumulative impacts must reflect the severity of the impacts, as well as the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of environmental impacts attributable to the Project alone. As stated in CEQA, Public Resources Code, Section 21083(b)(2), "a project may have a significant effect on the environment if the possible effects of a project are individually limited but cumulatively considerable."

According to the CEQA Guidelines:

Cumulative impacts refer to two or more individual effects, which, when considered together, are considerable and compound or increase other environmental impacts.

- The individual effects may be changes resulting from a single project or a number of separate projects.
- The cumulative impact from several projects is the change in the environment, which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (California Code of Regulations [CCR], Title 14, Division 6, Chapter 3, §15355).

In addition, as stated in the CEQA Guidelines, it should be noted that:

The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed Project's incremental effects are cumulatively considerable (CCR, Title 14, Division 6, Chapter 3, Section 15064[I][5]).

Cumulative impact discussions for each environmental topic area are provided at the end of each technical analysis contained within Chapter 4, under *Impacts and Mitigation Measures*. The cumulative impacts discussions explain the geographic scope of the area affected by each cumulative effect (e.g., immediate project vicinity, city, county, watershed, or air basin). The geographic area considered for each cumulative impact depends upon the impact that is being analyzed. For example, in assessing aesthetic impacts, the pertinent geographic study area is the vicinity of the areas of new development under the proposed plan from which the new development can be publicly viewed and may contribute to a significant cumulative visual effect. In assessing macro-scale air quality impacts, on the other hand, all development within the air basin contributes to regional emissions of criteria pollutants, and basin-wide projections of emissions are the best tool for determining the cumulative effect.

Section 15130 of the CEQA Guidelines permits two different methodologies for the completion of the cumulative impact analysis:

- The 'list' approach permits the use of a list of past, present, and probable future projects producing related or cumulative impacts, including projects both within and outside the city.

- The 'projections' approach allows the use of a summary of projections contained in an adopted plan or related planning document, such as a regional transportation plan, or in an EIR prepared for such a plan. The projections may be supplemented with additional information such as regional modeling.

This EIR uses the list approach and below is a list of similar projects within a 1.5-mile radius of the Project site. The project list provided by the Lead Agency includes the following projects.

1. Live Oak North (Tract 902, 99 single-family units, under construction)
2. Billingsly (Tentative Tract 927, 95 single-family units, not under construction)
3. Stonehaven (Tentative Tract 940, 82 single-family units, not under construction)
4. Live Oak West (Entitled under Live Oak Master Plan and Tentative Tract 909, 642 units, not under construction)
5. Live Oak East (Tract 865 and 881, 448 single-family units, under construction)
6. Live Oak East II (Tentative Tract 912, 94 single-family units, not under construction)
7. Fairfield Inn Hotel (80 units, under construction)
8. The Enclave (Tract 915, 66 single-family units, under construction)
9. The Village (100 multi-family units, under construction)
10. 216-unit apartment complex (not under construction)
11. Proposed medical mixed use complex (not entitled)
12. Monte Vista (40 high-density single-family units, under construction)

The following provides a summary of the cumulative impact scope for each impact area:

- Land Use and Planning: The analysis of the proposed Project addresses cumulative impacts related to consistency with the City of Hanford General Plan and other applicable planning documents.

- Transportation and Traffic: The analysis of the proposed Project addresses cumulative impacts to the transportation network in Hanford and the surrounding area.

CHAPTER 4 - ENVIRONMENTAL IMPACT ANALYSES

4.1 - Land Use and Planning

4.1.1 - INTRODUCTION

This section describes the affected environment and regulatory setting of the proposed Project for impacts that may affect land use and planning. It also describes the environmental and regulatory setting and discusses the need for mitigation measures where applicable. The information is based, in part, on a review of the proposed Project's consistency with the City of Hanford General Plan, City Zoning Ordinance, Kings County General Plan, and Kings County LAFCo regulations.

4.1.2 - ENVIRONMENTAL SETTING

On-Site Land Uses

The Project site has historically been used as an agricultural field and does not contain any structures.

As discussed in the scoping Initial Study (IS) prepared with the NOP (Appendix A), the site contains both Prime Farmland and Farmland of Statewide Importance as designed by the California Department of Conservation, Farmland Mapping and Monitoring Program (FMMP) (California Department of Conservation, 2022). The Project site is located within the Sphere of Influence (SOI) of the City and is designated for Low Density Residential under their General Plan. The Project site is not subject to a Williamson Act Land Use contract.

The Project site is located in Flood Zone X, an area of minimal flood hazard, and outside of the 100-year flood zone. Furthermore, the Project site is not located within the Special Flood Hazard Area (Zone A, V, A99, AE, AO, AH, VE, or AR). Per the National Hydrography Dataset (NHD) and National Wetlands Inventory (NWI), the Project site does not contain a delineated wetland, water feature, or potentially jurisdictional water body or wetland that may fall under the jurisdiction of federal and/or State regulatory agencies.

The Kings County General Plan states that there are limited excavation operations of soil, sand, and gravel for commercial use within Kings County. In 2009, the County had only one surface mining permit for a non-active gravel operation, and two agricultural reclamation sites that were fully reclaimed (Kings County, 2010). The City of Hanford General Plan further states that there have been no efforts to attempt extraction of mineral resources within or near the General Plan Planning Area. The Project site does not contain a mineral resource extraction area. Per the California Department of Conservation Well Finder online mapping application, the Project site does not contain an active or abandoned well site.

As shown in Table 4.1-1, *Project Site and Surrounding Land Uses and Zoning Classifications*, the Project site has a Kings County General Plan designation of Limited Agriculture, 10 acres, and a City of Hanford General Plan designation of Low Density Residential. The Project

proposes to annex into the City of Hanford's city limits and will be prezoned to the R-L-5 (Low Density Residential, 5,000 square feet) to be consistent with the City General Plan designation.

Surrounding Land Uses

Land uses in the region and immediate area of the Project site consist of agricultural operations and residential development. Immediately north of the Project site is agricultural land improved with row crops and single-family residences, and the Koinonia Church. The area west and south of the Project site consists of rural residential and undeveloped land. Land to the east is mainly developed with single-family residential. The nearest residences are located along the eastern boundary of the Project site.

As summarized in Table 4.1-1, surrounding land uses are designated Low Density Residential, Medium Density Residential, and Open Space under the City of Hanford General Plan Land Use Map. A small portion west of the Project site is located outside of the city limits and is designated as Limited Agriculture under the Kings County General Plan.

Table 4.1-1
Project Site and Surrounding Land Uses and Zoning Classifications

	Existing Land Use	Existing General Plan Designation	Existing Zoning
Project Site	Undeveloped Land	Low Density Residential	Prezone: R-L-5
Surrounding Land Use			
North	Agriculture, Rural Residential, Church	Medium Density Residential	R-M (Medium Density Residential)
East	Single-Family Residential	Low Density Residential	R-L-5 (Low Density Residential, 5,000 square feet)
South	Undeveloped	Open Space and Low Density Residential	R-L-5 and CO (Conservation)
West	Rural Residential, Undeveloped	Limited Agriculture, 5 Acres (Kings County) Low Density Residential (City of Hanford)	R-L-5 (City of Hanford) AL10 (Limited Agriculture, 10 acres) (Kings County)

4.1.3 - REGULATORY SETTING

This section summarizes the Land Use and Planning policies, laws, and regulations that apply to the proposed Project. This information provides context for the impact discussion related to the Project's consistency with applicable regulatory conditions.

Federal

No federal plans, policies, regulations, or laws are applicable for this issue area.

State

There are no State regulations for this issue area.

Regional

KINGS COUNTY LOCAL AREA FORMATION COMMISSION (LAFCO)

Kings County LAFCo is responsible for coordinating logical and timely changes in local governmental boundaries, conducting special studies that review ways to reorganize, simplify and streamline governmental structure and preparing a SOI for each city and special district within each county. The Commission's efforts are directed to seeing that services are provided efficiently and economically while ensuring that agricultural and open-space lands are protected. A SOI is a planning boundary outside of an agency's legal boundary that designates the agency's probable future boundary and service area. The purpose of the SOI is to ensure the provision of efficient services while discouraging urban sprawl and premature conversion of agricultural and open space lands by preventing overlapping jurisdictions and duplication of services. A secondary SOI has been established by Kings County LAFCo which is beyond the primary SOI and includes additional territory that serves only as an area of planning interest to the city. When a city desires to alter its boundary and add additional contiguous land into its jurisdictional control through an annexation, the city must first obtain LAFCo approval.

The Kings County LAFCo adopted standards to review proposals of all changes or organization or reorganization of cities and special districts and are reflected in the Kings County LAFCo Policies and Procedure Manual. Both favorable and unfavorable factors are listed, and the existence of favorable or unfavorable factors should not decide approval or denial; however a substantial number of favorable, or unfavorable, factors may be the determining factor of approval or denial of the proposal.

Standards for Annexation to Cities and Special Districts Providing Urban Services

1. *Favorable Factors:*

    a. *Proposal would eliminate or reduce in size, islands, near islands or other gross distortions of existing city and district boundaries.*
    b. *The proposed area is urban in character and should be provided with municipal or urban type services.*
    c. *The proposed area is close to urban development and municipal type services and would enhance its potential of full development.*
    d. *The proposal is required by a governmental agency for annexation of its publicly owned property.*

e. *The proposed annexation conforms to the adopted general plan.*
f. *The boundaries are definite and certain.*
g. *The proposed area is consistent with the sphere of influence.*
h. *Request for annexation comes with the consent of all land owners as shown on the last assessment roll.*

2. *Unfavorable Factors:*

a. *The proposed annexation would create extensive corridors or peninsulas extending into an unincorporated area, and would cause further distortion of existing city boundaries.*
b. *The proposed annexation would result in a premature intrusion of urbanization into an agricultural area.*
c. *Extension of city services is financially infeasible for the foreseeable future.*
d. *The area is presently rural or agricultural and no urban development appears to be imminent.*
e. *The proposed annexation is motivated by land speculation or other motives not in the public's best interest.*
f. *Boundaries of the proposal do not include appropriate area or are otherwise improperly drawn.*
g. *The proposal is inconsistent with adopted sphere of influence and adopted general plan.*

Local

KINGS COUNTY GENERAL PLAN

The 2035 Kings County General Plan provides a future vision for the county and guides the physical growth and development of the unincorporated portion of Kings County. The Kings County General Plan is also intended to conserve the County's resources through the year 2035 in a manner consistent with the goals of the people of Kings County. The Kings County General Plan includes the following goal, objective and policies regarding annexation.

LU Goal E1: Urban Fringe areas continue to allow existing uses, while land remains intended for probable future urban growth and expansion of Cities where urban level municipal services are provided.

LU Objective E1.1: Require new development in city fringe areas (except a single-family house or secondary dwelling unit on an existing lot) to annex to the city, and encourage existing developed fringe areas to annex to the City where the City the closest and most logical municipal service provide.

LU Policy E1.1.1: Require urban growth to be contiguous to existing urban development and annex to a city in order to ensure coordinated urban growth according to that City's General Plan policies. Commercial and industrial development may be considered for development

in the County when annexation is not feasible or practical but must develop public improvements to City standards.

CITY OF HANFORD GENERAL PLAN

The Hanford General Plan serves as the community's guide for the continued development, enhancement, and revitalization of the City of Hanford. The General Plan includes the following policies related to land use and annexations that are relevant to this analysis:

Chapter 3 Land Use and Community Design

Goal L1: A well planned community that grows in an organized fashion.

Goal L3: Limitation of urban sprawl-style development patterns in new growth areas.

Goal L4: Adequate land available to meet housing needs for all citizens through the year 2035.

Goal L5: Stable, high quality neighborhoods with housing integrated with schools, parks, and availability of everyday commercial goods and services.

Goal L6: A wide range of housing choices that insure opportunities for a variety of age groups, lifestyles, and income levels.

Goal L7: Residential densities that encourage both compact and infill development.

Goal L30: Preservation and enhancement of Hanford's unique character and achievement of an optimal balance of residential, commercial, industrial, public, and open space land uses.

Goal L32: Improvement in Hanford's quality of life through use of practical design principles and standards.

Goal L38: Revitalized Arterial corridors that accommodate a mix of nonresidential and residential uses that generate activity and economic vitality and improve the visual character.

Policy L1 Planned Area Boundary

Designate a Planned Area Boundary to serve as the limits of the area to be planned for urban development.

Policy L2 2035 Growth Boundary

Designate a 2035 Growth Boundary to serve as the limits of the area to be developed with urban uses during the 2015 to 2035 planning period. Locate the 2035 Growth Boundary along major roadways and other natural or manmade physical features that can serve as a physical boundary between urban and agricultural uses.

Policy L3 Developable Land Inventory

Include enough land within the 2035 Growth Boundary to meet the project land needs to accommodate growth through the year 2035, along with a 35% market flexibility factor that acknowledges existing constraints to development of some parcels.

Policy L4 New Development within Boundary

Approve new urban development only within the 2035 Growth Boundary.

Policy L6 Agriculture and the Urban Fringe

Recognize and protect the right of agricultural uses within the growth boundary to exist and continue to operate in proximity to new development on the fringes of the City.

Policy L7 Primary Sphere of Influence

Support and pursue an amendment of the City of Hanford's Primary Sphere of Influence to be coterminous to the Planned Area Boundary.

Policy L15 Initiation of Annexations

Consider initiation of annexation of land into the City of Hanford only when the following criteria are met:

1. The land is within the Primary Sphere of Influence.
2. The capacity of the water, sewer, fie, school, and police services are adequate to service the area to be annexed, or will be adequate at the time that development occurs.
3. Land for development within the city limits is insufficient to meet the current land use needs.
4. The territory to be annexed is contiguous to existing developed areas.

Policy L18 Compatibility with Surrounding Neighborhoods

Ensure that new development is compatible with existing and surrounding neighborhoods.

Policy L24 Availability of Infrastructure

Ensure that new residential developments have sufficient urban infrastructure and public facilities to accommodate the number and type of development being proposed.

Policy L27 Mix of Densities in Neighborhoods

Encourage mixing of residential densities and lot sizes within neighborhoods.

Policy L29 Agriculture

Recognize the right of agriculture to exist and continue to operate in proximity to the new residential development on the fringes of the city. Deed restrictions may be required which inform future residents of the right of agriculture to continue within the limits of the law without interference or protect from nearby property owners.

Policy L33 Size of Lots in the Low Density Residential Land Use Designation

While it is recognized that existing lot sizes of 10,000 to 40,000 square feet are included in this designation, new individual lot sizes shall range from 5,000 to 10,000 square feet in size. Under Planned Unit Development provisions, smaller lot sizes at higher densities may be permitted when clustered around shared open space amenities or through density bonus policies.

Policy L114 Services and Facilities

Include easily accessible services and facilities within each neighborhood to meet the daily needs of neighborhood residents. Most residents should life within a ½ mile walking distance of schools, parks and retail services.

Policy L120 Encroachment of Incompatible Land Uses

Protect residential neighborhoods from the encroachment of land uses that may have a negative impact on the residential living environment.

Policy L147 Hanford-Armona Road Residential and Mixed Use Development

Encourage residential and mixed use developed in the Hanford-Armona Road Corridor between 10th and 13th Avenues.

Chapter 4 Transportation and Circulation

Policy T1 Coordination of Circulation and Land Use

Develop a circulation network that reinforces the desired land use pattern for Hanford, as identified in the land use element.

Policy T29 Maximum Level of Service

Maintain a peak hour Level of Service E on streets and intersections within the area bounded by Highway 198, 10th Avenue, 11th Avenue, and Florinda Avenue, inclusive of these streets. Maintain a peak hour Level of Service D on all other streets and intersections with the Planned Growth Boundary.

Policy T33 Street improvements and Priorities

Prioritize street improvements with emphasis on current and forecasted service levels.

Policy T36 Traffic Impact Fees

Periodically review and update the traffic impact fee program to ensure new development contributes its fair share of funding for new street, intersection, and highway improvements.

Policy T40 Pedestrian and Bicycle Placemaking

Promote pedestrian and bicycle improvements that improve connectivity between neighborhoods, provide opportunities for distinctive neighborhood features, and foster a greater sense of community.

Policy T48 Traffic Calming

Consider the use of traffic calming designs such as roundabouts, bulb-outs, and other traffic calming designs, where they will improve the operation or LOS of a street.

Policy T49 Subdivision Connectivity

Design subdivision to maximize connectivity both internally and with other surrounding development.

Policy T51 Alternative Design Standards

Consider alternative roadway design standards for new residential and mixed use development for future streets that may include:

- Narrower street widths on local roadways.
- Smaller turning radii geometrics on street intersections to improve safety for pedestrians.
- Tree lined streets in parkways between the curb and sidewalk.
- Roundabouts in lieu of traffic signals where appropriate conditions exist to maximize intersection efficiency, maintain continuous traffic flow, and reduce accident severity.

Policy T64 Bicycle Network Master Planning

Maintain a Bicycle Master Plan to coordinate existing and planned infrastructure to support, encourage and promote bicycle transportation, with effective connections to downtown, major shopping areas, mixed use neighborhoods, community facilities, schools, parks, and employment areas.

Policy T70 Pedestrian Connections

Increase connectivity through direct and safe pedestrian connections to public amenities, neighborhoods, village centers and other destinations throughout the city.

Chapter 5 Open Space, Conservation and Recreation

Goal O8: The equitable distribution of parks throughout the community that are well designed, accessible, and integrated with the surrounding neighborhood.

Goal O9 Parks provided at a combined ratio of 2.5 acres per 1,000 residents.

Policy O1 Boundary between Urban and Agricultural Uses

Utilize the Planned Area Boundary as the long term boundary line between urban uses and agricultural uses and prohibit non-agricultural development outside the Planned Area Boundary.

Policy O2 Agricultural Buffer

Coordinate land use policies and designations with Kings County to provide for a buffer between the urban area of Hanford and the surrounding unincorporated communities.

Policy O4 Interim Agricultural Use

Retain existing agricultural areas as an interim use inside the Planned Area Boundary and support agricultural operations until such time that the areas are needed for logical urban expansion.

Policy O12 Soil Erosion

Require new development to implement measures to minimize soil erosion related to construction.

Policy O15 Energy-efficient Design Features

Require that new development incorporate energy-efficient design features for HVAC, lighting systems, and insulation meet or exceed California Code of Regulations Title 24.

Policy O16 Vegetation to Conserve Energy

Encourage the use of native and drought tolerant shade trees and vines on southern and western exposure building walls as an energy conservation technique.

Policy O21 Water Conservation Ordinance

Actively enforce and periodically update the City Water Conservation Ordinance.

Policy O22 Water Conservation Efforts

Actively encourage water conservation by both agricultural and urban water users.

Policy O24 Drought Tolerant Vegetation

Promote the use of drought-tolerant vegetation to minimize water consumption by providing information to developers, designers, and homebuyers.

Policy O25 Recharge Basins

Protect existing groundwater recharge basins and natural and manmade sloughs and seek the establishment of new basins within and around Hanford.

Policy O28 Water Availability in Emergencies

Ensure that public and private water facilities have adequate capacity to supply emergency needs.

Policy O29 Water Conservation Measures for New Development

Encourage new development projects to include water conservation measures, including use of graywater, reclaimed, or recycled water for landscaping, water-conserving plumbing fixtures and appliances, and water-efficient landscapes.

Policy O30 Storm Water Pollution Prevention

Implement the NPDES Stormwater Permit and for those properties exempt from the Permit, require a storm water pollution prevention plan, including use of best management practices, to control erosion and sedimentation during construction.

Policy O31 Provision of Open Space Areas

Preserve and enhance natural open space areas.

Policy O35 Impacts from Development

Ensure that potential impacts to biological resources and sensitive habitat are carefully evaluated when considering development projects.

Policy O36 Nonnative Invasive Species

Manage or eliminate nonnative invasive species from City-owned property and open space.

Policy O37 Mature Trees

Promote the preservation of existing mature trees and encourage the planting of appropriate shade trees

Policy O38 Native Tree Species and Drought Tolerant Vegetation

Encourage the planting of native tree species and drought-tolerant vegetation.

Policy 039 Endangered Wildlife and Habitat

Establish programs in connection with environmental review processes that protect endangered wildlife and their habitats.

Policy 040 Sensitive Wildlife

Work with state, federal, and local agencies on the preservation of sensitive wildlife species in the City.

Policy 044 Flexible Land Use Standards

Adopt flexible land use and design standards to allow the adaptive reuse of historic buildings with a variety of economically viable uses, while minimizing impacts to the historic value and character of sites and structures.

Policy 046 Archaeological Site Consultation

Consult with appropriate Native American associations about potential archaeological sites in the beginning stages of the development review process.

Policy 047 Archaeological Site Study

Require archaeological studies by a certified archaeologist in areas of archaeological potential significance prior to approval of development projects.

Policy 048 Cultural Site Consultation

Consult with the California Archaeological Inventory Southern San Joaquin Valley at California State University, Bakersfield about potential cultural sites on projects that could have an impact on cultural resources.

Policy 049 Cultural Site Discovery

Halt construction at a development site if cultural resources are encountered unexpectedly during construction.

Policy 050 Parks, Recreation, and Open Space Master Plan

Prepare and periodically update a Parks, Recreation, and Open Space Master Plan to plan for new growth identified in the land use element.

Policy 057 Neighborhood Parks

Establish neighborhood parks generally between 2 and 5 acres in size at locations easily accessed by residents of the neighborhood.

Policy O58 Neighborhood Parks Service Area

Neighborhood parks shall have a general service are of approximately ½ mile radius, and situated to avoid patrons having to cross arterial streets, railroad lines and major waterways.

Policy O64 Park Visibility

Parks shall be designed to promote a safe and clean environment for recreation. New neighborhoods shall be designed so that common side and rear residential property lines with parks are minimized and visibility of parks from public streets is maximized.

Policy O65 Development Impact Fee for Parks

Adopt and periodically update a park development impact fee to fund new neighborhood and community parks needed to serve new growth.

Chapter 6 Public Facilities and Services

Goal P1: Adequate water quality and quantity to meet existing and planned needs.

Goal P2: Adequate wastewater collection and treatment to meet both existing and planned needs.

Goal P3: Adequate and effective stormwater collection and disposal to meet both existing and planned needs.

Goal P5: Adequate solid waste disposal capacity to meet existing and future demands.

Goal P12: Adequate provision of school facilities to serve projected growth.

Policy P1 Adequate Water Services

Provide adequate water services to sup[port the level of development identified in the land use element.

Policy P3 Water Supply and Fire Flow Availability

Condition approval of new development projects and water service extensions on the availability of adequate water supply and the ability to meet domestic and fire flow needs of the area.

Policy P7 New Water Infrastructure

Require developers to fund and install new water distribution facilities to service their new developments.

Policy P8 Impact Fees for Water Facilities

Adopt and periodically update a water impact fee to fund community-wide water supply, treatment, and distribution infrastructure needed to serve new growth.

Policy P9 Sufficient Collection and Treatment

Ensure provision of sufficient wastewater collection and treatment facilities to support the existing and new growth identified in the land use element.

Policy P13 New Wastewater Infrastructure

Require developers to fund and install new wastewater collection facilities to service their new development.

Policy P14 Impact Fees for Wastewater Facilities

Adopt and periodically update a wastewater impact fee to fund community-wide wastewater collection and treatment needed to serve new growth.

Policy P15 Adequate Storm Water Services

Provide adequate storm water drainage infrastructure to support the level of development identified in the land use element.

Policy P17 Adequate Storm Water Drainage Improvements Availability

Condition approval of development projects on the provision of adequate storm water drainage improvements.

Policy P21 New Storm Water Drainage Infrastructure

Require developers to fund and install new storm water drainage facilities to service their new developments.

Policy P22 Impact Fees for Wastewater Facilities

Adopt and periodically update a wastewater drainage impact fee to fund area-wide storm water drainage needed to serve new growth.

Policy P24 New Development Run-Off Volumes

Require new development to discharge storm water runoff at volumes no greater than the capacity of any portion of the existing downstream system by utilizing detention or retention or other approved methods, unless the project is providing drainage infrastructure in accordance with an adopted drainage plan.

Policy P37 Impact Fees for Police Facilities

Require new development to provide funding to meet the cost of providing vehicles, equipment, and structures, to meet the needs for new population growth.

Policy P46 Building Design for Safety

Encourage building designs that help to reduce crime and improve resident safety.

Policy P47 Lighting for Safety

Facilitate public safety through the placement and design of outdoor lighting, while respecting the privacy of surrounding properties.

Policy P52 Impact Fees for Fire Facilities

Require developers to contribute impact fees to fund the cost of providing fire facilities needed to support new population growth and development.

Policy P59 Fire and Building Codes

Continue to enforce the California Fire Code, California Building Code, and Hanford Municipal Code to mitigate threats to safety and property.

Policy P79 Impact Fees for General Government Facilities

Require developers to contribute impact fees to fund the cost of providing expanded general government facilities needed to support new population growth and development.

Chapter 7 Health, Safety, and Noise

Goal H1: Reduced impacts to human life, property, the local economy, and the environment resulting from natural hazards, human-trade hazards, and noise.

Goal H5: Protection from the harmful effects of hazardous materials.

Goal H7: Protection from the harmful and annoying effects of excessive noise.

Goal H8: Protection of the City's economical base by preventing incompatible land uses from encroaching upon existing or planned noise-producing uses.

Policy H15 Building Codes and Standards for Earthquakes

Maintain and enforce current building codes and standards to reduce the potential for structural failure caused by ground shaking and other geologic hazards.

Policy H17 Geologic and Soils Studies

Require geologic and soils studies to identify potential hazards as part of the approval process for all new development prior to grading activities where questionable conditions exist.

Policy H20 New Development Requirements for Flood Protection

Require new development to provide onsite drainage or contribute towards their fair share cost of off-site drainage facilities to handle surface runoff.

Policy H27 Fire Code

Ensure that all new buildings are constructed to current Fire Code Standards.

Policy H34 Sensitive Receptors

Avoid siting uses with new sensitive receptors near existing industrial facilities that use or produce hazardous materials or may emit toxic air contaminants.

Policy H39 Aircraft Noise

Evaluate proposed development proposals against the land use policies of the Kings County Airport Land Use Compatibility Plan.

Policy H41 Interior Noise Exposure

Adopt State Noise Insulation Standards (California Code of Regulations, Title 24) and Chapter 35 of the Uniform Building Code concerning interior noise exposure for new single, multi-family housing. Hotels, and motels.

Policy H42 Noise Evaluation for New Development

Evaluate proposed development proposals against existing and future noise levels from ground transportation noise sources.

Policy H50 Sound Walls

Utilize sound walls at the perimeter of new residential developments to protect from noise generated by transportation corridors.

Policy H53 Land Use Zones that Encourage Health Food Sales

Designate land use zones that allow for convenience stores, supermarkets, and neighborhood markets that stock nutritional food choices in every existing and planned neighborhood.

Policy H60 Health and Land Use Decisions

Consider environmental justice issues as they are related to potential health impacts associated with land use decisions, including enforcement actions, to reduce the adverse health effects of hazardous materials, industrial activities, and other undesirable land uses on residents regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location.

Policy H61 Public Amenities

Consider environmental justice issues as they are related to the equitable provisions of desirable public amenities such as parks, recreational facilities, and other beneficial uses that improve the quality of life.

Policy H65 Comfortable Walking and Biking Environments

Provide comfortable environments and destinations for walking and bicycling to integrate physical activity into daily routines.

Policy H66 Non-Vehicular Access

Improve, bicycle, pedestrian, and public transportation access to residential areas, education and childcare facilities, employment centers, commercial centers, recreational areas, and other destination points.

Policy H68 New Growth Areas

Encourage land use pattern, density, and mix of uses in new growth areas that minimize the number of vehicle miles traveled and support viable choices for public transit, bicycling, and walking.

Policy H69 Separation between Incompatible Land Uses and Residential Neighborhoods

Maintain a separation between uses that are incompatible with residential neighborhoods.

4.1.4 - IMPACTS AND MITIGATION MEASURES

Methodology

The potential impacts associated with the Project are evaluated on a qualitative basis through a comparison of the existing land use and the proposed land uses, considering the applicable planning goals and policies identified above. Compliance with the aforementioned goals and policies is illustrated in consistency tables provided in the Project Impacts section below. The change in the land use on the project site is significant if the effect described under the thresholds of significance below occurs as a result of the project. The evaluation of the project impacts is based on professional judgment, analysis of the County's land use policies and the significance criteria suggested in in California Environmental Quality Act

(CEQA) Guidelines Appendix G, which the County has determined appropriate for this Draft EIR.

Thresholds of Significance

As identified in CEQA Guidelines Appendix G, to determine whether a project could potentially have a significant adverse effect on land use. A project could have a have a significant adverse effect on land use if the project would:

a. *Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?*

Project Impacts

Impact 4.1-2 - Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The City of Hanford General Plan establishes land use policies and regulations that are applicable to the Project. In addition to the City of Hanford General Plan, applicable policies and regulations of the Kings County General Plan and Kings County LAFCo were identified as they pertain to annexations of land. The following discussion evaluates the Project's consistency with these plans, policies, and regulations in the lands for which the City and responsible agencies has jurisdiction. Implementation of the proposed Project would require approval of an annexation request from Kings County LAFCo, and approval of a prezoning of the land to a compatible City of Hanford zone district, and tentative tract map with the City of Hanford Planning Commission and City Council.

The Project site has a General Plan designation of Low Density Residential and would be prezoned R-L-5. Per the City General Plan zoning matrix, the R-L-5 zone district is compatible with the General Plan designation. Approval of the tentative map subject to the provisions of the City of Hanford municipal code would allow subdivision of the Project area into lot sizes consistent with the R-L-5 zone district. Pursuant to Table 17.08.020, the proposed development of single-family dwellings throughout the subdivided Project area are permitted uses under the R-L-5 zone district.

Table 4.1-2 presents an evaluation of the Project's consistency with the City of Hanford General Plan and Kings County General Plan. The table lists the goals and policies identified above in the regulatory setting and provides analysis on the Project's general consistency with overarching policies. Additionally, the table provides goals and policies of issue areas that are presented in more detail in other sections of the EIR. As evaluated in detail in Table 4.1-2 below, the Project is consistent with the goals and policies of the City of Hanford General Plan and Kings County General Plan.

As described in Section 4.1-3, Regulatory Setting, Regional, the Project requires approval of an annexation request from Kings County LAFCo. The Kings County LAFCo Policy and Procedures Manual establishes standards for review of annexations that provide favorable and unfavorable factors to be considered with an application for annexation. Consistent with both Kings County and City of Hanford General Plan policy, application for annexation of land within the SOI of the City would occur with Kings County LAFCo and a decision would be made by the Kings County LAFCo Commissioners.

MITIGATION MEASURES

None

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Cumulative Setting Impacts and Mitigation Measures

CUMULATIVE SETTING

The study area for the analysis of cumulative impacts is the City of Hanford and the unincorporated portions of Kings County located adjacent to the city limits. The applicable cumulative projections include growth projections from the City of Hanford General Plan and the Kings County General Plan.

The City of Hanford General Plan was last adopted in the year 2017. Anticipated development within the General Plan includes 15,695 residential units needed between 2013 and 2035. The County of Kings General Plan was last adopted in the year 2010. The County General Plan was prepared to accommodate population growth through the year 2035. The General Plan estimates an additional 1,464 residential units to be constructed in the "Non-District County" area.

The Kings County 2016-2024 Housing Element, which includes Hanford, quantifies the number housing needs based on demographic trends noting an approximate 4,832 housing units under the new construction category. The total number of housing units is further defined with income categories stating 549 new construction units for extremely low income, 548 new units for very low income, 821 new units for low income, 865 units for moderate income, and 2,049 units for above-moderate income.

CUMULATIVE IMPACTS

As discussed in the Cumulative Project List section of the draft EIR, 12 similar projects are proposed within a one and a half-mile radius of the proposed Project, the geographic scope being the City of Hanford General Plan planning area. The Project and future development is required to be consistent with the City of Hanford General Plan and other applicable planning documents. Cumulative projects requiring additional consideration including rezones,

General Plan Amendments, and annexation would require approval by the County. Consistency with the City's applicable General Plan policies and Zoning Ordinance (and any other applicable planning documents) would ensure compliance and orderly development of the proposed Project and other related cumulative projects. Additionally, all cumulative projects are subject to environmental review and compliance with all federal, State, and local policies and plans. As such, cumulative impacts related to land use would be less than significant.

Moreover, the proposed Project's incremental contribution to the less than significant cumulative impacts would not be cumulatively considerable. The anticipated impacts of the proposed Project in conjunction with cumulative development in the area of the Project site would increase the urbanization and result in the loss of agricultural space within the San Joaquin Valley region. However, potential land use impacts require evaluation on a case-by-case basis because of the interactive effects of a specific development and its immediate environment. Further, as described in Table 4.1-2 below, the proposed project would be consistent with the goals and policies of the Hanford General Plan and would not lead to the premature conversion of agricultural land.

MITIGATION MEASURES

No mitigation measures are required.

CUMULATIVE LEVEL OF SIGNIFICANCE

Cumulative impacts would be ***less than significant***.

Table 4.1-2
Project Consistency with the Kings County General Plan and City of Hanford General Plan

Goals and Policies	Consistency Determination	Project Consistency
	Kings County General Plan	
LU Goal E1: Urban Fringe areas continue to allow existing uses, while land remains intended for probable future urban growth and expansion of Cities where urban-level municipal services are provided.	Consistent	The Project site is located within the SOI of the City of Hanford and is designated for low density residential under the City General Plan. The City of Hanford Water System Master Plan and Sewer System Master Plan indicate that municipal services are available or anticipated for development and would be able to service the Project.
LU Objective E1.1: Require new development in city fringe areas (except a single-family house or secondary dwelling unit on an existing lot) to annex to the city, and encourage existing developed fringe areas to annex to the City where the City the closest and most logical municipal service provide.	Consistent	The Project site is located adjacent to the current city limits and proposes annexation into the City. Per the City's Water System and Sewer System Master Plans, municipal services are either available or proposed for development and would be able to service the Project.
LU Policy E1.1.1: Require urban growth to be contiguous to existing urban development and annex to a city in order to ensure coordinated urban growth according to that City's General Plan policies. Commercial and industrial development may be considered for development in the County when annexation is not feasible	Consistent	The Project site is located adjacent to current city limits and is within the SOI of Hanford. The site is proposed to be prezoned for low density residential and is consistent with its General Plan designation. The Project proposes to annex into the City of Hanford and follows the urban growth principles of the City's General Plan.

Goals and Policies	Consistency Determination	Project Consistency
or practical but must develop public improvements to City standards.		
City of Hanford General Plan		
Chapter 3: Land Use and Community Design		
Goal L1: A well-planned community that grows in an organized fashion.	Consistent	The Project follows the General Plan designation of the site for low density residential and proposes a prezoning of R-L-5 (Low Density Residential, 5,000 square feet). Development of the subdivided lots would be subject to review, approval, and inspection by the City. This includes compliance with Zoning Ordinance development standards.
Goal L3: Limitation of urban sprawl-style development patterns in new growth areas.	Consistent	The Project follows the General Plan buildout forecast by providing single-family residential lots for an area designated for low density residential uses. The Project is located within the SOI of the City and is adjacent to existing single-family residences. The Project continues orderly City expansion as planned in the General Plan.
Goal L4: Adequate land available to meet housing needs for all citizens through the year 2035.	Consistent	The Project site encompasses approximately 88.9 acres. A 13.87-acre portion is anticipated to be removed via a lot-line adjustment,
Goal L5: Stable, high-quality neighborhoods with housing integrated with schools, parks, and availability of	Consistent	Pursuant to the City of Hanford General Plan and Zoning Map, there is a variety of commercial areas, recreational spaces, and school sites within a one-mile radius of the Project site. A mix of commercially zoned and

Goals and Policies	Consistency Determination	Project Consistency
everyday commercial goods and services.		existing commercial areas are located east, west, and north of the site. The proposed residential subdivision would meet the adopted standards of the City Municipal Code and Zoning Ordinance.
Goal L6: A wide range of housing choices that insure opportunities for a variety of age groups, lifestyles, and income levels.	Consistent	The Project site is proposed to be prezoned R-L-5 and consistent with the General Plan designation of Low Density Residential. The Project proposes a 326-lot residential subdivision with lots ranging between 5,000 to 7,000 square feet meeting the minimum lot size requirements of the City Zoning Ordinance. The lot size range allows for a variety of single-family residences to be developed.
Goal L7: Residential densities that encourage both compact and infill development.	Consistent	The Project site will be prezoned R-L-5, consistent with the General Plan designation of Low Density Residential. The lots proposed range between 5,000 to 7,000 square feet and meet the minimum lot size and density requirement of the R-L-5 zone district.
Goal L30: Preservation and enhancement of Hanford's unique character and achievement of an optimal balance of residential, commercial, industrial, public, and open space land uses.	Consistent	The Project is consistent with the General Plan buildout as the site is designated for Low Density Residential and is proposed to be prezoned R-L-5.

Goals and Policies	Consistency Determination	Project Consistency
Goal L32: Improvement in Hanford's quality of life through use of practical design principles and standards.	Consistent	Prior to Project construction, the proposed single-family residences, utility/infrastructure installation, and right-of-way development would be subject to review under the adopted development standards of the City including Municipal Code, Zoning Ordinance, and City utility design standards. Review and approval of ministerial building and grading permits ensure consistency for building and design standards throughout the City.
Goal L38: Revitalized Arterial corridors that accommodate a mix of nonresidential and residential uses that generate activity and economic vitality and improve the visual character.	Consistent	The Project site is located directly south of Hanford Armona Road, a designated Arterial road. The Project is consistent with General Plan buildout assumptions for Low Density Residential and adds 326 residential lots, a ponding basin, and a neighborhood park.
Policy L1 Planned Area Boundary: Designate a Planned Area Boundary to serve as the limits of the area to be planned for urban development.	Consistent	The Project site is located within the Planned Area Boundary and SOI of the City of Hanford. The site is designated for Low Density Residential under the General Plan.
Policy L2 2035 Growth Boundary: Designate a 2035 Growth Boundary to serve as the limits of the area to be developed with urban uses during the 2015 to 2035 planning period. Locate the 2035 Growth Boundary along major roadways and other natural or manmade physical features that can	Consistent	See Project Consistency Finding **Policy L1.**

Goals and Policies	Consistency Determination	Project Consistency
serve as a physical boundary between urban and agricultural uses.		
Policy L3 Developable Land Inventory: Include enough land within the 2035 Growth Boundary to meet the project land needs to accommodate growth through the year 2035, along with a 35% market flexibility factor that acknowledges existing constraints to development of some parcels.	Consistent	The Project proposes residential development consistent with the General Plan designation for Low Density Residential and will accommodate anticipated population growth by providing 326 residential lots.
Policy L4 New Development within Boundary: Approve new urban development only within the 2035 Growth Boundary.	Consistent	See Project Consistency Finding **Policy L1.**
Policy L6 Agriculture and the Urban Fringe: Recognize and protect the right of agricultural uses within the growth boundary to exist and continue to operate in proximity to new development on the fringes of the City.	Consistent	Currently, the Project site is zoned AL20 under Kings County jurisdiction. The proposed Project will annex the site into the City of Hanford and follow City General Plan buildout for Low Density Residential. Parcels located adjacent to city limits under Kings County jurisdiction will continue to be zoned appropriately for limited agriculture until the annexation of land within the SOI to the City occurs. The development and future residents are subject to City municipal code requirements including the "Right-to-Farm" standards due to its proximity to existing agriculture uses.

Goals and Policies	Consistency Determination	Project Consistency
Policy L7 Primary Sphere of Influence: Support and pursue an amendment of the City of Hanford's Primary Sphere of Influence to be coterminous to the Planned Area Boundary.	Consistent	See Project Consistency Finding **Policy L1.**
Policy L15 Initiation of Annexations: Consider initiation of annexation of land into the City of Hanford only when the following criteria are met: 1. The land is within the Primary Sphere of Influence. 2. The capacity of the water, sewer, fire, school, and police services are adequate to service the area to be annexed or will be adequate at the time that development occurs. 3. Land for development within the city limits is insufficient to meet the current land use needs. 4. The territory to be annexed is contiguous to existing developed areas.	Consistent	The Project proposes annexation of the subject parcels into the City of Hanford. The Project meets the criteria: 1. The Project site is located within the Primary SOI. 2. Per the City of Hanford Water System Master Plan and Sewer System Master Plan, city services are available or anticipated for development to service urban development along Hanford Armona Road. 3. The City of Hanford has designated this area for Low Density Residential and is located within the Primary SOI. The Project area has been made available for development and has municipal services in close proximity. Alternative infill sites within the city limits may not be available for development due to a number of variables including availability, municipal services connections, or other constraints.

Goals and Policies	Consistency Determination	Project Consistency
		4. The Project site located adjacent to city limits in all directions. The annexation of the Project site will not create a County island.
Policy L18 Compatibility with Surrounding Neighborhoods: Ensure that new development is compatible with existing and surrounding neighborhoods.	Consistent	Per the City of Hanford General Plan, is similarly designated and compatible with the existing and surrounding neighborhood. Land to the north is designated for Medium Density Residential, and land south, east, and west are designated for Low Density Residential. There is an existing single-family subdivision located directly east of the Project. Therefore, the proposed development would be compatible with the existing Low Density Residential to the east, and compatible with future Medium Density and Low Density Residential anticipated for sites north, south, and west of the Project site.
Policy L24 Availability of Infrastructure: Ensure that new residential developments have sufficient urban infrastructure and public facilities to accommodate the number and type of development being proposed.	Consistent	Per the City of Hanford Water System Master Plan and Sewer System Master Plan, water and sewer infrastructure exists or is anticipated to be developed to service residential development north and south of Hanford-Armona Road. The prepared initial study attached with the NOP determined that the City of Hanford has enough utility capacity to service the residential lots associated with the Project.

Goals and Policies	Consistency Determination	Project Consistency
Policy L27 Mix of Densities in Neighborhoods: Encourage mixing of residential densities and lot sizes within neighborhoods.	Consistent	The Project proposes a prezone of R-L-5 which is consistent with the General Plan designation of Low Density Residential. The subdivision proposes lots between 5,000 and 7,000 square feet, which is consistent with the City Zoning Ordinance and provides a mix of lot sizes for this new residential subdivision.
Policy L29 Agriculture: Recognize the right of agriculture to exist and continue to operate in proximity to the new residential development on the fringes of the city. Deed restrictions may be required which inform future residents of the right of agriculture to continue within the limits of the law without interference or protection from nearby property owners.	Consistent	The City of Hanford has adopted "Right-to-Farm" provisions that accept the inherent potential inconveniences and discomforts associated with agricultural activities and operations. The Project is located adjacent to existing agriculture uses and is subject to the "Right-to-Farm" provisions as adopted in the city Municipal Code.
Policy L33 Size of Lots in the Low Density Residential Land Use Designation: While it is recognized that existing lot sizes of 10,000 to 40,000 square feet are included in this designation, new individual lot sizes shall range from 5,000 to 10,000 square feet in size. Under Planned Unit Development provisions, smaller lot sizes at higher densities may be permitted when clustered around	Consistent	The Project proposes lots sizes between 5,000 square feet and 7,000 square feet. The Project meets the minimum lot size requirements of the Low Density Residential land use designation and proposed prezone of R-L-5.

Goals and Policies	Consistency Determination	Project Consistency
shared open space amenities or through density bonus policies.		
Policy L114 Services and Facilities: Include easily accessible services and facilities within each neighborhood to meet the daily needs of neighborhood residents. Most residents should live within a ½ mile walking distance of schools, parks and retail services.	Consistent	The Project site is located in proximity to a variety of services, including commercial services approximately 0.3 miles east of the Project site and a larger community commercial area approximately 0.5 miles north. The Project proposes the development of a neighborhood park to be utilized by residents of the development and provide recreational opportunities to existing and future residents. Additionally, Centennial Park is located approximately 0.6 miles east of the Project site. The nearest existing school site is approximately one mile east of the Project site. Therefore, there is a variety of accessible services and facilities within reach of the proposed Project site.
Policy L120 Encroachment of Incompatible Land Uses: Protect residential neighborhoods from the encroachment of land uses that may have a negative impact on the residential living environment.	Consistent	Per the City of Hanford General Plan, a mixture of residential and commercial uses are proposed in proximity to the Project site. There are no incompatible land uses adjacent to or in proximity of the site that would negatively impact the residential living environment.
Policy L147 Hanford-Armona Road Residential and Mixed Use Development: Encourage residential and mixed use developed in the	Consistent	The Project is consistent with the General Plan land designation of Low Density Residential.

Goals and Policies	Consistency Determination	Project Consistency
Hanford-Armona Road Corridor between 10th and 13th Avenues.		The Project proposes 326 residential zoned lots.
	Chapter 4: Transportation and Circulation	
Policy T1 Coordination of Circulation and Land Use: Develop a circulation network that reinforces the desired land use pattern for Hanford, as identified in the land use element.	Consistent	The Project proposes to access the subdivision from Hanford Armona Road and adjacent local roads. Access from Hanford Armona Road and internal roadways are subject to the design standards adopted by the City of Hanford.
Policy T29 Maximum Level of Service: Maintain a peak hour Level of Service E on streets and intersections within the area bounded by Highway 198, 10th Avenue, 11th Avenue, and Florinda Avenue, inclusive of these streets. Maintain a peak hour Level of Service D on all other streets and intersections with the Planned Growth Boundary.	Consistent	The prepared Traffic Impact Analysis (TIA) found Level of Service for the 13th Avenue and Hanford Armona Road intersection would operate at LOS E by the year 2043. To mitigate Project impacts on the intersection, signalization of the intersection was found to raise the LOS from LOS F to LOS A. Therefore, with implementation of the mitigation measure MM 4.2-1, the Project would be consistent with Policy T29.
Policy T33 Street improvements and Priorities: Prioritize street improvements with emphasis on current and forecasted service levels.	Consistent	The Project is expected to pay Traffic Impact Fees and pay its fair share towards improvements to the intersection that is anticipated to perform below LOS standards as identified in the Traffic Impact Analysis.
Policy T36 Traffic Impact Fees: Periodically review and update the traffic impact fee program to ensure new development contributes its fair share of funding for new street,	Consistent	The Project proponent will pay Traffic Impact Fees as required by the City.

Goals and Policies	Consistency Determination	Project Consistency
intersection, and highway improvements.		
Policy T40 Pedestrian and Bicycle Placemaking: Promote pedestrian and bicycle improvements that improve connectivity between neighborhoods, provide opportunities for distinctive neighborhood features, and foster a greater sense of community.	Consistent	The Project proposes to connect to the existing residential neighborhood to the east, Hume Avenue to the south, and Hanford Armona Road to the north. Right-of-way improvements including pedestrian and bicycle-related enhancements would be developed pursuant to standards adopted in the City development code.
Policy T48 Traffic Calming: Consider the use of traffic calming designs such as roundabouts, bulb-outs, and other traffic calming designs, where they will improve the operation or LOS of a street.	Consistent	Right-of-way development and improvements will be constructed to City development code standards.
Policy T49 Subdivision Connectivity: Design subdivision to maximize connectivity both internally and with other surrounding development.	Consistent	The Project has right-of-way connections to the existing subdivision to the east and proposes access to proposed subdivisions to the south and west.
Policy T51 Alternative Design Standards: Consider alternative roadway design standards for new residential and mixed use development for future streets that may include:	Consistent	Right-of-way development and improvements will be constructed to City development code standards. Listed design alternatives would be considered and implemented as a result of consultation between the Project proponent and City.

Goals and Policies	Consistency Determination	Project Consistency
• Narrower street widths on local roadways. • Smaller turning radii geometrics on street intersections to improve safety for pedestrians. • Tree lined streets in parkways between the curb and sidewalk. • Roundabouts in lieu of traffic signals where appropriate conditions exist to maximize intersection efficiency, maintain continuous traffic flow, and reduce accident severity.		
Policy T64 Bicycle Network Master Planning: Maintain a Bicycle Master Plan to coordinate existing and planned infrastructure to support, encourage, and promote bicycle transportation, with effective connections to downtown, major shopping areas, mixed use neighborhoods, community facilities, schools, parks, and employment areas.	Consistent	The 2035 Pedestrian and Bicycle Plan slates Hanford Armona Road and Hume Avenue for Class II Bike Lanes. The Project would not conflict with the adopted Pedestrian and Bicycle Plan.
Policy T70 Pedestrian Connections: Increase connectivity through direct and safe pedestrian connections to public amenities, neighborhoods,	Consistent	The proposed subdivision connects to existing and proposed neighborhoods to the east, west, and south. The Project would be developed to City of Hanford development code standards

Goals and Policies	Consistency Determination	Project Consistency
village centers, and other destinations throughout the city.		and provide access to Hanford Armona Road to the north, and Hume Avenue to the south where connection to commercial development exists east and north of the Project site.
Chapter 5: Open Space, Conservation and Recreation		
Goal O8: The equitable distribution of parks throughout the community that are well-designed, accessible, and integrated with the surrounding neighborhood.	Consistent	In addition to the proposed park located within the Project site, residents are within approximately half a mile of Centennial Park. The proposed park is located towards the northern portion of the Project site with internal roadways providing access to the neighborhood park to all residents of the subdivision. Proposed access points from surrounding proposed and existing neighborhoods will also have access to the proposed park.
Goal O9: Parks provided at a combined ratio of 3.5 acres per 1,000 residents.	Consistent	The Project proposes a 326-lot single-family residential subdivision on an 88.9-acre Project site. Assuming an average person per unit of 3.11 (U.S. Census), the Project would have approximately 1,014 residents. Per the performance standard of 3.5 acres per 1,000 residents, the Project would need approximately 3.55 acres of park space. Therefore, with the anticipated population, the proposed 3.58-acre park would be sufficient to meet Goal O9.
Policy O1 Boundary between Urban and Agricultural Uses: Utilize the	Consistent	The Project site is located within the SOI/Planned Area Boundary. The Project

Goals and Policies	Consistency Determination	Project Consistency
Planned Area Boundary as the long term boundary line between urban uses and agricultural uses and prohibit non-agricultural development outside the Planned Area Boundary.		proposes a single-family residential subdivision and does not conflict with the General Plan designation for low density residential.
Policy O2 Agricultural Buffer: Coordinate land use policies and designations with Kings County to provide for a buffer between the urban area of Hanford and the surrounding unincorporated communities.	Consistent	Per the Kings County General Plan, land within the SOI of a city is designated for limited agriculture to serve as the buffer between agriculture and the urban boundary of the City. The area outside of the SOI would continue to hold its limited agriculture or general agriculture designation.
Policy O4 Interim Agricultural Use: Retain existing agricultural areas as an interim use inside the Planned Area Boundary and support agricultural operations until such time that the areas are needed for logical urban expansion.	Consistent	The Project is following the correct procedures to change its County designation of limited agriculture to the City's low density residential designation by providing a consistent prezone and annexation request. The site is located within the primary SOI and is adjacent to the current city limits.
Policy O12 Soil Erosion: Require new development to implement measures to minimize soil erosion related to construction.	Consistent	The California Regional Water Quality Control Board requires that construction projects disturbing more than one acre of land will need to prepare and seek approval of a NPDES permit and SWPPP. The NPDES permit and SWPPP address best management practices (BMP) to minimize soil erosion and prevent pollution on surface and groundwater. The Project is also required to be constructed in compliance with City adopted development

Goals and Policies	Consistency Determination	Project Consistency
		standards which include the California Building Code.
Policy O15 Energy-efficient Design Features: Require that new development incorporate energy-efficient design features for HVAC, lighting systems, and insulation to meet or exceed California Code of Regulations Title 24.	Consistent	As noted, the Project is required to be constructed in compliance with the California Building Code and City development standards. These standards include compliance with the California Code of Regulations, Title 24, Part 11.
Policy O16 Vegetation to Conserve Energy: Encourage the use of native and drought-tolerant shade trees and vines on southern and western exposure building walls as an energy conservation technique.	Consistent	The Project will comply with the adopted City development code standards and the California Building Code. The California Building Code also provides recommendations for energy-saving standards in the Green Code, Title 24, Part 11.
Policy O21 Water Conservation Ordinance: Actively enforce and periodically update the City Water Conservation Ordinance.	Consistent	The Project proposes a connection to City services for water. Future residents would be subject to and comply with the provisions of the City Water Conservation Ordinance.
Policy O22 Water Conservation Efforts: Actively encourage water conservation by both agricultural and urban water users.	Consistent	See Consistency Finding Policy O21
Policy O24 Drought Tolerant Vegetation: Promote the use of drought-tolerant vegetation to minimize water consumption by	Consistent	Development of the Project including landscaping is subject to the City Municipal Code. Landscaping is to be reviewed and

Goals and Policies	Consistency Determination	Project Consistency
providing information to developers, designers, and homebuyers.		approved by the City which can include the use of drought-tolerant vegetation.
Policy O25 Recharge Basins: Protect existing groundwater recharge basins and natural and manmade sloughs and seek the establishment of new basins within and around Hanford.	Consistent	The Project proposes the development of a 2.86-acre basin for stormwater management in addition to groundwater recharge. The basin would be developed in accordance with Municipal Code requirements.
Policy O28 Water Availability in Emergencies: Ensure that public and private water facilities have adequate capacity to supply emergency needs.	Consistent	The Water Supply Assessment prepared for the IS/NOP (Appendix A) determined that the City of Hanford has sufficient water supplies to service the daily and potential emergency needs of the Project.
Policy O29 Water Conservation Measures for New Development: Encourage new development projects to include water conservation measures, including the use of graywater, reclaimed, or recycled water for landscaping, water-conserving plumbing fixtures and appliances, and water-efficient landscapes.	Consistent	Project construction is subject to compliance with the adopted development code and California Building Code including the CalGreen Code (Title 24, Part 11). The standards include the use of water-efficient appliances and plumbing fixtures. The Project proposes connection to City services and will comply with water conservation measures implemented by the City.
Policy O30 Storm Water Pollution Prevention: Implement the NPDES Stormwater Permit and for those properties exempt from the Permit, require a stormwater pollution prevention plan, including the use of	Consistent	Per NPDES Permit and SWPPP requirements, the Project will disturb more than one acre of land. Therefore, preparation and approval of the NPDES and SWPPP from the Regional

Goals and Policies	Consistency Determination	Project Consistency
best management practices, to control erosion and sedimentation during construction.		Water Quality Control Board will be necessary as a regulatory requirement.
Policy O31 Provision of Open Space Areas: Preserve and enhance natural open space areas.	Consistent	The Project site proposes the development of a 3.58-acre park space. The site has historically been utilized for agriculture and does not contain a natural open space area.
Policy O35 Impacts from Development: Ensure that potential impacts to biological resources and sensitive habitat are carefully evaluated when considering development projects.	Consistent	A reconnaissance survey of the Project site and a 50-foot buffer (Biological Survey Area, or BSA) was conducted for the IS/NOP (Appendix A) to determine the presence of a sensitive species of habitat. The IS/NOP determined that the site does not contain a special status species or sensitive habitat. A preconstruction survey would be conducted to ensure no species are present at the time of construction and avoidance measures would be implemented as necessary.
Policy O36 Nonnative Invasive Species: Manage or eliminate nonnative invasive species from City-owned property and open space.	Consistent	The proposed park design is subject to review and approval by the City. The use of non-native invasive species would not be approved.
Policy O37 Mature Trees: Promote the preservation of existing mature trees and encourage the planting of appropriate shade trees	Consistent	Under Municipal Code standards, landscaping including the planting of street trees would be complied with. The survey of the Project site indicated that mature trees are not present on the site.

Goals and Policies	Consistency Determination	Project Consistency
Policy O38 Native Tree Species and Drought-Tolerant Vegetation: Encourage the planting of native tree species and drought-tolerant vegetation.	Consistent	Development of the Project including landscaping is subject to the City Municipal Code. Landscaping is to be reviewed and approved by the City which can include the use of native tree species and drought-tolerant vegetation.
Policy O39 Endangered Wildlife and Habitat: Establish programs in connection with environmental review processes that protect endangered wildlife and their habitats.	Consistent	The reconnaissance survey as part of the IS/NOP did not identify a special status species or sensitive habitat where protection of an endangered species or sensitive habitat is necessary. A preconstruction survey would be conducted to determine the presence of a special-status species and avoidance measures would be implemented as necessary.
Policy O40 Sensitive Wildlife: Work with state, federal, and local agencies on the preservation of sensitive wildlife species in the City.	Consistent	The reconnaissance survey as part of the IS/NOP did not identify a special status species or sensitive habitat where consultation with a State or federal agency is necessary.
Policy O44 Flexible Land Use Standards: Adopt flexible land use and design standards to allow the adaptive reuse of historic buildings with a variety of economically viable uses, while minimizing impacts to the historic value and character of sites and structures.	Consistent	The Project is proposed on land that has historically been utilized for agricultural purposes and is improved with a single-family residence. The single-family residence has not been found to be historically significant. The IS/NOP determined that no impacts to historical structures would occur as a result of the Project.
Policy O46 Archaeological Site Consultation: Consult with appropriate	Consistent	A cultural resource records search and requests for tribal consultations pursuant to

Goals and Policies	Consistency Determination	Project Consistency
Native American associations about potential archaeological sites in the beginning stages of the development review process.		Assembly Bill 52 were conducted. The records search indicated negative results and tribal consultation was conducted and completed with no identification of an archaeological site.
Policy O47 Archaeological Site Study: Require archaeological studies by a certified archaeologist in areas of archaeological potential significance prior to approval of development projects.	Consistent	A review of the Project site within the IS/NOP for archaeological significance provided negative results.
Policy O48 Cultural Site Consultation: Consult with the California Archaeological Inventory Southern San Joaquin Valley at California State University, Bakersfield about potential cultural sites on projects that could have an impact on cultural resources.	Consistent	A Sacred Lands Files search was conducted with the Native American Heritage Commission and a records search with the Southern San Joaquin Valley Information Center. Both searches found that the Project site does not contain a cultural resource.
Policy O49 Cultural Site Discovery: Halt construction at a development site if cultural resources are encountered unexpectedly during construction.	Consistent	There is no indication that a cultural resource is likely to be found at the Project site, however, the Project proponent will comply with Policy O49 and halt construction if a cultural resource is unexpectedly encountered during construction.
Policy O50 Parks, Recreation, and Open Space Master Plan: Prepare and periodically update a Parks, Recreation, and Open Space Master Plan to plan for	Consistent	The Project does not conflict with the goals and policies established in the Parks, Recreation, and Open Space Master Plan. The Project proposes the establishment of a neighborhood park approximately 3.58 acres

Goals and Policies	Consistency Determination	Project Consistency
new growth identified in the land use element.		in size and meets the 3.5 acre per 1,000 resident performance goal of the General Plan and Parks, Recreation, and Open Space Master Plan.
Policy O57 Neighborhood Parks: Establish neighborhood parks generally between 2 and 5 acres in size at locations easily accessed by residents of the neighborhood.	Consistent	The Project proposes a neighborhood park approximately 3.58 acres in size and provides internal circulation that provides access for the entirety of the subdivision and surrounding neighborhoods.
Policy O58 Neighborhood Parks Service Area: Neighborhood parks shall have a general service area of approximately ½ mile radius, and situated to avoid patrons having to cross arterial streets, railroad lines, and major waterways.	Consistent	The proposed neighborhood park provides access to the entirety of the subdivision through internal right-of-way circulation. Proposed roads also connect with existing and proposed subdivisions to the east, west, and south where access to the park is available.
Policy O64 Park Visibility: Parks shall be designed to promote a safe and clean environment for recreation. New neighborhoods shall be designed so that common side and rear residential property lines with parks are minimized and the visibility of parks from public streets is maximized.	Consistent	The proposed park is located internally within the neighborhood and is not directly adjacent to residential property lines.
Policy O65 Development Impact Fee for Parks: Adopt and periodically update a park development impact fee to fund	Consistent	The Project proponent will pay the Parks Impact Fee as part of their permitting process.

Goals and Policies	Consistency Determination	Project Consistency
new neighborhood and community parks needed to serve new growth.		
	Chapter 6: Public Facilities and Services	
Goal P1: Adequate water quality and quantity to meet existing and planned needs.	Consistent	The prepared Water Supply Assessment (WSA) included with the IS/NOP determined that the City of Hanford has the capacity to service the Project.
Goal P2: Adequate wastewater collection and treatment to meet both existing and planned needs.	Consistent	The City of Hanford Sewer System Master Plan accounts for future development within their service area and planned area boundary. As the Project site is located within the planned area boundary, wastewater needs for the development are accounted for in the General Plan buildout. Costs related to future sewer extensions where the Project would be built are addressed through the use of impact fees that are to be paid by the Project proponent for their fair share of costs associated with extending service.
Goal P3: Adequate and effective stormwater collection and disposal to meet both existing and planned needs.	Consistent	The City of Hanford Storm Drainage System Master Plan accounts for future development within their service area and planned area boundary. As the Project site is located within the planned area boundary, stormwater drainage needs for the development are accounted for in the General Plan buildout. The Project proposes the use of a stormwater drainage basin within the neighborhood to address stormwater collection, however,

Goals and Policies	Consistency Determination	Project Consistency
		should the extension of City services be necessary, costs related to future stormwater drainage extensions where the Project would be built are addressed through the use of impact fees that are to be paid by the Project proponent for their fair share of costs associated with extending service.
Goal P5: Adequate solid waste disposal capacity to meet existing and future demands.	Consistent	Solid waste disposal is managed by the Kings County Waste Management Authority and licensed waste haulers. Solid waste would be sent to the Kettleman Hills Landfill which has a remaining capacity of 17.4 million cubic yards. The IS/NOP determined that construction and operation-related solid waste would have a less than significant impact on solid waste disposal capacity for existing and future demands.
Goal P12: Adequate provision of school facilities to serve projected growth.	Consistent	The City of Hanford has six elementary school districts and one high school district within the Planning Area. The Project site would be located within the Sierra Pacific High School area and the Armona Union Elementary School per the General Plan Background Report. The siting of a new school site is determined by the school district; however, the Project proponent is required to pay development impact fees for the school district to account for impacts related to new residential development and

Goals and Policies	Consistency Determination	Project Consistency
		the subsequent new population that would utilize school facilities.
Policy P1 Adequate Water Services: Provide adequate water services to support the level of development identified in the land use element.	Consistent	The prepared Water Supply Assessment (WSA) included with the IS/NOP determined that the City of Hanford has the capacity to service the Project. The Project site is located within the planning area boundary and is accounted for in the General Plan buildout. Development impact fees for the fair share costs of service extensions will be assessed and paid for by the Project proponent at the time of construction.
Policy P3 Water Supply and Fire Flow Availability: Condition approval of new development projects and water service extensions on the availability of adequate water supply and the ability to meet domestic and fire flow needs of the area.	Consistent	The prepared Water Supply Assessment (WSA) included with the IS/NOP determined that the City of Hanford has the capacity to service the Project.
Policy P7 New Water Infrastructure: Require developers to fund and install new water distribution facilities to service their new developments.	Consistent	The Project proponent will be required to install internal water distribution infrastructure and facilities that will connect with City infrastructure. These improvements will be subject to City development standards.
Policy P8 Impact Fees for Water Facilities: Adopt and periodically update a water impact fee to fund community-wide water supply,	Consistent	The Project proponent will be subject to development impact fees associated with water service.

Goals and Policies	Consistency Determination	Project Consistency
treatment, and distribution infrastructure needed to serve new growth.		
Policy P9 Sufficient Collection and Treatment: Ensure provision of sufficient wastewater collection and treatment facilities to support the existing and new growth identified in the land use element.	Consistent	See Consistency Finding Goal P2.
Policy P13 New Wastewater Infrastructure: Require developers to fund and install new wastewater collection facilities to service their new development.	Consistent	See Consistency Finding Goal P2.
Policy P14 Impact Fees for Wastewater Facilities: Adopt and periodically update a wastewater impact fee to fund community-wide wastewater collection and treatment needed to serve new growth.	Consistent	See Consistency Finding Goal P2.
Policy P15 Adequate Storm Water Services: Provide adequate stormwater drainage infrastructure to support the level of development identified in the land use element.	Consistent	See Consistency Finding Goal P3. The proposed stormwater basin and internal infrastructure of the subdivision will be built to City development standards.

Goals and Policies	Consistency Determination	Project Consistency
Policy P17 Adequate Storm Water Drainage Improvements Availability: Condition approval of development projects on the provision of adequate stormwater drainage improvements.	Consistent	See Consistency Finding Goal P3 and Policy P15.
Policy P21 New Stormwater Drainage Infrastructure: Require developers to fund and install new stormwater drainage facilities to service their new developments.	Consistent	See Consistency Finding Goal P3 and Policy P15.
Policy P22 Impact Fees for Wastewater Facilities: Adopt and periodically update a wastewater drainage impact fee to fund area-wide stormwater drainage needed to serve new growth.	Consistent	The Project proponent will be subject to development impact fees associated with wastewater service.
Policy P24 New Development Run-Off Volumes: Require new development to discharge stormwater runoff at volumes no greater than the capacity of any portion of the existing downstream system by utilizing detention or retention or other approved methods, unless the project is providing drainage infrastructure in accordance with an adopted drainage plan.	Consistent	See Consistency Finding Goal P3 and Policy P15.

Goals and Policies	Consistency Determination	Project Consistency
Policy P37 Impact Fees for Police Facilities: Require new development to provide funding to meet the cost of providing vehicles, equipment, and structures, to meet the needs for new population growth.	Consistent	The Project proponent will be subject to development impact fees associated with City police services.
Policy P46 Building Design for Safety: Encourage building designs that help to reduce crime and improve resident safety.	Consistent	The Project will be built pursuant to municipal code standards adopted by the City of Hanford.
Policy P47 Lighting for Safety: Facilitate public safety through the placement and design of outdoor lighting, while respecting the privacy of surrounding properties.	Consistent	The Project will be built pursuant to the development code and zoning ordinance standards adopted by the City of Hanford. This includes exterior lighting standards under Section 17.50.140 of the Municipal Code.
Policy P52 Impact Fees for Fire Facilities: Require developers to contribute impact fees to fund the cost of providing fire facilities needed to support new population growth and development.	Consistent	The Project proponent will be subject to development impact fees associated with City fire services.
Policy P59 Fire and Building Codes: Continue to enforce the California Fire Code, California Building Code, and Hanford Municipal Code to mitigate threats to safety and property.	Consistent	The Project will be constructed in compliance with City adopted development standards including the California Building Code, California Fire Code, and Hanford Municipal Code.

Goals and Policies	Consistency Determination	Project Consistency
Policy P79 Impact Fees for General Government Facilities: Require developers to contribute impact fees to fund the cost of providing expanded general government facilities needed to support new population growth and development.	Consistent	The Project proponent will be subject to development impact fees associated with City services.
	Chapter 7: Health, Safety, and Noise	
Goal H1: Reduced impacts to human life, property, the local economy, and the environment resulting from natural hazards, human-trade hazards, and noise.	Consistent	As determined in the IS/NOP, the Project has been determined to be less than significantly impacted by natural hazards, hazardous materials, and noise.
Goal H5: Protection from the harmful effects of hazardous materials.	Consistent	As reported in the IS/NOP, the Project site does not contain a hazardous waste facility, a cleanup site, or oil extraction well site. The potential use of limited amounts of hazardous materials related to construction would not create a significant impact. Hazardous materials are required to be handled in accordance with federal, State, and local statutes and regulations. The Project does not create a significant hazard to the public or environment as there is minimal use of hazardous materials related to the operation of the Project.
Goal H7: Protection from the harmful and annoying effects of excessive noise.	Consistent	Project construction and operation are subject to the provisions of the adopted City of Hanford Noise Ordinance. Construction

Goals and Policies	Consistency Determination	Project Consistency
		activities would occur between the hours of 7:00 a.m. and 8:00 p.m. consistent with the Noise Ordinance. Residents of the subdivision are subject to and protected by the Noise Ordinance for excessive noise.
Goal H8: Protection of the City's economical base by preventing incompatible land uses from encroaching upon existing or planned noise-producing uses.	Consistent	The proposed development of a single-family residential subdivision and prezoning of the site to R-L-5 is consistent with the City General Plan designation of low density residential. Surrounding land uses under the City General Plan include low density residential, medium density residential, and conservation. The Project does not result in an encroachment of incompatible land uses.
Policy H15 Building Codes and Standards for Earthquakes: Maintain and enforce current building codes and standards to reduce the potential for structural failure caused by ground shaking and other geologic hazards.	Consistent	Project construction is subject to the standards of the adopted Municipal Code which includes compliance with the California Building Code.
Policy H17 Geologic and Soils Studies: Require geologic and soils studies to identify potential hazards as part of the approval process for all new development prior to grading activities where questionable conditions exist.	Consistent	Prior to development of the Project, geologic and soil studies of the site would be conducted to determine site conditions and applicable development methods. No geologic or soil-related hazard has been identified on the site and has been confirmed in a prepared Phase I Site Assessment (Appendix A).

Goals and Policies	Consistency Determination	Project Consistency
Policy H20 New Development Requirements for Flood Protection: Require new development to provide onsite drainage or contribute towards their fair share cost of off-site drainage facilities to handle surface runoff.	Consistent	The Project site is not located or near a special flood hazard zone. Construction activities will be subject to the conditions of approval for the approved NPDES permit and SWPPP. Drainage improvements including the drainage basin will be developed in accordance to adopted City development standards.
Policy H27 Fire Code: Ensure that all new buildings are constructed to current Fire Code Standards.	Consistent	Project construction is subject to the Fire Code development standards and would be reviewed and approved by City Fire Department Staff prior to issuance of permits.
Policy H34 Sensitive Receptors: Avoid siting uses with new sensitive receptors near existing industrial facilities that use or produce hazardous materials or may emit toxic air contaminants.	Consistent	The Project site is located approximately 1.4 miles west of the nearest industrial zoned area and is not subject to hazardous materials or toxic air contaminants.
Policy H39 Aircraft Noise: Evaluate proposed development proposals against the land use policies of the Kings County Airport Land Use Compatibility Plan.	Consistent	The Project site is located approximately 2.7 miles west of the Hanford Municipal Airport and is outside of the Airport Overlay District and buffer established by the Kings County Airport Land Use Compatibility Plan.
Policy H41 Interior Noise Exposure: Adopt State Noise Insulation Standards (California Code of Regulations, Title 24) and Chapter 35 of the Uniform Building Code concerning interior noise	Consistent	The Project will comply with the Municipal Code and California Building Code standards for noise insulation and development of single-family housing.

Goals and Policies	Consistency Determination	Project Consistency
exposure for new single, multi-family housing. Hotels, and motels.		
Policy H42 Noise Evaluation for New Development: Evaluate proposed development proposals against existing and future noise levels from ground transportation noise sources.	Consistent	The IS/NOP determined that design of the Project including the use of a six-foot block wall would reduce noise emanating from the proposed residences and protect residences from noise generated from Hanford Armona Road.
Policy H50 Sound Walls: Utilize sound walls at the perimeter of new residential developments to protect from noise generated by transportation corridors.	Consistent	See Consistency Finding Policy H50.
Policy H53 Land Use Zones that Encourage Health Food Sales: Designate land use zones that allow for convenience stores, supermarkets, and neighborhood markets that stock nutritional food choices in every existing and planned neighborhood.	Consistent	The Project site is located along Hanford Armona Road and is in proximity to various commercial designated areas to the north, east, and west. A large Regional Commercial area exists to the north, smaller Neighborhood Commercial and Neighborhood Mixed Use exists east of the site, and planned Highway Commercial, and Corridor Mixed Use are present west of the site. These commercial areas will provide a variety of commercial opportunities for the proposed Project.
Policy H60 Health and Land Use Decisions: Consider environmental justice issues as they are related to potential health impacts associated	Consistent	The Project site is located towards the southwestern portion of the City where established residential and commercial uses exist. Industrial activities are located towards

Goals and Policies	Consistency Determination	Project Consistency
with land use decisions, including enforcement actions, to reduce the adverse health effects of hazardous materials, industrial activities, and other undesirable land uses on residents regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location.		the central and extreme southern portions of the city which are located more than a mile from the Project site and would not provide undesirable land uses or significant impacts to future and existing residents.
Policy H61 Public Amenities: Consider environmental justice issues as they are related to the equitable provisions of desirable public amenities such as parks, recreational facilities, and other beneficial uses that improve the quality of life.	Consistent	The Project proposes the development of a neighborhood park to be utilized by residents of the proposed subdivision and existing adjacent residents. Additionally, the Project site is in proximity where access to additional recreational facilities is available.
Policy H65 Comfortable Walking and Biking Environments: Provide comfortable environments and destinations for walking and bicycling to integrate physical activity into daily routines.	Consistent	The Project would develop pedestrian facilities in accordance with adopted Municipal Code development standards. The Project would not conflict with the 2016 City adopted Pedestrian and Bicycle Master Plan.
Policy H66 Non-Vehicular Access: Improve, bicycle, pedestrian, and public transportation access to residential areas, education and childcare facilities, employment centers, commercial centers, recreational areas, and other destination points.	Consistent	The Project would develop internal circulation and pedestrian facilities in accordance with adopted Municipal Code development standards. The Project would not conflict with the 2016 City adopted Pedestrian and Bicycle Master Plan or the Kings Area Regional Transit route access.

Goals and Policies	Consistency Determination	Project Consistency
Policy H68 New Growth Areas: Encourage land use pattern, density, and mix of uses in new growth areas that minimize the number of vehicle miles traveled and support viable choices for public transit, bicycling, and walking.	Consistent	The Project proposed development of internal circulation and pedestrian facilities in accordance with City Municipal Code requirements. The site is located adjacent to Hanford Armona Road where access to bicycle lanes and public transit is within walking distance to reduce potential vehicle miles traveled. The nearest public transit station is located at the intersection of Hanford Armona Road and 12th Avenue located approximately a half-mile east of the Project site.
Policy H69 Separation between Incompatible Land Uses and Residential Neighborhoods: Maintain a separation between uses that are incompatible with residential neighborhoods.	Consistent	The Project site is located towards the southwestern portion of the City where established residential and commercial uses exist. Industrial activities are located towards the central and extreme southern portions of the city which are located more than a mile from the Project site. The Project is being proposed, consistent with the City General Plan and Zoning Map.

4.2 - Transportation

4.2.1 - INTRODUCTION

This section describes the potential impacts to the transportation system associated with the proposed Silicon Valley Ranch Project (Project). The impact analysis examines the roadway, transit, bicycle, pedestrian, rail, and aviation components of the transportation system in the City of Hanford. To provide a context for the impact analysis, this section begins with the environmental setting, which describes the existing physical and operational conditions of the transportation system. Followed by the relevant regulatory framework, which influences the transportation system and provides the basis for impact significance thresholds that are used in the impact analysis findings and recommended mitigation measures.

4.2.2 - ENVIRONMENTAL SETTING

Roadway Network

The roadway network in the City is a traditional grid-based network of north/south and east/west streets, except for portions of the downtown area, whose grid-based network of streets is angled, consistent with the northeast/southwest railroad alignment. Almost all of the major streets in the City are regularly spaced at half-mile intervals. The grid system provides high levels of accessibility (i.e., travel choices) for residents. The road network is divided into five categories: State Highways, Arterial Streets, Collector Streets, Local Streets, and Alleys (see Tables 4.2-1 and 4.2-2). Hanford has five north/south arterials, 14 east/west arterials, 12 north/south collectors, seven east/west collectors, and numerous local and alleyway streets. Freeways are under the jurisdiction of the State and are outside of City control, but have been assessed for the purposes of this EIR section due to their location within the Project area.

Table 4.2-1
Existing Arterial Streets

North/South Arterial Streets	
Street Name	**Limits**
13th Avenue	Houston Avenue to Fargo Avenue
12th Avenue	Idaho Avenue to Flint Avenue
11th Avenue Jackson	Avenue to Flint Avenue
10th Avenue Jackson	Avenue to Hwy 43
9th Avenue	Houston Avenue to Lacey Boulevard
East/West Arterial Streets	
Street Name	**Limits**
Jackson Avenue	11th Avenue to 10th Avenue
Idaho Avenue	12th Avenue to 10th Avenue
Iona Avenue	12th Avenue to 10th Avenue

Street Name	Limits
Houston Avenue	13th Avenue to SR 43
Hanford-Armona Road	13th Avenue to 10th Avenue, 9th Avenue to SR 43
3rd Street (one way)	11th Avenue to 10th Avenue
4th Street (one way)	11th Avenue to 10th Avenue
6th Street	11th Avenue to 10th Avenue
7th Street	Mall Drive to 10th Avenue
E. Lacey Boulevard	10th Avenue to SR 43
W. Lacey Boulevard	13th Avenue to Irwin Street
Grangeville Boulevard	13th Avenue to SR 43
Fargo Avenue	13th Avenue to SR 43
Flint Avenue	12th Avenue to SR 43

Table 4.2-2
Existing Collector Streets

North/South Collector Streets	
Street Name	**Limits**
Campus University	6th Street to Grangeville Boulevard
Greenfield Street	Lacey Boulevard to Centennial Drive
Rodgers Street	11th Avenue to Mallard Way (potentially to Cortner Street)
Redington Street	4th Street to Grangeville Boulevard
Irwin Street	4th Street to Grangeville Boulevard
Harris Street	6th Street to Grangeville Boulevard
Fitzgerald Lane	Grangeville Boulevard to Fargo Avenue
Douty Street	Hanford-Armona Road to Flint Avenue
Kensington Street	Grangeville Boulevard to Fargo Avenue
9 ¼ Avenue	Lacey Boulevard to Leland Way
Centennial Drive	Lacey Boulevard to Heather Lane
Glacier Way	Fargo Avenue to Flint Avenue
East/West Collector Streets	
Street Name	**Limits**
Hume Street	12th Avenue to 11th Avenue
3rd Street	10th Avenue to 9th Avenue
Garner Street	Lacey Boulevard to 11th Avenue
Ivy Street	10th Avenue to 11th Avenue
Florinda Street	11th Avenue to 9 ¼ Avenue
Malone Street	Douty Street to 10th Avenue
McCreary Street	11th Avenue to Douty Street

State Facilities

The State facilities in the City of Hanford are listed below and are operated and maintained by Caltrans.

- State Route (SR) 198 is an east-west State highway that begins at U.S. Route 101 (US 101) south of King City and ends in Sequoia National Park. It connects the California Central Coast to the San Joaquin Valley, running through Hanford and Visalia. SR 198 intersects the major north-south routes in the Central Valley, including Interstate 5 (I-5) and SR 41, 43, 33, and 99. The portion of SR 198 through Hanford was upgraded to a four-lane freeway in the 1960s. In 2012, the portion from Hanford to SR 99 was upgraded to a four-lane expressway. Interchanges within the Planning Area are located at Highway 43, 10th Avenue, 11th Avenue, 12th Avenue, and 13th Avenue.

- SR 43 is a north-south State highway running roughly parallel to SR 99, connecting Shafter, Wasco, Corcoran, Hanford, and Selma. Arterial access is limited within the Planning Area to intersections at Flint Avenue, Fargo Avenue, 10th Avenue, Grangeville Boulevard, Lacey Boulevard, Hanford-Armona Road, and Houston Avenue.

Public Transportation

The largest provider of public transit services within Kings County is the Kings County Area Public Transit Agency (KCAPTA). KCAPTA is an intra-governmental agency with representatives from Avenal, Kings County, Hanford, and Lemoore and is responsible for the operation of the Kings Area Rural Transit (KART). KART offers a scheduled daily bus service from Hanford to Armona, Lemoore, the Lemoore Naval Air Station, Visalia, Corcoran, Stratford, Kettleman City, and Avenal.

There are currently eight fixed routes that circulate throughout the City and operate as early as 6:30 a.m. until as late as 9:00 p.m. The Fresno route, with service every Monday, Wednesday, and Friday, includes stops at Children's Hospital, Veterans Hospital, Community Regional Medical Center, St. Agnes Medical Center, and Kaiser Permanente Medical Center, as well as access to the downtown area with a stop at Fulton Mall. KART also offers limited service on Saturdays. In addition, KART provides regular transportation service to Visalia Monday through Friday.

KART began a scheduled fixed-route bus service for Hanford in July of 1991. The scheduled bus service operates Monday through Friday from 7:30 a.m. to 11:00 p.m. Expansion of the service is planned as new retail developments are built. West Hills College in Lemoore is served by the system, as are educational institutions in Visalia, including the College of Sequoias, Galen College, San Joaquin Business College, and Chapman College.

Dial-A-Ride is an origin-to-destination service available to eligible residents of Hanford, Lemoore, Armona, and Avenal. The KART dial-a-ride operates from 7:00 a.m. to 11:00 p.m. Monday through Friday and, on Saturday, from 9:00 a.m. to 4:00 p.m.

Park-and-Ride lots provide a meeting place where drivers can safely park and join carpools or vanpools or utilize existing public transit. Park-and-Ride lots are generally located near community entrances, major highways, or local arterials where conveniently scheduled transit service is provided. Lots are designed exclusively for commuters, or they can consist

of an area of parking spaces in complementary land uses such as shopping centers and churches. Hanford has one Park-and-Ride facility located at the northeastern entrance of the City at 10th Avenue and SR 43. There are a number of informal Park and Ride lots located in various communities throughout Kings County and served by KCAPTA vanpools. One of the largest is the old Wal-Mart parking lot located on the northwest corner of 12th Avenue and Lacey Avenue in Hanford.

The San Joaquin Valley Air Pollution Control District (SJVAPCD) provides funding for public transportation kiosks and the construction of Park-and-Ride lots. The purpose of this program is to encourage commuter rideshare activities as an alternative to single-occupant vehicle (SOV) commutes. Funds are available for eligible projects that meet specific program criteria on a first-come, first-served basis until the program funds are exhausted.

KART defines vanpooling as 7 to 15 persons who commute together in a van-type vehicle and who share the operating expenses. The KART vanpool program provides passengers with reliable transportation to and from work. The vanpool program is not only to provide safe travel to work but to provide alternative transportation options, which would ultimately reduce the number of vehicles on the road. Vanpooling is somewhat different from carpooling, though it is based upon the same principle: reducing single-occupant commuting. KART established a vanpool program for riders to the Corcoran and Avenal State prisons in 2001 and has purchased additional vans to implement new vanpools. The program has become very successful with 180 vans in service in 2009 and extends to the areas of Tulare, Kings, Kern, Madera, Ventura, Monterey, and Fresno counties. CalVans has grown to include more than 200 vanpools tailored to meet the needs of commuters, plus nearly 150 vans specially designed for farm workers. The SJVAPCD offers Vanpool Voucher Incentive Programs. The program is meant to encourage commuter rideshare practices among frequent long-distance riders in the San Joaquin Valley.

Bicycle and Pedestrian Circulation

Nearly all arterials in the city limits have been designated as bikeways except 13th Avenue, Houston Avenue, and Lacey Boulevard. Some collector streets have been identified as bikeways, including Pepper Drive, Glacier Way, Irwin Street, and Rodgers Street. Encore Drive, Nell Way, Leland Way, Fitzgerald Lane, Centennial Drive, Florinda Street, McCreary Avenue, Mall Drive, Liberty Street, Sangiovese Street, University Avenue, Greenfield Avenue, and Hume Drive.

The San Joaquin Valley Railroad has also been designated as a location for an east-west bike path. The railway corridor is not abandoned, and currently, there are no plans to abandon it. Any possible bike path will need to be located within an easement adjacent to the railroad line but not in the railway easement.

Rail/Highway Freight

Almost 87 percent of the total freight tonnage is moved out of the Valley by truck, while rail accounts for 11 percent. BNSF and SJVR railroads provide freight service to the Hanford

area. The BNSF mainline is double tracked through the entire Planning Area. Over time, it is expected that the number of trains using the system will increase as demand for rail service increases. The BNSF Railroad currently operates between 25 and 30 trains per day on the system. SJVR has a limited schedule of one train per day. The development of new industry along the SJVR right-of-way has prompted renewed investment in the east/west service. SJVR anticipates an increase to three round trips per week and in the speed of trains using this route. Planning for improvements must include identifying future surface crossings that are needed to implement the City's circulation system. In the process of improving the SJVR trackage, existing street crossings need to be modernized to ensure safety and adequate operational standards for both rail and vehicular traffic.

Amtrak Passenger Service

Amtrak provides passenger rail service from Hanford to the San Francisco Bay Area and Sacramento and service to Southern California by a combination of rail and bus. Freight service is available from both the BNSF Railway and the San Joaquin Valley Railroad. The Amtrak San Joaquin passenger train provides regularly scheduled intercity passenger rail service to Kings County. Stops are made daily at the Hanford and Corcoran stations for each northbound and southbound train. Stops along the San Joaquin line also include Bakersfield, Wasco, Fresno, Madera, Merced, Turlock, Modesto, Stockton, Antioch, Martinez, Richmond, Emeryville, and Oakland, with connecting bus service to Los Angeles, Sacramento, San Francisco, and many other points in Northern and Southern California. Passengers can transfer to the Amtrak Coast Starlight, which continues north to Portland and Seattle. Trains are accessible to the disabled and provide onboard bicycle racks, checked baggage, and food services.

High-Speed Train

In addition to the airport, train, and bus travel mentioned above, the California High-Speed Rail (HSR) will also serve as a regional transportation system for Fresno and surrounding communities. The proposed HSR line, if approved and funded, would ultimately extend through the San Joaquin Valley, linking San Francisco with Los Angeles. The initial construction section is planned to start in Madera County just north of Bakersfield, with a station located in Fresno's downtown, aligned with Mariposa Street. In November 2013, the California High-Speed Rail Commission identified the preferred route through the Planning Area. The selected route, which runs along the eastern edge of Hanford, roughly follows a north-south route near the high-voltage power lines between 7th and Avenue 8th Avenue.

Aviation

Hanford Municipal Airport (HJO) is the only public aviation facility in Kings County. The airport does not offer commercial flights. The airport is located on the southeast edge of Hanford and is owned and operated by the City of Hanford. The airport enforces City, State, and federal aviation regulations and administers airport leases, tie-downs, hangars, shelters, fueling, and their overall maintenance.

At present, airport property totals approximately 295 acres. Airport acreage consists of a runway and full-length parallel taxiway, transient and based tie-down aprons, and aircraft storage areas. The runway's current length is 5,180 feet, 75 feet wide, and oriented roughly north/south. The runway is designed to accommodate aircraft with wingspans of up to 79 feet and speeds of up to 121 knots. The runway can accommodate larger aircraft on an occasional basis. Currently, the aircraft parking capacity totals 116 spaces and includes 37 hangar units, 30 shade hangar units, and 49 tie-downs.

Hanford Municipal Airport also serves as a base for the National Weather Service (NWS). The primary function of the NWS is to provide current and forecasted weather conditions in the area (e.g., humidity, wind speed, barometer, dewpoint, temperature, and visibility).

4.2.3 - REGULATORY SETTING

This section summarizes the transportation policies, laws, and regulations that apply to the proposed Project. This information provides context for the impact discussion related to the Project's consistency with applicable regulatory conditions.

Federal

No federal plans, policies, regulations, or laws pertaining to transportation are applicable.

State

CALIFORNIA DEPARTMENT OF TRANSPORTATION

The California Department of Transportation (Caltrans) is responsible for operating and maintaining the State highway system. In the Project vicinity, State Routes 43 and 198, along with all the freeway ramp terminal intersections, fall under Caltrans jurisdiction. Caltrans provides administrative support for transportation programming decisions made by the California Transportation Commission (CTC) for State funding programs. The State Transportation Improvement Program (STIP) is a multi-year capital improvement program that sets priorities and funds transportation projects envisioned in long-range transportation plans.

SENATE BILL 743

Senate Bill 743, passed in 2013, required the California Governor's Office of Planning and Research (OPR) to develop new CEQA Guidelines that address traffic metrics under CEQA. As stated in the legislation, upon adoption of the new guidelines, "automobile delay, as described solely by the level of service (LOS) or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the guidelines, if any."

In December 2018, OPR and the State Natural Resources Agency submitted the updated CEQA Guidelines to the Office of Administrative Law for final approval to implement SB 743.

The Office of Administrative Law subsequently approved the updated CEQA Guidelines, thus, implementing SB 743 and making vehicle miles traveled (VMT) the primary metric used to analyze transportation impacts.

COMPLETE STREETS

The California Complete Streets Act (Act) requires general plans updated after January 30, 2011, to develop a plan for a multi-modal transportation system. The goal of the Act is to encourage cities to rethink policies that emphasize automobile circulation and prioritize motor vehicle improvements and come up with creative solutions that emphasize all modes of transportation. Complete Streets design has many advantages. When people have more transportation options, there are fewer traffic jams, and the overall capacity of the transportation network increases. Additionally, increased transit ridership, walking, and biking can reduce air pollution, energy consumption, and greenhouse gas emissions while improving the overall travel experience for road users. Providing more transportation options will allow the City to meet its future travel demands without solely relying on motorized vehicles.

While there is no standard design template for a Complete Street, it generally includes one or more of the following features: bicycle lanes, wide shoulders, well-designed and well-placed crosswalks, crossing islands in appropriate midblock locations, bus pullouts or special bus lanes, audible and accessible pedestrian signals, sidewalk bulb-outs, center medians, street trees, planter strips, and ground cover. Complete Streets create a sense of place and improve public safety due to their emphasis on comprehensively encouraging pedestrian activity. The Act is implemented through the City's Active Transportation Plan and General Plan.

Regional

KINGS COUNTY ASSOCIATION OF GOVERNMENTS (KCAG)

The KCAG is the State-designated Regional Transportation Planning Agency (RTPA) recognized by the State's Business, Transportation, and Housing Agency. KCAG is responsible for:

- Administering the Regional Transportation Plan.
- Preparing a Regional Transportation Improvement Program and the Federal Transportation Improvement Program.
- Reviewing the State Transportation Improvement Program and other State transportation programs.
- Monitoring local public transit operations.
- Overseeing federal transportation grant proposals.
- Administering the Local Transportation Fund and State Transit Assistance funds.

Other objectives of KCAG include facilitating planning on a regional scale with an emphasis on transportation, finding and researching problems in urban growth, and considering

common concerns of its constituent agencies. KCAG aims to tackle the issues that the members have in common but could not otherwise handle individually.

2018 KINGS COUNTY REGIONAL TRANSPORTATION PLAN

The 2018 Regional Transportation Plan (RTP) is a comprehensive assessment of all forms of transportation available in Kings County and the needs for travel and goods movement through the year 2042. The 2018 RTP update was accomplished within the framework of the KCAG, with assistance from Avenal, Corcoran, Hanford, Lemoore, and Kings County. The Santa Rosa Tachi-Yokut Tribe was also consulted during the development of the RTP. Caltrans District 6 and the San Joaquin Valley Air Pollution Control District staff provided invaluable service by furnishing helpful information, comments, and general support (KCAG, 2022).

2022 REGIONAL TRANSPORTATION IMPROVEMENT PROGRAM (2022 RTIP)

The Regional Transportation Improvement Program (RTIP) is a list of transportation projects and programs to be funded and implemented over the next three years. KCAG submits this document to Caltrans and amends the program on a quarterly cycle (KCAG, 2022).

Local

CITY OF HANFORD GENERAL PLAN

The Hanford General Plan serves as the community's guide for the continued development, enhancement, and revitalization of the City of Hanford. The General Plan includes the following policies related to transportation and circulation that are relevant to this analysis:

Policy T1 Coordination of Circulation and Land Use

Develop a circulation network that reinforces the desired land use pattern for Hanford, as identified in the Land Use Element.

Policy T2 Street Classification System

Designate a functional street classification system that includes Highways, Major Arterials, Arterials, Collectors, Minor Collectors, and Local streets.

Policy T3 Circulation Map

Identify the locations of existing and future Highways, Major Arterials, Arterials, Collectors, and Minor Collectors with the Planned Area Boundary on the Circulation Map. Locations shown shall be fixed, with allowance for slight variation from the depicted alignments of new Collectors and Minor Collectors.

Policy T4 Regional System Improvements

Identify and support improvements to regional transportation system improvements both within and outside the Planning Area that will improve mobility to and from Hanford. Policy T5 Funding Sources and Improvements coordinate with Caltrans and KCAG for funding and timely construction of programmed State highway and interchange improvements.

Policy T6 Highway Improvements

Coordinate with Caltrans to identify needed improvements to highway facilities in the City.

Policy T7 Highway 198 and 9th Avenue

Identify any program improvements necessary to maintain LOS standards at the intersection of SR 198 and 9th Avenue.

Policy T8 Highway 43 Access Limitations

Limit new direct access to Highway 43, and require building setbacks and offers of dedication to accommodate future widening.

Policy T9 Highway 43 Intersection Limitations

Limit roadway intersections with Highway 43 to Flint Avenue, 10th Avenue, Fargo Avenue, future 9th Avenue, Grangeville Boulevard, Lacey Boulevard, Hanford-Armona Road, Houston Avenue, Iona Avenue, Idaho Avenue, and Jackson Avenue.

Policy T10 Purpose of Major Arterials

Major Arterials shall provide through traffic movement around the edge of Hanford on continuous routes with very limited access to abutting property and local streets.

Policy T11 Designation of Major Arterials

Major Arterials shall be designated on Flint Avenue between 13th Avenue and SR 43, on 13th Avenue between Flint Avenue and Houston Avenue, and Houston Avenue between 13th Avenue and SR 43.

Policy T12 Access to Major Arterials

New access to Major Arterials shall be limited to new intersections with Arterials and Collectors, and where the Major Arterial is a property's only legal access to a public right of way.

Policy T13 Purpose of Arterials

Arterials shall provide for through traffic movement on continuous routes through Hanford with limited access to abutting property.

Policy T14 Designation of Arterials

Arterials shall be designated generally on the one-mile grid of streets within the Planned Area Boundary. The specific streets designated are Flint Avenue, Fargo Avenue, Grangeville Boulevard, Lacey Boulevard, Hanford-Armona Road, Houston Avenue, Iona Avenue, Idaho Avenue, 7th Avenue, 9th Avenue, 10th Avenue, 11th Avenue, 12th Avenue, and 13th Avenue.

Policy T15 Access to Major Arterials

New access to Arterials from new local streets and new driveways shall be limited to maximize through traffic movements.

Policy T16 Consolidation of Arterial Access Points

Encourage the consolidation or elimination of driveways, access points, and curb cuts along existing Arterials.

Policy T17 Purpose of Collectors

Collectors shall provide traffic movement within a limited area and connect local roads to the Arterial street system.

Policy T18 Designation of Collectors

Collectors shall be designated generally at half-mile intervals between Arterials in new growth areas and on selected existing through streets that connect to two or more Arterials.

Policy T19 Access to Collectors

New access to Collectors from new local streets and abutting property is generally permitted but may be limited in some cases depending on planned roadway capacity and adjacent land use development patterns.

Policy T20 Purpose of Minor Collectors

Minor Collectors shall provide internal traffic movement within a neighborhood and connect local roads to Collectors and/or Arterials.

Policy T21 Designation of Collectors

Minor Collectors shall be designated in developed areas without a half-mile Collector interval and/or where the street is not wide enough to be designated a Collector.

Policy T22 Access to Collectors

Minor Collectors shall have no access limitations.

Policy T23 Purpose of Local Streets

Local streets shall provide internal traffic movement within a neighborhood and direct access to abutting property.

Policy T24 Block Lengths

Adopt standards for block lengths for new local streets to promote ease of movement and connectivity.

Policy T25 Cul-de-sacs

Construct cul-de-sacs on all permanent dead-end streets. New cul-de-sacs shall be discouraged in commercial and industrial developments. Adopt maximum lengths of new local streets with cul-de-sacs.

Policy T26 Cul-de-sac

Non-motorized connectivity encourages sidewalks and breaks in perimeter walls to allow pedestrian, bicycle, and visual access from cul-de-sac streets to other nearby streets.

Policy T27 Maintenance of Local Streets

Adopt policies that incorporate the use of maintenance districts to fund local street maintenance.

Policy T28 Alleys

Generally discourage new alleys, but allow in limited cases when effectively incorporated into the overall neighborhood design. Fund the maintenance of new alleys with maintenance districts.

Policy T29 Maximum Level of Service

Maintain a peak hour LOS E on streets and intersections within the area bounded by Highway 198, 10th Avenue, 11th Avenue, and Florinda Avenue, inclusive of these streets. Maintain a peak hour LOS D on all other streets and intersections with the Planned Growth Boundary.

Policy T30 Capital Improvement Program

Include the acquisition of right-of-way and the construction and maintenance of streets in the City Capital Improvement Program.

Policy T31 Coordination with Development Approvals

Coordinate additions and modifications to the roadway system with land development approvals.

Policy T32 Ultimate Rights-of-Way

Acquire control of land within ultimate right-of-way of Arterial and Collector streets during early stages of development.

Policy T33 Street Improvements and Priorities

Prioritize street improvements with emphasis on current and forecasted service levels.

Policy T34 Kings County Regional Transportation Plan

Local circulation system improvements shall be consistent with the goals and objectives stated in the Kings County Regional Transportation Plan.

Policy T35 Caltrans Coordination

Coordinate with Caltrans to identify needed improvements to its highway facilities in the City and implement necessary programs to assist in improving State Route 43 and 198 and its interchanges/intersections with local roadways.

Policy T36 Traffic Impact Fees

Periodically review and update the traffic impact fee program to ensure new development contributes its fair share of funding for new streets, intersections, and highway improvements.

Policy T37 Shade Trees in Planter Strips

Where adequate space permits, include street trees planted in planter strips between the curb and sidewalk to shade paved street surfaces.

Policy T38 Operational Improvements First

Maximize operational improvements before widening existing streets even when they do not meet current width standards.

Policy T39 Accommodating All Modes of Traffic

Plan, design, and construct new transportation improvement projects to safely accommodate the needs of pedestrians, bicyclists, transit riders, motorists, and persons of all abilities.

Policy T40 Pedestrian and Bicycle Placemaking

Promote pedestrian and bicycle improvements that improve connectivity between neighborhoods, provide opportunities for distinctive neighborhood features, and foster a greater sense of community.

Policy T41 Streetscape Enhancements

Strive to improve the visual character of roadway corridors by improving streetscapes with amenities such as street trees, pedestrian-scaled lighting, underground utilities, water-efficient landscaping, and streetscape furniture.

Policy T42 Existing Sound Walls and Fences

Encourage landscaping improvements along walls and fences adjacent to major streets to discourage graffiti and enhance visual character.

Policy T43 Safe Routes to Schools Programs

Promote Safe Routes to Schools Programs for all schools serving the City.

Policy T44 Funding

Seek outside funding for Safe Routes to Schools projects.

Policy T45 Truck Routes

Minimize the adverse impact of truck traffic on the community by designating, maintaining, and enforcing a system of designated truck routes.

Policy T46 Good Movement Strategies

Coordinate with regional transportation agencies to plan and implement goods movement strategies, including those that improve mobility, deliver goods efficiently, and minimize negative environmental impacts.

Policy T47 Truck Parking

Identify locations where heavy truck parking is acceptable and where it is prohibited based upon adjacent land use designations.

Policy T48 Traffic Calming

Consider the use of traffic-calming designs such as roundabouts, bulb-outs, and other traffic-calming designs, which will improve the operation or LOS of a street.

Policy T49 Subdivision Connectivity

Design subdivisions to maximize connectivity both internally and with other surrounding development.

Policy T50 Carpool Programs

Encourage the use of carpooling, vanpooling, and flexible employment hours.

Policy T51 Alternative Design Standards

Consider alternative roadway design standards for new residential and mixed use development for future streets that may include:

- Narrower street widths on local roadways.
- Smaller turning radii geometrics on street intersections to improve safety for pedestrians.
- Tree-lined streets in parkways between the curb and sidewalk.
- Roundabouts in lieu of traffic signals where appropriate conditions exist to maximize intersection efficiency, maintain continuous traffic flow, and reduce accident severity.

Policy T65 Bicycle Network Master Planning

Maintain a Bicycle Master Plan to coordinate existing and planned infrastructure to support, encourage, and promote bicycle transportation, with effective connections to downtown, major shopping areas, mixed use neighborhoods, community facilities, schools, parks, and employment areas.

Policy T70 Pedestrian Connections

Increase connectivity through direct and safe pedestrian connections to public amenities, neighborhoods, village centers, and other destinations throughout the city.

CITY OF HANFORD VMT THRESHOLDS AND IMPLEMENTATION GUIDELINES

The City of Hanford adopted a set of vehicle miles traveled (VMT) thresholds to support the shift from a delay-based analysis (LOS) to VMT. The adopted VMT Thresholds and Implementation Guidelines. The City VMT Guidelines provide implementation of CEQA VMT metrics as applicable to the City of Hanford through the establishment of VMT screening criteria and VMT analysis thresholds.

City VMT Guidelines provide a list of screening criteria for projects and activities that may result in a reduction of VMT and GHG emissions. If a project meets one or more of the following screening factors, the project may be presumed to produce a less than significant VMT impact:

- The project is within 0.5 miles (mi) of a transit priority area or a high-quality transit area and is consistent with the Regional Transportation Plan (RTP)/ Sustainable Communities Strategy (SCS), has a floor area ratio (FAR) equal or greater than 0.75, does not provide more parking than what is required by the City's Municipal Code, or does not reduce the number of affordable residential units. In accordance with SB 743, "transit priority areas" are defined as "an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program. A "major transit stop" means: "a site containing an existing rail transit

station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service of 15 minutes or less during the morning and afternoon peak commute periods." A high-quality transit area or corridor is a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. (See Pub. Resources Code, § 21099, subds. (a)(7), (b)(1).)

- The project includes local-serving retail with a combined area of less than 55,000 square feet (sf). Whether a retail project is local-serving or not will be determined at the discretion of the City. As included in Appendix A, a list of recently completed local serving retail projects (as identified by the City) demonstrates that retail projects up to 55,000 sf could be considered as local serving. Additionally, as shown in Table B, retail projects up to 125,000 sf would not have a significant GHG impact. As explained in section 3.1.1, projects not having a significant GHG impact would not also have a significant VMT impact. However, based on substantial evidence for justifying local serving retail, as included in Appendix A, the City establishes retail projects less than 55,000 sf to be screened out.

- Redevelopment projects that result in an equal or net reduction in VMT can be considered to have less than significant VMT impact. A net reduction in VMT would occur if the land use proposed by the project would generate less VMT than the existing land use.

- The project includes 100 percent affordable housing units. Affordable housing units consists of low-income households and research has shown that low-income households produce lower VMT compared to a market-rate housing unit.

- A project consistent with the City's General Plan can be successfully screened if the project would generate fewer than 1,000 average daily trips (ADT), while a project not consistent with the City's General Plan can be screened if the project would generate fewer than 500 ADT. Consistency with the General Plan is required because the GHG and therefore VMT reduction targets for MPOs were established by CARB and are included in the RTPs. The RTP utilizes the latest version of City's General Plan for analyzing GHG emissions.

- Institutional/government and public service uses that support community health, safety and welfare may also be screened from subsequent CEQA VMT analysis. These facilities (e.g., police stations, fire stations, government offices, utilities, public libraries, community centers, and refuse stations) would be a part of the community and, as public services, the VMT would be accounted for within the community. A decision whether a particular project can be categorized as a public service facility will be determined at the discretion of the City. Similarly, any other similar use not included in the list can be approved on a case-by-case basis by the City as applicable. As such, these uses would result in reduction in total VMT due to the proximity of these services within the community. Additionally, many of these facilities would generate fewer than 1,000 ADT and/or use vehicles other than passenger-cars or

light-duty trucks. These other vehicle fleets are subject to regulation outside of CEQA, such as the California Air Resources Board (CARB) and San Joaquin Valley Air Pollution Control District.

- Local parks, daycare centers, student housing projects on or adjacent to a college campus, local-serving gas stations, banks, and K–12 public schools.

- Projects located in areas with low VMT may be screened out from further CEQA analysis. The TA acknowledges that residential and office projects located in areas having a low VMT, (which incorporate features such as density, mix of uses, transit accessibility), tend to exhibit similarly low VMT. Also, areas that are mapped as low VMT areas do not need to prepare any additional VMT analysis. Therefore, residential, office, industrial, or mixed-use projects that are consistent with the City's General Plan and located within low VMT areas (using the City of Hanford VMT Screening Tool2 and applying appropriate thresholds) can be presumed to have similar low VMT profiles and could be screened out from the need for further VMT analysis. It should be noted that if a project constitutes a General Plan Amendment or Zone Change, such projects will be evaluated on a case-by-case basis. Figures 4, 5, and 6 illustrate the VMT per capita, VMT per employee, and VMT per service population screening maps for the City.

- The 2022 State CEQA Guidelines Section 15007 (c) states that "if a document meets the content requirements in effect when the document is sent out for public review, the document shall not need to be revised to conform to any new content requirements in Guideline amendments taking effect before the document is finally approved." Therefore, if a development/land use plan/transportation project is already cleared by a certified Environmental Impact Report (EIR) or an adopted Negative Declaration/Mitigated Negative Declaration, then subsequent projects that are consistent with the approved project will not require a new VMT analysis unless mandated by another section of the CEQA Guidelines.

If the project meets any one of the screening criteria, it may be presumed to have a less than significant transportation impact. No further VMT analysis would then be necessary, The CEQA document shall enumerate the screening criteria and how the project meets or exceeds that applicable VMT threshold. If project screening does not apply, a VMT analysis will be required. The extent of this analysis may be a simple algebraic demonstration or a more sophisticated traffic modeling exercise. For all projects that require a VMT analysis, use of the KCAG TDM is required unless the project includes a special land use that is difficult to analyze using a travel demand model. For the latter, the City may require a qualitative analysis or an analysis using empirical data as applicable to the project. Next, the project-generated VMT (per capita, per employee, per service population, or total) is compared to the appropriate significance threshold. If the project VMT metric is less than the significance threshold, the project is presumed to create a less-than-significant impact. No further VMT analysis for CEQA purposes would be required.

Table 4.2-3
City of Hanford VMT Thresholds

VMT Metric	Threshold	Regional Average
VMT per Capita	8.99	10.33
VMT per Employee	16.95	19.48
VMT per Service Population	21.84	25.10

Source: City of Hanford VMT Thresholds and Implementation Guidelines

Should project VMT metrics exceed the significance threshold stated in Table 4.2-3, mitigation measures will be required.

4.2.4 - IMPACTS AND MITIGATION MEASURES

Methodology

As stated above, SB 743 requires all CEQA analyses relating to transportation impacts to be conducted using the vehicle miles traveled (VMT) metric. As the City of Hanford and KCAG have adopted guidelines and thresholds for VMT, the screening and thresholds from their guidelines are utilized to determine if an impact occurs as a result of the Project. A Traffic Impact Analysis (TIA) Report was prepared for this Project (see Appendix B) (Ruettgers and Schuler Civil Engineers, 2024).

Thresholds of Significance

The following criteria, as established in Appendix G of the CEQA Guidelines, will be utilized to determine if a project could potentially have a significant impact:

a) *Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?*

b) *Conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b)?*

Project Impacts

Impact 4.2-1 - Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

The first step to determining Project trip generation is to assess the impacts that the Project may have on the surrounding roadway network in the City of Hanford. The trip generation rates for the proposed Project were obtained from the 11th Edition of the Trip Generation Manual published by the Institute of Transportation Engineers (ITE). At build-out, the Project is estimated to generate a maximum of 2,993 daily trips, 219 AM peak hour trips, and 302 PM peak hour trips.

As noted in the regulatory section above, the Hanford General Plan has policies related to traffic systems. The General Plan has established LOS E as the acceptable level on streets and

intersections within the area bounded by State Route 198, 10th Avenue, 11th Avenue, and Florinda Avenue, and a peak hour LOS D on all other streets and intersections within the Planned Growth Boundary. The County of Kings has established LOS D as the acceptable level of traffic congestion on County roads. Since the study facilities for this Project lie outside of the SR 198, 10th Avenue, 11th Avenue, and Florinda Avenue boundary, the LOS D threshold was utilized to evaluate the potential significance of LOS impacts to the City of Hanford roadway facilities and the County of Kings facilities.

Existing Level of Service Analysis

The following roadways and corresponding intersections were analyzed in the TIA:

- 11th Avenue
- 12th Avenue
- 13th Avenue
- Hanford-Armona Road
- Hume Avenue
- State Route 198

As noted in the TIA for this Project (Appendix B), all study intersections currently operate at an acceptable LOS during both AM and PM peak periods.

Existing Plus Project Traffic Conditions

Access to and from the Project site will be from four main access points and two internal access points connecting to the existing easterly adjacent subdivision. One access point will be from Hanford-Armona Road. Three access points will be located along the south side of the site providing access to Hume Avenue.

The TIA analyzed the location of the existing and proposed roadways and access points relative to those in the vicinity of the Project site. Based on this review, all proposed roadways and access points are proposed in locations that minimize traffic-operational impacts to existing and future roadway networks.

A capacity analysis of the study intersections was conducted utilizing the Transportation Research Board's *Highway Capacity Manual* (HCM) and produced estimates for the following traffic scenarios:

- Existing Year (2024)
- Existing Year (2024) + Project
- Opening Year (2026)
- Opening Year (2026) +Project
- Future Year (2044)
- Future Year (2044) + Project

LOS criteria for unsignalized and signalized intersections as defined in HCM are presented in Tables 4.2-4 and 4.2-5 below.

Table 4.2-4
Unsignalized Intersection Level of Service Criteria

Level of Service	Average Control Delay (sec/veh)	Expected Delay to Minor Street Traffic
A	≤ 10	Little or no delay
B	> 10 and ≤ 15	Short delays
C	> 15 and ≤ 25	Average delays
D	> 25 and ≤ 35	Long delays
E	> 35 and ≤ 50	Very long delays
F	> 50	Extreme delays

Source: Appendix B

Table 4.2-5
Signalized Intersection Level of Service Criteria

Level of Service	Average Control Delay (sec/veh)	Volume-to-Capacity Ratio
A	≤ 10	< 0.60
B	> 10 and ≤ 20	0.61 - 0.70
C	> 20 and ≤ 35	0.71 - 0.80
D	> 35 and ≤ 55	0.81 - 0.90
E	> 55 and ≤ 80	0.91 - 1.00
F	> 80	> 1.00

Source: Appendix B

Tables 4.2-6 and 4.2-7 summarize the Weekday AM and PM Peak Hour LOS for study area intersections. Based on the analysis prepared, two intersections are projected to operate at below the acceptable LOS in the 2044 and 2044 + Project scenarios.

Table 4.2-6
Intersection Level of Service Weekday AM Peak Hour

ID#	Intersection	Control Type	2024	2024+Project	2026	2026+Project	2044	2044+Project	2044+Project w/Mitigation
1	12th Ave & SR 198 WB Ramps	Signal	B	B	B	B	B	B	-
2	12th Ave & SR 198 EB Ramps	Signal	B	B	B	B	B	B	-
3	SR 198 WB Ramps & Hanford Armona Rd	Roundabout	A	A	A	A	B	C	-
4	SR 198 EB Ramps	NB	B	B	B	B	C	C	-

ID#	Intersection	Control Type	2024	2024+Project	2026	2026+Project	2044	2044+Project	2044+Project w/Mitigation
	& Hanford Armona Rd								
5	13th Ave & Hanford Armona Rd	NB SB Signal	B A -	B A -	B A -	C A -	D (31.4) A -	F (35.0) A -	- - A
6	12th Ave & Hanford Armona Rd	Signal	C	C	C	C	C	C	C
7	11th Ave & Hanford Armona Rd	Signal	B	B	B	B	C	C	-
8	12th Ave & Hume Ave	WB	B	B	B	B	C	C	-

Source: Appendix B

Table 4.2-7
Intersection Level of Service Weekday PM Peak Hour

ID#	Intersection	Control Type	2024	2024+Project	2026	2026+Project	2044	2044+Project	2044+Project w/Mitigation
1	12th Ave & SR 198 WB Ramps	Signal	B	B	C	B	C	C	-
2	12th Ave & SR 198 EB Ramps	Signal	A	A	A	B	B	B	-
3	SR 198 WB Ramps & Hanford Armona Rd	Roundabout	A	A	A	A	B	B	-
4	SR 198 EB Ramps & Hanford Armona Rd	NB	B	B	B	B	C	C	-
5	13th Ave & Hanford Armona Rd	NB SB Signal	C A -	C A -	C A -	C A -	F (>300) A -	F (>300) A -	- - B
6	12th Ave & Hanford Armona Rd	Signal	C	C	C	C	D (40.9)	D (42.1)	C
7	11th Ave & Hanford Armona Rd	Signal	B	B	C	C	C	C	-
8	12th Ave & Hume Ave	WB	B	B	B	B	C	C	-

Source: Appendix B

Annual growth rates ranging between 1.10 and 5.03 percent were applied to the existing peak hour volumes to estimate future volumes for the years 2026 (opening year) and 2044 (horizon year). These growth rates were estimated based on the TIA's review of data from the KCAG travel demand model. The KCAG travel demand model takes into account in-construction and anticipated to-be-constructed projects, which includes 11 out of the 12

projects identified by the City within a 1.5-mile radius of the Project site. The remaining project (Grangeville Mixed Use Project) is currently under environmental review and the scope of intersections does not overlap with the proposed Project, therefore little to no influence on traffic from the Grangeville Project would occur on the proposed Project. Future peak hour volumes for the years 2026 and 2044 both without and with project traffic include peak hour trip estimates for two tracts of the Live Oak development, a master planned community located northwest, southwest, and southeast quadrants of 12th Avenue and Hume Avenue which are under construction. As found in the TIA, there are two intersections that will need improvements by the 2044 year to maintain or improve the operational level of service of the street system in the vicinity of the Project.

Signal warrant criteria was met for the 13th Avenue and Hanford Armona Road intersection; however, it is important to note that a signal warrant defines the minimum condition under which signalization of an intersection might be warranted. Meeting this threshold does not suggest traffic signals are required, but rather, that other traffic factors and conditions be considered to determine whether signals are truly justified. Pursuant to General Plan Policy T36, the Project proponent will be required to pay traffic development impact fees. The provision of an intersection signalization would be determined by the City of Hanford. Improvement costs for signalization are within the purview of traffic development impact fees as required in Policy T36, therefore eventual signalization of the intersection by the City would address the LOS deficiency caused by General Plan buildout (2044) and Project development (2044+Project).

For the 12th Avenue and Hanford Armona Road intersection, the TIA recommends improvements be made to the eastbound roadway to include changing the existing eastbound right turn lane (EBR) to an eastbound through and right turn lane (EBTR). The Project proponent would be required to pay their fair share cost for the needed improvement to ensure that the intersection by the year 2044, operates at an acceptable LOS. The inclusion of fair share cost payment is recommended as a Mitigation Measure and is included as MM 4.2-1.

Implementation of MM 4.2-1 would allow the studied intersection to operate at an acceptable LOS under City LOS standards and reduce impacts to less than significant.

MITIGATION MEASURES

MM 4.2-1: The Project proponent or developer shall be required to pay their fair share of costs for the needed improvements. This includes changing the 12th Avenue and Hanford Armona Road intersection eastbound right turn lane to an eastbound through lane and a right turn lane.

The fair share cost for the improvement is calculated at 18.94% and shall be collected by the City of Hanford at the appropriate time.

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with implementation of mitigation measures*.

Impact 4.2-2 - Conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b)

The VMT Analysis prepared for this Project (Appendix B) follows the guide of the City of Hanford VMT Thresholds and Implementation Guidelines, dated November 2022 (VMT Guidelines) to analyze the Project's VMT and compare them to the established VMT threshold.

Land use developments meeting one or more of the screening criteria contained in the VMT Guidelines are presumed to create a less than significant transportation impact and no further VMT analysis is required. These criteria relate to project type, size, location, proximity to transit, and trip-making potential. The project does not meet any of the screening criteria. Therefore, a detailed VMT analysis is required and is included as Appendix B.

For projects that are not screened out, a quantitative analysis of VMT impacts must be prepared and compared against the adopted VMT thresholds of significance. According to the VMT Guidelines, residential developments that generate more than 8.99 daily VMT for residential VMT per capita would be considered to have a significant transportation impact.

Baseline VMT

The first step in a VMT analysis is to establish the baseline average VMT, which requires the definition of a region. The established region for the Project is Kings County, which is modeled by the KCAG.

Based on the VMT analysis, the Project would result in 9.61 VMT per capita and exceed the 8.99 VMT per capita threshold. As a result, it is recommended that the Project implement VMT mitigation measures for the residential component to reduce VMT per Capita. In order to reduce VMTs, a project must decrease the number of vehicle miles travels to and from the Project site. For land development projects, VMT mitigation focuses on measures that reduce the number and/or length of single-occupant vehicle trips generated by the project. According to the VMT Guidelines, proposed mitigation to reduce project VMT "must be supported by substantial evidence illustrating that the measure(s) will mitigate VMT impacts to less than significant." The VMT Guidelines cite the Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health Equity: Designed for Local Governments, Communities, and Project Developers, California Air Pollution Control Officers Association, December 2021 (CAPCOA Handbook) as a source for mitigation measures with quantitative methods for estimating VMT reduction. These measures included increasing residential density and providing easy access to high-quality public transit within 0.5 miles of a high frequency transit station. However, the TIA found that no applicable and feasible mitigation measures are available to reduce

VMT below the adopted City threshold. Therefore, the Project is expected to result in a significant transportation impact under CEQA.

MITIGATION MEASURES

No mitigation measures

LEVEL OF SIGNIFICANCE

Impacts would be ***significant and unavoidable***.

Cumulative Setting Impacts and Mitigation Measures

CUMULATIVE SETTING

The study area for the analysis of cumulative impacts is the City of Hanford and unincorporated portions of Kings County located adjacent to the city limits. Cumulative impacts are assessed with the proposed Project and the 12 projects located within a one-half mile of the Project site as identified by the City of Hanford. Eleven of the 12 projects are entitled and either under construction or are anticipated to be under construction in the future. The projects that are entitled are included in and are consistent with the General Plan. Therefore, those projects are included in the KCAG travel demand model. The growth rates used to determine future traffic volumes would therefore reflect traffic from these projects. One of the projects is currently under environmental review, the Grangeville Mixed Use Project. A review of the scope of intersections in the Grangeville traffic study did not overlap with any of the intersections included in the Silicon Valley Ranch study. Therefore, there would be little to no influence of traffic from the Grangeville project on the Silicon Valley Ranch project.

CUMULATIVE IMPACTS

As noted above, use of the KCAG travel demand model and estimates provided in the TIA (Appendix B), impacts related to LOS would be less than significant with mitigation measures incorporated for the proposed Project and for the cumulative year 2044. Based on the analysis in the TIA, cumulative impacts for LOS would be less than significant with mitigation incorporated.

As for VMT, Project impacts are considered significant and unavoidable. This is in large part due to the lack of applicable and feasible VMT mitigation measures. The cumulative impacts for the City of Hanford would be considered significant and unavoidable.

MITIGATION MEASURES

Implementation of MM 4.17-1.

CUMULATIVE LEVEL OF SIGNIFICANCE

Cumulative impacts for LOS would be *less than significant with mitigation incorporated.*

Cumulative impacts for VMT would be *significant and unavoidable.*

4.3 - Approach to Environmental Analysis

Section 4.1 of this Draft EIR contains discussions of the environmental setting, regulatory setting, thresholds of significance, and potential environmental impacts related to the construction and operation of the proposed Project. These sections also include a discussion of mitigation measures and the level of significance after the implementation of mitigation measures.

Section 15125(a) of the CEQA Guidelines identifies that an EIR includes a description of the physical environmental conditions in the vicinity of the Project. This environmental setting will normally constitute the baseline physical conditions by which a Lead Agency determines whether an impact is significant.

The study area for the analysis of the Project and cumulative impacts is the Hanford city limits, the portions of Kings County located adjacent to the City. The applicable cumulative projections include growth projections from the Hanford General Plan and the Kings County General Plan.

The regulatory setting includes a discussion of the regulatory environment as it existed prior to the implementation of the Project. There is federal, State, regional, and local regulations identified within each environmental issue discussion, where appropriate. It is acknowledged that although the existing City of Hanford development codes currently guide development within the City.

The impact analysis contains a discussion of Project-specific impacts as well as cumulative impacts. The Project that is evaluated is the construction of 326 single-family residences, internal roads, a 2.86-acre drainage retention basin, and a 3.58-acre park on an approximately 88.9-acre site (Project). Lots will range between 5,000 and 7,000 square feet. Associated utility and right-of-way infrastructure would be developed in accordance with City standards and regulations. Specific components of the Project are not separately evaluated; however, the Project, as a whole, is evaluated. The Project, as a whole, is referred to as the proposed Project or Project, throughout this EIR.

The impacts within the impact analysis section are identified as *no impact, less-than-significant impact, potentially significant impact,* or *significant impact*. The project-specific impacts address the potential environmental impacts that could occur under the development activity anticipated to occur with the proposed Project.

4.4 - Environmental Topics

The potential environmental effects associated with the implementation of the proposed Project are analyzed in the following topical environmental issue areas:

- Land Use Planning
- Transportation
- Mandatory Findings of Significance

4.5 - Organization of Issue Areas

Each environmental issue section contains the following components:

- Introduction - includes a brief discussion of the information used for the analysis.

- Environmental Setting - identifies and describes the existing physical environmental conditions of the Project area associated with each of the impact sections.

- Regulatory Setting - provides an understanding of the regulatory environment that exists prior to the implementation of the Project. This discussion includes the applicable goals, objectives, and policies from the City of Hanford 2035 General Plan as well as other regulations that currently exist.

- Methodology – identifies which criteria, technical documents, or formulas were used to analyze specific environmental impacts.

- Thresholds of Significance - identifies thresholds from Appendix G of the CEQA Guidelines that assist in determining the significance of an impact. Some thresholds include a more detailed discussion to address the City of Hanford's or other local agency's specific significance criteria for the Project area.

- Project Impacts - describes environmental changes to the existing physical conditions that may occur if the proposed Project is implemented and evaluates these changes with respect to the CEQA thresholds of significance. This section includes a Project-specific impact analysis and a cumulative impact analysis. Mitigation measures are identified for the potentially significant project and cumulative impacts, if determined feasible. The mitigation measures are those measures that could avoid, minimize, or reduce an environmental impact. This section also includes a discussion of the level of significance after mitigation that describes the level of impact significance remaining after mitigation measures are implemented.

4.6 - Level of Significance

Determining the severity of the project and cumulative impacts is fundamental to achieving the objectives of CEQA. CEQA Guidelines Section 15091 requires that decision-makers mitigate, as completely as is feasible, the significant impacts identified in Project EIR. If the

Project EIR identifies any significant unmitigated impacts, CEQA Guidelines Section 15093 requires decision-makers in approving a project to adopt a Statement of Overriding Considerations that explains why the benefits of the project outweigh the adverse environmental consequences identified in the EIR.

The level of significance for each impact examined in this EIR is determined by considering the predicted magnitude of the impact against the applicable threshold. Thresholds are developed using criteria from the CEQA Guidelines and checklist; federal, State, and local regulatory schemes; local/regional plans and ordinances; accepted practice; consultation with agencies and recognized experts; and other professional opinions. When adopting or using thresholds of significance, a Lead Agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence.

4.7 - Format Used for Impact Analysis and Mitigation Measures

The format adopted in this EIR to present the evaluation of impacts is described and illustrated below.

Summary Heading of Impact

Impact 4.1-1: An impact summary heading appears immediately preceding the impact description (Summary Heading of Impact in this example). The impact number correlates to the section of the report (4.1 for Aesthetics in this example) and the sequential order of the impact (1 in this example) within that section. To the right of the impact number is the impact statement, which identifies the potential impact, corresponding to CEQA thresholds.

Project Impact Analysis

A narrative analysis follows the impact statement. The analysis identifies the significant environmental effects of the proposed Project on the environment, based on an examination of the changes in the existing physical conditions in the affected area as they exist at the time the Notice of Preparation is published. Direct and indirect significant effects of the Project on the environment are identified and described for both the short-term and long-term effects. The analysis includes relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services.

Cumulative Impact Analysis

A narrative analysis of cumulative impacts follows the project impacts section. The cumulative impacts analysis includes a discussion of the level of impact that would occur if the proposed Project, in combination with cumulative development, as described in Chapter

1 - *Executive Summary* of this EIR, are implemented. If the combined level of impact is *no impact* or *less-than-significant* impact, the Project's incremental effect would be less than cumulatively considerable. If the combined level of impact is *significant*, the Project's incremental effect is determined to be cumulatively considerable. The discussion of cumulative impacts is guided by the standards of practicality and reasonableness and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.

Mitigation Measures

Mitigation measures to reduce potential project-specific and cumulative impacts include a summary heading and description using the format presented below:

MM 4.4-1: Project-specific or cumulative mitigation is identified that would reduce the impact to the lowest degree feasible. The mitigation number links the particular mitigation to the impact section with which it is associated (Impact 4.4-1 in this example).

Level of Significance After Mitigation

This section identifies the resulting level of significance of the project-specific or cumulative impact following mitigation.

CHAPTER 5 - CONSEQUENCES OF PROJECT IMPLEMENTATION

5.1 - Environmental Effects Found to be Less than Significant

Section 15128 of the California Environmental Quality Act (CEQA) Guidelines requires that an Environmental Impact Report (EIR) "contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR."

The City of Hanford has engaged the public in the scoping of the environmental document. Comments received during scoping have been considered in the process of identifying issue areas that should receive attention in the EIR. The contents of this EIR were established based on the Notice of Preparation (NOP) prepared in accordance with the CEQA Guidelines and on public and agency input received during the scoping process.

After further study and environmental review in this EIR, direct and indirect impacts of the proposed Project (not including cumulative impacts) would be less than significant or could be reduced to less-than-significant levels with mitigation measures for the resource areas listed below.

5.1.1 - POTENTIAL FOR LESS THAN SIGNIFICANT IMPACTS TO OCCUR

Aesthetics

- Impact 4.1-3: Substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from publicly accessible vantage point). If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality

- Impact 4.1-4: Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area

Agriculture and Forestry Resources

- Impact 4.2-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use

- Impact 4.2-5: Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use

Air Quality

- Impact 4.3-1: Conflict with or obstruct implementation of the applicable air quality plan
- Impact 4.3-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or State ambient air quality standard
- Impact 4.3-3: Expose sensitive receptor to substantial pollutant concentrations
- Impact 4.3-4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people

Biological Resources

- Impact 4.4-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service
- Impact 4.4-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service
- Impact 4.4-3: Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means
- Impact 4.4-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites

Cultural Resources

- Impact 4.5-1: Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5
- Impact 4.5-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5
- Impact 4.5-3: Disturb any human remains, including those interred outside of formal cemeteries

Energy

- Impact 4.6-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during Project construction or operation

- Impact 4.6-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency

Geology and Soils

- Impact 4.7-1: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving the rupture of a known earthquake fault

- Impact 4.7-2: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking

- Impact 4.7-3: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction

- Impact 4.7-4: Directly or indirectly cause potentially substantial adverse effects, including the risk of loss, injury, or death involving landslides

- Impact 4.7-5: Result in substantial soil erosion or loss of topsoil

- Impact 4.7-6: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse

- Impact 4.7-7: Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property

- Impact 4.7-9: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

Greenhouse Gas Emissions

- Impact 4.8-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment

- Impact 4.8-2: Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases

Hazards and Hazardous Materials

- Impact 4.9-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials

- Impact 4.9-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment

- Impact 4.9-3: Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school

- Impact 4.9-4: Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment

- Impact 4.9-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area

- Impact 4.9-6: Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan

Hydrology and Water Quality

- Impact 4.10-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality

- Impact 4.10-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin

- Impact 4.10-3(i): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site

- Impact 4.10-3(ii): Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river or through the addition of impervious surfaces, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site

- Impact 4.10-3(iii): Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff

- Impact 4.10-3(iv): Impede or redirect flood flows

- Impact 4.10-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan

Land Use and Planning

- Impact 4.1-2 (Impact 4.11-2 of Appendix G): Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect

Noise

- Impact 4.13-1: Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies

- Impact 4.13-2: Generation of excessive ground-borne vibration or ground-borne noise levels

Population and Housing

- Impact 4.14-1: Induce substantial unplanned population growth in an area, either directly or indirectly

Public Services

- Impact 4.15-1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or to other performance objectives for any of the public services for fire protection services

- Impact 4.15-2: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for police protection services

- Impact 4.15-3: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause

significant environmental impacts in order to maintain acceptable service Ratios, response times, or other performance objectives for school services

- Impact 4.15-4: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for park services

- Impact 4.15-5: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for other public facilities

Recreation

- Impact 4.16-1: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated

Transportation and Traffic

- Impact 4.17-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)

- Impact 4.17-4: Result in inadequate emergency access

Tribal Cultural Resources

- Impact 4.18-1(i): Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)

- Impact 4.18-1(ii): Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the Lead Agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code

Section 5024.1, the Lead Agency shall consider the significance of the resource to a California Native American tribe

Utilities and Service Systems

- Impact 4.19-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which would cause significant environmental effects

- Impact 4.19-2: Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed

- Impact 4.19-3: Result in a determination by the wastewater treatment provider that serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments

- Impact 4.19-4: Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals

- Impact 4.19-5: Comply with federal, state, and local management and reduction statutes and regulations related to solid waste

Wildfire

- Impact 4.20-1: Substantially impair an adopted emergency response plan or emergency evacuation plan

- Impact 4.20-2: Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire

- Impact 4.20-3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment

- Impact 4.20-4: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes

5.1.2 - Potential for Less than Significant Impacts to Occur with Incorporation of Mitigation Measures

Potential environmental effects of the Project and mitigation measures are discussed in detail in Chapter 4 of this EIR. After a full analysis, the following effects were determined to be less than significant with the incorporation of mitigation measures.

Transportation

- Impact 4.2-1 (Impact 4.17-1 of Appendix G): Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities

5.2 - Significant Environmental Effects that Cannot be Avoided

Section 15126.2(b) of the CEQA Guidelines requires that the EIR describe any significant impacts, including those that can be mitigated but not reduced to less-than-significant levels. Potential environmental effects of the project and proposed mitigation measures are discussed in detail in Chapter 4, *Environmental Analysis*, of this EIR.

The environmental impacts determined to be significant and unavoidable are described in Table 5-1, *Summary of Significant Impacts of the Proposed Project*.

Table 5-1
Summary of Significant Impacts of the Proposed Project

Resources	Project Impacts	Cumulative Impacts
Transportation and Traffic Impact 4.2-2 (Impact 4.17-2 of Appendix G)	VMT associated with the Project is estimated to be at 9.61 VMT per Capita and would exceed City of Hanford adopted VMT per Capita thresholds of 8.99. Since the Project exceeds the City VMT threshold and no feasible mitigation has been identified to reduce impacts, permanent (operation) impacts are considered significant and unavoidable.	No feasible mitigation measure has been identified that would be feasible and reduce Project impacts to a less than significant impact. For these reasons, the proposed Project would have a **significant and unavoidable** cumulatively considerable contribution to VMT generation.

5.3 - Growth Inducing Impacts

Growth inducement can be a result of new development that requires an increase in dwelling units or an increase in employment, removes barriers to development, or provides resources that lead to secondary growth. The Project would add new residential uses and is projected in the City General Plan. As determined in the prepared IS/NOP, the population of the City is expected to grow by more than 50 percent over the next twenty years. The 6th Cycle RHNA states that the City of Hanford will need to provide an additional 5,547 dwelling units by 2035. The proposed Project will help the city work toward attaining a sufficient housing supply while also complying with the General Plan buildout.

The Project is situated in a growing urbanized area, where substantial employment and housing opportunities will continue to grow. The Project would accordingly accommodate planned growth and not induce unplanned growth.

With respect to removing barriers to development, such as by providing access to previously undeveloped areas, the Project is not anticipated to result in significant growth inducement. The Project does not include the construction of infrastructure that could provide for future residential development; it does not remove barriers to off-site development.

Although the Project accommodates planned economic growth at suitable locations, the net increase in population on the Project site would be less than significant.

5.4 - Significant Irreversible Changes

As stated in the CEQA Guidelines, an EIR must address any significant irreversible environmental change that would result from project implementation. According to Section 15126.2(c) of the CEQA Guidelines, such a change would occur if one of the following scenarios occurs:

- The Project would involve a large commitment of nonrenewable resources.
- Irreversible damage can result from environmental accidents associated with the Project.
- The proposed consumption of resources is not justified (e.g., the Project would result in the wasteful use of energy).

The environmental effects of the proposed Project are thoroughly discussed in Chapter 4, *Environmental Impact Analysis*, of this EIR and summarized in the Executive Summary. Implementation of the proposed Project would commit nonrenewable resources during any construction activities and future cannabis-related facility operations. Future cannabis-related operations, oil, gas, and other nonrenewable resources would be consumed for the cultivation, manufacturing, distribution, and retail sales of cannabis products. Therefore, an irreversible commitment of nonrenewable resources would occur as a result of the proposed Project. However, assuming that those commitments occur in accordance with the adopted goals, policies, and implementation measures of the Hanford General Plan, as a matter of public policy, those commitments have been determined to be acceptable. The

policies of the Hanford General Plan ensure that any irreversible environmental changes associated with those commitments will be minimized.

CHAPTER 6 - ALTERNATIVES

6.1 - Introduction

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) describe a range of reasonable alternatives to the Project or to the location of the Project site that could feasibly avoid or lessen any significant environmental impacts of the Project while attaining most of the Project's basic objectives. An EIR also must compare and evaluate the environmental effects and comparative merits of the alternatives. This chapter describes alternatives considered but eliminated from further consideration, including the reasons for elimination, and compares the environmental impacts of several alternatives retained with those of the Project.

The following are key provisions of the CEQA Guidelines (Section 15126.6):

- The discussion of alternatives shall focus on alternatives to the Project or its location that are capable of avoiding or substantially lessening any significant effects of the Project, even if these alternatives would impede to some degree the attainment of the Project objectives or would be costlier.

- The No Project Alternative shall be evaluated, along with its impacts. The no project analysis shall discuss the existing conditions at the time the Notice of Preparation was published, as well as what would be reasonably expected to occur in the foreseeable future if the Project were not approved, based on current plans and consistent with available infrastructure and community services.

- The range of alternatives required in an EIR is governed by a "rule of reason;" therefore, the EIR must evaluate only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the Project.

- For alternative locations, only locations that would avoid or substantially lessen any of the significant effects of the Project need to be considered for inclusion in the EIR.

- An EIR need not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote and speculative.

The range of feasible alternatives is selected and discussed in a manner to foster meaningful public participation and informed decision-making. Among the factors that may be taken into account when addressing the feasibility of alternatives, as described in Section 15126.6(f)(1) of the CEQA Guidelines, are environmental impacts, site suitability, economic viability, availability of infrastructure, general plan consistency, regulatory limitations, jurisdictional boundaries, and whether the Project proponent could reasonably acquire, control, or otherwise have access to an alternative site. An EIR need not consider an alternative whose effects could not be reasonably identified, whose implementation is remote or speculative, and that would not achieve the basic project objectives.

Under case law and CEQA Section 15126.6(f), the discussion of alternatives need not be exhaustive and is subject to a rule of reason. CEQA Section 15126.6(d) states that "if an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternatives shall be discussed, but in less detail than the significant effects of the project as proposed." Determining factors that may be used to eliminate alternatives from detailed consideration in an EIR are (a) failure to meet most of the basic project objectives, (b) infeasibility, or (c) inability to avoid significant environmental impacts. CEQA Section 15364 defines "feasibility" as "Capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors."

The Project has the potential to have significant adverse effects, at either a project level or cumulative level, on aesthetics, agriculture, air quality, biological resources, greenhouse gas emissions, noise, population, and housing at the Project site. Even with the mitigation measures described in Chapter 4, *Environmental Analysis*, of this EIR, impacts in these issue areas would be significant and unavoidable. Therefore, per the CEQA Guidelines, this section discusses alternatives that are capable of avoiding or substantially lessening the effects on these resources. Significant, unavoidable impacts of the Project are summarized below. Following these summaries, Section 6.2, *Project Objectives*, restates the Project proponent's objectives. Section 6.3, *Alternatives Eliminated from Further Consideration*, presents alternatives to the Project that were considered but eliminated for further analysis. Section 6.4, *Alternatives Analyzed in This EIR*, presents alternatives fully analyzed in this EIR, provides a comparison of alternatives, and makes a determination about the environmentally superior alternative.

6.1.1 - Significant Impacts of the Project

The implementation of the proposed Project would result in significant and unavoidable impacts and significant impacts prior to mitigation incorporated. These potential significant and unavoidable impacts and less-than-significant impacts with mitigation incorporated are evaluated for each of the alternatives that are considered and evaluated as discussed below.

No Potential for Impacts to Occur

Potential environmental effects of the Project and mitigation measures are discussed in detail in Chapter 4 of this EIR. After a full analysis, the following effects were determined to have no potential for impacts to occur:

Aesthetics

- Impact 4.1-1: Have a substantial adverse effect on a scenic vista
- Impact 4.1-2: Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway

Agriculture and Forest Resources

- Impact 4.2-2: Conflict with existing zoning for agricultural use or a Williamson Act contract

- Impact 4.2-3: Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), or timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Productions (as defined in Government Code Section 51104(g))

- Impact 4.2-4: Result in the loss of forest land or conversion of forest land to non-forest use

Biological Resources

- Impact 4.4-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance

- Impact 4.4-6: Conflict with provisions of an adopted habitat conservation plan, natural communities conservation plan, or other approved local, regional, or State habitat conservation plan

Geology and Soils

- Impact 4.7-8: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater

Hazards and Hazardous Materials

- Impact 4.9-7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires

Hydrology and Water Quality

- Impact 4.10-4: In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation

Land Use and Planning

- Impact 4.11-1: Physically divide an established community

Mineral Resources

- Impact 4.12-1: Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State

- Impact 4.12-2: Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan

Noise

- Impact 4.13-3: For a Project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels

Population and Housing

- Impact 4.14-2: Displace substantial number of existing people or housing necessitating the construction

Recreation

- Impact 4.16-2: Include recreational facilities or require construction or expansion of recreational facilities that might have an adverse physical effect on the environment

Potential for Less than Significant Impacts

Potential environmental effects of the Project and mitigation measures are discussed in detail in Chapter 4 of this EIR. After a full analysis, the following effects were determined to have less than significant impacts to occur:

Aesthetics

- Impact 4.1-3: Substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality

- Impact 4.1-4: Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area

Agriculture and Forest Resources

- Impact 4.2-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use

- Impact 4.2-5: Involve other changes in the existing environment which, because of their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use

Air Quality

- Impact 4.3-1: Conflict with or obstruct implementation of the applicable air quality plan
- Impact 4.3-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or State ambient air quality standard
- Impact 4.3-3: Expose sensitive receptors to substantial pollutant concentrations
- Impact 4.3-4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people

Biological Resources

- Impact 4.4-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service
- Impact 4.4-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service
- Impact 4.4-3: Have a substantial adverse effect on State or federally Protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means
- Impact 4.4-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites

Cultural Resources

- Impact 4.5-1: Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5
- Impact 4.5-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5
- Impact 4.5-3: Disturb any human remains, including those interred outside of dedicated cemeteries

Energy

- Impact 4.6-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation

- Impact 4.6-2: Conflict with or obstruct a State or local plan for renewable energy or energy efficiency

Geology and Soils

- Impact 4.7-1: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving the rupture of a known earthquake fault

- Impact 4.7-2: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking

- Impact 4.7-3: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction

- Impact 4.7-4: Directly or indirectly cause potentially substantial adverse effects, including the risk of loss, injury, or death involving landslides

- Impact 4.7-5: Result in substantial soil erosion or loss of topsoil

- Impact 4.7-6: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse

- Impact 4.7-7: Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property

- Impact 4.7-9: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

Greenhouse Gas Emissions

- Impact 4.8.1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment

- Impact 4.8.2: Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases

Hazards and Hazardous Materials

- Impact 4.9-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials

- Impact 4.9-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment

- Impact 4.9-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school

- Impact 4.9-4: Create a hazard to the public or the environment as a result of being located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5

- Impact 4.9-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area

- Impact 4.9-6: Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan

Hydrology and Water Quality

- Impact 4.10-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality

- Impact 4.10-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin

- Impact 4.10-3(i): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site

- Impact 4.10-3(ii): Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river or through the addition of impervious surfaces, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site

- Impact 4.10-3(iii): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the

addition of impervious surfaces, in a manner which would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantially additional sources of polluted runoff

- Impact 4.10-3(iv): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows

- Impact 4.10-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan

Land Use and Planning

- Impact 4.1-2 (Impact 4.11-2 of CEQA Appendix G): Cause a significant environmental impact due to a conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect

Noise

- Impact 4.13-1: Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies

- Impact 4.13-2: Generation of excessive ground-borne vibration or ground-borne noise levels

Population and Housing

- Impact 4.14-1: Induce substantial unplanned population growth in an area, either directly or indirectly

Public Services

- Impact 4.15-1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection

- Impact 4.15-2: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for police protection services

- Impact 4.15-3: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service Ratios, response times, or other performance objectives for school services

- Impact 4.15-4: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for park services

- Impact 4.15-5: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for other public facilities

Recreation

- Impact 4.16-1: Result in increased use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration would occur or be accelerated

Transportation

- Impact 4.17-3: Substantially increase hazards due to a geometric design feature or incompatible uses

- Impact 4.17-4: Result in inadequate emergency access

Tribal Cultural Resources

- Impact 4.18-1: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California register of historical resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)

- Impact 4.18-2: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its

discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Subdivision (c) of Public Resources Code Section 5024.1

Utilities and Service Systems

- Impact 4.19-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects

- Impact 4.19-2: Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed

- Impact 4.19-3: Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments

- Impact 4.19-4: Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals

- Impact 4.19-5: Comply with federal, State, and local management and reduction statutes and regulations related to solid waste

Wildfire

- Impact 4.20-1: Substantially impair an adopted emergency response plan or emergency evacuation plan

- Impact 4.20-2: Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire

- Impact 4.20-3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment

- Impact 4.20-4: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes

Potential for Less than Significant Impacts to Occur with Incorporation of Mitigation Measures

Potential environmental effects of the Project and mitigation measures are discussed in detail in Chapter 4 of this EIR. After a full analysis, the following effect was determined to be less than significant with the incorporation of mitigation measures.

Transportation

- Impact 4.2-1 (Impact 4.17-1 of CEQA Appendix G): Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities

Potential for Significant and Unavoidable Impacts to Occur

Potential environmental effects of the Project and mitigation measures are discussed in detail in Chapter 4 of this EIR. After a full analysis, the following effects were determined to have potential for significant and unavoidable impacts to occur:

Transportation

- Impact 4.2-2 (Impact 4.17-2 of CEQA Appendix G): Conflict or be inconsistent with CEQA Guidelines 15064.3, Subdivision (b)

6.1.2 - OTHER IMPACTS OF THE PROJECT

Impacts of the Project on the other resources evaluated in this EIR were found to be either less than significant or less than significant after mitigation. Therefore, consideration of alternatives that would further reduce impacts on these resources is not required by CEQA. Only alternatives that reduce or substantially lessen the Project's impacts on aesthetics, agriculture, air quality, biological resources, greenhouse gas emissions, noise, or population and housing are considered in this EIR. If one of the alternatives would cause a greater adverse impact on another resource, these impacts are disclosed in Section 6.4, *Alternatives Analyzed in this EIR*. Otherwise, impacts to the remaining resources evaluated in this EIR are not discussed further in this section.

6.2 - Project Objectives

The Project has the following objectives:

1. Provide a variety of housing opportunities with a range of styles, sizes, and values that will be designed to satisfy existing and future demand for quality housing in the area.

2. Provide a sense of community and walkability within the development through the use of street patterns, parks/open space areas, landscaping, and other Project amenities.

3. Create a successful and financially feasible Project by meeting the housing needs of the area.

4. Provide a residential development that assists the City in meeting its General Plan and Housing Element requirements and objectives.

CEQA requires that an EIR describe a reasonable range of alternatives to the Project, or to the location of the Project, that would avoid or substantially lessen any of the significant effects of the Project and that would feasibly attain most of the basic Project objectives (Title 14, Section 15126.6). Attainment of the Project objectives is discussed for each retained alternative in Section 6.4.

6.3 - Alternatives Considered but Rejected

There are no Project alternatives that were considered and rejected.

6.4 - Alternatives Considered and Evaluated

An evaluation of three alternatives that were considered and evaluated is provided below. These alternatives represent a reasonable range of alternatives to the proposed Project. This analysis includes alternatives that could feasibly accomplish some of the basic objectives of the proposed Project and could potentially avoid or substantially lessen one or more of the significant effects. The following is an evaluation of each of the alternatives to the proposed Project that were further considered for analysis. Table 6-1, below, provides a summary of the impacts comparison between the proposed Project and the Project alternatives.

6.4.1 - ALTERNATIVE A - NO PROJECT ALTERNATIVE

Under the No Project Alternative, the Project area would remain unchanged and there would be no residential units or parks constructed. The No Project Alternative would keep the site as agriculture and remain under the jurisdiction of Kings County. As no change would occur, the Project site would continue to be consistent with the Kings County General Plan land use designation and zoning of Limited Agriculture, 10 acres (AL10). The City is also required to meet the State Regional Housing Needs Allocation (RHNA) for new housing in the City under the Housing Element of the City General Plan. The No Project Alternative would not fulfill the objectives of the Project or assist the City in meeting RHNA. With regard to transportation impacts, the No Project Alternative would result in no new trips generated. Therefore, the No Project Alternative would reduce the less than significant impact associated with LOS thresholds and significant and unavoidable impact relating to VMT. However, the City is required to meet the State Regional Housing Needs Allocation (RHNA) for new housing in

the City. The No Project Alternative would not fulfill the objectives of the Project or assist the City in meeting RHNA.

6.4.2 - ALTERNATIVE B - REDUCED PROJECT ALTERNATIVE

This alternative would decrease the number of single-family residential houses from 326 to 242. As described in this draft EIR, the proposal to approve the tentative tract map, annex the site into the City, and prezoning the site to R-L-5 would remain the same. With **Alternative B** a similar outcome to the proposed Project would occur with regard to County and City General Plan consistency. The annexation would meet County and LAFCo objectives in addition to providing planned City expansion within their SOI. This alternative will meet all Project objectives but would have a reduced positive effect of assisting the City in meeting regional housing needs. Under **Alternative B**, overall VMT for the Project would decrease; however, per capita VMT impacts of significant and unavoidable would remain the same as the proposed Project. With regard to City LOS thresholds, overall trip generation would be reduced, resulting in lessened impacts on studied intersections. However, this reduction is still likely to exceed LOS thresholds cumulatively, and require mitigation as indicated in this draft EIR to improve the impacted intersection of 12th Avenue and Hanford Armona Road. Impacts regarding LOS would continue to be *less than significant with mitigation incorporated*.

6.4.3 - ALTERNATIVE C – MULTI-FAMILY ALTERNATIVE

This alternative would replace the proposed single-family residential with multi-family apartments at a density of at least 14.5 dwelling units per gross acre (1,088 units). The Project site is currently designated by the General Plan for low-density residential and prezoned R-L-5. The proposed Project request would be modified to include a General Plan Amendment and a Zone Change to Medium Density Residential (R-M) to allow multi-family apartments. With regard to the addition of a General Plan Amendment, consistency findings with General Plan goals and policies would be necessary to determine if the proposed Medium Density Residential land use would comply. However, due to its proximity to designated Medium Density Residential land northerly adjacent to the Project site, consistency findings can likely be made as availability of City services, implementation of pedestrian, bicycle, and vehicle standards, and payment of impact fees would still be applicable to the development.

Under **Alternative C**, the overall density increase would result in higher trips generated. This would, in turn, cause impacts to LOS and VMT. For LOS, a rise in vehicle trips generated due to an increased number of residents originating from the Project site would result in higher utilization of intersections in the vicinity of the site. Based on this assumption, the higher utilization could negatively impact LOS for the studied intersections and would potentially require additional mitigation/improvements to intersections to meet LOS standards.

Therefore, **Alternative C** could result in an increased impact with regard to City LOS standards. In regard to VMT, the City of Hanford has adopted VMT Thresholds and Implementation Guidelines, which was utilized for the proposed Project to determine

impacts. With regard to the adopted screening criteria and VMT thresholds, **Alternative C** does not meet the screening criteria and would likely generate more than 1,000 average daily trips, is not located within 0.5 miles of a transit priority area and is not located within an area where existing VMT per capita is low. The City's VMT Guidelines cite the *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health Equity: Designed for Local Governments, Communities, and Project Developers,* California Air Pollution Control Officers Association, December 2021 (CAPCOA Handbook) as a source for measures with quantitative methods for estimating VMT reduction. It was found that the in CAPCOA Handbook, that an increase in density over the national average (9.1 dwelling units per acre) can result in a VMT reduction. Assuming no change in the amount of developable land, the project would need at least 455 dwelling units to reach the national average and be credited for any reduction in project VMT. Moreover, the project would require a total of 590 dwelling units to mitigate the impact of project VMT to a less-than-significant level. (Ruettgers and Schuler Civil Engineers, 2024). As **Alternative C** proposes a density larger than the national average, it can be seen that a reduction in Project VMT would occur. Therefore, VMT under **Alternative C** would result in a less than significant impact.

6.4.4 - ALTERNATIVE D – DIFFERENT SITE ALTERNATIVE

This alternative would relocate the Project to a different site in order to be located nearer to corridor mixed use where a mix of commercial and office uses would be available in addition to being located closer to major transit corridors. This alternative would locate the Project on the east side of the City, bounded by Lacey Boulevard to the south, 9 1/4 Avenue to the west, State Route 43 to the east, and Grangeville Boulevard to the north. This alternative will meet all Project objectives and would assist the City in meeting its regional housing needs.

Additionally, **Alternative D** would result in similar conditions as the proposed Project, consistency findings with Kings County and LAFCo for annexation, and General Plan conformity with the City can be made. With regard to LOS standards, the alternative site would require an analysis of intersections in the vicinity of the site and the comparisons of future conditions at the chosen intersections. It can be determined that under **Alternative D**, impacts to LOS at intersections could occur similar to the proposed Project. Dependent on the LOS grade found as a result of Project implementation, mitigation measures for intersection improvements and the use of transportation impact fees per General Plan policy would be applicable to **Alternative D** and therefore result in similar impacts as the proposed Project.

Under **Alternative D**, overall VMT per capita for the Project would still exceed City VMT thresholds as the majority of the site is located within a high VMT area (Kings County Council of Governments, 2020) in addition to no changes made to the Project lot count. Therefore, per capita, VMT would remain similar to the proposed Project as there are no other factors including proximity to high-quality transit corridors that could provide VMT reductions. Impacts would continue to be *significant and unavoidable*. In addition, the applicant does not currently own either of these properties and it is not known if the current owners are willing to sell these properties.

6.5 - Environmentally Superior Alternative

CEQA requires that the City identify an Environmentally Superior Alternative. If the No Project Alternative is the Environmentally Superior Alternative, the City must identify an Environmentally Superior Alternative among the other alternatives considered in the EIR (CEQA Guidelines, Section 15126.6). This alternatives analysis includes three other Project alternatives –Alternative B - Reduced Project, Alternative C - Multi-Family, and Alternative D - Different Site. Based on the evaluation of the three alternatives, Alternative C – Multi-Family would reduce significant and unavoidable environmental impacts relating to VMT while fulfilling most of the objectives of the proposed Project and is therefore the Environmentally Superior Alternative.

Table 6-1
Summary of Alternatives Impacts

Environmental Resource	Project	Alternative A	Alternative B	Alternative C	Alternative D
Land Use and Planning: Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect	Less than significant	Similar	Similar	Similar	Similar
Land Use and Planning: Cumulative Impacts associated with land use plan, policy, or regulation	Less than significant	Similar	Similar	Similar	Similar
Transportation and Traffic: Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities	Less than significant with mitigation incorporated	Fewer	Fewer	Similar	Similar
Transportation and Traffic: Cumulative Impacts associated with LOS	Less than significant with mitigation incorporated	Fewer	Fewer	Similar	Similar
Transportation and Traffic: Conflict or be Inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b)	Significant / Unavoidable	Fewer	Similar	Fewer	Similar
Transportation and Traffic: Cumulative Impacts associated with VMT	Significant / Unavoidable	Fewer	Similar	Fewer	Similar
Meet Project Objectives	Yes	No	Yes	Yes	Yes
Reduce Any Significant and Unavoidable Impacts to No Impact or Less than Significant	No	Yes	No	Yes	No

CHAPTER 7 - RESPONSE TO COMMENTS

This chapter is being reserved for and will be included as the Final EIR.

CHAPTER 8 - ORGANIZATIONS AND PERSONS CONSULTED

Note: All of the below entities were either notified or contacted directly to ask for or directly receive consultation on their applicable area of expertise with respect to this proposed Project. This may not be an all-inclusive list.

Federal Agencies

- U.S. Department of Agriculture/Natural Resources Conservation Service
- U.S. Environmental Protection Agency—Region IX
- U.S. Fish and Wildlife Service

State Agencies

- California Air Resources Board
- California Highway Patrol
- California Department of Conservation
- California Department of Toxic Substances Control
- California Department of Parks and Recreation
- California State Department of Water Resources
- California Department of Fish and Wildlife
- California Department of Forestry and Fire Protection
- California Department of Health Services
- Native American Heritage Commission
- California Department of Transportation District 6
- Regional Water Quality Control Board/Central Valley Region
- State Clearinghouse Office of Planning and Research

Regional and Local

- Kings County Public Works Department
- Kings County Sheriff's Department
- City of Hanford Public Works Department
- City of Hanford Community Development Department
- City of Hanford Parks & Recreation Department
- City of Hanford Police Department
- City of Hanford Airport Department
- Hanford Elementary School District
- Hanford Joint Union High School District
- Pacific Gas & Electric Company
- San Joaquin Valley Unified Air Pollution Control District
- Southern San Joaquin Valley Information Center
- Southern California Gas Company
- Southern California Edison

Native American Consultation

In accordance with Assembly Bill 52 and the California Tribal Consultation guidelines, the appropriate native groups were consulted with respect to the Project's potential impacts on Native American places, features, and objects. As of the writing of this report, staff have not received any comments from consulted tribes regarding the department's AB 52 request. Staff notes consultation with appropriate Native American groups per AB 52 requirements has occurred.

CHAPTER 9 - LIST OF PREPARERS

Lead Agency

CITY OF HANFORD

Jason Waters – Deputy City Manager, Director of Community Development
Gabrielle Myers – Senior Planner, Community Development Department

Technical Assistance

QK

Jaymie L. Brauer, Principal Planner

Thomas Kobayashi, Senior Associate Planner

RUETTGERS & SCHULER, CIVIL ENGINEERS

Ian Parks, RCE

GEO TECK, INC

Kyle R. McHargue, CEG, Project Geologist

Anna M. Scott, Project Geologist

CHAPTER 10 - REFERENCES

California Department of Conservation. (2022). *California Farmland Mapping and Monitoring Program*. Retrieved from California Important Farmland Finder: https://maps.conservation.ca.gov/DLRP/CIFF/

GeoTeck, Inc. (2024). *Phase I and Limited Phase II Environmental Site Assessment, Westing Tentative Subdivision Map No. 943.*

KCAG. (2022). *KCAG 2018 RTP.* Retrieved from https://www.kingscog.org/rtp_adopted

KCAG. (2022). *KCAG RTIP.* Retrieved from https://www.kingscog.org/rtip

Kings County. (2010). *County of Kings 2035 General Plan.*

Kings County Council of Governments. (2020). *KCAG VMT and Parcels*. Retrieved from ArcGIS: https://www.arcgis.com/home/item.html?id=e62d55a0d03841a0aa41f3655c5f4770

Ruettgers and Schuler Civil Engineers. (2024). *Traffic Study, Silicon Valley Ranch.*

PHASE I AND LIMITED PHASE II ENVIRONMENTAL SITE ASSESSMENT
VESTING TENTATIVE SUBDIVISION MAP NO. 943
APNS 011-040-008, 011-040-010, AND 011-040-027
HANFORD, KINGS COUNTY, CALIFORNIA 93230

July 1, 2024

Project No. 3951-CR

Prepared For:

K. Hovnanian California Region, Inc.
1260 Corona Pointe Court, Suite 301
Corona, California 92879

GEOTEK

GeoTek, Inc.
1548 North Maple Street, Corona, California 92878
(951) 710-1160 Office (951) 710-1167 Fax www.geotekusa.com

July 1, 2024
Project No. 3951-CR

K. Hovnanian California Region, Inc.
1260 Corona Pointe Court, Suite 301
Corona, California 92879

Attention: Mr. Isaac Vazquez

Subject: **Phase I and Limited Phase II Environmental Site Assessment**
Vesting Tentative Subdivision Map No. 943
APNs 011-040-008, 011-040-010, and 011-040-027
Hanford, Kings County, California 93230

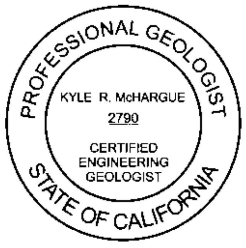
Dear Mr. Vazquez:

GEOTEK, INC. (GEOTEK) is pleased to present this Phase I and Limited Phase II Environmental Site Assessment for the above-referenced subject Site. Services were conducted in substantial conformance with the scope and limitations of the American Society of Testing and Materials E 1527-21, "*Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process,*" which is approved to meet the requirements of the federal All Appropriate Inquiries (AAI) standards as set forth in the Code of Federal Regulations, Title 40, Section 312 (40 CFR 312), and GEOTEK'S Proposal No. P-0401724-CR dated April 4, 2024.

Based on the investigation, this Phase I and Limited Phase II Environmental Site Assessment has not revealed evidence of a recognized environmental condition in connection with the subject Site. No further investigation is recommended at this time.

GEOTEK appreciates this opportunity to be of service. If you have any questions, or if GEOTEK can be of further service, please contact the office at (951) 710-1160.

Sincerely,
GEOTEK, INC.



Kyle R. McHargue
Project Geologist, CEG 2790
Expires 02/28/2026

Anna M. Scott
Project Geologist

EXECUTIVE SUMMARY

GEOTEK, INC. (GEOTEK) has performed a Phase I and Limited Phase II Environmental Site Assessment (ESA) for the Vesting Tentative Subdivision Map No. 943 (the "Site"), located in the City of Hanford, Kings County, California. GEOTEK'S services were conducted in substantial conformance with the scope and limitations of the American Society of Testing and Materials (ASTM) E 1527-21, "*Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*", which is approved to meet the requirements of the federal All Appropriate Inquiries (AAI) standards as set forth in the Code of Federal Regulations, Title 40, Section 312 (40 CFR 312), and GEOTEK Proposal No. P-0401724-CR, dated April 4, 2024. Any additions or deletions from the scope of services are discussed in the appropriate sections of this assessment.

A representative of GEOTEK conducted a Site reconnaissance on June 11, 2024. The weather was warm, and the sky was clear. The irregular shaped Site is currently comprised of three (3) parcels of land (Kings County Assessor's Parcel Numbers (APNs) 011-040-008, 011-040-010, and 011-040-027). The parcels encompass a total of approximately 88.91 acres. The Site can generally be accessed from Hanford Armona Drive to the north.

The Site is currently vacant land being utilized for agricultural operations. Visual evidence of hazardous substances and wastes was not observed during the Site reconnaissance. No visual indication of spills or leaks were observed. No pungent or acrid odors were observed emanating from the Site.

The Site is in an area largely characterized by residential development, vacant land or agricultural land. The Site is bound to the north by Hanford Armona Road, followed by residences (12358-12458 Hanford Armona Road) and agricultural land. The Site is bound to the east by residential development (1983 and 1984 West Idlewood Way; 1986 West Concord Way; 1100-1198, 1224-1380, 1400-1490 Greenbrier Drive; and 1978 West Summer Blossom Way). Agricultural land bounds the Site to the south. Agricultural land and residences (12645 and 12633 Hanford Armona Road) bound the Site to the west. None of the adjoining properties appear to represent a recognized environmental condition or environmental concern to the Site.

The Site does not appear on the environmental database report obtained for this assessment.

There are two (2) facilities listed in the database report within the various search distances specified by ASTM E 1527-21. Due to facility status; distance; lack of violations, spills or leaks; investigations or clean-ups; and/or locations hydro-geologically down- or cross-gradient, it is

GEOTEK'S opinion that these facilities have not created a recognized environmental condition to the Site.

Based on readily available historical information, the Site appears to have been primarily utilized for agricultural purposes with a structure in the northwest portion of the Site in an aerial photograph dated 1934. The structure appears to be razed in a 1937 aerial photograph. The Site appears to be entirely utilized for agricultural operations from at least 1950 to the present.

The surrounding areas appear to be generally utilized for agricultural operations and/or vacant land with scattered residences from at least 1934 until at least 1950. Residential tract development is first visible to the east of the Site in an aerial photograph dated 1974. Additional residences are visible to the east of the Site in an aerial photograph dated 1976. There are no significant changes in the surrounding areas visible in the 1984 and 1994 aerial photographs. A residential tract development and religious building are visible to the north of the Site in an aerial photograph dated 2006. Additional residences are visible to the east of the Site in aerial photographs dated 2009 and 2016, 2020 and 2024.

Historically, some agricultural sites have utilized pesticides that are currently considered a health risk and no longer used. This particular environmental concern was investigated by GEOTEK as part of this assessment. Near surface soil samples were collected from the Site and were analyzed for organo-chlorinated pesticides (EPA Method 8081) and arsenic (EPA Method 6010B). The laboratory testing concluded that organo-chlorinated pesticides and arsenic were not detected above regional screening levels for residential soils in the soil samples tested. Based on this laboratory testing, it is GEOTEK'S opinion that the historical agricultural use on the subject Site is not considered an environmental concern.

Based on the investigation, this Phase I and Limited Phase II Environmental Site Assessment has not revealed evidence of a recognized environmental condition in connection with the subject Site. No further investigation is recommended at this time.

This executive summary does not contain all the information that is found in the full report. The report should be read in its entirety to obtain a more complete understanding of the information provided and to aid in any decisions made or actions taken based on this information.

TABLE OF CONTENTS

EXECUTIVE SUMMARY ES-1
1.0 INTRODUCTION 1
1.1 Purpose 1
1.2 Scope of Work 1
1.3 Significant Assumptions 2
1.4 Limitations and Exceptions 3
1.5 Special Terms and Conditions 3
1.6 Reliance 4
2.0 DESCRIPTION OF SITE AND SURROUNDING AREA 5
2.1 Site Location and Legal Description 5
2.2 Site and Vicinity General Characteristics 5
2.3 Current Property Use 5
2.4 Site Improvements 6
2.4.1 Hazardous Substances 6
2.4.2 Storage Tanks 6
2.4.3 Poly-Chlorinated Biphenyls (PCBs) 6
2.4.4 Controlled Substances 6
2.4.5 Indications of Solid Waste Disposal 7
2.4.6 Utility Supply 7
2.4.7 Drainage 7
2.4.8 Other Conditions of Concern 7
2.4.9 Interviews 7
2.5 Current Adjoining Property Use 7
3.0 CLIENT PROVIDED INFORMATION 9
3.1 Environmental Clean Up Liens 9
3.2 Activity and Use Limitations 9
3.3 Specialized Knowledge 9
3.4 Purchase Price 9
3.5 Commonly Known Information 9
3.6 Obvious Indicators of Contamination 9
4.0 OWNER, PROPERTY MANAGER AND OCCUPANT INFORMATION 10
4.1 Owner, Property Manager and Occupant Information 10
4.2 Interviews 10
4.3 Reason for Performing Phase I and Limited Phase II ESA 11
4.4 Other User Provided Information 11
5.0 PROPERTY PHYSICAL SETTING 12
5.1 Regional Geology 12

TABLE OF CONTENTS

5.2 Local Geologic Setting 12
5.3 Topography 12
5.4 Vicinity Surface Drainage 13
5.5 Hydrogeology 13
6.0 ENVIRONMENTAL REGULATORY RECORDS REVIEW 14
6.1 Environmental Database Records Search 14
6.2 Discussion of Regulatory Records 15
6.2.1 Department of Defense 15
6.2.2 National Priorities List 16
6.2.3 Superfund Enterprise Management System 16
6.2.4 Resource Conservation and Recovery Act 16
6.2.5 Federal Institutional Control/Engineering Control Registries 17
6.2.6 Emergency Response Notification System 17
6.2.7 State Response Sites 17
6.2.8 EnviroStor Database 18
6.2.9 California Hazardous Material Incident Report System 18
6.2.10 Cleanup Program Sites 18
6.2.11 Solid Waste Facilities List 19
6.2.12 Leaking Underground Storage Tanks List 19
6.2.13 Underground Storage Tanks List 19
6.2.14 State Institutional Control/Engineering Control Registries 20
6.2.15 Federal and/or State Voluntary Cleanup Program 20
6.2.16 Brownfield Sites 20
6.2.17 Local and/or Tribal Databases 20
6.2.18 Drycleaners 21
6.2.19 Other Databases 21
6.2.20 Unmappable Facilities 22
6.3 Local Regulatory Agency Records 22
6.4 Out of Scope Considerations 22
7.0 VAPOR ENCROACHMENT SCREENING 24
8.0 SITE AND SURROUNDING AREA HISTORY 25
8.1 Historical Site Usage 25
8.1.1 Aerial Photograph Review 25
8.1.2 Assessor's Information 25
8.1.3 Building Department Records 25
8.1.4 Chain of Title 26
8.1.5 City Directory Review 26

TABLE OF CONTENTS

8.1.6 INTERVIEWS 26
8.1.7 RECORDER'S INFORMATION 27
8.1.8 SANBORN MAP REVIEW 27
8.1.9 TOPOGRAPHIC MAP REVIEW 27
8.2 HISTORICAL IMMEDIATELY SURROUNDING PROPERTY USAGE 28
8.2.1 AERIAL PHOTOGRAPH REVIEW 28
8.2.2 CITY DIRECTORIES 29
8.2.3 SANBORN MAP REVIEW 29
8.2.4 TOPOGRAPHIC MAP REVIEW 29
8.3 HISTORICAL USE SUMMARY 30
9.0 SUMMARY OF LIMITED SOIL ANALYSIS 31
10.0 SIGNIFICANT DATA GAPS 33
11.0 CONCLUSIONS AND RECOMMENDATIONS 34
12.0 CERTIFICATIONS 35
13.0 REFERENCES 36

LIST OF APPENDICES

Appendix A: Figures
Appendix B: Documents Obtained from EDR
Appendix C: Questionnaire(s) and Site Documents from Other Sources
Appendix D: Photographs
Appendix E: Environmental Database Report
Appendix F: Vapor Encroachment Screening
Appendix G: Laboratory Test Results
Appendix H: Project Team Qualifications

1.0 INTRODUCTION

GEOTEK, INC. (GEOTEK) has performed a Phase I and Limited Phase II Environmental Site Assessment (ESA) for the Vesting Tentative Subdivision Map No. 943 (the "Site"), located in the City of Hanford, Kings County, California.

1.1 PURPOSE

The purpose of this Phase I and Limited Phase II ESA was to identify and evaluate actual and potential environmental conditions involving the subject Site. It was not the purpose of this assessment to determine the degree or extent of contamination, if any, but rather the potential for contamination.

1.2 SCOPE OF WORK

The Phase I and Limited Phase II ESA is a general characterization of environmental concerns based on reasonably ascertainable information and observations. GEOTEK performed the Phase I and Limited Phase II ESA in substantial accordance with ASTM Standard E 1527-21. The following services were provided for the assessment:

- A reconnaissance of the Site and surrounding properties to visually assess current utilization and indications of potential surface contamination. This was accomplished by driving the Site boundaries, and then traversing the Site until the entire Site had been surveyed.

- A reconnaissance of the surrounding area for approximately one-half mile was conducted, without entering the properties, making observations concerning property uses, conditions, and housekeeping.

- Interviews were conducted, either in person, via telephone, or via a written questionnaire(s) with the client representative, the seller's representative, and/or appropriate regulatory agency personnel.

- A review of the geologic and hydro-geologic settings was conducted using reasonably ascertainable public records and documents.

- An environmental database report was obtained from a data service provider. This database report compiles and locates documented "hazardous waste" facilities within specific minimum search distances as defined by ASTM E 1527-21. If necessary,

additional information on identified facilities was gathered by a file review at the appropriate federal, state, local, and/or tribal regulatory agency.

- A review of reasonably ascertainable historical records (including aerial photographs, topographic maps, building records, and city directories) was conducted to assess the historical land utilization and indications of potential contamination or sources of contamination for the Site.

- Collection of twelve (12) soil samples collected from specific locations on the Site and laboratory testing of the soil samples for arsenic and organo-chlorinated pesticides.

- This report was prepared, which relates the findings of this study and presents the conclusions and recommendations.

Specific items not included in this Scope of Services are additional soil analysis, water analysis, asbestos containing materials analysis, radon analysis, lead-based paint analysis, lead in drinking water, wetlands, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, vapor intrusion testing, high voltage power lines, and other items not within the scope of ASTM E 1527-21.

1.3 SIGNIFICANT ASSUMPTIONS

Specific assumptions by GEOTEK for this assessment include:

- GEOTEK had permission to access the Site grounds;

- The client has provided GEOTEK with available geotechnical or environmental reports for the Site;

- The client has provided GEOTEK with known current or historic uses of hazardous materials at the Site, or with other specialized knowledge of the environmental history of the Site and surrounding area;

- The client is not the sole and absolute source of information;

- The seller has provided proper and complete access to their knowledge, both written and verbal, and GEOTEK can rely on the information.

1.4 LIMITATIONS AND EXCEPTIONS

GEOTEK conducted a Phase I and Limited Phase II Environmental Site Assessment in substantial accordance with ASTM E 1527-21 and as authorized by K. HOVNANIAN CALIFORNIA REGION, INC. This study does not include sampling of groundwater and/or materials on-site for environmental testing. This report is intended for the use of K. HOVNANIAN CALIFORNIA REGION, INC. The contents should not be relied upon by any party other than the aforementioned without the express written consent of GEOTEK.

The findings, conclusions, and recommendations made in this report are based on the information that was made available to GEOTEK, in most instances from public records. The information is relevant to the date of the sitework and should not be relied on to represent conditions at any later date. The opinions and conclusions expressed herein are based on information obtained during the assessment and on experience and current standards of technical practice. GEOTEK makes no other warranties, either express or implied, concerning the completeness of the data furnished to us. GEOTEK cannot be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time the assessment was undertaken. GEOTEK is not responsible, nor liable for work, testing or recommendations performed or provided by others. This Phase I and Limited Phase II Environmental Site Assessment is not and should not be construed as a warranty or guarantee about the presence or absence of environmental hazards or contaminants which may affect the subject Site. Facts, conditions, and acceptable risk factors change with time; accordingly, this report should be viewed within this context.

Specific limitations to the scope of ASTM E 1527-21 due to contract limitations, availability of resources, and/or encountered Site conditions are discussed in the appropriate sections of this report.

1.5 SPECIAL TERMS AND CONDITIONS

This assessment report is presented as fulfilling the standard requirements of most financial institutions, governmental regulatory agencies, ASTM, and generally accepted industry standards and practices. Please refer to GEOTEK Proposal No. P-0401724-CR for complete terms and conditions for this assessment.

1.6 RELIANCE

This assessment has been prepared for its exclusive use, and may be relied upon by K. HOVNANIAN CALIFORNIA REGION, INC., their successors and assignees. Third party reliance letters may be issued upon request and upon the payment of the, then current, fee for such letters. All third parties relying on this report, by such reliance, agree to be bound by the General Conditions and Limitations agreed by K. HOVNANIAN CALIFORNIA REGION, INC. No reliance by any party is permitted without such agreement, regardless of the content of the reliance letter itself.

2.0 DESCRIPTION OF SITE AND SURROUNDING AREA

The objective of describing the Site and surrounding area is to document current conditions as observed and to obtain information which would indicate the likelihood of a recognized environmental condition in connection with the Site. A representative of GEOTEK conducted a Site reconnaissance on June 11, 2024. The weather was warm, and the sky was clear. The Site can generally be accessed from Hanford Armona Drive to the north.

2.1 SITE LOCATION AND LEGAL DESCRIPTION

The Site is located southeasterly of the intersection of Hanford Armona Drive and Turner Drive, in the City of Hanford, Kings County, California. According to the U.S. Geological Survey (USGS) Hanford quadrangle topographic map sheet (7.5-minute series), the Site is located in Section 3 Township 19 South, Range 21 East, Mount Diablo Principal Meridian (see Figure 1 in Appendix A and documents in Appendix B). The Site is known as Kings County Assessor's Parcel Numbers (APNs) 011-040-008, 011-040-010, and 011-040-027 and is also known as the Vesting Tentative Subdivision Map No. 943. Additional legal descriptions for the Site are included in the Environmental Lien and AUL Search as obtained from Environmental Data Resources, Inc. (EDR) included in Appendix B. A Property Tax Map Report as obtained from EDR is also included in Appendix B. However, no APN maps were supplied in the Property Tax Map Report. Additionally, no APN maps were available in numerous website searches with the City of Hanford and the County of Kings. The Vesting Tentative Subdivision Map is included in Appendix C.

2.2 SITE AND VICINITY GENERAL CHARACTERISTICS

The Site is currently vacant land being utilized for agricultural operations.

The Site is in an area largely characterized by residential development, vacant land and/or agricultural land.

The Site is currently zoned as "R-1-5" (Single Family: 5,000 SF min.) on the Vesting Tentative Subdivision Map dated March 21, 2024.

2.3 CURRENT PROPERTY USE

The Site is currently vacant land being utilized for agricultural operations.

2.4 SITE IMPROVEMENTS

The Site is currently vacant land being utilized for agricultural operations.

Photographs of the Site are included in Appendix D and locations of the photographs are shown on Figure 3 in Appendix A.

2.4.1 HAZARDOUS SUBSTANCES

Visual evidence of hazardous substances and wastes was not observed during the Site reconnaissance. No visual indication of spills or leaks were observed. No pungent or acrid odors were observed emanating from the Site.

2.4.2 STORAGE TANKS

GEOTEK did not observe evidence of underground or above-ground fuel storage tanks (such as vent pipes, fill pipes, regular-shaped depressions, etc.) on the Site.

2.4.3 POLY-CHLORINATED BIPHENYLS (PCBS)

GEOTEK did not observe suspect equipment (transformers, elevators, hydraulic lift mechanisms, trash compactors, etc.) which may contain PCBs on the Site.

2.4.4 CONTROLLED SUBSTANCES

GEOTEK consulted the U.S. Drug Enforcement Agency (DEA) website (Clandestine Drug Labs in the United States | DEA.gov) to cross-check the Site address and adjoining properties against published facilities subject to DEA enforcement. The Site nor any adjoining facilities appeared on the list of published facilities for the last five (5) years.

GEOTEK consulted with the Hanford City Fire and Police Departments regarding controlled substances in association with the Site or adjoining facilities. Neither agency had information regarding the Site.

GEOTEK did not observe evidence of illegal or controlled substances being used or manufactured at the Site.

2.4.5 Indications of Solid Waste Disposal

Waste disposal for the Site and Site area is provided by the City of Hanford. Scattered household items and landscaping debris were observed during the Site reconnaissance. These materials are considered a *de minimis* condition and should be removed and disposed of at a proper facility prior to any future land development.

2.4.6 Utility Supply

Sewer and water services for the Site and area are provided by the City of Hanford. Electric services for the Site and area are provided by Southern California Edison. Gas services for the Site and area are provided by The Gas Company.

2.4.7 Drainage

Natural drainage at the Site is generally interpreted to be toward the north, conforming to the natural topography in the area. Ponded water was not observed during the Site reconnaissance.

2.4.8 Other Conditions of Concern

No visual indication of conditions of concern (drywells, cesspools, etc.) that would indicate a recognized environmental condition was observed during the Site reconnaissance.

2.4.9 Interviews

GeoTek interviewed the following individuals while performing this assessment:

- Mr. Isaac Vazquez, a representative of the future Site owner, completed a User Questionnaire, dated June 6, 2024.
- Mr. Marc R. Frelier, a representative of the current Site owner, completed a Property Owner Questionnaire, dated May 27, 2024.

Information from these interviews is incorporated into the appropriate sections of this report.

2.5 Current Adjoining Property Use

The Site is in an area largely characterized by residential development, vacant land or agricultural land. The Site is bound to the north by Hanford Armona Road, followed by

residences (12358-12458 Hanford Armona Road) and agricultural land. The Site is bound to the east by residential development (1983 and 1984 West Idlewood Way; 1986 West Concord Way; 1100-1198, 1224-1380, 1400-1490 Greenbrier Drive; and 1978 West Summer Blossom Way). Agricultural land bounds the Site to the south. Agricultural land and residences (12645 and 12633 Hanford Armona Road) bound the Site to the west. None of the adjoining properties appear to represent a recognized environmental condition or environmental concern to the Site.

3.0 CLIENT PROVIDED INFORMATION

As a form of interview, Mr. Isaac Vazquez, a representative of the future Site owner, completed a "User Questionnaire" for the Site, in accordance with ASTM E 1527-21. A copy of the completed questionnaire is included in Appendix C.

3.1 ENVIRONMENTAL CLEAN UP LIENS

Mr. Isaac Vazquez is not aware of any environmental clean-up liens at the Site.

3.2 ACTIVITY AND USE LIMITATIONS

Mr. Isaac Vazquez is not aware of any activity use limitations at the Site.

3.3 SPECIALIZED KNOWLEDGE

Mr. Isaac Vazquez is not aware of any specialized knowledge of the Site or nearby properties.

3.4 PURCHASE PRICE

Mr. Isaac Vazquez states that the purchase price being paid for the property reflects the fair market value.

3.5 COMMONLY KNOWN INFORMATION

Mr. Isaac Vazquez states that he is not aware of commonly known or reasonably ascertainable information for the Site.

3.6 OBVIOUS INDICATORS OF CONTAMINATION

Mr. Isaac Vazquez states that he is not aware of obvious indicators of a likely environmental impact at the Site.

4.0 OWNER, PROPERTY MANAGER AND OCCUPANT INFORMATION

This section contains other relevant information regarding this assessment in accordance with ASTM 1527-21.

4.1 OWNER, PROPERTY MANAGER AND OCCUPANT INFORMATION

It is GEOTEK'S understanding that Middlefield Manor LLC currently owns and manages the Site. The Site is currently unoccupied.

4.2 INTERVIEWS

GEOTEK interviewed the following individuals while performing this assessment:

- Mr. Isaac Vazquez, a representative of the future Site owner, completed a User Questionnaire, dated June 6, 2024.
- Mr. Marc R. Frelier, a representative of the current Site owner, completed a Property Owner Questionnaire, dated May 27, 2024.

Information from these interviews is incorporated into the appropriate sections of this report.

As a form of interview, Mr. Marc R. Frelier, a representative of the current Site owner, completed a "Property Owner Questionnaire" for the Site in accordance with ASTM E 1527-21. A copy of the completed questionnaire is included in Appendix C.

Mr. Marc R. Frelier answered "yes" to questions 10b, 11a, and 11b.

In question 10a Mr. Frelier states, "small diesel tanks servicing ag well". GEOTEK did not observe these diesel tanks during the Site reconnaissance.

In question 10b, Mr. Frelier states, "for ag irrigation".

In question 11b Mr. Frelier states, "irrigation pipeline".

Mr. Marc R. Frelier answered "no", "unknown" or "not applicable" to the remaining questions.

In question 4a, Mr. Frelier clarifies, "fields have been laser leveled in past and benched".

In question 5b, Mr. Frelier clarifies, "only chemicals or material for farming".

In question 8a, Mr. Frelier clarifies, "only temporary ditches and drains for farming".

In question 18a, Mr. Frelier clarifies, "may have been historical drainage at south end".

Mr. Marc R. Frelier answered "no", "unknown" or "not applicable" to the remaining questions.

GEOTEK'S Site reconnaissance and research did not discover substantially contradictory information from the Property Owner Questionnaire that would change the recommendations and conclusions of this report.

4.3 REASON FOR PERFORMING PHASE I AND LIMITED PHASE II ESA

This Phase I and Limited Phase II ESA was performed at the request of K. HOVNANIAN CALIFORNIA REGION, INC. in order to qualify for one of the Landowner Liability Protections offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001.

4.4 OTHER USER PROVIDED INFORMATION

GEOTEK was not provided with any other information of an environmental nature by K. HOVNANIAN CALIFORNIA REGION, INC. for the Site.

5.0 PROPERTY PHYSICAL SETTING

Surface and subsurface environments are of interest because they control the movement of water-born contaminants, which could be transported to and from the subject Site. GEOTEK reviewed information regarding the physical setting of the subject Site and immediate surrounding area.

5.1 REGIONAL GEOLOGY

The property is situated in the Great Valley geomorphic province. The Great Valley province is one of the largest geomorphic units in western North America. It extends approximately 440 miles from the Sacramento Valley drained by the Sacramento River to the San Joaquin Valley drained by the San Joaquin River to the southeasterly adjacent Sierra Nevada province. This province varies in width from about 30 to 80 miles. The Great Valley is a trough in which sediments have been deposited since the Jurassic (about 160 million years ago). Great oil fields have been found in southernmost San Joaquin Valley and along anticlinal uplifts on its southwestern margin. In the Sacramento Valley, the Sutter Buttes, the remnants of an isolated Pliocene volcano rise above the valley floor. It is bounded on the west, northwest and southwest by the Coast Ranges province and on the east, northeast and southeast by the Sierra Nevada province.

The San Joaquin Fault borders the northwestern portion of the Great Central Valley province, adjacent to the Coast Ranges province, while the White Wolf Fault borders the southeastern portion adjacent to the Sierra Nevada province.

5.2 LOCAL GEOLOGIC SETTING

The Site and Site area are understood to be underlain by alluvial fan deposits (Matthews, R.A., and Burnett, J.L., 1965). Additional data regarding soil survey information for the Site and Site area is also included in Appendix B.

5.3 TOPOGRAPHY

The Site and Site area can be considered as having relatively flat terrain. Based on the USGS topographic map for the area and other documents reviewed for this report, the elevation of the Site is approximately 225 feet above mean sea level.

5.4 VICINITY SURFACE DRAINAGE

Natural drainage at the Site is interpreted to be dominantly directed toward the north, conforming to the natural topography in the area.

According to the Federal Emergency Management Agency (FEMA), the Site is in an area of "0.2 percent annual chance flood hazard" (Community Panel Number 06031C-0185C and 06031C-0195C, both dated June 16, 2009). A copy of the FEMA map is included in Appendix C.

5.5 HYDROGEOLOGY

According to a review of historical groundwater data (California Department of Water Resources and California State Water Resources Control Board groundwater well data [http://wdl.water.ca.gov and http://geotracker.waterboards.ca.gov]) and in-house information, groundwater is greater than 50 feet below ground surface with a flow estimated to be directed to the north.

6.0 ENVIRONMENTAL REGULATORY RECORDS REVIEW

The records review is conducted to help identify known recognized environmental conditions at the Site and/or on adjoining or nearby properties which may have impacted the subject Site.

6.1 ENVIRONMENTAL DATABASE RECORDS SEARCH

GEOTEK obtained and reviewed an environmental database report of the federal and state environmental records specified by ASTM E 1527-21. The database report was provided by Environmental Data Resources, Inc. (EDR) of Shelton, Connecticut. Additionally, orphan or un-mappable sites listed by EDR were reviewed for the approximate minimum search distances noted and included in the discussion, if applicable. Refer to Appendix E for a copy of the database report.

ENVIRONMENTAL DATABASE	MINIMUM SEARCH DISTANCE	SITE	ADJOINING	TOTAL LISTED
U.S. Department of Defense (DOD) facilities and Formerly Used Defense Sites (FUDS)	1.0 Mile	No	0	0
Environmental Protection Agency (EPA) - National Priorities List (NPL), including delisted NPL	1.0 Mile	No	0	0
EPA – Superfund Enterprise Management System (SEMS), including archived sites (formerly CERCLIS)	0.5 Mile	No	0	0
EPA – Resource Conservation and Recovery Act (RCRA), Corrective Action Facilities (CORRACTS)	1.0 Mile	No	0	0
EPA – RCRA, Transportation, Storage, and Disposal facilities (TSD)	0.5 Mile	No	0	0
EPA - RCRA Generators	Site and Adjoining	No	0	0
EPA – Emergency Response Notification System (ERNS)	Site	No	N/A	0
Federal institutional control/engineering control registries	Site	No	N/A	0
California Environmental Protection Agency (CEPA) – State Response Sites (Response, formerly Annual Work Plan and Bond Expenditure Plan)	1.0 Mile	No	0	0

ENVIRONMENTAL DATABASE	MINIMUM SEARCH DISTANCE	SITE	ADJOINING	TOTAL LISTED
CEPA – EnviroStor Database (ENVIROSTOR, formerly CALSITES)	0.5 Mile	No	0	1
CEPA – California Hazardous Materials Information Reporting System (CHMIRS)	Site and Adjoining	No	0	0
CEPA – Cleanup Program Sites (CPS, formerly SLIC)[i]	0.5 Mile	No	0	0
Department of Resources, Recycling, and Recovery (DRRR) and CEPA - Solid Waste Fill/Landfill (SWF/LF), Solid Waste Assessment Test (SWAT)/Waste Management Unit Database System (WMUDS) and Recycling Facilities (SWRCY)	0.5 Mile	No	0	0
CEPA – Leaking Underground Storage Tanks (LUST), including historic and archive databases	0.5 Mile	No	0	1
CEPA – Underground Storage Tanks (UST), including historic and archive databases	Site and Adjoining	No	0	0
State institutional control/engineering control registries	Site	No	N/A	0
Federal and/or state Voluntary Cleanup Program (VCP) sites	0.5 Mile	No	0	0
Federal and/or state Brownfield Sites (BFS)	0.5 Mile	No	0	0
Local and/or Tribal databases	Up To 1.0 Mile	No	0	0
Drycleaners	0.25 Mile	No	0	0
Other databases	Up to 1.0 Mile	No	0	0
Unmappable facilities	Up to 1.0 Mile	No	0	1

N/A – Not Applicable
[i] Spills, Leaks, Investigations, and Cleanups (SLIC) facilities.

6.2 Discussion of Regulatory Records

6.2.1 Department of Defense

The Department of Defense (DOD) facility database includes federal facilities operated by the DOD which encompasses greater than 640 acres. Formerly Used Defense Sites (FUDS) are properties where the U.S. Army Corps of Engineers is actively working or will take necessary cleanup actions. Environmental impacts from the operations of such facilities have been

documented across the continental United States. The DOD and FUDS databases are searched for a 1.0-mile distance.

The Site does not appear on the DOD or FUDS databases. There are no facilities listed on the DOD or FUDS databases within 1.0-mile of the Site.

6.2.2 National Priorities List

The National Priorities List (NPL) is the EPA's list of confirmed or proposed Superfund sites. GeoTek's review of this data includes sites which have been delisted from the NPL. The NPL is searched for a 1.0-mile distance.

The Site does not appear on the NPL. There are no NPL facilities located within 1.0-mile of the Site.

6.2.3 Superfund Enterprise Management System

The Superfund Enterprise Management System (SEMS, formerly CERCLIS) is a compilation of sites that the EPA has investigated or is currently investigating for a release or threatened release of hazardous substances. GeoTek's review of SEMS sites includes archive (no further remedial action planned) facilities. The SEMS list is searched for a 0.5-mile distance.

The Site does not appear on the SEMS list. There are no SEMS facilities located within 0.5-mile of the Site.

The Site does not appear on the SEMS-ARCHIVE list. There are no facilities on the SEMS-ARCHIVE list within 0.5-mile of the Site.

6.2.4 Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) compile selective information on facilities which generate, transport, store, treat and or dispose of hazardous waste. RCRA facilities can be listed on one of three databases:

- *Corrective Action Facilities (CORRACTS)* are facilities undergoing corrective action. A corrective action order is issued pursuant to RCRA Section 3008(h) when there has been a release of hazardous waste or constituents into the environment from a RCRA facility. The CORRACTS list is searched for a 1.0-mile distance.

The Site does not appear on the CORRACTS list. There are no CORRACTS facilities located within 1.0-mile of the site.

- *Transportation, Storage, and Disposal Facilities (TSD)* includes facilities that transport, store or dispose of hazardous waste and are not listed on the RCRA Generators list. The TSD is searched for a 0.5-mile distance.

  The Site does not appear on the RCRA TSD list. There are no RCRA TSD facilities located within 0.5-mile of the site.

- *Generators List* identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Generators database is a compilation by the EPA of reporting facilities that generate hazardous waste. The RCRA generators list is searched for the Site and adjoining properties.

  The Site does not appear on the RCRA Generators list. There are no facilities listed on the RCRA Generators list that adjoin the Site.

6.2.5 Federal Institutional Control/Engineering Control Registries

The EPA maintains three (3) databases which list sites that have institutional and/or engineering controls in place as part of their operations. These databases are searched for the Site.

The Site does not appear on these databases.

6.2.6 Emergency Response Notification System

The Emergency Response Notification System (ERNS) is a national database used to collect information on reported releases of oil or hazardous substances. The ERNS list is searched for the Site.

The Site does not appear on the ERNS list.

6.2.7 State Response Sites

The State Response Sites (RESPONSE) records are the state equivalent to the federal National Priorities List (NPL) database. The RESPONSE database is searched for a 1.0-mile distance.

The Site does not appear on the RESPONSE database. There are no RESPONSE facilities located within 1.0-mile of the site.

6.2.8 ENVIROSTOR DATABASE

The EnviroStor Database (EnviroStor, formerly CALSITES) records are the state equivalent to the federal SEMS database. EnviroStor is searched for a 0.5-mile distance.

The Site does not appear on the EnviroStor database.

There is one (1) EnviroStor facility located within 0.5-mile of the Site. The facility is listed as Ben Cornelius and is addressed as 11801 12th Avenue. The facility is located approximately 2,362 feet (0.447 mile) southeast of the Site. The site type is listed as "historical" and the facility status is listed as "refer:RWQCB" and dated June 26, 1995. Comments explain it was discovered on March 23, 1987 and that waste was being stored in an unlined pond. Due to the facility status, distance, and being located hydrogeologically down-gradient, it is GEOTEK'S opinion that this facility has not not created a recognized environmental condition to the Site.

6.2.9 CALIFORNIA HAZARDOUS MATERIAL INCIDENT REPORT SYSTEM

The California Hazardous Material Incident Report Systems (CHMIRS) is a state database used to collect information on reported hazardous materials incidents (accidental leaks and spills). The CHMIRS list is searched for a 0.25-mile distance.

The Site does not appear on the CHMIRS database. There are no CHMIRS facilities located within 0.25-mile of the Site.

6.2.10 CLEANUP PROGRAM SITES

The California Cleanup Program Sites (CPS) database (formerly the SLIC database) is compiled by the CEPA State Water Resources Control Board through its Regional Water Quality Control Boards (RWQCB). It is designed to protect and restore water quality from spills, leaks, and similar discharges. The CPS is searched for a 0.5-mile distance.

The Site does not appear on the CPS database. There are no CPS facilities located within 0.5-mile of the Site.

6.2.11 SOLID WASTE FACILITIES LIST

Department of Resources, Recycling, and Recovery (DRRR) and CEPA maintain multiple databases identifying and tracking landfill facilities. The Solid Waste Fill/Landfill (SWF/LF), Waste Management Unit Database System (WMUDS)/Solid Waste Assessment Test (SWAT), and Solid Waste Recycling Facilities (SWRCY) databases includes information pertaining to closed and open solid waste facilities operating in the state of California (collectively the "SWLF"). The SWLF databases are searched for a 0.5-mile distance.

The Site does not appear on the WMUDS/SWAT, SWF/LF or SWRCY lists. There are no facilities on the WMUDS/SWAT, SWF/LF or SWRCY lists within 0.5-mile of the Site.

6.2.12 LEAKING UNDERGROUND STORAGE TANKS LIST

The California Leaking Underground Storage Tanks (LUST) list is a compilation of petroleum storage tank sites that have reported a release. GEOTEK'S review includes historic, archived and tribal LUST databases. The LUST list is searched for a 0.5-mile distance.

The Site does not appear on the LUST list.

There is one (1) facility identified on the LUST databases withing 0.5-mile of the Site. The facility is listed as Highway Patrol Headquarters and is addressed as 11050 13th Avenue. The facility is located 2,462 feet (0.466 mile) west-northwest of the Site. The status is listed as "completed-case closed" as of May 19, 2016. Due to the facility status, distances, and/or location hydro-geologically down-gradient, it is GEOTEK'S opinion that this facility has not created a recognized environmental condition to the Site.

6.2.13 UNDERGROUND STORAGE TANKS LIST

The California Underground Storage Tank (UST) list is a compilation of petroleum storage tank sites that are registered with the state of California. GEOTEK'S review included historic, archived, and tribal UST databases. The UST list is searched for the Site and adjoining properties.

The Site does not appear on the UST list. There are no facilities adjoining to the Site on the UST list.

The Site does not appear on the HIST UST list. There are no facilities adjoining to the Site on the HIST UST list.

6.2.14 State Institutional Control/Engineering Control Registries

The State of California maintains institutional and engineering control databases or registries. This lists sites with engineering or institutional controls in place. Institutional controls include administrative measures intended to prevent exposure to contaminants remaining on site. Engineering controls include various forms of caps, building foundations, liners, and treatment methods. The State Institutional Control/Engineering Control Registries is searched for the Site.

The Site does not appear on the State Institutional Control/Engineering Control Registries.

6.2.15 Federal and/or State Voluntary Cleanup Program

Voluntary Cleanup Program (VCP) facilities are those where the current or past owner of which has entered into an agreement with EPA or the state to utilize their own resources to remediate a site or facility. The VCP databases are searched for 0.5-mile.

The Site does not appear on the VCP databases. No facilities were identified on the VCP databases withing 0.5-mile of the Site.

6.2.16 Brownfields Sites

Brownfields sites (BFSs) are real property, the expansion, redevelopment or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant or contaminant. Federal brownfields are listed by EPA. State brownfields in California are listed by CEPA. BFSs are searched for 0.5-mile.

The Site does not appear on the federal or stated BFS database. There are no BFS facilities within 0.5-mile of the Site.

6.2.17 Local and/or Tribal Databases

The Site does not appear on the local databases reviewed.

Tribal governments are under the jurisdiction of the EPA for environmental concerns. Currently, the EPA Region 9 publishes LUST and UST information for tribes in Arizona, California, Hawaii, Nevada, and the Pacific Territories. The LUST database is searched for 0.5 mile, and the UST database is searched for 0.25 mile.

The Site does not appear on the Tribal LUST or UST databases. No facilities were identified on the Tribal LUST or UST databases within 0.5 mile of the Site.

6.2.18 DRYCLEANERS

The DRYCLEANERS list is compiled and provided by CEPA. The DRYCLEANER database is searched for a 0.25-mile distance.

The Site does not appear on the DRYCLEANER list. There are no DRYCLEANER facilities listed within 0.25-mile of the Site.

6.2.19 OTHER DATABASES

EDR compiles information from multiple federal, state, local, and proprietary databases. Most are secondary or tertiary or redundant. Facilities compiled on these other databases are evaluated based on the severity of the listing, distance, and location.

The Site does not appear on the environmental database report obtained for this assessment.

There are no other facilities listed in the environmental database report.

6.2.19.1 HISTORIC AUTOMOTIVE FACILITIES

EDR provides a proprietary database including the names, locations, and dates of known historic automotive repair and service facilities. This database is searched for 0.25-mile.

The Site does not appear on the historic automotive facilities database. There are no listed facilities within 0.25-mile.

6.2.19.2 HISTORICAL DRYCLEANERS

EDR provides a proprietary database including the names, locations, and dates active of known dry-cleaning facilities. The state and certain local regulatory agencies also provide information on dry-cleaning facilities. These databases are searched for 0.25-mile.

The Site does not appear on the Historical Drycleaners database. There are no listed facilities within 0.25-mile.

6.2.19.3 MANUFACTURED GAS PLANTS

EDR provides a proprietary database including the names, locations, and dates active of known manufactured gas plants (MGP). This database is searched for 1.0-mile.

The Site does not appear on the MGP database. There are no listed facilities within 0.25-mile.

6.2.20 UNMAPPABLE FACILITIES

GEOTEK reviewed the listing of "orphan" or unmappable facilities in the database report. There is one (1) unmapped listing in the database report. However, this listing is approximately five (5) miles from the Site and therefore is not considered a recognized environmental condition to the Site.

6.3 LOCAL REGULATORY AGENCY RECORDS

GEOTEK reviewed the CEPA (State Water Resources Control Board) "GeoTracker" database (GeoTracker (ca.gov)) and the CEPA (Department of Toxic Substances Control) "EnviroStor" database (EnviroStor (ca.gov)) for information on the Site.

The Site does not appear on the "GeoTracker" or "EnviroStor" databases.

GEOTEK consulted with the City of Hanford Police and Fire Departments regarding aboveground and underground storage tanks, emergency responses, hazardous material permits, spills, leaks, inspections, controlled substances, or other information of an environmental or hazardous nature in association with the Site or adjoining facilities. Neither agency had information regarding the Site.

6.4 OUT OF SCOPE CONSIDERATIONS

Per- and Poly-Fluoroalkyl substances (PFAS) are a group of over 9,000 synthetic chemicals that have been used for over 70 years. Due to the very stable carbon-fluorine bonds, perfluoroalkyls are resistant to biodegradation, photooxidation, direct photolysis, and hydrolysis. Atmospheric deposition can lead to contamination of soils and leaching into groundwater away from point sources. Health effects in humans may include cancer, cardiovascular, immunological, endocrine, reproductive, and hepatic harm.

At the time of the adoption of ASTM 1527-21 standard, PFAS chemicals were considered to be "emerging contaminants" and therefore technically are considered to be non-scope considerations, per the ASTM-1527-21 standards. However, as of April 19, 2024, the United States Environmental Protection Agency (USEPA) officially designated the regulatory status of two (2) commonly utilized PFAS chemicals as hazardous substances under CERCLA. The two (2) chemicals are perfluoro octane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA). Furthermore, it is likely that numerous additional chemicals within the PFAS family will become officially designated as hazardous substances in the near future.

Although still technically considered an emerging contaminant per the governing ASTM 1527-21 standards, GEOTEK conservatively has elected to currently consider PFAS chemicals to be hazardous substances and thus potentially may represent a recognized environmental condition. Generally, high-risk PFAS sites include airports, landfills, wastewater-treatment plants, government and military sites, petroleum plants, fire suppression/firefighting sites with aqueous film forming foam (AFFF), PFAS treated material and food packaging facilities, plating facilities, some biosolid farming sites, and most chemical production and manufacturing facilities, among others.

The Site does not appear on the PFAS database within the EDR Radius Report. The Site does not appear on the GeoTracker PFAS Map website (GeoTracker PFAS Map (ca.gov)). The Site does not appear on the USEPA PFAS Analytic Tools website (PFAS Analytic Tools (epa.gov)).

Based on the lack of high-risk facilities and no obvious signs of substantial PFAS contamination at the Site, it is GEOTEK'S opinion that PFAS chemicals do not represent a recognized environmental condition to the Site.

7.0 VAPOR ENCROACHMENT SCREENING

The purpose of a Vapor Encroachment Screen (VES) is to identify, to the extent feasible, if a Vapor Encroachment Condition (VEC) exists at the Site.

A Vapor Encroachment Screen Report was generated for the Site and Site area utilizing EDR's Vapor Encroachment Worksheet (see Appendix F).

It was determined that there are no historical dry cleaners, former manufactured gas plants, former industrial sites or historical gas stations located within 600 feet and/or up gradient from the Site. It was also determined that no other conditions that would indicate a VEC exists at the Site.

It is GEOTEK'S opinion that a VEC is not likely to exist at the subject Site. The Vapor Encroachment Screen report is included in Appendix F.

8.0 SITE AND SURROUNDING AREA HISTORY

In order to construct the history of the Site and the surrounding area, GEOTEK reviewed reasonably ascertainable public documents, including aerial photographs, topographic maps, building records, city directories, fire insurance maps, environmental liens and activity use limitations (AULs) and county assessor history records.

8.1 HISTORICAL SITE USAGE

8.1.1 AERIAL PHOTOGRAPH REVIEW

GEOTEK reviewed aerial photographs dated 1934, 1937, 1950, 1974, 1976, 1984, 1994, 2006, 2009, 2012, 2016, 2020 and 2024 (see Appendix A and B).

The Site appears to have been primarily utilized for agricultural purposes with a structure in the northwest portion of the Site in an aerial photograph dated 1934.

The structure appears to be razed in a 1937 aerial photograph.

The Site appears to be entirely utilized for agricultural operations from at least 1950 to the present.

A 2024 aerial photograph is utilized for Figure 2 (Appendix A).

8.1.2 ASSESSOR'S INFORMATION

The Site is known as Kings County Assessor's Parcel Numbers (APNs) 011-040-008, 011-040-010, and 011-040-027 and is also known as the Vesting Tentative Subdivision Map No. 943. Additional legal descriptions for the Site are included in the Environmental Lien and AUL Search as obtained from Environmental Data Resources, Inc. (EDR) included in Appendix B. A Property Tax Map Report as obtained from EDR is also included in Appendix B. However, no APN maps were supplied in the Property Tax Map Report. Additionally, no APN maps were available in numerous website searches with the City of Hanford and the County of Kings. The Vesting Tentative Subdivision Map is included in Appendix C.

8.1.3 BUILDING DEPARTMENT RECORDS

A Building Permit Report, as obtained from and provided by EDR, is included in Appendix B. No permits were provided for the Site as an address was not provided/is not available.

8.1.4 CHAIN OF TITLE

GEOTEK has not received nor been authorized to obtain Chain-of-Title documents for the Site.

8.1.5 CITY DIRECTORY REVIEW

GEOTEK obtained The EDR – City Directory Image Report, as obtained from and provided by EDR, and included in Appendix B. No listings were provided for the Site as an address was not provided/is not available.

8.1.6 INTERVIEWS

GEOTEK interviewed the following individuals while performing this assessment:

- Mr. Isaac Vazquez, a representative of the future Site owner, completed a User Questionnaire, dated June 6, 2024.
- Mr. Marc R. Frelier, a representative of the current Site owner, completed a Property Owner Questionnaire, dated May 27, 2024.

Information from these interviews is incorporated into the appropriate sections of this report.

As a form of interview, Mr. Marc R. Frelier, a representative of the current Site owner, completed a "Property Owner Questionnaire" for the Site in accordance with ASTM E 1527-21. A copy of the completed questionnaire is included in Appendix C.

Mr. Marc R. Frelier answered "yes" to questions 10b, 11a, and 11b.

In question 10a Mr. Frelier states, "small diesel tanks servicing ag well". GEOTEK did not observe these diesel tanks during the Site reconnaissance.

In question 10b, Mr. Frelier states, "for ag irrigation".

In question 11b Mr. Frelier states, "irrigation pipeline".

In question 4a, Mr. Frelier clarifies, "fields have been laser leveled in past and benched".

In question 5b, Mr. Frelier clarifies, "only chemicals or material for farming".

In question 8a, Mr. Frelier clarifies, "only temporary ditches and drains for farming".

In question 18a, Mr. Frelier clarifies, "may have been historical drainage at south end".

Mr. Marc R. Frelier answered "no", "unknown" or "not applicable" to the remaining questions.

GEOTEK'S Site reconnaissance and research did not discover contradictory information from the Property Owner Questionnaire.

8.1.7 RECORDER'S INFORMATION

According to information provided by the EDR Environmental Lien and AUL Search, the Site is currently owned by Middlefield Manor LLC. No record of environmental liens nor activity and use limitations (AULs) was revealed in the documents reviewed. A copy of this report is included in Appendix B.

8.1.8 SANBORN MAP REVIEW

Sanborn Fire Insurance Maps for the Site were requested from EDR-Sanborn, which owns and maintains the largest and most complete collection of maps. No source sheets were provided in the Sanborn Map Report as the Site is an "unmapped property". The Sanborn Map Report is included in Appendix B.

8.1.9 TOPOGRAPHIC MAP REVIEW

GEOTEK reviewed the following topographic map sheets:

- Hanford Quadrangle (7.5-minute series), dated 1926
- Hanford Quadrangle (7.5-minute series), dated 1954
- Hanford Quadrangle (15-minute series), dated 1976
- Hanford Quadrangle (7.5-minute series), dated 2012
- Hanford Quadrangle (7.5-minute series), dated 2015
- Hanford Quadrangle (7.5-minute series), dated 2018
- Hanford Quadrangle (7.5-minute series), dated 2021

The Topo Map Report, as obtained from EDR, is included in Appendix B.

The Site appears to be vacant land on the topographic map sheets dated 1926 and 1954 topographic map sheets.

The 1976 topographic map sheet is an aerial photograph. The Site appears to be used for agricultural operations in this photograph.

Agricultural land is depicted in the southwest portion of the Site on the topographic map sheet dated 2012.

The 2015 2018 and 2021 topographic map sheets show little detail other than streets in the vicinity.

A 2021 topographic map sheet is utilized for Figure 1 (Appendix A).

8.2 Historical Immediately Surrounding Property Usage

8.2.1 Aerial Photograph Review

GeoTek reviewed aerial photographs dated 1934, 1937, 1950, 1974, 1976, 1984, 1994, 2006, 2009, 2012, 2016, 2020 and 2024 (see Appendix A and B).

The surrounding areas appear to be generally utilized for agricultural operations and/or vacant land with scattered residences from at least 1934 until at least 1950.

Residential tract development is first visible to the east of the Site in an aerial photograph dated 1974.

Additional residences are visible to the east of the Site in an aerial photograph dated 1976.

There are no significant changes in the surrounding areas visible in the 1984 and 1994 aerial photographs.

A residential tract development and industrial/commercial building are visible to the north of the Site in an aerial photograph dated 2006.

Additional residences are visible to the east of the Site in aerial photographs dated 2009 and 2016, 2020 and 2024.

A 2024 aerial photograph is utilized for Figure 2 (Appendix A)

8.2.2 CITY DIRECTORIES

GEOTEK has reviewed a City Directory Image report obtained from and provided by EDR for the Site and surrounding property addresses. The City Directory Image report provides information on several nearby property addresses. The listings appear to primarily be residential in nature and are not considered a recognized environmental concern to the Site.

8.2.3 SANBORN MAP REVIEW

Sanborn Fire Insurance Maps for the Site were requested from EDR-Sanborn, which owns and maintains the largest and most complete collection of maps. No source sheets were provided in the Sanborn Map Report as the Site and surrounding area are "unmapped property". The Sanborn Map Report is included in Appendix B.

8.2.4 TOPOGRAPHIC MAP REVIEW

GEOTEK reviewed the following topographic map sheets:

- Hanford Quadrangle (7.5-minute series), dated 1926
- Hanford Quadrangle (7.5-minute series), dated 1954
- Hanford Quadrangle (15-minute series), dated 1976
- Hanford Quadrangle (7.5-minute series), dated 2012
- Hanford Quadrangle (7.5-minute series), dated 2015
- Hanford Quadrangle (7.5-minute series), dated 2018
- Hanford Quadrangle (7.5-minute series), dated 2021

The Topo Map Report, as obtained from EDR, is included in Appendix B.

The surrounding properties appear to be vacant land with sporadic structures on the topographic map sheet dated 1926. Additionally, the Southern Pacific Railroad is depicted to the north of the Site.

The surrounding properties appear to be vacant land and/or agricultural operations with sporadic residences on the topographic map sheet dated 1954. Additionally, there is a well depicted on the adjoining property to the west.

The 1976 topographic map sheet is an aerial photograph. The surrounding properties appear to primarily be used for agricultural operations with residential developments expanding to the east of the Site.

The 2012, 2015, 2018 and 2021 topographic map sheets show little detail other than streets in the vicinity.

A 2021 topographic map sheet is utilized for Figure 1 (Appendix A).

8.3 HISTORICAL USE SUMMARY

Based on readily available historical information, the Site appears to have been primarily utilized for agricultural purposes with a structure in the northwest portion of the Site in an aerial photograph dated 1934. The structure appears to be razed in a 1937 aerial photograph. The Site appears to be entirely utilized for agricultural operations from at least 1950 to the present.

The surrounding areas appear to be generally utilized for agricultural operations and/or vacant land with scattered residences from at least 1934 until at least 1950. Residential tract development is first visible to the east of the Site in an aerial photograph dated 1974. Additional residences are visible to the east of the Site in an aerial photograph dated 1976. There are no significant changes in the surrounding areas visible in the 1984 and 1994 aerial photographs. A residential tract development and religious building are visible to the north of the Site in an aerial photograph dated 2006. Additional residences are visible to the east of the Site in aerial photographs dated 2009 and 2016, 2020 and 2024.

Data gaps exist from 1926 to 1934, 1950 to 1974, 1976 to 1984, 1984 to 1994, and 1994 to 2006, due to the limited records which are reasonably ascertainable in the local area. However, it is GEOTEK'S opinion that additional historical information, if it were to become available, is not likely to change the conclusions or recommendations of this assessment.

9.0 SUMMARY OF LIMITED SOIL ANALYSIS

As the Site was historically utilized for agriculture, GEOTEK obtained soil samples from the Site for chemical analysis. Twelve (12) soil samples were obtained from selected areas of the Site from a depth of up to approximately six (6) inches below the existing ground surface and submitted to a state certified laboratory for analysis of organo-chlorinated pesticides (OCPs) in accordance with US EPA Test Method 8081A and arsenic in accordance with US EPA Test Method 6010B. The locations of the samples are shown on Figure 4 in Appendix A.

Analysis of the soil samples had detectable concentrations of OCPs in five (5) of the samples (Samples #1, #4, #6, #7 and #8). The results are summarized in the following table:

OCP SUMMARY ANALYTICAL RESULTS

Sample Name	4,4'-DDE (ug/kg)
#1	35
#2	<20
#3	<20
#4	35
#5	<20
#6	38
#7	43
#8	27
#9	<20
#10	<20
#11	<20
#12	<20
Screening Level	**2,000***

ug/kg = micrograms per kilogram
* = EPA Regional Screening Levels (RSLs) for residential soil (May 2024)

The concentration of the organo-chlorinated pesticide (OCP) compound 4,4'-DDE was not above screening levels for residential soils in the samples tested, as determined by EPA Regional Screening Level (RSL) for residential soil, May 2024 (TR=1E-06, HQ=1.0).

Analysis of the soil sample detected measurable quantities of arsenic in all 12 of the soil samples tested (Samples #1 through #12). The applicable results of the laboratory analysis are summarized in the following table:

ARSENIC SUMMARY ANALYTICAL RESULTS

Sample Name	Arsenic (mg/kg)
#1	9.9
#2	7.6
#3	7.2
#4	6.9
#5	6.9
#6	6.4
#7	7.1
#8	6.3
#9	6.1
#10	5.7
#11	6.4
#12	7.5
Screening Level	**0.11***

mg/kg = micrograms per kilogram
* = DTSC Recommended Screening Levels (RSLs) for residential soil (May 2022)

The concentration of the metal arsenic in all of the soil samples was above screening levels for residential soils, as determined by the Department of Toxic Substance Control (DTSC). However, the EPA and the DTSC have acknowledged that naturally occurring arsenic in southern California typically exceeds the maximum screening level, with levels recorded up to 12 mg/kg in many areas (Human Health Risk Assessment (HHRA) Note Number 11 - Southern California Ambient Arsenic Screening Level). The test results for all of the soil samples are below the typically detected levels of arsenic in the southern California area.

A copy of the laboratory report and Chain-of-Custody documentation are included in Appendix G.

Based on the investigation, GEOTEK is of the opinion that possible previous pesticide usage has not created a recognized environmental condition or concern to the Site. Additional investigation is not considered necessary at the Site.

10.0 SIGNIFICANT DATA GAPS

No significant data gaps were discovered while performing this Phase I and Limited Phase II Environmental Site Assessment. Therefore, it is GEOTEK'S opinion that sufficient information was obtained to identify current Site conditions and past Site usage.

Minor data gaps include:

- Gaps in the historic records from 1926 to 1934, 1950 to 1974, 1976 to 1984, 1984 to 1994, and 1994 to 2006 due to the limited resources readily available and reasonably ascertainable in the local area or through online resources.

- GEOTEK has not received nor reviewed Chain-of-Title documents for the Site.

It is GEOTEK'S opinion that additional information, if it were to become available, is not likely to change the conclusions or recommendations of this assessment.

11.0 CONCLUSIONS AND RECOMMENDATIONS

GEOTEK has performed a Phase I and Limited Phase II Environmental Site Assessment (ESA) for the subject Site in substantial conformance with the scope and limitations of ASTM E 1527-21 and GEOTEK Proposal No. P-0401724-CR, dated April 4, 2024. Any exceptions to, or deletions from, this practice are described in the appropriate sections of this report.

Based on this investigation, this Phase I and Limited Phase II Environmental Site Assessment has not revealed evidence of a recognized environmental condition in connection with the subject Site. No further investigation is recommended at this time.

12.0 CERTIFICATIONS

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in 40 CFR 312. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject Site. I have developed and performed all the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR 312.

The qualifications of the Project Team are included in Appendix H.

GEOTEK appreciates this opportunity to be of service. If you have any questions, or if GEOTEK can be of further service, please contact the office at (951) 710-1160.

Sincerely,
GEOTEK, INC.

PROFESSIONAL GEOLOGIST
KYLE R. McHARGUE
2790
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

Kyle R. McHargue
Project Geologist, CEG 2790
Expires 02/28/2026

Anna M. Scott
Project Geologist

\\geotekfs1\Riverside\Projects\3901 to 3950\3943CR K. Hovnanian California Region, Inc Cottonwood Phase 3 Hanford\Phase I ESA\3951-CR K Hovnanian Cottonwood Phase 3 - Phase I and Limited Phase II ESA.doc

13.0 REFERENCES

CALIFORNIA, STATE OF

- EnviroStor, Records Inquiry, https://www.envirostor.dtsc.ca.gov/public/
- Geotracker, Records Inquiry, https://geotracker.waterboards.ca.gov/
- Matthews, R.A., and Burnett, J.L., 1965, "Geologic Map of California" Fresno Sheet, California Division of Mines and Geology, Geologic Atlas of California GAM-05, scale 1:250,000
- Water Resources, Department of Hydrologic Data

ENVIRONMENTAL DATA RESOURCES, INC.

- Aerial Photo Decade Package, Inquiry No. 7674781.11, dated June 7, 2024
- Building Permit Report, Inquiry No. 7674781.8, dated June 6, 2024
- Certified Sanborn Map Report, Inquiry No. 7674781.3, dated June 6, 2024
- City Directory Abstract Report, Inquiry No. 7674781.5, dated June 7, 2024
- Environmental Lien and AUL Search Report, Inquiry No. 7674781.7, dated June 10, 2024
- Historical Topo Map Report, Inquiry No. 7674781.4, dated June 6, 2024
- Property Tax Map Report, Inquiry No. 7674781.6, dated June 6, 2024
- Radius Map Report, Inquiry No. 7674781.2s, dated June 6, 2024
- Vapor Encroachment Screen Report, Inquiry No. 7674781.2s, dated June 27, 2024

FEDERAL EMERGENCY MANAGEMENT AGENCY

- Flood Insurance Map, Community Panel Number 06031C-0185C and 06031C-0195C, dated June 16, 2009, accessed on June 6, 2024

HANFORD, CITY OF

- Fire Department, Records Inquiry
- Police Department, Records Inquiry

KINGS, COUNTY OF

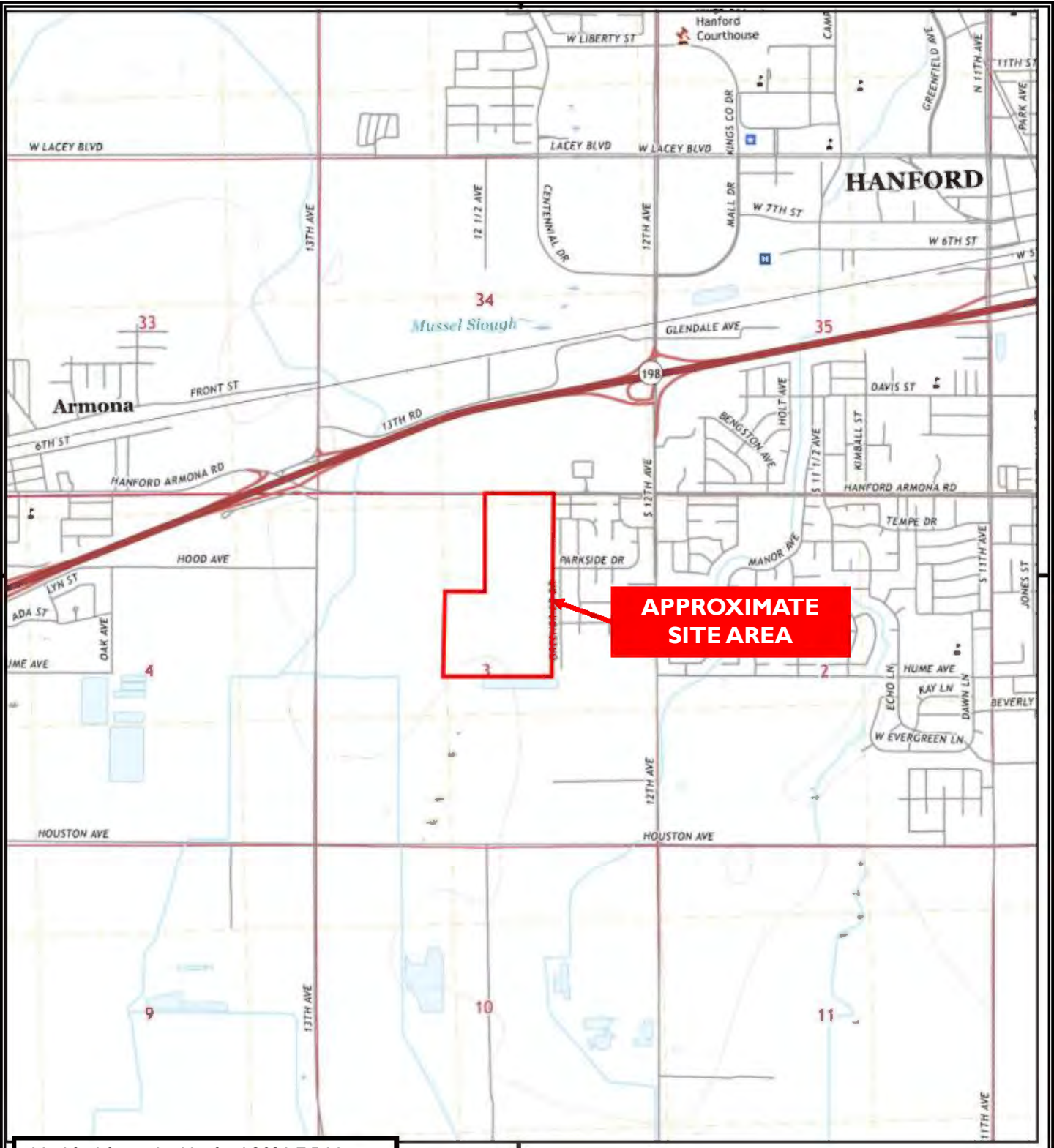
- Assessor's Office, Records Inquiry

U.S. GOVERNMENT

- Drug Enforcement Agency
- Records inquiry, http://www.dea.gov/seizures

APPENDIX A

FIGURES



Modified from the Hanford 2021 7.5-Minute Topographic Map Sheets

0 Miles 0.25 0.5 1 1.5

K. Hovnanian California Region, Inc.
Tentative Tract Map No. 943
APN 184-100-008
Hanford, King County, California

Project No. 3951-CR

NORTH

Figure 1

Site Location and Topography Map

GEOTEK

Aerial Photograph dated May 6, 2024

Single-Family Residences
(12358-12458 Hanford Armona Road)

Agricultural Land

Single-Family Development
(1983 and 1984 West Idlewood Way)

Single-Family Development
(1986 West Concord Way)

Vacant Land

Debris

Single-Family Development
(1100-1198 Greenbrier Drive)

Site

Single-Family Development
(1224-1380 Greenbrier Drive)

Single-Family Development
(1978 West Summer Blossom Way)

Single-Family Development
(1400-1490 Greenbrier Drive)

Single-Family Residence
(12645 Hanford Armona Road)

Debris

Single-Family Residence
(12633 Hanford Armona Road)

Debris

Agricultural Land

1577 ft

Hanford Armona Rd
Hanford Armona Rd
12th Ave
Robin Ct
Hanford
Lark St
Robin Ave
Woodland Dr
Oriole St
Hawk St
S 12th Ave
Parkside Dr
Greenbrier Dr
Edgewood Dr
Osprey St
Springcrest St
Willis Dr
Hartley Dr
W Graham St
Sidonia St
12th Ave

NORTH

Legend

Site Boundary

K. Hovnanian California Region, Inc.
Tentative Tract Map No. 943
APN 184-100-008
Hanford, King County, California

GeoTek Project No. 3951-CR

GEOTEK

Figure 2

General Site Layout Map

Aerial Photograph dated May 6, 2024

Hanford Armona Rd

Hanford Armona Rd

Hanford Armona

1-3

4-6

27-29

7

8

23-26

21-22

9-10

19-20

16-18

15

11-14

1409 ft

Concord Cir

Woodland Dr

Parkside Dr

Greenbrier Dr

Edgewood Dr

S 12th Ave

Robin Ave

Oriole St

Hawk St

Osprey St

Springcrest St

W Spring Crest St

W Graham St

W Twilight St

Polar Ave

NORTH

Legend

Site Boundary

22 Photo Locations

K. Hovnanian California Region, Inc.
Tentative Tract Map No. 943
APN 184-100-008
Hanford, King County, California

GeoTek Project No. 3951-CR

GEOTEK

Figure 3

Photo Location Map

Aerial Photograph dated May 6, 2024

Hanford Armona Rd

Hanford Armona Rd

Hanford Armona Rd

1

9

2

8

3

12

7

11

4

6

10

5

Concord Cir

Woodland Dr

Robin Ave

Lark

Oriole St

Hawk St

Parkside Dr

S 12th Ave

Edgewood Dr

Greenbrier Dr

Osprey St

Springcrest St

W Spring Crest St

W Graham St

W Twilight St

Polar Ave

1409 ft

NORTH

Legend

10 OCP and Arsenic Sample Location

Site Boundary

K. Hovnanian California Region, Inc.
Tentative Tract Map No. 943
APN 184-100-008
Hanford, King County, California

GeoTek Project No. 3951-CR

GEOTEK

Figure 4

Sample Location Map

APPENDIX B

DOCUMENTS OBTAINED FROM EDR

VTTM 943

Hanford Armona Road

Hanford, CA 93230

Inquiry Number: 7674781.11

June 07, 2024

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

06/07/24

Site Name:	Client Name:
VTTM 943	Geotek
Hanford Armona Road	1548 North Maple Street
Hanford, CA 93230	Corona, CA 92880
EDR Inquiry # 7674781.11	Contact: Kyle Richard Mchargue

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2020	1"=500'	Flight Year: 2020	USDA/NAIP
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1994	1"=500'	Acquisition Date: January 01, 1994	USGS/DOQQ
1984	1"=500'	Flight Date: June 09, 1984	USDA
1976	1"=500'	Flight Date: July 01, 1976	USGS
1974	1"=500'	Flight Date: August 01, 1974	USGS
1950	1"=500'	Flight Date: January 25, 1950	USDA
1937	1"=500'	Flight Date: September 03, 1937	USDA
1934	1"=500'	Flight Date: January 01, 1934	USGS

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, LLC. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. This Report is provided on an "AS IS", "AS AVAILABLE" basis. NO WARRANTY EXPRESS OR IMPLIED IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, LLC AND ITS SUBSIDIARIES, AFFILIATES AND THIRD PARTY SUPPLIERS DISCLAIM ALL WARRANTIES, OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, ARISING OUT OF OR RELATED TO THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES REGARDING ACCURACY, QUALITY, CORRECTNESS, COMPLETENESS, COMPREHENSIVENESS, SUITABILITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, MISAPPROPRIATION, OR OTHERWISE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, LLC OR ITS SUBSIDIARIES, AFFILIATES OR THIRD PARTY SUPPLIERS BE LIABLE TO ANYONE FOR ANY DIRECT, INCIDENTAL, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY TYPE OR KIND (INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, LOSS OF USE, OR LOSS OF DATA), ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT.

Any analyses, estimates, ratings, environmental risk levels, or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only an assessment performed by a qualified environmental professional can provide findings, opinions or conclusions regarding the environmental risk or conditions in, on or at any property.

Copyright 2024 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, LLC or its affiliates. All other trademarks used herein are the property of their respective owners.

INQUIRY #: 7674781.11

YEAR: 2020

= 500'

N

EDR

INQUIRY #: 7674781.11

YEAR: 2016

= 500'

N

EDR

INQUIRY #: 7674781.11
YEAR: 2012
= 500'
N
EDR

INQUIRY #: 7674781.11

YEAR: 2009

= 500'

N

EDR

INQUIRY #: 7674781.11

YEAR: 2006

= 500'

N

EDR

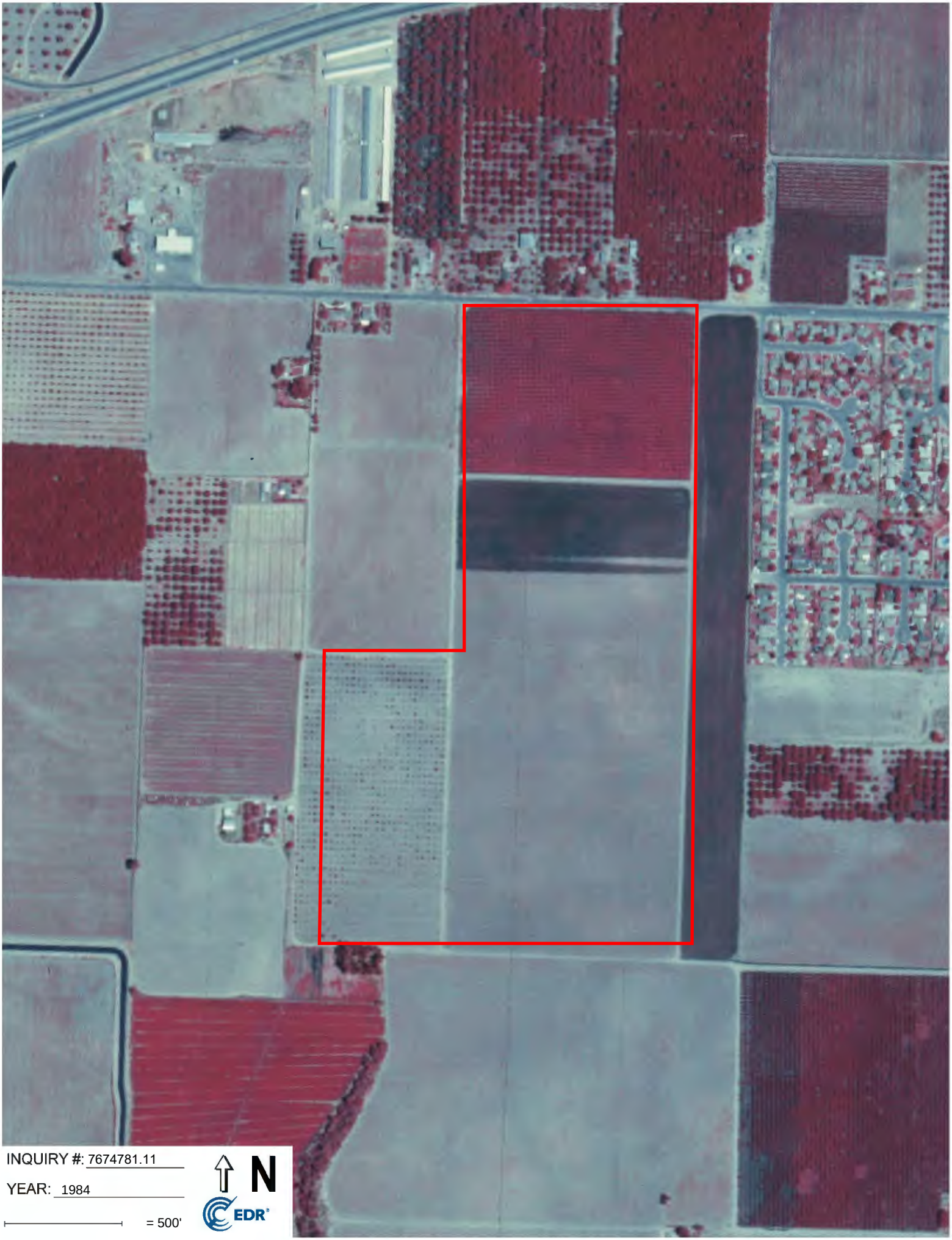
INQUIRY #: 7674781.11

YEAR: 1994

= 500'

N

EDR


INQUIRY #: 7674781.11
YEAR: 1984
= 500'
N
EDR

INQUIRY #: 7674781.11

YEAR: 1976

= 500'

N

EDR

INQUIRY #: 7674781.11
YEAR: 1974
= 500'
N
EDR

INQUIRY #: 7674781.11

YEAR: 1950

= 500'

N

EDR

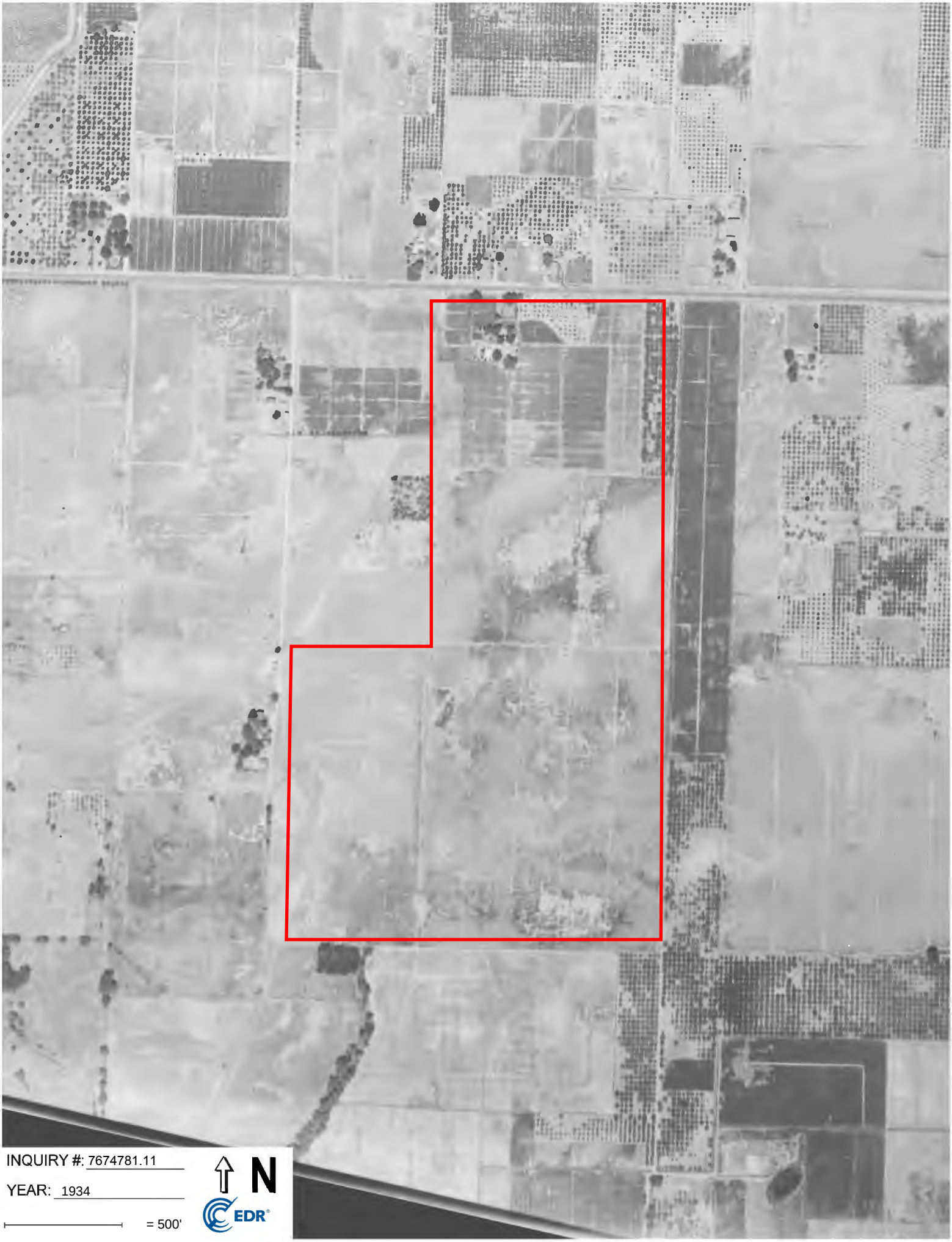
INQUIRY #: 7674781.11

YEAR: 1937

= 500'

N

EDR


INQUIRY #: 7674781.11
YEAR: 1934
= 500'
N
EDR

VTTM 943
Hanford Armona Road
Hanford, CA 93230

Inquiry Number: 7674781.8
June 06, 2024

EDR Building Permit Report

Target Property and Adjoining Properties

EDR® Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

About This Report

Executive Summary

Findings

Glossary

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, LLC. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. This Report is provided on an "AS IS", "AS AVAILABLE" basis. **NO WARRANTY EXPRESS OR IMPLIED IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, LLC AND ITS SUBSIDIARIES, AFFILIATES AND THIRD PARTY SUPPLIERS DISCLAIM ALL WARRANTIES, OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, ARISING OUT OF OR RELATED TO THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES REGARDING ACCURACY, QUALITY, CORRECTNESS, COMPLETENESS, COMPREHENSIVENESS, SUITABILITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, MISAPPROPRIATION, OR OTHERWISE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, LLC OR ITS SUBSIDIARIES, AFFILIATES OR THIRD PARTY SUPPLIERS BE LIABLE TO ANYONE FOR ANY DIRECT, INCIDENTAL, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY TYPE OR KIND (INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, LOSS OF USE, OR LOSS OF DATA), ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT.** Any analyses, estimates, ratings, environmental risk levels, or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only an assessment performed by a qualified environmental professional can provide findings, opinions or conclusions regarding the environmental risk or conditions in, on or at any property.

Copyright 2023 by Environmental Data Resources, LLC. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, LLC, or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, LLC or its affiliates. All other trademarks used herein are the property of their respective owners.

EDR BUILDING PERMIT REPORT

About This Report

The EDR Building Permit Report provides a practical and efficient method to search building department records for indications of environmental conditions. Generated via a search of municipal building permit records gathered from more than 1,600 cities nationwide, this report will assist you in meeting the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527 - 21), or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

Building permit data can be used to identify current and/or former operations and structures/features of environmental concern. The data can provide information on a target property and adjoining properties such as the presence of underground storage tanks, pump islands, sumps, drywells, etc., as well as information regarding water, sewer, natural gas, electrical connection dates, and current/former septic tanks.

Methodology

EDR has developed the EDR Building Permit Report through our partnership with BuildFax, the nation's largest repository of building department records. BuildFax collects, updates, and manages building department records from local municipal governments. The database now includes 30 million permits, on more than 10 million properties across 1,600 cities in the United States.

The EDR Building Permit Report comprises local municipal building permit records, gathered directly from local jurisdictions, including both target property and adjoining properties. Years of coverage vary by municipality. Data reported includes (where available): date of permit, permit type, permit number, status, valuation, contractor company, contractor name, and description.

Incoming permit data is checked at seven stages in a regimented quality control process, from initial data source interview, to data preparation, through final auditing. To ensure the building department is accurate, each of the seven quality control stages contains, on average, 15 additional quality checks, resulting in a process of approximately 105 quality control "touch points."

For more information about the EDR Building Permit Report, please contact your EDR Account Executive at (800) 352-0050.

EDR® Environmental Data Resources Inc.

BUILD FAX PROPERTY HISTORY

EXECUTIVE SUMMARY: SEARCH DOCUMENTATION

A search of building department records was conducted by Environmental Data Resources, Inc (EDR) on behalf of Geotek on Jun 06, 2024.

TARGET PROPERTY

Hanford Armona Road
Hanford, CA 93230

SEARCH METHODS

EDR searches available lists for both the Target Property and Surrounding Properties.

RESEARCH SUMMARY

Building permits identified: **YES**

The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

Hanford

Year	*Source*	*TP*	*Adjoining*
2024	City of Hanford, Building Division		
2023	City of Hanford, Building Division		
2022	City of Hanford, Building Division		
2021	City of Hanford, Building Division		
2020	City of Hanford, Building Division		
2019	City of Hanford, Building Division		
2018	City of Hanford, Building Division		
2017	City of Hanford, Building Division		
2016	City of Hanford, Building Division		
2015	City of Hanford, Building Division		
2014	City of Hanford, Building Division		X
2013	City of Hanford, Building Division		
2012	City of Hanford, Building Division		
2011	City of Hanford, Building Division		
2010	City of Hanford, Building Division		
2009	City of Hanford, Building Division		
2008	City of Hanford, Building Division		
2007	City of Hanford, Building Division		
2006	City of Hanford, Building Division		
2005	City of Hanford, Building Division		
2004	City of Hanford, Building Division		
2003	City of Hanford, Building Division		
2002	City of Hanford, Building Division		
2001	City of Hanford, Building Division		
2000	City of Hanford, Building Division		
1999	City of Hanford, Building Division		
1998	City of Hanford, Building Division		
1997	City of Hanford, Building Division		

EXECUTIVE SUMMARY: SEARCH DOCUMENTATION

Year	Source	TP	Adjoining
1996	City of Hanford, Building Division		
1995	City of Hanford, Building Division		
1994	City of Hanford, Building Division		
1993	City of Hanford, Building Division		
1992	City of Hanford, Building Division		
1991	City of Hanford, Building Division		
1990	City of Hanford, Building Division		
1989	City of Hanford, Building Division		
1988	City of Hanford, Building Division		
1987	City of Hanford, Building Division		
1986	City of Hanford, Building Division		
1985	City of Hanford, Building Division		
1984	City of Hanford, Building Division		
1983	City of Hanford, Building Division		
1982	City of Hanford, Building Division		
1981	City of Hanford, Building Division		
1980	City of Hanford, Building Division		
1979	City of Hanford, Building Division		
1978	City of Hanford, Building Division		
1977	City of Hanford, Building Division		
1976	City of Hanford, Building Division		
1975	City of Hanford, Building Division		
1974	City of Hanford, Building Division		
1973	City of Hanford, Building Division		
1972	City of Hanford, Building Division		
1971	City of Hanford, Building Division		
1970	City of Hanford, Building Division		

Name: JurisdictionName
Years: Years
Source: Source
Phone: Phone

BUILDING DEPARTMENT RECORDS SEARCHED

Name: Hanford
Years: 1970-2024
Source: City of Hanford, Building Division, Hanford, CA
Phone: (559) 585-2581

Name: Tulare County
Years: 1985-2024
Source: Tulare County, Community and Development Services Branch, TULARE, CA
Phone: (559) 624-7100

Name: Kings County Unincorporated Area
Years: 2000-2024
Source: County of Kings, Community Development Agency, Hanford, CA
Phone:

TARGET PROPERTY FINDINGS

TARGET PROPERTY DETAIL

Hanford Armona Road
Hanford, CA 93230

No Permits Found

ADJOINING PROPERTY FINDINGS

ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

Hanford Armona Road

Hanford Armona Road

Date:	**4/14/2014**
Permit Type:	
Description:	**3 ax trac/ 2ax trlr**
Permit Description:	
Work Class:	
Proposed Use:	
Permit Number:	TP14-0038
Status:	APPROVED
Valuation:	$0.00
Contractor Company:	
Contractor Name:	

GLOSSARY

General Building Department concepts

- **ICC:** The International Code Council. The governing body for the building/development codes used by all jurisdictions who've adopted the ICC guidelines. MOST of the US has done this. Canada, Mexico, and other countries use ICC codes books and guides as well. There are a few states who have added guidelines to the ICC codes to better fit their needs. For example, California has added seismic retrofit requirements for most commercial structures.
- **Building Department (Permitting Authority, Building Codes, Inspections Department, Building and Inspections):** This is the department in a jurisdiction where an owner or contractor goes to obtain permits and inspections for building, tearing down, remodeling, adding to, re-roofing, moving or otherwise making changes to any structure, Residential or Commercial.
- **Jurisdiction:** This is the geographic area representing the properties over which a Permitting Authority has responsibility.
- **GC:** General Contractor. Usually the primary contractor hired for any Residential or Commercial construction work.
- **Sub:** Subordinate contracting companies or subcontractors. Usually a "trades" contractor working for the GC. These contractors generally have an area of expertise in which they are licensed like Plumbing, Electrical, Heating and Air systems, Gas Systems, Pools etc. (called "trades").
- **Journeymen:** Sub contractors who have their own personal licenses in one or more trades and work for different contracting companies, wherever they are needed or there is work.
- **HVAC (Mechanical, Heating & Air companies):** HVAC = Heating, Ventilation, and Air Conditioning.
- **ELEC (Electrical, TempPole, TPole, TPower, Temporary Power, Panel, AMP Change, Power Release):** Electrical permits can be pulled for many reasons. The most common reason is to increase the AMPs of power in an electrical power panel. This requires a permit in almost every jurisdiction. Other commons reason for Electrical permits is to insert a temporary power pole at a new construction site. Construction requires electricity, and in a new development, power has yet to be run to the lot. The temporary power pole is usually the very first permit pulled for new development. The power is released to the home owner when construction is complete and this sometimes takes the form of a Power Release permit or inspection.
- **"Pull" a permit:** To obtain and pay for a building permit.
- **CBO:** Chief Building Official
- **Planning Department:** The department in the development process where the building /structural plans are reviewed for their completeness and compliance with building codes
- **Zoning Department:** The department in the development process where the site plans are reviewed for their compliance with the regulations associated with the zoning district in which they are situated.
- **Zoning District:** A pre-determined geographic boundary within a jurisdiction where certain types of structures are permitted / prohibited. Examples are Residential structure, Commercial/Retail structures, Industrial/Manufacturing structures etc. Each zoning district has regulations associated with it like the sizes of the lots, the density of the structures on the lots, the number of parking spaces required for certain types of structures on the lots etc.
- **PIN (TMS, GIS ID, Parcel#):** Property Identification Number and Tax Map System number.
- **State Card (Business license):** A license card issued to a contractor to conduct business.
- **Building Inspector (Inspector):** The inspector is a building department employee that inspects building construction for compliance to codes.
- **C.O.:** Certificate of Occupancy. This is the end of the construction process and designates that the owners now have permission to occupy a structure after its building is complete. Sometimes also referred to as a Certificate of Compliance.

GLOSSARY

Permit Content Definitions

- Permit Number: The alphanumerical designation assigned to a permit for tracking within the building department system. Sometimes the permit number gives clues to its role, e.g. a "PL" prefix may designate a plumbing permit.
- Description: A field on the permit form that allows the building department to give a brief description of the work being done. More often than not, this is the most important field for EP's to find clues to the prior use (s) of the property.
- Permit Type: Generally a brief designation of the type of job being done. For example BLDG-RES, BLDG-COM, ELEC, MECH etc.

Sample Building Permit Data

Date: Nov 09, 2000
Permit Type: Bldg -
New Permit Number: 101000000405
Status: Valuation: $1,000,000.00
Contractor Company: OWNER-BUILDER
Contractor Name:

Description: New one store retail (SAV-ON) with drive-thru pharmacy. Certificate of Occupancy.

VTTM 943
Hanford Armona Road
Hanford, CA 93230

Inquiry Number: 7674781.5
June 07, 2024

The EDR-City Directory Image Report

Environmental Data Resources Inc
6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Executive Summary

Findings

City Directory Images

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, LLC. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. This Report is provided on an "AS IS", "AS AVAILABLE" basis. **NO WARRANTY EXPRESS OR IMPLIED IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, LLC AND ITS SUBSIDIARIES, AFFILIATES AND THIRD PARTY SUPPLIERS DISCLAIM ALL WARRANTIES, OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, ARISING OUT OF OR RELATED TO THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES REGARDING ACCURACY, QUALITY, CORRECTNESS, COMPLETENESS, COMPREHENSIVENESS, SUITABILITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, MISAPPROPRIATION, OR OTHERWISE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, LLC OR ITS SUBSIDIARIES, AFFILIATES OR THIRD PARTY SUPPLIERS BE LIABLE TO ANYONE FOR ANY DIRECT, INCIDENTAL, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY TYPE OR KIND (INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, LOSS OF USE, OR LOSS OF DATA), ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT.** Any analyses, estimates, ratings, environmental risk levels, or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only an assessment performed by a qualified environmental professional can provide findings, opinions or conclusions regarding the environmental risk or conditions in, on or at any property.

Copyright 2023 by Environmental Data Resources, LLC. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, LLC, or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, LLC or its affiliates. All other trademarks used herein are the property of their respective owners.

EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available business directory data at approximately five year intervals.

RECORD SOURCES

The EDR City Directory Report accesses a variety of business directory sources, including Haines, InfoUSA, Polk, Cole, Bresser, and Stewart. Listings marked as EDR Digital Archive access Cole and InfoUSA records. The various directory sources enhance and complement each other to provide a more thorough and accurate report.

EDR is licensed to reproduce certain City Directory works by the copyright holders of those works. The purchaser of this EDR City Directory Report may include it in report(s) delivered to a customer.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2020	☑	☐	EDR Digital Archive
2017	☑	☐	Cole Information
2014	☑	☐	Cole Information
2010	☑	☐	Cole Information
2005	☑	☐	Cole Information
2000	☑	☐	Cole Information
1995	☑	☐	Cole Information
1992	☑	☐	Cole Information
1990	☑	☐	Haines Criss-Cross Directory
1985	☑	☐	Haines Criss-Cross Directory
1980	☑	☐	Haines Criss-Cross Directory
1975	☑	☐	Haines Criss-Cross Directory
1973	☑	☐	Haines Criss-Cross Directory

FINDINGS

TARGET PROPERTY STREET

Hanford Armona Road
Hanford, CA 93230

Year	***CD Image***	***Source***
HANFORD ARMONA RD		
2020	pg A2	EDR Digital Archive
2017	pg A7	Cole Information
2014	pg A12	Cole Information
2010	pg A18	Cole Information
2005	pg A24	Cole Information
2000	pg A31	Cole Information
1995	pg A36	Cole Information
1992	pg A40	Cole Information
1990	pg A43	Haines Criss-Cross Directory
1990	pg A44	Haines Criss-Cross Directory
1990	pg A45	Haines Criss-Cross Directory
1985	pg A46	Haines Criss-Cross Directory
1985	pg A47	Haines Criss-Cross Directory
1980	pg A48	Haines Criss-Cross Directory
1980	pg A49	Haines Criss-Cross Directory
1975	pg A50	Haines Criss-Cross Directory
1975	pg A51	Haines Criss-Cross Directory
1973	pg A52	Haines Criss-Cross Directory
1973	pg A53	Haines Criss-Cross Directory
1973	pg A54	Haines Criss-Cross Directory

FINDINGS

CROSS STREETS

No Cross Streets Identified

City Directory Images

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

HANFORD ARMONA RD 2020

1433	ALBERT GRAAF
	ALBERT VANDERGRAAF
	DER VAN
	MARINUS VANDERGRAAF
	RIEKIE VANDERGRAAF
1580	ATM
1660	ATM
2911	B & R TEVELDE
	B T V SENIOR HOUSING LLC
	LONE OAK ENERGY LLC
	SANTA FE FARMS INC
6025	PATRICIA CARDOZA
6160	BELLE LEAL
	DANIEL LEAL
	JULIAN AGUAYO
6236	BELLE ACQUISTAPACE
	BELMIRA LEAL
	DANIEL LEAL
6380	EARL IRBY
6431	MANUEL TOSTE
6585	SUSIE NORWOOD
	TILDE NORWOOD
6624	CARLOS BORGES
	LUZIA BORGES
6672	IRENE CORREIA
	JASON CORREIA
	KRISTI CLOWER
	WYATT BUTTLE
6714	CHERYL DUTRA
	EDDIE DUTRA
6749	DAVID CLACHER
	KARA CLACHER
	SANTIAGO RODRIGUEZ
6750	ANDREW JAMES
6780	DAVID KELLENBERGER
	TAMMI KELLENBERGER
6812	LYNNE ELLIS
6850	ELAINE MEYER
	FRANK MEYER
6894	IGNACIO GARZA
6976	DIANE TAMEZ
	GLORIA TAMEZ
	PEDRO TAMEZ
	RICARDO TAMEZ
7140	DAVID GONZALEZ
7184	WILLIAM COX
7216	ELUTERIO CORONADO
	FLORIBERTA CORONADO
7252	CATALINA QUIRINO
	FLORITA ALCARAZ

HANFORD ARMONA RD 2020 (Cont'd)

7480	BAKER COMMODITIES INC
	DOUGLAS FLETCHER
7533	THRESHER INDUSTRIES INC
7761	SOUTH VALLEY MATERIALS INC
	VALLEY READY MIX
7803	KINGS WASTE & RECYCLING
8038	PATRICK BRASIL
8076	BRIAN SOUSA
	JENNIFER SOUSA
8211	DAVID DANELL
	DEZERAYE DANELL
8265	BILL DANELL
	CLAIRE DANELL
	JR LAND CO LLC
8395	JOSE TEIXEIRA
	LIZUARTE TEIXEIRA
	MARIA TEIXEIRA
8415	JOHN TEIXEIRA
	MARIA TEIXEIRA
8471	CECELIA PEREZ
	LUPE PEREZ
8945	LEONARD MATTOS
9102	LONNIE CLEMENT
9144	MARGARET BORBOLLA
	RALPH BORBOLLA
9184	ADRIANNA LUNA
	ANGEL LUNA
	HAROLD PRIETO
	KELLY LUNA
9248	GENEVIEVE MAGNIA
	GUADALUPE MAGNIA
	LUPE MAGNIA
9513	GLORIA DURAN
	JOHNNY DURAN
9539	GUS LOPEZ
	OTILIA LOPEZ
9615	YVONNE GARZA
9839	R-N-R WELDING
	SAN JOSE MOTOSPORTS INC
10519	ANTHONY SANTOS
	BUFFY SANTOS
10556	ADDIE BURKETT
	SANDRA BURKETT
10700	HANFORD COMMODITIES LLC
10833	CRICKET WIRELESS AUTH RETAILER
	EL REY SUPERMERCADO
10870	JERRY WOOD
10874	VERA DIETRICH
	WILLIAM DIETRICH
10890	BRENDA JONES

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

HANFORD ARMONA RD 2020 (Cont'd)

10898	JOSE AMARAL
	JOSE PALOMERA
10904	DONALD GILBERT
10912	MALVIN GIPSON
10914	PAULA ROBINSON
10915	DHARAM MANAGEMENT LLC
	STOP ZONE INC
10918	CHERYL WARMERDAM
10926	WILFRIDO VALENTINE
10928	KATHY FLORES
10936	JOSE CAJERO
	MARIA CAJERO
10937	AUGIE JAURIGUI
	EMMA JAURIGUI
	LEROY JAURIGUI
	SAMANTHA JAURIGUI
10938	ARNOLD ALCALA
10942	RONDA SILVA
10946	OLIVE MCHANEY
10948	BEATRICE MARTIN
10954	BELAIR MOBILE HOME PARK
	JUDITH GRIFFITHS
	LEROY GRIFFITH
	LESTER HAUGHT
10992	GLENN JAMES
10994	SUSAN EAST
10998	CLARENCE STROUP
	DEBRA DODD
	SANDRA STROUP
11130	MARISSA NUNES
11151	ANGELO NATALI
	CAIN SANCHEZ
11212	JARRED CORDEIRO
	MARIO CORDEIRO
11274	CALVARY CHRISTIAN CTR
11303	BRIAN MARTINEZ
	LOUIS MARTINEZ
	MARTINEZ MARINA
11356	FUKUKO HAAS
	WALTER HAAS
11386	DEBORAH MINCHUE
	DICKIE MINCHUE
	JC MINCHUE
	VICKIE MINCHUE
11400	ETHAN VELACRUZ
	RUSSELL CHISM
11402	MARLENE MACEDO
	WILLIAM MACEDO
11454	CYNTHIA LONG
	GALEN LONG

HANFORD ARMONA RD 2020 (Cont'd)

11454	KENNETH LONG
11474	IAN TREADWELL
	IRENE TREADWELL
	JONATHAN TREADWELL
11526	JOEL CASTILLO
11540	FRANCISCO SIGALA
12150	NORMA MARTINEZ
12168	JERRY KENNEDY
	SUSAN KENNEDY
12182	MELVIN EVANS
12184	CASA DEL SOL
12188	ADRIANA QUINONES
	ANESSA AGREDANO
	IVAN AGREDANO
12192	ANDREW YBARRA
	KAREN GARCIA
	TAMMY JACKSON
12196	KIMBERLY BURCH
12202	ROSEANNE DELGADO
12204	PAULINE MOZ
12208	VINCENT INGELLIS
12358	ADOLFO MENDOZA-SOSA
	AMPARO MENDOZA-SOSA
12536	KOINONIA CHRISTIAN FELLOWSHIP
12591	GINA CATTUZZO
	RICK WILLIAMS
12628	KINGS PANTRY
12629	DONNA THOMAS
12642	ALLEGIANCE COLLISION
	J N NELSON PROPERTIES LLC
12645	ERIK ROCHA
	LEONARD DUTRA
	MARGARET DUTRA
	MELANIE DUTRA
	NADINE DUTRA
12659	ANGIE DUTRA
	HENRY DUTRA
	JUSTIN DUTRA
12918	MORGAN & SLATES MFG & SUPLS
12939	JOSE AGUILAR
13180	BARBER STORAGE
	HANFORD PURELY STORAGE
	LISA BANKY
	RUSSELL BANKY
13225	D D N K INC
	G2 AUTO LOCATORS
	GTWO PARTNERS
13235	AUTOMOTIVE PERFORMANCE
13321	HANFORD TOWING SVC
13375	QUALITY MACHINERY CTR

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

HANFORD ARMONA RD 2020 (Cont'd)

13400 LAYNE
MMIM INC
13405 JIM MACIEL
KATHRYN MACIEL
13488 ALEX LARSON
AMERICAN TRAVELING SHOWS
JACQUELINE LARSON
13520 JESUS RODRIQUEZ
13529 ALFONSO ORTEGA
JOE SILVEIRA
MARY ORTEGA
SILVEIRA'S AIR CONDITIONING
13539 MICHAEL YATTY
13549 KINGS COMMUNITY ACTION ORG-OPR
13594 MITCHELL'S AIR CONDITIONING
SUSAN MITCHELL
13704 AQUA AZUL
CANNERY INDUSTRIAL PARK
CENTRAL VALLEY HEALTH TRNSPRT
COLLINS AIR
GMT GAME
WINDTAMER TARPS
14514 JOHN LABANDEIRA
14552 LAURA KILNER
14570 CHARLES YOUNG
14670 KINGS COUNTY AIR COND INC
14992 DAVID BOWMAN

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 2017

1318	HANFORD ARMONA SELFSTORAGE
1365	STUHAAN, EVERETT
6236	LEAL, KURT A
6255	RODRIGUEZ, ZENAIDA N
6380	IRBY, EARL B
6431	TOSTE, MANUEL B
6435	KELI, NANCY
6585	NORWOOD, RICHARD
6624	BORGES, CARLOS A
6672	CORREIA, JASON M
6713	TORRES, ADRIANA A
6749	CLACHER, AARON M
	D C ELECTRIC
6780	KELLENBERGER, DAVID W
6812	ELLIS, JOHN C
6850	MEYER, FRANK F
6976	TAMEZ, RICARDO R
7184	COX, WILLIAM F
7216	CORONADO, FRANCIS V
7479	AGUILAR, JOSE B
7480	BAKER COMMODITIES INCKERMAN DIVISIO
	BAKER COMMODITIES INCKINGS TULARE
	FLETCHER, DOUGLAS D
7761	SOUTH VALLEY MATERIALS INC
	VALLEY READY MIX
7767	KENNIES INDOOR COMFORT SPECIALISTS
7803	KINGS WASTE & RECYCLING AUTH
7818	PEREIRRA, JOSEPH B
8038	BRASIL, PATRICK D
8211	DANELL, DAVID M
8265	DANELL BROS CUSTOM CHOPPING
8395	TEIXEIRA, MARIA J
8471	PEREZ, ALEXANDER M
9144	BORBOLLA, RALPH R
9184	LUNA, ANGEL D
9539	LOPEZ, CARLOS
9615	GARZA, YVONNE M
9617	DUTRA, TONY
9619	TRUJILLO, LAWRENCE L
9839	RNR WELDING
9845	CENTRAL VALLEY COOPERATIVE
10355	IMMACULATE HEART
10435	IMMACULATE HEART OF MARY CHURCH
	ROMAN CATHOLIC BISHOP THE
10443	BRISTOL, ROBERT
10519	ESCOBAR, MARISELA
10531	AGUILAR, ANGELICA
10556	BURKETT, SANDRA L
10569	CERON, LUIS
10623	RANGEL, CHRISTOPHER

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 2017 (Cont'd)

10626	SAENZ, LYNDA
10700	HANFORD COMMODITIES LLC
	HANFORD COMMODITIES TRANSPORT
10833	DOLLAR RENT A CAR
	RN MARKET
10862	LEON, HILARIO
10864	GUECHO, RONALD J
10870	WOOD, JERRY E
10872	IVINGS, RICHARD
10874	DIETRISH, VERA B
10876	GONZALEZ, ADRIANA
10878	SHEPHERD, RONALD L
10880	SHERWOOD, LESLIE W
10882	LICON, DIXIE L
10886	MALDONADO, MARIA T
10888	ABLES, SHIRLEY
10890	CIBRIAN, MARIA G
10892	ACOSTA, LOIS L
10894	SANCHEZ, GEMA
10896	ANA, ZAZUETA
10898	PALOMERA, JOSE
10900	CANTORIANO-ANDRACA, ELIO
10904	GILBERT, DONALD
10910	ALVES, TIMOTHY A
10912	KNAUER, KATHRYN
10914	ROBINSON, JOHNNY G
10915	STOP ZONE INC
10916	ALVAREZ, FRANCISCO
10918	WARMERDAM, CHERYL L
10920	CORONADO, HENRY
10924	WILLIAMS, JACKIE
10926	VALENTINE, WILFRED C
10930	DENISON, SHERYL
10934	POTTER, LEROY
10936	CAJERO, JOSE
10937	JAURIGUI, LEROY P
10940	TAJUM, MATTHEW
10942	SILVA, RONDA N
10946	MCHANEY, BILLY F
10948	MARTIN, BEATRICE
10950	LUGO, JEANNINE R
10954	BEL AIR MOBILE HOME PARK
	GRIFFITH, LEROY L
10958	RAMIREZ, EVELYN
10960	HAMMOND, JAY
10992	JAMES, GLEN E
10994	QUAIR, ELEANOR
10998	STROUP, CLARENCE C
11122	VENTURA, JOSE
11124	DUONG, PHUONG V

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 2017 (Cont'd)

11126	BLAZQUEZ, VENANCIO
11132	SOLARIO, HELEN
11134	LEWIS, DAVID L
11151	SANCHEZ, CAIN
11212	CORDEIRO, MARIO D
11274	CALVARY CHRISTIAN CENTER
11303	MANITAS DEAMOR
	MARTINEZ, BRIAN I
11356	HAAS, WALTER G
11386	SPOLINI, GARY L
11400	CHISM, RUSSELL J
11402	MACEDO, WILLIAM E
11454	LONG, DAVID L
11474	TREADWELL, JONATHAN D
11526	CASTILLO, JOEL R
11540	SIGALA, FRANCISCO
12168	KENNEDY, JERRY A
12182	REEVES, TERRI L
12184	CASA DEL SOL
12186	GARCIA, SHARON R
	HAMILTON, RENAE
	MORAN, LUIS D
	PEREZ, BAUDELIO
	WRIGHT, RODERICK N
12188	AGREDANO, ANESSA M
	QUINONES, EUGENI
	SAUCEDO, SANDRA
12190	JOHNSON, MARILYN L
	RANGEL, MARIA D
12192	CHAVEZ, JOSEFA
	GARCIA, PHILLIP E
	RANGEL, JOSE N
12194	ANGELA, CORONA
12198	CARRANZA, ALICIA
	GARCIA, ANACCA
	HIGINIA, RAMIRIZ Z
	NUNO, JOSE A
	SALAZAR, MARIA D
	SERNA, HELEN R
12200	CERVANTEZ, TINO
	FULLER, JODI L
	ROSSEL, ROSALINDA C
	STARR, CHARLES R
	WILSON, SONIA
12202	FERNANDEZ, R
	RODRIGUEZ, ANTONETTE
	ULLOA, MARIBETH
12204	DAUENHAUER, DAVID R
	GARCIA, JENNIFER
	GARCIA, LILIANA

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 2017 (Cont'd)

12204 MEDEIROS, ELIZABETH
MOZ, PAULINE D
VALDERIA, SANDRA
12206 JOHN, CANO
PUGA, MIGUEL
12208 GUILLEN, LISA
PIZANO, LUZ M
RAMOS, ANA M
12358 MAGANA, ADOLFO M
12536 FUTURE HOPE PRESCHOOL
KOINONIA CHRISTIAN FELLOWSHIP
12589 LARA-SITIZ, ANDY
12591 WILLIAMS, RICK B
12628 KINGS PANTRY
12629 THOMAS, DONNA L
12642 PREMIERE COLLISION CENTER
PRO TOW
12659 DUTRA, LEONARD A
12918 MORGAN & SLATES INC
12939 AGUILAR, JOSE A
13069 SD ATV SERVICE
13159 VETERINARY PHARMACEUTICALS INC
13180 HANFORD ARMONA SELFSTORAGE
13225 PEDDLERS MALL
UHAUL
13235 AUTOMOTIVE PERFORMANCE
13291 HUFFENBERGER RESTORATIONS
M C TRUCK & TRAILER PARTS
13321 HANFORD TOWING SERVICE
13375 GRANGER WATER SPECIALTIES
QUALITY MACHINERY CENTER
13400 KIDS BARN LLC
LAYNE
13405 MACIEL, JIM K
13488 LARSON, RICK L
13508 FIVE STAR MINI STORAGE
13520 RODRIQUEZ, JESUS
13529 SILVEIR, JOE M
SILVEIRAS AIR CONDITIONING & HEATIN
13539 YATTY, MICHAEL M
13549 KINGS COMMUNITY ACTION ORGANIZATION
13594 MITCHELL, SUSAN L
MITCHELLS AIR CONDITIONING & HEATIN
13704 CENTRAL VALLEY HEALTH TRANSPORT
COLLINS AIR
G M T GAMES
HOUR OF TRUTH MINISTRIES INC
WINDTAMER TARPS
13738 J & D JOSHUAS TOWING
13784 FRANKS ARMONA AUTO BODY

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 2017 (Cont'd)

14514	LABANDEIRA, JANENE M
14570	YOUNG, CECELIA
14666	LIU, CYNTHIA M
14670	KINGS COUNTY AIR CONDITIONING INC
14724	CENTRAL VALLEY ROD & RESTORATIONS
14992	MARVIN, LINDA D

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 2014

1058	JACQUILLARD, PAMELA
1115	NATALL, ANGELO
1433	VANDER, GRAAF A
2511	OCCUPANT UNKNOWN,
2911	OCCUPANT UNKNOWN,
6160	HOOPER, JAMES R
6236	LEAL, DANNY J
6255	RODRIGUEZ, NIKE
6380	IRBY, EARL B
6431	TOSTE, MANUEL B
6435	KELI, NANCY
6509	COELHO, TELMO
6585	NORWOOD, SUSIE M
6624	BORGES, CARLOS A
6672	OCCUPANT UNKNOWN,
6713	TORRES, ADRIANA A
6714	DIAS, JACLYN
6749	CLACHER, AARON M
	D C ELECTRIC
6750	DUTRA, EDDIE S
6780	KELLENBERGER, DAVID W
6812	ELLIS, JOHN C
6850	MEYER, FRANK F
6894	GARZA, IGNACIO G
6976	TAMEZ, RICARDO R
7140	CORONADO, JESUS
7184	COX, WILLIAM F
7216	CORONADO, FRANCIS V
7252	VRYHOF, KIMBERLY L
7257	OCCUPANT UNKNOWN,
7441	OCCUPANT UNKNOWN,
7479	AGUILAR, JOSE B
7480	BAKER COMMODITIES INCKERMAN DIVISIO
	BAKER COMMODITIES INCKINGS TULARE
	FLETCHER, DOUGLAS D
	KINGS TULARE TALLOW DIVISION OF BAKE
7761	SOUTH VALLEY MATERIALS
	SOUTH VALLEY MATERIALS INC
	VALLEY READY MIX
7767	KENNIES INDOOR COMFORT SPECIALISTS I
7803	KINGS WASTE & RECYCLING AUTH
7818	PEREIRRA, JOSEPH B
8038	OCCUPANT UNKNOWN,
8076	GOMES, MICHAEL T
	PROLITE SIGNS
8211	DANELL, DAVID M
8263	DANELL, CLAIRE L
8265	DANELL BROS CUSTOM CHOPPING
8395	TEIXEIRA, JOSE L
8415	HOLLAR, PAUL R

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 2014 (Cont'd)

8471	PEREZ, ALEXANDER M
9102	CLEMENT, LONNIE
9144	BORBOLLA, RALPH R
9184	COTTA, CYNTHIA
9248	MAGNIA, LUPE
9513	DURAN, GREGORY V
9539	LOPEZ, CARLOS
9615	WULFFENSTEIN, BESSIE
9617	DUTRA, TONY
9619	TRUJILLO, LAWRENCE L
9839	R NR WELDING
9842	OCCUPANT UNKNOWN,
9845	CENTRAL VALLEY COOPERATIVE
10355	IMMACULATE HEART
10435	IMMACULATE HEART OF MARY CHURCH
10443	ASPEITIA, PIERRE
10519	ESCOBAR, MARISELA
10531	BASS, ANTHONY
10556	BURKETT, SANDRA L
10569	CERON, LUIS
10595	OCCUPANT UNKNOWN,
10623	DELACRUZ, STEVE D
10626	SAENZ, LYNDA
10628	WHARRY, WILLIAN
10630	FRANKLIN, ARETHA E
10632	OCCUPANT UNKNOWN,
10636	OCCUPANT UNKNOWN,
10700	HANFORD COMMODITIES LLC
	HANFORD COMMODITIES TRANSPORT
10833	DOLEX
	JOYERIA FB
	RN MARKET
10862	LEON, HILARIO
10864	GUECHO, RONALD J
10868	OCCUPANT UNKNOWN,
10870	OCCUPANT UNKNOWN,
10872	DENISON, SHERYL
10874	DIETRICH, WILLIAM E
	DIETRISH, VERA B
10876	GONZALEZ, ADRIANA
10878	SHEPHERD, RONALD L
10880	SHERWOOD, M W
10882	LICON, DIXIE L
10886	MALDONADO, MARIA T
10888	ABLES, SHIRLEY
10890	CIBRIAN, GUADALUPE
10894	SANCHEZ, GEMA
10896	ANA, ZAZUETA
10898	HENDRICKSON, RICHARD M
	PALOMERA, JOSE

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 2014 (Cont'd)

10900	CANTORIANO-ANDRACA, ELIO
	ENSALDO, IRENE
10902	LIMA, MAYRA
10904	GILBERT, DONALD
10906	BETTENCOURT, LEONARD M
10908	DUTRA, MANUEL
10910	ALVES, TIMOTHY A
10912	TAYLOR, LORA E
10914	JENSEN, SHELLY M
10915	STOP ZONE INC
10916	ALVAREZ, FRANCISCO
10918	MCDONALD, CYRENA A
	WARMERDAM, CHERYL L
10920	ROMERO, MAYRA
10924	WILLIAMS, JACKIE
10926	VALENTINE, WILFRED C
10928	HAMMOND, JAY
10930	WOOD, BOBBY
10932	BOYCE, MARTHA L
10934	POTTER, LEROY
10936	CAJERO, MARIA L
10937	JAURIGUI, LEROY P
10940	OCCUPANT UNKNOWN,
10942	SILVA, RONDA N
10946	MCHANEY, BILLY F
10948	MARTIN, BEATRICE
10950	LUGO, HILARIO
10952	OCCUPANT UNKNOWN,
10954	BEL AIR MOBILE HOME PARK
	GRIFFITH, LEROY L
10958	CRANFORD, MARALYN J
	DAVIS, ALFRED L
10960	OCCUPANT UNKNOWN,
10962	OCCUPANT UNKNOWN,
10964	OCCUPANT UNKNOWN,
10970	BERRY, SARAH
10972	OCCUPANT UNKNOWN,
10974	OCCUPANT UNKNOWN,
10975	SILVA, RICHARD
10976	OCCUPANT UNKNOWN,
10986	OCCUPANT UNKNOWN,
10990	WILES, AMANDA E
10992	ABLES, JIMMY L
10994	EAST, JOHN
10998	STROUP, CLARENCE C
11122	CELAYA, JOSE O
11124	DUONG, PHUONG V
11126	BLAZQUEZ, VENANCIO
11130	FERNANDEZ, EFREN
11132	SOLARIO, HELEN

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 2014 (Cont'd)

11134	LEWIS, DAVID L
11136	ALNAGAR, G
11151	OCCUPANT UNKNOWN,
11212	OCCUPANT UNKNOWN,
11274	CALVARY CHRISTIAN CENTER
11303	MANITAS DE AMOR PRESCHOOL & CHILDCAR
	MARTINEZ, LOUIS M
11356	HAAS, WALTER G
11386	MINCHUE, DICKIE L
11400	CHISM, RUSSELL J
11402	MACEDO, WILLIAM E
11454	LONG, DAVID L
11464	OCCUPANT UNKNOWN,
11474	TREADWELL, JON D
11526	OCCUPANT UNKNOWN,
11540	SIGALA, FRANCISCO
11580	MARTINEZ, PAULINE
12150	OCCUPANT UNKNOWN,
12168	KENNEDY, JERRY A
12182	CHAVEZ, SYLVIA
	MEDEIROS, RICKEY
12184	CASA DEL SOL
12186	CASTRO, MOISES
	ESPINOZA, YESENIA
	FOSTER, CRYSTAL
	GARCIA, SHARON R
	HOLMES, CHARLOTT L
	LAVARES, YOSSI
	MONCADA, MARITZA
	RODRIGUEZ, NORMA
	SOLIS, MAXINE I
12188	AGREDANO, ANESSA M
	PRIGGETT, TERRY
	SAUCEDO, SANDRA
	TAMAYO, VIRGINIA
12190	BOTELLO, ALEJANDRA
	JOHNSON, MARILYN L
	SMITH, GUADALUPE
12192	DELACRUZ, MIKE M
	GARCIA, PHILLIP T
	VALDEZ, ORTIZ C
12194	JARAMILLO, DORA M
12196	GRANADOS, AMILCAR
12198	GARCIA, ANGELA
	GONZALEZ, ANNA
	HIGINIA, RAMIRIZ Z
	MEDINA, FELICIANO
	ORELLANA, SANDRA
	SERNA, HELEN R
	ZARAGOZA, MARIA O

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 2014 (Cont'd)

12200	FULLER, JODI L
	GARZIA, ISABEL
	RONQUILLO, JOHN A
	ROSSEL, ROSALINDA C
12202	FERNANDEZ, R
	MONTOYA, DANIELL
	RODRIGUEZ, MARCI
	ULLOA, MARIBETH
12204	GARCIA, LILIANA
	MOZ, PAULINE D
	RODRIGUEZ, NORMA G
12206	AGUAYO, R
	BESOUGLOFF, PETER I
	LISA, DESOTO
	MORENO, GLORIA
	TORRES, AMY E
12208	FAGUNDES, ASHLEY
	GIRON, KIMBERLY
	LOPEZ, R
	MACIEL, MEELENA
	PIZANO, LUZ M
	RAMOS, ANA M
	SNOW, KARI
12246	OCCUPANT UNKNOWN,
12358	PENSIERO, GENE
12406	WINTERBERG, WILLIAM L
12458	SILKWOOD, FRANK L
12536	KOINONIA CHRISTIAN FELLOWSHIP
12589	LARA-SITIZ, ANDY
12591	OCCUPANT UNKNOWN,
12628	KINGS PANTRY
	OCCUPANT UNKNOWN,
12629	THOMAS, RICK R
12631	GIBSON, JOE D
12633	OCCUPANT UNKNOWN,
12642	PREMIERE COLLISION CENTER
	PRO TOW
12645	DUTRA, LEONARD A
12659	DUTRA, HENRY J
12784	OCCUPANT UNKNOWN,
12918	MORGAN & SLATES MANUFACTURING & SUPP
12939	AGUILAR, MARCUS A
13069	SD ATV SERVICE
13180	HANFORD ARMONA SELFSTORAGE
13225	PEDDLERS MALL
13235	AUTOMOTIVE PERFORMANCE
13291	HUFFENBERGER RESTORATIONS
13321	HANFORD TOWING SERVICE
13331	OCCUPANT UNKNOWN,
13405	MACIEL, JIM K

HANFORD ARMONA RD 2014 (Cont'd)

13488 LARSON, RICK L
13508 FIVE STAR MINI STORAGE
HERITAGE STORAGE
13520 OCCUPANT UNKNOWN,
13529 SILVEIR, JOE M
SILVEIRAS AIR CONDITIONING & HEATIN
13539 YATTY, MICHAEL M
13549 KINGS COMMUNITY ACTION ORGANIZATION
13572 OCCUPANT UNKNOWN,
13594 MITCHELL, GARY E
MITCHELLS AIR CONDITIONING & HEATIN
13704 COLLINS AIR
G M T GAMES
WINDTAMER TARPS
13706 VITZ, JULIET
13708 WESTSCAPES
13781 DANIELSON, WIL R
13784 FRANKS ARMONA AUTO BODY
13840 RAZO, ROGELIO
14514 LABANDEIRA, JOHNNY R
14552 OCCUPANT UNKNOWN,
14570 MANCILLA, DAVID
14650 ALEXANDER, LORETTA
14670 KINGS COUNTY AIR CONDITIONING INC
14724 CENTRAL VALLEY ROD & RESTORATIONS
14992 MARVIN, LINDA

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 2010

1115	NATALL, ANGELO
1365	HELM, JERRY E
1433	VANDERGRAAF, ALBERT A
2243	OCCUPANT UNKNOWN,
2511	OCCUPANT UNKNOWN,
2911	CASTRO, VERONICA
6160	HOOPER, ROBERT J
6236	LEAL, DANNY J
6255	PAYAN, M J
6380	IRBY, EARL B
6431	TOSTE, MANUEL B
6433	BRAVO, RAMIREZ J
6509	COELHO, TELMO
6624	BORGES, CARLOS A
6672	CORREIA, JOHN M
6713	TORRES, ADRIANA
6714	DIAS, CHERYL L
6749	D C ELECTRIC
	OCCUPANT UNKNOWN,
6750	DUTRA, EDDIE S
6780	TOLAN, C
6812	ELLIS, JOHN C
6850	MEYER, FRANK F
6894	GARZA, IGNACIO G
6976	TAMEZ, RICARDO R
7140	CORONADO, JESUS
7184	COX, WALLACE G
7216	CORONADO, ELUTERIO V
7252	VICTORIA, FLORITA
7257	ASAP PLUMBING
	SOSA, ESTELA C
7441	WHITE, JAMES M
7479	OCCUPANT UNKNOWN,
7480	BAKER COMMODITIES INC
	FLETCHER, DOUGLAS D
7761	SOUTH VALLEY MATERIALS INC
	VALLEY READY MIX
7803	KINGS WASTE & RECYCLING AUTH
7818	PEREIRRA, JOSEPH B
8076	OCCUPANT UNKNOWN,
8211	DANELL, DAVID M
8263	DANELL, CLAIRE L
8265	DANELL BROTHERS CUSTOM CHOPPNG
8395	TEIXEIRA, MARIA J
8471	OCCUPANT UNKNOWN,
8945	LAKEVIEW GOLF COURSE
9102	CLEMENT, ELNORA E
9144	BORBOLLA, RALPH R
9184	PRIETO, HAROLD D
9248	MAGNIA, GUADALUPE C

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 2010 (Cont'd)

9513	DURAN, GREGORY V
9539	LOPEZ, CARLOS
9615	OREGEL, SANDRA
9617	DUTRA, TONY
9619	GUTIERREZ, JESUS E
9839	RNR WELDING
9842	OCCUPANT UNKNOWN,
9845	CENTRAL VALLEY COOP
	INTERNATIONAL FIBER PACKAGING
10355	IMMACULATE HEART OF MARY CHR
10435	IMMACULATE HEART SCHLRELIGION
	OCCUPANT UNKNOWN,
10519	OCCUPANT UNKNOWN,
10531	COELHO, DIMAS
10556	BURKETT, SANDRA L
10569	CERON, LINDA
10595	DELACRUZ, KIRK
10623	HINOJOSA, VALERIE
10628	WHARRY, WILLIAN
10630	CLEVAND, NICOLE
10632	OCCUPANT UNKNOWN,
10636	MITCHELL, DEANNA M
10815	K & D LIQUOR FOOD & GAS
10833	DOLEX DOLLAR EXPRESS
	JOYERIA FB
	RN MARKET
10862	LEON, HILARIO
10864	GUECHO, RONALD R
10870	DENISON, SHERYL
10872	DENISON, JIMMY L
10874	DIETRICH, WILLIAM E
	DIETRISH, VERA
10876	HOANEY, EUNIA
10878	SHEPHERD, RONALD L
10882	LICON, DIXIE L
10884	DIVINE, REECE D
10886	MALDONADO, MARIA T
10888	ABLES, SHIRLEY
10890	CIBRIAN, GUADALUPE
	LYNCH, LARRY G
10892	OLIVEIRA, GEORGE L
10894	OCCUPANT UNKNOWN,
10896	OCCUPANT UNKNOWN,
10898	AMARAL, JOSE P
10900	HERNANDEZ, ELSA
10902	LIMA, MAYRA
10904	ASBILL, JAMES
10906	BETTENCOURT, LEONARD M
10910	ALVES, JAN M
10912	RAY, KATHY K

HANFORD ARMONA RD 2010 (Cont'd)

10914 ROBINSON, JOHNNY G
10915 STOP ZONE
10916 CAJERO, NORMA
10918 WARMERDAM, CHERYL L
10922 BINDER, ALLEN
10924 WILLIAMS, JACKIE
10926 VALENTINE, WILFRED C
10930 DENISON, S
10932 BOYCE, MARTHA L
10934 HARDIN, GUY G
10936 CAJERO, MARIA L
10937 JAURIGUI, LEROY P
10940 EVERSOLE, CHARLES D
10942 OCCUPANT UNKNOWN,
10946 MCHANEY, BILLY J
10950 BARRERA, DENNY J
LUGO, HILARIO
10952 OCCUPANT UNKNOWN,
10954 BELAIR MOBILE HOME PARK
GRIFFITH, LEROY L
10958 CRANFORD, MARALYN J
10962 BRIGHT, JAMES
10964 HOLLAND, EDWARD
10968 KINSER, DENISE L
10970 BERRY, SARAH
10972 OCCUPANT UNKNOWN,
10974 OCCUPANT UNKNOWN,
10976 OCCUPANT UNKNOWN,
10978 OCCUPANT UNKNOWN,
10982 STARLINE, MELISSA M
10984 CORONADO, ALEX
10986 OCCUPANT UNKNOWN,
10988 STANLEY, FRANCES A
10992 ABLES, SHIRLEY
10994 EAST, JOHN
10998 STROUP, CLARENCE C
11122 RUIZ, CANDACE
11124 DUONG, PHUONG V
11126 BLAZQUEZ, VENANCIO
11130 FERNANDEZ, EFREN
11132 SOLARIO, PAULINE H
11134 OCCUPANT UNKNOWN,
11136 ALNAGAR, G
11151 HARP, KENNETH A
11212 CORDEIRO, MARIO D
11303 MANITAS DE AMOR CHILDCARE
OCCUPANT UNKNOWN,
11356 HAAS, WALTER G
11386 MINCHUE, DICKIE L
11400 DELACRUZ, DAVID L

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 2010 (Cont'd)

11402	MACEDO, WILLIAM E
11454	LONG, GALEN L
11464	OCCUPANT UNKNOWN,
11474	TREADWELL, IRENE
11526	OCCUPANT UNKNOWN,
11540	SIGALA, FRANCISCO
11580	MARTINEZ, PAULINE
12150	MARTINEZ, ALBERT F
12168	KENNEDY, JERRY A
12184	CASA DEL SOL
12186	ESPINOZA, YESENIA
	FLORES, A F
	FRANCO, ELIZABETH H
	FULLER, JODI L
	GARCIA, GENESIS
	HOLMES, CHARLOTTE L
	MORAN, LUIS D
	NORAT, NIVIA N
	THOMAS, JANINE E
12188	AGREDANO, ANESSA M
	GUADRON, FRANCISCO E
	JARAMILLO, DORA
	PATINO, ROSARIO
	QUINONES, EUGENI
	TAMAYO, VIRGINIA
12190	JOHNSON, MARILYN L
	QUINONES, SERGIO G
12192	DELACRUZ, MIKE
	GARCIA, VIRGINIA
	RANGEL, JOSE N
	WELSH, BETTY
12194	BOJORQUEZ, NORMA
	CAMACHO, ARMANDO
	CORONA, ANGELA
	HEBERT, AMBER
	HINES, HEATHER
12196	MENDEZ, JOSE
	NUNES, LU A
	PETERSON, RICK
12198	BIBEE, DENNIS
	BURCIAGA, ALENE R
	FINNELL, MELODY
	MEDINA, FELICIANO
	NUNO, MARIA
	RODRIGUEZ, JOSE
	WOODS, BRANDI
	YBARRA, ELIZABETH
12200	ROSSEL, ROSALINDA
	URRUTIA, MANUEL V
12202	FERNANDEZ, R

HANFORD ARMONA RD 2010 (Cont'd)

12202	RAMIREZ, MARIA
	VALE, GILBERT
	VARGAS, EDUARDO
	WILKINSON, JENNIFER
12204	AZURDIA, GEORGINA
	BENITEZ, VERONICA
	FLORES, ALEX
	MARTINEZ, MARIA
	MCCULLUM, CHRISTINE
	MEDEIRO, ELIZABETH
	MOZ, PAULINE D
	PEREZ, RACHEL
	RODRIGUEZ, NORMA
	SANCHEZ, ELVIRA
	SKINNER, SHAMYRA
12206	ALLEN, DUSTIN
	BAIZE, SHANEEQUA
	GONZALES, ADRIAN
	GONZALEZ, LILIANA
	KING, RACHEL W
	MORENO, GLORIA
	MORENO, YESENIA
	NEVAREZ, CRYSTAL
	VALDEZ, RAMIRO
12208	GONZALES, LORINDA
	GUILLEN, LISA
	PIZANO, LUZ M
	RAMOS, ANA M
	VALLEJO, MELISSA
12246	OCCUPANT UNKNOWN,
12358	OCCUPANT UNKNOWN,
12406	WINTERBERG, WILLIAM L
12458	SILKWOOD, RANDY C
12589	LARA-SITIZ, ANDY
12591	WILLIAMS, RICK B
12628	OCCUPANT UNKNOWN,
12631	GIBSON, JOE D
12633	OCCUPANT UNKNOWN,
12642	PREMIERE COLLISION CTR
12645	DUTRA, LEONARD A
12659	DUTRA, HENRY J
12782	OCCUPANT UNKNOWN,
12784	OCCUPANT UNKNOWN,
12918	MORGAN & SLATES MFG & SUPPLIES
12939	AGUILAR, JOSE A
13180	HANFORD ARMONA SELF STORAGE
13218	HANFORD TOWING
13235	AUTOMOTIVE PERFORMANCE
13261	CARLOS TRANSMISSION SHOP
13291	HUFFENBERGER RESTORATIONS

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 2010 (Cont'd)

13291	M C TRUCK & TRAILER
	MC TRUCK & TRAILER PARTS
13321	HANFORD TOWING SVC
13331	OCCUPANT UNKNOWN,
13375	QUALITY MACHINERY CTR
13400	KROY WEST INC
	RAS MARKETING INC
	THRESHER INDUSTRIES INC
13405	MACIEL, JIM K
13488	REED, WILMA
13508	FIVE STAR MINI STORAGE
13515	FANN, RUSSELL E
13520	COCHRAN, BRYAN
13529	SILVEIR, JOE M
13539	YATTY, MICHAEL M
13572	OCCUPANT UNKNOWN,
13594	MITCHELL, SUSAN L
13704	ALTA PILLOW FORMS
	AQUA AZUL
	WINDTAMER TARPS
13706	VITZ, JULIET
13781	DANIELSON, WIL R
14514	LABANDEIRA, JANENE M
14552	BIVENS, SAY
14570	MORALES, STEVEN L
14650	ALEXANDER, LORETTA
14670	KINGS COUNTY AIR CONDITIONING
14724	CENTRAL VALLEY ROD & RSTRTN
14992	MARVIN, RICHARD E

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 2005

1365	STUHAAN, EVERETT C
1433	VANDERGRAAF, ALBERT A
2243	VEIGA, MANUEL C
2511	BETTENCOURT, GIL M
2911	JUAREZ, JOSE
6025	OCCUPANT UNKNOWN,
6160	HOOPER, ROBERT J
6236	LEAL, DANNY J
6255	NAVARRO, MICHELLE
6380	IRBY, EARL B
6431	MANUEL TOSTE
	MORENO, CARMEN C
	TOSTE, MANUEL B
6433	BRAVO, RAMIREZ J
6435	OCCUPANT UNKNOWN,
6509	OCCUPANT UNKNOWN,
6624	BORGES, CARLOS A
6672	OCCUPANT UNKNOWN,
6713	GARCIA, ELIAS
6714	DUTRA, EDDIE S
6749	CLACHER, ROBERT
	D C ELECTRIC
6750	DUTRA, JOAQUIN J
6780	TOLAN, C
6812	ELLIS, JOHN C
6850	MEYER, FRANK F
6894	GARZA, IGNACIO G
6976	TAMEZ, RICARDO R
7140	LEWIS, JAMES R
7184	COX, MARY J
7216	CORONADO, ANTONIO G
7218	COMMERCIAL GROUND MAINTENANCE
7252	ALCARAZ, JOSE
7257	ASAP PLUMBING
	SOSA, RAMIRO R
7441	NAVARRO, MICHELLE
7479	BETTENCOURT, ROWENA J
7480	BAKER COMMODITIES INC
	FLETCHER, DOUGLAS D
7721	SOUTH VALLEY MATERIALS
7761	SOUTH VALLEY HEIDELBER CEMENT GROUP
	SOUTH VALLEY MATERIALS
	VALLEY READY MIX OF TULARE
7803	KINGS WASTE & RECYCLING AUTHORITY
	RECYCLING HOT LINE
7818	PEREIRRA, JOSEPH B
8038	OCCUPANT UNKNOWN,
8211	DANELL, DAVID M
8265	DANELL BROTHERS INC CA
8395	TEIXEIRA, MARIA J

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 2005 (Cont'd)

8471	MID VALLEY ENTERPRISES
	PEREZ, ALEXANDER M
8945	ART OF DECOR
	LAKESIDE GOLF PARK
9102	CLEMENT, ELNORA
9144	BORBOLLA, RALPH R
9184	PRIETO, HAROLD D
9248	MAGNIA, GUADALUPE C
9491	OCCUPANT UNKNOWN,
9513	DURAN, GREGORY V
9539	LOPEZ, CARLOS
9615	OCCUPANT UNKNOWN,
9619	GUTIERREZ, JESUS E
9842	OCCUPANT UNKNOWN,
9845	CENTRAL VALLEY COOP
10355	IMMACULATE HEART OF MARY CHURCH
10443	GUERRA, JOSE I
10519	OCCUPANT UNKNOWN,
10531	BASS, ANTHONY
10556	BURKETT, SANDRA
10569	RODRIGUEZ, TONY
10595	OCCUPANT UNKNOWN,
10628	WHARRY, WILLIAN
10630	CLEVAND, NICOLE
10632	OCCUPANT UNKNOWN,
10634	NELSON, VIRGINIA
10636	MITCHELL, DEANNA M
10700	JACOB STERN & SONS INC
10833	JOYERIA YURANI
	R N MARKET
10862	LEON, HILARIO
10864	GUECHO, RONALD J
10866	GONZALEZ, JOSE D
10868	BURRIS, MIKE
10870	SANFORD, LEN L
10872	POTTS, RONALD
10874	DIETRICH, WILLIAM E
10876	DUDLEY, WILLARD J
10882	LICON, DIXIE L
10886	BROCHU, WANDA L
10888	NELSON, JAMES I
10890	BOYCE, MARTHA
	LYNCH, LARRY G
10892	OLIVEIRA, GEORGE L
10894	OCCUPANT UNKNOWN,
10896	BARAJAS, JOSE
10898	GARCIA, JUAN
	HINTON, LEON B
10900	GARCIA, BENJAMIN C
10902	OCCUPANT UNKNOWN,

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 2005 (Cont'd)

10904	ASBILL, JAMES
10906	BETTENCOURT, LEONARD M
10910	ALVES, JAN M
10914	ROBINSON, JOHNNY G
10916	PICENO, MIGUEL
10918	LONG, KENNETH L
10920	WILLIAMS, RUBY J
10922	BINDER, ALLEN
	DENISON, MARGARET L
	STURGEON, PAMELA J
10926	VALENTINE, WILFRED C
10928	GARCIA, DORAIMELDA E
10930	ADAMS, TINA M
10932	BOYCE, MARTHA L
10934	HARDIN, GUY
10936	HUDSON, ART C
10937	JAURIGUI, LUPE A
10940	EVERSOLE, CHARLES D
10942	OCCUPANT UNKNOWN,
10946	MCHANEY, BILLY F
10950	MILAM, HAZEL E
10952	OCCUPANT UNKNOWN,
10954	GRIFFITH, LEROY L
	L & J AUTO AIR CONDITION
10956	ABLES, DONALD S
10958	CRAWFORD, MARALYN
10960	OCCUPANT UNKNOWN,
10964	HOLLAND, EDWARD
10968	BRIGHT, J
10970	ROBERTS, JOHN
10972	OCCUPANT UNKNOWN,
10974	OCCUPANT UNKNOWN,
10976	OCCUPANT UNKNOWN,
10982	ETTER, JANICE
10984	MADINA, PAUL
10986	OCCUPANT UNKNOWN,
10988	STANLEY, FRANCES
10990	OCCUPANT UNKNOWN,
10992	JAMES, GLEN E
10994	WALLACE, RICHARD L
10998	BELAIR MOBILE HOME PARK
	DENISON, JIMMY L
11120	REYES, JESUS
11122	CAMPOS, LETICIA
11124	JIMENEZ, FRANCISCO
11126	BLAZQUEZ, VENANCIO
11130	SANCHEZ, MIGUEL G
11132	SOLARIO, PAULINE H
11134	CRAFT, STACEY L
11151	NATALI, IRENE

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 2005 (Cont'd)

11212	CORDEIRO, MARIO D
11274	CALVARY CHRISTIAN CENTER
11303	MANITAS DE AMOR CHILDCARE AND DEV CE
	OCCUPANT UNKNOWN,
11356	HAAS, WALTER G
11386	MINCHUE, DICKIE L
11400	DELACRUZ, DAVID L
11402	MACEDO, WILLIAM E
11454	LONG, GALEN L
11526	CALIFORNIA ROOFING SERVICES
	VAIDEZ, MICHAEL R
11540	OCCUPANT UNKNOWN,
12150	MARTINEZ, ALBERT F
12168	KENNEDY, JERRY A
12182	GONZALEZ, MARY
12184	CASA DEL SOL
12186	ALEXANDER, DEMETRIA
	FATH, REIL
	FORSYTHE, FRANCO
	FRANCO, E
	GONSALVES, AMY
	HUSTON, MEKA
	SMITH, BRIA
	THOMAS, JANINE E
	VILLALOBOS, MISTY M
	WOODS, MICHELLE D
12188	FRAUSTO, ANESSA M
	FURCH, HOWARD J
	GUADRON, FRANCISCO
	JOHNSON, ERIC
	LEVEQUE, MARTINA
	MOON, VIRGINIA
	NUNES, LUANN
	QUINONES, EUGENIA
	RAMIREZ, GUADALUPE
12190	ELLIS, ROBIN
	JOHNSON, ERNEST
	JOHNSON, MARILYN L
	QUINONES, SERGIO G
	SAIS, YOLANDA
	SMITH, GUADALUPE
12192	GARCIA, KAREN
	JAMES, INGRID
	LANG, CYNTHIA
	RODRIGUEZ, NORMA
	WELSH, BETTY
12194	BRIGHT, ANGELA
	HAYES, MARLENA
	MCCORMICK, MICHAEL J
	MOZ, CAYETANA C

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 2005 (Cont'd)

12196 HOUSTON, SHELLY
VILLA, ABEL
12198 BURCIAGA, ALENE
MACIEL, IGNACIO
12200 BARKER, COREY
BOWLES, STEVEN
DOUGLAS, DEXTER
GRUETZMACHER, A
HALL, TAMMY
RENTERIA, ANDREW
RODRIGUEZ, JUANITA T
SKINNER, ISAAC L
12202 FERNANDEZ, R
QUINONEZ, JUAN
SANCHEZ, DELILAH Y
VALE, KATHY R
12204 ALCALA, MARQUEZ A
DIAZ, REANNA C
GARCIA, AMY
LOZA, ANTONIO
MACHADO, MELISSA A
MARTINEZ, KAREN D
MCCULLUM, CHRISTINE
MOZ, PAULINE
NORAT, NIVIA N
SANTIAGO, J C
SMIT, CRYSTAL
SOLORIO, IRMA
TAMAYO, REANNA
VALDEZ, FRANCISCA
WARREN, TERRY L
WRIGHT, RODERICK N
12206 ALLEN, DUSTIN
ALMAREZ, MARIA
BIBEE, DENNIS
GARCIA, DIANA I
GARZA, ROSEMARY
JOHNSON, LASHAWN
LAURA, C
MONROY, CIRILIO
SIMPILCIANO, ROBERT R
12208 BALL, L
CASTRO, DENISE
DELA, CRUZ C
GARCIA, CHRISTINA
GARDNER, GARZA
GARZA, MIA
HORN, DEBRA A
HOUSTON, JOHN D
LEON, PAULINA

HANFORD ARMONA RD 2005 (Cont'd)

12208	MEDINA, PARICIA
	MUNOZ, SHAREL
	PAUWELLS, LOPEZ
	PIERCE, KARLA
	RUBIO, ANA P
12246	OCCUPANT UNKNOWN,
12358	SCHUMACHER, GERALD H
12406	WINTERBERG, WILLIAM L
12458	MORALES, JOSE
12591	OCCUPANT UNKNOWN,
12628	CARROLL, JAY
12629	THOMAS, DONNA H
12631	GIBSON, JOE D
12633	GONZALES, LOUIE
12645	DUTRA, LEONARD
12659	DUTRA, HENRY J
12782	OCCUPANT UNKNOWN,
12784	COMMERCIAL LANDSCAPE MAINTENANCE
	COMMERCIAL LANDSCAPE MNTNNC
	VASQUEZ, HEATHER
12939	OCCUPANT UNKNOWN,
13159	VETERINARY PHARMACEUTICALS INC
13235	AUTOMOTIVE PERFORMANCE
13261	MAJESTIC MUSIC
13291	HUFFENBERGER RESTORATIONS
13331	OCCUPANT UNKNOWN,
13375	QUALITY MACHINERY CENTER
	TRI COUNTIES EQUIPMENT CO
13400	BELTON INDUSTRIES
	CENTRAL VALLEY WELDING
	KROY WEST INC
	THRESHER INDUSTRIES LLC
13405	MACIEL, JIM K
13488	AMERICAN TRAVELING SHOWS
	JR SELF STORAGE & RV
	REED, WILMA
13508	JR SELF STORAGE
13515	FANN, RUSSELL E
13520	COCHRAN, BRYAN
13529	SILVEIR, JOE M
	SILVEIRAS & FOUR SEASONS CNTN
	SILVEIRAS & FOUR SEASONS CONTINUOUS
13539	YATTY, MICHAEL M
13572	OCCUPANT UNKNOWN,
13704	AQUA AZUL
	AUDIO N VISION
	CANNERY INDUSTRIAL PARK
	GMT GAMES
13706	VITZ, JULIET
13738	J & D JOSHUAS TOWING

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 2005 (Cont'd)

13795 KOS, LEWIS
13824 DENIZ, DAVID M
13860 RAZO, PEREZ
13872 HILLMAN, L
13882 LEMOS, FAYE
13921 LONG, DEBRA K
13981 DANIELSON, W R
13993 DANIELSONS HARDWARE RENTALS SAW & MO
14514 LABANDEIRA, JANENE M
14552 BIVENS, RAY R
14570 MORALES, STEVEN L
14724 ROD CENTRAL VLY & RESTORATION
14940 OCCUPANT UNKNOWN,
14992 OCCUPANT UNKNOWN,

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 2000

1365	STUHAAN, EVERETT
1433	OCCUPANT UNKNOWN,
1605	OCCUPANT UNKNOWN,
1705	ARTS AUTO DIAGNOSTICS
2243	OCCUPANT UNKNOWN,
2511	BETTENCOURT, GIL
6025	CARDOZA, P
6160	CASPARY, SHERRY L
6236	LEAL, DANNY
6431	MILLS, GARY A
	TOSTE, MANUEL B
6433	OCCUPANT UNKNOWN,
6435	OCCUPANT UNKNOWN,
6585	OCCUPANT UNKNOWN,
6624	BORGES, CARLOS A
6672	CORREIA, JOHN M
6713	OCCUPANT UNKNOWN,
6714	OCCUPANT UNKNOWN,
6749	CLACHER, DAVID L
	D C ELECTRIC
6812	ELLIS, JOHN
6850	OCCUPANT UNKNOWN,
6894	GARZA, IGNACIO
6976	TAMEZ, RICARDO V
7140	LEWIS, JAMES
7184	COX, MARY J
7216	CORONADO, ANTONIO
7252	OCCUPANT UNKNOWN,
7257	SOSA, RAMIRO R
7479	OCCUPANT UNKNOWN,
7480	BAKER COMMODITIES INCORPORATED KINGS TULARE
	KINGS TULARE TALLOW DIVISION OF BAKER COMMODITIES INCORPORAT
	OCCUPANT UNKNOWN,
7761	SOUTH VALLEY MATERIALS INCORPORATED
7803	KINGS WASTE & RECYCLING AUTHORITY
	RECYCLING HOT LINE THE
7818	PEREIRRA, JOSEPH
8038	BENEDICT, DUANE W
8076	WILLIAMS, RAYMOND C
8211	OCCUPANT UNKNOWN,
8263	DANELL, CLAIRE L
8265	DANELL BROTHERS CUSTOM CHOPPING
	DANELL, CLAIRE L
8395	TEIXEIRA, JOSE L
8415	OCCUPANT UNKNOWN,
8471	MID VALLEY DIESEL TRUCK & TRAILER REPAIR
	PEREZ, A M
8945	LAKESIDE GOLF COURSE
	OCCUPANT UNKNOWN,
9102	OCCUPANT UNKNOWN,

HANFORD ARMONA RD 2000 (Cont'd)

9144 OCCUPANT UNKNOWN,
9184 OCCUPANT UNKNOWN,
9248 ARCHULETA, G
9365 HODGE, DELLA M
9443 OCCUPANT UNKNOWN,
9483 KINGS COUNTY ROOFING COMPANY
9513 OCCUPANT UNKNOWN,
9539 LOPEZ, GUS M
9615 OCCUPANT UNKNOWN,
9617 OCCUPANT UNKNOWN,
9619 MARTINEZ, F
9839 RHINO LININGS OF HANFORD HANFORD GOLD PLATING
9845 CENTRAL VALLEY COOPERATIVE
10355 IMMACULATE HEART OF MARY
10531 OCCUPANT UNKNOWN,
10556 BURKETT, MYRTLE L
10569 OCCUPANT UNKNOWN,
10595 MARTINEZ, HOPE
10623 DELACRUZ, STEVE
10626 OCCUPANT UNKNOWN,
10630 OCCUPANT UNKNOWN,
10632 OCCUPANT UNKNOWN,
10634 CASTANEDA, STELLA
10636 OCCUPANT UNKNOWN,
10700 SNOW COMMODITIES COMPANY INCORPORATED
10833 OCCUPANT UNKNOWN,
R N MARKET
10862 EDWARDS, ROY
10864 MINTER, JASON W
10866 OCCUPANT UNKNOWN,
10868 OCCUPANT UNKNOWN,
10870 MCCORD, DANIEL
10872 FREELAND, TERRY D
10874 HOWE, GLENDA F
10876 DUDLEY, WILLARD
10878 OCCUPANT UNKNOWN,
10882 OCCUPANT UNKNOWN,
10886 MILAM, HAZEL
10888 NELSON, JAMES I
10892 OLIVEIRA, GEORGE
10894 LINDSEY, GUY L
10898 WEISSER, MICHAEL
10900 SMITH, ROBERT L
10904 CHENEY, RICHARD D
10906 BETTENCOURT, LEONARD
10908 OCCUPANT UNKNOWN,
10910 ALVES, LAURA L
10914 ROBERTS, D
10915 K & D LIQUOR & FOOD
10918 OCCUPANT UNKNOWN,

HANFORD ARMONA RD 2000 (Cont'd)

10920 OCCUPANT UNKNOWN,
10922 DENISON, M L
WELLS, LORI
10924 WILLIAMS, OVAL B
10926 OCCUPANT UNKNOWN,
10930 BENNINGFIELD, JOHN H
10932 BOYCE, MARTHA L
10934 HARDIN, GUY
10936 OCCUPANT UNKNOWN,
10937 JAURIGUI, LEROY P
10938 OCCUPANT UNKNOWN,
10942 OCCUPANT UNKNOWN,
10946 MCHANEY, BILLY F
10948 RUTHERFORD, M M
10950 CHRISTENSEN, NADINE
10952 INGLE, DAVID W
10954 GRIFFITH, LORY
10956 MORTON, ALICE L
10958 KELLER, DONALD G
10960 STANLEY, FRANCES
10964 LEAL, VERNON M
NORTON, LUTHER R
STOUT, DIANA M
10966 ADAMS, HAZEL
10968 SULLIVAN, JUDY E
10970 TAYLOR, LEANNA
10974 OCCUPANT UNKNOWN,
10976 OCCUPANT UNKNOWN,
10986 GILLAM, PAUL
10998 BELAIR MOBILE HOME PARK
11120 OCCUPANT UNKNOWN,
11122 OCCUPANT UNKNOWN,
11132 SOLARIO, PAULINE H
11134 OCCUPANT UNKNOWN,
11151 NATALI, IRENE
11212 OCCUPANT UNKNOWN,
11274 CALVARY CHRISTIAN CENTER
11303 MARTINEZ, NANCY C
11306 OCCUPANT UNKNOWN,
11356 HAAS, WALTER
11386 OCCUPANT UNKNOWN,
11400 DELACRUZ, SHEILA
11402 MACEDO, WILLIAM E
11454 LONG, GALEN L
11464 AVALOS, LUIS
11474 SAIV, LEONEL
11526 CALIFORNIA ROOFING SERVICES
12186 HARRIS, MARTIE G
VILLALOBOS, MISTY M
12188 VALE, LIZETTE

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 2000 (Cont'd)

12190 BANEGAS, CHERYL
JOHNSON, MARY E
12192 REIL, FAITH A
12194 GONZALES, RENEE
MOZ, C
12200 SKINNER, EDITH
12202 VEIGA, E
12204 DESOTO, C
GAYTON, D
RANGEL, SYLVIA
ROGERS, REGINA
12206 BESOUGLOFF, DEANNA
CARTER, KIMYATA A
DELATORRE, ALICIA
DIAZ, C M
12208 MARTINEZ, DAMIAN
12358 SHOEMAKER, GERALD
12406 WINTERBERG, W L
12458 DOMINGUEZ, RUBEN
12536 STRAIN, LOIS
12589 BILLINGSLEY, SAMUEL E
12591 RUFO, BENIGNO O
12628 ORR, MISTI K
12629 OCCUPANT UNKNOWN,
12631 MITCHELL, HERBERT
12633 RODRIGUEZ, EULAILO
12645 DUTRA, HENRY J
12659 DUTRA, HENRY J
12744 TIRE CENTERS
12780 OCCUPANT UNKNOWN,
12782 BOWLES, C
CHRISTINES FLOWERS
12918 MORGAN & SLATES MANUFACTURING & SUPPLIES INCORPORATED RTL OU
12939 PACE, ELDON D
13159 DESJARDINS HAROLD VETERINARY PHARMACEUTICALS INCORPORATED
VETRNRY PHARMACEUTICALS INCORPORATED DRY MEDICINES ONLY
13265 AUTOMOTIVE PERFORMANCE
BROCK & LOVETT CONSTRUCTION
13291 HUFFENBERGER RESTORATIONS
13375 MACIEL JOHN TRI COUNTIES EQUIPMENT CO
TRI-COUNTIES EQUIPMENT CO
13400 ASC TUBING INCORPORATED
BELTON INDUSTRIES INCORPORATED
KROY WEST INCORPORATED
13405 MACIEL, JIM
13520 COCHRAN, BRYAN
13529 GONZALEZ, RICK E
13539 YATTY, MICHAEL M
13594 MITCHELLS AIR CONDITIONING & HEATING
13704 COLLINS AIR

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 2000 (Cont'd)

13704	G M T GAMES
13706	BORNEFELD, GROVER
13710	D & S CUSTOM CABINETS
13795	KOS, LEWIS
13818	DONEZ, JUAN
	HERNANDEZ, NORMA P
13882	OCCUPANT UNKNOWN,
13921	LUCERO, JESSICA
13935	OCCUPANT UNKNOWN,
13963	OCCUPANT UNKNOWN,
13981	DANIELSON, W R
14013	ARMONA UNITED METHODIST CHURCH
14341	ARMONA CENTRAL ASSEMBLY OF GOD
14514	CAMARA, EDWIN R
14552	BIVENS, RAY
14570	MORALES, STEVEN L
14602	BATES, WOODROW W
14992	MARVIN, RICHARD L
15279	KJOP 1240 AM REQUEST LINE

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 1995

1035	SEVENTH DAY ADVENTIST CHURCH
1150	KNEE, FRED M
1170	WATSON, ROGER
1365	STUHAAN, EVERETT
1433	VANDER, ALBERT
1705	EDS REFRIGERATOR SHOP
	U HAUL CO
2243	ANDRADA, LOUIS
2511	BETTENCOURT, GIL
5471	OCCUPANT UNKNOWNN
6160	DAVAL BUILDING MAINTENANCE
	MATTOS, ALFRED J
6233	OCCUPANT UNKNOWNN
6236	LEAL, DANNY
6255	CONDIE, HELEN R
6431	TOSTE, MANUEL B
6433	FRANCO, MANUEL
	GALLEGOS, JULIAN
6435	LIMA, FRANK P
6509	QUESADO, LINDA
6585	NORWOOD, DICK
6624	BORGES, CARLOS A
6672	CORREIA, JOHN M
6714	BARNETT, DOYLE H
6749	D C ELECTRIC
6750	OCCUPANT UNKNOWNN
6780	DELGADILLO, ADALINE
6812	ELLIS, JOHN
6850	MEYER, FRANK F
6894	GARZA, IGNACIO
7140	SUELTER, VIVIAN
7184	COX, W F
7216	OCCUPANT UNKNOWNN
7479	BETTENCOURT, JOHN
7480	BAKER COMMODITIES INC
	OCCUPANT UNKNOWNN
7761	CROOKSHANKS READY MIX
7818	PEREIRRA, JOSEPH
7875	KINGS COUNTY WASTE MANAGEMENT
	MITCHELL BROWN GENERAL ENGRNG
8076	HEWETT, ROGER
8211	BETTENCOURT, MANUEL A
8265	DANELL, BILL
8395	TEIXEIRA, JOE L
8415	TEIXEIRA, JOHN
8471	ALS DIESEL TRUCK & TRAILER
	OCCUPANT UNKNOWNN
9184	PRIETO, HAROLD
9248	MAGNIA, G
9365	HAIRPORT BARBER SHOP

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 1995 (Cont'd)

9365	LOPEZ, JOE R
9443	SATURNINO, JIMENEZ
9483	KINGS COUNTY ROOFING CO
9513	DURAN, JOHN A
9539	LOPEZ, GUS M
9615	SANCHEZ, ROBERT
9617	JUAREZ, RIOS J
9619	SANCHEZ, EVERARD
9845	CENTRAL VALLEY COOPERATIVE
10355	IMMACULATE HEART OF MARY
10443	GUERRA, JOSE I
10519	SANCHEZ, JESUS G
10556	OCCUPANT UNKNOWNN
10569	VIZCARRA, JULIO
10595	OCCUPANT UNKNOWNN
10623	DELA, STEVE
10626	CERVANTES, JESUS
10632	HERNANDEZ, R
10833	R N MARKET
10862	EDWARDS, ROY
10864	OCCUPANT UNKNOWNN
10868	OCCUPANT UNKNOWNN
10870	OCCUPANT UNKNOWNN
10876	DUDLEY, WILLARD
	HOANEY, EUNIA
10878	RITCHIE, BERNERD
10882	LICON, DIXIE
10886	KLIEVER, HERB
10890	SALINAS, TINA
10894	MASSEY, ELAINE M
10900	SMITH, ROBERT L
10902	STAGGS, JOHN
10904	ANDERSON, ALMA H
10906	BETTENCOURT, LEONARD
10908	AERNI, DALE
10914	ROBERTS, DOROTHE
10915	K & D LIQUOR & FOOD
10918	OCCUPANT UNKNOWNN
10920	SHAVER, HUGH C
10924	WILLIAMS, OVAL B
10930	BENNINGFIELD, JOHN H
10932	HILL, BOYD
10934	HARDIN, GUY
10937	JAUREQUI, GONZALE C
10938	OCCUPANT UNKNOWNN
10940	EVERSOLE, CHARLES
10942	OCCUPANT UNKNOWNN
10946	MCHANEY, BILL F
10948	RUTHERFORD, HOMER
10950	OCCUPANT UNKNOWNN

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 1995 (Cont'd)

10952 OCCUPANT UNKNOWNN
10954 OCCUPANT UNKNOWNN
10956 MORTON, STANLEY
10958 KELLER, DONALD G
10960 BURGESS, JAMES
10968 OCCUPANT UNKNOWNN
10974 OCCUPANT UNKNOWNN
10976 HUTSELL, IVEL O
10986 OCCUPANT UNKNOWNN
10988 OCCUPANT UNKNOWNN
10994 OCCUPANT UNKNOWNN
10996 MASSEY, JOE JR
10998 BELAIR MOBILE HOME PARK
11122 SILVA, RENE
11124 OCCUPANT UNKNOWNN
11130 OCCUPANT UNKNOWNN
11132 OCCUPANT UNKNOWNN
11134 OCCUPANT UNKNOWNN
11136 SANDERSON, H M
11151 NATALI, ANGELO
11274 CALVARY CHRISTIAN CTR
11306 OCCUPANT UNKNOWNN
11356 OCCUPANT UNKNOWNN
11402 MACEDO, WILLIAM E
11464 AVALOS, LOUIS
11474 TORRES, JESUS
12246 DOMINGUEZ, RUBEN
12358 SCHUMACHER, GERALD
SHOEMAKER, GERALD
12406 WINTERBERG, W L
12458 FLOODMAN, JOHN A
12589 BILLINGSLEY, SAMUEL E
12628 BARLOW, MARK
12631 MITCHELL, HERBERT
12633 RODRIGUEZ, EULALIO
12918 LEROY MORGAN
12939 AVILA, ROSEMAY
13035 OCCUPANT UNKNOWNN
13101 OCCUPANT UNKNOWNN
13159 DESJARDINS, SHANE
VET PHARMACEUTICALS INC
13291 DAVES UPHOLSTERY
13375 TRI COUNTIES EQUIPMENT CO
13400 ASC TUBING INC
RAYS APPAREL
13405 MACIEL, JIM
13520 COCHRAN, BRYAN
13529 GONZALEZ, RICK E
13704 DAWSON WOODWORKS
DAWSON, WOODWOR

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 1995 (Cont'd)

13795 KOS, LEWIS
13963 OCCUPANT UNKNOWNN
13981 DANIELSON, W R
14514 ANTHONYS CARPET & UPHOLSTERY
14700 LEMOORE BODY WORKS

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 1992

1150 KNEE, FRED M
1170 WATSON, ROGER
1433 VANDERGRAAF, ALBERT
2243 ANDRADA, LOUIS
2511 BETTENCOURT, GIL
6160 DAVAL BUILDING MNTC
MATTOS, ALFRED J
6431 TOSTE, MANUEL B
6435 LIMA, FRANK P
6585 NORWOOD, DICK
6624 BORGES, CARLOS A
6672 CORREIA, JOHN M
6714 BARNETT, DOYLE H
6749 D C ELECTRIC
6812 ELLIS, JOHN
6850 MEYER, FRANK F
7184 COX, W F
7479 BETTENCOURT, JOHN
7480 BAKER COMDTYS KINGS
KINGS TULARE TALLOW
7761 CROOKSHANKS RDY MIX
7818 PEREIRRA, JOSEPH
7875 BROWN M GENL ENGRG
KINGS CO SOLID WST
8076 HEWIETT, ROGER
8265 DANELL BROS CHOPPNG
DANELL, BILL
8395 TEIXEIRA, JOE L
8471 ALS DIESEL TRCK RPR
9184 PRIETO, HAROLD
9365 HAIRPORT BARBER SHP
LOPEZ, JOE R
9443 JIMENEZ ROSA RADIO
SATURNINO, JIMENEZ
9483 KINGS CO IRRIGATION
9513 DURAN, JOHN A
9539 LOPEZ, GUS M
9615 SANCHEZ, ROBERT
9619 JUAREZ, BULMARO
9839 T&G TRUCKING
VERNONS TRUCK RPR
9845 CENTRL VLY COOPERTV
9865 ARTISTIC VISIONS
10355 IMMACULT HEART MARY
10443 GUERRA, JOSE I
10519 SANCHEZ, JESUS G
10569 VIZCARRA, JULIO
10595 VARGAS, MARIA
10623 DELACRUZ, STEVE
10700 SNOW COMMODITIES CO

Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 1992 (Cont'd)

10833 R N MARKET
10862 EDWARDS, ROY
10864 STONE, HARLIN
10868 WILLETT, ARMAND J
10870 SNOWDER, L J
10876 DUDLEY, WILLARD
HOANEY, EUNIA
10878 RITCHIE, BERNERD
10882 LICON, DIXIE
10886 KLIEVER, HERB
10894 MASSEY, ELAINE M
10900 HUDSON, MYRTIE M
10902 JOHNSON, ROYAL A
10906 BETTENCOURT, LEONARD
10908 ARNOLD, DIRK
10914 ROBERTS, D
10915 R&D LIQUOR&FOOD
10916 TINDELL, JOE
10918 SILVA, TONY R
10922 DENISON, AMBUS
10924 WILLIAMS, OVAL B
10930 KIRBY, O
10932 HILL, BOYD
10934 HARDIN, GUY
10942 HANDLEY, J B
10948 RUTHERFORD, HOMER
10968 PHILLIPS, LALA
10976 HUTSELL, IVEL O
10982 TANNER, EMORY
10996 THORNSBERRY, CLARK
10998 BELAIR MOBILE HM PK
11132 WONG, KWONG H
11151 NATALI, ANGELO
11274 CALVARY CHRSTN CNTR
11356 HAAS, WALTER
11402 MACEDO, WILLIAM E
11464 AVALOS, LOUIS
11474 TORRES, JESUS
11540 PURDY, NEAL
12246 DOMINGUEZ, RUBEN
12358 SHOEMAKER, GERALD
12406 SILKWOOD, FRANK
WINTERBERG, W L
12458 FLOODMAN, JOHN A
12589 BILLINGSLEY, SAMUEL E
12631 MITCHELL, HERBERT
12633 RODRIGUEZ, EULALIO
SUICIDE MTRCYCL RPR
12778 VERBURG BROTHERS
13101 VANDERLAS, H R

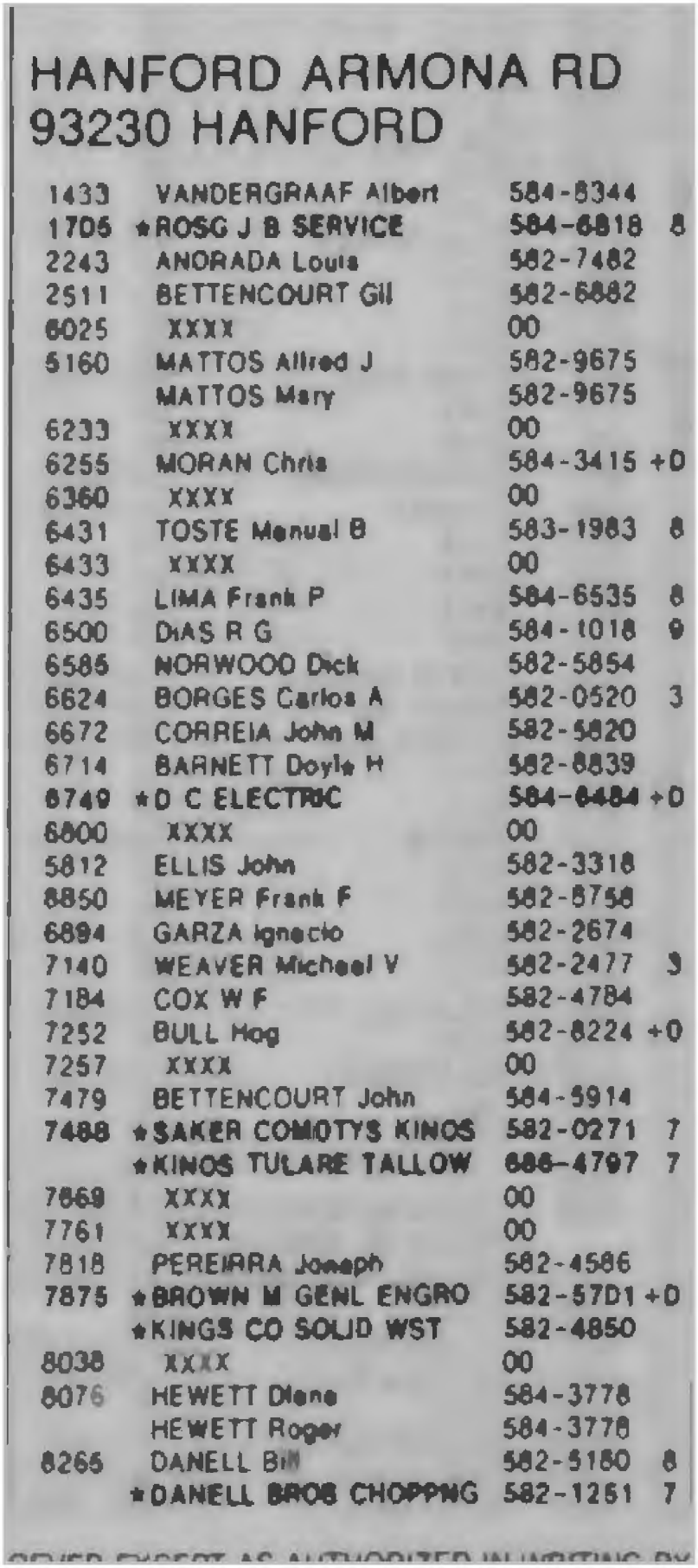
Target Street	Cross Street	Source
✓	-	Cole Information

HANFORD ARMONA RD 1992 (Cont'd)

13159 DESJARDINS HAROLD
DESJARDINS, HAROLD
13331 LEMOORE CHRSTN CNTR
13375 TRI COUNTIES EQUIP
13400 A S C TUBING INC
BELTON INDUSTRY INC
PRIVATE LABEL
13405 MACIEL, JIM
13520 COCHRAN, BRYAN
13529 GONZALEZ, RICK E
13576 RAMOS, DANNY
13704 DAWSON WOODWORKS
13712 AG COVERS INC
13914 SOUTH VLY AMBULANCE
13963 ADAMS, GEORGE H
13981 DANIELSON, W R
13993 DANIELSONS HARDWARE
14041 ARMONA UN METHODIST
14118 COMBS, ALLEN
14223 BARBOZ, M
14341 ARMONA ASSEMBLY GOD
14352 DIBBLE, DOUGLAS D
14552 SANSOM, HAROLD
14700 LEMOORE BODY WORKS
14724 HOUSE OF PLANTS
14992 MARVIN, RICHARD L

Target Street	Cross Street	Source
✔	-	Haines Criss-Cross Directory

HANFORD ARMONA RD 1990

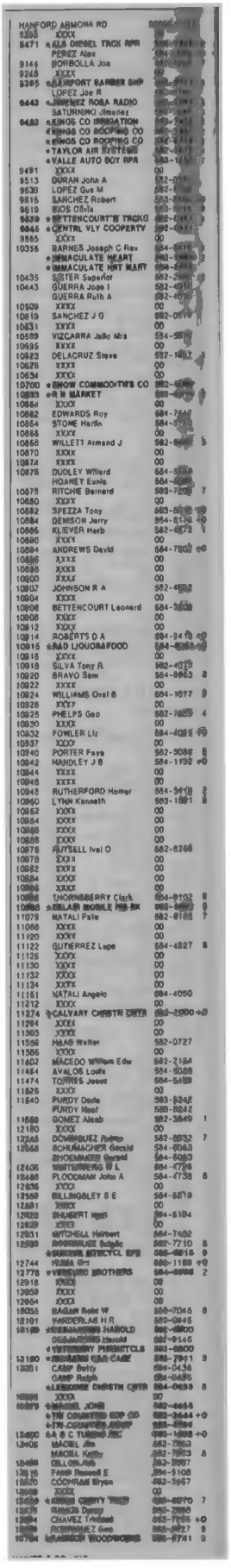


HANFORD ARMONA RD
93230 HANFORD

1433	VANDERGRAAF Albert	584-8344	
1705	★ROSG J B SERVICE	584-6818	8
2243	ANORADA Louis	582-7482	
2511	BETTENCOURT Gil	582-6882	
6025	XXXX	00	
5160	MATTOS Alfred J	582-9675	
	MATTOS Mary	582-9675	
6233	XXXX	00	
6255	MORAN Chris	584-3415	+D
6360	XXXX	00	
6431	TOSTE Manual B	583-1983	8
6433	XXXX	00	
6435	LIMA Frank P	584-6535	8
6500	DIAS R G	584-1018	9
6585	NORWOOD Dick	582-5854	
6624	BORGES Carlos A	582-0520	3
6672	CORREIA John M	582-5820	
6714	BARNETT Doyle H	582-8839	
6749	★D C ELECTRIC	584-6484	+D
6800	XXXX	00	
5812	ELLIS John	582-3318	
6850	MEYER Frank F	582-8758	
6894	GARZA Ignacio	582-2674	
7140	WEAVER Michael V	582-2477	3
7184	COX W F	582-4784	
7252	BULL Hog	582-8224	+D
7257	XXXX	00	
7479	BETTENCOURT John	584-5914	
7488	★SAKER COMOTYS KINGS	582-0271	7
	★KINGS TULARE TALLOW	686-4797	7
7669	XXXX	00	
7761	XXXX	00	
7818	PEREIRRA Joseph	582-4586	
7875	★BROWN M GENL ENGRO	582-5701	+D
	★KINGS CO SOLID WST	582-4850	
8038	XXXX	00	
8076	HEWETT Diane	584-3778	
	HEWETT Roger	584-3778	
8265	DANELL Bill	582-5180	8
	★DANELL BROS CHOPPNG	582-1251	7

Target Street	Cross Street	Source
✔	-	Haines Criss-Cross Directory

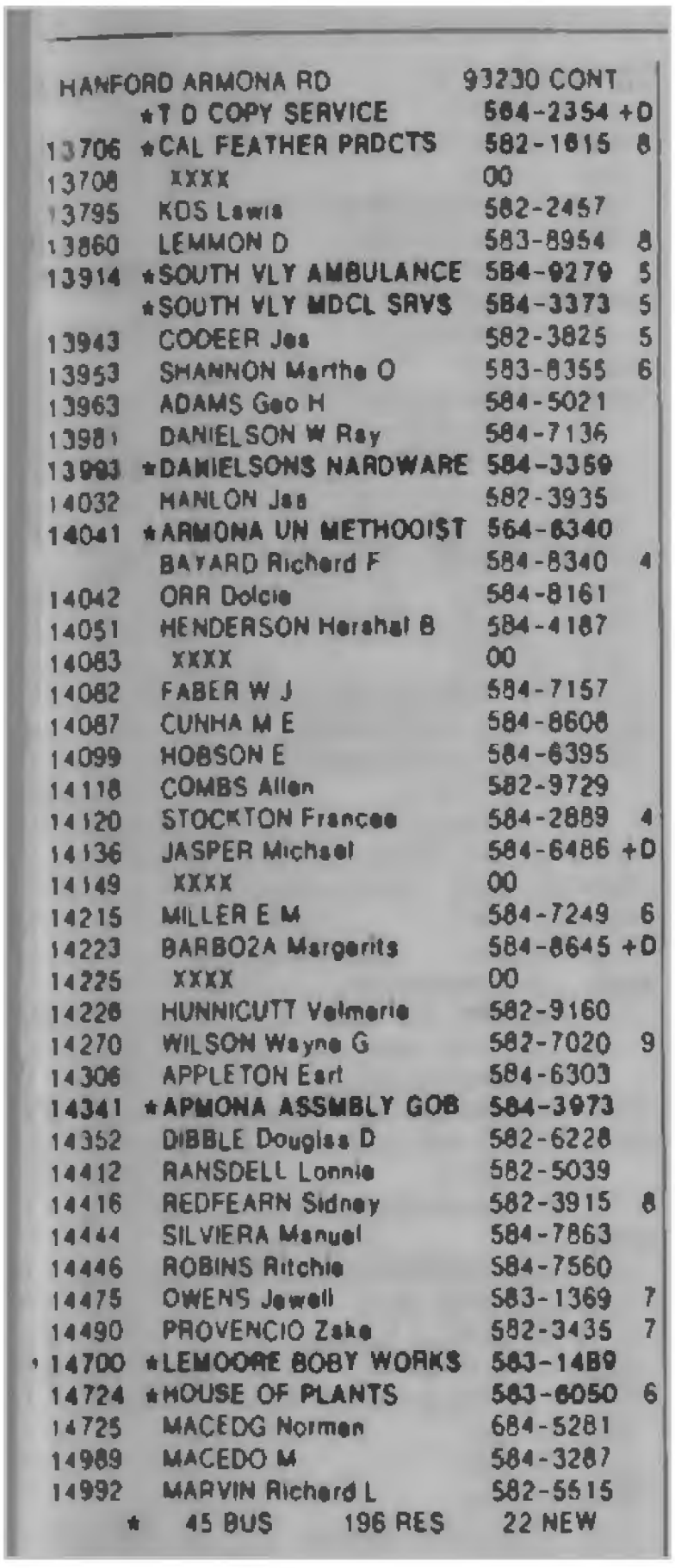
HANFORD ARMONA RD 1990



HANFORD ARMONA RD
8383 XXXX
8471 ★ALS DIESEL TRCK RPR
PEREZ Alex
9144 BORBOLLA Joe
9248 XXXX
9395 ★AIRPORT BARBER SHP
LOPEZ Joe R
9443 ★JIMENEZ ROSA RADIO
SATURNINO Jimenez
9483 ★KINGS CO IRRIGATION
★KINGS CO ROOFING CO
★KINGS CO ROOFING CO
★TAYLOR AIR SYSTEMS
★VALLE AUTO BOY RPR
9491 XXXX
9513 DURAN John A
9639 LOPEZ Gus M
9815 SANCHEZ Robert
9819 RIOS Olivia
9839 ★BETTENCOURT M TRCKG
9845 ★CENTRL VLY COOPERTV
9865 XXXX
10355 BARNES Joseph C Rev
★IMMACULATE HEART
★IMMACULATE HRT MARY
10435 SISTER Superior
10443 GUERRA Jose I
GUERRA Ruth A
10509 XXXX
10519 SANCHEZ J G
10531 XXXX
10589 VIZCARRA Jello Mrs
10595 XXXX
10623 DELACRUZ Steve
10628 XXXX
10634 XXXX
10700 ★SNOW COMMODITIES CO
10833 ★A N MARKET
10854 XXXX
10862 EDWARDS Roy
10864 STONE Hartin
10868 XXXX
10868 WILLETT Armand J
10870 XXXX
10874 XXXX
10876 DUDLEY Willard
HOANEY Eunie
10875 RITCHIE Bernard
10880 XXXX
10882 SPEZZA Tony
10884 DENISON Jerry
10886 KLEVER Herb
10890 XXXX
10894 ANDREWS David
10896 XXXX
10898 XXXX
10900 XXXX
10902 JOHNSON R A
10904 XXXX
10906 BETTENCOURT Leonard
10908 XXXX
10912 XXXX
10914 ROBERTS D A
10916 ★R&D LIQUOR&FOOD
10916 XXXX
10918 SILVA Tony R
10920 BRAVO Sam
10922 XXXX
10924 WILLIAMS Orel B
10926 XXXX
10928 PHELPS Geo
10930 XXXX
10932 FOWLER Liz
10937 XXXX
10940 PORTER Faye
10942 HANDLEY J B
10944 XXXX
10946 XXXX
10948 RUTHERFORD Homer
10950 LYNN Kenneth
10952 XXXX
10954 XXXX
10956 XXXX
10958 XXXX
10976 RUTSELL Ival O
10978 XXXX
10982 XXXX
10984 XXXX
10986 XXXX
10988 THORNBERRY Clark
10994 ★DELANO MOBILE HM PK
11078 NATALI Pete
11088 XXXX
11120 XXXX
11122 GUTIERREZ Lupe
11126 XXXX
11130 XXXX
11132 XXXX
11134 XXXX
11161 NATALI Angelo
11212 XXXX
11274 ★CALVARY CHRSTN CNTR
11294 XXXX
11303 XXXX
11356 HAAS Walter
11366 XXXX
11402 MACEDO William Edw
11484 AVALOS Louis
11474 TORRES Jesse
11526 XXXX
11540 PURDY Dale
PURDY Noel
11568 GOMEZ Alash
12180 XXXX
12248 DOMINGUEZ Pedro
12266 SCHUMACHER Gerald
SHOEMAKER Gerald
12405 WIETSBERG W L
12446 PLOODMAN John A
12636 XXXX
12648 GILLINGSLEY S E
12661 XXXX
12668 SHUBERT Hans
12629 XXXX
12631 MITCHELL Herbert
12699 ★SUNRISE STRETCH SPA
12744 PRIMA Gro
12778 ★VINEYARD BROTHERS
12918 XXXX
12959 XXXX
12964 XXXX
18035 BAGAN Robt W
18101 HARDERLAS H R
18169 ★DESMARAIS HAROLD
DESMARAIS Harold
★VETERINARY PRIMETCLS
13180 ★SHARMA KAR CARE
13351 CAMP Betty
CAMP Ralph
★LEBANON CHRSTN CNTR
XXXX
★MAGEL JOHN
★TRI COUNTIES EMP CU
★TRI COUNTIES CREDIT
13400 SA & C TURKEY INC
13405 MAGEL Jim
MAGEL Kathy
GILLORLAN
13515 Frank Russell E
13520 COCHRAN Bryan
XXXX
★ARMONA COUNTY TREE
13575 GARCIA Danny
13584 CHAVEZ Thelma
PERNIMMEZ Geo
★HARMON WOODWORKS

Target Street	Cross Street	Source
✔	-	Haines Criss-Cross Directory

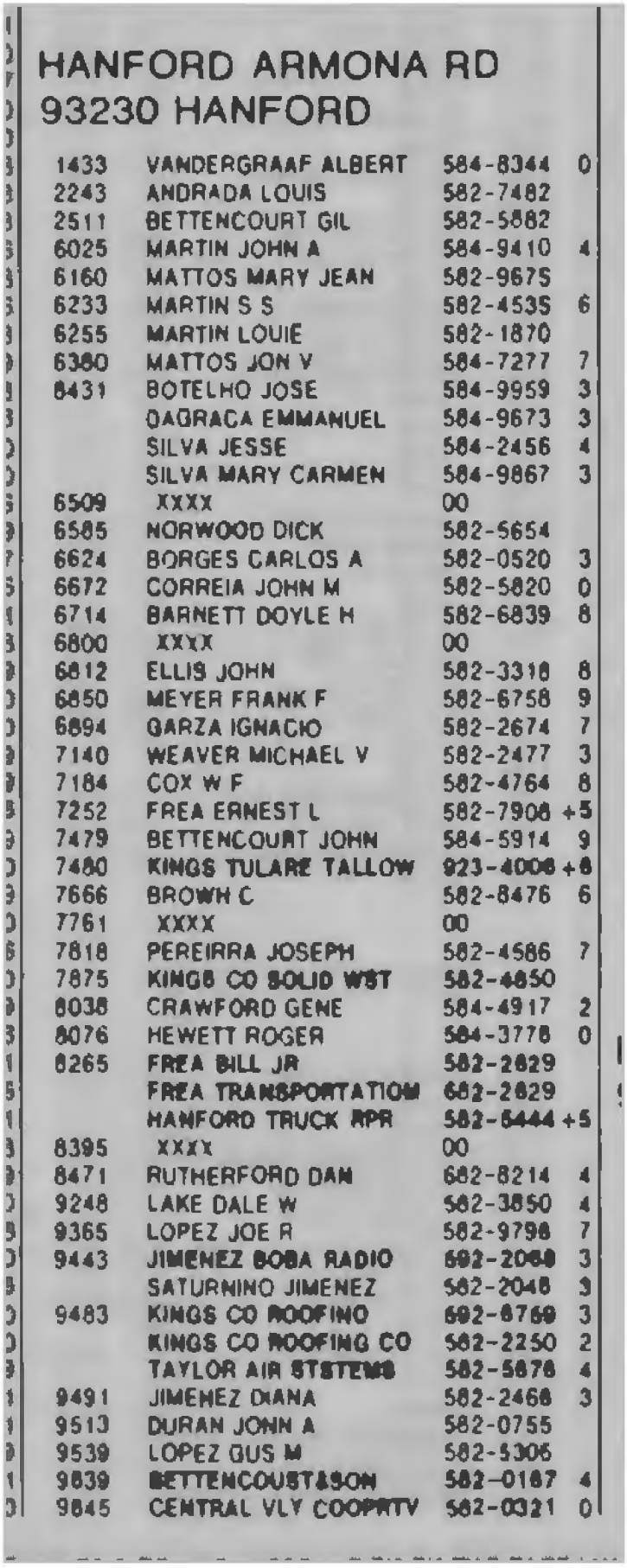
HANFORD ARMONA RD 1990



HANFORD ARMONA RD		93230 CONT	
	*T D COPY SERVICE	584-2354	+D
13706	*CAL FEATHER PRDCTS	582-1615	8
13708	XXXX	00	
13795	KOS Lewis	582-2457	
13860	LEMMON D	583-8954	8
13914	*SOUTH VLY AMBULANCE	584-9279	5
	*SOUTH VLY MDCL SRVS	584-3373	5
13943	COOEER Jas	582-3825	5
13953	SHANNON Martha O	583-8355	6
13963	ADAMS Geo H	584-5021	
13981	DANIELSON W Ray	584-7136	
13983	*DANIELSONS HARDWARE	584-3359	
14032	HANLON Jas	582-3935	
14041	*ARMONA UN METHODIST	564-6340	
	BAYARD Richard F	584-8340	4
14042	ORR Dolcie	584-8161	
14051	HENDERSON Hershal B	584-4187	
14083	XXXX	00	
14082	FABER W J	584-7157	
14087	CUNHA M E	584-8608	
14099	HOBSON E	584-6395	
14118	COMBS Allen	582-9729	
14120	STOCKTON Frances	584-2889	4
14136	JASPER Michael	584-6486	+D
14149	XXXX	00	
14215	MILLER E M	584-7249	6
14223	BARBOZA Margerita	584-8645	+D
14225	XXXX	00	
14226	HUNNICUTT Velmerie	582-9160	
14270	WILSON Wayne G	582-7020	9
14306	APPLETON Earl	584-6303	
14341	*APMONA ASSMBLY GOD	584-3973	
14352	DIBBLE Douglas D	582-6228	
14412	RANSDELL Lonnie	582-5039	
14416	REDFEARN Sidney	582-3915	8
14444	SILVIERA Manuel	584-7863	
14446	ROBINS Ritchie	584-7560	
14475	OWENS Jewell	583-1369	7
14490	PROVENCIO Zeke	582-3435	7
14700	*LEMOORE BOBY WORKS	583-1489	
14724	*HOUSE OF PLANTS	583-6050	6
14725	MACEDO Norman	684-5281	
14989	MACEDO M	584-3287	
14992	MARVIN Richard L	582-5515	
	* 45 BUS	196 RES	22 NEW

Target Street	Cross Street	Source
✔	-	Haines Criss-Cross Directory

HANFORD ARMONA RD 1985

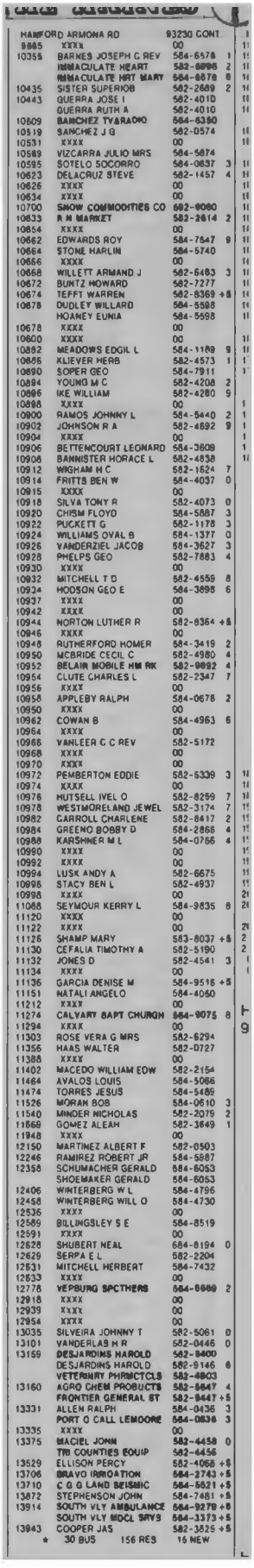


HANFORD ARMONA RD
93230 HANFORD

1433	VANDERGRAAF ALBERT	584-8344	0
2243	ANDRADA LOUIS	582-7482	
2511	BETTENCOURT GIL	582-5882	
6025	MARTIN JOHN A	584-9410	4
6160	MATTOS MARY JEAN	582-9675	
6233	MARTIN S S	582-4535	6
6255	MARTIN LOUIE	582-1870	
6380	MATTOS JON V	584-7277	7
6431	BOTELHO JOSE	584-9959	3
	DAGRACA EMMANUEL	584-9673	3
	SILVA JESSE	584-2456	4
	SILVA MARY CARMEN	584-9867	3
6509	XXXX	00	
6585	NORWOOD DICK	582-5654	
6624	BORGES CARLOS A	582-0520	3
6672	CORREIA JOHN M	582-5820	0
6714	BARNETT DOYLE H	582-6839	8
6800	XXXX	00	
6812	ELLIS JOHN	582-3318	8
6850	MEYER FRANK F	582-6758	9
6894	GARZA IGNACIO	582-2674	7
7140	WEAVER MICHAEL V	582-2477	3
7184	COX W F	582-4764	8
7252	FREA ERNEST L	582-7908	+5
7479	BETTENCOURT JOHN	584-5914	9
7480	KINGS TULARE TALLOW	923-4006	+8
7666	BROWN C	582-8476	6
7761	XXXX	00	
7818	PEREIRRA JOSEPH	582-4586	7
7875	KINGS CO SOLID WST	582-4850	
8038	CRAWFORD GENE	584-4917	2
8076	HEWETT ROGER	584-3778	0
8265	FREA BILL JR	582-2829	
	FREA TRANSPORTATION	582-2829	
	HANFORD TRUCK RPR	582-5444	+5
8395	XXXX	00	
8471	RUTHERFORD DAN	582-8214	4
9248	LAKE DALE W	582-3850	4
9365	LOPEZ JOE R	582-9798	7
9443	JIMENEZ BOBA RADIO	582-2068	3
	SATURNINO JIMENEZ	582-2048	3
9483	KINGS CO ROOFING	582-8769	3
	KINGS CO ROOFING CO	582-2250	2
	TAYLOR AIR STSTEMS	582-5878	4
9491	JIMENEZ DIANA	582-2468	3
9513	DURAN JOHN A	582-0755	
9539	LOPEZ GUS M	582-5306	
9839	BETTENCOUST&SON	582-0187	4
9845	CENTRAL VLY COOPRTV	582-0321	0

Target Street	Cross Street	Source
✔	-	Haines Criss-Cross Directory

HANFORD ARMONA RD 1985



HANFORD ARMONA RD	93230 CONT	
9865 XXXX	00	
10355 BARNES JOSEPH C REV	584-6578	1
IMMACULATE HEART	582-8896	2
IMMACULATE HRT MARY	584-8878	8
10435 SISTER SUPERIOR	582-2689	2
10443 GUERRA JOSE I	582-4010	
GUERRA RUTH A	582-4010	
10509 SANCHEZ TV&RADIO	584-6380	
10519 SANCHEZ J G	582-0574	
10531 XXXX	00	
10569 VIZCARRA JULIO MRS	584-5874	
10595 SOTELO SOCORRO	584-0637	3
10623 DELACRUZ STEVE	582-1457	4
10626 XXXX	00	
10634 XXXX	00	
10700 SNOW COMMODITIES CO	582-9080	
10833 R N MARKET	582-2814	2
10854 XXXX	00	
10862 EDWARDS ROY	584-7547	9
10864 STONE HARLIN	584-5740	
10866 XXXX	00	
10868 WILLETT ARMAND J	582-6483	3
10872 BUNTZ HOWARD	582-7277	
10874 TEFFT WARREN	582-8369	+8
10878 DUDLEY WILLARD	584-5598	
HOANEY EUNIA	584-5598	
10878 XXXX	00	
10880 XXXX	00	
10882 MEADOWS EDGIL L	584-1189	9
10886 KLIEVER HERB	582-4573	1
10890 SOPER GEO	584-7911	
10894 YOUNG M C	582-4208	2
10896 IKE WILLIAM	582-4280	9
10898 XXXX	00	
10900 RAMOS JOHNNY L	584-5440	2
10902 JOHNSON R A	582-4692	9
10904 XXXX	00	
10906 BETTENCOURT LEONARD	584-3608	
10908 BANNISTER HORACE L	582-4838	
10912 WIGHAM H C	582-1624	7
10914 FRITTS BEN W	584-4037	0
10915 XXXX	00	
10918 SILVA TONY R	582-4073	0
10920 CHISM FLOYD	584-5887	3
10922 PUCKETT G	582-1178	3
10924 WILLIAMS OVAL B	584-1377	0
10926 VANDERZIEL JACOB	584-3627	3
10928 PHELPS GEO	582-7883	4
10930 XXXX	00	
10932 MITCHELL T D	582-4559	8
10934 HODSON GEO E	584-3898	6
10937 XXXX	00	
10942 XXXX	00	
10944 NORTON LUTHER R	582-8364	+8
10946 XXXX	00	
10948 RUTHERFORD HOMER	584-3419	2
10950 MCBRIDE CECIL C	582-4980	4
10952 BELAIR MOBILE HM PK	582-9892	4
10954 CLUTE CHARLES L	582-2347	7
10956 XXXX	00	
10958 APPLEBY RALPH	584-0678	2
10950 XXXX	00	
10962 COWAN B	584-4963	6
10964 XXXX	00	
10966 VANLEER C C REV	582-5172	
10968 XXXX	00	
10970 XXXX	00	
10972 PEMBERTON EDDIE	582-5339	3
10974 XXXX	00	
10976 MUTSELL IVEL O	582-8259	7
10978 WESTMORELAND JEWEL	582-3174	7
10982 GARROLL CHARLENE	582-8417	2
10984 GREENO BOBBY D	584-2868	4
10988 KARSHNER M L	584-0756	4
10990 XXXX	00	
10992 XXXX	00	
10994 LUSK ANDY A	582-6675	
10996 STACY BEN L	582-4937	
10998 XXXX	00	
11088 SEYMOUR KERRY L	584-9835	8
11120 XXXX	00	
11122 XXXX	00	
11126 SHAMP MARY	583-8037	+8
11130 CEFALIA TIMOTHY A	582-5190	
11132 JONES D	582-4541	3
11134 XXXX	00	
11136 GARCIA DENISE M	584-9516	+8
11151 NATALI ANGELO	584-4050	
11212 XXXX	00	
11274 CALVARY BAPT CHURCH	584-9075	8
11294 XXXX	00	
11303 ROSE VERA G MRS	582-6294	
11356 HAAS WALTER	582-0727	
11388 XXXX	00	
11402 MACEDO WILLIAM EDW	582-2154	
11464 AVALOS LOUIS	584-5066	
11474 TORRES JESUS	584-5489	
11526 MORAN BOB	584-0610	3
11540 MINDER NICHOLAS	582-2079	2
11668 GOMEZ ALEAH	582-3849	1
11948 XXXX	00	
12150 MARTINEZ ALBERT F	582-0503	
12246 RAMIREZ ROBERT JR	584-5887	
12358 SCHUMACHER GERALD	584-6053	
SHOEMAKER GERALD	584-6053	
12406 WINTERBERG W L	584-4796	
12458 WINTERBERG WILL O	584-4730	
12536 XXXX	00	
12589 BILLINGSLEY S E	584-8519	
12591 XXXX	00	
12628 SHUBERT NEAL	584-8194	0
12629 SERPA E L	582-2204	
12631 MITCHELL HERBERT	584-7432	
12633 XXXX	00	
12778 VEPSURG SPCTHERS	584-8889	2
12918 XXXX	00	
12939 XXXX	00	
12954 XXXX	00	
13035 SILVEIRA JOHNNY T	582-5061	0
13101 VANDERLAS H R	582-0446	0
13159 DESJARDINS HAROLD	582-8400	
DESJARDINS HAROLD	582-9146	8
VETERINRY PHRMCTCLS	582-4803	
13160 AGRO CHEM PRODUCTS	582-8647	4
FRONTIER GENERAL ST	582-8447	+8
13331 ALLEN RALPH	584-0436	3
PORT O CALL LEMOORE	584-0836	3
13335 XXXX	00	
13375 MACIEL JOHN	582-4458	0
TRI COUNTIES EQUIP	582-4456	
13529 ELLISON PERCY	582-4065	+8
13706 BRAVO IRRIGATION	584-2743	+8
13710 C G G LAND SEISMIC	584-5521	+8
13872 STEPHENSON JOHN	584-7481	+8
13914 SOUTH VLY AMBULANCE	584-9279	+8
SOUTH VLY MDCL SRVS	584-3373	+8
13943 COOPER JAS	582-3525	+8
* 30 BUS 156 RES	15 NEW	

Target Street	Cross Street	Source
✔	-	Haines Criss-Cross Directory

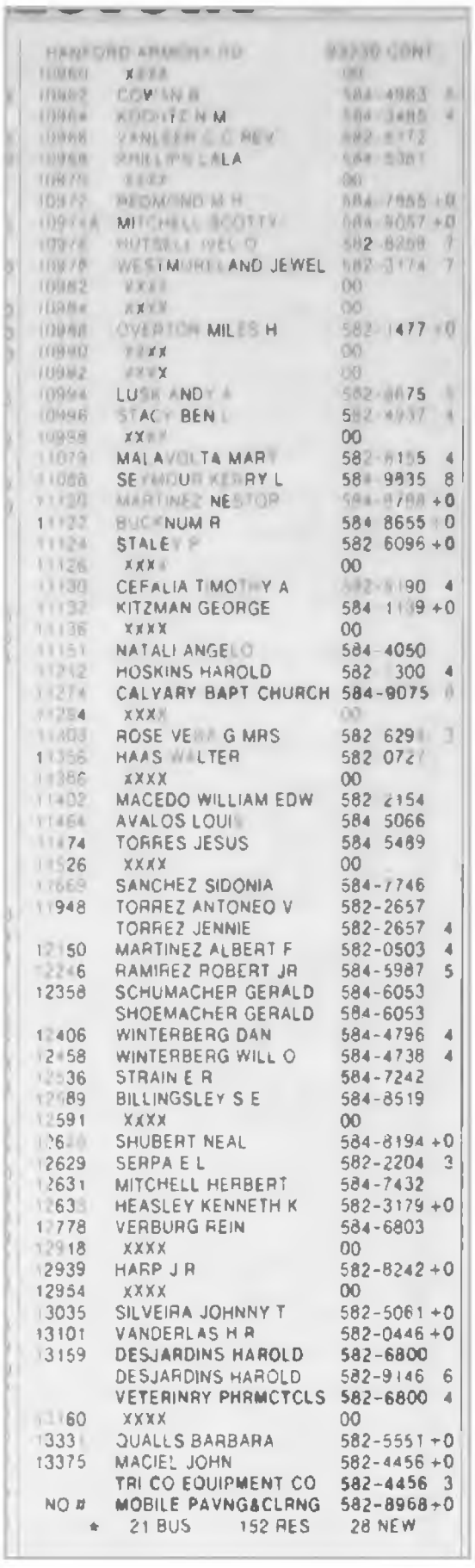
HANFORD ARMONA RD 1980

HANFORD ARMONA RD
93230 HANFORD

1365	XXXX	00	
1433	VANDERGRAAF ALBERT	584-8344	+0
2243	ANDRADA LOUIS	582-7482	4
2511	BETTENCOURT GIL	582-5882	4
6160	MATTOS MARY JEAN	582-9675	
6233	MARTIN S S	582-4535	6
6255	MARTIN LOUIE	582-1870	5
6380	MATTOS JON V	584-7277	7
6431	GONZALES MANUEL	584-4343	8
	SILVA JESSE	584-6967	9
6509	XXXX	00	
6585	NORWOOD DICK	582-5654	4
6624	DANELL KELLY	582-6627	7
6672	CORREIA JOHN M	582-5820	+0
6714	BARNETT DOYLE H	582-8839	8
6812	ELLIS JOHN	582-3318	8
6850	MEYER FRANK F	582-6758	9
6894	GARZA IGNACIO	582-2674	7
7184	COX W F	582-4764	8
7252	XXXX	00	
7257	SOSA ROSALINDA	582-8007	8
7479	BETTENCOURT JOHN	584-5914	9
7480	KARST DENNIS R	584-9953	+0
	KINGS TULARE TALLOW	686-4797	7
	KINGS TULARE TALLOW	582-0271	6
	KINGS TULARE TALLOW	923-4908	6
7666	BROWN C	582-8476	6
7761	BROWN MARY MISS	584-6752	
7818	PEREIRRA JOSEPH	582-4586	7
7875	KINGS CO OF WASTE	582-4850	5
8038	XXXX	00	
8076	HEWETT ROGER	584-3778	+0
8265	FREA BILL JR	582-2629	
	FREA TRANSPORTATION	582-2629	7
	FREA TRANSPORTATION	686-0007	6
8395	HOMAN ALBERT	582-0647	
9248	XXXX	00	
9365	LOPEZ JOE R	582-9796	7
9443	JIMENEZ ROSA MARIA	582-2048	
	JIMENEZ SATURNINO	582-2048	
9483	KINGS CO ROOFING CO	582-2250	
	KINGS COUNTY ROOFNG	582-8759	+0
9491	ABBOTT RICK	582-8285	8
9513	DURAN JOHN A	582-0755	
9539	LOPEZ GUS M	582-5306	
9845	C V C CNTRL GINNING	582-0321	+0
	COTTON GINNING DEPT	582-0321	+0
9865	XXXX	00	
10355	IMMACULATE HRT MARY	584-8576	6
	IMMACULATE HRT MARY	582-9998	5
10435	SISTER SUPERIOR	582-2689	
10443	GUERRA JOSE I	582-4010	8
	GUERRA RUTH A	582-4010	8
10509	SANCHEZ TV&RADIO	584-8350	
10519	SANCHEZ J G	582-0574	
10569	VIZCARRA JULIO MRS	584-5874	
10700	SNOW COMMODITIES CO	582-9086	5
10854	PEREZ RICHARD A JR	582-6093	+0
10862	EDWARDS ROY	584-7547	9
10864	STONE HARLIN	584-5740	5
10868	NORTON LUTHER R	582-7623	9
10872	BUNTZ HOWARD	582-7277	
10874	SILVA G M	584-5963	7
10876	DUDLEY WILLARD	584-5598	3
	HOANEY EUNIA	584-5598	
10878	THOMAS E	584-6004	7
10880	XXXX	00	
10882	MEADOWS EDGIL L	584-1189	9
10886	XXXX	00	
10890	SOPER GEO	584-7911	3
10894	PRESLEY K L	584-3656	6
10896	IKE WILLIAM	582-4280	9
10898	CARVITTO SHERRY	584-9342	+0
	VIGARIO PEANUTS	584-9042	9
10900	COLVERT C	584-8740	9
10902	JOHNSON R A	582-4692	9
10904	ANDERSON A H	584-7086	7
10906	BETTENCOURT L	584-3609	3
10908	BANNISTER HORACE L	582-4838	
10912	WIGHAM H C	582-1624	7
10914	FRITTS BEN W	584-4037	+0
10915	XXXX	00	
10918	SILVA TONY R	582-4073	+0
10920	WAITE RAY	584-5034	
10922	HARSCHER I	582-6944	4
10924	WILLIAMS OVAL B	584-1377	+0
10926	YOUNG D M	582-2833	
10928	REEDY MAMIE	584-5330	5
10930	GREEN OPAL M	584-7301	
10932	MITCHELL T D	582-4553	6
10934	HODSON GEORGE E	584-3695	6
10937	BRATTON RAS	584-2713	8
10938	RUTLEDGE ALICE L	582-4040	
10940	XXXX	00	
10942	BARRETT ILAND	584-4609	6

Target Street	Cross Street	Source
✔	-	Haines Criss-Cross Directory

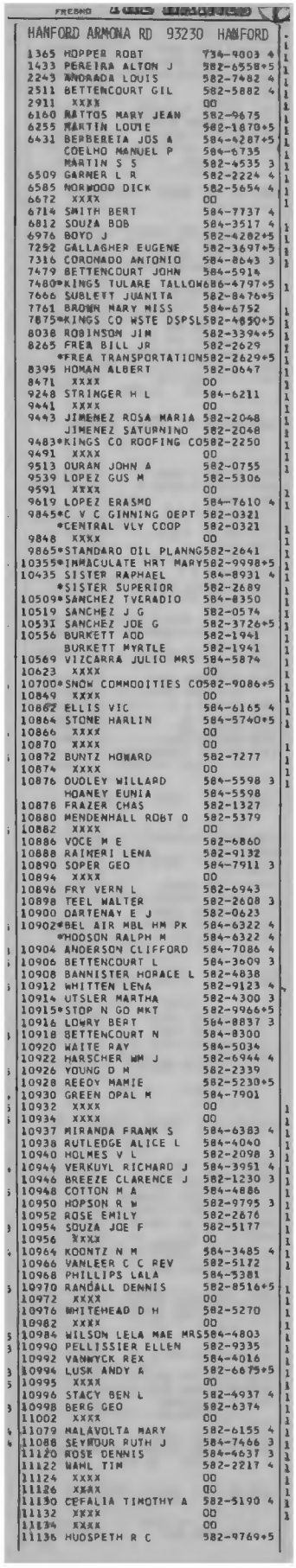
HANFORD ARMONA RD 1980



HANFORD ARMONA RD		93230 CONT	
[illegible]	XXXX	00	
[illegible]	COWAN B	584-4983	5
[illegible]	KOONTZ N M	584-3485	4
[illegible]	VANLEER C C REV	582-5172	
[illegible]	PHILLIPS LALA	584-5361	
[illegible]	XXXX	00	
[illegible]	REDMOND M H	584-7955	+0
[illegible]	MITCHELL SCOTTY	584-9057	+0
[illegible]	HUTSELL WELDO	582-8268	7
[illegible]	WESTMORELAND JEWEL	582-3174	7
[illegible]	XXXX	00	
[illegible]	XXXX	00	
[illegible]	OVERTON MILES H	582-1477	+0
[illegible]	XXXX	00	
[illegible]	XXXX	00	
[illegible]	LUSK ANDY A	582-8675	5
[illegible]	STACY BEN L	582-4937	4
[illegible]	XXXX	00	
[illegible]	MALAVOLTA MARY	582-8155	4
[illegible]	SEYMOUR KERRY L	584-9835	8
[illegible]	MARTINEZ NESTOR	584-8788	+0
11122	BUCKNUM R	584 8655	0
11124	STALEY P	582 6096	+0
11126	XXXX	00	
11130	CEFALIA TIMOTHY A	582-8190	4
11132	KITZMAN GEORGE	584 1139	+0
11136	XXXX	00	
11151	NATALI ANGELO	584-4050	
11212	HOSKINS HAROLD	582 300	4
11274	CALVARY BAPT CHURCH	584-9075	6
11284	XXXX	00	
11403	ROSE VERA G MRS	582 6291	3
11356	HAAS WALTER	582 0727	
11386	XXXX	00	
11402	MACEDO WILLIAM EDW	582 2154	
11464	AVALOS LOUIS	584 5066	
11474	TORRES JESUS	584 5489	
11526	XXXX	00	
11669	SANCHEZ SIDONIA	584-7746	
11948	TORREZ ANTONEO V	582-2657	
	TORREZ JENNIE	582-2657	4
12150	MARTINEZ ALBERT F	582-0503	4
12246	RAMIREZ ROBERT JR	584-5987	5
12358	SCHUMACHER GERALD	584-6053	
	SHOEMACHER GERALD	584-6053	
12406	WINTERBERG DAN	584-4796	4
12458	WINTERBERG WILL O	584-4738	4
12536	STRAIN E R	584-7242	
12589	BILLINGSLEY S E	584-8519	
12591	XXXX	00	
12626	SHUBERT NEAL	584-8194	+0
12629	SERPA E L	582-2204	3
12631	MITCHELL HERBERT	584-7432	
12635	HEASLEY KENNETH K	582-3179	+0
12778	VERBURG REIN	584-6803	
12918	XXXX	00	
12939	HARP J R	582-8242	+0
12954	XXXX	00	
13035	SILVEIRA JOHNNY T	582-5061	+0
13101	VANDERLAS H R	582-0446	+0
13159	DESJARDINS HAROLD	582-6800	
	DESJARDINS HAROLD	582-9146	6
	VETERINRY PHRMCTCLS	582-6800	4
13160	XXXX	00	
13331	QUALLS BARBARA	582-5551	+0
13375	MACIEL JOHN	582-4456	+0
	TRI CO EQUIPMENT CO	582-4456	3
NO #	MOBILE PAVNG&CLRNG	582-8968	+0
*	21 BUS 152 RES	28 NEW	

Target Street	Cross Street	Source
✔	-	Haines Criss-Cross Directory

HANFORD ARMONA RD 1975



FRESNO

HANFORD ARMONA RD 93230 HANFORD

1365	HOPPER ROBT	734-9003	4
1433	PEREIRA ALTON J	582-6558	5
2243	ANDRADA LOUIS	582-7482	4
2511	BETTENCOURT GIL	582-5882	4
2911	XXXX	00	
6160	MATTOS MARY JEAN	582-9675	
6255	MARTIN LOUIE	582-1870	5
6431	BERBEREIA JOS A	584-4287	5
	COELHO MANUEL P	584-6735	
	MARTIN S S	582-4535	3
6509	GARNER L R	582-2224	4
6585	NORWOOD DICK	582-5654	4
6672	XXXX	00	
6714	SMITH BERT	584-7737	4
6812	SOUZA BOB	584-3517	4
6976	BOYD J	582-4202	5
7292	GALLAGHER EUGENE	582-3697	5
7316	CORONADO ANTONIO	584-8643	3
7479	BETTENCOURT JOHN	584-5914	
7480	*KINGS TULARE TALLOW	686-4797	5
7666	SUBLETT JUANITA	582-8476	5
7761	BROWN MARY MISS	584-6752	
7875	*KINGS CO WSTE DSPSL	582-4850	5
8038	ROBINSON JIM	582-3394	5
8265	FREA BILL JR	582-2629	
	*FREA TRANSPORTATION	582-2629	5
8395	HOMAN ALBERT	582-0647	
8471	XXXX	00	
9248	STRINGER H L	584-6211	
9441	XXXX	00	
9443	JIMENEZ ROSA MARIA	582-2048	
	JIMENEZ SATURNINO	582-2048	
9483	*KINGS CO ROOFING CO	582-2250	
9491	XXXX	00	
9513	DURAN JOHN A	582-0755	
9539	LOPEZ GUS M	582-5306	
9591	XXXX	00	
9619	LOPEZ ERASMO	584-7610	4
9845	*C V C GINNING DEPT	582-0321	
	*CENTRAL VLY COOP	582-0321	
9848	XXXX	00	
9865	*STANDARD OIL PLANNG	582-2641	
10355	*IMMACULATE HRT MARY	582-9998	5
10435	SISTER RAPHAEL	584-8931	4
	*SISTER SUPERIOR	582-2689	
10509	*SANCHEZ TVERADIO	584-8350	
10519	SANCHEZ J G	582-0574	
10531	SANCHEZ JOE G	582-3726	5
10556	BURKETT ADD	582-1941	
	BURKETT MYRTLE	582-1941	
10569	VIZCARRA JULIO MRS	584-5874	
10623	XXXX	00	
10700	*SNOW COMMODITIES CO	582-9086	5
10849	XXXX	00	
10862	ELLIS VIC	584-6165	4
10864	STONE HARLIN	584-5740	5
10866	XXXX	00	
10870	XXXX	00	
10872	BUNTZ HOWARD	582-7277	
10874	XXXX	00	
10876	DUDLEY WILLARD	584-5598	3
	HOANEY EUNIA	584-5598	
10878	FRAZER CHAS	582-1327	
10880	MENDENHALL ROBT O	582-5379	
10882	XXXX	00	
10886	VOCE M E	582-6860	
10888	RAINERI LENA	582-9132	
10890	SOPER GEO	584-7911	3
10894	XXXX	00	
10896	FRY VERN L	582-6943	
10898	TEEL WALTER	582-2608	3
10900	DARTENAY E J	582-0623	
10902	*BEL AIR MBL HM PK	584-6322	4
	*HODSON RALPH M	584-6322	4
10904	ANDERSON CLIFFORD	584-7086	4
10906	BETTENCOURT L	584-3609	3
10908	BANNISTER HORACE L	582-4838	
10912	WHITTEN LENA	582-9123	4
10914	UTSLER MARTHA	582-4300	3
10915	*STOP N GO MKT	582-9966	5
10916	LOWRY BERT	584-8837	3
10918	BETTENCOURT N	584-8300	
10920	WAITE RAY	584-5034	
10922	HARSCHER WM J	582-6944	4
10926	YOUNG D M	582-2339	
10928	REEDY MAMIE	582-5230	5
10930	GREEN OPAL M	584-7901	
10932	XXXX	00	
10934	XXXX	00	
10937	MIRANDA FRANK S	584-6383	4
10938	RUTLEDGE ALICE L	584-4040	
10940	HOLMES V L	582-2098	3
10944	VERKUYL RICHARD J	584-3951	4
10946	BREEZE CLARENCE J	582-1230	3
10948	COTTON M A	584-4886	
10950	HOPSON R W	582-9795	3
10952	ROSE EMILY	582-2676	
10954	SOUZA JOE F	582-5177	
10956	XXXX	00	
10964	KOONTZ N M	584-3485	4
10966	VANLEER C C REV	582-5172	
10968	PHILLIPS LALA	584-5381	
10970	RANDALL DENNIS	582-8516	5
10972	XXXX	00	
10976	WHITEHEAD D H	582-5270	
10982	XXXX	00	
10984	WILSON LELA MAE MRS	584-4803	
10990	PELLISSIER ELLEN	582-9335	
10992	VANWYCK REX	584-4016	
10994	LUSK ANDY A	582-6675	5
10995	XXXX	00	
10996	STACY BEN L	582-4937	4
10998	BERG GEO	582-6374	
11002	XXXX	00	
11079	MALAVOLTA MARY	582-6155	4
11088	SEYMOUR RUTH J	584-7466	3
11120	ROSE DENNIS	584-4637	3
11122	WAHL TIM	582-2217	4
11124	XXXX	00	
11126	XXXX	00	
11130	CEFALIA TIMOTHY A	582-5190	4
11132	XXXX	00	
11134	XXXX	00	
11136	HUDSPETH R C	582-9769	5

Target Street	Cross Street	Source
✔	-	Haines Criss-Cross Directory

HANFORD ARMONA RD 1975

1975

..HANFORD ARMONA RD 93230 CONT..

11151 NATALI ANGELO 584-4050
11212 HOSKINS HAROLD 582-1300 4
11303 ROSE VERA G MRS 582-6294 3
11306 XXXX OO
11356 HAAS WALTER 582-0727
11386 KEITH N L 582-1826
11402 MACEDO WM EOW 582-2154
11454 RODRIGUEZ JESS V 584-4182
11464 AVALOS LOUIS 584-5066
11474 TORRES JESUS 584-5489
11526 PARSONS DONALD 584-8132
11607 LOVETT WAYNE 582-9751 4
11669 SANCHEZ SIDONIA 584-7746
11948 TORREZ ANTONEO V 582-2657
TORREZ JENNIE 582-2657 4
12150 MARTINEZ ALBERT F 582-0503 4
12168 KENNEDY JERRY 582-0109 4
12246 RAMIREZ ROBT JR 584-5987+5
12358 SCHUMACHER GERALD 584-6053
SHOEMACHER GERALD 584-6053
12406 MILLER MARY G 584-4796 4
WINTERBERG DAN 584-4796 4
12458 WINTERBERG WILL O 584-4738 4
12536 STRAIN E R 584-7242
12589 BILLINGSLEY S E 584-8519
12591 GEE ROBT D 582-7769+5
12628 PRICE LARRY J 582-5061
12629 SERPA E L 582-2204 3
12631 MITCHELL HERBERT 584-7432
12764 XXXX OO
12778 VERBURG REIN 584-6803
12918 ELLIS DAVID W 582-6686+5
12939 XXXX OO
12954 XXXX OO
13101 BAHLER C D 582-0446
13159 DESJARDINS HAROLD 582-6800
*VETERINRY PHRMCTCLS 582-6800 4
13331 XXXX OO
13375*MACIEL JOHN 582-4456
*TRI COUNTIES EQUIP 582-4456 3
13515 XXXX CO
13529 ELLISON PERCY L 582-4061
13539 GOLDING PAUL 582-1569
13860 XXXX OO
13981 DANIELSON W RAY 584-7136
14086 MACCAGNO JOHN 584-6226
14092 BRYAN JENNIE P 584-7635
14099 HOBSON E 584-6395
14120 XXXX OO
14352 RICHWINE HOWARD 584-3984
14396 SILVA JOSEPHINE 582-3420
14860 XXXX OO
14989 XXXX OO
14992 MARVIN RICHARD L 584-6042
15030 XXXX OO
15523 RODRIGUES FRANK L 584-4885
15769 JAMES EPHRIAM 584-3534
JAMES VIOLA 584-3534
15845 TOLEDO JOHN M 584-5140
15919 HAMILTON REBA 584-7551
15960 MENEZES JOHN S 584-5797
15981*CENTER CASH GROCERY 582-9122 4
* 18 BUS 168 RES 22 NEW

Target Street	Cross Street	Source
✔	-	Haines Criss-Cross Directory

HANFORD ARMONA RD 1973

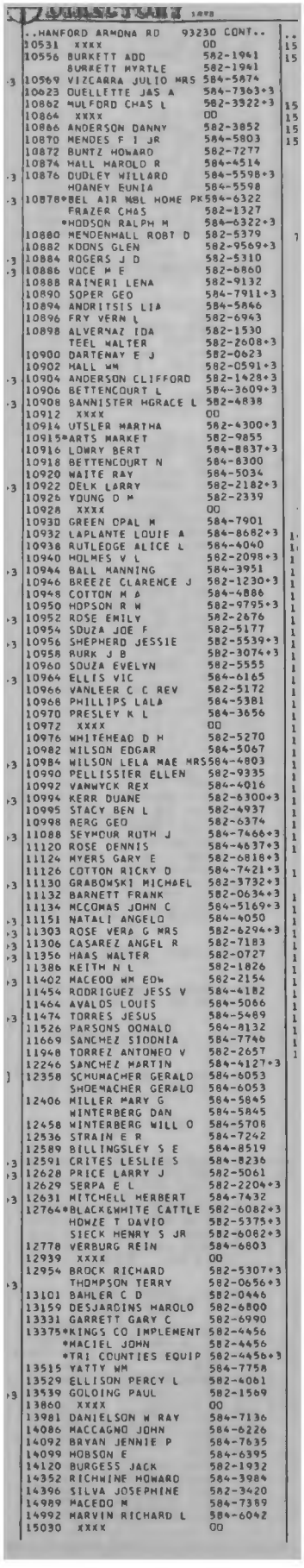
HANFORD ARMONA RD 93230 HANFORD

2243	ANDRADA LOUIS	584-5707
2511	XXXX	OO
6160	MATTOS MARY JEAN	582-9675
6431	COELHO MANUEL P	584-6735
	FONTES JIM	582-2730•3
	MARTIN S S	582-4535•3
6672	XXXX	OO
7316	CORONADO ANTONIO	584-8643•3
7479	BETTENCOURT JOHN	584-5914
7480	*KINGS TOLARE TALLOW	582-0271
	*REINHART K E	582-0271
7666	DIHEL MATT	582-2345
7761	BROWN MARY MISS	584-6752
8265	FREA BILL JR	582-2629
	*FREA BROS TRANSPRTN	686-0007•3
	*FREA TRANSPORTATION	582-2629
8395	HOMAN ALBERT	582-0647
8471	XXXX	OO
9248	STRINGER H L	584-6211
9441	XXXX	OO
9443	JIMENEZ ROSA MARIA	582-2048
	JIMENEZ SATURNINO	582-2048
9483	*KINGS CO ROOFING CO	582-2250
9491	ROSE LORNA	582-6638•3
9513	DURAN JOHN A	582-0755
9539	LOPEZ GOS M	582-5306
9591	XXXX	OO
9845	*C V C GINNING DEPT	582-0321
	*CENTRAL VLY COOP	582-0321
9848	XXXX	OO
9865	*STANDARD OIL PLANNG	582-2641
10355	*IMMACULATE HRT MARY	584-8576
	*PRIETO JULIAN M REV	584-8576
10435	*SISTER SUPERIOR	582-2689
10509	*SANCHEZ TV&RADIO	584-8350
10519	SANCHEZ J G	582-0574

s page may not be key punched, entered into o compu

Target Street	Cross Street	Source
✔	-	Haines Criss-Cross Directory

HANFORD ARMONA RD 1973

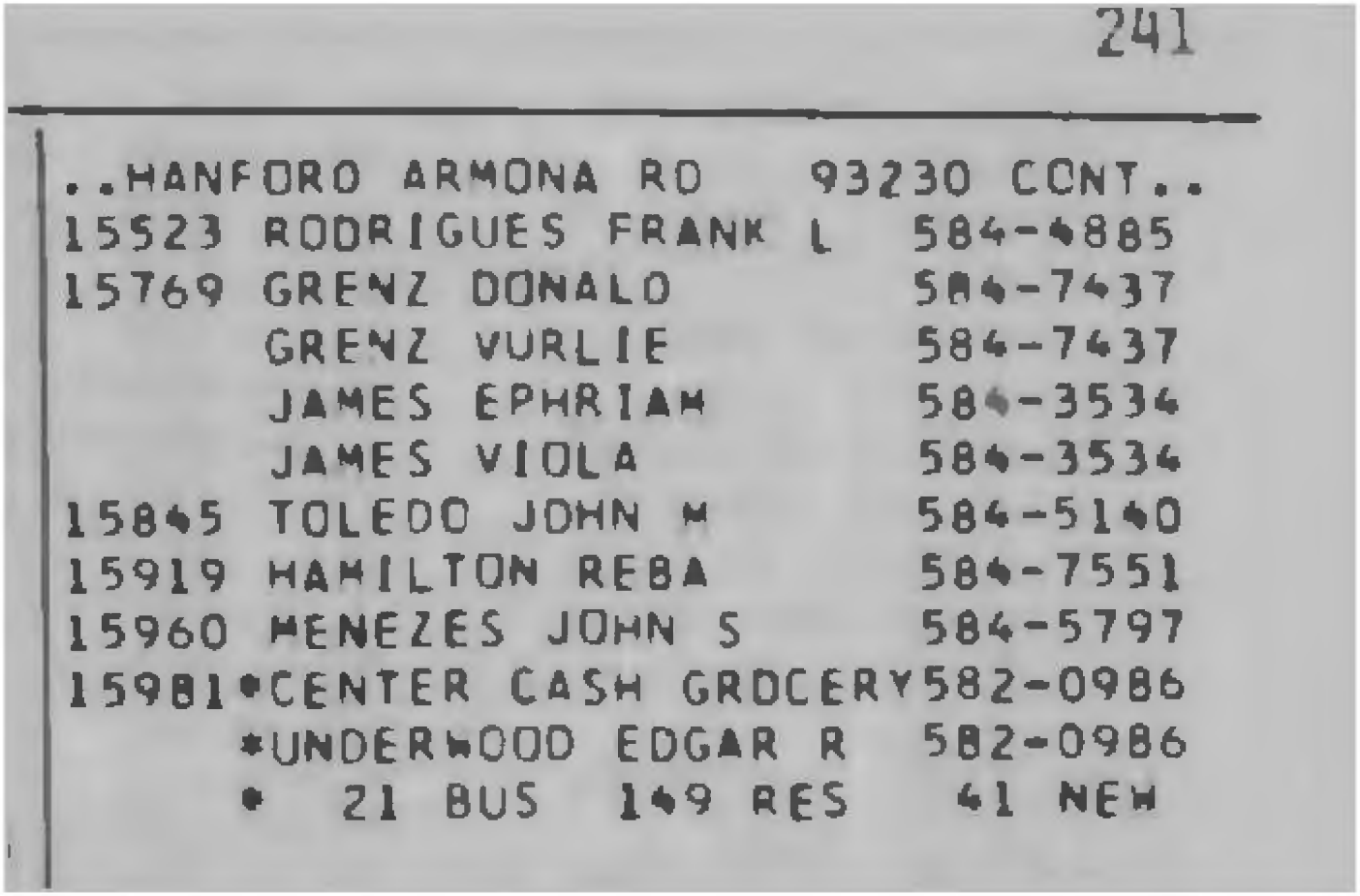


..HANFORD ARMONA RD 93230 CONT..

10531	XXXX	OO	15
10556	BURKETT ADD	582-1941	15
	BURKETT MYRTLE	582-1941	
10569	VIZCARRA JULIO MRS	584-5874	
10623	DUELLETTE JAS A	584-7363+3	
10862	MULFORD CHAS L	582-3922+3	15
10864	XXXX	OO	15
10866	ANDERSON DANNY	582-3852	15
10870	MENDES F I JR	584-5803	15
10872	BUNTZ HOWARD	582-7277	
10874	HALL HAROLD R	584-4514	
10876	DUDLEY WILLARD	584-5598+3	
	HOANEY EUNIA	584-5598	
10878	*BEL AIR MBL HOME PK	584-6322	
	FRAZER CHAS	582-1327	
	*HODSON RALPH M	584-6322+3	
10880	MENDENHALL ROBT D	582-5379	7
10882	KOONS GLEN	582-9569+3	
10884	ROGERS J D	582-5310	
10886	VOCE M E	582-6860	
10888	RAINERI LENA	582-9132	
10890	SOPER GEO	584-7911+3	
10894	ANDRITSIS LIA	584-5846	
10896	FRY VERN L	582-6943	
10898	ALVERNAZ IDA	582-1530	
	TEEL WALTER	582-2608+3	
10900	DARTENAY E J	582-0623	
10902	HALL WM	582-0591+3	
10904	ANDERSON CLIFFORD	582-1428+3	
10906	BETTENCOURT L	584-3609+3	
10908	BANNISTER MGRACE L	582-4838	
10912	XXXX	OO	
10914	UTSLER MARTHA	582-4300+3	
10915	*ARTS MARKET	582-9855	
10916	LOWRY BERT	584-8837+3	
10918	BETTENCOURT N	584-8300	
10920	WAITE RAY	584-5036	
10922	DELK LARRY	582-2182+3	
10926	YOUNG D M	582-2339	
10928	XXXX	OO	
10930	GREEN OPAL M	584-7901	
10932	LAPLANTE LOUIE A	584-8682+3	1
10938	RUTLEDGE ALICE L	584-4040	1
10940	HOLMES V L	582-2098+3	1
10944	BALL MANNING	584-3951	1
10946	BREEZE CLARENCE J	582-1230+3	1
10948	COTTON M A	584-4886	1
10950	HOPSON R W	582-9795+3	1
10952	ROSE EMILY	582-2676	1
10954	SOUZA JOE F	582-5177	1
10956	SHEPHERD JESSIE	582-5539+3	1
10958	BURK J B	582-3074+3	1
10960	SOUZA EVELYN	582-5555	1
10964	ELLIS VIC	584-6165	1
10966	VANLEER C C REV	582-5172	1
10968	PHILLIPS LALA	584-5381	1
10970	PRESLEY K L	584-3656	1
10972	XXXX	OO	1
10976	WHITEHEAD D H	582-5270	1
10982	WILSON EDGAR	584-5067	1
10984	WILSON LELA MAE MRS	584-4803	1
10990	PELLISSIER ELLEN	582-9335	1
10992	VANWYCK REX	584-4016	1
10994	KERR DUANE	582-6300+3	1
10995	STACY BEN L	582-4937	1
10998	BERG GEO	582-6374	1
11088	SEYMOUR RUTH J	584-7466+3	1
11120	ROSE DENNIS	584-4637+3	1
11124	MYERS GARY E	582-6818+3	
11126	COTTON RICKY D	584-7421+3	1
11130	GRABOWSKI MICHAEL	582-3732+3	
11132	BARNETT FRANK	582-0634+3	1
11134	MCCOMAS JOHN C	584-5169+3	1
11151	NATALI ANGELO	584-4050	1
11303	ROSE VERA G MRS	582-6294+3	1
11306	CASAREZ ANGEL R	582-7183	1
11356	HAAS WALTER	582-0727	1
11386	KEITH N L	582-1826	1
11402	MACEDO WM EDW	582-2154	1
11454	RODRIGUEZ JESS V	584-4182	1
11464	AVALOS LOUIS	584-5066	1
11474	TORRES JESUS	584-5489	1
11526	PARSONS DONALD	584-8132	1
11669	SANCHEZ SIDONIA	584-7746	1
11948	TORREZ ANTONEO V	582-2657	1
12246	SANCHEZ MARTIN	584-4127+3	
12358	SCHUMACHER GERALD	584-6053	
	SHOEMACHER GERALD	584-6053	
12406	MILLER MARY G	584-5845	
	WINTERBERG DAN	584-5845	
12458	WINTERBERG WILL O	584-5708	
12536	STRAIN E R	584-7242	
12589	BILLINGSLEY S E	584-8519	
12591	CRITES LESLIE S	584-8236	
12628	PRICE LARRY J	582-5061	
12629	SERPA E L	582-2204+3	
12631	MITCHELL HERBERT	584-7432	
12764	*BLACK&WHITE CATTLE	582-6082+3	
	HOWZE T DAVID	582-5375+3	
	SIECK HENRY S JR	582-6082+3	
12778	VERBURG REIN	584-6803	
12939	XXXX	OO	
12954	BROCK RICHARD	582-5307+3	
	THOMPSON TERRY	582-0656+3	
13101	BAHLER C D	582-0446	
13159	DESJARDINS HAROLD	582-6800	
13331	GARRETT GARY C	582-6990	
13375	*KINGS CO IMPLEMENT	582-4456	
	*MACIEL JOHN	582-4456	
	*TRI COUNTIES EQUIP	582-4456+3	
13515	YATTY WM	584-7758	
13529	ELLISON PERCY L	582-4061	
13539	GOLDING PAUL	582-1569	
13860	XXXX	OO	
13981	DANIELSON W RAY	584-7136	
14086	MACCAGNO JOHN	584-6226	
14092	BRYAN JENNIE P	584-7635	
14099	HOBSON E	584-6395	
14120	BURGESS JACK	582-1932	
14352	RICHWINE HOWARD	584-3984	
14396	SILVA JOSEPHINE	582-3420	
14989	MACEDO M	584-7389	
14992	MARVIN RICHARD L	584-6042	
15030	XXXX	OO	

Target Street	Cross Street	Source
✔	-	Haines Criss-Cross Directory

HANFORD ARMONA RD 1973



241

..HANFORD ARMONA RD 93230 CONT..
15523 RODRIGUES FRANK L 584-4885
15769 GRENZ DONALD 584-7437
GRENZ VURLIE 584-7437
JAMES EPHRIAM 584-3534
JAMES VIOLA 584-3534
15845 TOLEDO JOHN M 584-5140
15919 HAMILTON REBA 584-7551
15960 MENEZES JOHN S 584-5797
15981 *CENTER CASH GRDCERY 582-0986
*UNDERWOOD EDGAR R 582-0986
* 21 BUS 149 RES 41 NEW

VTTM 943
Hanford Armona Road
Hanford, CA 93230

Inquiry Number: 7674781.7
June 10, 2024

EDR Environmental Lien and AUL Search

EDR® Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

EDR Environmental Lien and AUL Search

The EDR Environmental Lien Search Report provides results from a search of available current land title records for environmental cleanup liens and other activity and use limitations (AULs), such as engineering controls and institutional controls.

A network of professional, trained researchers, following established procedures, uses client supplied address information to:

- search for parcel number and/or legal description
- search for ownership information
- research official land title documents recorded at jurisdictional agencies such as recorders' offices, registries of deeds, county clerks' offices, etc.
- search for publicly available environmental encumbering instrument(s) filed on or after the recording of the current deed; between the recording of the current deed and the most current publicly available date
- provide a copy of any environmental encumbrance(s)
- provide a copy of the current deed when available

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, LLC. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. This Report is provided on an "AS IS", "AS AVAILABLE" basis. NO WARRANTY EXPRESS OR IMPLIED IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, LLC AND ITS SUBSIDIARIES, AFFILIATES AND THIRD PARTY SUPPLIERS DISCLAIM ALL WARRANTIES, OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, ARISING OUT OF OR RELATED TO THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES REGARDING ACCURACY, QUALITY, CORRECTNESS, COMPLETENESS, COMPREHENSIVENESS, SUITABILITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, MISAPPROPRIATION, OR OTHERWISE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, LLC OR ITS SUBSIDIARIES, AFFILIATES OR THIRD PARTY SUPPLIERS BE LIABLE TO ANYONE FOR ANY DIRECT, INCIDENTAL, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY TYPE OR KIND (INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, LOSS OF USE, OR LOSS OF DATA), ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT. Any analyses, estimates, ratings, environmental risk levels, or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only an assessment performed by a qualified environmental professional can provide findings, opinions or conclusions regarding the environmental risk or conditions in, on or at any property.

Copyright 2024 by Environmental Data Resources, LLC. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, LLC, or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, LLC or its affiliates. All other trademarks used herein are the property of their respective owners.

EDR Environmental Lien and AUL Search

TARGET PROPERTY INFORMATION

ADDRESS

Hanford Armona Road
VTTM 943
Hanford, CA 93230

ENVIRONMENTAL LIEN

Environmental Lien: Found ☐ Not Found ☒

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

AULs: Found ☐ Not Found ☒

RESEARCH SOURCE

Source 1:

Kings Recorder
Kings, CA

PROPERTY INFORMATION

Deed 1:

Type of Deed:	deed
Title is vested in:	Middlefield Manor LLC
Title received from:	Quercus Grp LLC Margot Griswold Charlotte Griswold
Deed Dated	3/2/2018
Deed Recorded:	4/10/2018
Book:	NA
Page:	na
Volume:	na
Instrument:	na
Docket:	NA
Land Record Comments:	
Miscellaneous Comments:	
Legal Description:	See Exhibit
Legal Current Owner:	Middlefield Manor LLC
Parcel # / Property Identifier:	011-040-008
Comments:	See Exhibit

Deed Exhibit 1

RECORDING REQUESTED BY:
Stewart Title of California, Inc.

WHEN RECORDED MAIL TO:
AND MAIL TAX STATEMENT TO:

Middlefield Manor, LLC
20900 Boyce Lane
Saratoga, CA 95070

ORDER NO. 174793
APN: 011-040-008, 011-040-040, 011-040-027

DOC NBR: 1805681 04/10/2018 08:34:00 AM
OFFICIAL RECORDS OF Kings County
Clerk-Recorder, Kristine Lee
RECORDING FEE: $37.00
COUNTY TAX: $1,809.50
CITY TAX: $0.00

DOC TYPE: 07
9 PGS
R057

STEWART TITLE

SPACE ABOVE THIS LINE FOR RECORDERS USE

GRANT DEED

THE UNDERSIGNED GRANTOR(s) DECLARE(s)

DOCUMENTARY TRANSFER TAX is $1,809.50 CITY TAX $0.00

☐ Monument Preservation Fee is: $

☒ computed on full value of property conveyed, or

☐ computed on full value less value of liens or encumbrances remaining at time of sale.

X Unincorporated area City of _____

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

Margot Griswold , as her sole and separate property, as to an undivided 12.50% interest and Charlotte Griswold-Tergis , as her sole and separate property, as to an undivided 12.50% interest and Edward H. Griswold , as his sole and separate property, as to an undivided 12.50% interest and Wendy Lewis , as her sole and separate property, as to an undivided 12.50% interest and Tedra Lee Battaglia , as her sole and separate property, as to an undivided 12.50% interest and The Quercus Group, LLC a California Limited Liability Company, as to an undivided 37.50% interest

hereby GRANT(S) to Middlefield Manor, LLC, A California Limited Liability Company

the following described real property in an unincorporated area, County of Kings, State of California:

See Exhibit "A" attached hereto and made a part hereof.

Date: March 2, 2018

Margot Griswold

Charlotte Griswold-Tergis

Edward H. Griswold

Wendy Lewis

Tedra Lee Battaglia

The Quercus Group, LLC a California Limited Liability Company

By: Susan J. Kennedy, Operating Manager and Treasurer

By: Marjorie R. Eldevik, Manager and Secretary

MAIL TAX STATEMENT AS DIRECTED ABOVE

Margot Griswold

Charlotte Griswold-Tergis

Edward H. Griswold

Wendy Lewis

Tedra Lee Battaglia

The Quercus Group, LLC a California Limited Liability Company

By: _____
Susan J. Kennedy, Operating Manager and Treasurer

By: Marjorie R. Eldevik Manager and Secretary
Marjorie R. Eldevik, Manager and Secretary

MAIL TAX STATEMENT AS DIRECTED ABOVE

Margot Griswold 3/26/18
Margot Griswold

Charlotte Griswold-Tergis

Edward H. Griswold

Wendy Lewis

Tedra Lee Battaglia

The Quercus Group, LLC a California Limited Liability Company

By:
Susan J. Kennedy, Operating Manager and Treasurer

By:
Marjorie R. Eldevik, Manager and Secretary

MAIL TAX STATEMENT AS DIRECTED ABOVE

California Notarial
Loose Certificate
Attached

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached and not the truthfulness, accuracy, or validity of that document.

State of California
County of Kings

On 3/24/2018 before me C. Houk -, Notary Public personally appeared Charlotte Griswold - Tergis and Susan J. Kennedy, who proved to me on the basis of satisfactory evidence to be the person(s), whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature C. Houk

(seal)

C. HOUK
Notary Public - California
Kings County
Commission # 2216928
My Comm. Expires Nov 1, 2021

All-Purpose Acknowledgement

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Ventura)

On March 26th 2018 before me, Ethan Koerten, Notary Public personally appeared
(insert name and title of the officer)

MARGOT GRESWOLD ,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrumenr and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

Ethan Koerten
Comm. #2207996
Notary Public California
Ventura County
Comm. Expires Aug. 25, 2021

WITNESS my hand and official seal.

(SEAL) SIGNATURE

OPTIONAL INFORMATION

The acknowledgment contained within this document is in accordance with California law. Any certificate of acknowledgment performed within the State of California shall use the preceding wording pursuant to Civil Code section 1189. An acknowledgment cannot be affixed to a document sent by mail or otherwise delivered to a notary public, including electronic means, whereby the signer did not personally appear before the notary public, even if the signer is known by the notary public. In addition, the correct notarial wording can only be signed and sealed by a notary public. The seal and signature cannot be affixed to a document without the correct notarial wording.

THE INFORMATION BELOW IS OPTIONAL. HOWEVER, IT MAY PROVE VALUABLE AND COULD PREVENT FRAUDULENT ATTACHMENT OF THIS FORM TO AN UNAUTHORIZED DOCUMENT.

CAPACITY CLAIMED BY THE SIGNER

- ☐ INDIVIDUAL
- ☐ CORPORATE OFFICER
- ☐ PARTNER (S)
- ☐ ATTORNEY-IN-FACT
- ☐ TRUSTEE
- ☐ OTHER _____

DESCRIPTION OF ATTACHED DOCUMENT

GRANT DEED
TITLE OR TYPE OF DOCUMENT

5
NUMBER PAGES (INCLUDING ACKNOWLEDGMENT)

3/26/2018
DATE OF DOCUMENT

OTHER

GENERAL CALIFORNIA ACKNOWLEDGEMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached and not the truthfulness, accuracy, or validity of that document.

State of California }
} ss.
County of Kings }

On March 29, 2018 before me Cheryl Anne Amos,

Notary Public (here insert name and title of the officer) personally appeared

Edward H. Griswold,

who proved to me on the basis of satisfactory evidence to be the person(s), whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
WITNESS my hand and official seal.

Signature Cheryl Anne Amos

CHERYL ANNE AMOS
Commission # 2072184
Notary Public - California
Kings County
My Comm. Expires Jul 11, 2018
(Seal)

State of California }
} ss.
County of Kings }

On April 2, 2018 before me Cheryl Anne Amos,

Notary Public (here insert name and title of the officer) personally appeared

Wendy Lewis and Tedra Lee Battaglia,

who proved to me on the basis of satisfactory evidence to be the person(s), whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
WITNESS my hand and official seal.

Signature Cheryl Anne Amos

CHERYL ANNE AMOS
Commission # 2072184
Notary Public - California
Kings County
My Comm. Expires Jul 11, 2018
(Seal)

File No.: 01180-6700
Notary Acknowledgement SCE

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached and not the truthfulness, accuracy, or validity of that document.

State of California
County of Kings

On March 30 2018 before me Jessica Lynn Darnell, Notary Public personally appeared Marjorie R. Eldevik, who proved to me on the basis of satisfactory evidence to be the person(s), whose name(s) is/are subscribed to the within instrument and acknowledged to me that ~~he/she~~ they executed the same in ~~his/her~~ their authorized capacity(~~ies~~), and that by ~~his/her~~ their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Jessica Lynn Darnell

(seal)

JESSICA LYNN DARNELL
Commission No. 2154389
NOTARY PUBLIC-CALIFORNIA
SAN BERNARDINO COUNTY
My Comm. Expires MAY 23, 2020

EXHIBIT "A"
LEGAL DESCRIPTION

Parcel 1: 011-040-008 and 011-040-010

All that portion of the west half of the northeast quarter of section 3, township 19 south, range 21 east, mount diablo base and meridian, according to the official plat thereof, described as follows:

Beginning at the northwest corner of said northeast quarter; thence south along the west line thereof a distance of 43.26 chains, more or less, to the southwest corner of said northeast quarter; thence east along the south line of said quarter section; 15.64 chains to the center of a water ditch; thence northerly along the center line of said water ditch 43.26 chains to a point in the north line of said northeast quarter; thence west along said north line a distance of 16.25 chains, more or less, to the point of beginning.

Parcel 2: 011-040-027

That portion of the southeast quarter of the northwest quarter of section 3, township 19 south, range 21 east, mount diablo base and meridian, in the county of Kings, state of California, more particularly described as parcel 2 of parcel map recorded in book 5, page 72, of parcel map recorded in Book 5, Page 72 of parcel maps, Kings County Records.

APN: 011-040-008, 011-040-010, 011-040-027

END OF DOCUMENT

VTTM 943
Hanford Armona Road
Hanford, CA 93230

Inquiry Number: 7674781.6
June 06, 2024

The EDR Property Tax Map Report

EDR® Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

EDR Property Tax Map Report

Environmental Data Resources, Inc.'s EDR Property Tax Map Report is designed to assist environmental professionals in evaluating potential environmental conditions on a target property by understanding property boundaries and other characteristics. The report includes a search of available property tax maps, which include information on boundaries for the target property and neighboring properties, addresses, parcel identification numbers, as well as other data typically used in property location and identification.

NO COVERAGE

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OR DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction orforecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2022 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc. or its affiliates is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

VTTM 943
Hanford Armona Road
Hanford, CA 93230

Inquiry Number: 7674781.3
June 06, 2024

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

06/06/24

Site Name:

VTTM 943
Hanford Armona Road
Hanford, CA 93230
EDR Inquiry # 7674781.3

Client Name:

Geotek
1548 North Maple Street
Corona, CA 92880
Contact: Kyle Richard Mchargue

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Geotek were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 5F26-4BCF-B5FD

PO # 3951-CR

Project 3951-CR

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 5F26-4BCF-B5FD

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ✓ Library of Congress
- ✓ University Publications of America
- ✓ EDR Private Collection

The Sanborn Library LLC Since 1866™

Limited Permission To Make Copies

Geotek (the client) is permitted to make up to FIVE photocopies of this Sanborn Map transmittal and each fire insurance map accompanying this report solely for the limited use of its customer. No one other than the client is authorized to make copies. Upon request made directly to an EDR Account Executive, the client may be permitted to make a limited number of additional photocopies. This permission is conditioned upon compliance by the client, its customer and their agents with EDR's copyright policy; a copy of which is available upon request.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, LLC. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. This Report is provided on an "AS IS", "AS AVAILABLE" basis. NO WARRANTY EXPRESS OR IMPLIED IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, LLC AND ITS SUBSIDIARIES, AFFILIATES AND THIRD PARTY SUPPLIERS DISCLAIM ALL WARRANTIES, OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, ARISING OUT OF OR RELATED TO THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES REGARDING ACCURACY, QUALITY, CORRECTNESS, COMPLETENESS, COMPREHENSIVENESS, SUITABILITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, MISAPPROPRIATION, OR OTHERWISE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, LLC OR ITS SUBSIDIARIES, AFFILIATES OR THIRD PARTY SUPPLIERS BE LIABLE TO ANYONE FOR ANY DIRECT, INCIDENTAL, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY TYPE OR KIND (INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, LOSS OF USE, OR LOSS OF DATA), ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT. Any analyses, estimates, ratings, environmental risk levels, or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only an assessment performed by a qualified environmental professional can provide findings, opinions or conclusions regarding the environmental risk or conditions in, on or at any property.

Copyright 2024 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, LLC or its affiliates. All other trademarks used herein are the property of their respective owners.

VTTM 943
Hanford Armona Road
Hanford, CA 93230

Inquiry Number: 7674781.4
June 06, 2024

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

06/06/24

Site Name:

VTTM 943
Hanford Armona Road
Hanford, CA 93230
EDR Inquiry # 7674781.4

Client Name:

Geotek
1548 North Maple Street
Corona, CA 92880
Contact: Kyle Richard Mchargue

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Geotek were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# 3951-CR
Project: 3951-CR

Coordinates:

Latitude:	36.309918 36° 18' 36" North
Longitude:	-119.680091 -119° 40' 48" West
UTM Zone:	Zone 11 North
UTM X Meters:	259371.98
UTM Y Meters:	4021657.74
Elevation:	243.00' above sea level

Maps Provided:

2021
2018
2015
2012
1976
1954
1926

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, LLC. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. This Report is provided on an "AS IS", "AS AVAILABLE" basis. NO WARRANTY EXPRESS OR IMPLIED IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, LLC AND ITS SUBSIDIARIES, AFFILIATES AND THIRD PARTY SUPPLIERS DISCLAIM ALL WARRANTIES, OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, ARISING OUT OF OR RELATED TO THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES REGARDING ACCURACY, QUALITY, CORRECTNESS, COMPLETENESS, COMPREHENSIVENESS, SUITABILITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, MISAPPROPRIATION, OR OTHERWISE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, LLC OR ITS SUBSIDIARIES, AFFILIATES OR THIRD PARTY SUPPLIERS BE LIABLE TO ANYONE FOR ANY DIRECT, INCIDENTAL, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY TYPE OR KIND (INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, LOSS OF USE, OR LOSS OF DATA), ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT. Any analyses, estimates, ratings, environmental risk levels, or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only an assessment performed by a qualified environmental professional can provide findings, opinions or conclusions regarding the environmental risk or conditions in, on or at any property.

Copyright 2024 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, LLC or its affiliates. All other trademarks used herein are the property of their respective owners.

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2021 Source Sheets

Hanford
2021
7.5-minute, 24000

2018 Source Sheets

Hanford
2018
7.5-minute, 24000

2015 Source Sheets

Hanford
2015
7.5-minute, 24000

2012 Source Sheets

Hanford
2012
7.5-minute, 24000

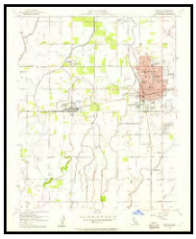
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1976 Source Sheets

Hanford
1976
7.5-minute, 24000
Aerial Photo Revised 1976

1954 Source Sheets



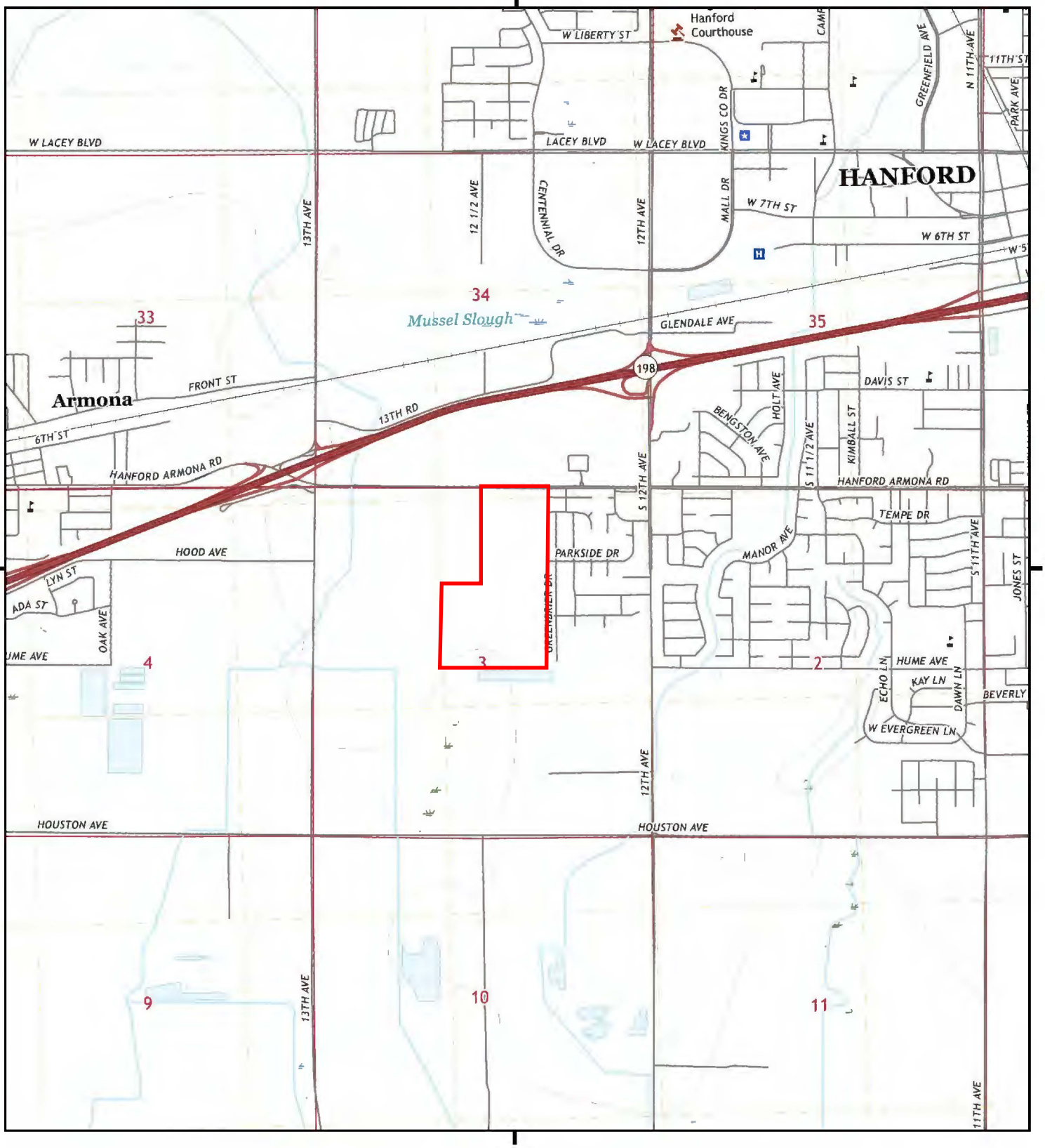
Hanford
1954
7.5-minute, 24000
Aerial Photo Revised 1950

1926 Source Sheets

Hanford
1926
7.5-minute, 31680

Historical Topo Map

2021



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

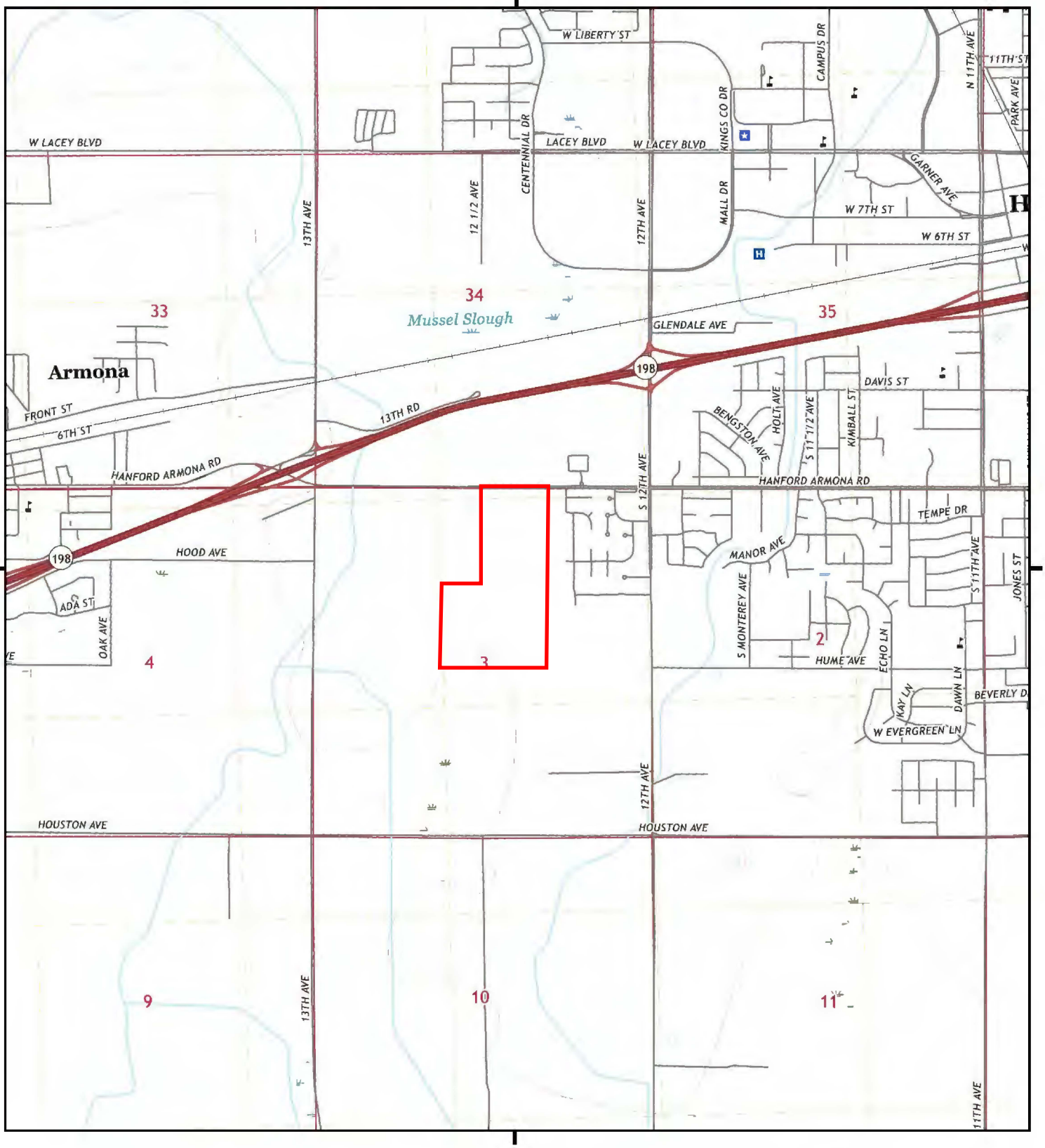
TP, Hanford, 2021, 7.5-minute

SITE NAME: VTTM 943
ADDRESS: Hanford Armona Road
Hanford, CA 93230
CLIENT: Geotek

N

Historical Topo Map

2018



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

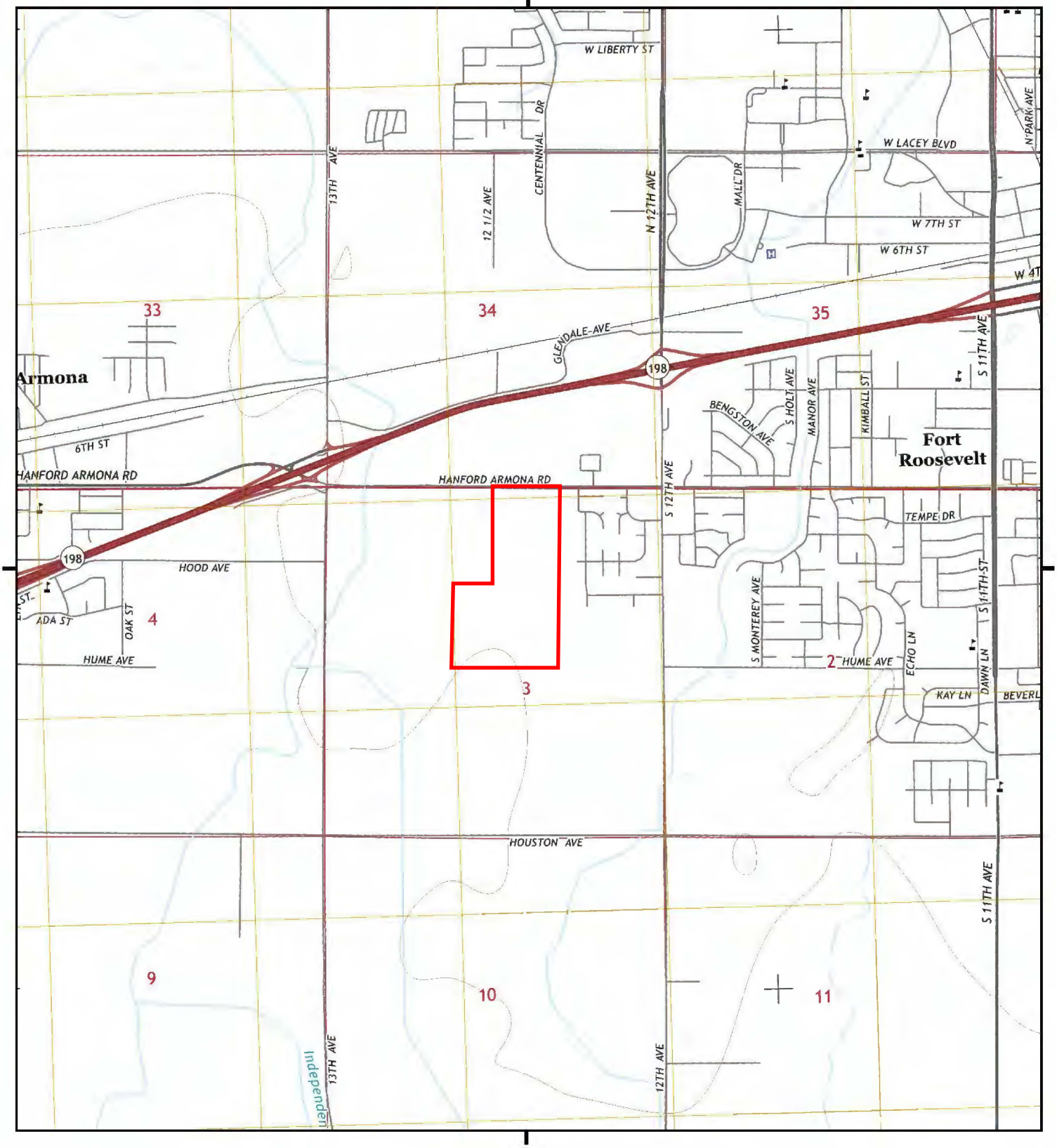
TP, Hanford, 2018, 7.5-minute

SITE NAME: VTTM 943
ADDRESS: Hanford Armona Road
Hanford, CA 93230
CLIENT: Geotek

N

Historical Topo Map

2015



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

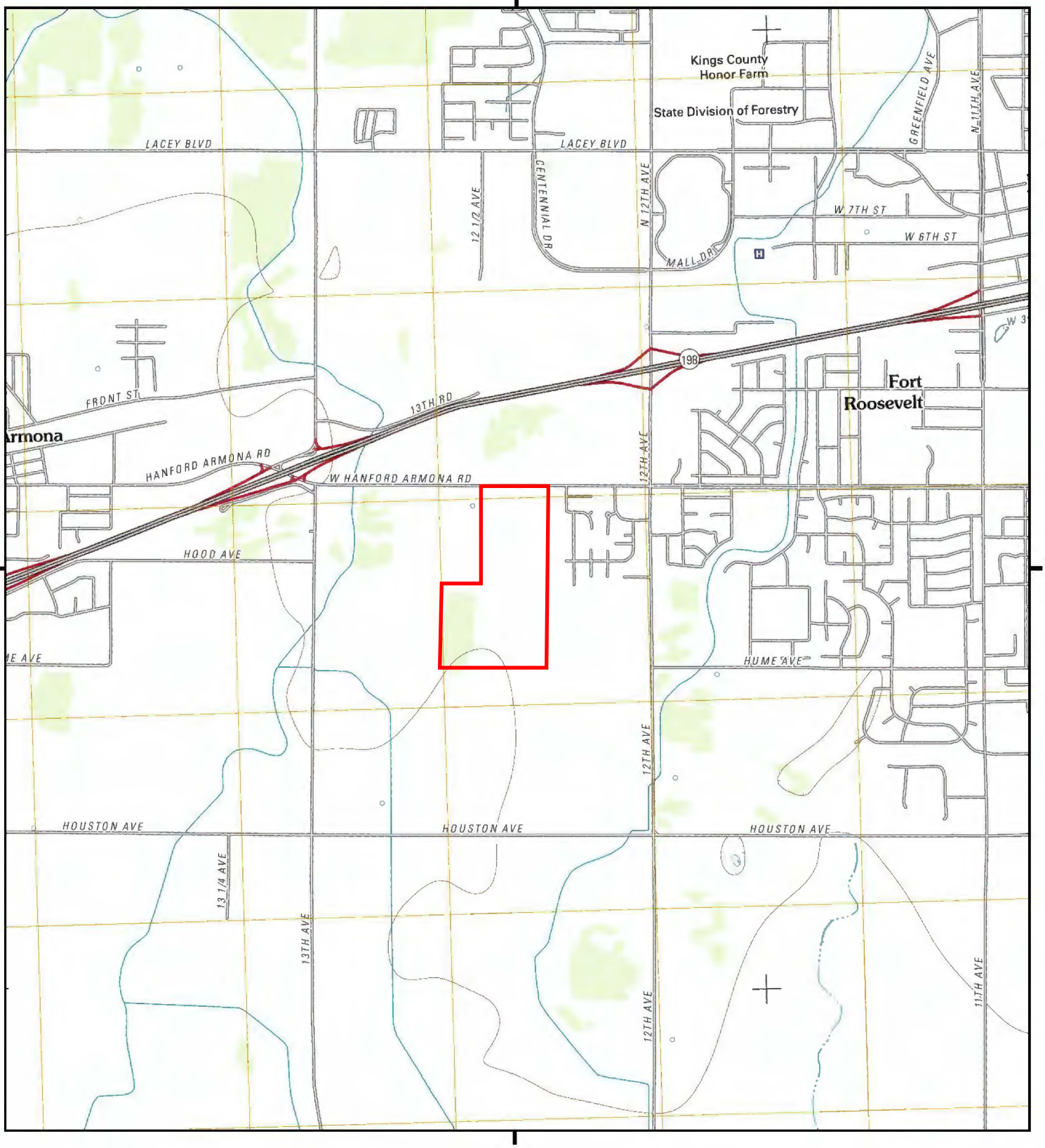
TP, Hanford, 2015, 7.5-minute

SITE NAME: VTTM 943
ADDRESS: Hanford Armona Road
Hanford, CA 93230
CLIENT: Geotek

N

Historical Topo Map

2012



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Hanford, 2012, 7.5-minute

SITE NAME: VTTM 943
ADDRESS: Hanford Armona Road
Hanford, CA 93230
CLIENT: Geotek

N

This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

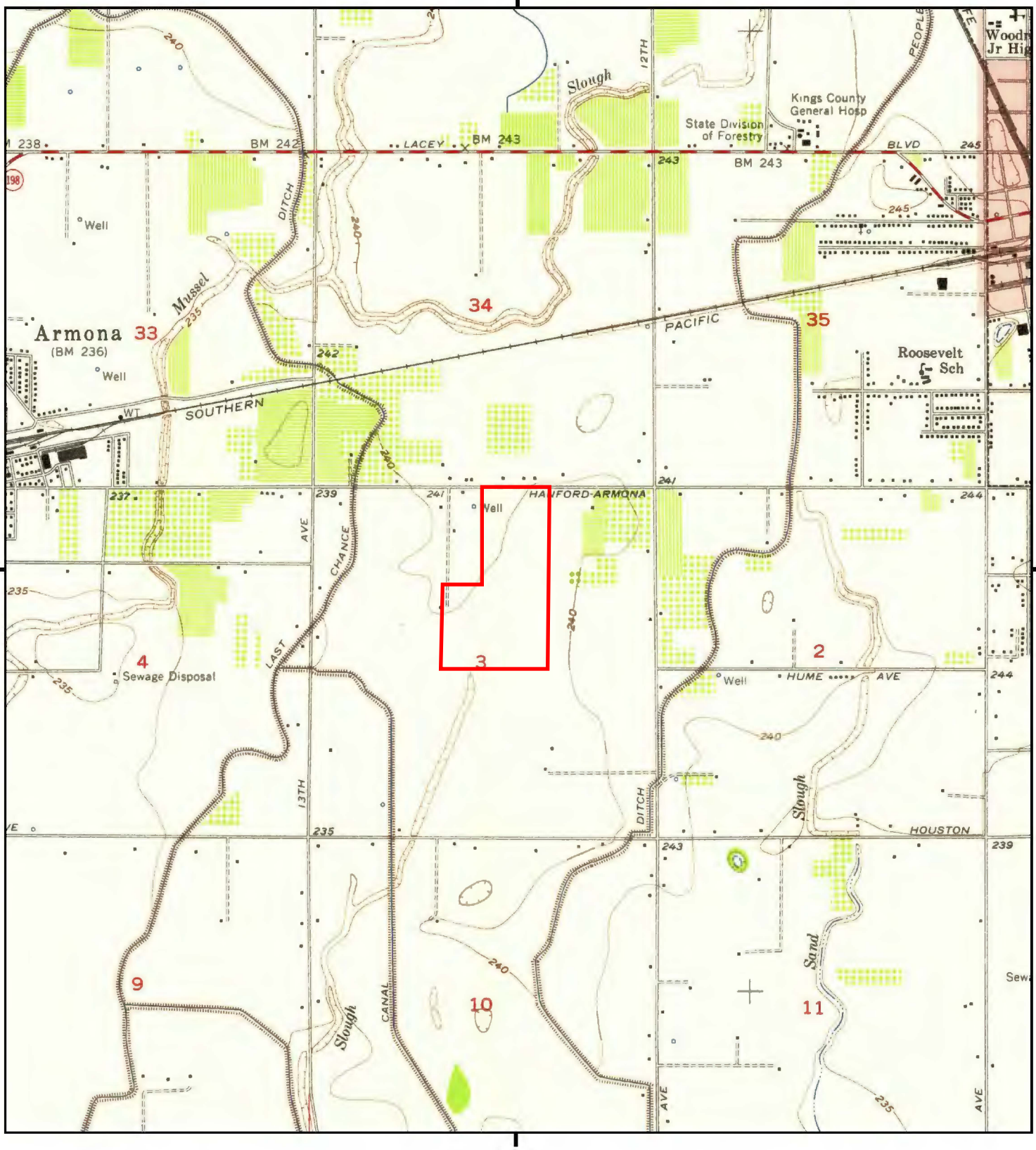
TP, Hanford, 1976, 7.5-minute

SITE NAME: VTTM 943
ADDRESS: Hanford Armona Road
Hanford, CA 93230
CLIENT: Geotek

N

Historical Topo Map

1954



This report includes information from the following map sheet(s).

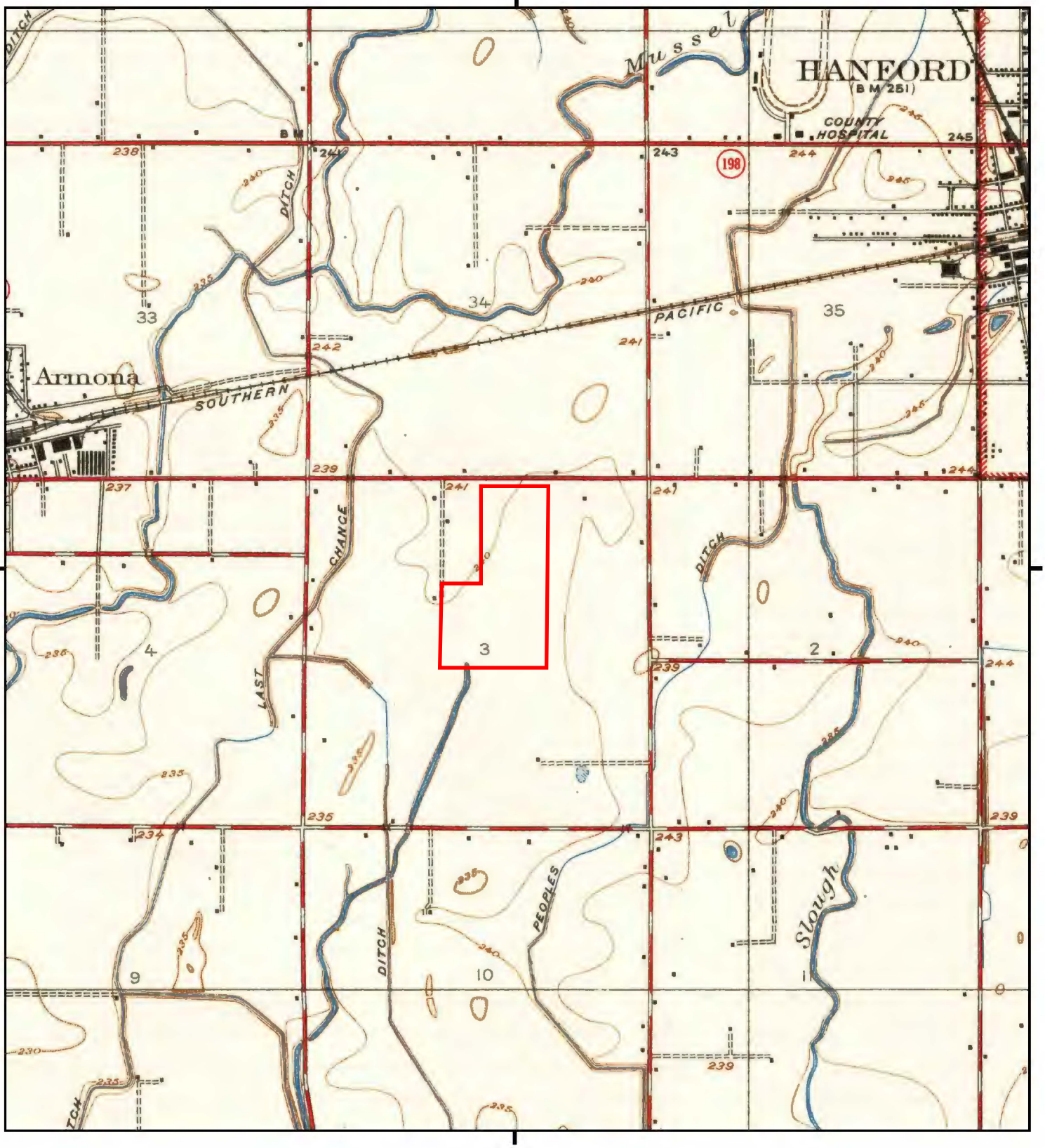
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Hanford, 1954, 7.5-minute

SITE NAME: VTTM 943
ADDRESS: Hanford Armona Road
Hanford, CA 93230
CLIENT: Geotek

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Hanford, 1926, 7.5-minute

SITE NAME: VTTM 943
ADDRESS: Hanford Armona Road
Hanford, CA 93230
CLIENT: Geotek

N

APPENDIX C

QUESTIONNAIRE(S) AND SITE DOCUMENTS FROM OTHER SOURCES

National Flood Hazard Layer FIRMette

FEMA

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/27/2024 at 2:53 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

PROPERTY QUESTIONNAIRE

To the best of your actual knowledge and in good faith, please complete the following property questionnaire and return to GeoTek (contact information below).

PROPERTY INFORMATION

Property/Site Name: 75 Acres, Hanford Armona Road
Property Street Address(es):
Property City, State, Zip: Hanford, CA, 93230

PROPERTY LAND USE DESCRIPTION

Area of Property (square feet or acres) 75.02 Acres, more or less
Assessor Parcel Number(s): 011-040-08; 10; 27
Additional Street Addresses used at Property (current or past) NONE
Description of Property and Improvements (number of buildings, date(s) of construction, type of buildings, former structures no longer on property): No buildings
Agricultural Irrigation System

UTILITY SERVICES (list suppliers/providers/servicers)

Electric: PG&E & SMUD
Natural Gas NONE
Propane: NONE
Water: NONE
Sewer: NONE
Trash Removal: Not at this time

CURRENT/PRIOR PROPERTY OWNERSHIP AND USE

How long have you owned the property? APRIL, 2018
Describe the property usage during your ownership: Farming, Irrigated Row Crops

Who owned the property before you and for how long? Margot Griswold, Ed Griswold, Tedra Lee Battaglia, The Quercus Group - many years
Describe the property usage prior to your ownership: Same - farming, row crop. The SW 20 acres had walnuts (removed 2021)

ADJOINING PROPERTY LAND USE DESCRIPTION

North Land Use: Church, Ag
South Land Use: AG
East Land Use: SFR
West Land Use: AG → SFR

Your Name: Marc R. Frelier
Firm: MRF Lands / Silicon Valley Ranch, LLC

Please Return to GeoTek, Inc.
kmchargue@geotekusa.com
1548 N. Maple St., Corona, CA 92585
Phone: (951) 710-1160

PROPERTY QUESTIONNAIRE

Signature: Marc R. Fredericks **Date:** May 17, 2024

No.	Question	Please indicate your response to each question. ("Unk" indicates a response of "unknown")			
		Yes	No	Unk	**Please explain each affirmative or unknown answer in the space provided.**
1a	Is the *property* used for an industrial use?		✓		
1b	Is any *adjoining property* used for an industrial use?			✓	
2a	Do you observe evidence or do you have any prior knowledge that the *property* has been used for an industrial use in the past?		✓		
2b	Did you observe evidence or do you have any prior knowledge that any *adjoining property* has been used for an industrial use in the past.		✓		
3a	Is the *property* used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility (if applicable, identify which)?		✓		
3b	Is any *adjoining property* used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility (if applicable, identify which)?		✓		
4a	Did you observe evidence or do you have any knowledge that the *property* has been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility (if applicable, identify which)?		✓		Fields had been lazor levelled in past. & benched.
4b	Did you observe evidence or do you have any prior knowledge that any *adjoining property* has been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility (if applicable, identify which)?		✓		

PROPERTY QUESTIONNAIRE

No.	Question	Please indicate your response to each question. ("Unk" indicates a response of "unknown")			
		Yes	No	Unk	**Please explain each affirmative or unknown answer in the space provided.**
5a	Are there currently any damage or discarded automotive or industrial batteries, pesticides, paints, or other chemicals in individual containers of >5 gal (19L.) in volume or 50 gal (190 L.) in the aggregated, stored on or used at the *property* or at the facility?		✓		
5b	Did you observe evidence or do you have any prior knowledge that there have been previously any damaged or discarded automotive or industrial batteries, or pesticides, paints, or other chemicals in individual containers of >5 gal (19 L.) in volume or 50 gal (190 L.) in the aggregated, stored on or used at the *property* or at the facility?		✓		Only Chemicals or material for farming.
6a	Are there currently any industrial *drums* (typically 55-gal (208 L.)) or sacks of chemicals located on the property or at the facility?		✓		
6b	Did you observe evidence or do you have prior knowledge that there have been previously any industrial *drums*(typically 55 gal (208 L.)) or sacks of chemicals on located on the property of at the facility?		✓		
7a	Did you observe evidence or do you have prior knowledge that *fill dirt* that has been brought onto the property that originated from a contaminated site?		✓		
7b	Did you observe evidence or do you have prior knowledge that *fill dirt* that has been brought onto the property that is of an unknown origin?		✓		
8a	Are there currently *pits, ponds, or lagoons* located on the *property* in connection with waste treatment or waste disposal?		✓		Only temporary ditches & drains for farming.
8b	Did you observe evidence or do you have prior knowledge that there have been previously, any *pits, ponds, or lagoons* located on the *property* in connection with waste treatment or waste disposal?		✓		
9a	Is there currently any stained soil on the *property*?		✓		
9b	Did you observe evidence or do you have prior knowledge that there has been previously, any stained soil on the *property*?		✓		

PROPERTY QUESTIONNAIRE

No.	Question	Please indicate your response to each question. ("Unk" indicates a response of "unknown")			
		Yes	No	Unk	**Please explain each affirmative or unknown answer in the space provided.**
10a	Are there any currently any registered or unregistered storage tanks (above or underground) located on the *property*?		✓		
10b	Did you observe evidence or do you have prior knowledge that there have been previously, any registered or unregistered storage tanks (above or underground) located on the *property*?	✓			Small diesel tanks servicing AG Well.
11a	Are there currently any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the *property* or adjacent to any structure located on the *property*?	✓			for Ag irrigation
11b	Did you observe evidence or do you have prior knowledge that there have been previously, any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the *property* or adjacent to any structure located on the *property*?	✓			Irrigation Pipeline
12a	Is there currently evidence of leaks, spills or staining by substances other than water, or foul odors, associated with any flooring, drains, walls, ceilings, or exposed grounds on the property?		✓		
12b	Did you observe evidence or do you have any prior knowledge that there have been previously any leaks, spills, or staining by substances other than water, or foul odors, associated with any flooring, drains, walls, ceilings, or exposed grounds on the property?		✓		
13a	If the property is served by a private well or non-public water system, is there evidence or do you have prior knowledge that contaminants have been identified in the well or system of that exceed guidelines applicable to the water system?		✓		
13b	If the property is served by a private well or non-public system, is there evidence or do you have prior knowledge that the well has been designated a contaminated by any government environmental/health agency?		✓		

PROPERTY QUESTIONNAIRE

No.	Question	Please indicate your response to each question. ("Unk" indicates a response of "unknown")			
		Yes	No	Unk	**Please explain each affirmative or unknown answer in the space provided.**
14	Does the *owner* or *occupants* of the *property* have any knowledge of *environmental liens* or governmental notification relating to past or recurrent violations of environmental laws with respect to the *property* or any facility located on the *property*?		✓		
15a	Has the *owner* or *occupant* of the *property* been informed of the past existence of *hazardous substances* or *petroleum products* with respect to the *property* or any facility located on the *property*?		✓		
15b	Has the *owner* or *occupant* of the *property* been informed of the current existence of *hazardous substances* or *petroleum products* with respect to the *property* or any facility located on the *property*?		✓		
15c	Has the *owner* or *occupant* of the *property* been informed of the past existence of environmental violations with respect to the *property* or any facility located on the *property*?		✓		
15d	Has the *owner* or *occupant* of the *property* been informed of the current existence of environmental violations with respect to the *property* or any facility located on the *property*?		✓		
16	Does the *owner* or *occupant* of the *property* have any knowledge of any *environmental site assessments* of the *property* or facility that indicated the presence of *hazardous substances* or *petroleum products* on, or contamination of, the *property* or recommended further assessment of the *property*?		✓		
17	Does the *owner* or *occupant* of the *property* know of any past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any *hazardous substance* or *petroleum products* involving the *property* by any owner or occupant of the *property*?		✓		
18a	Does the *property* discharge waste water (not including sanitary waste or storm water) onto or adjacent to the property and/or into a storm water system?		✓		May have been historical drainage at South end.

PROPERTY QUESTIONNAIRE

No.	Question	Please indicate your response to each question. ("Unk" indicates a response of "unknown")			
		Yes	No	Unk	**Please explain each affirmative or unknown answer in the space provided.**
18b	Does the *property* discharge waste water (not including sanitary waste or storm water) onto or adjacent to the property and/or into a sanitary sewer system?		✓		
19	Did you observe or do you have any knowledge that any *hazardous substances* or *petroleum products*, unidentified waste materials, tires, automotive or industrial batteries, or any other waste materials have been dumped above grade, buried and/or burned on the *property*?		✓		
20	Is there a transformer, capacitor, or any hydraulic equipment for which there are any records indicating the presence of PCBs?		✓		
21a	Are there hydraulic elevators on the property?		✓		
21b	Have the hydraulic elevators been tested within the past twelve months?				N/A
21c	Are there available maintenance records for the hydraulic elevators?				N/A
22a	Is there a Radiology installation located on this property?		✓		
22b	Does the Radiology installation use film?				N/A
22c	Is the Radiology film disposed-of by a licensed recycler or disposal company?				N/A
23a	Is there an emergency generator located on the property?		✓		
23b	Is the emergency generator fueled from aboveground or underground tanks?				N/A
24	Is there a Hematology facility located on the property?		✓		
25a	Is bulk medical gas stored on the property?		✓		

USER QUESTIONNAIRE

INTRODUCTION

In order to qualify for one of the *Landowner Liability Protections* offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2002, the *user* must provide the following information (if available) to the *environmental professional.* Failure to provide this information could result in a determination that "*all appropriate inquiry*" is not complete.

(1) Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law?

CIRCLE YES *or* NO

If yes, please explain in detail.

(2) Are you aware of any Act Use Limitations (AUL), such as *engineering controls*, land use restrictions or *institutional controls* that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?

YES *or* NO

If yes, please explain.

(3) As the *user* of this Environmental Site Assessment (ESA) do you have any specialized knowledge or familiarity related to the *property* or nearby properties? For example, are you involved in the same line of business as the current or former *occupants* of the *property* or its neighboring *property,* so that you may have specific knowledge of the chemicals and processes used by this type of business?

YES *or* NO

If yes, please explain.

(4) Does the purchase price being paid for this *property* reasonably reflect the fair market value of the *property*?

YES *or* NO

If you believe that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?

YES *or* NO

If yes, please explain.

(5) Are you aware of commonly known or *reasonably* ascertainable information that would help the *environment professional* to identify conditions pinpointing releases or threaten releases of hazardous materials and/ or chemicals? For example, as user,

(a.) Do you know of any past uses of the *property?* YES or NO

(b.) Do you know of specific chemicals that are present or once were present at the *property*? YES or NO

(c.) Do you know of any chemical spills or any other chemical releases that have taken place at the *property?* YES or NO

(d.) Do you know of any environmental cleanups that have taken place at the *property*? YES *or* NO

If any yes, please explain.

(6) As the user of this Environmental Site Assessment (ESA), based on your knowledge and experience related to the *property* are there any *obvious* indicators that point to the presence or likely presence of contamination at the *property*?

YES *or* NO

If yes, please explain.

Completed By__Gilbert Isaac Vazquez _____
Print Name

Gilbert Isaac Vazquez
Signature

_____6.6.24_____
Date

APPENDIX D

PHOTOGRAPHS

PHOTOGRAPHS
Tentative Tract Map No. 943
Hanford, King County, California

1. View east, along Hanford Armona Road from northeast corner of Site.

2. View west, along Hanford Armona Road from northeast corner of Site.

GEOTEK

PHOTOGRAPHS
Tentative Tract Map No. 943
Hanford, King County, California

3. View southwesterly, along Hanford Armona Road from northeast corner of Site.

4. View east from north portion of Site. Showing adjoining single-family development east of the Site.

PHOTOGRAPHS
Tentative Tract Map No. 943
Hanford, King County, California

5. View west from north portion of Site.

6. View northwesterly from north portion of Site.

PHOTOGRAPHS
Tentative Tract Map No. 943
Hanford, King County, California

7. View south from north portion of Site.

8. Showing debris in east boundary of Site.

GEOTEK

PHOTOGRAPHS
Tentative Tract Map No. 943
Hanford, King County, California

9. View westerly from east boundary of Site.

10. Showing abandoned shopping carts in east boundary of Site.

GEOTEK

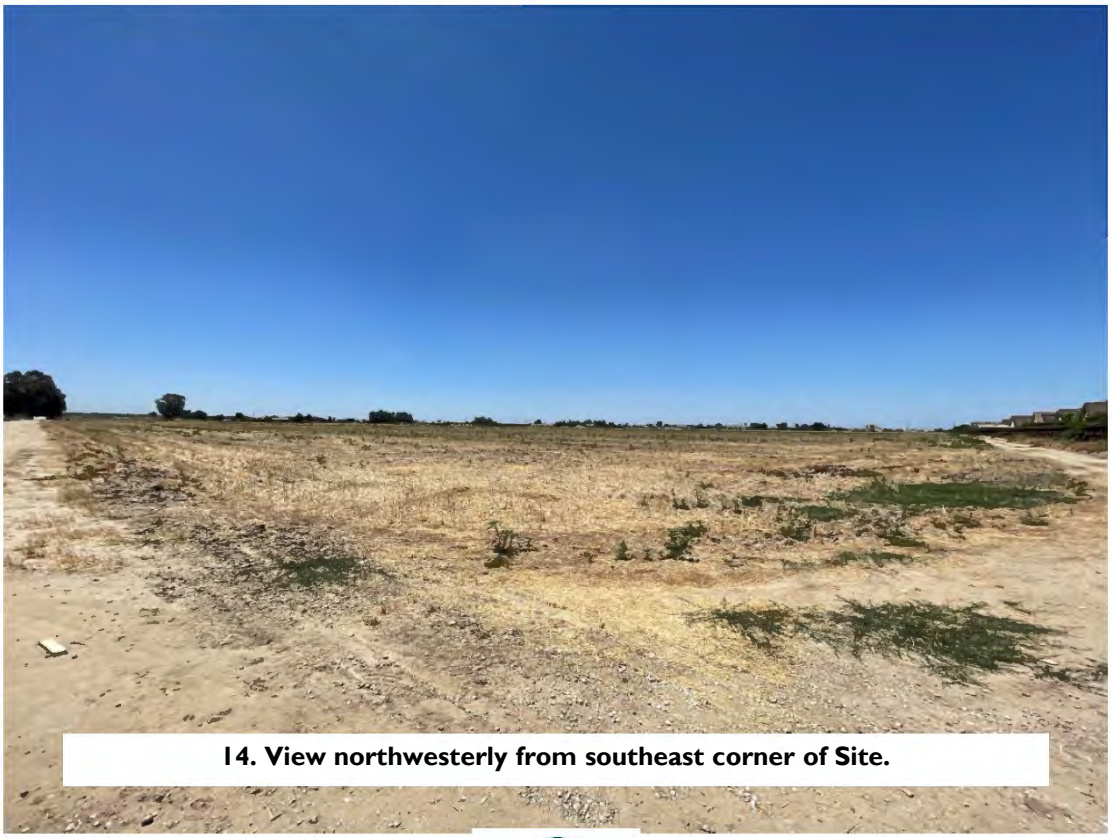
PHOTOGRAPHS
Tentative Tract Map No. 943
Hanford, King County, California

11. Showing furniture debris and abandoned tires in southeast corner of Site.

12. Showing furniture debris in southeast corner of Site.

PHOTOGRAPHS
Tentative Tract Map No. 943
Hanford, King County, California

13. Showing furniture debris in southeast corner of Site.



14. View northwesterly from southeast corner of Site.

PHOTOGRAPHS
Tentative Tract Map No. 943
Hanford, King County, California

15. Showing furniture debris in south-central boundary of Site.

16. Showing debris in south boundary of Site.

GEOTEK

PHOTOGRAPHS
Tentative Tract Map No. 943
Hanford, King County, California

17. View northeast from southwest boundary of Site. Showing water line pipe and wooden box.

18. View northwesterly from southwest boundary of Site.

GEOTEK

PHOTOGRAPHS
Tentative Tract Map No. 943
Hanford, King County, California

19. View west from south boundary of Site.

20. View northeasterly from south boundary of Site.

PHOTOGRAPHS
Tentative Tract Map No. 943
Hanford, King County, California

21. View southwesterly from northwest boundary of Site.

22. View north from northwest boundary of Site. Showing adjoining vacant land to the northwest of the Site.

PHOTOGRAPHS
Tentative Tract Map No. 943
Hanford, King County, California

23. View southwesterly from central-west portion of Site.

24. View northeast from central-west portion of Site. Showing irrigation standpipe.

GEOTEK

PHOTOGRAPHS
Tentative Tract Map No. 943
Hanford, King County, California

25. View northeasterly from central-west portion of Site.

26. View northwesterly from central-west portion of Site. Showing adjoining vacant land to the northeast of the Site.

GEOTEK

PHOTOGRAPHS
Tentative Tract Map No. 943
Hanford, King County, California

27. View easterly from northwest boundary of Site.

28. View southeasterly from northwest boundary of Site.

PHOTOGRAPHS
Tentative Tract Map No. 943
Hanford, King County, California

29. View southwesterly from northwest boundary of Site. Showing adjoining vacant land to the northwest of the Site.

APPENDIX E

ENVIRONMENTAL DATABASE REPORT

GEOTEK

VTTM 943
Hanford Armona Road
Hanford, CA 93230

Inquiry Number: 7674781.2s
June 06, 2024

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	ES1
Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	9
Orphan Summary	30
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting SSURGO Soil Map	A-5
Physical Setting Source Map	A-9
Physical Setting Source Map Findings	A-11
Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, LLC. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. This Report is provided on an "AS IS", "AS AVAILABLE" basis. **NO WARRANTY EXPRESS OR IMPLIED IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, LLC AND ITS SUBSIDIARIES, AFFILIATES AND THIRD PARTY SUPPLIERS DISCLAIM ALL WARRANTIES, OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, ARISING OUT OF OR RELATED TO THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES REGARDING ACCURACY, QUALITY, CORRECTNESS, COMPLETENESS, COMPREHENSIVENESS, SUITABILITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, MISAPPROPRIATION, OR OTHERWISE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, LLC OR ITS SUBSIDIARIES, AFFILIATES OR THIRD PARTY SUPPLIERS BE LIABLE TO ANYONE FOR ANY DIRECT, INCIDENTAL, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY TYPE OR KIND (INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, LOSS OF USE, OR LOSS OF DATA) INFORMATION PROVIDED IN THIS REPORT.** Any analyses, estimates, ratings, environmental risk levels, or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only an assessment performed by a qualified environmental professional can provide findings, opinions or conclusions regarding the environmental risk or conditions in, on or at any property.

Copyright 2024 by Environmental Data Resources, LLC. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, LLC, or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, LLC or its affiliates. All other trademarks used herein are the property of their respective owners.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527 - 21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E2247 - 16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E1528 - 22) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

HANFORD ARMONA ROAD
HANFORD, CA 93230

COORDINATES

Latitude (North):	36.3099180 - 36° 18' 35.70''
Longitude (West):	119.6800910 - 119° 40' 48.32''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	259366.2
UTM Y (Meters):	4021456.5
Elevation:	243 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	50005774 HANFORD, CA
Version Date:	2021

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20200705
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
HANFORD ARMONA ROAD
HANFORD, CA 93230

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	DAVID HERNANDEZ	1166 EDGEWOOD DR	RCRA NonGen / NLR	Higher	331, 0.063, ENE
2	GILLIAN GARDNER	1255 CLING CIRCLE	RCRA NonGen / NLR	Higher	1029, 0.195, East
3	DANNY FLOREZ	1083 WOODLAND DR	RCRA NonGen / NLR	Higher	1132, 0.214, ENE
4	WL WINTERBG FARM	12458 HANFORD DRIVE	HIST UST	Higher	1156, 0.219, NW
5	CORNELIUS, BEN	11801 12TH AVENUE	ENVIROSTOR	Higher	2362, 0.447, SE
A6	HIGHWAY PATROL HEADQ	11050 13TH	LUST, Cortese, HIST CORTESE, CERS	Lower	2462, 0.466, WNW
A7	HIGHWAY PATROL HEADQ	11050 13TH AVE	UST FINDER RELEASE	Lower	2462, 0.466, WNW

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Lists of Federal Delisted NPL sites

Delisted NPL ---------- National Priority List Deletions

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS ---------- Corrective Action Report

Lists of Federal RCRA TSD facilities

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Lists of Federal RCRA generators

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-VSQG ---------- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System

US ENG CONTROLS---- Engineering Controls Sites List
US INST CONTROLS---- Institutional Controls Sites List

Federal ERNS list

ERNS---- Emergency Response Notification System

Lists of state- and tribal (Superfund) equivalent sites

RESPONSE---- State Response Sites

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF---- Solid Waste Information System

Lists of state and tribal leaking storage tanks

INDIAN LUST---- Leaking Underground Storage Tanks on Indian Land
CPS-SLIC---- Statewide SLIC Cases

Lists of state and tribal registered storage tanks

FEMA UST---- Underground Storage Tank Listing
UST---- Active UST Facilities
AST---- Aboveground Petroleum Storage Tank Facilities
INDIAN UST---- Underground Storage Tanks on Indian Land

Lists of state and tribal voluntary cleanup sites

VCP---- Voluntary Cleanup Program Properties
INDIAN VCP---- Voluntary Cleanup Priority Listing

Lists of state and tribal brownfield sites

BROWNFIELDS---- Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS---- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT---- Waste Management Unit Database
SWRCY---- Recycler Database
HAULERS---- Registered Waste Tire Haulers Listing
INDIAN ODI---- Report on the Status of Open Dumps on Indian Lands
ODI---- Open Dump Inventory
DEBRIS REGION 9---- Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS---- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL---- Delisted National Clandestine Laboratory Register

HIST Cal-Sites---------- Historical Calsites Database
SCH---------- School Property Evaluation Program
CDL---------- Clandestine Drug Labs
CERS HAZ WASTE---------- California Environmental Reporting System Hazardous Waste
Toxic Pits---------- Toxic Pits Cleanup Act Sites
US CDL---------- National Clandestine Laboratory Register

Local Lists of Registered Storage Tanks

SWEEPS UST---------- SWEEPS UST Listing
CERS TANKS---------- California Environmental Reporting System (CERS) Tanks
CA FID UST---------- Facility Inventory Database

Local Land Records

LIENS---------- Environmental Liens Listing
LIENS 2---------- CERCLA Lien Information
DEED---------- Deed Restriction Listing

Records of Emergency Release Reports

HMIRS---------- Hazardous Materials Information Reporting System
CHMIRS---------- California Hazardous Material Incident Report System
LDS---------- Land Disposal Sites Listing
MCS---------- Military Cleanup Sites Listing
SPILLS 90---------- SPILLS 90 data from FirstSearch

Other Ascertainable Records

FUDS---------- Formerly Used Defense Sites
DOD---------- Department of Defense Sites
SCRD DRYCLEANERS---------- State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR---------- Financial Assurance Information
EPA WATCH LIST---------- EPA WATCH LIST
2020 COR ACTION---------- 2020 Corrective Action Program List
TSCA---------- Toxic Substances Control Act
TRIS---------- Toxic Chemical Release Inventory System
SSTS---------- Section 7 Tracking Systems
ROD---------- Records Of Decision
RMP---------- Risk Management Plans
RAATS---------- RCRA Administrative Action Tracking System
PRP---------- Potentially Responsible Parties
PADS---------- PCB Activity Database System
ICIS---------- Integrated Compliance Information System
FTTS---------- FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS---------- Material Licensing Tracking System
COAL ASH DOE---------- Steam-Electric Plant Operation Data
COAL ASH EPA---------- Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER---------- PCB Transformer Registration Database
RADINFO---------- Radiation Information Database
HIST FTTS---------- FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS---------- Incident and Accident Data
CONSENT---------- Superfund (CERCLA) Consent Decrees
INDIAN RESERV---------- Indian Reservations

EXECUTIVE SUMMARY

FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
MINES MRDS	Mineral Resources Data System
ABANDONED MINES	Abandoned Mines
FINDS	Facility Index System/Facility Registry System
DOCKET HWC	Hazardous Waste Compliance Docket Listing
ECHO	Enforcement & Compliance History Information
UXO	Unexploded Ordnance Sites
FUELS PROGRAM	EPA Fuels Program Registered Listing
PFAS NPL	Superfund Sites with PFAS Detections Information
PFAS FEDERAL SITES	Federal Sites PFAS Information
PFAS TSCA	PFAS Manufacture and Imports Information
PFAS TRIS	List of PFAS Added to the TRI
PFAS RCRA MANIFEST	PFAS Transfers Identified In the RCRA Database Listing
PFAS ATSDR	PFAS Contamination Site Location Listing
PFAS WQP	Ambient Environmental Sampling for PFAS
PFAS NPDES	Clean Water Act Discharge Monitoring Information
PFAS ECHO	Facilities in Industries that May Be Handling PFAS Listing
PFAS ECHO FIRE TRAIN	Facilities in Industries that May Be Handling PFAS Listing
PFAS PT 139 AIRPORT	All Certified Part 139 Airports PFAS Information Listing
AQUEOUS FOAM NRC	Aqueous Foam Related Incidents Listing
BIOSOLIDS	ICIS-NPDES Biosolids Facility Data
PFAS	PFAS Investigation Site Location Listing
AQUEOUS FOAM	Former Fire Training Facility Assessments Listing
CA BOND EXP. PLAN	Bond Expenditure Plan
CHROME PLATING	Chrome Plating Facilities Listing
CUPA Listings	CUPA Resources List
DRYCLEANERS	Cleaner Facilities
EMI	Emissions Inventory Data
ENF	Enforcement Action Listing
Financial Assurance	Financial Assurance Information Listing
ICE	Inspection, Compliance and Enforcement
HWP	EnviroStor Permitted Facilities Listing
HWT	Registered Hazardous Waste Transporter Database
HWTS	Hazardous Waste Tracking System
HAZNET	Facility and Manifest Data
MINES	Mines Site Location Listing
MWMP	Medical Waste Management Program Listing
NPDES	NPDES Permits Listing
PEST LIC	Pesticide Regulation Licenses Listing
PROC	Certified Processors Database
Notify 65	Proposition 65 Records
HAZMAT	Hazardous Material Facilities
UIC	UIC Listing
UIC GEO	UIC GEO (GEOTRACKER)
WASTEWATER PITS	Oil Wastewater Pits Listing
WDS	Waste Discharge System
WIP	Well Investigation Program Case List
MILITARY PRIV SITES	MILITARY PRIV SITES (GEOTRACKER)
PROJECT	PROJECT (GEOTRACKER)
WDR	Waste Discharge Requirements Listing
CIWQS	California Integrated Water Quality System

EXECUTIVE SUMMARY

CERS ---------- CERS
NON-CASE INFO ---------- NON-CASE INFO (GEOTRACKER)
OTHER OIL GAS ---------- OTHER OIL & GAS (GEOTRACKER)
PROD WATER PONDS ---------- PROD WATER PONDS (GEOTRACKER)
SAMPLING POINT ---------- SAMPLING POINT (GEOTRACKER)
WELL STIM PROJ ---------- Well Stimulation Project (GEOTRACKER)
UST FINDER ---------- UST Finder Database

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP ---------- EDR Proprietary Manufactured Gas Plants
EDR Hist Auto ---------- EDR Exclusive Historical Auto Stations
EDR Hist Cleaner ---------- EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF ---------- Recovered Government Archive Solid Waste Facilities List
RGA LUST ---------- Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Lists of state- and tribal hazardous waste facilities

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 01/22/2024 has revealed that there is

1 ENVIROSTOR site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CORNELIUS, BEN Facility Id: 16200007 Status: Refer: RWQCB	11801 12TH AVENUE	SE 1/4 - 1/2 (0.447 mi.)	5	16

Lists of state and tribal leaking storage tanks

LUST: Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the LUST list, as provided by EDR, has revealed that there is 1 LUST site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
HIGHWAY PATROL HEADQ Database: LUST REG 5, Date of Government Version: 07/01/2008 Database: LUST, Date of Government Version: 03/04/2024 Status: Completed - Case Closed Global Id: T0603100023 Status: Remediation Plan	***11050 13TH***	***WNW 1/4 - 1/2 (0.466 mi.)***	***A6***	***17***

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Registered Storage Tanks

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there is 1 HIST UST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
WL WINTERBG FARM Facility Id: 00000022683	12458 HANFORD DRIVE	NW 1/8 - 1/4 (0.219 mi.)	4	15

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 12/04/2023 has revealed that

there are 3 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
DAVID HERNANDEZ EPA ID:: CAC003047707	1166 EDGEWOOD DR	ENE 0 - 1/8 (0.063 mi.)	1	9
GILLIAN GARDNER EPA ID:: CAC003223821	1255 CLING CIRCLE	E 1/8 - 1/4 (0.195 mi.)	2	11
DANNY FLOREZ EPA ID:: CAC002971005	1083 WOODLAND DR	ENE 1/8 - 1/4 (0.214 mi.)	3	13

Cortese: The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

A review of the Cortese list, as provided by EDR, and dated 12/13/2023 has revealed that there is 1 Cortese site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
HIGHWAY PATROL HEADQ Cleanup Status: COMPLETED - CASE CLOSED	***11050 13TH***	***WNW 1/4 - 1/2 (0.466 mi.)***	***A6***	***17***

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there is 1 HIST CORTESE site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
HIGHWAY PATROL HEADQ Reg Id: 5T16000022	***11050 13TH***	***WNW 1/4 - 1/2 (0.466 mi.)***	***A6***	***17***

UST FINDER RELEASE: US EPA's UST Finder data is a national composite of leaking underground storage tanks. This data contains information about, and locations of, leaking underground storage tanks. Data was collected from state sources and standardized into a national profile by EPA's Office of Underground Storage Tanks, Office of Research and Development, and the Association of State and Territorial Solid Waste Management Officials.

A review of the UST FINDER RELEASE list, as provided by EDR, and dated 06/08/2023 has revealed that there is 1 UST FINDER RELEASE site within approximately 0.5 miles of the target property.

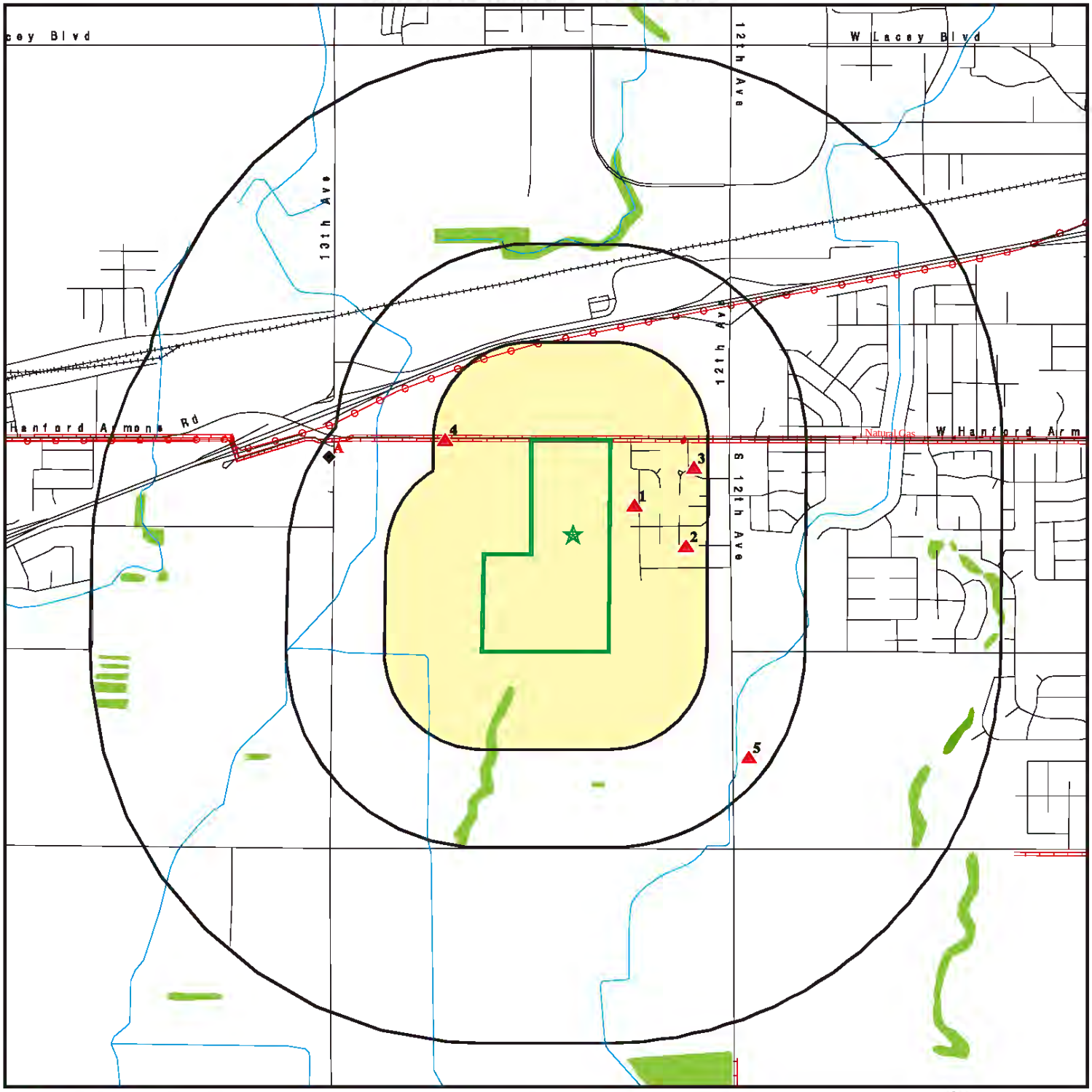
Lower Elevation	Address	Direction / Distance	Map ID	Page
HIGHWAY PATROL HEADQ	11050 13TH AVE	WNW 1/4 - 1/2 (0.466 mi.)	A7	28

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 1 records.

Site Name	Database(s)
	CDL

OVERVIEW MAP - 7674781.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

Power transmission lines

Pipelines

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

State Wetlands

Areas of Concern

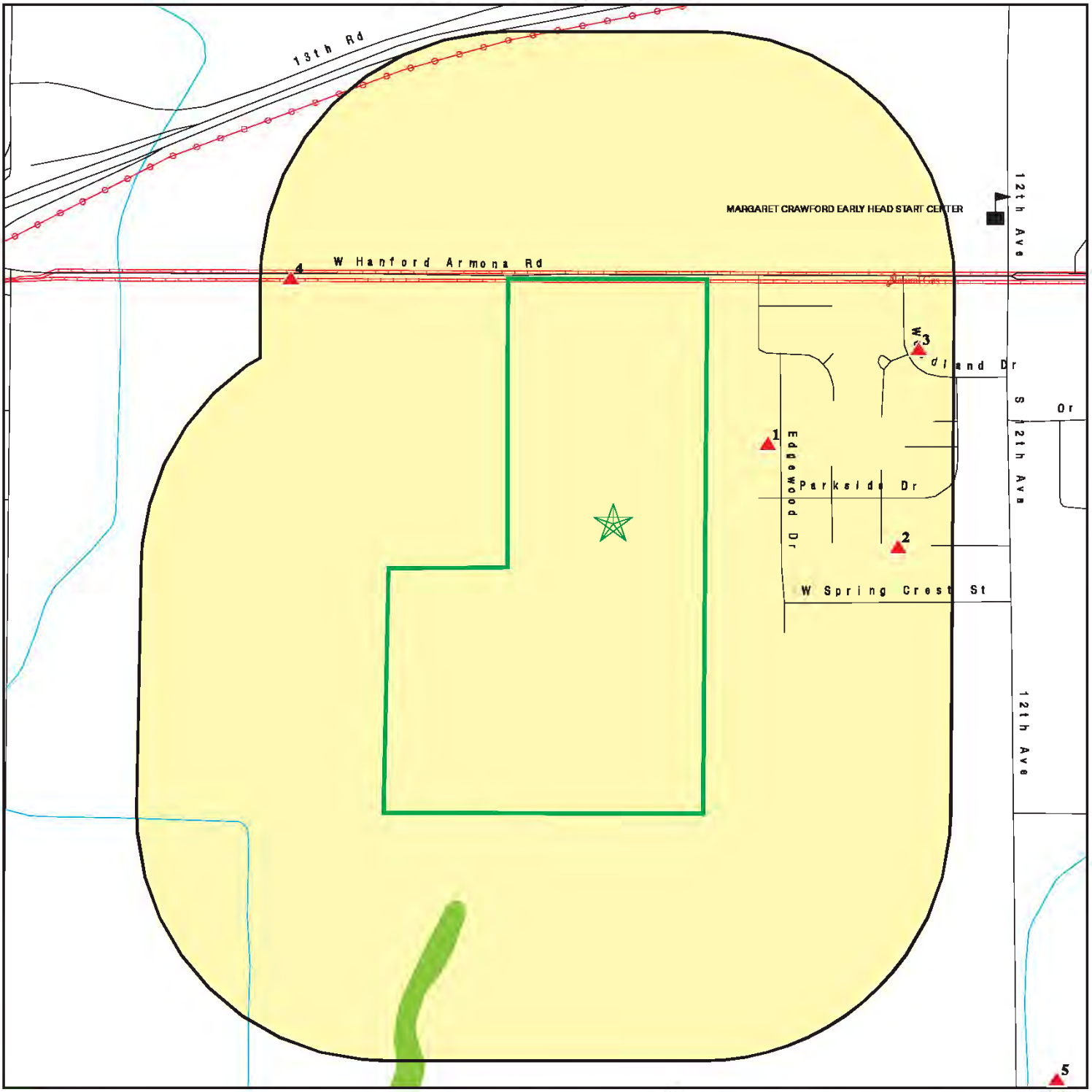
N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	VTTM 943	CLIENT:	Geotek
ADDRESS:	Hanford Armona Road Hanford CA 93230	CONTACT:	Kyle Richard Mchargue
LAT/LONG:	36.309918 / 119.680091	INQUIRY #:	7674781.2s
		DATE:	June 06, 2024 6:57 pm

Copyright © 2024 EDR, Inc. © 2015 TomTom Rel. 2015.

DETAIL MAP - 7674781.2S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Pipelines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	VTTM 943	CLIENT:	Geotek
ADDRESS:	Hanford Armona Road Hanford CA 93230	CONTACT:	Kyle Richard Mchargue
LAT/LONG:	36.309918 / 119.680091	INQUIRY #:	7674781.2s
		DATE:	June 06, 2024 6:58 pm

Copyright © 2024 EDR, Inc. © 2015 TomTom Rel. 2015.

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Lists of Federal NPL (Superfund) sites								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Lists of Federal Delisted NPL sites								
Delisted NPL	1.000		0	0	0	0	NR	0
Lists of Federal sites subject to CERCLA removals and CERCLA orders								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Lists of Federal CERCLA sites with NFRAP								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA facilities undergoing Corrective Action								
CORRACTS	1.000		0	0	0	0	NR	0
Lists of Federal RCRA TSD facilities								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA generators								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
Lists of state- and tribal (Superfund) equivalent sites								
RESPONSE	1.000		0	0	0	0	NR	0
Lists of state- and tribal hazardous waste facilities								
ENVIROSTOR	1.000		0	0	1	0	NR	1
Lists of state and tribal landfills and solid waste disposal facilities								
SWF/LF	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
Lists of state and tribal leaking storage tanks								
LUST	0.500		0	0	1	NR	NR	1
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	0	0	NR	NR	0
Lists of state and tribal registered storage tanks								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
Lists of state and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
Lists of state and tribal brownfield sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
CERS HAZ WASTE	0.250		0	0	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250		0	1	NR	NR	NR	1
CERS TANKS	0.250		0	0	NR	NR	NR	0
CA FID UST	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LIENS 2	0.001		0	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001		0	NR	NR	NR	NR	0
MCS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		1	2	NR	NR	NR	3
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
MINES MRDS	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
PFAS NPL	0.250		0	0	NR	NR	NR	0
PFAS FEDERAL SITES	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
PFAS TSCA	0.250		0	0	NR	NR	NR	0
PFAS TRIS	0.250		0	0	NR	NR	NR	0
PFAS RCRA MANIFEST	0.250		0	0	NR	NR	NR	0
PFAS ATSDR	0.250		0	0	NR	NR	NR	0
PFAS WQP	0.250		0	0	NR	NR	NR	0
PFAS NPDES	0.250		0	0	NR	NR	NR	0
PFAS ECHO	0.250		0	0	NR	NR	NR	0
PFAS ECHO FIRE TRAIN	0.250		0	0	NR	NR	NR	0
PFAS PT 139 AIRPORT	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM NRC	0.250		0	0	NR	NR	NR	0
BIOSOLIDS	0.001		0	NR	NR	NR	NR	0
PFAS	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
CHROME PLATING	0.500		0	0	0	NR	NR	0
Cortese	0.500		0	0	1	NR	NR	1
CUPA Listings	0.250		0	0	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	0.001		0	NR	NR	NR	NR	0
ENF	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		0	0	1	NR	NR	1
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
HWTS	0.001		0	NR	NR	NR	NR	0
HAZNET	0.001		0	NR	NR	NR	NR	0
MINES	0.250		0	0	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
PEST LIC	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
HAZMAT	0.250		0	0	NR	NR	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
UIC GEO	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
MILITARY PRIV SITES	0.001		0	NR	NR	NR	NR	0
PROJECT	0.001		0	NR	NR	NR	NR	0
WDR	0.001		0	NR	NR	NR	NR	0
CIWQS	0.001		0	NR	NR	NR	NR	0
CERS	0.001		0	NR	NR	NR	NR	0
NON-CASE INFO	0.001		0	NR	NR	NR	NR	0
OTHER OIL GAS	0.001		0	NR	NR	NR	NR	0
PROD WATER PONDS	0.001		0	NR	NR	NR	NR	0
SAMPLING POINT	0.001		0	NR	NR	NR	NR	0
WELL STIM PROJ	0.001		0	NR	NR	NR	NR	0
UST FINDER	0.250		0	0	NR	NR	NR	0
UST FINDER RELEASE	0.500		0	0	1	NR	NR	1

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	1	3	5	0	0	9

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1
ENE
< 1/8
0.063 mi.
331 ft.

DAVID HERNANDEZ
1166 EDGEWOOD DR
HANFORD, CA 93230

RCRA NonGen / NLR

1026041571
CAC003047707

Relative:
Higher

Actual:
243 ft.

RCRA Listings:

Date Form Received by Agency:	20191218
Handler Name:	David Hernandez
Handler Address:	1166 Edgewood Dr
Handler City,State,Zip:	HANFORD, CA 93230-5723
EPA ID:	CAC003047707
Contact Name:	DAVID HERNANDEZ
Contact Address:	1166 EDGEWOOD DR
Contact City,State,Zip:	HANFORD, CA 93230-5723
Contact Telephone:	559-530-1897
Contact Fax:	Not reported
Contact Email:	VALERIEO@CVECORP.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	1166 EDGEWOOD DR
Mailing City,State,Zip:	HANFORD, CA 93230-5723
Owner Name:	David Hernandez
Owner Type:	Other
Operator Name:	David Hernandez
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No

DAVID HERNANDEZ (Continued) **1026041571**

Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20200210
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name: DAVID HERNANDEZ	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	1166 EDGEWOOD DR
Owner/Operator City,State,Zip:	HANFORD, CA 93230-5723
Owner/Operator Telephone:	559-530-1897
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name: DAVID HERNANDEZ	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	1166 EDGEWOOD DR
Owner/Operator City,State,Zip:	HANFORD, CA 93230-5723
Owner/Operator Telephone:	559-530-1897
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20191218
Handler Name: DAVID HERNANDEZ	
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

DAVID HERNANDEZ (Continued) **1026041571**

List of NAICS Codes and Descriptions:
NAICS Code: 56299
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

2
East
1/8-1/4
0.195 mi.
1029 ft.

GILLIAN GARDNER
1255 CLING CIRCLE
HANFORD, CA 93230

RCRA NonGen / NLR **1027681994**
CAC003223821

Relative:
Higher

Actual:
243 ft.

RCRA Listings:

Date Form Received by Agency:	20230322
Handler Name:	Gillian Gardner
Handler Address:	1255 Cling Circle
Handler City,State,Zip:	HANFORD, CA 93230
EPA ID:	CAC003223821
Contact Name:	GILLIAN GARDNER
Contact Address:	1255 CLING CIRCLE
Contact City,State,Zip:	HANFORD, CA 93230
Contact Telephone:	559-267-3309
Contact Fax:	Not reported
Contact Email:	JDAVIS@PARCENVIRONMENTAL.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	1255 CLING CIRCLE
Mailing City,State,Zip:	HANFORD, CA 93230
Owner Name:	Gillian Gardner
Owner Type:	Other
Operator Name:	Gillian Gardner
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No

GILLIAN GARDNER (Continued) **1027681994**

Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20230323
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name: GILLIAN GARDNER	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	1255 CLING CIRCLE
Owner/Operator City,State,Zip:	HANFORD, CA 93230
Owner/Operator Telephone:	559-267-3309
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name: GILLIAN GARDNER	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	1255 CLING CIRCLE
Owner/Operator City,State,Zip:	HANFORD, CA 93230
Owner/Operator Telephone:	559-267-3309
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

GILLIAN GARDNER (Continued) **1027681994**

Historic Generators:
- Receive Date: 20230322
- Handler Name: GILLIAN GARDNER
- Federal Waste Generator Description: Not a generator, verified
- State District Owner: Not reported
- Large Quantity Handler of Universal Waste: No
- Recognized Trader Importer: No
- Recognized Trader Exporter: No
- Spent Lead Acid Battery Importer: No
- Spent Lead Acid Battery Exporter: No
- Current Record: Yes
- Non Storage Recycler Activity: No
- Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:
- NAICS Code: 56299
- NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:
- Violations: No Violations Found

Evaluation Action Summary:
- Evaluations: No Evaluations Found

---

3 **DANNY FLOREZ** **RCRA NonGen / NLR** **1024751213**
ENE **1083 WOODLAND DR** **CAC002971005**
1/8-1/4 **HANFORD, CA 93230**
0.214 mi.
1132 ft.

Relative: **Higher**

Actual: **243 ft.**

RCRA Listings:
- Date Form Received by Agency: 20180716
- Handler Name: Danny Florez
- Handler Address: 1083 Woodland Dr
- Handler City,State,Zip: HANFORD, CA 93230
- EPA ID: CAC002971005
- Contact Name: DANNY FLOREZ
- Contact Address: 219 N DOUTY ST
- Contact City,State,Zip: HANFORD, CA 93230
- Contact Telephone: 559-362-9530
- Contact Fax: Not reported
- Contact Email: LIZE@PWSEI.COM
- Contact Title: Not reported
- EPA Region: 09
- Land Type: Not reported
- Federal Waste Generator Description: Not a generator, verified
- Non-Notifier: Not reported
- Biennial Report Cycle: Not reported
- Accessibility: Not reported
- Active Site Indicator: Handler Activities
- State District Owner: Not reported
- State District: Not reported
- Mailing Address: 219 N DOUTY ST
- Mailing City,State,Zip: HANFORD, CA 93230
- Owner Name: Danny Florez

DANNY FLOREZ (Continued) **1024751213**

Owner Type:	Other
Operator Name:	Danny Florez
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20180831
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name: DANNY FLOREZ	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	219 N DOUTY ST
Owner/Operator City,State,Zip:	HANFORD, CA 93230
Owner/Operator Telephone:	559-362-9530
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

DANNY FLOREZ (Continued) **1024751213**

Owner/Operator Indicator: Operator
Owner/Operator Name: DANNY FLOREZ
Legal Status: Other
Date Became Current: Not reported
Date Ended Current: Not reported
Owner/Operator Address: 219 N DOUTY ST
Owner/Operator City,State,Zip: HANFORD, CA 93230
Owner/Operator Telephone: 559-362-9530
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:
Receive Date: 20180716
Handler Name: DANNY FLOREZ
Federal Waste Generator Description: Not a generator, verified
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 56299
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

---

4 **WL WINTERBG FARM** **HIST UST** **U001581696**
NW **12458 HANFORD DRIVE** **N/A**
1/8-1/4 **HANFORD, CA 93230**
0.219 mi.
1156 ft.

Relative:
Higher

Actual:
243 ft.

HIST UST:
Name: WL WINTERBG FARM
Address: 12458 HANFORD DRIVE
City,State,Zip: HANFORD, CA 93230
File Number: 00025797
URL: https://documents.geotracker.waterboards.ca.gov/ustpdfs/pdf/00025797.pdf
Region: STATE
Facility ID: 00000022683
Facility Type: Other
Other Type: FARM
Contact Name: Not reported
Telephone: 2095820926
Owner Name: W.L. WINTERBERG

WL WINTERBG FARM (Continued) **U001581696**

Owner Address:	12501 LACY
Owner City,St,Zip:	HANFORD, CA 93230
Total Tanks:	0001
Tank Num:	001
Container Num:	0000000001
Year Installed:	Not reported
Tank Capacity:	00000550
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor

Click here for Geo Tracker PDF:

---

5 **CORNELIUS, BEN** **ENVIROSTOR** **S100180507**
SE **11801 12TH AVENUE** **N/A**
1/4-1/2 **HANFORD, CA 93230**
0.447 mi.
2362 ft.

Relative:
Higher

Actual:
243 ft.

ENVIROSTOR:

Name:	CORNELIUS, BEN
Address:	11801 12TH AVENUE
City,State,Zip:	HANFORD, CA 93230
Facility ID:	16200007
Status:	Refer: RWQCB
Status Date:	06/26/1995
Site Code:	Not reported
Site Type:	Historical
Site Type Detailed:	* Historical
Acres:	Not reported
NPL:	NO
Regulatory Agencies:	NONE SPECIFIED
Lead Agency:	NONE SPECIFIED
Program Manager:	Not reported
Supervisor:	Referred - Not Assigned
Division Branch:	Cleanup Sacramento
Assembly:	33
Senate:	16
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	Not reported
Latitude:	36.30174
Longitude:	-119.6720
APN:	NONE SPECIFIED
Past Use:	NONE SPECIFIED
Potential COC:	NONE SPECIFIED
Confirmed COC:	NONE SPECIFIED
Potential Description:	NONE SPECIFIED
Alias Name:	BEN CORNELIUS
Alias Type:	Alternate Name
Alias Name:	CORNELIUS RANCH
Alias Type:	Alternate Name
Alias Name:	16200007
Alias Type:	Envirostor ID Number

CORNELIUS, BEN (Continued) **S100180507**

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Screening
Completed Date:	11/29/1989
Comments:	SITE SCREENING DONE SOAP STALK WASTE IS CLASSIFIED AS HAZ- ARDOUS WASTE BASED ON THE AQUATIC FISH BIOASSAY TEST. RECOMMEND MEDIUM PRIOR- ITY PRELIMINARY ENDANGERMENT ASSESSMENT
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	* Discovery
Completed Date:	03/23/1987
Comments:	FACILITY IDENTIFIED DHS, SURVEILLANCE AND ENFORCEMENT UNIT: COMPLAINT - WASTE STORED IN UNLINED POND
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

A6 **HIGHWAY PATROL HEADQUARTE** **LUST** **S101295374**
WNW **11050 13TH** **Cortese** **N/A**
1/4-1/2 **HANFORD, CA 93230** **HIST CORTESE**
0.466 mi. **CERS**
2462 ft. **Site 1 of 2 in cluster A**

Relative: **Lower**

Actual: **240 ft.**

LUST:

Name:	HIGHWAY PATROL HEADQUARTERS
Address:	11050 13TH AVE
City,State,Zip:	HANFORD, CA 93230
Lead Agency:	CENTRAL VALLEY RWQCB (REGION 5F)
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603100023
Global Id:	T0603100023
Latitude:	36.312504869298
Longitude:	-119.691375152779
Status:	Completed - Case Closed
Status Date:	05/19/2016
Case Worker:	MLE
RB Case Number:	5T16000022
Local Agency:	KINGS COUNTY
File Location:	Regional Board
Local Case Number:	Not reported
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
EPA Region:	9
Coordinate Source:	Google Map Move
Cuf Case:	NO
Quantity Released Gallons:	Not reported
Begin Date:	12/05/1986
Leak Reported Date:	12/19/1986

HIGHWAY PATROL HEADQUARTE (Continued) **S101295374**

How Discovered:	Tank Closure
How Discovered Description:	Not reported
Discharge Source:	Tank
Discharge Cause:	Physc / Mech Damage
Stop Method:	Not reported
Stop Description:	Not reported
No Further Action Date:	05/19/2016
CA Water Watershed Name:	South Valley Floor - Hanford-Lemoore (551.90)
Dwr Groundwater Subbasin Name:	San Joaquin Valley - Tulare Lake (5-022.12)
Disadvantaged Community:	Not reported
CA Enviroscreen 3 Score:	91-95%
CA Enviroscreen 4 Score:	85-90%
Military DOD Site:	No
Facility Project Subtype:	Not reported
RWQCB Region:	CENTRAL VALLEY RWQCB (REGION 5F)
Site History:	The subject property (Site) is currently occupied by a vacant building which previously served as a California Highway Patrol (CHP) headquarters. The Site is not within the service area of a public water system. There is a domestic water supply well onsite, and four domestic wells and one irrigation well within 1,000 feet of the Site. The nearest surface water body is a distributary of the Last Chance Ditch, approximately 650 feet east of the Site. Groundwater was measured at between 25 and 28 feet below ground surface (bgs) on 8 May 2015, and is estimated to flow primarily southeast. In December 1986 a leaking 12,000-gallon underground storage tank (UST), was removed. Analysis of soil and groundwater samples collected at that time indicated that petroleum product constituents had been released into the subsurface soil and groundwater. On 19 December 1986 the Kings County Health Department (KCHD) issued a report establishing a Leaking UST (LUST) case. The KCHD referred the case to the Central Valley Water Board on 5 January 1987. Subsurface soil investigation conducted from June 1987 to July 1989 determined that petroleum product constituents migrated laterally from the former UST location, to include an area estimated to be at least 9,600 square feet within the southeast portion of the Site. The majority of the impacted soil was between a depth of 10 feet bgs and the groundwater surface. The maximum estimated mass of petroleum product constituents within the soil was equivalent to approximately 12,000 pounds of gasoline or about 1,950 gallons. In July 1989 soil excavation was conducted at the Site which removed approximately 600 cubic yards of petroleum product impacted soil, estimated to have contained approximately 2,500 pounds of gasoline. In April 1991 a soil vapor extraction (SVE) system with three SVE wells was operated for a total of 82 days. The SVE operation removed approximately 9,300 pounds of gasoline vapors from the soil and groundwater. The remediation efforts have removed approximately 98% of the estimated total petroleum product constituents that were present in the subsurface. A series nineteen of groundwater monitoring wells were installed on the Site and the adjacent properties, between June 1987 and January 2015. Groundwater monitoring has been ongoing at the Site since May 1989, with the most recent sampling conducted in May 2015. Early in the monitoring effort, free product was observed in three onsite monitoring wells, but the last time it was observed was during the January 1992 sampling event. The analytical results from the groundwater samples have shown a general decrease in petroleum product constituent concentrations in all the wells since December 1993. The analytical results confirm that the groundwater plume is either stable or

HIGHWAY PATROL HEADQUARTE (Continued) **S101295374**

decreasing in areal extent. Petroleum constituents that remain in soil and groundwater beneath the Site should continue to degrade naturally, and pose no significant threat to human health and safety, the environment or groundwater quality in the area of the Site. On 1 May 2012, the State Water Resources Control Board (State Board) adopted the Low-Threat Underground Storage Tank Case Closure Policy, (Policy). The Policy is limited to areas with available public water systems. Case closure outside areas with public water systems are to be evaluated based upon the fundamental framework and principles contained in the Policy. Based on the evaluation outlined above, this case meets the fundamental framework and principles of the Policy, and closure is warranted.

LUST:
Global Id: T0603100023
Contact Type: Regional Board Caseworker - Primary Caseworker
Contact Name: MICHEALE EASLEY
Organization Name: CENTRAL VALLEY RWQCB (REGION 5F)
Address: 1685 E Street
City: FRESNO
Email: micheale.easley@waterboards.ca.gov
Phone Number: 5594884391

Global Id: T0603100023
Contact Type: Local Agency Caseworker
Contact Name: PATZER, SUSAN E.
Organization Name: KINGS COUNTY
Address: Not reported
City: r5 UNKNOWN
Email: Not reported
Phone Number: Not reported

LUST:
Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 09/09/2002
Action: File review

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 11/21/2002
Action: File review

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 02/08/2002
Action: File review

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 10/29/2009
Action: Staff Letter

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 12/21/2009
Action: Technical Correspondence / Assistance / Other

HIGHWAY PATROL HEADQUARTE (Continued) **S101295374**

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 10/01/2014
Action: Site Visit / Inspection / Sampling

Global Id: T0603100023
Action Type: Other
Date: 12/15/1986
Action: Leak Discovery

Global Id: T0603100023
Action Type: RESPONSE
Date: 08/12/2002
Action: Monitoring Report - Quarterly

Global Id: T0603100023
Action Type: RESPONSE
Date: 05/29/2006
Action: Other Report / Document

Global Id: T0603100023
Action Type: RESPONSE
Date: 10/11/2007
Action: Other Workplan

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 11/28/2007
Action: Staff Letter

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 11/09/2006
Action: Staff Letter

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 02/20/2007
Action: Warning Letter

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 01/16/2007
Action: Staff Letter

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 04/18/2007
Action: Staff Letter

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 01/14/2014
Action: Staff Letter

Global Id: T0603100023
Action Type: ENFORCEMENT

HIGHWAY PATROL HEADQUARTE (Continued) **S101295374**

Date: 07/25/2014
Action: Staff Letter

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 12/02/2015
Action: Staff Letter

Global Id: T0603100023
Action Type: Other
Date: 12/19/1986
Action: Leak Reported

Global Id: T0603100023
Action Type: RESPONSE
Date: 08/12/2002
Action: Monitoring Report - Quarterly

Global Id: T0603100023
Action Type: RESPONSE
Date: 08/12/2002
Action: Monitoring Report - Quarterly

Global Id: T0603100023
Action Type: RESPONSE
Date: 12/13/2005
Action: Other Workplan

Global Id: T0603100023
Action Type: RESPONSE
Date: 01/22/2007
Action: Corrective Action Plan / Remedial Action Plan

Global Id: T0603100023
Action Type: RESPONSE
Date: 03/01/2016
Action: Well Destruction Report

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 05/10/2006
Action: Staff Letter

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 07/18/2007
Action: Staff Letter

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 04/25/2006
Action: Staff Letter

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 07/17/2006
Action: Staff Letter

HIGHWAY PATROL HEADQUARTE (Continued) **S101295374**

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 08/30/2006
Action: Site Visit / Inspection / Sampling

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 08/03/2006
Action: Warning Letter

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 06/30/2011
Action: Staff Letter

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 11/13/2013
Action: Staff Letter

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 05/19/2016
Action: Closure/No Further Action Letter

Global Id: T0603100023
Action Type: Other
Date: 12/05/1986
Action: Leak Stopped

Global Id: T0603100023
Action Type: RESPONSE
Date: 02/02/2006
Action: Monitoring Report - Quarterly

Global Id: T0603100023
Action Type: RESPONSE
Date: 08/03/2010
Action: Monitoring Report - Semi-Annually

Global Id: T0603100023
Action Type: RESPONSE
Date: 02/03/2011
Action: Monitoring Report - Semi-Annually

Global Id: T0603100023
Action Type: RESPONSE
Date: 04/26/2010
Action: Correspondence

Global Id: T0603100023
Action Type: RESPONSE
Date: 05/01/2014
Action: Monitoring Report - Other

Global Id: T0603100023
Action Type: RESPONSE

HIGHWAY PATROL HEADQUARTE (Continued) **S101295374**

Date: 08/01/2015
Action: Monitoring Report - Semi-Annually

Global Id: T0603100023
Action Type: RESPONSE
Date: 11/01/2014
Action: Monitoring Report - Quarterly

Global Id: T0603100023
Action Type: RESPONSE
Date: 09/30/2015
Action: Other Report / Document

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 08/27/2004
Action: * Verbal Communication

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 07/23/2003
Action: Staff Letter

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 01/25/2005
Action: * Verbal Communication

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 09/15/2005
Action: Staff Letter

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 05/27/2005
Action: Staff Letter

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 12/20/2005
Action: Staff Letter

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 02/18/2015
Action: Staff Letter

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 05/21/2014
Action: Staff Letter

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 09/22/2015
Action: Staff Letter

HIGHWAY PATROL HEADQUARTE (Continued) **S101295374**

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 09/22/2015
Action: Notification - Preclosure

Global Id: T0603100023
Action Type: RESPONSE
Date: 10/05/2004
Action: Monitoring Report - Quarterly

Global Id: T0603100023
Action Type: RESPONSE
Date: 08/04/2003
Action: Monitoring Report - Quarterly

Global Id: T0603100023
Action Type: RESPONSE
Date: 12/13/2005
Action: CAP/RAP - Final Remediation / Design Plan

Global Id: T0603100023
Action Type: RESPONSE
Date: 11/02/2005
Action: Monitoring Report - Quarterly

Global Id: T0603100023
Action Type: RESPONSE
Date: 08/01/2011
Action: Monitoring Report - Semi-Annually

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 05/06/2002
Action: Staff Letter

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 11/22/2002
Action: Warning Letter

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 09/10/2002
Action: Staff Letter

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 05/20/2003
Action: Staff Letter

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 11/21/2002
Action: Meeting

Global Id: T0603100023
Action Type: ENFORCEMENT

HIGHWAY PATROL HEADQUARTE (Continued) **S101295374**

Date: 05/11/2004
Action: * Verbal Communication

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 02/25/2010
Action: Staff Letter

Global Id: T0603100023
Action Type: ENFORCEMENT
Date: 07/29/2015
Action: Staff Letter

Global Id: T0603100023
Action Type: RESPONSE
Date: 12/16/2009
Action: CAP/RAP - Final Remediation / Design Plan

Global Id: T0603100023
Action Type: RESPONSE
Date: 08/02/2007
Action: Monitoring Report - Quarterly

Global Id: T0603100023
Action Type: RESPONSE
Date: 11/02/2007
Action: Monitoring Report - Quarterly

Global Id: T0603100023
Action Type: RESPONSE
Date: 03/04/2008
Action: Well Installation Report

Global Id: T0603100023
Action Type: RESPONSE
Date: 04/07/2008
Action: CAP/RAP - Final Remediation / Design Plan - Regulator Responded

Global Id: T0603100023
Action Type: RESPONSE
Date: 01/02/2014
Action: Other Workplan - Regulator Responded

Global Id: T0603100023
Action Type: RESPONSE
Date: 03/31/2014
Action: Soil and Water Investigation Report - Regulator Responded

Global Id: T0603100023
Action Type: RESPONSE
Date: 01/07/2014
Action: Soil Vapor Intrusion Investigation Workplan - Regulator Responded

Global Id: T0603100023
Action Type: RESPONSE
Date: 03/31/2014
Action: Request for Closure - Regulator Responded

HIGHWAY PATROL HEADQUARTE (Continued) **S101295374**

Global Id: T0603100023
Action Type: RESPONSE
Date: 07/16/2014
Action: Well Installation Workplan - Regulator Responded

Global Id: T0603100023
Action Type: RESPONSE
Date: 07/31/2014
Action: Other Workplan - Regulator Responded

Global Id: T0603100023
Action Type: RESPONSE
Date: 09/01/2015
Action: Request for Closure - Regulator Responded

Global Id: T0603100023
Action Type: REMEDIATION
Date: 01/01/1996
Action: Soil Vapor Extraction (SVE)

LUST:
Global Id: T0603100023
Status: Open - Case Begin Date
Status Date: 12/05/1986

Global Id: T0603100023
Status: Open - Site Assessment
Status Date: 12/18/1986

Global Id: T0603100023
Status: Open - Site Assessment
Status Date: 09/14/1987

Global Id: T0603100023
Status: Open - Site Assessment
Status Date: 02/07/1989

Global Id: T0603100023
Status: Open - Remediation
Status Date: 07/06/1989

Global Id: T0603100023
Status: Open - Remediation
Status Date: 12/21/1989

Global Id: T0603100023
Status: Open - Verification Monitoring
Status Date: 02/01/1996

Global Id: T0603100023
Status: Open - Remediation
Status Date: 11/18/2005

Global Id: T0603100023
Status: Open - Remediation
Status Date: 01/29/2007

HIGHWAY PATROL HEADQUARTE (Continued) **S101295374**

Global Id: T0603100023
Status: Open - Remediation
Status Date: 04/18/2007

Global Id: T0603100023
Status: Open - Remediation
Status Date: 02/24/2009

Global Id: T0603100023
Status: Completed - Case Closed
Status Date: 05/19/2016

LUST REG 5:
Name: HIGHWAY PATROL HEADQUARTERS
Address: 11050 13TH AVE
City: HANFORD
Region: 5
Status: Remediation Plan
Case Number: 5T16000022
Case Type: Drinking Water Aquifer affected
Substance: GASOLINE
Staff Initials: JDW
Lead Agency: Regional
Program: LUST
MTBE Code: 2

CORTESE:
Name: HIGHWAY PATROL HEADQUARTERS
Address: 11050 13TH AVE
City,State,Zip: HANFORD, CA 93230
Region: CORTESE
Envirostor Id: Not reported
Global ID: T0603100023
Site/Facility Type: LUST CLEANUP SITE
Cleanup Status: COMPLETED - CASE CLOSED
Status Date: Not reported
Site Code: Not reported
Latitude: Not reported
Longitude: Not reported
Owner: Not reported
Enf Type: Not reported
Swat R: Not reported
Flag: active
Order No: Not reported
Waste Discharge System No: Not reported
Effective Date: Not reported
Region 2: Not reported
WID Id: Not reported
Solid Waste Id No: Not reported
Waste Management Uit Name: Not reported
File Name: Active Open

HIST CORTESE:
edr_fname: HIGHWAY PATROL HEADQUARTE
edr_fadd1: 11050 13TH

HIGHWAY PATROL HEADQUARTE (Continued) **S101295374**

City,State,Zip: HANFORD, CA 93230
Region: CORTESE
Facility County Code: 16
Reg By: LTNKA
Reg Id: 5T16000022

CERS:
Name: HIGHWAY PATROL HEADQUARTERS
Address: 11050 13TH AVE
City,State,Zip: HANFORD, CA 93230
Site ID: 736261
CERS ID: T0603100023
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: PATZER, SUSAN E. - KINGS COUNTY
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: r5 UNKNOWN
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: ,

Affiliation Type Desc: Regional Board Caseworker
Entity Name: MICHEALE EASLEY - CENTRAL VALLEY RWQCB (REGION 5F)
Entity Title: Not reported
Affiliation Address: 1685 E Street
Affiliation City: FRESNO
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 5594884391,

A7 **HIGHWAY PATROL HEADQUARTERS** **UST FINDER RELEASE** **1028975963**
WNW **11050 13TH AVE** **N/A**
1/4-1/2 **HANFORD, CA 93230**
0.466 mi.
2462 ft. **Site 2 of 2 in cluster A**

Relative:
Lower

Actual:
240 ft.

UST FINDER RELEASE:
Object ID: 55493
Facility ID: Not reported
Lust ID: CAT0603100023
Name: HIGHWAY PATROL HEADQUARTERS
Address: 11050 13TH AVE
City,State,Zip: HANFORD, CA 93230
Address Match Type: PointAddress
Reported Date: Not reported
Status: No Further Action
Substance: Not reported
Population within 1500ft: 37
Domestic Wells within 1500ft: 2
Land Use: Non-Developed
Within SPA: No
SPA PWS Facility ID: Not reported

HIGHWAY PATROL HEADQUARTERS (Continued) **1028975963**

SPA Water Type:	Not reported
SPA Facility Type:	Not reported
SPA HUC12:	Not reported
Within WHPA:	Yes
WHPA PWS Facility ID:	CA1600607_34454
WHPA Water Type:	GW - Ground water
WHPA Facility Type:	WL - Well
WHPA HUC12:	180300122004
Within 100yr Floodplain:	No
Tribe:	Not reported
EPA Region:	9
NFA Letter 1:	Not reported
NFA Letter 2:	Not reported
NFA Letter 3:	Not reported
NFA Letter 4:	Not reported
Closed With Residual Contaminate:	Not reported
Coordinate Source:	Geocode
X Coord:	-119.69108
Y Coord:	36.3128100000001
Latitude:	36.3128099999999
Longitude:	-119.691079999999

Count: 1 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
HANFORD	S122412428		7184 HANFORD - ARMONA RD	93230	CDL

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 02/29/2024
Date Data Arrived at EDR: 03/01/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 06/03/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 02/29/2024
Date Data Arrived at EDR: 03/01/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 06/03/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Lists of Federal Delisted NPL sites

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 02/29/2024
Date Data Arrived at EDR: 03/01/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 06/03/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: Quarterly

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 12/20/2023
Date Data Arrived at EDR: 12/20/2023
Date Made Active in Reports: 01/24/2024
Number of Days to Update: 35

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 03/26/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 04/22/2024
Date Data Arrived at EDR: 05/01/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 23

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/03/2024
Next Scheduled EDR Contact: 07/22/2024
Data Release Frequency: Quarterly

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 04/22/2024
Date Data Arrived at EDR: 05/01/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 23

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/03/2024
Next Scheduled EDR Contact: 07/22/2024
Data Release Frequency: Quarterly

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/06/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 6

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Quarterly

Lists of Federal RCRA TSD facilities

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/06/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Quarterly

Lists of Federal RCRA generators

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/06/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/06/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/06/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 02/14/2024
Date Data Arrived at EDR: 02/16/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 48

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 05/17/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/13/2024
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/21/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/13/2024
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/21/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/12/2023
Date Data Arrived at EDR: 12/13/2023
Date Made Active in Reports: 02/28/2024
Number of Days to Update: 77

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Quarterly

Lists of state- and tribal (Superfund) equivalent sites

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 01/22/2024
Date Data Arrived at EDR: 01/23/2024
Date Made Active in Reports: 04/08/2024
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/23/2024
Next Scheduled EDR Contact: 08/05/2024
Data Release Frequency: Quarterly

Lists of state- and tribal hazardous waste facilities

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 01/22/2024
Date Data Arrived at EDR: 01/23/2024
Date Made Active in Reports: 04/08/2024
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/23/2024
Next Scheduled EDR Contact: 08/05/2024
Data Release Frequency: Quarterly

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 02/05/2024
Date Data Arrived at EDR: 02/06/2024
Date Made Active in Reports: 04/26/2024
Number of Days to Update: 80

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 05/07/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Quarterly

Lists of state and tribal leaking storage tanks

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks
California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List
Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)
Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/05/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 80

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 06/04/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Quarterly

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 1: Active Toxic Site Investigation
Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/04/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)

Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/05/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 80

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/04/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: No Update Planned

Lists of state and tribal registered storage tanks

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 11/16/2023
Date Data Arrived at EDR: 11/16/2023
Date Made Active in Reports: 02/13/2024
Number of Days to Update: 89

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/05/2024
Date Made Active in Reports: 05/29/2024
Number of Days to Update: 85
Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 06/04/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Semi-Annually

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases
UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 02/13/2024
Date Data Arrived at EDR: 03/05/2024
Date Made Active in Reports: 06/03/2024
Number of Days to Update: 90
Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 06/04/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Varies

MILITARY UST SITES: Military UST Sites (GEOTRACKER)
Military ust sites

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/05/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 80
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/04/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Varies

AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69
Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 03/08/2024
Next Scheduled EDR Contact: 06/24/2024
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56
Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 04/17/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 10/17/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 04/17/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

Lists of state and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 07/08/2021
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 01/22/2024
Date Data Arrived at EDR: 01/23/2024
Date Made Active in Reports: 04/08/2024
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/23/2024
Next Scheduled EDR Contact: 08/05/2024
Data Release Frequency: Quarterly

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 03/18/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Varies

Lists of state and tribal brownfield sites

BROWNFIELDS: Considered Brownfieds Sites Listing
A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 12/13/2023
Date Data Arrived at EDR: 12/13/2023
Date Made Active in Reports: 03/07/2024
Number of Days to Update: 85

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 03/11/2024
Date Data Arrived at EDR: 03/12/2024
Date Made Active in Reports: 05/10/2024
Number of Days to Update: 59

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/12/2024
Next Scheduled EDR Contact: 06/24/2024
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 04/19/2024
Next Scheduled EDR Contact: 08/05/2024
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/05/2024
Date Made Active in Reports: 05/28/2024
Number of Days to Update: 84

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/04/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 04/04/2024
Date Data Arrived at EDR: 04/05/2024
Date Made Active in Reports: 04/15/2024
Number of Days to Update: 10

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 04/22/2024
Next Scheduled EDR Contact: 08/05/2024
Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 04/15/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176
Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 04/19/2024
Next Scheduled EDR Contact: 08/04/2024
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/21/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database
The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21
Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program
This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 01/22/2024
Date Data Arrived at EDR: 01/23/2024
Date Made Active in Reports: 04/08/2024
Number of Days to Update: 76
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/23/2024
Next Scheduled EDR Contact: 08/05/2024
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs
A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 09/28/2023
Date Made Active in Reports: 12/18/2023
Number of Days to Update: 81
Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 05/09/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Varies

CERS HAZ WASTE: California Environmental Reporting System Hazardous Waste
List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 01/16/2024
Date Data Arrived at EDR: 01/16/2024
Date Made Active in Reports: 04/03/2024
Number of Days to Update: 78

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 04/16/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/21/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Quarterly

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing

Aboveground storage tank sites

Date of Government Version: 02/01/2024
Date Data Arrived at EDR: 02/01/2024
Date Made Active in Reports: 04/24/2024
Number of Days to Update: 83

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 04/25/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Varies

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CERS TANKS: California Environmental Reporting System (CERS) Tanks

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 01/16/2024
Date Data Arrived at EDR: 01/16/2024
Date Made Active in Reports: 04/03/2024
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 04/16/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Quarterly

Local Land Records

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 02/26/2024
Date Data Arrived at EDR: 02/27/2024
Date Made Active in Reports: 05/15/2024
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/22/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/29/2024
Date Data Arrived at EDR: 03/01/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 26

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 06/03/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 02/26/2024
Date Data Arrived at EDR: 02/27/2024
Date Made Active in Reports: 05/14/2024
Number of Days to Update: 77

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 05/29/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/12/2023
Date Data Arrived at EDR: 12/13/2023
Date Made Active in Reports: 02/28/2024
Number of Days to Update: 77

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/20/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System
California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 01/23/2024
Date Made Active in Reports: 04/09/2024
Number of Days to Update: 77

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 04/16/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)
Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/05/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 80

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/04/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)
Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/05/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 80

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/04/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch
Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/06/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/30/2024
Date Data Arrived at EDR: 02/13/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 51

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 05/14/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 07/13/2021
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 239

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/11/2024
Next Scheduled EDR Contact: 07/22/2024
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/04/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 07/30/2021
Date Data Arrived at EDR: 02/03/2023
Date Made Active in Reports: 02/10/2023
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 05/09/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 12/11/2023
Date Data Arrived at EDR: 12/13/2023
Date Made Active in Reports: 02/28/2024
Number of Days to Update: 77

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 03/13/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA Watch List

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 04/29/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: No Update Planned

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 05/02/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 06/14/2022
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 283

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/14/2024
Next Scheduled EDR Contact: 06/24/2024
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2022
Date Data Arrived at EDR: 11/13/2023
Date Made Active in Reports: 02/07/2024
Number of Days to Update: 86

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 05/16/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 01/16/2024
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 70

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/17/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 02/29/2024
Date Data Arrived at EDR: 03/01/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 26

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 06/03/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 02/01/2024
Date Data Arrived at EDR: 02/08/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 56

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/15/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 06/03/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 03/20/2023
Date Data Arrived at EDR: 04/04/2023
Date Made Active in Reports: 06/09/2023
Number of Days to Update: 66

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/04/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 03/28/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 01/02/2024
Date Data Arrived at EDR: 01/16/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 57

Source: Nuclear Regulatory Commission
Telephone: 301-415-0717
Last EDR Contact: 04/15/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2022
Date Data Arrived at EDR: 11/27/2023
Date Made Active in Reports: 02/22/2024
Number of Days to Update: 87

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 05/28/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 05/28/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 05/02/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 03/25/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80
Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 04/23/2024
Next Scheduled EDR Contact: 08/05/2024
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 01/11/2024
Date Made Active in Reports: 01/16/2024
Number of Days to Update: 5

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 03/28/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 03/20/2023
Number of Days to Update: 11

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/04/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 03/03/2023
Date Data Arrived at EDR: 03/03/2023
Date Made Active in Reports: 06/09/2023
Number of Days to Update: 98

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 04/26/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/16/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 02/29/2024
Date Data Arrived at EDR: 03/01/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 26

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 06/03/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 01/02/2024
Date Data Arrived at EDR: 01/03/2024
Date Made Active in Reports: 01/04/2024
Number of Days to Update: 1

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 04/04/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Quarterly

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/05/2024
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 05/21/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 01/07/2022
Date Data Arrived at EDR: 02/24/2023
Date Made Active in Reports: 05/17/2023
Number of Days to Update: 82

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/22/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/23/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 11/28/2023
Date Data Arrived at EDR: 11/29/2023
Date Made Active in Reports: 12/11/2023
Number of Days to Update: 12

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Quarterly

MINES MRDS: Mineral Resources Data System

Mineral Resources Data System

Date of Government Version: 08/23/2022
Date Data Arrived at EDR: 11/22/2022
Date Made Active in Reports: 02/28/2023
Number of Days to Update: 98

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 05/22/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Varies

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/09/2024
Date Data Arrived at EDR: 02/27/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 87

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 05/29/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 12/17/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 03/04/2024
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 04/04/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 09/06/2023
Date Data Arrived at EDR: 09/13/2023
Date Made Active in Reports: 12/11/2023
Number of Days to Update: 89

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 04/08/2024
Next Scheduled EDR Contact: 07/22/2024
Data Release Frequency: Varies

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 05/17/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/12/2024
Date Data Arrived at EDR: 02/13/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 51

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 05/14/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Quarterly

PFAS NPL: Superfund Sites with PFAS Detections Information

EPA's Office of Land and Emergency Management and EPA Regional Offices maintain data describing what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment.

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 03/04/2024
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 703-603-8895
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

PFAS FEDERAL SITES: Federal Sites PFAS Information

Several federal entities, such as the federal Superfund program, Department of Defense, National Aeronautics and Space Administration, Department of Transportation, and Department of Energy provided information for sites with known or suspected detections at federal facilities.

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 03/04/2024
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

PFAS TRIS: List of PFAS Added to the TRI

Section 7321 of the National Defense Authorization Act for Fiscal Year 2020 (NDAA) immediately added certain per- and polyfluoroalkyl substances (PFAS) to the list of chemicals covered by the Toxics Release Inventory (TRI) under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) and provided a framework for additional PFAS to be added to TRI on an annual basis.

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 01/04/2024
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 202-566-0250
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

PFAS TSCA: PFAS Manufacture and Imports Information

EPA issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. EPA publishes non-confidential business information (non-CBI) and includes descriptive information about each site, corporate parent, production volume, other manufacturing information, and processing and use information.

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 01/04/2024
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

PFAS RCRA MANIFEST: PFAS Transfers Identified In the RCRA Database Listing

To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: PFAS, PFOA, PFOS, PERFL, AFFF, GENX, GEN-X (plus the VT waste codes). These keywords were searched for in the following text fields: Manifest handling instructions (MANIFEST_HANDLING_INSTR), Non-hazardous waste description (NON_HAZ_WASTE_DESCRIPTION), DOT printed information (DOT_PRINTED_INFORMATION), Waste line handling instructions (WASTE_LINE_HANDLING_INSTR), Waste residue comments (WASTE_RESIDUE_COMMENTS).

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 01/04/2024
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

PFAS ATSDR: PFAS Contamination Site Location Listing

PFAS contamination site locations from the Department of Health & Human Services, Center for Disease Control & Prevention. ATSDR is involved at a number of PFAS-related sites, either directly or through assisting state and federal partners. As of now, most sites are related to drinking water contamination connected with PFAS production facilities or fire training areas where aqueous film-forming firefighting foam (AFFF) was regularly used.

Date of Government Version: 06/24/2020
Date Data Arrived at EDR: 03/17/2021
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 601

Source: Department of Health & Human Services
Telephone: 202-741-5770
Last EDR Contact: 04/22/2024
Next Scheduled EDR Contact: 08/05/2024
Data Release Frequency: Varies

PFAS WQP: Ambient Environmental Sampling for PFAS

The Water Quality Portal (WQP) is a part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations and individuals submit project details and sampling results to this public repository. The information is commonly used for research and assessments of environmental quality.

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 03/04/2024
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

PFAS NPDES: Clean Water Act Discharge Monitoring Information

Any discharger of pollutants to waters of the United States from a point source must have a National Pollutant Discharge Elimination System (NPDES) permit. The process for obtaining limits involves the regulated entity (permittee) disclosing releases in a NPDES permit application and the permitting authority (typically the state but sometimes EPA) deciding whether to require monitoring or monitoring with limits. Caveats and Limitations: Less than half of states have required PFAS monitoring for at least one of their permittees and fewer states have established PFAS effluent limits for permittees. New rulemakings have been initiated that may increase the number of facilities monitoring for PFAS in the future.

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 03/04/2024
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

PFAS ECHO: Facilities in Industries that May Be Handling PFAS Listing

Regulators and the public have expressed interest in knowing which regulated entities may be using PFAS. EPA has developed a dataset from various sources that show which industries may be handling PFAS. Approximately 120,000 facilities subject to federal environmental programs have operated or currently operate in industry sectors with processes that may involve handling and/or release of PFAS.

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 03/04/2024
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

PFAS ECHO FIRE TRAIN: Facilities in Industries that May Be Handling PFAS Listing

A list of fire training sites was added to the Industry Sectors dataset using a keyword search on the permitted facilitys name to identify sites where fire-fighting foam may have been used in training exercises. Additionally, you may view an example spreadsheet of the subset of fire training facility data, as well as the keywords used in selecting or deselecting a facility for the subset. as well as the keywords used in selecting or deselecting a facility for the subset. These keywords were tested to maximize accuracy in selecting facilities that may use fire-fighting foam in training exercises, however, due to the lack of a required reporting field in the data systems for designating fire training sites, this methodology may not identify all fire training sites or may potentially misidentify them.

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 03/04/2024
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

PFAS PT 139 AIRPORT: All Certified Part 139 Airports PFAS Information Listing

Since July 1, 2006, all certified part 139 airports are required to have fire-fighting foam onsite that meet military specifications (MIL-F-24385) (14 CFR 139.317). To date, these military specification fire-fighting foams are fluorinated and have been historically used for training and extinguishing. The 2018 FAA Reauthorization Act has a provision stating that no later than October 2021, FAA shall not require the use of fluorinated AFFF. This provision does not prohibit the use of fluorinated AFFF at Part 139 civilian airports; it only prohibits FAA from mandating its use. The Federal Aviation Administration?s document AC 150/5210-6D - Aircraft Fire Extinguishing Agents provides guidance on Aircraft Fire Extinguishing Agents, which includes Aqueous Film Forming Foam (AFFF).

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 03/04/2024
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

AQUEOUS FOAM NRC: Aqueous Foam Related Incidents Listing

The National Response Center (NRC) serves as an emergency call center that fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. The spreadsheets posted to the NRC website contain initial incident data that has not been validated or investigated by a federal/state response agency. Response center calls from 1990 to the most recent complete calendar year where there was indication of Aqueous Film Forming Foam (AFFF) usage are included in this dataset. NRC calls may reference AFFF usage in the ?Material Involved? or ?Incident Description? fields.

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 03/04/2024
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 202-267-2675
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

PCS ENF: Enforcement data
No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 03/29/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

PCS: Permit Compliance System
PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 12/16/2016
Date Data Arrived at EDR: 01/06/2017
Date Made Active in Reports: 03/10/2017
Number of Days to Update: 63

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 03/29/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: No Update Planned

BIOSOLIDS: ICIS-NPDES Biosolids Facility Data
The data reflects compliance information about facilities in the biosolids program.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 01/03/2024
Date Made Active in Reports: 01/16/2024
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 202-564-4700
Last EDR Contact: 04/16/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

PFAS: PFAS Contamination Site Location Listing
A listing of PFAS sites included in the Envirostor and GeoTracker databases. Locations of potential sources of per - and polyfluoroalkyl substances (PFAS). This does not mean that PFAS has been produced, used, or discharged at these sites.

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/06/2024
Date Made Active in Reports: 05/29/2024
Number of Days to Update: 84

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/04/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Varies

AQUEOUS FOAM: Former Fire Training Facility Assessments Listing
Airports shown on this list are those believed to use Aqueous Film Forming Foam (AFFF), and certified by the Federal Aviation Administration (FAA) under Title 14, Code of Federal Regulations (CFR), Part 139 (14 CFR Part 139). This list was created by SWRCB using information available from the FAA. Location points shown are from the latitude and longitude listed on the FAA airport master record.

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/05/2024
Date Made Active in Reports: 05/28/2024
Number of Days to Update: 84

Source: State Water Resources Control Board
Telephone: 916-341-5455
Last EDR Contact: 06/04/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Varies

CA BOND EXP. PLAN: Bond Expenditure Plan
Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CHROME PLATING: Chrome Plating Facilities Listing

This listing represents chrome plating facilities the California State Water Resources Control Board staff identified as possibly being a source of Per- and polyfluoroalkyl substance (PFAS) contamination. Sites and locations were identified by staff with the Division of Water Quality in the California State Water Board. Data was collected from the CA Air Resources Board 2013 and 2018 - Cr VI emission survey, CA Emission Inventory, CA HAZ Waste discharge database and by reviewing storm water permits. Former chrome plating sites are also included that are open site investigation or remediation cases with the Regional Water Quality Control Boards and the Department of Toxic Substances Control.

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/05/2024
Date Made Active in Reports: 05/28/2024
Number of Days to Update: 84

Source: State Water Resources Control Board
Telephone: 916-341-5455
Last EDR Contact: 06/04/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Varies

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 12/13/2023
Date Data Arrived at EDR: 12/13/2023
Date Made Active in Reports: 03/07/2024
Number of Days to Update: 85

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Quarterly

CUPA LIV-PLE: CUPA Facility Listing

list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 02/14/2024
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 05/08/2024
Number of Days to Update: 77

Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 05/09/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Varies

DRYCLEAN VENTURA: Drycleaner Facility Listing

A listing of drycleaner facility locations, for the Ventura County Air Pollution Control District.

Date of Government Version: 01/04/2024
Date Data Arrived at EDR: 01/16/2024
Date Made Active in Reports: 02/08/2024
Number of Days to Update: 23

Source: Ventura County Air Pollution Control District
Telephone: 805-645-1421
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN AMADOR: Amador Air District Drycleaner Facility Listing

A listing of drycleaner facility locations, for the Amador Air Quality Management District

Date of Government Version: 04/26/2023
Date Data Arrived at EDR: 04/27/2023
Date Made Active in Reports: 07/13/2023
Number of Days to Update: 77

Source: Amador Air Quality Management District
Telephone: 209-257-0112
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 02/20/2024
Date Data Arrived at EDR: 02/22/2024
Date Made Active in Reports: 05/08/2024
Number of Days to Update: 76

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 05/17/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Varies

DRYCLEAN MOJAVE: Mojave Desert Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Mojave Desert Air Quality Management District.

Date of Government Version: 04/15/2024
Date Data Arrived at EDR: 04/17/2024
Date Made Active in Reports: 04/24/2024
Number of Days to Update: 7
Source: Mojave Desert Air Quality Management District
Telephone: 760-245-1661
Last EDR Contact: 04/16/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN BUTTE: Butte County Air Quality Management DistrictDrycleaner Facility Listing
Butte County Air Quality Management DistrictDrycleaner Facility Listing.

Date of Government Version: 04/25/2023
Date Data Arrived at EDR: 10/18/2023
Date Made Active in Reports: 01/16/2024
Number of Days to Update: 90
Source: Butte County Air Quality Management District
Telephone: 530-332-9400
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN FEATHER RVR: Feather River Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Feather River Air Quality Management District.

Date of Government Version: 03/08/2023
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 06/05/2023
Number of Days to Update: 88
Source: Feather River Air Quality Management District
Telephone: 530-634-7659
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN SAN DIEGO: San Diego County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the San Diego County Air Pollution Control District.

Date of Government Version: 03/19/2024
Date Data Arrived at EDR: 03/21/2024
Date Made Active in Reports: 04/12/2024
Number of Days to Update: 22
Source: San Diego County Air Pollution Control District
Telephone: 858-586-2616
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities
A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 04/02/2024
Date Data Arrived at EDR: 04/05/2024
Date Made Active in Reports: 04/15/2024
Number of Days to Update: 10
Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 05/22/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Annually

DRYCLEAN GRANT: Grant Recipients List
Assembly Bill 998 (AB 998) established the Non-Toxic Dry Cleaning Incentive Program to provide financial assistance to the dry cleaning industry to switch from systems using perchloroethylene (Perc), an identified toxic air contaminant and potential human carcinogen, to non-toxic and non-smog forming alternatives.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 01/26/2024
Date Made Active in Reports: 04/16/2024
Number of Days to Update: 81
Source: California Air Resources Board
Telephone: 916-323-0006
Last EDR Contact: 04/25/2024
Next Scheduled EDR Contact: 08/05/2024
Data Release Frequency: Varies

DRYCLEAN LAKE: Lake County Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Lake County Air Quality Management District,

Date of Government Version: 02/15/2024
Date Data Arrived at EDR: 02/16/2024
Date Made Active in Reports: 05/02/2024
Number of Days to Update: 76
Source: Lake County Air Quality Management District
Telephone: 707-263-7000
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 02/26/2024
Date Data Arrived at EDR: 02/27/2024
Date Made Active in Reports: 05/15/2024
Number of Days to Update: 78
Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 05/22/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Varies

DRYCLEAN MENDOCINO: Mendocino County Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Mendocino County Air Quality Management District.

Date of Government Version: 02/26/2024
Date Data Arrived at EDR: 02/28/2024
Date Made Active in Reports: 05/15/2024
Number of Days to Update: 77
Source: Mendocino County Air Quality Management District
Telephone: 707-463-4354
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN EAST KERN: Eastern Kern Air Pollution Control District District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Eastern Kern Air Pollution Control District.

Date of Government Version: 01/12/2023
Date Data Arrived at EDR: 04/26/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 79
Source: Eastern Kern Air Pollution Control District
Telephone: 661-862-9684
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN IMPERIAL: Imperial County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Imperial County Air Pollution Control District

Date of Government Version: 04/25/2023
Date Data Arrived at EDR: 04/26/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 79
Source: Imperial County Air Pollution Control District
Telephone: 442-265-1800
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN YOLO-SOLANO: Yolo-Solano Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Yolo-Solano Air Quality Management District.

Date of Government Version: 01/04/2024
Date Data Arrived at EDR: 01/05/2024
Date Made Active in Reports: 03/20/2024
Number of Days to Update: 75
Source: Yolo-Solano Air Quality Management District
Telephone: 530-757-3650
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN SHASTA: Shasta County Air Quality Management District District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Shasta County Air Quality Management District.

Date of Government Version: 04/26/2023
Date Data Arrived at EDR: 04/27/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 78
Source: Shasta County Air Quality Management District
Telephone: 530-225-5674
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN MONTERY BAY: Monterey Bay Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Monterey Bay Air Quality Management District.

Date of Government Version: 01/03/2024
Date Data Arrived at EDR: 01/05/2024
Date Made Active in Reports: 03/20/2024
Number of Days to Update: 75

Source: Monterey Bay Air Quality Management District
Telephone: 831-647-9411
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN SAN LUIS OB: San Luis Obispo County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the San Luis Obispo County Air Pollution Control District.

Date of Government Version: 01/03/2024
Date Data Arrived at EDR: 01/04/2024
Date Made Active in Reports: 03/20/2024
Number of Days to Update: 76

Source: San Luis Obispo County Air Pollution Control District
Telephone: 805-781-5756
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN PLACER: Placer County Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Placer County Air Quality Management District.

Date of Government Version: 05/15/2023
Date Data Arrived at EDR: 05/17/2023
Date Made Active in Reports: 08/14/2023
Number of Days to Update: 89

Source: Placer County Air Quality Management District
Telephone: 530-745-2335
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN SAN JOAQUIN: San Joaquin Valley Air Pollution Control District District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the San Joaquin Valley Air Pollution Control District.

Date of Government Version: 01/04/2024
Date Data Arrived at EDR: 01/04/2024
Date Made Active in Reports: 03/21/2024
Number of Days to Update: 77

Source: San Joaquin Valley Air Pollution Control District
Telephone: 559-230-6001
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN BAY AREA: Bay Area Air Quality Management District Drycleaner Facility Listing
Bay Area Air Quality Management District Drycleaner Facility Listing.

Date of Government Version: 02/20/2019
Date Data Arrived at EDR: 05/30/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1432

Source: Bay Area Air Quality Management District
Telephone: 415-516-1916
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN CALAVERAS: Calaveras County Environmental Management Agency Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Calaveras County Environmental Management Agency.

Date of Government Version: 06/17/2019
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1412

Source: Calaveras County Environmental Management Agency
Telephone: 209-754-6399
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Varies

DRYCLEAN N COAST: North Coast Unified Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the North Coast Unified Air Quality Management District.

Date of Government Version: 11/30/2016
Date Data Arrived at EDR: 04/19/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1473

Source: North Coast Unified Air Quality Management District
Telephone: 707-443-3093
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN N SIERRA: Northern Sierra Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Northern Sierra Air Quality Management District,

Date of Government Version: 05/07/2019
Date Data Arrived at EDR: 05/07/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1455
Source: Northern Sierra Air Quality Management District
Telephone: 530-274-9350
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN SANTA BARB: Santa Barbara County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Santa Barbara County Air Pollution Control District.

Date of Government Version: 02/19/2019
Date Data Arrived at EDR: 04/17/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1475
Source: Santa Barbara County Air Pollution Control District
Telephone: 805-961-8867
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN TEHAMA: Tehama County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Tehama County Air Pollution Control District.

Date of Government Version: 04/24/2019
Date Data Arrived at EDR: 04/24/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1468
Source: Tehama County Air Pollution Control District
Telephone: 530-527-3717
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN GLENN: Glenn County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Glenn County Air Pollution Control District.

Date of Government Version: 01/08/2024
Date Data Arrived at EDR: 01/10/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 77
Source: Glenn County Air Pollution Control District
Telephone: 530-934-6500
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN N SONOMA: Norther Sonoma County County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Northern Sonoma County Air Pollution Control District.,

Date of Government Version: 01/05/2024
Date Data Arrived at EDR: 01/10/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 77
Source: Santa Barbara County Air Pollution Control District
Telephone: 707-433-5911
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN SACRAMENTO: Sacramento Metropolitan Air Quality Management DistrictDrycleaner Facility Listing
A listing of drycleaner facility locations, for the Sacramento Metropolitan Air Quality Management District.

Date of Government Version: 01/03/2024
Date Data Arrived at EDR: 01/10/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 77
Source: Sacramento Metropolitan Air Quality Management District
Telephone: 916-874-3958
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

EMI: Emissions Inventory Data
Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 06/09/2023
Date Made Active in Reports: 08/30/2023
Number of Days to Update: 82
Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 03/14/2024
Next Scheduled EDR Contact: 06/24/2024
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 01/16/2024
Date Data Arrived at EDR: 01/16/2024
Date Made Active in Reports: 04/03/2024
Number of Days to Update: 78

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 04/16/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

FIN ASSURANCE 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 01/11/2024
Date Data Arrived at EDR: 01/16/2024
Date Made Active in Reports: 04/03/2024
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 04/12/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

FIN ASSURANCE 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 02/07/2024
Date Data Arrived at EDR: 02/28/2024
Date Made Active in Reports: 05/15/2024
Number of Days to Update: 77

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 05/02/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Varies

ICE: Inspection, Compliance and Enforcement

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 02/07/2024
Date Data Arrived at EDR: 02/07/2024
Date Made Active in Reports: 02/07/2024
Number of Days to Update: 0

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 05/14/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 02/07/2024
Date Data Arrived at EDR: 02/07/2024
Date Made Active in Reports: 02/07/2024
Number of Days to Update: 0

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/14/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 01/02/2024
Date Data Arrived at EDR: 01/03/2024
Date Made Active in Reports: 03/21/2024
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 04/04/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Quarterly

HWTS: Hazardous Waste Tracking System

DTSC maintains the Hazardous Waste Tracking System that stores ID number information since the early 1980s and manifest data since 1993. The system collects both manifest copies from the generator and destination facility.

Date of Government Version: 01/26/2024
Date Data Arrived at EDR: 01/30/2024
Date Made Active in Reports: 04/17/2024
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-324-2444
Last EDR Contact: 05/09/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 01/03/2024
Date Made Active in Reports: 03/21/2024
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 04/04/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Annually

MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/05/2024
Date Made Active in Reports: 05/28/2024
Number of Days to Update: 84

Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 06/04/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 01/23/2024
Date Data Arrived at EDR: 02/27/2024
Date Made Active in Reports: 05/16/2024
Number of Days to Update: 79

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 05/29/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Varies

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 02/05/2024
Date Data Arrived at EDR: 02/06/2024
Date Made Active in Reports: 04/25/2024
Number of Days to Update: 79

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 05/07/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing

A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 02/26/2024
Date Data Arrived at EDR: 02/27/2024
Date Made Active in Reports: 05/17/2024
Number of Days to Update: 80

Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 05/29/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Quarterly

PROC: Certified Processors Database

A listing of certified processors.

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/05/2024
Date Made Active in Reports: 05/28/2024
Number of Days to Update: 84

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/04/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records

Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 03/08/2024
Date Data Arrived at EDR: 03/08/2024
Date Made Active in Reports: 05/29/2024
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 03/08/2024
Next Scheduled EDR Contact: 06/24/2024
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities

Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 11/03/2020
Date Data Arrived at EDR: 11/05/2020
Date Made Active in Reports: 01/26/2021
Number of Days to Update: 82

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 04/25/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Annually

UIC: UIC Listing

A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/05/2024
Date Made Active in Reports: 05/28/2024
Number of Days to Update: 84

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 06/04/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)

Underground control injection sites

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/05/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 80

Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/04/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing

Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 02/11/2021
Date Data Arrived at EDR: 07/01/2021
Date Made Active in Reports: 09/29/2021
Number of Days to Update: 90

Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 04/04/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 05/09/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: No Update Planned

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 03/15/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)
Military privatized sites

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/05/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 80

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/04/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)
Projects sites

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/05/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 80

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/04/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing
In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/05/2024
Date Made Active in Reports: 05/28/2024
Number of Days to Update: 84

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 06/04/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Quarterly

CIWQS: California Integrated Water Quality System
The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 02/26/2024
Date Data Arrived at EDR: 02/27/2024
Date Made Active in Reports: 05/14/2024
Number of Days to Update: 77

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 05/29/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 01/16/2024
Date Data Arrived at EDR: 01/16/2024
Date Made Active in Reports: 04/03/2024
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 04/16/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/05/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 80

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/04/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/05/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 80

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/04/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)

Produced water ponds sites

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/05/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 80

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/04/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)

Sampling point - public sites

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/05/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 80

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/04/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)

Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/05/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 80

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/04/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Varies

UST FINDER RELEASE: UST Finder Releases Database

US EPA's UST Finder data is a national composite of leaking underground storage tanks. This data contains information about, and locations of, leaking underground storage tanks. Data was collected from state sources and standardized into a national profile by EPA's Office of Underground Storage Tanks, Office of Research and Development, and the Association of State and Territorial Solid Waste Management Officials.

Date of Government Version: 06/08/2023
Date Data Arrived at EDR: 10/31/2023
Date Made Active in Reports: 01/18/2024
Number of Days to Update: 79

Source: Environmental Protecton Agency
Telephone: 202-564-0394
Last EDR Contact: 05/08/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Semi-Annually

UST FINDER: UST Finder Database

EPA developed UST Finder, a web map application containing a comprehensive, state-sourced national map of underground storage tank (UST) and leaking UST (LUST) data. It provides the attributes and locations of active and closed USTs, UST facilities, and LUST sites from states and from Tribal lands and US territories . UST Finder contains information about proximity of UST facilities and LUST sites to: surface and groundwater public drinking water protection areas; estimated number of private domestic wells and number of people living nearby; and flooding and wildfires.

Date of Government Version: 06/08/2023
Date Data Arrived at EDR: 10/04/2023
Date Made Active in Reports: 01/18/2024
Number of Days to Update: 106

Source: Environmental Protection Agency
Telephone: 202-564-0394
Last EDR Contact: 05/08/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019
Date Data Arrived at EDR: 01/11/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 53

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 03/28/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks
Underground storage tank sites located in Alameda county.

Date of Government Version: 12/26/2023
Date Data Arrived at EDR: 12/26/2023
Date Made Active in Reports: 03/19/2024
Number of Days to Update: 84

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 03/28/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List
Cupa Facility List

Date of Government Version: 04/27/2023
Date Data Arrived at EDR: 04/27/2023
Date Made Active in Reports: 07/13/2023
Number of Days to Update: 77

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 04/25/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA BUTTE: CUPA Facility Listing
Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 03/28/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 12/18/2023
Date Data Arrived at EDR: 12/18/2023
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 86

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 03/15/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/06/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 78

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 04/25/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 01/19/2024
Date Data Arrived at EDR: 01/24/2024
Date Made Active in Reports: 04/09/2024
Number of Days to Update: 76

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 04/19/2024
Next Scheduled EDR Contact: 08/05/2024
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 02/05/2024
Date Data Arrived at EDR: 02/08/2024
Date Made Active in Reports: 04/26/2024
Number of Days to Update: 78

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 04/19/2024
Next Scheduled EDR Contact: 08/05/2024
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 08/08/2022
Date Data Arrived at EDR: 08/09/2022
Date Made Active in Reports: 09/01/2022
Number of Days to Update: 23

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 04/19/2024
Next Scheduled EDR Contact: 08/05/2024
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 06/28/2021
Date Data Arrived at EDR: 12/21/2021
Date Made Active in Reports: 03/03/2022
Number of Days to Update: 72

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 03/28/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA GLENN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 04/12/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 08/12/2021
Date Data Arrived at EDR: 08/12/2021
Date Made Active in Reports: 11/08/2021
Number of Days to Update: 88

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 05/09/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 01/17/2024
Date Data Arrived at EDR: 01/18/2024
Date Made Active in Reports: 04/03/2024
Number of Days to Update: 76

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 04/12/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 05/09/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Varies

KERN COUNTY:

CUPA KERN: CUPA Facility List
A listing of sites included in the Kern County Hazardous Material Business Plan.

Date of Government Version: 10/30/2023
Date Data Arrived at EDR: 11/01/2023
Date Made Active in Reports: 01/23/2024
Number of Days to Update: 83

Source: Kern County Public Health
Telephone: 661-321-3000
Last EDR Contact: 04/25/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Varies

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 04/25/2024
Date Data Arrived at EDR: 05/01/2024
Date Made Active in Reports: 05/08/2024
Number of Days to Update: 7

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 04/25/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 12/03/2020
Date Data Arrived at EDR: 01/26/2021
Date Made Active in Reports: 04/14/2021
Number of Days to Update: 78

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 05/09/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List
Cupa facility list

Date of Government Version: 02/05/2024
Date Data Arrived at EDR: 02/08/2024
Date Made Active in Reports: 04/26/2024
Number of Days to Update: 78

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 04/08/2024
Next Scheduled EDR Contact: 07/22/2024
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List
Cupa facility list

Date of Government Version: 07/31/2020
Date Data Arrived at EDR: 08/21/2020
Date Made Active in Reports: 11/09/2020
Number of Days to Update: 80

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 04/12/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

LOS ANGELES COUNTY:

AOCONCERN: Key Areas of Concerns in Los Angeles County
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: N/A
Telephone: N/A
Last EDR Contact: 03/08/2024
Next Scheduled EDR Contact: 06/24/2024
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 01/16/2024
Date Data Arrived at EDR: 01/18/2024
Date Made Active in Reports: 03/26/2024
Number of Days to Update: 68

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 04/12/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 01/09/2024
Date Data Arrived at EDR: 01/10/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 77

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 04/09/2024
Next Scheduled EDR Contact: 07/22/2024
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LF LOS ANGELES CITY: City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 12/31/2022
Date Data Arrived at EDR: 01/12/2023
Date Made Active in Reports: 03/29/2023
Number of Days to Update: 76

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/22/2024
Data Release Frequency: Varies

LOS ANGELES AST: Active & Inactive AST Inventory
A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Varies

LOS ANGELES CO LF METHANE: Methane Producing Landfills
This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 04/13/2023
Date Data Arrived at EDR: 07/13/2023
Date Made Active in Reports: 09/27/2023
Number of Days to Update: 76

Source: Los Angeles County Department of Public Works
Telephone: 626-458-6973
Last EDR Contact: 04/11/2024
Next Scheduled EDR Contact: 07/22/2024
Data Release Frequency: No Update Planned

LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory
A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 12/01/2023
Date Data Arrived at EDR: 12/13/2023
Date Made Active in Reports: 12/14/2023
Number of Days to Update: 1

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Varies

LOS ANGELES UST: Active & Inactive UST Inventory
A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 12/01/2023
Date Data Arrived at EDR: 12/13/2023
Date Made Active in Reports: 03/07/2024
Number of Days to Update: 85

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation LA County List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 07/11/2023
Date Data Arrived at EDR: 10/17/2023
Date Made Active in Reports: 01/09/2024
Number of Days to Update: 84

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 04/18/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/22/2024
Data Release Frequency: No Update Planned

UST LONG BEACH: City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 65

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 04/12/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 04/12/2023
Date Data Arrived at EDR: 05/02/2023
Date Made Active in Reports: 06/13/2023
Number of Days to Update: 42

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 04/12/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 08/10/2020
Date Data Arrived at EDR: 08/12/2020
Date Made Active in Reports: 10/23/2020
Number of Days to Update: 72

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 05/09/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 29

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 03/22/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: Semi-Annually

MENDOCINO COUNTY:

UST MENDOCINO: Mendocino County UST Database
A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/22/2021
Date Data Arrived at EDR: 11/18/2021
Date Made Active in Reports: 11/22/2021
Number of Days to Update: 4

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 05/17/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 11/15/2023
Date Data Arrived at EDR: 11/20/2023
Date Made Active in Reports: 02/15/2024
Number of Days to Update: 87

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 05/08/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 02/22/2021
Date Data Arrived at EDR: 03/02/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 78

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 05/17/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 10/04/2021
Date Data Arrived at EDR: 10/06/2021
Date Made Active in Reports: 12/29/2021
Number of Days to Update: 84

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 03/22/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 05/17/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 09/05/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 05/17/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 10/31/2023
Date Data Arrived at EDR: 11/03/2023
Date Made Active in Reports: 01/23/2024
Number of Days to Update: 81

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 04/16/2024
Next Scheduled EDR Contact: 08/05/2024
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups Orange County
Petroleum and non-petroleum spills.

Date of Government Version: 02/02/2024
Date Data Arrived at EDR: 03/13/2024
Date Made Active in Reports: 06/04/2024
Number of Days to Update: 83

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/02/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 02/22/2024
Date Data Arrived at EDR: 03/13/2024
Date Made Active in Reports: 06/04/2024
Number of Days to Update: 83

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/02/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 02/22/2024
Date Data Arrived at EDR: 03/13/2024
Date Made Active in Reports: 06/04/2024
Number of Days to Update: 83

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/02/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 02/28/2024
Date Data Arrived at EDR: 02/28/2024
Date Made Active in Reports: 05/16/2024
Number of Days to Update: 78

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 05/22/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 04/12/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 01/04/2024
Date Data Arrived at EDR: 01/04/2024
Date Made Active in Reports: 03/29/2024
Number of Days to Update: 85

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 06/24/2024
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 01/04/2024
Date Data Arrived at EDR: 01/04/2024
Date Made Active in Reports: 03/21/2024
Number of Days to Update: 77

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/08/2024
Next Scheduled EDR Contact: 06/24/2024
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 11/07/2022
Date Data Arrived at EDR: 12/21/2022
Date Made Active in Reports: 03/16/2023
Number of Days to Update: 85

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 03/25/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: Quarterly

ML SACRAMENTO: Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 11/07/2022
Date Data Arrived at EDR: 12/09/2022
Date Made Active in Reports: 03/01/2023
Number of Days to Update: 82

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 03/25/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List
Cupa facility list

Date of Government Version: 01/17/2024
Date Data Arrived at EDR: 01/18/2024
Date Made Active in Reports: 01/26/2024
Number of Days to Update: 8

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 05/09/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: Hazardous Material Permits
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 02/13/2024
Date Data Arrived at EDR: 02/14/2024
Date Made Active in Reports: 05/02/2024
Number of Days to Update: 78

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 04/25/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 05/16/2024
Date Data Arrived at EDR: 05/22/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 2

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 05/22/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/01/2023
Date Data Arrived at EDR: 01/31/2024
Date Made Active in Reports: 04/17/2024
Number of Days to Update: 77

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 04/12/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing

A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 07/22/2021
Date Data Arrived at EDR: 10/19/2021
Date Made Active in Reports: 01/13/2022
Number of Days to Update: 86

Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 04/12/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

SAN DIEGO CO SAM: Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 05/22/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

CUPA SAN FRANCISCO CO: CUPA Facility Listing

Cupa facilities

Date of Government Version: 02/01/2024
Date Data Arrived at EDR: 02/01/2024
Date Made Active in Reports: 04/24/2024
Number of Days to Update: 83

Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 04/25/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Varies

LUST SAN FRANCISCO: Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 04/25/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: No Update Planned

UST SAN FRANCISCO: Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 02/01/2024
Date Data Arrived at EDR: 02/01/2024
Date Made Active in Reports: 04/24/2024
Number of Days to Update: 83

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 04/25/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Quarterly

SAN FRANCISO COUNTY:

SAN FRANCISCO MAHER: Maher Ordinance Property Listing
a listing of properties that fall within a Maher Ordinance, for all of San Francisco

Date of Government Version: 01/15/2024
Date Data Arrived at EDR: 01/18/2024
Date Made Active in Reports: 04/05/2024
Number of Days to Update: 78

Source: San Francisco Planning
Telephone: 628-652-7483
Last EDR Contact: 04/16/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 03/08/2024
Next Scheduled EDR Contact: 06/24/2024
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 02/14/2024
Date Data Arrived at EDR: 02/14/2024
Date Made Active in Reports: 05/02/2024
Number of Days to Update: 78

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 05/09/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 02/20/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/07/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 05/31/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28
Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 05/09/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 02/21/2024
Date Data Arrived at EDR: 02/22/2024
Date Made Active in Reports: 05/08/2024
Number of Days to Update: 76
Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 05/09/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Varies

HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22
Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13
Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 05/17/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: No Update Planned

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 05/09/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Varies

SITE MIT SANTA CRUZ: Site Mitigation Santa Cruz County List
Sites may become contaminated with toxic chemicals through illegal dumping or disposal, from leaking underground storage tanks, or through industrial or commercial activities.The goal of the site mitigation program is to protect the public health and the environment while facilitating completion of contaminated site clean-up projects in a timely manner.

Date of Government Version: 12/03/2018
Date Data Arrived at EDR: 06/23/2023
Date Made Active in Reports: 07/13/2023
Number of Days to Update: 20

Source: Santa Cruz Environmental Health Services
Telephone: 831-454-2761
Last EDR Contact: 05/09/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA SHASTA: CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 05/09/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/13/2019
Number of Days to Update: 68

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 05/22/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 09/15/2021
Date Data Arrived at EDR: 09/16/2021
Date Made Active in Reports: 12/09/2021
Number of Days to Update: 84

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 05/22/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 07/02/2021
Date Data Arrived at EDR: 07/06/2021
Date Made Active in Reports: 07/14/2021
Number of Days to Update: 8

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 03/15/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 06/30/2021
Date Data Arrived at EDR: 06/30/2021
Date Made Active in Reports: 09/24/2021
Number of Days to Update: 86

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 03/15/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 02/08/2022
Date Data Arrived at EDR: 02/10/2022
Date Made Active in Reports: 05/04/2022
Number of Days to Update: 83

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/22/2024
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 08/03/2023
Date Data Arrived at EDR: 08/24/2023
Date Made Active in Reports: 09/12/2023
Number of Days to Update: 19

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 05/22/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 12/05/2023
Date Data Arrived at EDR: 02/01/2024
Date Made Active in Reports: 02/28/2024
Number of Days to Update: 27

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 05/09/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 01/17/2024
Date Data Arrived at EDR: 01/18/2024
Date Made Active in Reports: 04/03/2024
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 04/12/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 10/07/2022
Date Data Arrived at EDR: 10/07/2022
Date Made Active in Reports: 12/21/2022
Number of Days to Update: 75

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 04/25/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 04/12/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

VENTURA COUNTY:

BWT VENTURA: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 12/26/2023
Date Data Arrived at EDR: 01/24/2024
Date Made Active in Reports: 04/08/2024
Number of Days to Update: 75

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 04/15/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Quarterly

LF VENTURA: Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/22/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: No Update Planned

LUST VENTURA: Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 05/02/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: No Update Planned

MED WASTE VENTURA: Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 12/26/2023
Date Data Arrived at EDR: 01/23/2024
Date Made Active in Reports: 04/09/2024
Number of Days to Update: 77

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 04/15/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 02/27/2024
Date Data Arrived at EDR: 03/05/2024
Date Made Active in Reports: 05/29/2024
Number of Days to Update: 85
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 06/04/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 12/18/2023
Date Data Arrived at EDR: 12/26/2023
Date Made Active in Reports: 03/19/2024
Number of Days to Update: 84
Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 03/22/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 01/22/2024
Date Data Arrived at EDR: 01/23/2024
Date Made Active in Reports: 04/08/2024
Number of Days to Update: 76
Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 04/19/2024
Next Scheduled EDR Contact: 08/05/2024
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 02/05/2024
Date Data Arrived at EDR: 02/06/2024
Date Made Active in Reports: 04/25/2024
Number of Days to Update: 79
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 05/07/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36
Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 03/29/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 11/30/2023
Date Made Active in Reports: 12/01/2023
Number of Days to Update: 1

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 04/25/2024
Next Scheduled EDR Contact: 08/05/2024
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/08/2024
Next Scheduled EDR Contact: 07/22/2024
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/18/2022
Number of Days to Update: 80

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 05/13/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 06/03/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Annually

Oil/Gas Pipelines

Source: Endeavor Business Media

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data

Source: Endeavor Business Media

This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.
Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

© 2015 TomTom North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

VTTM 943
HANFORD ARMONA ROAD
HANFORD, CA 93230

TARGET PROPERTY COORDINATES

Latitude (North):	36.309918 - 36° 18' 35.70''
Longitude (West):	119.680091 - 119° 40' 48.33''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	259366.2
UTM Y (Meters):	4021456.5
Elevation:	243 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	50005774 HANFORD, CA
Version Date:	2021

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

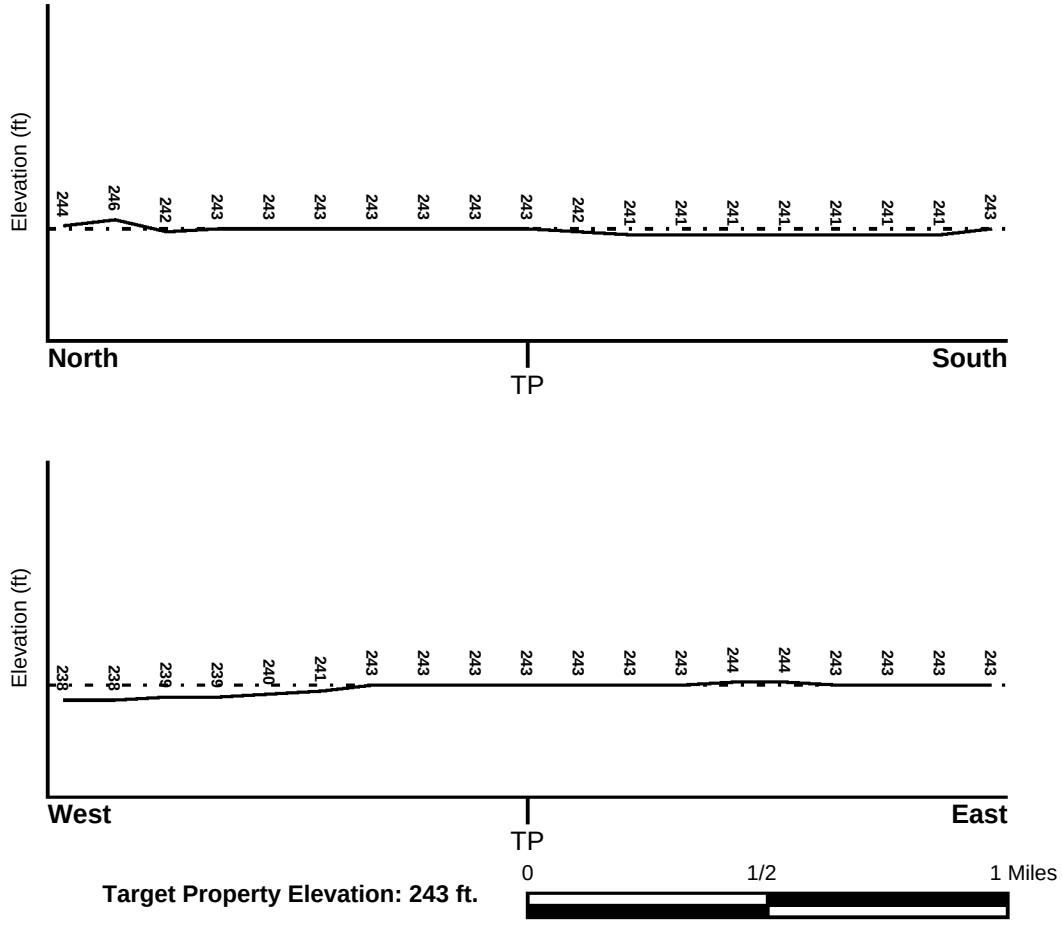
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General South

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
0600860075B	FEMA Q3 Flood data

Additional Panels in search area:	FEMA Source Type
06031C0185C	FEMA FIRM Flood data
0600880005B	FEMA Q3 Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
HANFORD	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

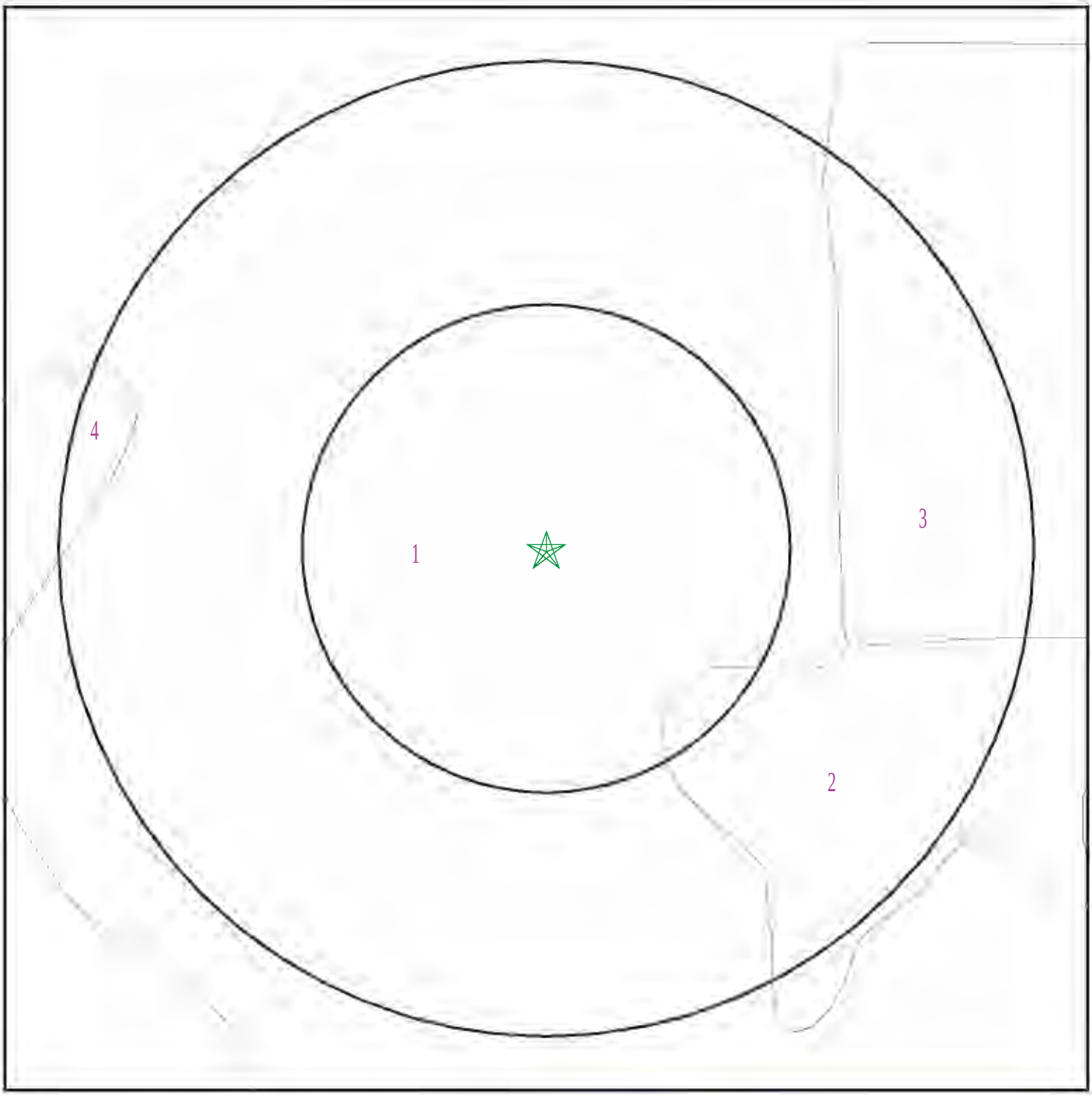
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 7674781.2s



★ Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	VTTM 943	CLIENT:	Geotek
ADDRESS:	Hanford Armona Road Hanford CA 93230	CONTACT:	Kyle Richard Mchargue
LAT/LONG:	36.309918 / 119.680091	INQUIRY #:	7674781.2s
		DATE:	June 06, 2024 6:58 pm

Copyright © 2024 EDR, Inc. © 2015 TomTom Rel. 2015.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: NORD

Soil Surface Texture:
Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	18 inches		Not reported	Not reported	Max: 14 Min: 4	Max: 8.4 Min: 7.4
2	18 inches	72 inches		Not reported	Not reported	Max: 14 Min: 4	Max: 8.4 Min: 7.4

Soil Map ID: 2

Soil Component Name: WASCO

Soil Surface Texture:
Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	20 inches		Not reported	Not reported	Max: 42 Min: 14	Max: 8.4 Min: 6.6
2	20 inches	59 inches		Not reported	Not reported	Max: 42 Min: 14	Max: 8.4 Min: 6.6

Soil Map ID: 3

Soil Component Name: URBAN LAND

Soil Surface Texture:
Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class:
Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

Soil Map ID: 4

Soil Component Name: CAJON

Soil Surface Texture:
Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Somewhat excessively drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches		Not reported	Not reported	Max: 141 Min: 42	Max: 8.4 Min: 7.4
2	11 inches	59 inches		Not reported	Not reported	Max: 141 Min: 42	Max: 8.4 Min: 7.4
3	59 inches	70 inches		Not reported	Not reported	Max: 141 Min: 42	Max: 8.4 Min: 7.4

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A3	USGS40000171989	1/8 - 1/4 Mile North
6	USGS40000171948	1/4 - 1/2 Mile West
7	USGS40000172062	1/4 - 1/2 Mile North
8	USGS40000171887	1/2 - 1 Mile SSW
19	USGS40000171892	1/2 - 1 Mile SE
35	USGS40000171955	1/2 - 1 Mile East
37	USGS40000171990	1/2 - 1 Mile WNW
D39	USGS40000171934	1/2 - 1 Mile East
43	USGS40000172122	1/2 - 1 Mile North

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

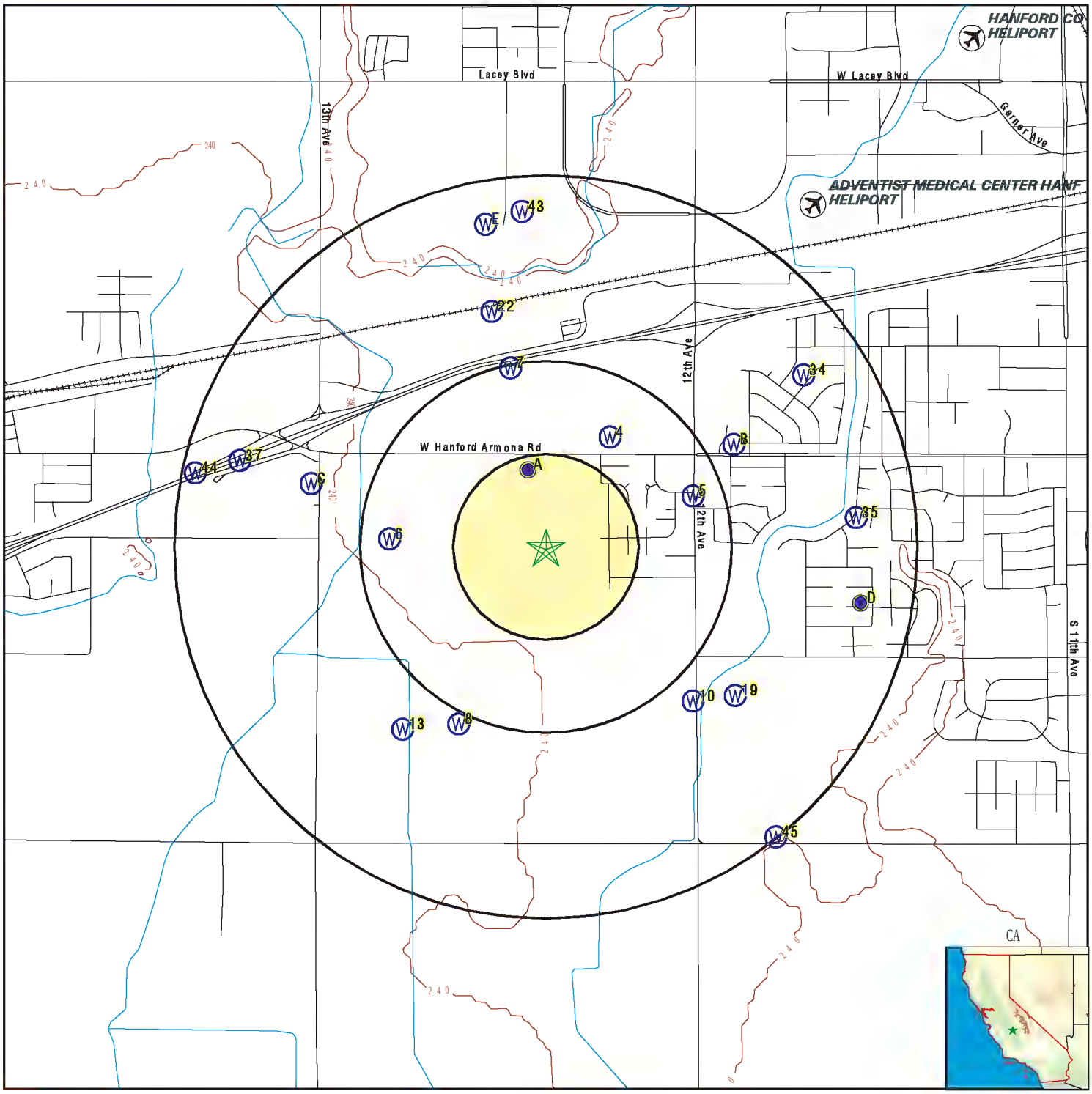
No PWS System Found

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A1	CADWR0000009018	1/8 - 1/4 Mile NNW
A2	CADWR9000025224	1/8 - 1/4 Mile NNW
4	CADWR9000025282	1/4 - 1/2 Mile NNE
5	CADWR9000025217	1/4 - 1/2 Mile ENE
B9	13788	1/2 - 1 Mile ENE
10	CADWR9000025159	1/2 - 1 Mile SE
B11	CADDW2000019373	1/2 - 1 Mile ENE
C12	CAEDF0000140782	1/2 - 1 Mile WNW
13	CADWR9000025153	1/2 - 1 Mile SW
C14	CAEDF0000070131	1/2 - 1 Mile WNW
C15	CAEDF0000081455	1/2 - 1 Mile WNW
C16	CAEDF0000089774	1/2 - 1 Mile WNW
C17	CAEDF0000010313	1/2 - 1 Mile WNW
C18	CAEDF0000137784	1/2 - 1 Mile WNW
C20	CAEDF0000092794	1/2 - 1 Mile WNW
C21	CAEDF0000077344	1/2 - 1 Mile WNW
22	CADDW2000001369	1/2 - 1 Mile NNW
C23	CAEDF0000117453	1/2 - 1 Mile WNW
C24	CAEDF0000059614	1/2 - 1 Mile WNW
C25	CAEDF0000129047	1/2 - 1 Mile WNW
C26	CAEDF0000052207	1/2 - 1 Mile WNW
C27	CAEDF0000012045	1/2 - 1 Mile WNW
C28	CAEDF0000125986	1/2 - 1 Mile WNW
C29	CAEDF0000106121	1/2 - 1 Mile WNW
C30	CAEDF0000057602	1/2 - 1 Mile WNW
C31	CAEDF0000063692	1/2 - 1 Mile WNW
C32	CAEDF0000130330	1/2 - 1 Mile WNW
C33	CAEDF0000115365	1/2 - 1 Mile WNW
34	13789	1/2 - 1 Mile ENE
D36	CADWR9000025197	1/2 - 1 Mile East
D38	CADWR0000012706	1/2 - 1 Mile East
D40	CAUSGSN00008167	1/2 - 1 Mile East
E41	CADWR9000025342	1/2 - 1 Mile North
E42	CADWR0000003421	1/2 - 1 Mile North
44	CADWR9000025225	1/2 - 1 Mile WNW
45	CADWR9000025104	1/2 - 1 Mile SE

PHYSICAL SETTING SOURCE MAP - 7674781.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	VTTM 943	CLIENT:	Geotek
ADDRESS:	Hanford Armona Road Hanford CA 93230	CONTACT:	Kyle Richard Mchargue
LAT/LONG:	36.309918 / 119.680091	INQUIRY #:	7674781.2s
		DATE:	June 06, 2024 6:58 pm

Copyright © 2024 EDR, Inc. © 2015 TomTom Rel. 2015.

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A1
NNW
1/8 - 1/4 Mile
Higher

CA WELLS **CADWR0000009018**

Well ID:	19S21E03B001M	Well Type:	UNK
Source:	Department of Water Resources		
Other Name:	19S21E03B001M	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DWR&samp_date=&global_id=&assigned_name=19S21E03B001M&store_num=		
GeoTracker Data:	Not Reported		

A2
NNW
1/8 - 1/4 Mile
Higher

CA WELLS **CADWR9000025224**

State Well #:	19S21E03B001M	Station ID:	17245
Well Name:	19S21E03B001M	Basin Name:	Tulare Lake
Well Use:	Unknown	Well Type:	Single Well
Well Depth:	0	Well Completion Rpt #:	Not Reported

A3
North
1/8 - 1/4 Mile
Higher

FED USGS **USGS40000171989**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	019S021E03B001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19510101	Well Depth:	348
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1961-11-21
Feet below surface:	83.00	Feet to sea level:	Not Reported
Note:	Not Reported		

4
NNE
1/4 - 1/2 Mile
Higher

CA WELLS **CADWR9000025282**

State Well #:	18S21E34R001M	Station ID:	32310
Well Name:	Not Reported	Basin Name:	Tulare Lake
Well Use:	Unknown	Well Type:	Unknown
Well Depth:	0	Well Completion Rpt #:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

5
ENE
1/4 - 1/2 Mile
Higher

CA WELLS **CADWR9000025217**

State Well #:	13S21E15P001M	Station ID:	14115
Well Name:	Not Reported	Basin Name:	Tulare Lake
Well Use:	Unknown	Well Type:	Unknown
Well Depth:	0	Well Completion Rpt #:	Not Reported

6
West
1/4 - 1/2 Mile
Lower

FED USGS **USGS40000171948**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	019S021E03D001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19590101	Well Depth:	38
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1961-12-12
Feet below surface:	21.40	Feet to sea level:	Not Reported
Note:	Not Reported		

7
North
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000172062**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	018S021E34P001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19570101	Well Depth:	335
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

8
SSW
1/2 - 1 Mile
Lower

FED USGS **USGS40000171887**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	019S021E03M001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19570101	Well Depth:	280
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1961-11-21
Feet below surface:	94.00	Feet to sea level:	Not Reported
Note:	Not Reported		

B9
ENE
1/2 - 1 Mile
Higher

CA WELLS **13788**

Seq:	13788	Prim sta c:	18S/21E-35N01 M
Frds no:	1610003030	County:	16
District:	12	User id:	CYA
System no:	1610003	Water type:	G
Source nam:	WELL 37	Station ty:	WELL/AMBNT/MUN/INTAKE
Latitude:	361851.0	Longitude:	1194013.0
Precision:	3	Status:	AR
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		

System no:	1610003	System nam:	Hanford, City Of
Hqname:	Not Reported	Address:	400 N. DOUTY STREET
City:	HANFORD	State:	CA
Zip:	93230	Zip ext:	Not Reported
Pop serv:	37000	Connection:	10813
Area serve:	HANFORD		

10
SE
1/2 - 1 Mile
Higher

CA WELLS **CADWR9000025159**

State Well #:	19S21E03J001M	Station ID:	35757
Well Name:	19S21E03J001M	Basin Name:	Tulare Lake
Well Use:	Unknown	Well Type:	Single Well
Well Depth:	0	Well Completion Rpt #:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

B11
ENE
1/2 - 1 Mile
Higher

CA WELLS **CADDW2000019373**

GAMA:

Well ID:	CA1610003_030_030	Well Type:	MUNICIPAL
Source:	DDW	Other Names:	1610003-030
GAMA Pfas testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DHS&samp_date=&global_id=&assigned_name=CA1610003_030_030&store_num=		
GeoTracker Data:	Not Reported		

C12
WNW
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000140782**

Well ID:	T0603100023-MW-19	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-19
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0603100023&assigned_name=MW-19&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0603100023&assigned_name=MW-19		

13
SW
1/2 - 1 Mile
Lower

CA WELLS **CADWR9000025153**

State Well #:	19S21E03M001M	Station ID:	17246
Well Name:	19S21E03M001M	Basin Name:	Tulare Lake
Well Use:	Unknown	Well Type:	Single Well
Well Depth:	0	Well Completion Rpt #:	Not Reported

C14
WNW
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000070131**

Well ID:	T0603100023-MW-13	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-13
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0603100023&assigned_name=MW-13&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0603100023&assigned_name=MW-13		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

C15
WNW
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000081455**

Well ID:	T0603100023-MW-2	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-2
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0603100023&assigned_name=MW-2&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0603100023&assigned_name=MW-2		

C16
WNW
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000089774**

Well ID:	T0603100023-VEW-1	Well Type:	MONITORING
Source:	EDF	Other Name:	VEW-1
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0603100023&assigned_name=VEW-1&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0603100023&assigned_name=VEW-1		

C17
WNW
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000010313**

Well ID:	T0603100023-MW-15	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-15
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0603100023&assigned_name=MW-15&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0603100023&assigned_name=MW-15		

C18
WNW
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000137784**

Well ID:	T0603100023-VEW-3	Well Type:	MONITORING
Source:	EDF	Other Name:	VEW-3
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0603100023&assigned_name=VEW-3&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0603100023&assigned_name=VEW-3		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

19
SE
1/2 - 1 Mile
Higher

FED USGS **USGS40000171892**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	019S021E03J001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19590101	Well Depth:	420
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1961-11-21
Feet below surface:	80.50	Feet to sea level:	Not Reported
Note:	Not Reported		

C20
WNW
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000092794**

Well ID:	T0603100023-MW-9	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-9
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0603100023&assigned_name=MW-9&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0603100023&assigned_name=MW-9		

C21
WNW
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000077344**

Well ID:	T0603100023-MW-18	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-18
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0603100023&assigned_name=MW-18&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0603100023&assigned_name=MW-18		

22
NNW
1/2 - 1 Mile
Higher

CA WELLS **CADDW2000001369**

GAMA:

Well ID:	CA1600253_001_001	Well Type:	MUNICIPAL
Source:	DDW	Other Names:	1600253-001
GAMA Pfas testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DHS&samp_date=&global_id=&assigned_name=CA1600253_001_001&store_num=		
GeoTracker Data:	Not Reported		

C23
WNW
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000117453**

Well ID:	T0603100023-MW-8	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-8
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0603100023&assigned_name=MW-8&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0603100023&assigned_name=MW-8		

C24
WNW
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000059614**

Well ID:	T0603100023-MW-4	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-4
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0603100023&assigned_name=MW-4&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0603100023&assigned_name=MW-4		

C25
WNW
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000129047**

Well ID:	T0603100023-ASW-1	Well Type:	MONITORING
Source:	EDF	Other Name:	ASW-1
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0603100023&assigned_name=ASW-1&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0603100023&assigned_name=ASW-1		

C26
WNW
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000052207**

Well ID:	T0603100023-MW-17	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-17
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0603100023&assigned_name=MW-17&store_num=		

GeoTracker Data: https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0603100023&assigned_name=MW-17

C27
WNW
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000012045**

Well ID: T0603100023-VEW-2
Well Type: MONITORING
Source: EDF
Other Name: VEW-2
GAMA PFAS Testing: Not Reported
Groundwater Quality Data: https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0603100023&assigned_name=VEW-2&store_num=
GeoTracker Data: https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0603100023&assigned_name=VEW-2

C28
WNW
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000125986**

Well ID: T0603100023-MW-3
Well Type: MONITORING
Source: EDF
Other Name: MW-3
GAMA PFAS Testing: Not Reported
Groundwater Quality Data: https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0603100023&assigned_name=MW-3&store_num=
GeoTracker Data: https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0603100023&assigned_name=MW-3

C29
WNW
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000106121**

Well ID: T0603100023-MW-16
Well Type: MONITORING
Source: EDF
Other Name: MW-16
GAMA PFAS Testing: Not Reported
Groundwater Quality Data: https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0603100023&assigned_name=MW-16&store_num=
GeoTracker Data: https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0603100023&assigned_name=MW-16

C30
WNW
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000057602**

Well ID: T0603100023-MW-14
Well Type: MONITORING
Source: EDF
Other Name: MW-14
GAMA PFAS Testing: Not Reported
Groundwater Quality Data: https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0603100023&assigned_name=MW-14&store_num=
GeoTracker Data: https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0603100023&assigned_name=MW-14

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

C31
WNW
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000063692**

Well ID:	T0603100023-MW-12	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-12
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0603100023&assigned_name=MW-12&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0603100023&assigned_name=MW-12		

C32
WNW
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000130330**

Well ID:	T0603100023-MW-11	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-11
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0603100023&assigned_name=MW-11&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0603100023&assigned_name=MW-11		

C33
WNW
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000115365**

Well ID:	T0603100023-MW-10	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-10
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0603100023&assigned_name=MW-10&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0603100023&assigned_name=MW-10		

34
ENE
1/2 - 1 Mile
Higher

CA WELLS **13789**

Seq:	13789	Prim sta c:	18S/21E-35P02 M
Frds no:	1610003013	County:	16
District:	12	User id:	CYA
System no:	1610003	Water type:	G
Source nam:	WELL 19 - ABANDONED	Station ty:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Latitude:	361900.0	Longitude:	1194000.0
Precision:	8	Status:	AB
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported

Comment 7:	Not Reported		
System no:	1610003	System nam:	Hanford, City Of
Hqname:	Not Reported	Address:	400 N. DOUTY STREET
City:	HANFORD	State:	CA
Zip:	93230	Zip ext:	Not Reported
Pop serv:	37000	Connection:	10813
Area serve:	HANFORD		

35
East **FED USGS** **USGS40000171955**
1/2 - 1 Mile
Higher

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	019S021E02C001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19550101	Well Depth:	125
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

D36
East **CA WELLS** **CADWR9000025197**
1/2 - 1 Mile
Higher

State Well #:	19S21E02F001M	Station ID:	17243
Well Name:	19S21E02F001M	Basin Name:	Tulare Lake
Well Use:	Unknown	Well Type:	Single Well
Well Depth:	0	Well Completion Rpt #:	Not Reported

37
WNW **FED USGS** **USGS40000171990**
1/2 - 1 Mile
Lower

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	019S021E04B001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19540101	Well Depth:	160
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1961-11-21
Feet below surface:	77.50	Feet to sea level:	Not Reported
Note:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

D38
East
1/2 - 1 Mile
Higher

CA WELLS **CADWR0000012706**

Well ID:	19S21E02F001M	Well Type:	UNK
Source:	Department of Water Resources		
Other Name:	19S21E02F001M	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DWR&samp_date=&global_id=&assigned_name=19S21E02F001M&store_num=		
GeoTracker Data:	Not Reported		

D39
East
1/2 - 1 Mile
Higher

FED USGS **USGS40000171934**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	019S021E02F001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Alluvium Above E-Clay	Aquifer Type:	Not Reported
Construction Date:	19600101	Well Depth:	398
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1961-11-21
Feet below surface:	87.40	Feet to sea level:	Not Reported
Note:	Not Reported		

D40
East
1/2 - 1 Mile
Higher

CA WELLS **CAUSGSN00008167**

Well ID:	USGS-361828119395001	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-361828119395001	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-361828119395001&store_num=		
GeoTracker Data:	Not Reported		

E41
North
1/2 - 1 Mile
Higher

CA WELLS **CADWR9000025342**

State Well #:	18S21E34F001M	Station ID:	16660
Well Name:	Not Reported	Basin Name:	Tulare Lake
Well Use:	Unknown	Well Type:	Unknown
Well Depth:	0	Well Completion Rpt #:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

E42
North
1/2 - 1 Mile
Higher

CA WELLS **CADWR0000003421**

Well ID:	18S21E34F001M	Well Type:	UNK
Source:	Department of Water Resources		
Other Name:	18S21E34F001M	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DWR&samp_date=&global_id=&assigned_name=18S21E34F001M&store_num=		
GeoTracker Data:	Not Reported		

43
North
1/2 - 1 Mile
Higher

FED USGS **USGS40000172122**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	018S021E34F001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	80
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

44
WNW
1/2 - 1 Mile
Lower

CA WELLS **CADWR9000025225**

State Well #:	19S21E04B001M	Station ID:	17247
Well Name:	Not Reported	Basin Name:	Tulare Lake
Well Use:	Unknown	Well Type:	Unknown
Well Depth:	0	Well Completion Rpt #:	Not Reported

45
SE
1/2 - 1 Mile
Lower

CA WELLS **CADWR9000025104**

State Well #:	19S21E02N001M	Station ID:	35756
Well Name:	19S21E02N001M	Basin Name:	Tulare Lake
Well Use:	Unknown	Well Type:	Single Well
Well Depth:	0	Well Completion Rpt #:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
93230	24	1

Federal EPA Radon Zone for KINGS County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 93230

Number of sites tested: 6

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	2.300 pCi/L	83%	17%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

OTHER STATE DATABASE INFORMATION

Groundwater Ambient Monitoring & Assessment Program
State Water Resources Control Board
Telephone: 916-341-5577
The GAMA Program is Californias comprehensive groundwater quality monitoring program. GAMA collects data by testing the untreated, raw water in different types of wells for naturally-occurring and man-made chemicals. The GAMA data includes Domestic, Monitoring and Municipal well types from the following sources, Department of Water Resources, Department of Heath Services, EDF, Agricultural Lands, Lawrence Livermore National Laboratory, Department of Pesticide Regulation, United States Geological Survey, Groundwater Ambient Monitoring and Assessment Program and Local Groundwater Projects.

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

Geothermal Wells Listing
Department of Conservation
Telephone: 916-445-9686
Geothermal well means a well constructed to extract or return water to the ground after it has been used for heating or cooling purposes. Geothermal wells in California (except for wells on federal leases which are administered by the Bureau of Land Management) are permitted, drilled, operated, and permanently sealed and closed (plugged and abandoned) under requirements and procedures administered by the Geothermal Section of the Department of Conservations Geologic Energy Management Division (CalGEM, formerly DOGGR).

California Oil and Gas Well Locations
Source: Dept of Conservation, Geologic Energy Management Division
Telephone: 916-323-1779
Oil and Gas well locations in the state.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

California Earthquake Fault Lines
Source: California Division of Mines and Geology
The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

RADON

State Database: CA Radon
Source: Department of Public Health
Telephone: 916-210-8558
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

© 2015 TomTom North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

APPENDIX F

VAPOR ENCROACHMENT

VTTM 943
Hanford Armona Road
Hanford, CA 93230

Inquiry Number: 7674781.2s
June 27, 2024

EDR Vapor Encroachment Screen

Prepared using EDR's Vapor Encroachment Worksheet

EDR® Environmental Data Resources Inc

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	ES1
Primary Map	2
Secondary Map	3
Map Findings	4
Record Sources and Currency	GR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

The EDR Vapor Encroachment Worksheet enables EDR's customers to make certain online modifications that effects maps, text and calculations contained in this Report. As a result, maps, text and calculations contained in this Report may have been so modified. EDR has not taken any action to verify any such modifications, and this report and the findings set forth herein must be read in light of this fact. Environmental Data Resources shall not be responsible for any customer's decision to include or not include in any final report any records determined to be within the relevant minimum search distances.

This report contains information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANYSUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OR DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES.ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this report "AS IS". Any analyses, estimates, ratings, or risk codes provided in this report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can produce information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2024 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by EDR. The report was designed to assist parties seeking to meet the search requirements of the ASTM Standard Practice for Assessment of Vapor Encroachment into Structures on Property Involved in Real Estate Transactions (E 2600).

STANDARD ENVIRONMENTAL RECORDS	Default Area of Concern (Miles)*	property	1/10	> 1/10
Lists of Federal NPL (Superfund) sites	1.0	0	0	0
Lists of Federal Delisted NPL sites	1.0	0	0	0
Lists of Federal sites subject to CERCLA removals and CERCLA orders	0.5	0	0	0
Lists of Federal CERCLA sites with NFRAP	0.5	0	0	0
Lists of Federal RCRA facilities undergoing Corrective Action	1.0	0	0	0
Lists of Federal RCRA TSD facilities	0.5	0	0	0
Lists of Federal RCRA generators	0.25	0	0	0
Federal institutional controls / engineering controls registries	0.5	0	0	0
Federal ERNS list	0.001	0	0	-
Lists of state- and tribal (Superfund) equivalent sites	1.0	0	0	0
Lists of state- and tribal hazardous waste facilities	1.0	0	0	0
Lists of state and tribal landfills and solid waste disposal facilities	0.5	0	0	0
Lists of state and tribal leaking storage tanks	0.5	0	0	0
Lists of state and tribal registered storage tanks	0.25	0	0	0
State and tribal institutional control / engineering control registries	not searched	-	-	-
Lists of state and tribal voluntary cleanup sites	0.5	0	0	0
Lists of state and tribal brownfield sites	0.5	0	0	0

ADDITIONAL ENVIRONMENTAL RECORDS				
Local Brownfield lists	0.5	0	0	0
Local Lists of Landfill / Solid Waste Disposal Sites	0.5	0	0	0
Local Lists of Hazardous waste / Contaminated Sites	1.0	0	0	0
Local Lists of Registered Storage Tanks	0.25	0	0	0
Local Land Records	0.5	0	0	0
Records of Emergency Release Reports	0.5	0	0	0
Other Ascertainable Records	1.0	0	0	0

EDR HIGH RISK HISTORICAL RECORDS				
EDR Exclusive Records	1.0	0	0	0
Exclusive Recovered Govt. Archives	0.001	0	0	-

EXECUTIVE SUMMARY

EDR RECOVERED GOVERNMENT ARCHIVES

EDR Exclusive Records	1.0	0	0	0
Exclusive Recovered Govt. Archives	0.001	0	0	-

*The Default Area of Concern may be adjusted by the environmental professional using experience and professional judgement. Each category may include several databases, and each database may have a different distance. A list of individual databases is provided at the back of this report.

EXECUTIVE SUMMARY

TARGET PROPERTY INFORMATION

ADDRESS

VTTM 943
HANFORD ARMONA ROAD
HANFORD, CA 93230

COORDINATES

Latitude (North):	36.309918 - 36° 18′ 35.70282″
Longitude (West):	119.680091 - 119° 40′ 48.33069″
Elevation:	243 ft. above sea level

EXECUTIVE SUMMARY

SEARCH RESULTS

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Name	Address	Dist/Dir	Map ID	Page

Not Reported

ADDITIONAL ENVIRONMENTAL RECORDS

Name	Address	Dist/Dir	Map ID	Page

Not Reported

EDR HIGH RISK HISTORICAL RECORDS

Name	Address	Dist/Dir	Map ID	Page

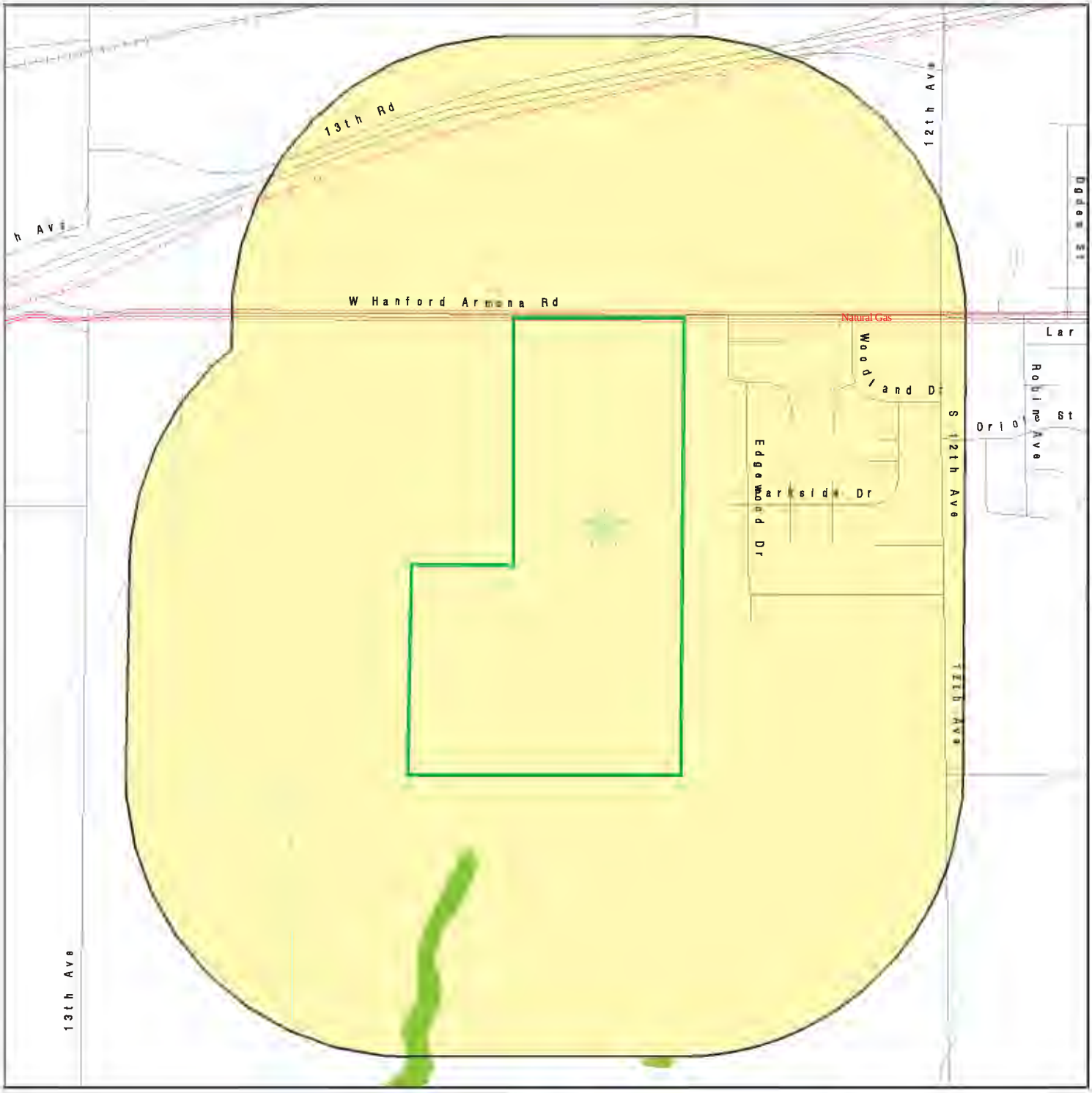
Not Reported

EDR RECOVERED GOVERNMENT ARCHIVES

Name	Address	Dist/Dir	Map ID	Page

Not Reported

PRIMARY MAP - 7674781.2S



0 300 1/3 1/2 Miles

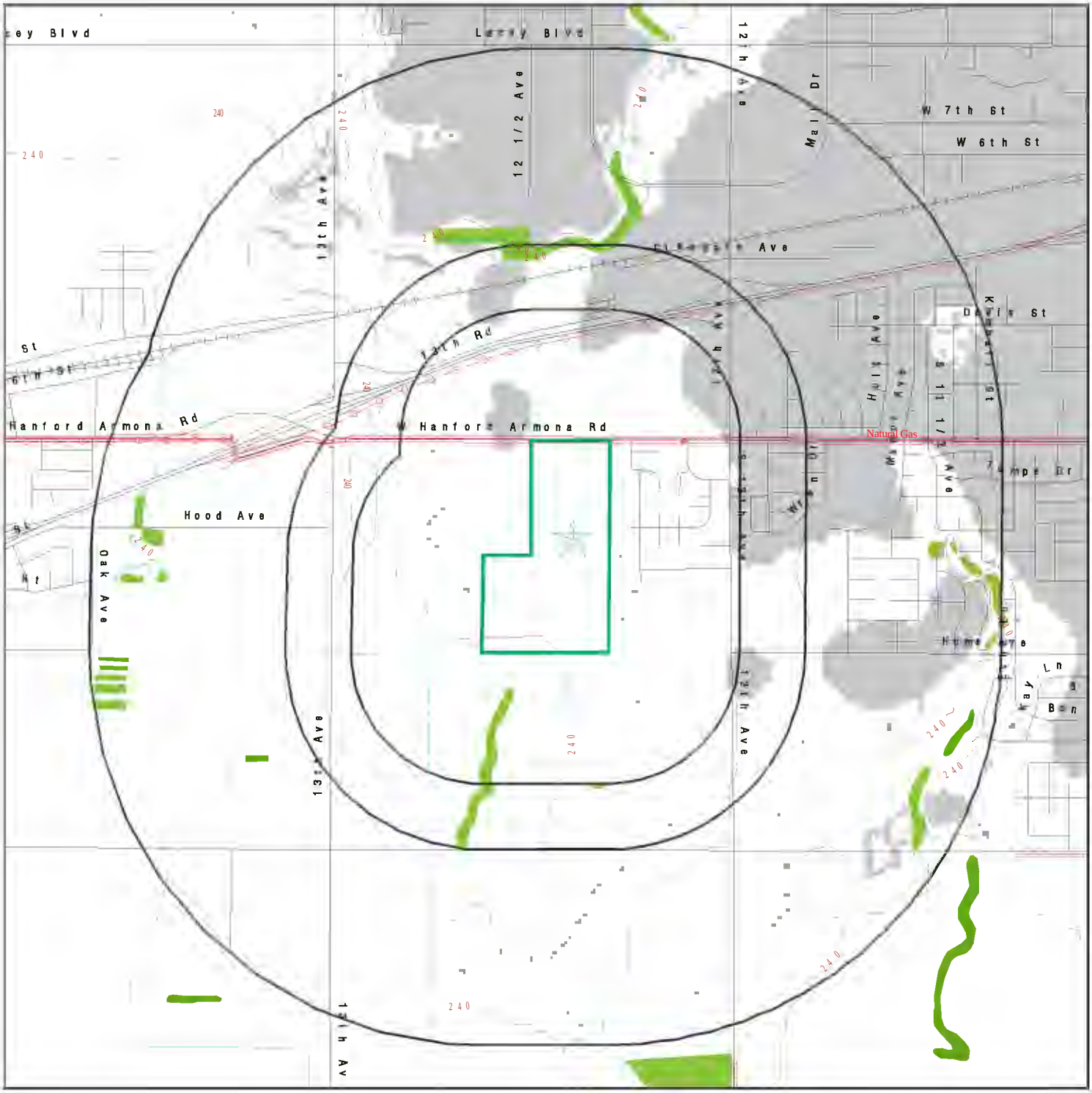
- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Pipelines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	VTTM 943	CLIENT:	Geotek
ADDRESS:	Hanford Armona Road Hanford CA 93230	CONTACT:	Kyle Richard Mchargue
LAT/LONG:	36.309918 / 119.680091	INQUIRY #:	7674781.2s
		DATE:	June 06, 2024 6:57 pm

Copyright © 2024 EDR, Inc © 2015 TomTom Rel. 2015.

SECONDARY MAP - 7674781.2S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites

0 1/3 1/2 1 Miles

- Indian Reservations BIA
- Power transmission lines
- Pipelines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Upgradient Area
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: VTTM 943	CLIENT: Geotek
ADDRESS: Hanford Armona Road Hanford CA 93230	CONTACT: Kyle Richard Mchargue
LAT/LONG: 36.309918 / 119.680091	INQUIRY #: 7674781.2s DATE: June 06, 2024 6:57 pm

Copyright © 2024 EDR, Inc © 2015 TomTom Rel. 2015.

MAP FINDINGS

LEGEND

FACILITY NAME **FACILITY ADDRESS, CITY, ST, ZIP**			EDR SITE ID NUMBER
◆ **MAP ID#**	Direction Distance Range Relative Elevation	(Distance feet / miles) Feet Above Sea Level	ASTM 2600 Record Sources found in this report. Each database searched has been assigned to one or more categories. For detailed information about categorization, see the section of the report Records Searched and Currency.

Worksheet:

Comments:

Comments may be added on the online Vapor Encroachment Worksheet.

DATABASE ACRONYM: Applicable categories (A hoverbox with database description).

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
ENVIRONMENTAL RECORDS						
Federal NPL site list						
US	NPL	National Priority List	EPA	02/29/2024	03/01/2024	03/27/2024
US	Proposed NPL	Proposed National Priority List Sites	EPA	02/29/2024	03/01/2024	03/27/2024
US	NPL LIENS	Federal Superfund Liens	EPA	10/15/1991	02/02/1994	03/30/1994
Federal CERCLIS list						
US	SEMS	Superfund Enterprise Management System	EPA	04/22/2024	05/01/2024	05/24/2024
Federal RCRA CORRACTS facilities list						
US	CORRACTS	Corrective Action Report	EPA	12/04/2023	12/06/2023	12/12/2023
Federal RCRA TSD facilities list						
US	RCRA-TSDF	RCRA - Treatment, Storage and Disposal	Environmental Protection Agency	12/04/2023	12/06/2023	12/12/2023
Federal RCRA generators list						
US	RCRA-LQG	RCRA - Large Quantity Generators	Environmental Protection Agency	12/04/2023	12/06/2023	12/12/2023
US	RCRA-SQG	RCRA - Small Quantity Generators	Environmental Protection Agency	12/04/2023	12/06/2023	12/12/2023
US	RCRA-VSQG	RCRA - Very Small Quantity Generators (Formerly Conditionall	Environmental Protection Agency	12/04/2023	12/06/2023	12/12/2023
Federal institutional controls / engineering controls registries						
US	LUCIS	Land Use Control Information System	Department of the Navy	02/14/2024	02/16/2024	04/04/2024
US	US ENG CONTROLS	Engineering Controls Sites List	Environmental Protection Agency	02/13/2024	02/21/2024	04/04/2024
US	US INST CONTROLS	Institutional Controls Sites List	Environmental Protection Agency	02/13/2024	02/21/2024	04/04/2024
Federal ERNS list						
US	ERNS	Emergency Response Notification System	National Response Center, United States Coast	12/12/2023	12/13/2023	02/28/2024
State and tribal - equivalent NPL						
CA	RESPONSE	State Response Sites	Department of Toxic Substances Control	01/22/2024	01/23/2024	04/08/2024
State and tribal - equivalent CERCLIS						
CA	ENVIROSTOR	EnviroStor Database	Department of Toxic Substances Control	01/22/2024	01/23/2024	04/08/2024
State and tribal landfill / solid waste disposal						
CA	SWF/LF (SWIS)	Solid Waste Information System	Department of Resources Recycling and Recover	02/05/2024	02/06/2024	04/26/2024
State and tribal leaking storage tank lists						
CA	LUST REG 6V	Leaking Underground Storage Tank Case Listing	California Regional Water Quality Control Boa	06/07/2005	06/07/2005	06/29/2005
CA	LUST REG 9	Leaking Underground Storage Tank Report	California Regional Water Quality Control Boa	03/01/2001	04/23/2001	05/21/2001
CA	LUST REG 8	Leaking Underground Storage Tanks	California Regional Water Quality Control Boa	02/14/2005	02/15/2005	03/28/2005
CA	LUST REG 7	Leaking Underground Storage Tank Case Listing	California Regional Water Quality Control Boa	02/26/2004	02/26/2004	03/24/2004
CA	LUST REG 5	Leaking Underground Storage Tank Database	California Regional Water Quality Control Boa	07/01/2008	07/22/2008	07/31/2008
CA	LUST REG 4	Underground Storage Tank Leak List	California Regional Water Quality Control Boa	09/07/2004	09/07/2004	10/12/2004
CA	LUST REG 3	Leaking Underground Storage Tank Database	California Regional Water Quality Control Boa	05/19/2003	05/19/2003	06/02/2003

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
CA	LUST REG 2	Fuel Leak List	California Regional Water Quality Control Boa	09/30/2004	10/20/2004	11/19/2004
CA	LUST	Leaking Underground Fuel Tank Report (GEOTRACKER)	State Water Resources Control Board	03/04/2024	03/05/2024	05/24/2024
CA	LUST REG 6L	Leaking Underground Storage Tank Case Listing	California Regional Water Quality Control Boa	09/09/2003	09/10/2003	10/07/2003
CA	LUST REG 1	Active Toxic Site Investigation	California Regional Water Quality Control Boa	02/01/2001	02/28/2001	03/29/2001
US	INDIAN LUST R8	Leaking Underground Storage Tanks on Indian Land	EPA Region 8	10/25/2023	01/17/2024	03/13/2024
US	INDIAN LUST R10	Leaking Underground Storage Tanks on Indian Land	EPA Region 10	10/25/2023	01/17/2024	03/13/2024
US	INDIAN LUST R7	Leaking Underground Storage Tanks on Indian Land	EPA Region 7	10/25/2023	01/17/2024	03/13/2024
US	INDIAN LUST R9	Leaking Underground Storage Tanks on Indian Land	Environmental Protection Agency	10/25/2023	01/17/2024	03/13/2024
US	INDIAN LUST R5	Leaking Underground Storage Tanks on Indian Land	EPA, Region 5	10/04/2023	01/17/2024	03/13/2024
US	INDIAN LUST R4	Leaking Underground Storage Tanks on Indian Land	EPA Region 4	10/25/2023	01/17/2024	03/13/2024
US	INDIAN LUST R1	Leaking Underground Storage Tanks on Indian Land	EPA Region 1	10/25/2023	01/17/2024	03/13/2024
US	INDIAN LUST R6	Leaking Underground Storage Tanks on Indian Land	EPA Region 6	10/25/2023	01/17/2024	03/13/2024
CA	CPS-SLIC	Statewide SLIC Cases (GEOTRACKER)	State Water Resources Control Board	03/04/2024	03/05/2024	05/24/2024
CA	SLIC REG 1	Active Toxic Site Investigations	California Regional Water Quality Control Boa	04/03/2003	04/07/2003	04/25/2003
CA	SLIC REG 2	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Regional Water Quality Control Board San Fran	09/30/2004	10/20/2004	11/19/2004
CA	SLIC REG 3	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	California Regional Water Quality Control Boa	05/18/2006	05/18/2006	06/15/2006
CA	SLIC REG 4	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Region Water Quality Control Board Los Angele	11/17/2004	11/18/2004	01/04/2005
CA	SLIC REG 5	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Regional Water Quality Control Board Central	04/01/2005	04/05/2005	04/21/2005
CA	SLIC REG 6V	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Regional Water Quality Control Board, Victorv	05/24/2005	05/25/2005	06/16/2005
CA	SLIC REG 6L	SLIC Sites	California Regional Water Quality Control Boa	09/07/2004	09/07/2004	10/12/2004
CA	SLIC REG 7	SLIC List	California Regional Quality Control Board, Co	11/24/2004	11/29/2004	01/04/2005
CA	SLIC REG 8	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	California Region Water Quality Control Board	04/03/2008	04/03/2008	04/14/2008
CA	SLIC REG 9	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	California Regional Water Quality Control Boa	09/10/2007	09/11/2007	09/28/2007
State and tribal registered storage tank lists						
CA	UST	Active UST Facilities	SWRCB	03/04/2024	03/05/2024	05/29/2024
CA	UST CLOSURE	Proposed Closure of Underground Storage Tank (UST) Cases	State Water Resources Control Board	02/13/2024	03/05/2024	06/03/2024
CA	MILITARY UST SITES	Military UST Sites (GEOTRACKER)	State Water Resources Control Board	03/04/2024	03/05/2024	05/24/2024
CA	AST	Aboveground Petroleum Storage Tank Facilities	California Environmental Protection Agency	07/06/2016	07/12/2016	09/19/2016
US	INDIAN UST R4	Underground Storage Tanks on Indian Land	EPA Region 4	10/24/2023	01/17/2024	03/13/2024
US	INDIAN UST R10	Underground Storage Tanks on Indian Land	EPA Region 10	10/24/2023	01/17/2024	03/13/2024
US	INDIAN UST R6	Underground Storage Tanks on Indian Land	EPA Region 6	10/24/2023	01/17/2024	03/13/2024
US	INDIAN UST R5	Underground Storage Tanks on Indian Land	EPA Region 5	10/17/2023	01/17/2024	03/13/2024
US	INDIAN UST R9	Underground Storage Tanks on Indian Land	EPA Region 9	10/24/2023	01/17/2024	03/13/2024
US	INDIAN UST R1	Underground Storage Tanks on Indian Land	EPA, Region 1	10/24/2023	01/17/2024	03/13/2024
US	INDIAN UST R7	Underground Storage Tanks on Indian Land	EPA Region 7	10/24/2023	01/17/2024	03/13/2024
US	INDIAN UST R8	Underground Storage Tanks on Indian Land	EPA Region 8	10/24/2023	01/17/2024	03/13/2024
US	FEMA UST	Underground Storage Tank Listing	FEMA	11/16/2023	11/16/2023	02/13/2024
State and tribal voluntary cleanup sites						
US	INDIAN VCP R7	Voluntary Cleanup Priority Lisitng	EPA, Region 7	03/20/2008	04/22/2008	05/19/2008
CA	VCP	Voluntary Cleanup Program Properties	Department of Toxic Substances Control	01/22/2024	01/23/2024	04/08/2024
US	INDIAN VCP R1	Voluntary Cleanup Priority Listing	EPA, Region 1	07/27/2015	09/29/2015	02/18/2016

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
State and tribal Brownfields sites						
CA	BROWNFIELDS	Considered Brownfieds Sites Listing	State Water Resources Control Board	12/13/2023	12/13/2023	03/07/2024
Other Records						
US	CONSENT	Superfund (CERCLA) Consent Decrees	Department of Justice, Consent Decree Library	12/31/2023	01/11/2024	01/16/2024
US	ROD	Records Of Decision	EPA	02/29/2024	03/01/2024	03/27/2024
US	LIENS 2	CERCLA Lien Information	Environmental Protection Agency	02/29/2024	03/01/2024	03/27/2024
CA	HIST CAL-SITES	Calsites Database	Department of Toxic Substance Control	08/08/2005	08/03/2006	08/24/2006
US	DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations	EPA, Region 9	01/12/2009	05/07/2009	09/21/2009
CA	SWRCY	Recycler Database	Department of Conservation	03/04/2024	03/05/2024	05/28/2024
CA	CA FID UST	Facility Inventory Database	California Environmental Protection Agency	10/31/1994	09/05/1995	09/29/1995
CA	HIST UST	Hazardous Substance Storage Container Database	State Water Resources Control Board	10/15/1990	01/25/1991	02/12/1991
CA	SAN FRANCISCO AST	Aboveground Storage Tank Site Listing	San Francisco County Department of Public Hea	02/01/2024	02/01/2024	04/24/2024
CA	SWEEPS UST	SWEEPS UST Listing	State Water Resources Control Board	06/01/1994	07/07/2005	08/11/2005
US	US AIRS (AFS)	Aerometric Information Retrieval System Facility Subsystem (	EPA	10/12/2016	10/26/2016	02/03/2017
US	US AIRS MINOR	Air Facility System Data	EPA	10/12/2016	10/26/2016	02/03/2017
US	PCB TRANSFORMER	PCB Transformer Registration Database	Environmental Protection Agency	09/13/2019	11/06/2019	02/10/2020
US	SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing	Environmental Protection Agency	07/30/2021	02/03/2023	02/10/2023
US	EPA WATCH LIST	EPA Watch List	Environmental Protection Agency	08/30/2013	03/21/2014	06/17/2014
US	COAL ASH DOE	Steam-Electric Plant Operation Data	Department of Energy	12/31/2022	11/27/2023	02/22/2024
US	US FIN ASSUR	Financial Assurance Information	Environmental Protection Agency	12/11/2023	12/13/2023	02/28/2024
US	US HIST CDL	National Clandestine Laboratory Register	Drug Enforcement Administration	12/31/2023	02/21/2024	04/04/2024
US	2020 COR ACTION	2020 Corrective Action Program List	Environmental Protection Agency	09/30/2017	05/08/2018	07/20/2018
US	LEAD SMELTER 1	Lead Smelter Sites	Environmental Protection Agency	02/29/2024	03/01/2024	03/27/2024
US	FUSRAP	Formerly Utilized Sites Remedial Action Program	Department of Energy	03/03/2023	03/03/2023	06/09/2023
US	COAL ASH EPA	Coal Combustion Residues Surface Impoundments List	Environmental Protection Agency	01/12/2017	03/05/2019	11/11/2019
US	LEAD SMELTER 2	Lead Smelter Sites	American Journal of Public Health	04/05/2001	10/27/2010	12/02/2010
US	Delisted NPL	National Priority List Deletions	EPA	02/29/2024	03/01/2024	03/27/2024
US	SEMS-ARCHIVE	Superfund Enterprise Management System Archive	EPA	04/22/2024	05/01/2024	05/24/2024
US	RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated	Environmental Protection Agency	12/04/2023	12/06/2023	12/12/2023
US	HMIRS	Hazardous Materials Information Reporting System	U.S. Department of Transportation	12/12/2023	12/13/2023	02/28/2024
US	DOT OPS	Incident and Accident Data	Department of Transporation, Office of Pipeli	01/02/2020	01/28/2020	04/17/2020
US	US CDL	Clandestine Drug Labs	Drug Enforcement Administration	12/31/2023	02/21/2024	04/04/2024
US	US BROWNFIELDS	A Listing of Brownfields Sites	Environmental Protection Agency	03/11/2024	03/12/2024	05/10/2024
US	DOD	Department of Defense Sites	USGS	06/07/2021	07/13/2021	03/09/2022
US	FEDLAND	Federal and Indian Lands	U.S. Geological Survey	04/02/2018	04/11/2018	11/06/2019
US	FUDS	Formerly Used Defense Sites	U.S. Army Corps of Engineers	01/30/2024	02/13/2024	04/04/2024
US	UMTRA	Uranium Mill Tailings Sites	Department of Energy	08/30/2019	11/15/2019	01/28/2020
US	ODI	Open Dump Inventory	Environmental Protection Agency	06/30/1985	08/09/2004	09/17/2004
US	US MINES	Mines Master Index File	Department of Labor, Mine Safety and Health A	02/05/2024	02/21/2024	04/04/2024
US	MINES VIOLATIONS	MSHA Violation Assessment Data	DOL, Mine Safety & Health Admi	01/02/2024	01/03/2024	01/04/2024
US	US MINES 2	Ferrous and Nonferrous Metal Mines Database Listing	USGS	01/07/2022	02/24/2023	05/17/2023
US	US MINES 3	Active Mines & Mineral Plants Database Listing	USGS	04/14/2011	06/08/2011	09/13/2011
US	PRP	Potentially Responsible Parties	EPA	09/19/2023	10/03/2023	10/19/2023
US	TRIS	Toxic Chemical Release Inventory System	EPA	12/31/2022	11/13/2023	02/07/2024
US	TSCA	Toxic Substances Control Act	EPA	12/31/2020	06/14/2022	03/24/2023

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA/Office of Prevention, Pesticides and Toxi	04/09/2009	04/16/2009	05/11/2009
US	FTTS INSP	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA	04/09/2009	04/16/2009	05/11/2009
US	HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HIST FTTS INSP	FIFRA/TSCA Tracking System Inspection & Enforcement Case Lis	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	SSTS	Section 7 Tracking Systems	EPA	01/16/2024	01/17/2024	03/27/2024
US	ICIS	Integrated Compliance Information System	Environmental Protection Agency	11/18/2016	11/23/2016	02/10/2017
US	PADS	PCB Activity Database System	EPA	03/20/2023	04/04/2023	06/09/2023
US	MLTS	Material Licensing Tracking System	Nuclear Regulatory Commission	01/02/2024	01/16/2024	03/13/2024
US	RADINFO	Radiation Information Database	Environmental Protection Agency	07/01/2019	07/01/2019	09/23/2019
US	FINDS	Facility Index System/Facility Registry System	EPA	02/09/2024	02/27/2024	05/24/2024
US	RAATS	RCRA Administrative Action Tracking System	EPA	04/17/1995	07/03/1995	08/07/1995
US	RMP	Risk Management Plans	Environmental Protection Agency	02/01/2024	02/08/2024	04/04/2024
US	BRS	Biennial Reporting System	EPA/NTIS	12/31/2021	03/09/2023	03/20/2023
US	PWS	Public Water System Data	EPA	12/17/2013	01/09/2014	10/15/2014
US	INDIAN RESERV	Indian Reservations	USGS	12/31/2014	07/14/2015	01/10/2017
US	INDIAN ODI	Report on the Status of Open Dumps on Indian Lands	Environmental Protection Agency	12/31/1998	12/03/2007	01/24/2008
US	IHS OPEN DUMPS	Open Dumps on Indian Land	Department of Health & Human Serivces, Indian	04/01/2014	08/06/2014	01/29/2015
US	ABANDONED MINES	Abandoned Mines	Department of Interior	11/28/2023	11/29/2023	12/11/2023
CA	CA BOND EXP. PLAN	Bond Expenditure Plan	Department of Health Services	01/01/1989	07/27/1994	08/02/1994
CA	CDL	Clandestine Drug Labs	Department of Toxic Substances Control	12/31/2021	09/28/2023	12/18/2023
CA	CHMIRS	California Hazardous Material Incident Report System	Office of Emergency Services	12/31/2023	01/23/2024	04/09/2024
CA	CORTESE	"Cortese" Hazardous Waste & Substances Sites List	CAL EPA/Office of Emergency Information	12/13/2023	12/13/2023	03/07/2024
CA	CUPA LIV-PLE	CUPA Facility Listing	Livermore-Pleasanton Fire Department	02/14/2024	02/21/2024	05/08/2024
CA	DEED	Deed Restriction Listing	DTSC and SWRCB	02/26/2024	02/27/2024	05/14/2024
CA	DRYCLEAN VENTURA	Drycleaner Facility Listing	Ventura County Air Pollution Control District	01/04/2024	01/16/2024	02/08/2024
CA	DRYCLEAN AMADOR	Amador Air District Drycleaner Facility Listing	Amador Air Quality Management District	04/26/2023	04/27/2023	07/13/2023
CA	DRYCLEAN SOUTH COAST	South Coast Air Quality Management District Drycleaner Listi	South Coast Air Quality Management District	02/20/2024	02/22/2024	05/08/2024
CA	DRYCLEAN MOJAVE	Mojave Desert Air Quality Management District Drycleaner Fac	Mojave Desert Air Quality Management District	04/15/2024	04/17/2024	04/24/2024
CA	DRYCLEAN BUTTE	Butte County Air Quality Management DistrictDrycleaner Facil	Butte County Air Quality Management District	04/25/2023	10/18/2023	01/16/2024
CA	DRYCLEAN FEATHER RVR	Feather River Air Quality Management District Drycleaner Fac	Feather River Air Quality Management District	03/08/2023	03/09/2023	06/05/2023
CA	DRYCLEAN SAN DIEGO	San Diego County Air Pollution Control District Drycleaner F	San Diego County Air Pollution Control Distri	03/19/2024	03/21/2024	04/12/2024
CA	DRYCLEANERS	Cleaner Facilities	Department of Toxic Substance Control	04/02/2024	04/05/2024	04/15/2024
CA	DRYCLEAN GRANT	Grant Recipients List	California Air Resources Board	12/31/2021	01/26/2024	04/16/2024
CA	DRYCLEAN LAKE	Lake County Air Quality Management District Drycleaner Facil	Lake County Air Quality Management District	02/15/2024	02/16/2024	05/02/2024
CA	DRYCLEAN AVAQMD	Antelope Valley Air Quality Management District Drycleaner L	Antelope Valley Air Quality Management Distri	02/26/2024	02/27/2024	05/15/2024
CA	DRYCLEAN MENDOCINO	Mendocino County Air Quality Management District Drycleaner	Mendocino County Air Quality Management Distr	02/26/2024	02/28/2024	05/15/2024
CA	DRYCLEAN EAST KERN	Eastern Kern Air Pollution Control District District Dryclea	Eastern Kern Air Pollution Control District	01/12/2023	04/26/2023	07/14/2023
CA	DRYCLEAN IMPERIAL	Imperial County Air Pollution Control District Drycleaner Fa	Imperial County Air Pollution Control Distric	04/25/2023	04/26/2023	07/14/2023
CA	DRYCLEAN YOLO-SOLANO	Yolo-Solano Air Quality Management District Drycleaner Facil	Yolo-Solano Air Quality Management District	01/04/2024	01/05/2024	03/20/2024
CA	DRYCLEAN SHASTA	Shasta County Air Quality Management District District Drycl	Shasta County Air Quality Management District	04/26/2023	04/27/2023	07/14/2023
CA	DRYCLEAN MONTERY BAY	Monterey Bay Air Quality Management District Drycleaner Faci	Monterey Bay Air Quality Management District	01/03/2024	01/05/2024	03/20/2024
CA	DRYCLEAN SAN LUIS OB	San Luis Obispo County Air Pollution Control District Drycle	San Luis Obispo County Air Pollution Control	01/03/2024	01/04/2024	03/20/2024
CA	DRYCLEAN PLACER	Placer County Air Quality Management District Drycleaner Fac	Placer County Air Quality Management District	05/15/2023	05/17/2023	08/14/2023
CA	DRYCLEAN SAN JOAQUIN	San Joaquin Valley Air Pollution Control District District D	San Joaquin Valley Air Pollution Control Dist	01/04/2024	01/04/2024	03/21/2024
CA	DRYCLEAN BAY AREA	Bay Area Air Quality Management District Drycleaner Facility	Bay Area Air Quality Management District	02/20/2019	05/30/2019	05/01/2023
CA	DRYCLEAN CALAVERAS	Calaveras County Environmental Management Agency Drycleaner	Calaveras County Environmental Management Age	06/17/2019	06/19/2019	05/01/2023
CA	DRYCLEAN N COAST	North Coast Unified Air Quality Management District Dryclean	North Coast Unified Air Quality Management Di	11/30/2016	04/19/2019	05/01/2023

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
CA	DRYCLEAN N SIERRA	Northern Sierra Air Quality Management District Drycleaner F	Northern Sierra Air Quality Management Distri	05/07/2019	05/07/2019	05/01/2023
CA	DRYCLEAN SANTA BARB	Santa Barbara County Air Pollution Control District Dryclean	Santa Barbara County Air Pollution Control Di	02/19/2019	04/17/2019	05/01/2023
CA	DRYCLEAN TEHAMA	Tehama County Air Pollution Control District Drycleaner Faci	Tehama County Air Pollution Control District	04/24/2019	04/24/2019	05/01/2023
CA	DRYCLEAN GLENN	Glenn County Air Pollution Control District Drycleaner Facil	Glenn County Air Pollution Control District	01/08/2024	01/10/2024	03/27/2024
CA	DRYCLEAN N SONOMA	Norther Sonoma County County Air Pollution Control District	Santa Barbara County Air Pollution Control Di	01/05/2024	01/10/2024	03/27/2024
CA	DRYCLEAN SACRAMENTO	Sacramento Metropolitan Air Quality Management DistrictDrycl	Sacramento Metropolitan Air Quality Managemen	01/03/2024	01/10/2024	03/27/2024
CA	EMI	Emissions Inventory Data	California Air Resources Board	12/31/2021	06/09/2023	08/30/2023
CA	ENF	Enforcement Action Listing	State Water Resoruces Control Board	01/16/2024	01/16/2024	04/03/2024
CA	FIN ASSURANCE 1	Financial Assurance Information Listing	Department of Toxic Substances Control	01/11/2024	01/16/2024	04/03/2024
CA	FIN ASSURANCE 2	Financial Assurance Information Listing	California Integrated Waste Management Board	02/07/2024	02/28/2024	05/15/2024
CA	HAULERS	Registered Waste Tire Haulers Listing	Integrated Waste Management Board	04/04/2024	04/05/2024	04/15/2024
CA	HAZNET	Facility and Manifest Data	California Environmental Protection Agency	12/31/2023	01/03/2024	03/21/2024
CA	HIST CORTESE	Hazardous Waste & Substance Site List	Department of Toxic Substances Control	04/01/2001	01/22/2009	04/08/2009
CA	HWP	EnviroStor Permitted Facilities Listing	Department of Toxic Substances Control	02/07/2024	02/07/2024	02/07/2024
CA	HWT	Registered Hazardous Waste Transporter Database	Department of Toxic Substances Control	01/02/2024	01/03/2024	03/21/2024
CA	ICE	Inspection, Compliance and Enforcement	Department of Toxic Subsances Control	02/07/2024	02/07/2024	02/07/2024
CA	LDS	Land Disposal Sites Listing (GEOTRACKER)	State Water Qualilty Control Board	03/04/2024	03/05/2024	05/24/2024
CA	LIENS	Environmental Liens Listing	Department of Toxic Substances Control	02/26/2024	02/27/2024	05/15/2024
CA	MCS	Military Cleanup Sites Listing (GEOTRACKER)	State Water Resources Control Board	03/04/2024	03/05/2024	05/24/2024
CA	MINES	Mines Site Location Listing	Department of Conservation	03/04/2024	03/05/2024	05/28/2024
CA	MWMP	Medical Waste Management Program Listing	Department of Public Health	01/23/2024	02/27/2024	05/16/2024
CA	NPDES	NPDES Permits Listing	State Water Resources Control Board	02/05/2024	02/06/2024	04/25/2024
CA	PEST LIC	Pesticide Regulation Licenses Listing	Department of Pesticide Regulation	02/26/2024	02/27/2024	05/17/2024
CA	PROC	Certified Processors Database	Department of Conservation	03/04/2024	03/05/2024	05/28/2024
CA	NOTIFY 65	Proposition 65 Records	State Water Resources Control Board	03/08/2024	03/08/2024	05/29/2024
CA	SAN JOSE HAZMAT	Hazardous Material Facilities	City of San Jose Fire Department	11/03/2020	11/05/2020	01/26/2021
CA	SCH	School Property Evaluation Program	Department of Toxic Substances Control	01/22/2024	01/23/2024	04/08/2024
CA	SPILLS 90	SPILLS90 data from FirstSearch	FirstSearch	06/06/2012	01/03/2013	02/22/2013
CA	TOXIC PITS	Toxic Pits Cleanup Act Sites	State Water Resources Control Board	07/01/1995	08/30/1995	09/26/1995
CA	UIC	UIC Listing	Deaprtment of Conservation	03/04/2024	03/05/2024	05/28/2024
CA	WASTEWATER PITS	Oil Wastewater Pits Listing	RWQCB, Central Valley Region	02/11/2021	07/01/2021	09/29/2021
CA	WDS	Waste Discharge System	State Water Resources Control Board	06/19/2007	06/20/2007	06/29/2007
CA	WIP	Well Investigation Program Case List	Los Angeles Water Quality Control Board	07/03/2009	07/21/2009	08/03/2009
CA	WMUDS/SWAT	Waste Management Unit Database	State Water Resources Control Board	04/01/2000	04/10/2000	05/10/2000
US	UXO	Unexploded Ordnance Sites	Department of Defense	09/06/2023	09/13/2023	12/11/2023
CA	MILITARY PRIV SITES	Military Privatized Sites (GEOTRACKER)	State Water Resources Control Board	03/04/2024	03/05/2024	05/24/2024
CA	NON-CASE INFO	Non-Case Information Sites (GEOTRACKER)	State Water Resources Control Board	03/04/2024	03/05/2024	05/24/2024
CA	OTHER OIL GAS	Other Oil & Gas Projects Sites (GEOTRACKER)	State Water Resources Control Board	03/04/2024	03/05/2024	05/24/2024
CA	PROD WATER PONDS	Produced Water Ponds Sites (GEOTRACKER)	State Water Resources Control Board	03/04/2024	03/05/2024	05/24/2024
CA	PROJECT	Project Sites (GEOTRACKER)	State Water Resources Control Board	03/04/2024	03/05/2024	05/24/2024
CA	SAMPLING POINT	Sampling Point ? Public Sites (GEOTRACKER)	State Water Resources Control Board	03/04/2024	03/05/2024	05/24/2024
US	ECHO	Enforcement & Compliance History Information	Environmental Protection Agency	12/17/2023	12/28/2023	03/04/2024
US	PFAS ECHO	Facilities in Industries that May Be Handling PFAS Listing	Environmental Protection Agency	12/28/2023	12/28/2023	03/04/2024
CA	WDR	Waste Discharge Requirements Listing	State Water Resources Control Board	03/04/2024	03/05/2024	05/28/2024
CA	AQUEOUS FOAM	Former Fire Training Facility Assessments Listing	State Water Resources Control Board	03/04/2024	03/05/2024	05/28/2024
CA	CHROME PLATING	Chrome Plating Facilities Listing	State Water Resources Control Board	03/04/2024	03/05/2024	05/28/2024
CA	CERS	CalEPA Regulated Site Portal Data	California Environmental Protection Agency	01/16/2024	01/16/2024	04/03/2024

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
CA	CERS TANKS	California Environmental Reporting System (CERS) Tanks	California Environmental Protection Agency	01/16/2024	01/16/2024	04/03/2024
US	BIOSOLIDS	ICIS-NPDES Biosolids Facility Data	Environmental Protection Agency	12/31/2023	01/03/2024	01/16/2024
US	PFAS TSCA	PFAS Manufacture and Imports Information	Environmental Protection Agency	12/28/2023	12/28/2023	01/04/2024
US	PFAS ATSDR	PFAS Contamination Site Location Listing	Department of Health & Human Services	06/24/2020	03/17/2021	11/08/2022
US	MINES MRDS	Mineral Resources Data System	USGS	08/23/2022	11/22/2022	02/28/2023
US	DOCKET HWC	Hazardous Waste Compliance Docket Listing	Environmental Protection Agency	05/06/2021	05/21/2021	08/11/2021
US	PFAS PT 139 AIRPORT	All Certified Part 139 Airports PFAS Information Listing	Environmental Protection Agency	12/28/2023	12/28/2023	03/04/2024
US	PFAS WQP	Ambient Environmental Sampling for PFAS	Environmental Protection Agency	12/28/2023	12/28/2023	03/04/2024
US	PFAS FEDERAL SITES	Federal Sites PFAS Information	Environmental Protection Agency	12/28/2023	12/28/2023	03/04/2024
US	PFAS RCRA MANIFEST	PFAS Transfers Identified In the RCRA Database Listing	Environmental Protection Agency	12/28/2023	12/28/2023	01/04/2024
US	PFAS ECHO FIRE TRAIN	Facilities in Industries that May Be Handling PFAS Listing	Environmental Protection Agency	12/28/2023	12/28/2023	03/04/2024
US	PFAS NPDES	Clean Water Act Discharge Monitoring Information	Environmental Protection Agency	12/28/2023	12/28/2023	03/04/2024
US	PFAS NPL	Superfund Sites with PFAS Detections Information	Environmental Protection Agency	12/28/2023	12/28/2023	03/04/2024
US	FUELS PROGRAM	EPA Fuels Program Registered Listing	EPA	02/12/2024	02/13/2024	04/04/2024
US	FEDERAL FACILITY	Federal Facility Site Information listing	Environmental Protection Agency	12/20/2023	12/20/2023	01/24/2024
CA	HWTS	Hazardous Waste Tracking System	Department of Toxic Substances Control	01/26/2024	01/30/2024	04/17/2024
CA	CIWQS	California Integrated Water Quality System	State Water Resources Control Board	02/26/2024	02/27/2024	05/14/2024
US	UST FINDER	UST Finder Database	Environmental Protection Agency	06/08/2023	10/04/2023	01/18/2024
US	UST FINDER RELEASE	UST Finder Releases Database	Environmental Protecton Agency	06/08/2023	10/31/2023	01/18/2024
CA	PFAS	PFAS Contamination Site Location Listing	State Water Resources Control Board	03/04/2024	03/06/2024	05/29/2024
CA	WELL STIM PROJ	Well Stimulation Project (GEOTRACKER)	State Water Resources Control Board	03/04/2024	03/05/2024	05/24/2024
CA	UIC GEO	Underground Injection Control Sites (GEOTRACKER)	State Water Resource Control Board	03/04/2024	03/05/2024	05/24/2024
US	PFAS TRIS	List of PFAS Added to the TRI	Environmental Protection Agency	12/28/2023	12/28/2023	01/04/2024
US	PCS	Permit Compliance System	EPA, Office of Water	12/16/2016	01/06/2017	03/10/2017
US	AQUEOUS FOAM NRC	Aqueous Foam Related Incidents Listing	Environmental Protection Agency	12/28/2023	12/28/2023	03/04/2024
CA	CERS HAZ WASTE	California Environmental Reporting System Hazardous Waste	CalEPA	01/16/2024	01/16/2024	04/03/2024

HISTORICAL USE RECORDS

US	EDR MGP	EDR Proprietary Manufactured Gas Plants	EDR, Inc.			
US	EDR Hist Auto	EDR Exclusive Historical Auto Stations	EDR, Inc.			
US	EDR Hist Cleaner	EDR Exclusive Historical Cleaners	EDR, Inc.			
CA	RGA LF	Recovered Government Archive Solid Waste Facilities List	Department of Resources Recycling and Recover		07/01/2013	01/13/2014
CA	RGA LUST	Recovered Government Archive Leaking Underground Storage Tan	State Water Resources Control Board		07/01/2013	12/30/2013

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
COUNTY RECORDS						
CA	CS ALAMEDA	Contaminated Sites	Alameda County Environmental Health Services	01/09/2019	01/11/2019	03/05/2019
CA	UST ALAMEDA	Underground Tanks	Alameda County Environmental Health Services	12/26/2023	12/26/2023	03/19/2024
CA	CUPA AMADOR	CUPA Facility List	Amador County Environmental Health	04/27/2023	04/27/2023	07/13/2023
CA	CUPA BUTTE	CUPA Facility Listing	Public Health Department	04/21/2017	04/25/2017	08/09/2017
CA	CUPA CALVERAS	CUPA Facility Listing	Calveras County Environmental Health	12/18/2023	12/18/2023	03/13/2024
CA	CUPA COLUSA	CUPA Facility List	Health & Human Services	04/06/2020	04/23/2020	07/10/2020
CA	SL CONTRA COSTA	Site List	Contra Costa Health Services Department	01/19/2024	01/24/2024	04/09/2024
CA	CUPA DEL NORTE	CUPA Facility List	Del Norte County Environmental Health Divisio	02/05/2024	02/08/2024	04/26/2024
CA	CUPA EL DORADO	CUPA Facility List	El Dorado County Environmental Management Dep	08/08/2022	08/09/2022	09/01/2022
CA	CUPA FRESNO	CUPA Resources List	Dept. of Community Health	06/28/2021	12/21/2021	03/03/2022
CA	CUPA GLENN	CUPA Facility List	Glenn County Air Pollution Control District	01/22/2018	01/24/2018	03/14/2018
CA	CUPA HUMBOLDT	CUPA Facility List	Humboldt County Environmental Health	08/12/2021	08/12/2021	11/08/2021
CA	CUPA IMPERIAL	CUPA Facility List	San Diego Border Field Office	01/17/2024	01/18/2024	04/03/2024
CA	CUPA INYO	CUPA Facility List	Inyo County Environmental Health Services	04/02/2018	04/03/2018	06/14/2018
CA	CUPA KERN	CUPA Facility List	Kern County Public Health	10/30/2023	11/01/2023	01/23/2024
CA	UST KERN	Underground Storage Tank Sites & Tank Listing	Kern County Environment Health Services Depar	04/25/2024	05/01/2024	05/08/2024
CA	CUPA KINGS	CUPA Facility List	Kings County Department of Public Health	12/03/2020	01/26/2021	04/14/2021
CA	CUPA LAKE	CUPA Facility List	Lake County Environmental Health	02/05/2024	02/08/2024	04/26/2024
CA	CUPA LASSEN	CUPA Facility List	Lassen County Environmental Health	07/31/2020	08/21/2020	11/09/2020
CA	AOCONCERN	Key Areas of Concerns in Los Angeles County		03/30/2009	03/31/2009	10/23/2009
CA	HMS LOS ANGELES	HMS: Street Number List	Department of Public Works	01/16/2024	01/18/2024	03/26/2024
CA	LF LOS ANGELES	List of Solid Waste Facilities	La County Department of Public Works	01/09/2024	01/10/2024	03/27/2024
CA	LF LOS ANGELES CITY	City of Los Angeles Landfills	Engineering & Construction Division	12/31/2022	01/12/2023	03/29/2023
CA	LOS ANGELES AST	Active & Inactive AST Inventory	Los Angeles Fire Department	06/01/2019	06/25/2019	08/22/2019
CA	LOS ANGELES CO LF METHANE	Methane Producing Landfills	Los Angeles County Department of Public Works	04/13/2023	07/13/2023	09/27/2023
CA	LOS ANGELES HM	Active & Inactive Hazardous Materials Inventory	Los Angeles Fire Department	12/01/2023	12/13/2023	12/14/2023
CA	LOS ANGELES UST	Active & Inactive UST Inventory	Los Angeles Fire Department	12/01/2023	12/13/2023	03/07/2024
CA	SITE MIT LOS ANGELES	Site Mitigation LA County List	Community Health Services	07/11/2023	10/17/2023	01/09/2024
CA	UST EL SEGUNDO	City of El Segundo Underground Storage Tank	City of El Segundo Fire Department	01/21/2017	04/19/2017	05/10/2017
CA	UST LONG BEACH	City of Long Beach Underground Storage Tank	City of Long Beach Fire Department	04/22/2019	04/23/2019	06/27/2019
CA	UST TORRANCE	City of Torrance Underground Storage Tank	City of Torrance Fire Department	04/12/2023	05/02/2023	06/13/2023
CA	CUPA MADERA	CUPA Facility List	Madera County Environmental Health	08/10/2020	08/12/2020	10/23/2020
CA	UST MARIN	Underground Storage Tank Sites	Public Works Department Waste Management	09/26/2018	10/04/2018	11/02/2018
CA	UST MENDOCINO	Mendocino County UST Database	Department of Public Health	09/22/2021	11/18/2021	11/22/2021
CA	CUPA MERCED	CUPA Facility List	Merced County Environmental Health	11/15/2023	11/20/2023	02/15/2024
CA	CUPA MONO	CUPA Facility List	Mono County Health Department	02/22/2021	03/02/2021	05/19/2021
CA	CUPA MONTEREY	CUPA Facility Listing	Monterey County Health Department	10/04/2021	10/06/2021	12/29/2021
CA	LUST NAPA	Sites With Reported Contamination	Napa County Department of Environmental Manag	01/09/2017	01/11/2017	03/02/2017
CA	UST NAPA	Closed and Operating Underground Storage Tank Sites	Napa County Department of Environmental Manag	09/05/2019	09/09/2019	10/31/2019
CA	CUPA NEVADA	CUPA Facility List	Community Development Agency	10/31/2023	11/03/2023	01/23/2024
CA	IND_SITE ORANGE	List of Industrial Site Cleanups Orange County	Health Care Agency	02/02/2024	03/13/2024	06/04/2024
CA	LUST ORANGE	List of Underground Storage Tank Cleanups	Health Care Agency	02/22/2024	03/13/2024	06/04/2024
CA	UST ORANGE	List of Underground Storage Tank Facilities	Health Care Agency	02/22/2024	03/13/2024	06/04/2024
CA	MS PLACER	Master List of Facilities	Placer County Health and Human Services	02/28/2024	02/28/2024	05/16/2024
CA	CUPA PLUMAS	CUPA Facility List	Plumas County Environmental Health	03/31/2019	04/23/2019	06/26/2019

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
CA	LUST RIVERSIDE	Listing of Underground Tank Cleanup Sites	Department of Environmental Health	01/04/2024	01/04/2024	03/29/2024
CA	UST RIVERSIDE	Underground Storage Tank Tank List	Department of Environmental Health	01/04/2024	01/04/2024	03/21/2024
CA	CS SACRAMENTO	Toxic Site Clean-Up List	Sacramento County Environmental Management	11/07/2022	12/21/2022	03/16/2023
CA	ML SACRAMENTO	Master Hazardous Materials Facility List	Sacramento County Environmental Management	11/07/2022	12/09/2022	03/01/2023
CA	CUPA SAN BENITO	CUPA Facility List	San Benito County Environmental Health	01/17/2024	01/18/2024	01/26/2024
CA	PERMITS SAN BERNARDINO	Hazardous Material Permits	San Bernardino County Fire Department Hazardo	02/13/2024	02/14/2024	05/02/2024
CA	HMMD SAN DIEGO	Hazardous Materials Management Division Database	Hazardous Materials Management Division	05/16/2024	05/22/2024	05/24/2024
CA	LF SAN DIEGO	Solid Waste Facilities	Department of Health Services	10/01/2023	01/31/2024	04/17/2024
CA	SAN DIEGO CO LOP	Local Oversight Program Listing	Department of Environmental Health	07/22/2021	10/19/2021	01/13/2022
CA	SAN DIEGO CO SAM	Environmental Case Listing	San Diego County Department of Environmental	03/23/2010	06/15/2010	07/09/2010
CA	CUPA SAN FRANCISCO CO	CUPA Facility Listing	San Francisco County Department of Environmen	02/01/2024	02/01/2024	04/24/2024
CA	LUST SAN FRANCISCO	Local Oversite Facilities	Department Of Public Health San Francisco Cou	09/19/2008	09/19/2008	09/29/2008
CA	UST SAN FRANCISCO	Underground Storage Tank Information	Department of Public Health	02/01/2024	02/01/2024	04/24/2024
CA	SAN FRANCISCO MAHER	Maher Ordinance Property Listing	San Francisco Planning	01/15/2024	01/18/2024	04/05/2024
CA	UST SAN JOAQUIN	San Joaquin Co. UST	Environmental Health Department	06/22/2018	06/26/2018	07/11/2018
CA	CUPA SAN LUIS OBISPO	CUPA Facility List	San Luis Obispo County Public Health Departme	02/14/2024	02/14/2024	05/02/2024
CA	BI SAN MATEO	Business Inventory	San Mateo County Environmental Health Service	02/20/2020	02/20/2020	04/24/2020
CA	LUST SAN MATEO	Fuel Leak List	San Mateo County Environmental Health Service	03/29/2019	03/29/2019	05/29/2019
CA	CUPA SANTA BARBARA	CUPA Facility Listing	Santa Barbara County Public Health Department	09/08/2011	09/09/2011	10/07/2011
CA	CUPA SANTA CLARA	Cupa Facility List	Department of Environmental Health	02/21/2024	02/22/2024	05/08/2024
CA	HIST LUST SANTA CLARA	HIST LUST - Fuel Leak Site Activity Report	Santa Clara Valley Water District	03/29/2005	03/30/2005	04/21/2005
CA	LUST SANTA CLARA	LOP Listing	Department of Environmental Health	03/03/2014	03/05/2014	03/18/2014
CA	CUPA SANTA CRUZ	CUPA Facility List	Santa Cruz County Environmental Health	01/21/2017	02/22/2017	05/23/2017
CA	SITE MIT SANTA CRUZ	Site Mitigation Santa Cruz County List	Santa Cruz Environmental Health Services	12/03/2018	06/23/2023	07/13/2023
CA	CUPA SHASTA	CUPA Facility List	Shasta County Department of Resource Manageme	06/15/2017	06/19/2017	08/09/2017
CA	LUST SOLANO	Leaking Underground Storage Tanks	Solano County Department of Environmental Man	06/04/2019	06/06/2019	08/13/2019
CA	UST SOLANO	Underground Storage Tanks	Solano County Department of Environmental Man	09/15/2021	09/16/2021	12/09/2021
CA	CUPA SONOMA	Cupa Facility List	County of Sonoma Fire & Emergency Services De	07/02/2021	07/06/2021	07/14/2021
CA	LUST SONOMA	Leaking Underground Storage Tank Sites	Department of Health Services	06/30/2021	06/30/2021	09/24/2021
CA	CUPA STANISLAUS	CUPA Facility List	Stanislaus County Department of Ennvironmenta	02/08/2022	02/10/2022	05/04/2022
CA	UST SUTTER	Underground Storage Tanks	Sutter County Environmental Health Services	08/03/2023	08/24/2023	09/12/2023
CA	CUPA TEHAMA	CUPA Facility List	Tehama County Department of Environmental Hea	12/05/2023	02/01/2024	02/28/2024
CA	CUPA TRINITY	CUPA Facility List	Department of Toxic Substances Control	01/17/2024	01/18/2024	04/03/2024
CA	CUPA TULARE	CUPA Facility List	Tulare County Environmental Health Services D	10/07/2022	10/07/2022	12/21/2022
CA	CUPA TUOLUMNE	CUPA Facility List	Divison of Environmental Health	04/23/2018	04/25/2018	06/25/2018
CA	BWT VENTURA	Business Plan, Hazardous Waste Producers, and Operating Unde	Ventura County Environmental Health Division	12/26/2023	01/24/2024	04/08/2024
CA	LF VENTURA	Inventory of Illegal Abandoned and Inactive Sites	Environmental Health Division	12/01/2011	12/01/2011	01/19/2012
CA	LUST VENTURA	Listing of Underground Tank Cleanup Sites	Environmental Health Division	05/29/2008	06/24/2008	07/31/2008
CA	MED WASTE VENTURA	Medical Waste Program List	Ventura County Resource Management Agency	12/26/2023	01/23/2024	04/09/2024
CA	UST VENTURA	Underground Tank Closed Sites List	Environmental Health Division	02/27/2024	03/05/2024	05/29/2024
CA	UST YOLO	Underground Storage Tank Comprehensive Facility Report	Yolo County Department of Health	12/18/2023	12/26/2023	03/19/2024
CA	CUPA YUBA	CUPA Facility List	Yuba County Environmental Health Department	01/22/2024	01/23/2024	04/08/2024

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date

STREET AND ADDRESS INFORMATION

© 2015 TomTom North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

APPENDIX G

LABORATORY TEST RESULTS

Orange Coast Analytical, Inc.
3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (480) 736-0960 Fax (480) 736-0970

LABORATORY REPORT FORM

ORANGE COAST ANALYTICAL, INC.

3002 Dow Suite 532 Tustin, CA 92780

(714) 832-0064

Laboratory Certification (ELAP) No.:2576
Expiration Date: 2025
Los Angeles County Sanitation District Lab ID# 10206

Laboratory Director's Name:
Mark Noorani

Client:	GeoTek, Inc.
Laboratory Reference:	GTK 28902
Project Name:	K Hovnanian California Region
Project Number:	3951-CR
Date Received:	6/11/2024
Date Reported:	6/20/2024
Chain of Custody Received:	☑
Analytical Method:	8081A, 6010B,

Mark Noorani, Laboratory Director

© This report may only be reproduced in full. Any partial reproduction of this report requires written permission from Orange Coast Analytical, Inc.

Mr Kyle Mchargue
GeoTek, Inc.
1548 N. Maple St
Corona, CA, 92880

Lab Reference # GTK 28902
Project Name: K Hovnanian California Region
Project #: 3951-CR

Case Narrative

Sample Receipt:

All samples on the Chain of Custody were received by OCA at 6ºC, on ice.
Samples in plastic bag.

Holding Times:

All samples were analyzed within required holding times unless otherwise noted in the data qualifier section of the report.

Analytical Methods:

Sample analysis was performed following the analytical methods listed on the cover page.

Data Qualifiers:

Within this report, data qualifiers may have been assigned to clarify deviations in common laboratory procedures or any divergence from laboratory QA/QC criteria. If a data qualifier has been used, it will appear in the back of the report along with its description. All method QA/QC criteria have been met unless otherwise noted in the data qualifier section.

Definition of Terms:

The definitions of common terms and acronyms used in the report have been placed at the back of the report to assist data users.

Comments:

None

Mr Kyle Mchargue
GeoTek, Inc.
1548 N. Maple St
Corona, CA, 92880

Lab Reference # GTK 28902
Project Name: K Hovnanian California Region
Project #: 3951-CR

Client Sample Summary

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
#1	28902-001	6/11/2024	6/10/2024	Soil
#2	28902-002	6/11/2024	6/10/2024	Soil
#3	28902-003	6/11/2024	6/10/2024	Soil
#4	28902-004	6/11/2024	6/10/2024	Soil
#5	28902-005	6/11/2024	6/10/2024	Soil
#6	28902-006	6/11/2024	6/10/2024	Soil
#7	28902-007	6/11/2024	6/10/2024	Soil
#8	28902-008	6/11/2024	6/10/2024	Soil
#9	28902-009	6/11/2024	6/10/2024	Soil
#10	28902-010	6/11/2024	6/10/2024	Soil
#11	28902-011	6/11/2024	6/10/2024	Soil
#12	28902-012	6/11/2024	6/10/2024	Soil

© Orange Coast Analytical, Inc

Mr Kyle Mchargue
GeoTek, Inc.
1548 N. Maple St
Corona, CA, 92880

Lab Reference # GTK 28902
Project Name: K Hovnanian California Region
Project #: 3951-CR

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
#1	28902-001	6/11/2024 11:55	6/10/2024 12:00	6/11/2024 16:00	6/13/2024 12:03	Soil

ANALYTE	CAS #	µg/kg	RL	MDL
Aldrin	309-00-2	<8.0	8.0	3.9
alpha-BHC	319-84-6	<20	20	4.8
beta-BHC	319-85-7	<20	20	5.6
gamma-BHC (Lindane)	58-89-9	<20	20	4.8
delta-BHC	319-86-8	<40	40	5.6
Chlordane	57-74-9	<120	120	44
4,4'-DDD	72-54-8	<40	40	8.0
4,4'-DDE	72-55-9	35	20	7.2
4,4'-DDT	50-29-3	<40	40	10
Dieldrin	60-57-1	<8.0	8.0	4.4
Endosulfan I	959-98-8	<40	40	4.4
Endosulfan II	33213-65-9	<20	20	5.6
Endosulfan sulfate	1031-07-8	<40	40	5.2
Endrin	72-20-8	<40	40	8.0
Endrin aldehyde	7421-93-4	<40	40	4.8
Endrin ketone	53494-70-5	<20	20	3.8
Heptachlor	76-44-8	<8.0	8.0	5.2
Heptachlor epoxide	1024-57-3	<20	20	5.6
Methoxychlor	72-43-5	<40	40	6.0
Toxaphene	8001-35-2	<160	160	40

Surrogate:	% RC*
Decachlorobiphenyl	107

* Acceptable Recovery: 38-133 %

Dilution Factor: 4

Data Qualifiers: D1,

Mr Kyle Mchargue
GeoTek, Inc.
1548 N. Maple St
Corona, CA, 92880

Lab Reference # GTK 28902
Project Name: K Hovnanian California Region
Project #: 3951-CR

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
#2	28902-002	6/11/2024 11:55	6/10/2024 12:00	6/11/2024 16:00	6/13/2024 12:17	Soil

ANALYTE	CAS #	µg/kg	RL	MDL
Aldrin	309-00-2	<8.0	8.0	3.9
alpha-BHC	319-84-6	<20	20	4.8
beta-BHC	319-85-7	<20	20	5.6
gamma-BHC (Lindane)	58-89-9	<20	20	4.8
delta-BHC	319-86-8	<40	40	5.6
Chlordane	57-74-9	<120	120	44
4,4'-DDD	72-54-8	<40	40	8.0
4,4'-DDE	72-55-9	<20	20	7.2
4,4'-DDT	50-29-3	<40	40	10
Dieldrin	60-57-1	<8.0	8.0	4.4
Endosulfan I	959-98-8	<40	40	4.4
Endosulfan II	33213-65-9	<20	20	5.6
Endosulfan sulfate	1031-07-8	<40	40	5.2
Endrin	72-20-8	<40	40	8.0
Endrin aldehyde	7421-93-4	<40	40	4.8
Endrin ketone	53494-70-5	<20	20	3.8
Heptachlor	76-44-8	<8.0	8.0	5.2
Heptachlor epoxide	1024-57-3	<20	20	5.6
Methoxychlor	72-43-5	<40	40	6.0
Toxaphene	8001-35-2	<160	160	40

Surrogate:	% RC*
Decachlorobiphenyl	106

* Acceptable Recovery: 38-133 %

Dilution Factor: 4

Data Qualifiers: D1,

Mr Kyle Mchargue
GeoTek, Inc.
1548 N. Maple St
Corona, CA, 92880

Lab Reference # GTK 28902
Project Name: K Hovnanian California Region
Project #: 3951-CR

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
#3	28902-003	6/11/2024 11:55	6/10/2024 12:00	6/11/2024 16:00	6/13/2024 12:32	Soil

ANALYTE	CAS #	µg/kg	RL	MDL
Aldrin	309-00-2	<8.0	8.0	3.9
alpha-BHC	319-84-6	<20	20	4.8
beta-BHC	319-85-7	<20	20	5.6
gamma-BHC (Lindane)	58-89-9	<20	20	4.8
delta-BHC	319-86-8	<40	40	5.6
Chlordane	57-74-9	<120	120	44
4,4'-DDD	72-54-8	<40	40	8.0
4,4'-DDE	72-55-9	<20	20	7.2
4,4'-DDT	50-29-3	<40	40	10
Dieldrin	60-57-1	<8.0	8.0	4.4
Endosulfan I	959-98-8	<40	40	4.4
Endosulfan II	33213-65-9	<20	20	5.6
Endosulfan sulfate	1031-07-8	<40	40	5.2
Endrin	72-20-8	<40	40	8.0
Endrin aldehyde	7421-93-4	<40	40	4.8
Endrin ketone	53494-70-5	<20	20	3.8
Heptachlor	76-44-8	<8.0	8.0	5.2
Heptachlor epoxide	1024-57-3	<20	20	5.6
Methoxychlor	72-43-5	<40	40	6.0
Toxaphene	8001-35-2	<160	160	40

Surrogate:	% RC*
Decachlorobiphenyl	101

* Acceptable Recovery: 38-133 %

Dilution Factor: 4

Data Qualifiers: D1,

Mr Kyle Mchargue
GeoTek, Inc.
1548 N. Maple St
Corona, CA, 92880

Lab Reference # GTK 28902
Project Name: K Hovnanian California Region
Project #: 3951-CR

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
#4	28902-004	6/11/2024 11:55	6/10/2024 12:00	6/11/2024 16:00	6/13/2024 12:47	Soil

ANALYTE	CAS #	µg/kg	RL	MDL
Aldrin	309-00-2	<8.0	8.0	3.9
alpha-BHC	319-84-6	<20	20	4.8
beta-BHC	319-85-7	<20	20	5.6
gamma-BHC (Lindane)	58-89-9	<20	20	4.8
delta-BHC	319-86-8	<40	40	5.6
Chlordane	57-74-9	<120	120	44
4,4'-DDD	72-54-8	<40	40	8.0
4,4'-DDE	72-55-9	35	20	7.2
4,4'-DDT	50-29-3	<40	40	10
Dieldrin	60-57-1	<8.0	8.0	4.4
Endosulfan I	959-98-8	<40	40	4.4
Endosulfan II	33213-65-9	<20	20	5.6
Endosulfan sulfate	1031-07-8	<40	40	5.2
Endrin	72-20-8	<40	40	8.0
Endrin aldehyde	7421-93-4	<40	40	4.8
Endrin ketone	53494-70-5	<20	20	3.8
Heptachlor	76-44-8	<8.0	8.0	5.2
Heptachlor epoxide	1024-57-3	<20	20	5.6
Methoxychlor	72-43-5	<40	40	6.0
Toxaphene	8001-35-2	<160	160	40

Surrogate:	% RC*
Decachlorobiphenyl	104

* Acceptable Recovery: 38-133 %

Dilution Factor: 4

Data Qualifiers: D1,

Mr Kyle Mchargue
GeoTek, Inc.
1548 N. Maple St
Corona, CA, 92880

Lab Reference # GTK 28902
Project Name: K Hovnanian California Region
Project #: 3951-CR

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
#5	28902-005	6/11/2024 11:55	6/10/2024 12:00	6/11/2024 16:00	6/13/2024 13:01	Soil

ANALYTE	CAS #	µg/kg	RL	MDL
Aldrin	309-00-2	<8.0	8.0	3.9
alpha-BHC	319-84-6	<20	20	4.8
beta-BHC	319-85-7	<20	20	5.6
gamma-BHC (Lindane)	58-89-9	<20	20	4.8
delta-BHC	319-86-8	<40	40	5.6
Chlordane	57-74-9	<120	120	44
4,4'-DDD	72-54-8	<40	40	8.0
4,4'-DDE	72-55-9	<20	20	7.2
4,4'-DDT	50-29-3	<40	40	10
Dieldrin	60-57-1	<8.0	8.0	4.4
Endosulfan I	959-98-8	<40	40	4.4
Endosulfan II	33213-65-9	<20	20	5.6
Endosulfan sulfate	1031-07-8	<40	40	5.2
Endrin	72-20-8	<40	40	8.0
Endrin aldehyde	7421-93-4	<40	40	4.8
Endrin ketone	53494-70-5	<20	20	3.8
Heptachlor	76-44-8	<8.0	8.0	5.2
Heptachlor epoxide	1024-57-3	<20	20	5.6
Methoxychlor	72-43-5	<40	40	6.0
Toxaphene	8001-35-2	<160	160	40

Surrogate:	% RC*
Decachlorobiphenyl	108

* Acceptable Recovery: 38-133 %

Dilution Factor: 4

Data Qualifiers: D1,

Mr Kyle Mchargue
GeoTek, Inc.
1548 N. Maple St
Corona, CA, 92880

Lab Reference # GTK 28902
Project Name: K Hovnanian California Region
Project #: 3951-CR

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
#6	28902-006	6/11/2024 11:55	6/10/2024 12:00	6/11/2024 16:00	6/13/2024 13:16	Soil

ANALYTE	CAS #	µg/kg	RL	MDL
Aldrin	309-00-2	<8.0	8.0	3.9
alpha-BHC	319-84-6	<20	20	4.8
beta-BHC	319-85-7	<20	20	5.6
gamma-BHC (Lindane)	58-89-9	<20	20	4.8
delta-BHC	319-86-8	<40	40	5.6
Chlordane	57-74-9	<120	120	44
4,4'-DDD	72-54-8	<40	40	8.0
4,4'-DDE	72-55-9	38	20	7.2
4,4'-DDT	50-29-3	<40	40	10
Dieldrin	60-57-1	<8.0	8.0	4.4
Endosulfan I	959-98-8	<40	40	4.4
Endosulfan II	33213-65-9	<20	20	5.6
Endosulfan sulfate	1031-07-8	<40	40	5.2
Endrin	72-20-8	<40	40	8.0
Endrin aldehyde	7421-93-4	<40	40	4.8
Endrin ketone	53494-70-5	<20	20	3.8
Heptachlor	76-44-8	<8.0	8.0	5.2
Heptachlor epoxide	1024-57-3	<20	20	5.6
Methoxychlor	72-43-5	<40	40	6.0
Toxaphene	8001-35-2	<160	160	40

Surrogate:	% RC*
Decachlorobiphenyl	105

* Acceptable Recovery: 38-133 %

Dilution Factor: 4
Data Qualifiers: D1,

Mr Kyle Mchargue
GeoTek, Inc.
1548 N. Maple St
Corona, CA, 92880

Lab Reference # GTK 28902
Project Name: K Hovnanian California Region
Project #: 3951-CR

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
#7	28902-007	6/11/2024 11:55	6/10/2024 12:00	6/11/2024 16:00	6/13/2024 13:30	Soil

ANALYTE	CAS #	µg/kg	RL	MDL
Aldrin	309-00-2	<8.0	8.0	3.9
alpha-BHC	319-84-6	<20	20	4.8
beta-BHC	319-85-7	<20	20	5.6
gamma-BHC (Lindane)	58-89-9	<20	20	4.8
delta-BHC	319-86-8	<40	40	5.6
Chlordane	57-74-9	<120	120	44
4,4'-DDD	72-54-8	<40	40	8.0
4,4'-DDE	72-55-9	43	20	7.2
4,4'-DDT	50-29-3	<40	40	10
Dieldrin	60-57-1	<8.0	8.0	4.4
Endosulfan I	959-98-8	<40	40	4.4
Endosulfan II	33213-65-9	<20	20	5.6
Endosulfan sulfate	1031-07-8	<40	40	5.2
Endrin	72-20-8	<40	40	8.0
Endrin aldehyde	7421-93-4	<40	40	4.8
Endrin ketone	53494-70-5	<20	20	3.8
Heptachlor	76-44-8	<8.0	8.0	5.2
Heptachlor epoxide	1024-57-3	<20	20	5.6
Methoxychlor	72-43-5	<40	40	6.0
Toxaphene	8001-35-2	<160	160	40

Surrogate:	% RC*
Decachlorobiphenyl	102

* Acceptable Recovery: 38-133 %

Dilution Factor: 4

Data Qualifiers: D1,

Mr Kyle Mchargue
GeoTek, Inc.
1548 N. Maple St
Corona, CA, 92880

Lab Reference # GTK 28902
Project Name: K Hovnanian California Region
Project #: 3951-CR

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
#8	28902-008	6/11/2024 11:55	6/10/2024 12:00	6/13/2024 16:00	6/17/2024 14:31	Soil

ANALYTE	CAS #	µg/kg	RL	MDL
Aldrin	309-00-2	<8.0	8.0	3.9
alpha-BHC	319-84-6	<20	20	4.8
beta-BHC	319-85-7	<20	20	5.6
gamma-BHC (Lindane)	58-89-9	<20	20	4.8
delta-BHC	319-86-8	<40	40	5.6
Chlordane	57-74-9	<120	120	44
4,4'-DDD	72-54-8	<40	40	8.0
4,4'-DDE	72-55-9	27	20	7.2
4,4'-DDT	50-29-3	<40	40	10
Dieldrin	60-57-1	<8.0	8.0	4.4
Endosulfan I	959-98-8	<40	40	4.4
Endosulfan II	33213-65-9	<20	20	5.6
Endosulfan sulfate	1031-07-8	<40	40	5.2
Endrin	72-20-8	<40	40	8.0
Endrin aldehyde	7421-93-4	<40	40	4.8
Endrin ketone	53494-70-5	<20	20	3.8
Heptachlor	76-44-8	<8.0	8.0	5.2
Heptachlor epoxide	1024-57-3	<20	20	5.6
Methoxychlor	72-43-5	<40	40	6.0
Toxaphene	8001-35-2	<160	160	40

Surrogate:	% RC*
Decachlorobiphenyl	115

* Acceptable Recovery: 38-133 %

Dilution Factor: 4

Data Qualifiers: D1,

Mr Kyle Mchargue
GeoTek, Inc.
1548 N. Maple St
Corona, CA, 92880

Lab Reference # GTK 28902
Project Name: K Hovnanian California Region
Project #: 3951-CR

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
#9	28902-009	6/11/2024 11:55	6/10/2024 12:00	6/13/2024 16:00	6/17/2024 14:46	Soil

ANALYTE	CAS #	µg/kg	RL	MDL
Aldrin	309-00-2	<8.0	8.0	3.9
alpha-BHC	319-84-6	<20	20	4.8
beta-BHC	319-85-7	<20	20	5.6
gamma-BHC (Lindane)	58-89-9	<20	20	4.8
delta-BHC	319-86-8	<40	40	5.6
Chlordane	57-74-9	<120	120	44
4,4'-DDD	72-54-8	<40	40	8.0
4,4'-DDE	72-55-9	<20	20	7.2
4,4'-DDT	50-29-3	<40	40	10
Dieldrin	60-57-1	<8.0	8.0	4.4
Endosulfan I	959-98-8	<40	40	4.4
Endosulfan II	33213-65-9	<20	20	5.6
Endosulfan sulfate	1031-07-8	<40	40	5.2
Endrin	72-20-8	<40	40	8.0
Endrin aldehyde	7421-93-4	<40	40	4.8
Endrin ketone	53494-70-5	<20	20	3.8
Heptachlor	76-44-8	<8.0	8.0	5.2
Heptachlor epoxide	1024-57-3	<20	20	5.6
Methoxychlor	72-43-5	<40	40	6.0
Toxaphene	8001-35-2	<160	160	40

Surrogate:	% RC*
Decachlorobiphenyl	91

* Acceptable Recovery: 38-133 %

Dilution Factor: 4

Data Qualifiers: D1,

Mr Kyle Mchargue
GeoTek, Inc.
1548 N. Maple St
Corona, CA, 92880

Lab Reference # GTK 28902
Project Name: K Hovnanian California Region
Project #: 3951-CR

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
#10	28902-010	6/11/2024 11:55	6/10/2024 12:00	6/13/2024 16:00	6/17/2024 15:01	Soil

ANALYTE	CAS #	µg/kg	RL	MDL
Aldrin	309-00-2	<8.0	8.0	3.9
alpha-BHC	319-84-6	<20	20	4.8
beta-BHC	319-85-7	<20	20	5.6
gamma-BHC (Lindane)	58-89-9	<20	20	4.8
delta-BHC	319-86-8	<40	40	5.6
Chlordane	57-74-9	<120	120	44
4,4'-DDD	72-54-8	<40	40	8.0
4,4'-DDE	72-55-9	<20	20	7.2
4,4'-DDT	50-29-3	<40	40	10
Dieldrin	60-57-1	<8.0	8.0	4.4
Endosulfan I	959-98-8	<40	40	4.4
Endosulfan II	33213-65-9	<20	20	5.6
Endosulfan sulfate	1031-07-8	<40	40	5.2
Endrin	72-20-8	<40	40	8.0
Endrin aldehyde	7421-93-4	<40	40	4.8
Endrin ketone	53494-70-5	<20	20	3.8
Heptachlor	76-44-8	<8.0	8.0	5.2
Heptachlor epoxide	1024-57-3	<20	20	5.6
Methoxychlor	72-43-5	<40	40	6.0
Toxaphene	8001-35-2	<160	160	40

Surrogate:	% RC*
Decachlorobiphenyl	110

* Acceptable Recovery: 38-133 %

Dilution Factor: 4

Data Qualifiers: D1,

Mr Kyle Mchargue
GeoTek, Inc.
1548 N. Maple St
Corona, CA, 92880

Lab Reference # GTK 28902
Project Name: K Hovnanian California Region
Project #: 3951-CR

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
#11	28902-011	6/11/2024 11:55	6/10/2024 12:00	6/13/2024 16:00	6/17/2024 15:15	Soil

ANALYTE	CAS #	µg/kg	RL	MDL
Aldrin	309-00-2	<8.0	8.0	3.9
alpha-BHC	319-84-6	<20	20	4.8
beta-BHC	319-85-7	<20	20	5.6
gamma-BHC (Lindane)	58-89-9	<20	20	4.8
delta-BHC	319-86-8	<40	40	5.6
Chlordane	57-74-9	<120	120	44
4,4'-DDD	72-54-8	<40	40	8.0
4,4'-DDE	72-55-9	<20	20	7.2
4,4'-DDT	50-29-3	<40	40	10
Dieldrin	60-57-1	<8.0	8.0	4.4
Endosulfan I	959-98-8	<40	40	4.4
Endosulfan II	33213-65-9	<20	20	5.6
Endosulfan sulfate	1031-07-8	<40	40	5.2
Endrin	72-20-8	<40	40	8.0
Endrin aldehyde	7421-93-4	<40	40	4.8
Endrin ketone	53494-70-5	<20	20	3.8
Heptachlor	76-44-8	<8.0	8.0	5.2
Heptachlor epoxide	1024-57-3	<20	20	5.6
Methoxychlor	72-43-5	<40	40	6.0
Toxaphene	8001-35-2	<160	160	40

Surrogate:	% RC*
Decachlorobiphenyl	117

* Acceptable Recovery: 38-133 %

Dilution Factor: 4

Data Qualifiers: D1,

Mr Kyle Mchargue
GeoTek, Inc.
1548 N. Maple St
Corona, CA, 92880

Lab Reference # GTK 28902
Project Name: K Hovnanian California Region
Project #: 3951-CR

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
#12	28902-012	6/11/2024 11:55	6/10/2024 12:00	6/13/2024 16:00	6/17/2024 15:30	Soil

ANALYTE	CAS #	µg/kg	RL	MDL
Aldrin	309-00-2	<8.0	8.0	3.9
alpha-BHC	319-84-6	<20	20	4.8
beta-BHC	319-85-7	<20	20	5.6
gamma-BHC (Lindane)	58-89-9	<20	20	4.8
delta-BHC	319-86-8	<40	40	5.6
Chlordane	57-74-9	<120	120	44
4,4'-DDD	72-54-8	<40	40	8.0
4,4'-DDE	72-55-9	<20	20	7.2
4,4'-DDT	50-29-3	<40	40	10
Dieldrin	60-57-1	<8.0	8.0	4.4
Endosulfan I	959-98-8	<40	40	4.4
Endosulfan II	33213-65-9	<20	20	5.6
Endosulfan sulfate	1031-07-8	<40	40	5.2
Endrin	72-20-8	<40	40	8.0
Endrin aldehyde	7421-93-4	<40	40	4.8
Endrin ketone	53494-70-5	<20	20	3.8
Heptachlor	76-44-8	<8.0	8.0	5.2
Heptachlor epoxide	1024-57-3	<20	20	5.6
Methoxychlor	72-43-5	<40	40	6.0
Toxaphene	8001-35-2	<160	160	40

Surrogate:	% RC*
Decachlorobiphenyl	120

* Acceptable Recovery: 38-133 %

Dilution Factor: 4

Data Qualifiers: D1,

Mr Kyle Mchargue
GeoTek, Inc.
1548 N. Maple St
Corona, CA, 92880

Lab Reference # GTK 28902
Project Name: K Hovnanian California Region
Project #: 3951-CR

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Method Blank	MBBL0611241			6/11/2024 11:49	6/13/2024 7:26	Soil

ANALYTE	CAS #	µg/kg	RL	MDL
Aldrin	309-00-2	<2.0	2.0	0.98
alpha-BHC	319-84-6	<5.0	5.0	1.2
beta-BHC	319-85-7	<5.0	5.0	1.4
gamma-BHC (Lindane)	58-89-9	<5.0	5.0	1.2
delta-BHC	319-86-8	<10	10	1.4
Chlordane	57-74-9	<30	30	11
4,4'-DDD	72-54-8	<10	10	2.0
4,4'-DDE	72-55-9	<5.0	5.0	1.8
4,4'-DDT	50-29-3	<10	10	2.5
Dieldrin	60-57-1	<2.0	2.0	1.1
Endosulfan I	959-98-8	<10	10	1.1
Endosulfan II	33213-65-9	<5.0	5.0	1.4
Endosulfan sulfate	1031-07-8	<10	10	1.3
Endrin	72-20-8	<10	10	2.0
Endrin aldehyde	7421-93-4	<10	10	1.2
Endrin ketone	53494-70-5	<5.0	5.0	0.95
Heptachlor	76-44-8	<2.0	2.0	1.3
Heptachlor epoxide	1024-57-3	<5.0	5.0	1.4
Methoxychlor	72-43-5	<10	10	1.5
Toxaphene	8001-35-2	<40	40	10

Surrogate:	% RC*
Decachlorobiphenyl	131

* Acceptable Recovery: 38-133 %

Dilution Factor: 1

Data Qualifiers: None

Mr Kyle Mchargue
GeoTek, Inc.
1548 N. Maple St
Corona, CA, 92880

Lab Reference # GTK 28902
Project Name: K Hovnanian California Region
Project #: 3951-CR

Metals

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
#1	28902-001	6/11/2024 11:55	6/10/2024 12:00	Soil

ANALYTE	EPA Method	Result	Units	Date Extracted	Date Analyzed	Qual	DF
Arsenic	6010B	9.9	mg/kg	06/12/24 13:00	06/13/24 16:02	--	1

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
#2	28902-002	6/11/2024 11:55	6/10/2024 12:00	Soil

ANALYTE	EPA Method	Result	Units	Date Extracted	Date Analyzed	Qual	DF
Arsenic	6010B	7.6	mg/kg	06/12/24 13:00	06/13/24 16:04	--	1

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
#3	28902-003	6/11/2024 11:55	6/10/2024 12:00	Soil

ANALYTE	EPA Method	Result	Units	Date Extracted	Date Analyzed	Qual	DF
Arsenic	6010B	7.2	mg/kg	06/12/24 13:00	06/13/24 16:11	--	1

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
#4	28902-004	6/11/2024 11:55	6/10/2024 12:00	Soil

ANALYTE	EPA Method	Result	Units	Date Extracted	Date Analyzed	Qual	DF
Arsenic	6010B	6.9	mg/kg	06/12/24 13:00	06/13/24 16:14	--	1

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
#5	28902-005	6/11/2024 11:55	6/10/2024 12:00	Soil

ANALYTE	EPA Method	Result	Units	Date Extracted	Date Analyzed	Qual	DF
Arsenic	6010B	6.9	mg/kg	06/12/24 13:00	06/13/24 16:16	--	1

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
#6	28902-006	6/11/2024 11:55	6/10/2024 12:00	Soil

ANALYTE	EPA Method	Result	Units	Date Extracted	Date Analyzed	Qual	DF
Arsenic	6010B	6.4	mg/kg	06/12/24 13:00	06/13/24 16:18	--	1

© Orange Coast Analytical, Inc

Mr Kyle Mchargue
GeoTek, Inc.
1548 N. Maple St
Corona, CA, 92880

Lab Reference # GTK 28902
Project Name: K Hovnanian California Region
Project #: 3951-CR

Metals

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
#7	28902-007	6/11/2024 11:55	6/10/2024 12:00	Soil

ANALYTE	EPA Method	Result	Units	Date Extracted	Date Analyzed	Qual	DF
Arsenic	6010B	7.1	mg/kg	06/12/24 13:00	06/13/24 16:21	--	1

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
#8	28902-008	6/11/2024 11:55	6/10/2024 12:00	Soil

ANALYTE	EPA Method	Result	Units	Date Extracted	Date Analyzed	Qual	DF
Arsenic	6010B	6.3	mg/kg	06/12/24 13:00	06/13/24 16:23	--	1

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
#9	28902-009	6/11/2024 11:55	6/10/2024 12:00	Soil

ANALYTE	EPA Method	Result	Units	Date Extracted	Date Analyzed	Qual	DF
Arsenic	6010B	6.1	mg/kg	06/12/24 13:00	06/13/24 16:25	--	1

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
#10	28902-010	6/11/2024 11:55	6/10/2024 12:00	Soil

ANALYTE	EPA Method	Result	Units	Date Extracted	Date Analyzed	Qual	DF
Arsenic	6010B	5.7	mg/kg	06/12/24 13:00	06/13/24 16:28	--	1

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
#11	28902-011	6/11/2024 11:55	6/10/2024 12:00	Soil

ANALYTE	EPA Method	Result	Units	Date Extracted	Date Analyzed	Qual	DF
Arsenic	6010B	6.4	mg/kg	06/12/24 13:00	06/13/24 16:30	--	1

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
#12	28902-012	6/11/2024 11:55	6/10/2024 12:00	Soil

ANALYTE	EPA Method	Result	Units	Date Extracted	Date Analyzed	Qual	DF
Arsenic	6010B	7.5	mg/kg	06/12/24 13:00	06/13/24 16:32	--	1

© Orange Coast Analytical, Inc

Mr Kyle Mchargue
GeoTek, Inc.
1548 N. Maple St
Corona, CA, 92880

Lab Reference # GTK 28902
Project Name: K Hovnanian California Region
Project #: 3951-CR

Metals

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
Method Blank				Soil

MB ID	ANALYTE	EPA Method	Result	Units	Date Extracted	Date Analyzed	Qual	DF
MBJH0612241	Arsenic	6010B	<2.0	mg/kg	06/12/24 13:00	06/13/24 15:12	--	1

© Orange Coast Analytical, Inc

QA/QC Report
for
Organochlorine Pesticides (EPA 8081A)
Reporting Units: ppb

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date of Extraction: 6/11/2024 11:49
Date of Analysis: 6/13/2024 8:39
Dup Date of Analysis: 6/13/2024 8:54
Laboratory Sample #: 28888-001
MS/MSD Qualifiers: None
Reference #: GTK 28902

Analyte	R	Spike Conc.	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
Aldrin	0.00	20.0	14.0	12.8	70	64	9	14-130	25	--
alpha-BHC	0.00	20.0	13.2	12.2	66	61	8	19-130	23	--
beta-BHC	0.00	20.0	16.8	15.0	84	75	11	21-130	25	--
gamma-BHC (Lindane)	0.00	20.0	14.4	13.2	72	66	9	26-130	24	--
4,4'-DDD	0.00	20.0	18.4	17.5	92	88	5	31-138	21	--
4,4'-DDE	0.00	20.0	18.0	16.7	90	84	7	32-142	20	--
4,4'-DDT	0.00	20.0	20.5	19.3	102	96	6	30-154	22	--
delta-BHC	0.00	20.0	16.8	15.0	84	75	11	29-130	28	--
Dieldrin	0.00	20.0	17.7	16.6	89	83	6	29-130	21	--
Endosulfan I	0.00	20.0	17.0	14.0	85	70	19	26-135	25	--
Endosulfan II	0.00	20.0	18.5	17.4	93	87	6	23-130	27	--
Endosulfan sulfate	0.00	20.0	18.0	16.1	90	81	11	D-136	50	--
Endrin	0.00	20.0	18.1	17.0	91	85	6	26-138	27	--
Endrin Aldehyde	0.00	20.0	16.3	14.6	81	73	11	D-130	50	--
Endrin ketone	0.00	20.0	17.1	16.0	86	80	7	12-130	50	--
Heptachlor	0.00	20.0	12.8	11.6	64	58	10	18-130	28	--
Heptachlor epoxide	0.00	20.0	16.6	15.0	83	75	10	25-130	26	--
Methoxychlor	0.00	20.0	16.7	15.9	84	79	5	21-136	32	--

Surrogate Recoveries for Spike Samples

Surrogate (%RC)	MS	MSD	Qual	LCS	LCSD	Qual	ACP % RC
Decachlorobiphenyl	125	120		133	134		38-133

Laboratory Control Sample (LCS) / Laboratory Control Sample Duplicate (LCSD)

Date of Extraction: 6/11/2024 11:49
Date of Analysis: 6/13/2024 7:41
Dup Date of Analysis: 6/13/2024 7:55
Laboratory Sample #: BL0611241A
LCS/LCSD Qualifiers: R2, S1,

Analyte	Spike Conc.	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Aldrin	20.0	15.0	13.5	75	68	11	8-130	29	--
alpha-BHC	20.0	14.7	14.0	74	70	5	14-130	30	--
beta-BHC	20.0	16.2	16.5	81	82	2	26-130	25	--
gamma-BHC (Lindane)	20.0	15.0	14.5	75	73	3	19-130	28	--
4,4'-DDD	20.0	18.7	18.8	94	94	1	44-132	20	--
4,4'-DDE	20.0	17.7	17.4	89	87	2	35-133	20	--

QA/QC Report
for
Organochlorine Pesticides (EPA 8081A)

Reporting Units: ppb

Analyte	Spike Conc.	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
4,4'-DDT	20.0	20.1	19.9	100	100	1	41-142	20	--
delta-BHC	20.0	16.7	17.3	84	86	4	29-130	26	--
Dieldrin	20.0	16.9	17.0	84	85	1	31-130	22	--
Endosulfan I	20.0	14.9	14.5	75	73	3	29-130	28	--
Endosulfan II	20.0	16.0	18.3	80	91	13	28-130	27	--
Endosulfan sulfate	20.0	1.22	13.3	6	67	166	2-145	43	R2,
Endrin	20.0	16.9	17.3	84	86	2	28-130	21	--
Endrin Aldehyde	20.0	1.95	12.0	10	60	144	3-130	41	R2,
Endrin ketone	20.0	6.54	16.6	33	83	87	18-130	23	R2,
Heptachlor	20.0	13.7	12.4	69	62	10	10-130	33	--
Heptachlor epoxide	20.0	15.7	15.2	78	76	3	24-130	27	--
Methoxychlor	20.0	17.1	18.2	86	91	6	32-134	17	--

QA/QC Report
for
Metals

Reference #: GTK 28902 Reporting units: ppm

Matrix Spike (MS) / Matrix Spike Duplicate (MSD) **6010B**

Laboratory Sample #: 28900-001 **Date of Extraction:** 06/12/24 13:00

Analyte	MS Date of Analysis	MSD Date of Analysis	R1	SPC CONC	MS	MSD	% MS	% MSD	RPD	ACP %MS	ACP RPD	Qualifiers
Arsenic	06/13/24 15:24	06/13/24 15:27	2.40	20.0	21.0	21.7	93	97	3	75-125	20	--

Laboratory Control Spike (LCS) / Laboratory Control Spike Duplicate (LCSD) **6010B**

Laboratory Sample #: JH0612241 **Date of Extraction:** 06/12/24 13:00

Analyte	LCS Date of Analysis	LCSD Date of Analysis		SPC CONC	LCS	LCSD	% LCS	% LCSD	RPD	ACP %LCS	ACP RPD	Qualifiers
Arsenic	06/13/24 15:15	06/13/24 15:18	--	20.0	18.8	18.7	94	94	1	80-120	20	--

Data Qualifier Definitions

Qualifier

D1 = Sample required dilution due to matrix.

R2 = RPD/RSD exceeded the laboratory acceptance limit.

BL0611241A	8081A	Endosulfan sulfate	LCS/LCSD
BL0611241A	8081A	Endrin Aldehyde	LCS/LCSD
BL0611241A	8081A	Endrin ketone	LCS/LCSD

S1 = Surrogate recovery was above laboratory acceptance limits.

BL0611241A	8081A	Decachlorobiphenyl	LCSD

Definition of terms:

R	Result of unspiked laboratory sample used for matrix spike determination.
SP CONC (or Spike Conc.)	Spike concentration added to sample or blank
MS	Matrix Spike sample result
MSD	Matrix Spike Duplicate sample result
%MS	Percent recovery of MS: {(MS-R1) / SP CONC} x100
%MSD	Percent recovery of MSD: {(MSD-R1) / SP CONC} x 100
RPD (for MS/MSD)	Relative Percent Difference: {(MS-MSD) / (MS+MSD)} x 100 x 2
LCS	Laboratory Control Sample result
LCSD	Laboratory Control Sample Duplicate result
%LCS	Percent recovery of LCS: {(LCS) / SP CONC} x100
%LCSD	Percent recovery of LCSD: {(LCSD) / SP CONC} x 100
RPD (for LCS/LCSD)	Relative Percent Difference: {(LCS-LCSD) / (LCS+LCSD)} x 100 x 2
ACP %LCS	Acceptable percent recovery range for Laboratory Control Samples.
ACP %MS	Acceptable percent recovery range for Matrix Spike samples
ACP RPD	Acceptable Relative Percent Difference
D	Detectable, result must be greater than zero
Qual	A checked box indicates a data qualifier was utilized and/or required for this analyte see attached explanation.
ND	Analyte Not Detected

Analysis Request and Chain of Custody Record

Lab Job No: 28902
Page 1 of 1

ORANGE COAST ANALYTICAL, INC. www.ocalab.com

3002 Dow, Suite 532
Tustin, CA 92780
(714) 832-0064 Fax (714) 832-0067

4620 E. Elwood, Suite 4
Phoenix, AZ 85040
(480) 736-0960 Fax (480) 736-0970

REQUIRED TURN AROUND TIME: Standard: X
72 Hours: 48 Hours: 24 Hours:

CUSTOMER INFORMATION		PROJECT INFORMATION	
COMPANY:	GeoTek, Inc.	PROJECT NAME:	K. Hovnanian California Region
SEND REPORT TO:	Kyle McHargue	NUMBER:	3951-CR
EMAIL:	kmchargue@geotekusa.com	ADDRESS:	TTM No. 943, Hanford King County, CA
ADDRESS:	cdiaz@geotekusa.com	P.O. #:	
PHONE:	FAX:	SAMPLED BY:	

SAMPLE ID	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER TYPE	ANALYSIS REQUEST / PRESERVATIVE: Organochlorinated pesticides (SW8081A) (OCP)	Arsenic (6010)	REMARKS/PRECAUTIONS
#1	1	6/10	12 PM	SOIL	Glass	/	/	
#2	↓	↓	↓	↓	↓	/	/	
#3						/	/	
#4						/	/	
#5						/	/	
#6						/	/	
#7						/	/	
#8						/	/	
#9						/	/	
#10						/	/	
#11						/	/	
#12	↓	↓	↓	↓	↓	/	/	

Total No. of Samples: 12 Method of Shipment: Hand Delivered/Cooler Preservative: 1 = Ice 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

Relinquished By:	Date/Time: 11:55AM 6/11/2024	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received For Lab By: JL OCA CA	Date/Time: 06/11/24 1155

Sample Matrix:
GW - Groundwater
WW - Wastewater
SW - Stormwater
DW - Drinking Water
W - Water
SS - Soil/Solid
OT - Other

Sample Integrity:
Intact: _____ On Ice: Yes / No @ 6 °C IR#3

By signing above, client acknowledges responsibility for payment of all services requested on this chain of custody form and any additional services provided in support of this project. Payment is due within

Sample Receipt Report

Laboratory Reference: GTK 28902 Logged in by: JR

Received:	06/11/24 11:55	Company Name:	GeoTek, Inc.
Method of Shipment:	Hand Delivered	Project Manager:	Mr Kyle Mcharque
Shipping Container:	See Notes	Project Name:	K Hovnanian California Region
# Shipping Containers:	1	Project #:	3951-CR

Sample Quantity
12 Soil

Chain of Custody		Complete ☑	Incomplete ☐	None ☐
Samples On Ice		Yes, Wet ☑	Yes, Blue ☐	No ☐
Observed Temp. (°C):	6	Thermometer ID: IR#3	Adjusted Temp.:	6+(-0)=6
Shipping Intact		Yes ☐	N/A ☑	No ☐
Shipping Custody Seals Intact		Yes ☐	N/A ☑	No ☐
Samples Intact		Yes ☑		No ☐
Sample Custody Seals Intact		Yes ☐	N/A ☑	No ☐
Custody Seals Signed & Dated		Yes ☐	N/A ☑	No ☐
Proper Test Containers		Yes ☑		No ☐
Proper Test Preservations		Yes ☑		No ☐
Samples Within Hold Times		Yes ☑		No ☐
VOAs Have Zero Headspace		Yes ☐	N/A ☑	No ☐
Sample Labels		Complete ☑	Incomplete ☐	None ☐
Sample Information Matches COC		Yes ☑	N/A ☐	No ☐

Notes

Samples in plastic bag.

Client Notified _____ By _____ On _____

APPENDIX H

PROJECT TEAM QUALIFICATIONS

Kyle R. McHargue, PG, CEG

Project Geologist

Registrations

CA Certified Engineering Geologist, CEG 2790

CA Professional Geologist, PG 9790

OR Registered Geologist, G2885

ID Professional Geologist, PGL-1844

Education

B.A., Geology, University of Hawaii, Manoa

Certifications

OSHA 40-Hr HAZWOPER

OSHA 8-Hr HAZWOPER Refresher

OSHA 10-Hour Construction Safety and Health Training

Nuclear Gauge Certified

APNGA Radiation Safety Officer Certified

First Aid/CPR

Professional Affiliations

BIA Riverside

BIA Emerging Leaders

Professional Experience

Kyle McHargue has 10 years of geotechnical and environmental experience working on and managing a diverse range of geotechnical and environmental projects throughout Southern California throughout Riverside, San Bernardino, Orange, San Diego, Los Angeles and Alameda counties. His geotechnical experience has ranged from staff to project geologist. Mr. McHargue's responsibilities include preparation of proposals, project management, preliminary geotechnical investigations, rippibility studies, fault hazard investigations, landslide investigations, seismic refraction surveys, settlement monitoring, percolation and infiltration studies, manure and methane evaluations, and field studies as a field and project geologist for a diverse range of grading projects. Mr. McHargue has performed hundreds of Phase I and Phase II Environmental Site Assessments for various property acquisitions and transfers in Riverside, Orange, San Diego, Los Angeles, San Bernardino, Kern, Fresno and Imperial Counties in California and Maricopa County in Arizona. Mr. McHargue also has over 5 years of field and office experience in land surveying and Storm Water Pollution Prevention Program (SWPPP) inspections.

Representative Project Experience-

Corona, Riverside County, California - Project Manager. Directed a geotechnical investigation, fault rupture hazard and landslide investigations, slope stability analysis, geotechnical reporting, as well as a Phase I Environmental Site Assessment for the Chaudhuri Estates hillside residential development.

Wildomar, Riverside County, California – Field Geologist. Supervised rough grading operations for 84-lot residential subdivision. In field challenges included stabilization fill design, fault hazard mapping, and high groundwater mitigation design.

Temecula, Riverside County, California – Project Geologist. Performed AP Fault Zone investigation, geotechnical and infiltration investigations for two adjacent commercial projects.

Ontario, San Bernardino County, California – Project and Field Geologist. Performed geotechnical, infiltration and manure/methane investigations for 121-acre development. Also supervised rough grading operations for a residential development included field mapping, field recommendations for remedial grading and preparation of reports and geologic maps.

Temecula, Riverside County, California – Project Geologist. Forensic distress investigation for religious center's structural & wall failures.

Anaheim Hills, Orange County, California – Project Geologist. Planned and performed geotechnical, infiltration investigations including all report preparation and slope stability analysis.

Coachella, Riverside County, California – Lead Field Geologist. Managed and geologically mapped 1,800 linear feet of fault trenching on the San Andreas Fault, including all background research and report preparation.

Employment History

GeoTek, Inc., Riverside-Project Geologist Jan. 2019 – Present

LGC Geo-Environmental, Inc., Temecula-Project Geologist Feb. 2015 – Jan. 2019

LGC Geo-Environmental, Inc., Temecula-Staff Geologist Dec. 2013 – Feb. 2015

Anna M. Scott

Project Geologist

Education

B.S., Geology, University of California, Riverside

Professional Experience

Ms. Anna Scott has over 30 years of geotechnical experience and has worked on or managed a wide range of geotechnical projects throughout southern California, including the High Desert, Inland Empire, Antelope Valley, Coachella Valley, Orange County and Bakersfield area. Her geotechnical experience has ranged from field and laboratory technician to field, staff and project geologist. Ms. Scott's responsibilities include preparation of proposals, preliminary geotechnical investigations, seismic studies, settlement monitor installation and studies, and field studies as a technician and geologist for large grading projects. Ms. Scott has performed Phase I and II ESAs for various property acquisitions and transfers throughout southern California.

Representative Project Experience

Ms. Scott has worked on numerous projects throughout southern California. Her experience includes working with various entities including the public and private sectors. Her vast knowledge includes geotechnical, environmental and materials services. This experience has been attained through small and large projects over the numerous years of her career.

Employment History

GeoTek, Inc., Riverside-Project Geologist, February 2005 – Present

GeoSoils, Inc., Santa Ana, September 1987 – February 2005

Project No: 257-80

TRAFFIC STUDY

SILICON VALLEY RANCH
CITY OF HANFORD

Prepared for:

QK, INC.

July 2024

Prepared by:

RUETTGERS & SCHULER CIVIL ENGINEERS

1800 30th Street, Suite 260
Bakersfield, California 93301

Ian J. Parks, RCE 58155

TABLE OF CONTENTS

Page

INTRODUCTION 1
FIGURE 1: VICINITY MAP 2
FIGURE 2: LOCATION MAP 3
FIGURE 3: VESTING TENTATIVE SUBDIVISION MAP 4
PROJECT TRIP GENERATION AND DESIGN HOUR VOLUMES 6
TABLE 1: PROJECT TRIP GENERATION 6
PROJECT TRIP DISTRIBUTION AND ASSIGNMENT 6
TABLE 2: PROJECT TRIP DISTRIBUTION 6
EXISTING AND FUTURE TRAFFIC 7
FIGURE 4: PROJECT PEAK HOUR TRAFFIC 8
FIGURE 5: 2024 PEAK HOUR TRAFFIC 9
FIGURE 6: 2024+PROJECT PEAK HOUR TRAFFIC 10
FIGURE 7: 2026 PEAK HOUR TRAFFIC 11
FIGURE 8: 2026+PROJECT PEAK HOUR TRAFFIC 12
FIGURE 9: 2044 PEAK HOUR TRAFFIC 13
FIGURE 10: 2044+PROJECT PEAK HOUR TRAFFIC 14
INTERSECTION ANALYSIS 15
TABLE 3a: INTERSECTION LOS, WEEKDAY PM PEAK HOUR 16
TABLE 3b: INTERSECTION LOS, WEEKDAY AM PEAK HOUR 17
TRAFFIC SIGNAL WARRANT ANALYSIS 18
TABLE 4a: TRAFFIC SIGNAL WARRANTS, WEEKDAY PM PEAK HOUR 18
TABLE 4b: TRAFFIC SIGNAL WARRANTS, WEEKDAY AM PEAK HOUR 19
ROADWAY ANALYSIS 20
TABLE 5: ROADWAY CAPACITY 20
MITIGATION 21
TABLE 6: INTERSECTION IMPROVEMENTS 21
VMT ANALYSIS 22
TABLE 7: VMT ANALYSIS RESULTS 22
SUMMARY 25
REFERENCES 26
APPENDIX 27

INTRODUCTION

The purpose of this study is to evaluate the potential traffic impacts of Silicon Valley Ranch, a proposed residential development located on the south side of Hanford Armona Road, between 13th Avenue and 12th Avenue, in the City of Hanford. A vicinity map is presented in Figure 1 and a location map is presented in Figure 2.

The study is consistent with City guidelines and includes analyses of intersection level of service, roadway capacity, traffic signal warrants and vehicle miles traveled. The scope of the study was developed in coordination with City, County and Caltrans staff and includes eight intersections (four signalized, three unsignalized, one roundabout) and adjoining roadway segments.

Project Description

The project site would be situated on approximately 75 acres of land which is currently used for agricultural production. The property is zoned R–L–5 (Low Density Residential – 5,000 SF minimum) and has a General Plan Land Use designation of Low Density Residential.

Upon completion, the project would include 326 single-family homes. An opening year of 2026 was assumed for this study. Access to the project site would be provided from Hanford Armona Road. The vesting tentative subdivision map is provided in Figure 3.

Existing Land Uses in Project Vicinity

Residential development is located immediately east of the project site and agricultural land uses lie directly to north, south and west. Residential areas also exist farther to the east and northeast. Commercial land uses are located primarily along the State Route 198 corridor and the northeast and southeast corners of 12th Avenue and Hanford-Armona Road.

FIGURE 1: VICINITY MAP

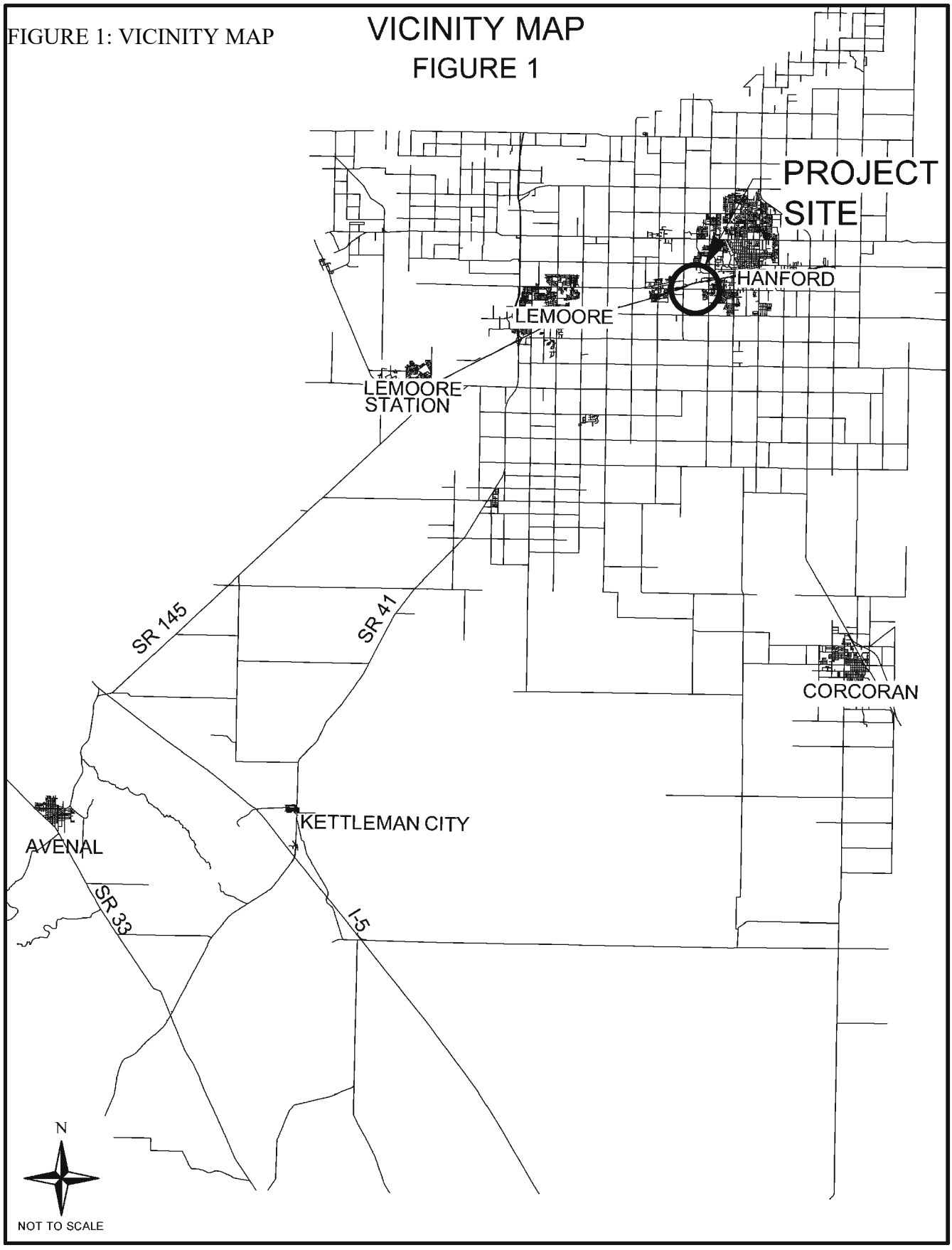


FIGURE 2: LOCATION MAP

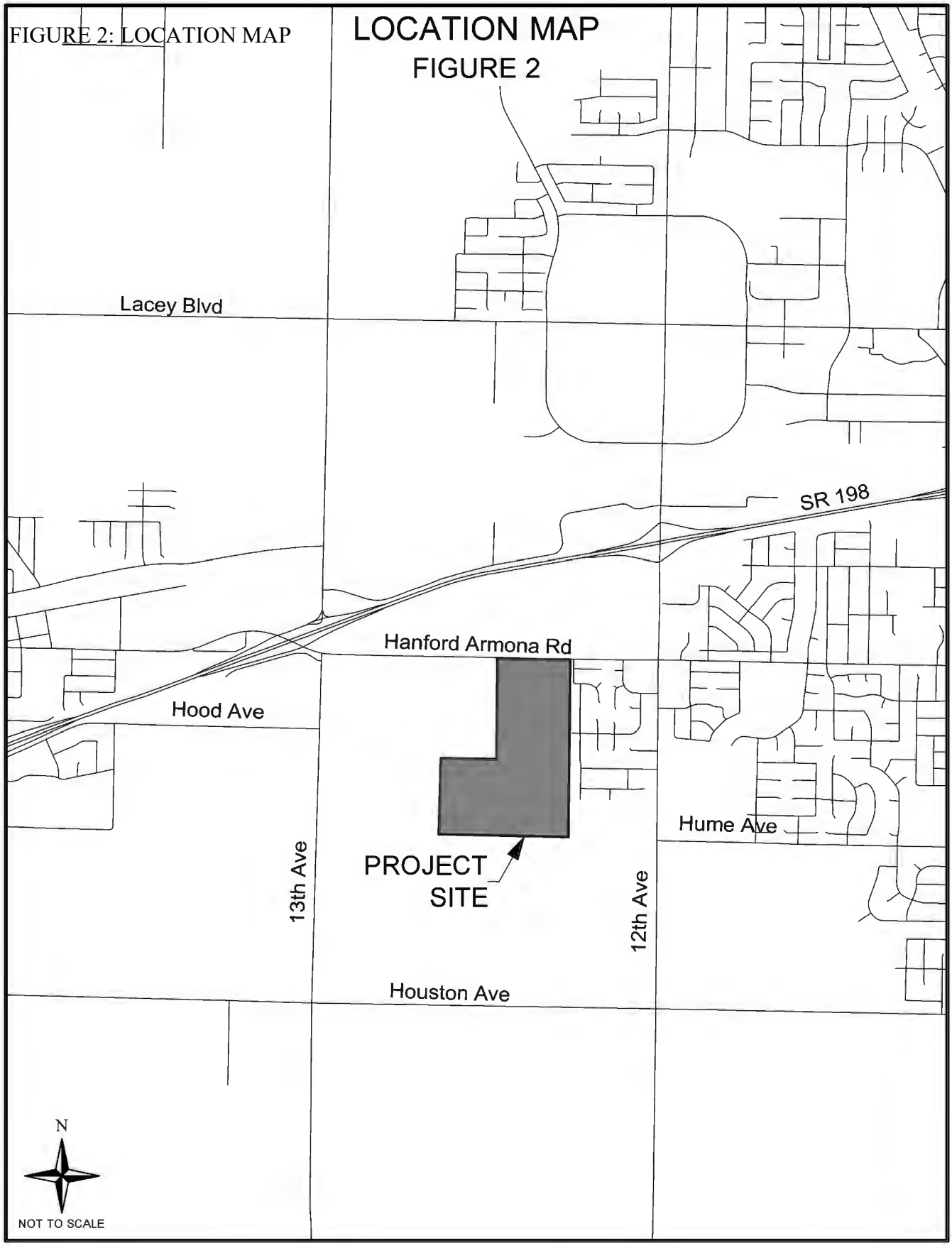
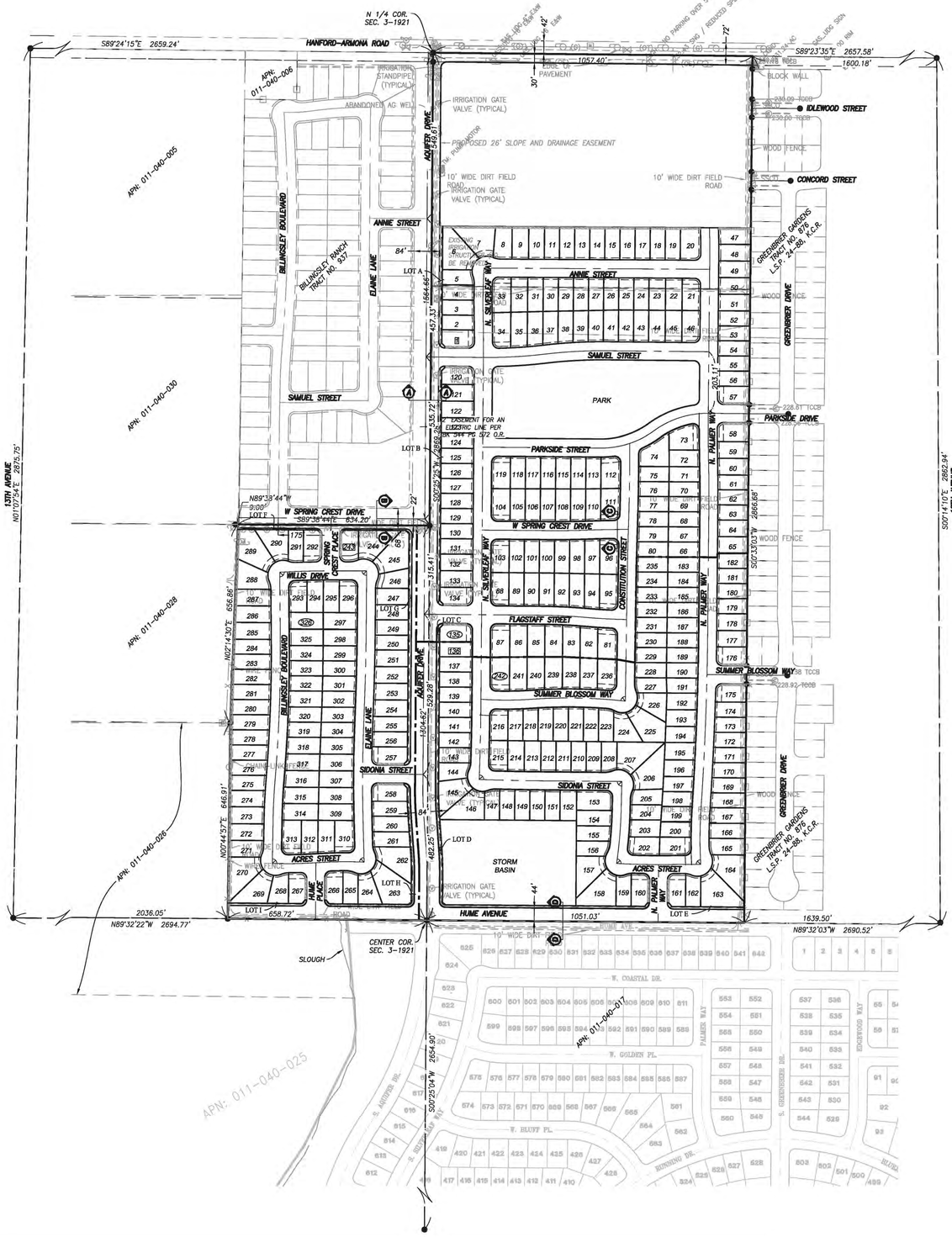
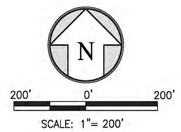


FIGURE 3





SCALE: 1"= 200'

LOT INFORMATION

PHASE I LOTS:	*135*
PHASE II LOTS:	*107*
PHASE III LOTS:	*84*
TOTAL LOTS:	*326*

AREA

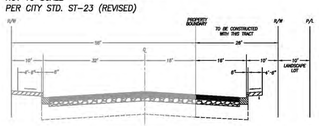
PHASE I GROSS:	*31.84±AC*
PHASE II GROSS:	*24.85±AC*
PHASE III GROSS:	*18.33±AC*
TOTAL SITE:	*75.02±AC*
INTERIOR STREET DEDICATION	*17.48±AC*
PHASE I:	*8.85±AC*
PHASE II:	*4.58±AC*
PHASE III:	*4.05±AC*
EXTERIOR STREET DEDICATION:	*4.91±AC*
PHASE I:	*1.19±AC*
PHASE II:	*2.46±AC*
PHASE III:	*1.26±AC*
TOTAL STREET DEDICATION:	*22.39±AC*
STORM BASIN DEDICATION:	*3.00AC*
PARK:	*3.58AC*
LANDSCAPE DEDICATION:	
PHASE I: LOTS A–C	*0.28±AC*
PHASE II: LOTS D–E	*0.38±AC*
PHASE III: LOTS F–I	*0.43±AC*
TOTAL LANDSCAPE DEDICATION:	*1.09±AC*

NOTES

1. *DATE OF PREPARATION: MARCH 21, 2024*
2. *GENERAL PLAN DESIGNATION: LOW DENSITY RESIDENTIAL*
3. *CITY ZONING: R–L–5*
4. *ALL DISTANCES SHOWN ARE IN FEET & DECIMALS THEREOF AND ARE APPROXIMATE*
5. *OFFSITE STREETS = 4.91 AC; ONSITE STREETS = 17.48 AC; LOTS = 46.06 AC; PARK & BASIN = 6.58 AC*
6. *EXISTING LAND USE: AG*
7. *PROPOSED LAND USE: SINGLE FAMILY RESIDENTIAL (100% OF SITE)*
8. *NATURAL GAS BY: THE GAS COMPANY*
9. *TELEPHONE BY: AT&T*
10. *POWER BY: SOUTHERN CALIFORNIA EDISON CO*
11. *CABLE T.V. BY: COMCAST*
12. *DOMESTIC WATER BY: CITY OF HANFORD*
13. *SEWAGE DISPOSAL BY: CITY OF HANFORD*
14. *REFUSE COLLECTION BY: CITY OF HANFORD*
15. *DRAINAGE: SITE BASIN*
16. *STORM DRAIN BASIN (PHASE I)*

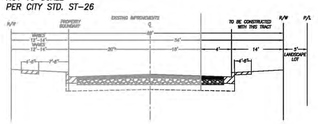
SECTION A-A
AQUIFER DRIVE

NOT TO SCALE
PER CITY STD. ST–23 (REVISED)



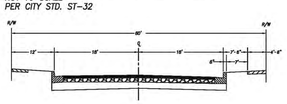
SECTION B-B
W SPRING CREST DRIVE

NOT TO SCALE
PER CITY STD. ST–26



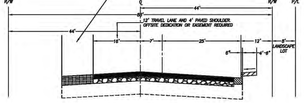
SECTION C-C
INTERIOR STREETS

NOT TO SCALE
PER CITY STD. ST–32



SECTION D-D
HUME AVENUE

NOT TO SCALE
PER CITY STD. ST–23



VESTING TENTATIVE
SUBDIVISION MAP TRACT #943
SILICON VALLEY RANCH

A PORTION OF THE WEST HALF OF THE NORTHEAST QUARTER & A PORTION OF THE EAST HALF OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 3, TOWNSHIP 19 SOUTH, RANGE 21 EAST, MOUNT DIABLO BASE & MERIDIAN, IN THE CITY OF HANFORD, COUNTY OF KINGS, STATE OF CALIFORNIA.

APPLICANT/OWNER:
SILICON VALLEY RANCH, LLC
PHIL R. BOYCE
20900 BOYCE LANE
SARATOGA, CA 95070
408–867–3737

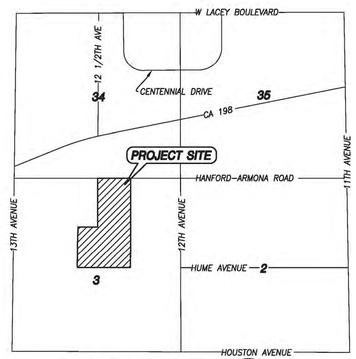
ZUMWALT HANSEN INC.
A QK Company
609 N. IRWIN STREET
HANFORD, CA 93230
TEL: (559) 582–8898
WWW.QKINC.COM

LEGAL DESCRIPTION

PARCEL 1: 011–040–008 AND 011–040–010
ALL THAT PORTION OF THE WEST HALF OF THE NORTHEAST QUARTER OF SECTION 3, TOWNSHIP 19 SOUTH, RANGE 21 EAST, MOUNT DIABLO BASE AND MERIDIAN, ACCORDING TO THE OFFICIAL PLAT THEREOF, DESCRIBED AS FOLLOWS:
BEGINNING AT THE NORTHWEST CORNER OF SAID NORTHEAST QUARTER; THENCE SOUTH ALONG THE WEST LINE THEREOF A DISTANCE OF 43.26 CHAINS, MORE OR LESS, TO THE SOUTHWEST CORNER OF SAID NORTHEAST QUARTER; THENCE EAST ALONG THE SOUTH LINE OF SAID QUARTER SECTION; 15.64 CHAINS TO THE CENTER OF A WATER DITCH; THENCE NORTHERLY ALONG THE CENTER LINE OF SAID WATER DITCH 43.26 CHAINS TO A POINT IN THE NORTH LINE OF SAID NORTHEAST QUARTER; THENCE WEST ALONG SAID NORTH LINE A DISTANCE OF 16.25 CHAINS, MORE OR LESS, TO THE POINT OF BEGINNING.
PARCEL 2: 011–040–027
THAT PORTION OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 3, TOWNSHIP 19 SOUTH, RANGE 21 EAST, MOUNT DIABLO BASE AND MERIDIAN, IN THE COUNTY OF KINGS, STATE OF CALIFORNIA, MORE PARTICULARLY DESCRIBED AS PARCEL 2 OF PARCEL MAP RECORDED IN BOOK 5, PAGE 72, OF PARCEL MAP RECORDED IN BOOK 5, PAGE 72 OF PARCEL MAPS, KINGS COUNTY RECORDS.

LEGEND

AC	ASPHALT PAVING	EM	ELECTRIC METER
BW	BACK OF WALK		EXISTING STREET LIGHT
CRN	ASPHALT CROWN		FIRE HYDRANT
EP	EDGE OF PAVEMENT	△	GATE POST
FL	FLOW LINE		GUY POLE
GDP	GUARD POST		IRRIGATION AG WELL
GV	GAS VALVE	(P)	IRRIGATION STANDPIPE
INV	INVERT	(V)	IRRIGATION VALVE
OG	ORIGINAL GROUND		TOPO
SSCO	SANITARY SEWER CLEANOUT	○	SANITARY SEWER CLEANOUT
SW	SIDEWALK	(S)	SANITARY SEWER MANHOLE
TC	TOP OF CURB	–	SIGN
TP	TELEPHONE POLE	(C)	S.D. CATCH BASIN MANHOLE
WBO	WATER BLOW–OFF	(D)	STORM DRAIN MANHOLE
	EXISTING ELECTRIC LINE (OVERHEAD)	T	TELEPHONE CHRISTY BOX
	EXISTING GAS LINE	(T)	TELEPHONE PEDESTAL
	EXISTING WOOD FENCE		TRANSFORMER POLE
	EXISTING CHAINLINK FENCE		UTILITY POLE
	EXISTING POST & WIRE FENCE	(W)	WATER METER
	EXISTING AC SURFACING		WATER VALVE
	EXISTING CONCRETE SURFACE		
	NO REAR OR SIDE ACCESS		
	BENCHMARK		
	DOWN GUY		



LOCATION MAP

NOT TO SCALE

L:\PROJECTS\2023\230096\CAD\TENTATIVE MAP\230096–TSM.DWG 4/2/2024 2:45 PM

Roadway Descriptions

11th Avenue is a north-south arterial in western Hanford. It operates within the study area as a four-lane roadway with a raised median and provides access to residential and commercial land uses and State Route 198 via 3rd and 4th Streets.

12th Avenue is a north-south arterial in western Hanford with an interchange connection to State Route 198. Within the study area, it operates as a four-lane roadway and a raised median and provides access to residential, commercial and agricultural land uses.

13th Avenue is a north-south major arterial in western Hanford that intersects Hanford-Armona Road near State Route 198. It operates within the study area as a two-lane roadway with unpaved shoulders and provides access primarily to residential and agricultural land uses.

Hanford-Armona Road is an east-west arterial with a roundabout intersection with the westbound ramps of State Route 198 near 13th Avenue. Within the study area, it exists as a two-lane roadway at various stages of widening and improvement and provides access to residential, commercial and agricultural land uses.

Hume Avenue is an east-west collector located midway between Houston Avenue and Hanford-Armona Road. Extending east from 12th Avenue, it operates as a two-lane roadway at various stages of widening and improvement and provides access primarily to residential land uses.

State Route 198 is an east-west state highway that extends from the California Central Coast, through the Central Valley to Sequoia National Park. It functions as a major regional and interregional corridor and operates within the study area as a four-lane expressway.

PROJECT TRIP GENERATION AND DESIGN HOUR VOLUMES

The project trip generation volumes shown in Table 1 were estimated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11th Edition (September 2021). Trip rates and peak hour directional splits for ITE Land Use Code 210 (Single-Family Detached Housing) were used to estimate project trips for weekday peak hour of adjacent street traffic based on information provided by the project applicant.

Table 1
Project Trip Generation

Land Use			Daily Trips		AM Peak Hour Trips			PM Peak Hour Trips		
ITE Code	Development Type	Variable	ADT Rate	ADT	Rate	IN Split Trips	OUT Split Trips	Rate	IN Split Trips	OUT Split Trips
210	Single-Family Detached Housing	326 Dwelling Units	eq	2,993	eq	26% 57	74% 162	eq	63% 190	37% 112

PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

The distribution of project peak hour trips is shown in Table 2 and represents the movement of traffic accessing the project site by direction. The project trip distribution was developed based on site location and travel patterns anticipated for the proposed land use.

Table 2
Project Trip Distribution

Direction	Percent
North	40
East	35
South	5
West	20

Project peak hour trips were assigned to the study intersections as shown in Figure 4. Project trip assignment was developed based on trip generation, trip distribution and likely travel routes for traffic accessing the project site.

EXISTING AND FUTURE TRAFFIC

Existing

Weekday peak hour turning movement counts were obtained at each of the study intersections in May 2023 (see Appendix for count data). Existing peak hour volumes are shown in Figure 5. Existing plus project peak hour volumes are shown in Figure 6.

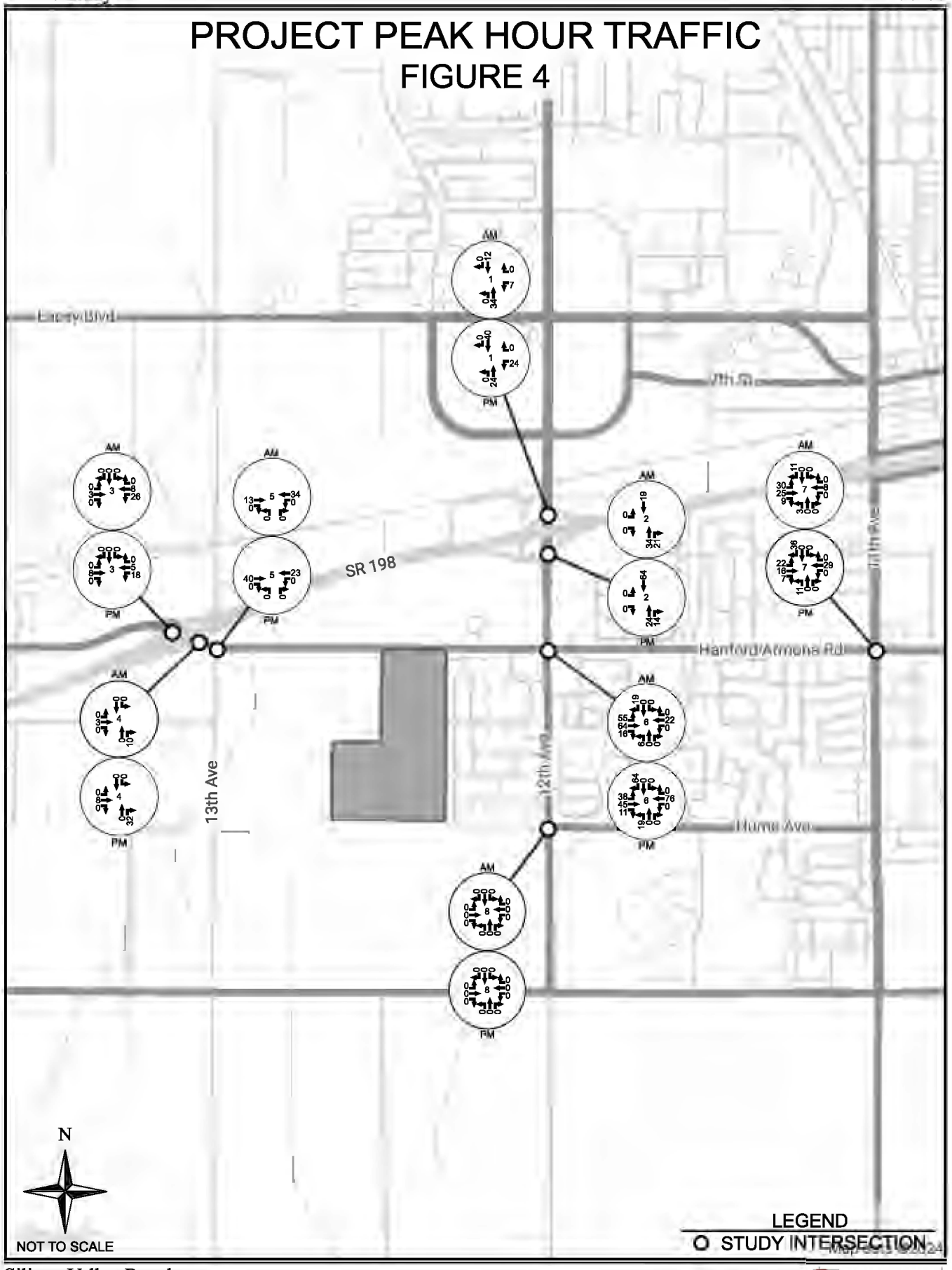
Future

Annual growth rates ranging between 1.10 and 5.03 percent were applied to the existing peak hour volumes to estimate future volumes for the years 2026 (opening year) and 2044 (horizon year). These growth rates were estimated based on a review of data from the Kings County Association of Governments (KCAG) travel demand model.

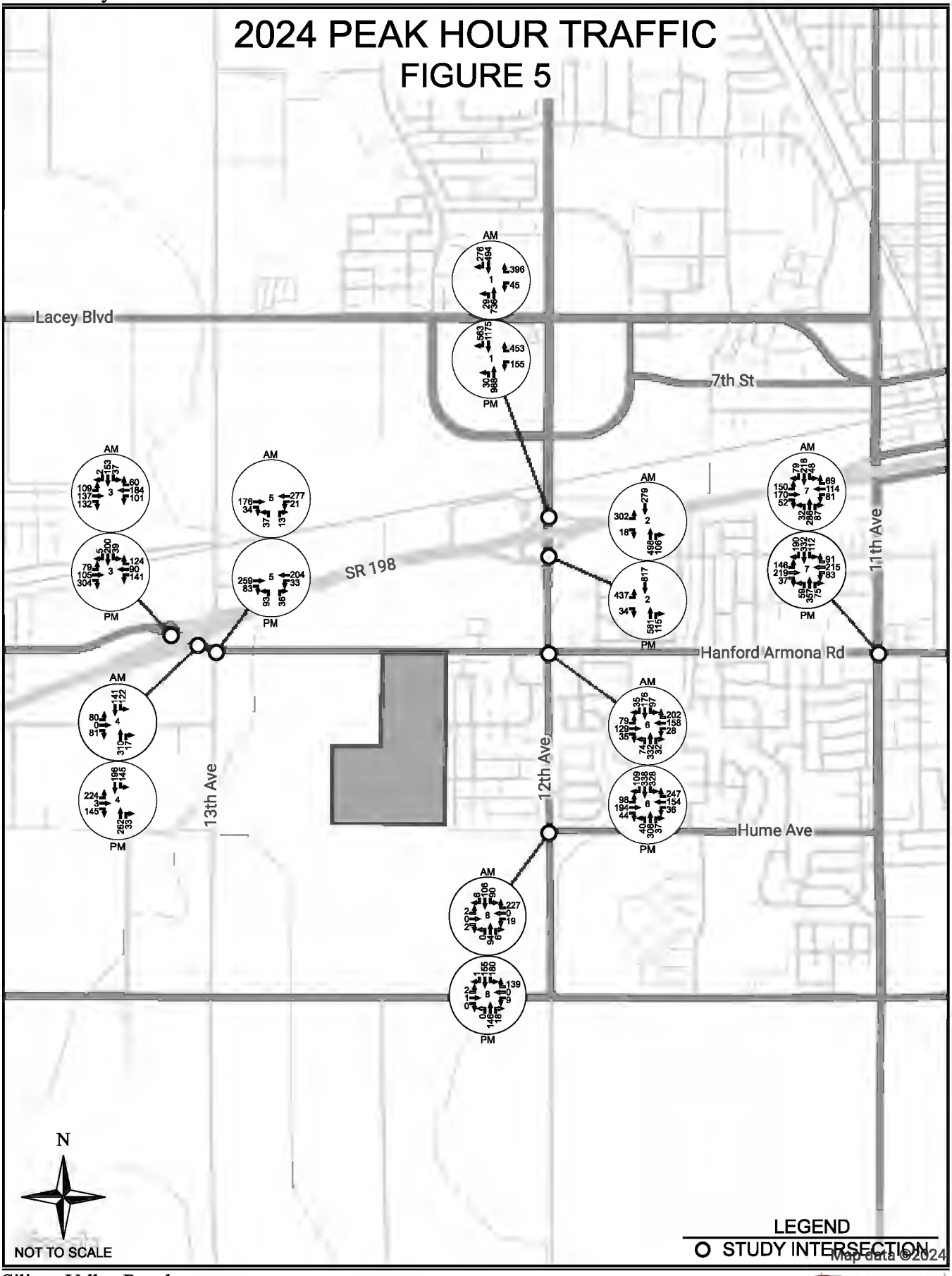
Future peak hour volumes for the year 2026, both without and with project traffic, are shown in Figures 7 and 8, respectively. These volumes include peak hour trip estimates for two tracts of the Live Oak development, a master-planned community located at the northwest, southwest and southeast quadrants of 12th Avenue and Hume Avenue (see Appendix for trip generation estimates). Both tracts are currently under construction (see Appendix for land use map with tracts outlined in red).

Future peak hour volumes for the year 2044, both without and with project traffic, are shown in Figures 9 and 10, respectively. These volumes include peak hour trip estimates for the Live Oak development at full buildout (see Appendix for trip generation estimates).

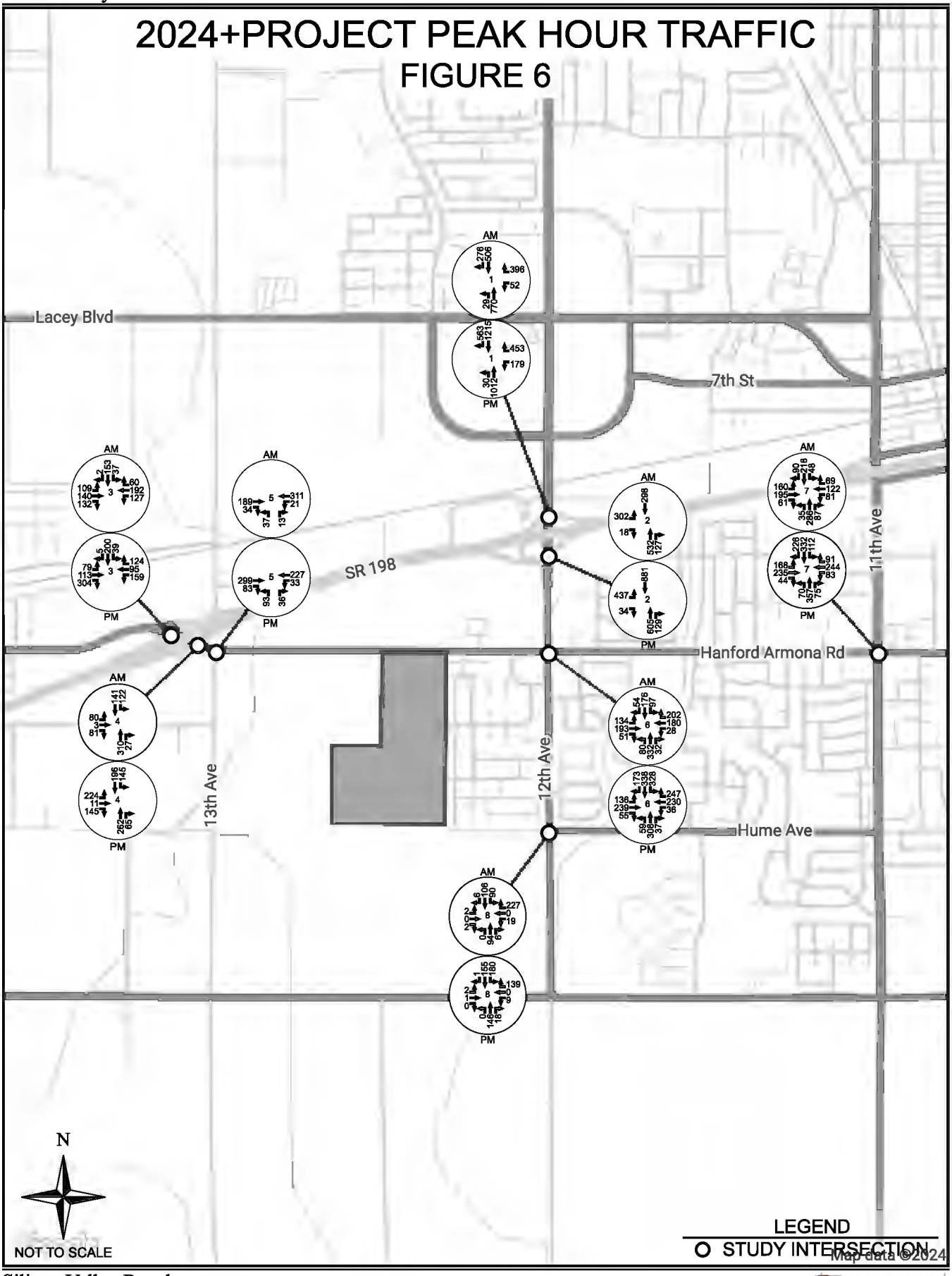
PROJECT PEAK HOUR TRAFFIC
FIGURE 4



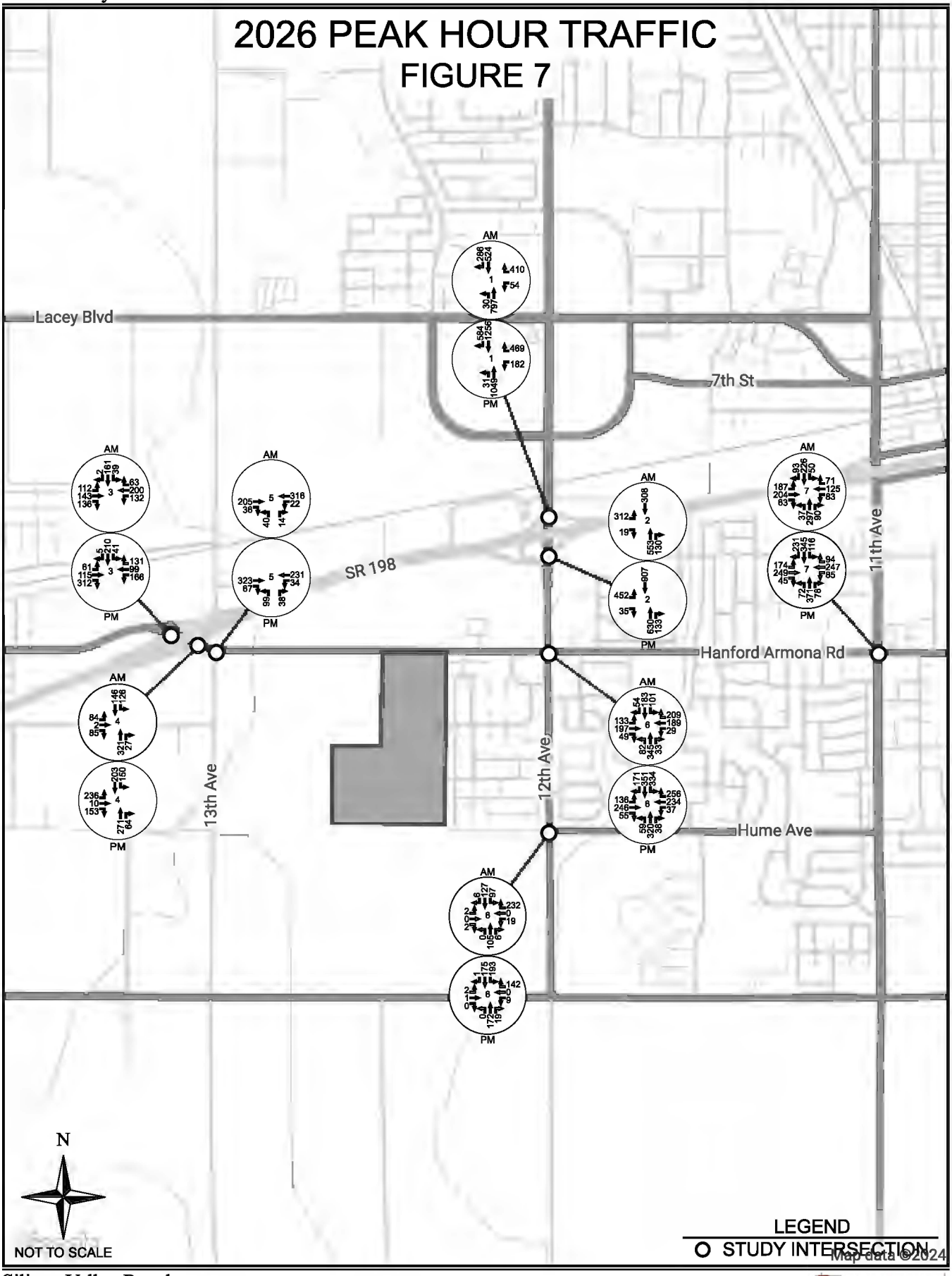
2024 PEAK HOUR TRAFFIC
FIGURE 5



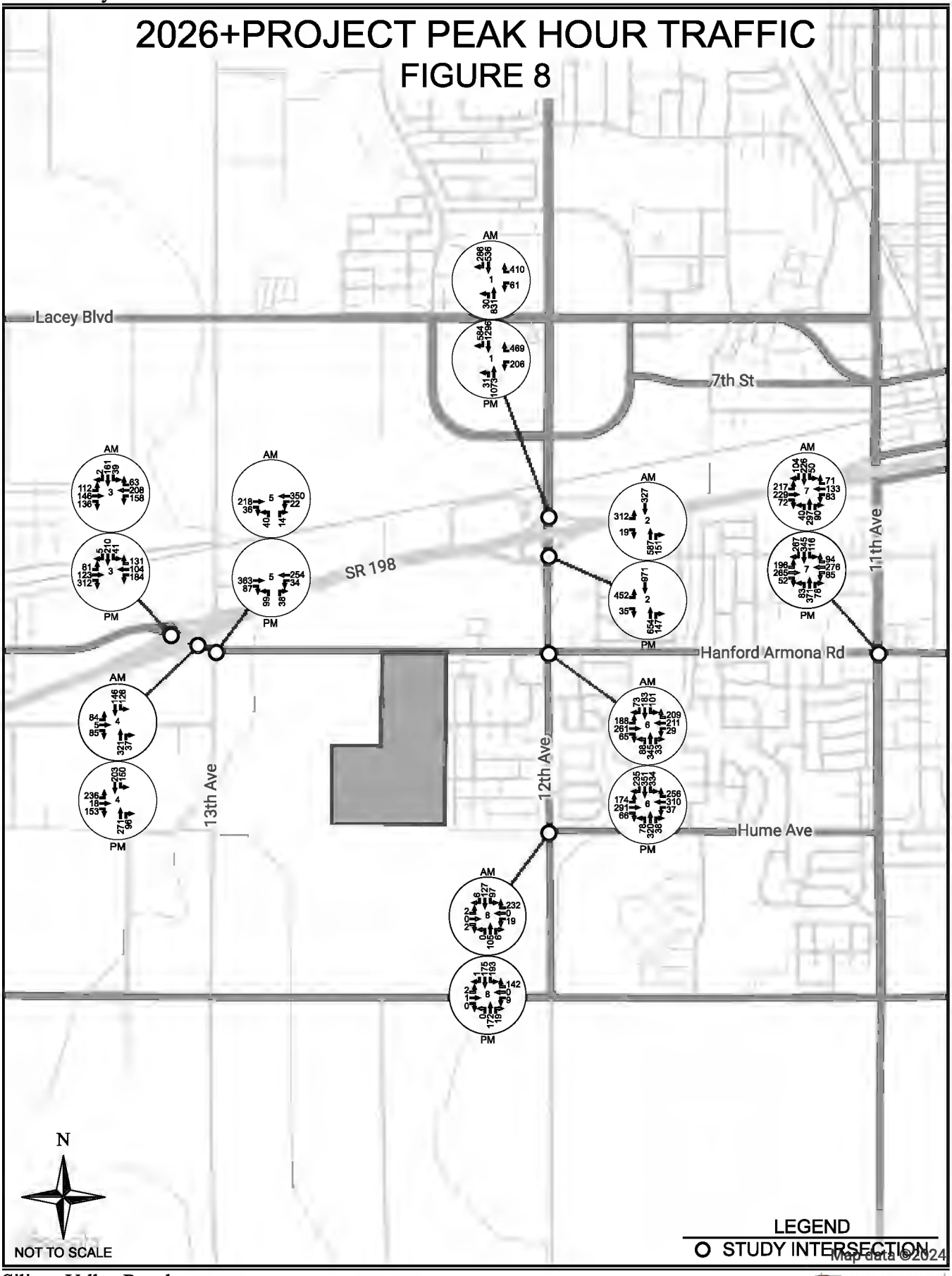
2024+PROJECT PEAK HOUR TRAFFIC
FIGURE 6



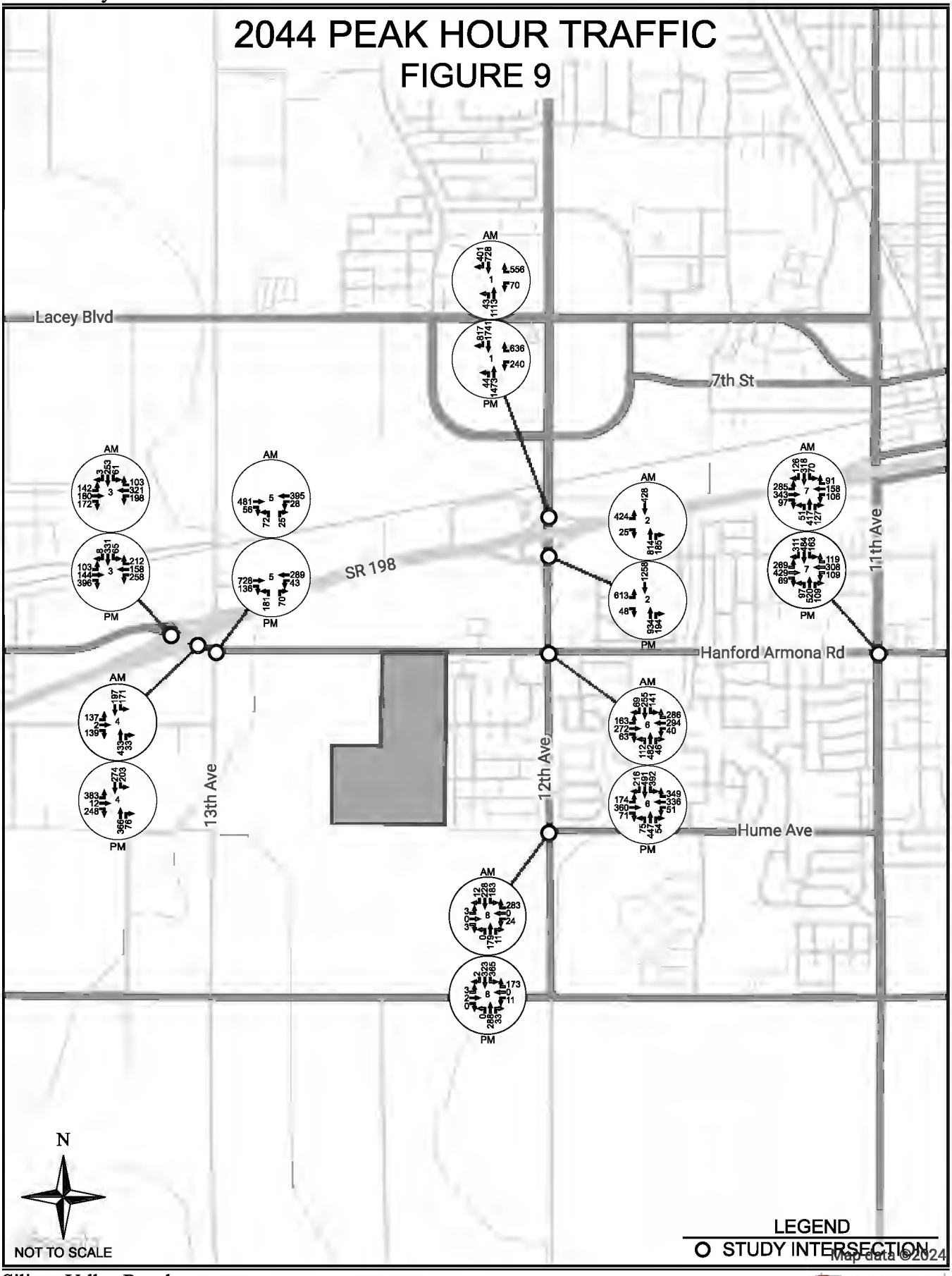
2026 PEAK HOUR TRAFFIC
FIGURE 7



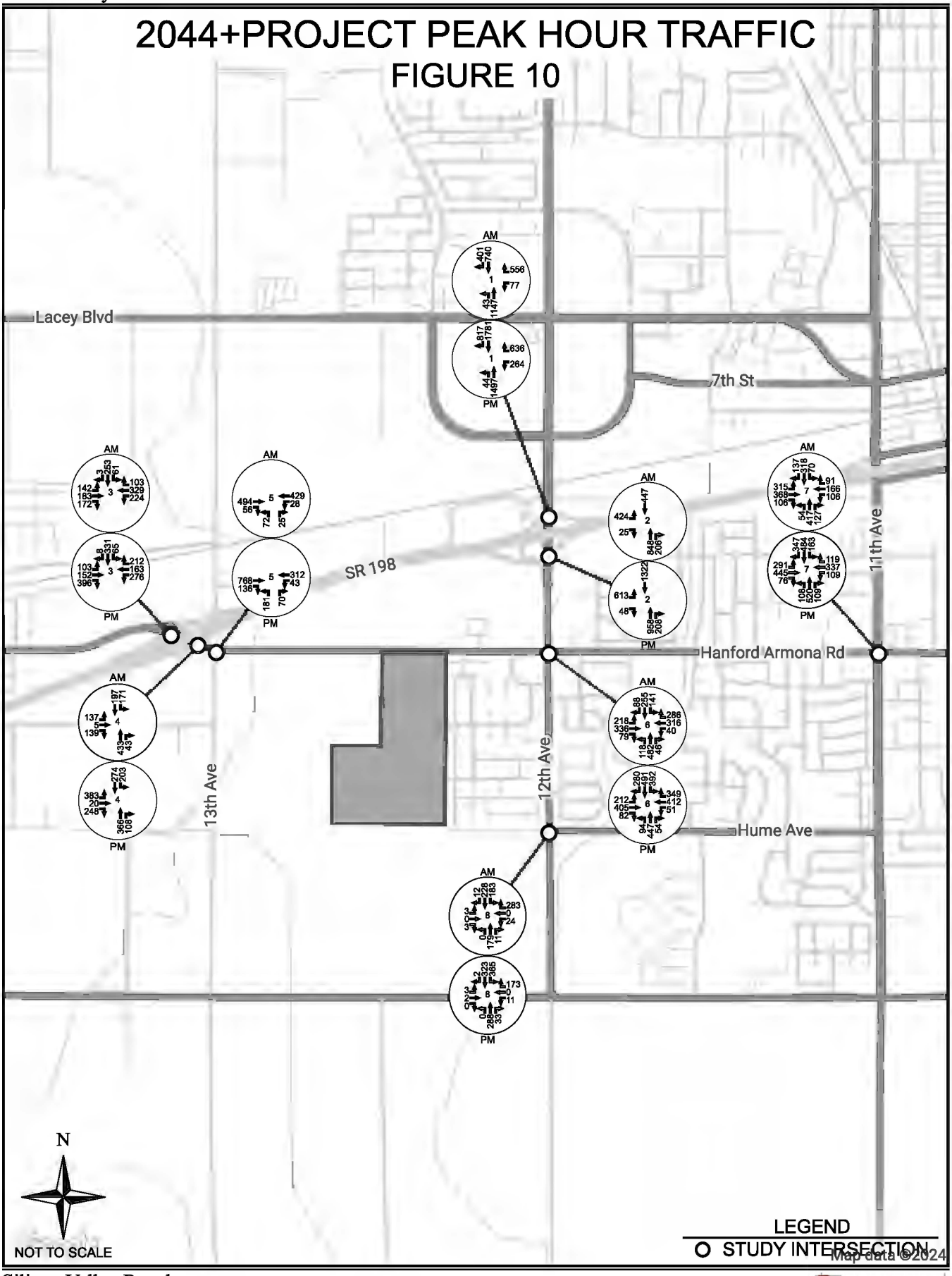
2026+PROJECT PEAK HOUR TRAFFIC
FIGURE 8



2044 PEAK HOUR TRAFFIC
FIGURE 9



2044+PROJECT PEAK HOUR TRAFFIC
FIGURE 10



INTERSECTION ANALYSIS

A capacity analysis of the study intersections was conducted using Synchro software from Trafficware (see Appendix for Synchro output). This software utilizes the capacity analysis methodology in the Transportation Research Board's *Highway Capacity Manual* (HCM). The analysis was performed for each of the following traffic scenarios.

- Existing Year (2024)
- Existing Year (2024) + Project
- Opening Year (2026)
- Opening Year (2026) + Project
- Future Year (2044)
- Future Year (2044) + Project

Level of service (LOS) criteria for unsignalized and signalized intersections, as defined in HCM, are presented in the tables below.

Level of Service Criteria
Unsignalized Intersections

Level of Service	Average Control Delay (sec/veh)	Expected Delay to Minor Street Traffic
A	≤ 10	Little or no delay
B	> 10 and ≤ 15	Short delays
C	> 15 and ≤ 25	Average delays
D	> 25 and ≤ 35	Long delays
E	> 35 and ≤ 50	Very long delays
F	> 50	Extreme delays

Level of Service Criteria
Signalized Intersections

Level of Service	Average Control Delay (sec/veh)	Volume-to-Capacity Ratio
A	≤ 10	< 0.60
B	> 10 and ≤ 20	0.61 - 0.70
C	> 20 and ≤ 35	0.71 - 0.80
D	> 35 and ≤ 55	0.81 - 0.90
E	> 55 and ≤ 80	0.91 - 1.00
F	> 80	> 1.00

Peak hour level of service for the study intersections is presented in Tables 3a and 3b. The City of Hanford has set an intersection level of service standard of LOS C or better. Intersection delay (seconds per vehicle) is shown within parentheses for intersections operating below LOS C.

Table 3a
Intersection Level of Service
Weekday PM Peak Hour

#	Intersection	Control Type	2024	2024+ Project	2026	2026+ Project	2044	2044+ Project	2044+ Project w/Mitigation
1	12th Ave & SR 198 WB Ramps	Signal	B	B	C	B	C	C	-
2	12th Ave & SR 198 EB Ramps	Signal	A	A	A	B	B	B	-
3	SR 198 WB Ramps & Hanford Armona Rd	Roundabout	A	A	A	A	B	B	-
4	SR 198 EB Ramps & Hanford Armona Rd	NB	B	B	B	B	C	C	-
5	13th Ave & Hanford Armona Rd	NB SB	C A	C A	C A	C A	F (>300) A	F (>300) A	- -
		Signal	-	-	-	-	-	-	B
6	12th Ave & Hanford Armona Rd	Signal	C	C	C	C	D (40.9)	D (42.1)	C
7	11th Ave & Hanford Armona Rd	Signal	B	B	C	C	C	C	-
8	12th Ave & Hume Ave	WB	B	B	B	B	C	C	-

Table 3b
Intersection Level of Service
Weekday AM Peak Hour

#	Intersection	Control Type	2024	2024+ Project	2026	2026+ Project	2044	2044+ Project	2044+ Project w/Mitigation
1	12th Ave & SR 198 WB Ramps	Signal	B	B	B	B	B	B	-
2	12th Ave & SR 198 EB Ramps	Signal	B	B	B	B	B	B	-
3	SR 198 WB Ramps & Hanford Armona Rd	Roundabout	A	A	A	A	B	C	-
4	SR 198 EB Ramps & Hanford Armona Rd	NB	B	B	B	B	C	C	-
5	13th Ave & Hanford Armona Rd	NB SB	B A	B A	B A	C A	D (31.4) A	F (35.0) A	- -
		Signal	-	-	-	-	-	-	A
6	12th Ave & Hanford Armona Rd	Signal	C	C	C	C	C	C	C
7	11th Ave & Hanford Armona Rd	Signal	B	B	B	B	C	C	-
8	12th Ave & Hume Ave	WB	B	B	B	B	C	C	-

TRAFFIC SIGNAL WARRANT ANALYSIS

Peak hour signal warrants were evaluated for the three unsignalized study intersections based on the 2014 *California Manual on Uniform Traffic Control Devices* (2014 CA MUTCD). Peak hour signal warrants assess delay to traffic on minor street approaches when entering or crossing a major street. Signal warrant analysis results are shown in Tables 4a and 4b.

Table 4a
Traffic Signal Warrants
Weekday PM Peak Hour

		2024			2024+Project			2026		
#	Intersection	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met
4	SR 198 EB Ramps at Hanford Armona Rd	636	372	NO	668	380	NO	672	385	NO
5	13th Ave at Hanford Armona Rd	580	129	NO	622	129	NO	676	137	NO
8	12th Ave at Hume Ave	500	148	NO	500	148	NO	509	156	NO

		2026+Project			2044			2044+Project		
#	Intersection	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met
4	SR 198 EB Ramps at Hanford Armona Rd	292	389	NO	889	636	NO	921	644	NO
5	13th Ave at Hanford Armona Rd	729	137	YES	1399	251	YES	1432	251	YES
8	12th Ave at Hume Ave	542	161	NO	985	184	NO	985	184	NO

Table 4b
Traffic Signal Warrants
Weekday AM Peak Hour

#	Intersection	2024 Major Street Total Approach Vol	2024 Minor Street High Approach Vol	2024 Warrant Met	2024+Project Major Street Total Approach Vol	2024+Project Minor Street High Approach Vol	2024+Project Warrant Met	2026 Major Street Total Approach Vol	2026 Minor Street High Approach Vol	2026 Warrant Met
4	SR 198 EB Ramps at Hanford Armona Rd	590	161	NO	600	164	NO	610	172	NO
5	13th Ave at Hanford Armona Rd	523	50	NO	561	50	NO	594	54	NO
8	12th Ave at Hume Ave	302	246	NO	302	246	NO	315	256	NO

#	Intersection	2026+Project Major Street Total Approach Vol	2026+Project Minor Street High Approach Vol	2026+Project Warrant Met	2044 Major Street Total Approach Vol	2044 Minor Street High Approach Vol	2044 Warrant Met	2044+Project Major Street Total Approach Vol	2044+Project Minor Street High Approach Vol	2044+Project Warrant Met
4	SR 198 EB Ramps at Hanford Armona Rd	615	180	NO	825	276	NO	835	279	NO
5	13th Ave at Hanford Armona Rd	629	54	NO	1113	97	YES	1143	97	YES
8	12th Ave at Hume Ave	321	261	NO	595	307	NO	595	307	NO

It is important to note that a signal warrant defines the minimum condition under which signalization of an intersection might be warranted. Meeting this threshold does not suggest traffic signals are required, but rather, that other traffic factors and conditions be considered to determine whether signals are truly justified.

It is also noted that signal warrants do not necessarily correlate with level of service. An intersection may satisfy a signal warrant condition and operate at or above an acceptable level of service or operate below an acceptable level of service and not meet signal warrant criteria.

ROADWAY ANALYSIS

A capacity analysis of study roadways was conducted using Highway Capacity Software (HCS) from the McTrans Center at the University of Florida. This software utilizes the capacity analysis methodology presented in the Transportation Research Board's *Highway Capacity Manual*.

Peak hour roadway capacities are presented in Table 5. The City of Hanford has a minimum level of service standard of LOS C for roadway segments.

Table 5
Roadway Capacity

Roadway Segment	2024 Directional LOS		2024+Project Directional LOS		2026 Directional LOS		2026+Project Directional LOS	
	N or E AM/PM	S or W AM/PM	N or E AM/PM	S or W AM/PM	N or E AM/PM	S or W AM/PM	N or E AM/PM	S or W AM/PM
Hanford Armona Rd: SR 198 WB Ramps to SR 198 EB Ramps	B/B	B/B	B/B	B/B	B/B	B/B	B/B	B/B
Hanford Armona Rd: SR 198 EB Ramps to 13th Ave	B/B	B/B	B/B	B/B	B/B	B/B	B/B	B/B
Hanford Armona Rd: 13th Ave to 12th Ave	B/B	B/B	B/B	B/B	B/B	B/B	B/B	B/B
Hanford Armona Rd: 12th Ave to 11th Ave	B/B	B/B	B/B	B/B	B/B	B/B	B/B	B/B
12th Ave: Hume Ave to Hanford Armona Rd	A/A	A/A	A/A	A/A	A/A	A/A	A/A	A/A
12th Ave: Hanford Armona Rd to SR 198 EB Ramps	A/A	A/A	A/A	A/A	B/B	B/B	B/B	B/B
12th Ave: SR 198 EB Ramps to SR 198 WB Ramps	A/A	A/A	A/A	A/A	B/B	B/B	B/B	B/B

Roadway Segment	2044 Directional LOS		2044+Project Directional LOS	
	N or E AM/PM	S or W AM/PM	N or E AM/PM	S or W AM/PM
Hanford Armona Rd: SR 198 WB Ramps to SR 198 EB Ramps	B/B	C/C	B/B	C/C
Hanford Armona Rd: SR 198 EB Ramps to 13th Ave	B/B	C/C	B/B	C/C
Hanford Armona Rd: 13th Ave to 12th Ave	C/C	C/C	C/C	C/C
Hanford Armona Rd: 12th Ave to 11th Ave	C/C	C/C	C/C	C/C
12th Ave: Hume Ave to Hanford Armona Rd	A/A	A/A	A/A	A/A
12th Ave: Hanford Armona Rd to SR 198 EB Ramps	B/B	B/B	B/B	B/B
12th Ave: SR 198 EB Ramps to SR 198 WB Ramps	B/B	B/B	B/B	B/B

MITIGATION

Intersection improvements needed by the year 2044 to maintain or improve the operational level of service of the street system in the vicinity of the project are presented in Table 6.

Table 6
Intersection Improvements

#	Intersection	Total Improvements Required by 2044	Project Share
5	13th Ave & Hanford Armona Rd	Install Traffic Signal	-
6	12th Ave & Hanford Armona Rd	Change EBR to EBTR	18.94%

The project's fair share cost for needed improvements was calculated using the formula below and approach peak hour volumes.

$$\% \text{ Share} = \frac{\text{Project Traffic}}{\text{(Future + Project Traffic) - Existing Traffic}} \times 100$$

VMT ANALYSIS

An analysis of project VMT (vehicle miles traveled) was conducted in accordance with the *VMT Thresholds and Implementation Guidelines*, City of Hanford, dated November 2022 (VMT Guidelines). The analysis involved comparing an estimate of VMT attributable to the project to a threshold VMT and assessing whether project VMT would result in a significant transportation impact under the California Environmental Quality Act (CEQA).

Project Screening

Land use developments meeting one or more of the screening criteria contained in the VMT Guidelines are presumed to create a less than significant transportation impact and no further VMT analysis is required. These criteria relate to project type, size, location, proximity to transit, and trip-making potential. The project does not meet any of the screening criteria. Therefore, a detailed VMT analysis is required.

Detailed Analysis

The detailed VMT analysis was conducted by LSA Associates, Inc. (Riverside, California) using the KCAG travel demand model. VMT analysis results are presented in Table 7 (see Appendix for VMT analysis memorandum).

Table 7
VMT Analysis Results

Land Use	Daily Vehicle Miles Traveled (VMT)				Significant Impact	Reduction Needed
	Metric	Baseline	Threshold	Project		
Residential	VMT per Capita	10.33	8.99	9.61	YES	6.5%

Source: LSA Associates, Inc. memorandum, dated March 3, 2023

Since the project's VMT per capita (9.61) is greater than the significance threshold (8.99), the project is expected to result in a significant transportation impact under CEQA. Therefore, mitigation would be required.

Mitigation

For land development projects, VMT mitigation focuses on measures that reduce the number and/or length of single-occupant vehicle trips generated by the project. According to the VMT Guidelines, proposed mitigation to reduce project VMT "must be supported by substantial evidence illustrating that the measure(s) will mitigate VMT impacts to less than significant."

The VMT Guidelines cite the *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health Equity: Designed for Local Governments, Communities, and Project Developers*, California Air Pollution Control Officers Association, December 2021 (CAPCOA Handbook) as a source for mitigation measures with quantitative methods for estimating VMT reduction. Below are quantitative measures contained in the CAPCOA Handbook for residential projects in suburban areas. Measure identifiers are shown within parentheses and italicized text addresses the applicability of each measure to the project.

- Increase residential density to a level higher than the national average (T-1)

  Applicable, but not feasible. The residential density for the project is 6.5 dwelling units/acre (326 single-family homes/50 acres of developable land). As stated in the CAPCOA Handbook, the national average is 9.1 dwelling units/acre and includes apartments, townhomes and condominiums in addition to detached single-family housing.

  Below is the VMT reduction formula in the CAPCOA Handbook for this measure (-0.22 = VMT elasticity factor).

  $$\text{VMT reduction} = [\ (\text{project du/acre} - 9.1\ \text{du/acre})\ /\ 9.1\ \text{du/acre}\ ]\ x\ (-0.22)$$

  Assuming no change in the amount of developable land, the project would need at least 455 dwelling units to reach the national average and be credited for any reduction in project VMT. Moreover, the project would require a total of 590 dwelling units to mitigate the impact of project VMT to a less than significant level. Such an increase in project residential density (approximately 80 percent) would not be feasible.

- Provide easy access to high-quality public transit (T-3)

  Not applicable because the project does not meet implementation requirements. Project must be located within 0.5 miles of a high frequency transit station (either rail or bus rapid transit with headways of less than 15 minutes).

- Integrate affordable and below market rate housing (T-4)

  Not applicable because the project does not meet implementation requirements. Project must be a multifamily residential development permanently dedicated as affordable housing for lower income families.

- Provide electric vehicle charging infrastructure (T-14)

  Not applicable to single-family residential projects. Mitigation potential available only to developments with buildings that have designated parking areas (e.g., commercial, educational, retail and multifamily housing).

- Limit residential parking supply (T-15)

  Not applicable because the measure is ineffective in locations where unrestricted street parking or other off-street parking is available and has adequate capacity to accommodate project-related vehicle parking demand.

- Unbundle residential parking costs from property costs (T-16)

  Not applicable since there are no residential parking costs associated with the project.

SUMMARY

This study evaluated the potential traffic impacts of Silicon Valley Ranch, a proposed 324 single-family residential development located on the south side of Hanford Armona Road, between 13th Avenue and 12th Avenue, in the City of Hanford.

The scope of the study includes eight intersections and adjoining roadway segments. Traffic impact analyses include intersection level of service (LOS), roadway capacity and vehicle miles traveled (VMT). Traffic signal warrants were also analyzed. Analysis results are summarized below.

Intersection Level of Service

All study intersections are expected to operate with minimal delay (at or above LOS C) during peak hours through the year 2044, both with and without project traffic, or can be mitigated to operate at an acceptable level of service.

Traffic Signal Warrants

Peak hour signal warrants were applied to the three unsignalized study intersections. Signal warrant criteria were met for the following intersection for the peak hours and analysis scenarios indicated.

13th Ave/Hanford Armona Rd	
PM peak hour	2026+Project, 2044 and 2044+Project
AM peak hour	2044 and 2044+Project

Roadway Capacity

All roadway segments within the scope of the study are expected to operate with minimal delay (at or above LOS C) during peak hours through the year 2044, both with and without project traffic.

VMT

The project's VMT is greater than the significance threshold. Therefore, the project is expected to result in a significant transportation impact under CEQA and mitigation would be required.

REFERENCES

1. *California Manual on Uniform Traffic Control Devices for Streets and Highways*, 2014 Edition, California Department of Transportation (Caltrans)
2. *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health Equity: Designed for Local Governments, Communities, and Project Developers*, California Air Pollution Control Officers Association, December 2021
3. *Highway Capacity Manual*, Transportation Research Board
4. *Trip Generation Manual*, 11th Edition, Institute of Transportation Engineers (ITE), September 2021
5. *VMT Thresholds and Implementation Guidelines,* City of Hanford, dated November 2022

APPENDIX

Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

Turning Movement Report

Prepared For:
Ruettgers & Schuler Civil Engineers
1800 30th St, Ste 260
Bakersfield, CA 93301

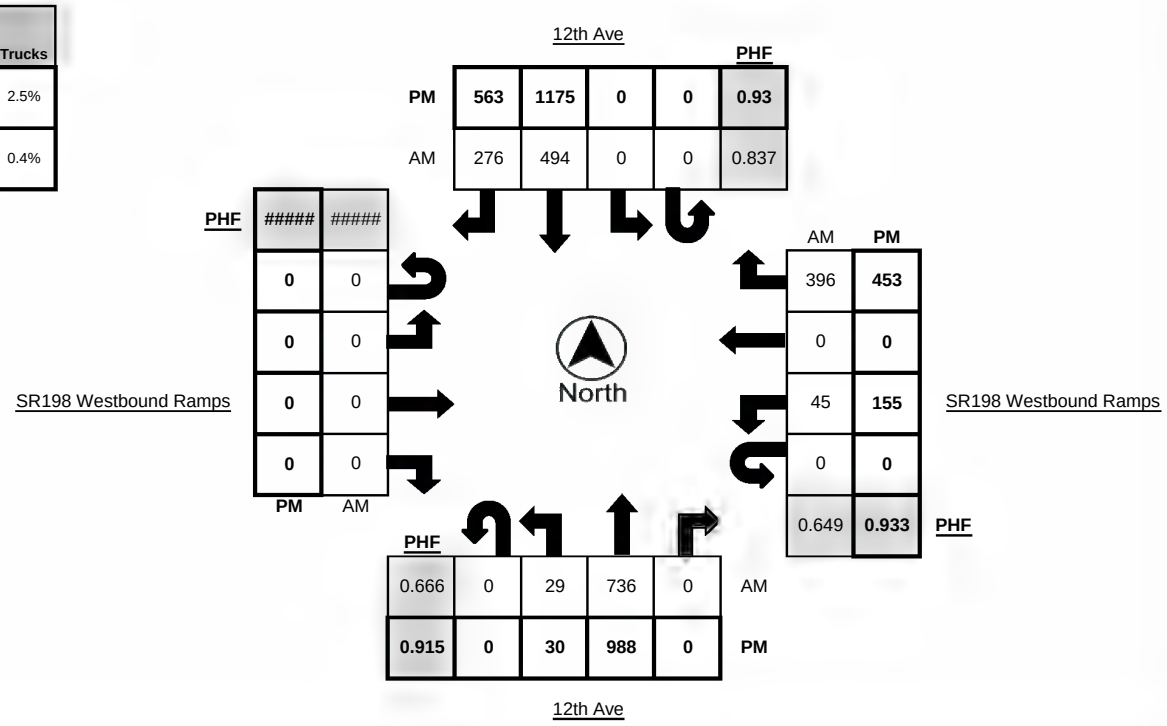
LOCATION 12th Ave @ SR 198 WB Ramps
LATITUDE 36.3194
COUNTY Kings
LONGITUDE -119.6730
COLLECTION DATE Thursday, May 04, 2023
WEATHER Clear

	Northbound					Southbound					Eastbound					Westbound				
Time	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
6:00 AM - 6:15 AM	0	3	52	0	0	0	0	67	44	4	0	0	0	0	0	0	7	0	41	1
6:15 AM - 6:30 AM	0	11	50	0	0	0	0	45	29	2	0	0	0	0	0	0	10	0	44	3
6:30 AM - 6:45 AM	0	11	55	0	0	0	0	70	46	3	0	0	0	0	0	0	13	0	49	2
6:45 AM - 7:00 AM	0	3	110	0	0	0	0	89	39	0	0	0	0	0	0	0	16	0	83	4
7:00 AM - 7:15 AM	0	8	85	0	1	0	0	86	65	2	0	0	0	0	0	0	8	0	77	5
7:15 AM - 7:30 AM	0	5	151	0	4	0	0	120	69	4	0	0	0	0	0	0	10	0	65	6
7:30 AM - 7:45 AM	0	9	220	0	5	0	0	144	86	8	0	0	0	0	0	0	8	0	103	2
7:45 AM - 8:00 AM	0	7	280	0	1	0	0	144	56	8	0	0	0	0	0	0	19	0	151	4
TOTAL	**0**	**57**	**1003**	**0**	**11**	**0**	**0**	**765**	**434**	**31**	**0**	**0**	**0**	**0**	**0**	**0**	**91**	**0**	**613**	**27**

	Northbound					Southbound					Eastbound					Westbound				
Time	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	0	8	223	0	1	0	0	237	132	3	0	0	0	0	0	0	28	0	112	3
4:15 PM - 4:30 PM	0	12	260	0	2	0	0	245	134	5	0	0	0	0	0	0	39	0	106	2
4:30 PM - 4:45 PM	0	7	237	0	0	0	0	304	131	1	0	0	0	0	0	0	37	0	105	0
4:45 PM - 5:00 PM	0	11	267	0	0	0	0	282	134	4	0	0	0	0	0	0	33	0	130	1
5:00 PM - 5:15 PM	0	8	243	0	2	0	0	311	156	4	0	0	0	0	0	0	35	0	110	1
5:15 PM - 5:30 PM	0	4	241	0	1	0	0	278	142	0	0	0	0	0	0	0	50	0	108	0
5:30 PM - 5:45 PM	0	13	224	0	0	0	0	277	107	1	0	0	0	0	0	0	23	0	96	0
5:45 PM - 6:00 PM	0	11	213	0	0	0	0	218	125	0	0	0	0	0	0	0	32	0	90	0
TOTAL	**0**	**74**	**1908**	**0**	**6**	**0**	**0**	**2152**	**1061**	**18**	**0**	**0**	**0**	**0**	**0**	**0**	**277**	**0**	**857**	**7**

	Northbound					Southbound					Eastbound					Westbound				
PEAK HOUR	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 8:00 AM	0	29	736	0	11	0	0	494	276	22	0	0	0	0	0	0	45	0	396	17
4:30 PM - 5:30 PM	0	30	988	0	3	0	0	1175	563	9	0	0	0	0	0	0	155	0	453	2

	PHF	Trucks
AM	0.752	2.5%
PM	0.975	0.4%



Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

Turning Movement Report

Prepared For:
Ruettgers & Schuler Civil Engineers
1800 30th St, Ste 260
Bakersfield, CA 93301

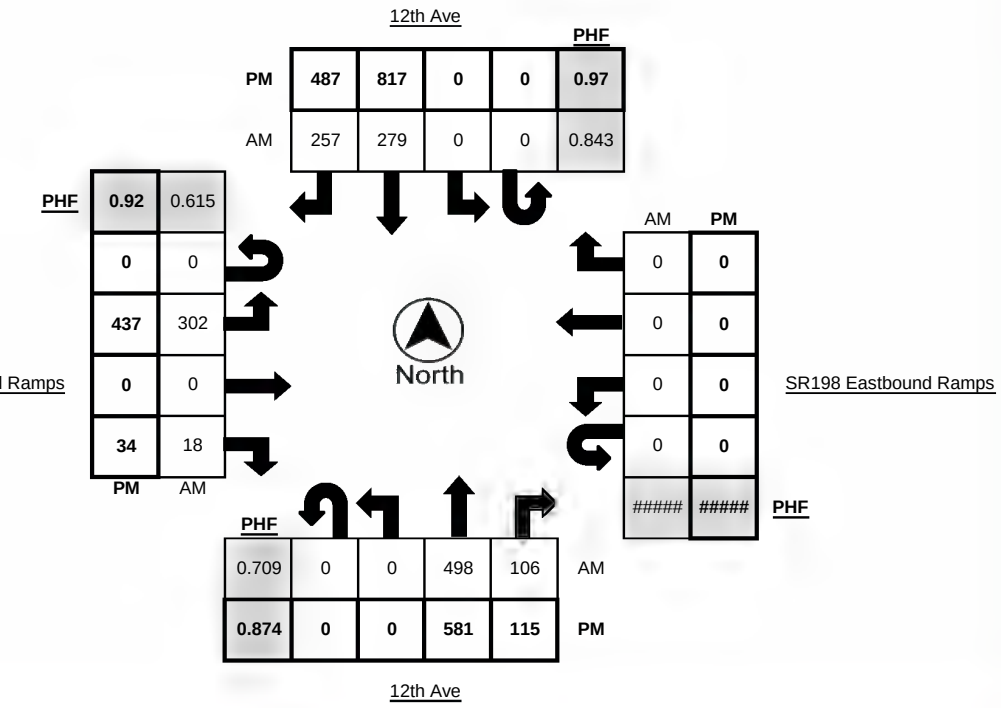
LOCATION 12th Ave @ SR198 EB Ramps
LATITUDE 36.3174
COUNTY Kings
LONGITUDE -119.6730
COLLECTION DATE Thursday, May 04, 2023
WEATHER Clear

	Northbound					Southbound					Eastbound					Westbound				
Time	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
6:00 AM - 6:15 AM	0	0	36	19	0	0	0	35	42	4	0	18	0	0	0	0	0	0	0	0
6:15 AM - 6:30 AM	0	0	40	12	0	0	0	28	30	2	0	22	0	2	0	0	0	0	0	0
6:30 AM - 6:45 AM	0	0	39	26	0	0	0	40	49	6	0	28	0	0	0	0	0	0	0	0
6:45 AM - 7:00 AM	0	0	55	25	4	0	0	63	46	1	0	59	0	4	2	0	0	0	0	0
7:00 AM - 7:15 AM	0	0	64	18	1	0	0	40	56	3	0	31	0	4	0	0	0	0	0	0
7:15 AM - 7:30 AM	0	0	104	31	3	0	0	66	61	7	0	59	0	4	0	0	0	0	0	0
7:30 AM - 7:45 AM	0	0	151	23	4	0	0	76	78	8	0	86	0	6	2	0	0	0	0	0
7:45 AM - 8:00 AM	0	0	179	34	1	0	0	97	62	9	0	126	0	4	0	0	0	0	0	0
TOTAL	**0**	**0**	**668**	**188**	**13**	**0**	**0**	**445**	**424**	**40**	**0**	**429**	**0**	**24**	**4**	**0**	**0**	**0**	**0**	**0**

	Northbound					Southbound					Eastbound					Westbound				
Time	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	0	0	136	25	1	0	0	159	101	3	0	102	0	7	0	0	0	0	0	0
4:15 PM - 4:30 PM	0	0	142	28	0	0	0	188	83	6	0	134	0	9	2	0	0	0	0	0
4:30 PM - 4:45 PM	0	0	148	27	1	0	0	204	132	1	0	102	0	12	0	0	0	0	0	0
4:45 PM - 5:00 PM	0	0	164	35	1	0	0	195	109	3	0	118	0	9	0	0	0	0	0	0
5:00 PM - 5:15 PM	0	0	142	24	2	0	0	201	127	0	0	96	0	6	1	0	0	0	0	0
5:15 PM - 5:30 PM	0	0	127	29	1	0	0	217	119	0	0	121	0	7	0	0	0	0	0	0
5:30 PM - 5:45 PM	0	0	139	35	1	0	0	184	125	1	0	118	0	7	0	0	0	0	0	0
5:45 PM - 6:00 PM	0	0	131	22	1	0	0	169	85	0	0	91	0	3	0	0	0	0	0	0
TOTAL	**0**	**0**	**1129**	**225**	**8**	**0**	**0**	**1517**	**881**	**14**	**0**	**882**	**0**	**60**	**3**	**0**	**0**	**0**	**0**	**0**

	Northbound					Southbound					Eastbound					Westbound				
PEAK HOUR	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 8:00 AM	0	0	498	106	9	0	0	279	257	27	0	302	0	18	2	0	0	0	0	0
4:30 PM - 5:30 PM	0	0	581	115	5	0	0	817	487	4	0	437	0	34	1	0	0	0	0	0

	PHF	Trucks
AM	0.727	2.6%
PM	0.981	0.4%



Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

Turning Movement Report

Prepared For:
Ruettgers & Schuler Civil Engineers
1800 30th St, Ste 260
Bakersfield, CA 93301

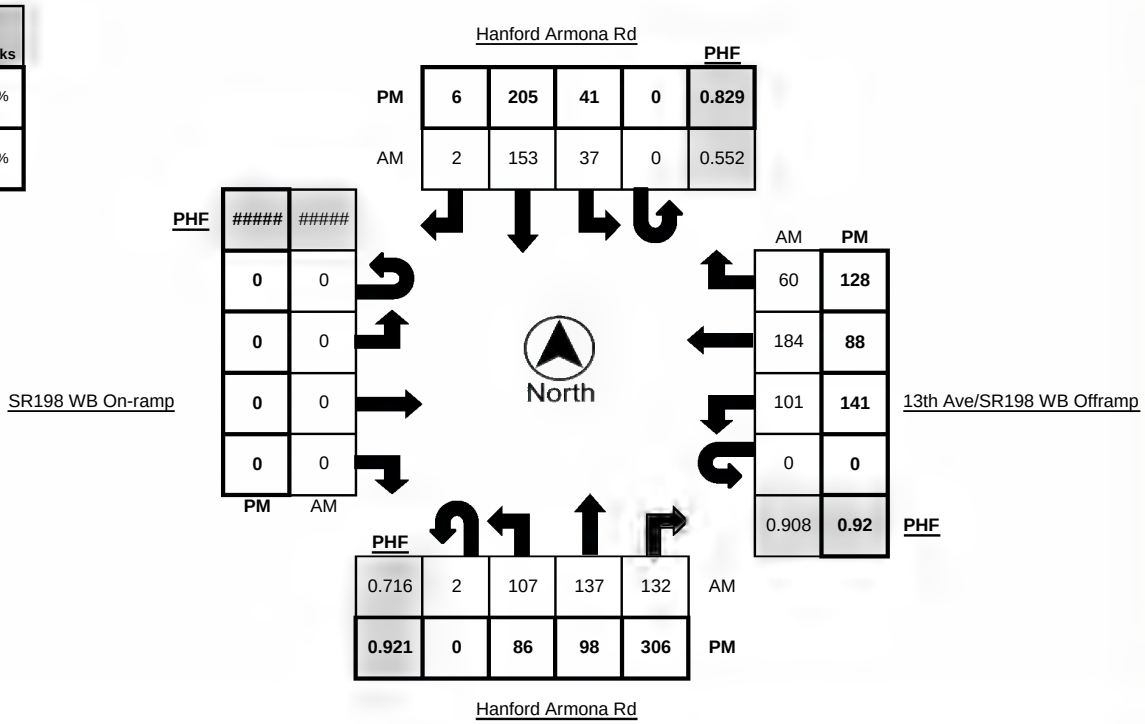
LOCATION Hanford Armona Rd @ SR 198 WB Onramp (Roundabout)
LATITUDE 36.3144
COUNTY Kings
LONGITUDE -119.6935
COLLECTION DATE Thursday, May 04, 2023
WEATHER Clear

	Northbound					Southbound					Eastbound					Westbound				
Time	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
6:00 AM - 6:15 AM	1	22	19	9	0	0	2	10	1	1	0	0	0	0	0	0	8	18	3	0
6:15 AM - 6:30 AM	1	18	6	13	1	0	6	17	2	4	0	0	0	0	0	0	7	24	4	0
6:30 AM - 6:45 AM	0	33	15	11	0	0	2	21	0	0	0	0	0	0	0	0	5	32	8	1
6:45 AM - 7:00 AM	0	18	12	15	1	0	4	23	1	1	0	0	0	0	0	0	19	32	10	1
7:00 AM - 7:15 AM	0	23	9	20	1	0	6	21	1	0	0	0	0	0	0	0	21	44	14	3
7:15 AM - 7:30 AM	0	25	22	31	3	0	3	27	1	2	0	0	0	0	0	0	20	44	14	1
7:30 AM - 7:45 AM	0	36	45	35	3	0	9	37	0	0	0	0	0	0	0	0	25	54	16	1
7:45 AM - 8:00 AM	2	23	61	46	0	0	19	68	0	0	0	0	0	0	0	0	35	42	16	1
TOTAL	**4**	**198**	**189**	**180**	**9**	**0**	**51**	**224**	**6**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**140**	**290**	**85**	**8**

	Northbound					Southbound					Eastbound					Westbound				
Time	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	0	16	33	75	1	0	10	45	0	0	0	0	0	0	0	0	50	14	32	3
4:15 PM - 4:30 PM	0	21	15	76	1	0	11	54	1	2	0	0	0	0	0	0	36	17	30	0
4:30 PM - 4:45 PM	0	18	27	73	1	0	10	44	2	1	0	0	0	0	0	0	37	25	35	4
4:45 PM - 5:00 PM	0	23	26	78	2	0	8	44	2	1	0	0	0	0	0	0	36	23	29	1
5:00 PM - 5:15 PM	0	24	30	79	0	0	12	63	1	2	0	0	0	0	0	0	32	23	34	0
5:15 PM - 5:30 PM	0	14	22	74	0	0	9	49	0	0	0	0	0	0	0	0	36	19	26	0
5:30 PM - 5:45 PM	0	29	31	54	1	0	9	63	0	0	0	0	0	0	0	0	28	20	32	0
5:45 PM - 6:00 PM	0	17	18	50	2	0	8	49	0	0	0	0	0	0	0	0	31	17	25	2
TOTAL	**0**	**162**	**202**	**559**	**8**	**0**	**77**	**411**	**6**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**286**	**158**	**243**	**10**

	Northbound					Southbound					Eastbound					Westbound				
PEAK HOUR	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 8:00 AM	2	107	137	132	7	0	37	153	2	2	0	0	0	0	0	0	101	184	60	6
4:15 PM - 5:15 PM	0	86	98	306	4	0	41	205	6	6	0	0	0	0	0	0	141	88	128	5

	PHF	Trucks
AM	0.733	1.6%
PM	0.922	1.4%



Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

Turning Movement Report

Prepared For:
Ruettgers & Schuler Civil Engineers
1800 30th St, Ste 260
Bakersfield, CA 93301

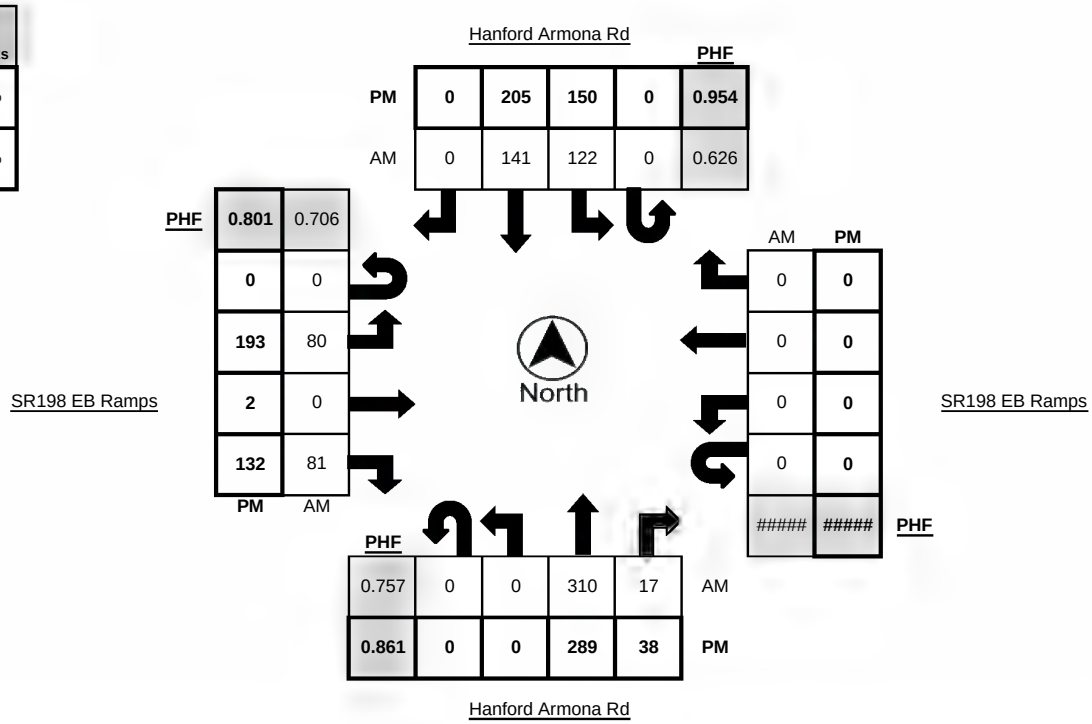
LOCATION Hanford Armona Rd @ SR198 EB Ramps
LATITUDE 36.3138
COUNTY Kings
LONGITUDE -119.6920
COLLECTION DATE Thursday, May 04, 2023
WEATHER Clear

	Northbound					Southbound					Eastbound					Westbound				
Time	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
6:00 AM - 6:15 AM	0	0	39	3	0	0	9	8	0	0	0	6	0	13	0	0	0	0	0	0
6:15 AM - 6:30 AM	0	0	30	1	1	0	13	8	0	2	0	11	0	5	0	0	0	0	0	0
6:30 AM - 6:45 AM	0	0	44	1	0	0	17	13	0	0	0	9	0	12	0	0	0	0	0	0
6:45 AM - 7:00 AM	0	0	37	0	1	0	27	16	0	0	0	12	0	5	0	0	0	0	0	0
7:00 AM - 7:15 AM	0	0	46	2	1	0	20	22	0	1	0	16	0	18	0	0	0	0	0	0
7:15 AM - 7:30 AM	0	0	67	2	1	0	21	29	0	2	0	10	0	19	2	0	0	0	0	0
7:30 AM - 7:45 AM	0	0	96	6	3	0	32	34	0	2	0	21	0	20	2	0	0	0	0	0
7:45 AM - 8:00 AM	0	0	101	7	0	0	49	56	0	1	0	33	0	24	1	0	0	0	0	0
TOTAL	**0**	**0**	**460**	**22**	**7**	**0**	**188**	**186**	**0**	**8**	**0**	**118**	**0**	**116**	**5**	**0**	**0**	**0**	**0**	**0**

	Northbound					Southbound					Eastbound					Westbound				
Time	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	0	0	65	4	1	0	31	60	0	0	0	60	1	32	1	0	0	0	0	0
4:15 PM - 4:30 PM	0	0	48	7	0	0	37	45	0	2	0	64	0	46	1	0	0	0	0	0
4:30 PM - 4:45 PM	0	0	56	7	2	0	36	43	0	0	0	59	1	41	0	0	0	0	0	0
4:45 PM - 5:00 PM	0	0	72	8	0	0	33	48	0	0	0	51	1	26	2	0	0	0	0	0
5:00 PM - 5:15 PM	0	0	73	8	0	0	42	51	0	1	0	62	0	40	3	0	0	0	0	0
5:15 PM - 5:30 PM	0	0	61	10	0	0	34	54	0	0	0	52	1	38	0	0	0	0	0	0
5:30 PM - 5:45 PM	0	0	83	12	0	0	41	52	0	0	0	28	0	28	1	0	0	0	0	0
5:45 PM - 6:00 PM	0	0	55	5	0	0	41	37	0	1	0	31	0	26	1	0	0	0	0	0
TOTAL	**0**	**0**	**513**	**61**	**3**	**0**	**295**	**390**	**0**	**4**	**0**	**407**	**4**	**277**	**9**	**0**	**0**	**0**	**0**	**0**

	Northbound					Southbound					Eastbound					Westbound				
PEAK HOUR	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 8:00 AM	0	0	310	17	5	0	122	141	0	6	0	80	0	81	5	0	0	0	0	0
4:45 PM - 5:45 PM	0	0	289	38	0	0	150	205	0	1	0	193	2	132	6	0	0	0	0	0

	PHF	Trucks
AM	0.695	2.1%
PM	0.914	0.7%



Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

Turning Movement Report

Prepared For:

Ruettgers & Schuler Civil Engineers
1800 30th St, Ste 260
Bakersfield, CA 93301

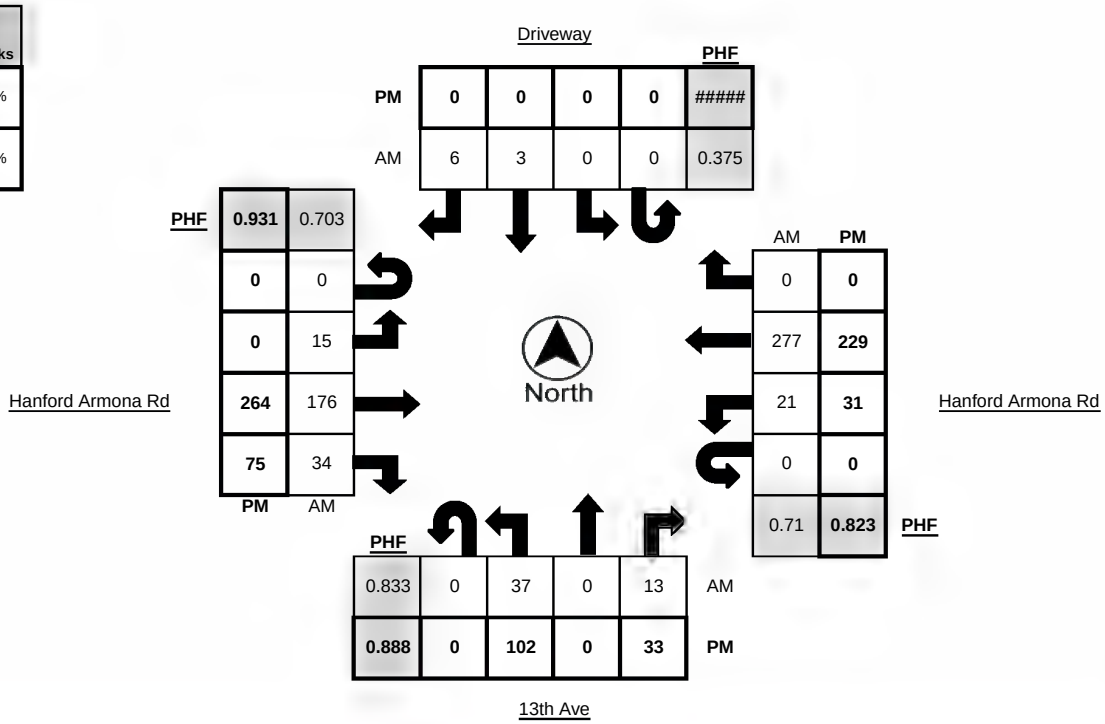
LOCATION 13th Ave @ Hanford Armona Rd
LATITUDE 36.3136
COUNTY Kings
LONGITUDE -119.6910
COLLECTION DATE Thursday, May 04, 2023
WEATHER Clear

	Northbound					Southbound					Eastbound					Westbound				
Time	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
6:00 AM - 6:15 AM	0	3	0	1	0	0	0	0	0	0	0	0	17	4	0	0	2	40	0	0
6:15 AM - 6:30 AM	0	4	0	2	0	0	0	0	0	0	0	0	11	2	0	0	2	27	0	1
6:30 AM - 6:45 AM	0	2	0	1	0	0	0	0	0	0	0	0	20	5	0	0	2	46	0	0
6:45 AM - 7:00 AM	0	1	0	5	0	0	0	0	0	0	0	2	17	4	2	0	1	33	0	1
7:00 AM - 7:15 AM	0	6	0	1	1	0	0	0	0	0	0	5	28	7	0	0	6	38	0	0
7:15 AM - 7:30 AM	0	11	0	2	1	0	0	0	2	0	0	5	35	9	1	0	4	58	0	1
7:30 AM - 7:45 AM	0	9	0	6	0	0	0	2	4	0	0	2	47	7	3	0	7	80	0	2
7:45 AM - 8:00 AM	0	11	0	4	0	0	0	1	0	0	0	3	66	11	0	0	4	101	0	2
TOTAL	**0**	**47**	**0**	**22**	**2**	**0**	**0**	**3**	**6**	**0**	**0**	**17**	**241**	**49**	**6**	**0**	**28**	**423**	**0**	**7**

	Northbound					Southbound					Eastbound					Westbound				
Time	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
4:00 PM - 4:15 PM	0	14	0	14	0	0	1	0	1	0	0	0	71	28	2	0	12	55	0	2
4:15 PM - 4:30 PM	0	15	0	3	0	0	0	0	1	0	0	1	75	17	1	0	4	43	0	0
4:30 PM - 4:45 PM	0	17	0	10	2	0	0	0	1	0	0	1	63	22	1	0	13	43	0	0
4:45 PM - 5:00 PM	0	30	0	8	0	0	0	0	0	0	0	0	47	28	1	0	8	51	0	0
5:00 PM - 5:15 PM	0	22	0	11	0	0	0	0	0	0	0	0	73	18	3	0	6	61	0	0
5:15 PM - 5:30 PM	0	24	0	7	0	0	0	0	0	0	0	0	76	15	0	0	6	49	0	0
5:30 PM - 5:45 PM	0	26	0	7	0	0	0	0	0	0	0	0	68	14	0	0	11	68	0	0
5:45 PM - 6:00 PM	0	16	0	9	0	0	0	0	0	0	0	0	51	13	2	0	15	44	0	1
TOTAL	**0**	**164**	**0**	**69**	**2**	**0**	**1**	**0**	**3**	**0**	**0**	**2**	**524**	**155**	**10**	**0**	**75**	**414**	**0**	**3**

	Northbound					Southbound					Eastbound					Westbound				
PEAK HOUR	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
7:00 AM - 8:00 AM	0	37	0	13	2	0	0	3	6	0	0	15	176	34	4	0	21	277	0	5
4:45 PM - 5:45 PM	0	102	0	33	0	0	0	0	0	0	0	0	264	75	4	0	31	229	0	0

	PHF	Trucks
AM	0.724	1.9%
PM	0.946	0.5%



Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

Turning Movement Report

Prepared For:
Ruettgers & Schuler Civil Engineers
1800 30th St, Ste 260
Bakersfield, CA 93301

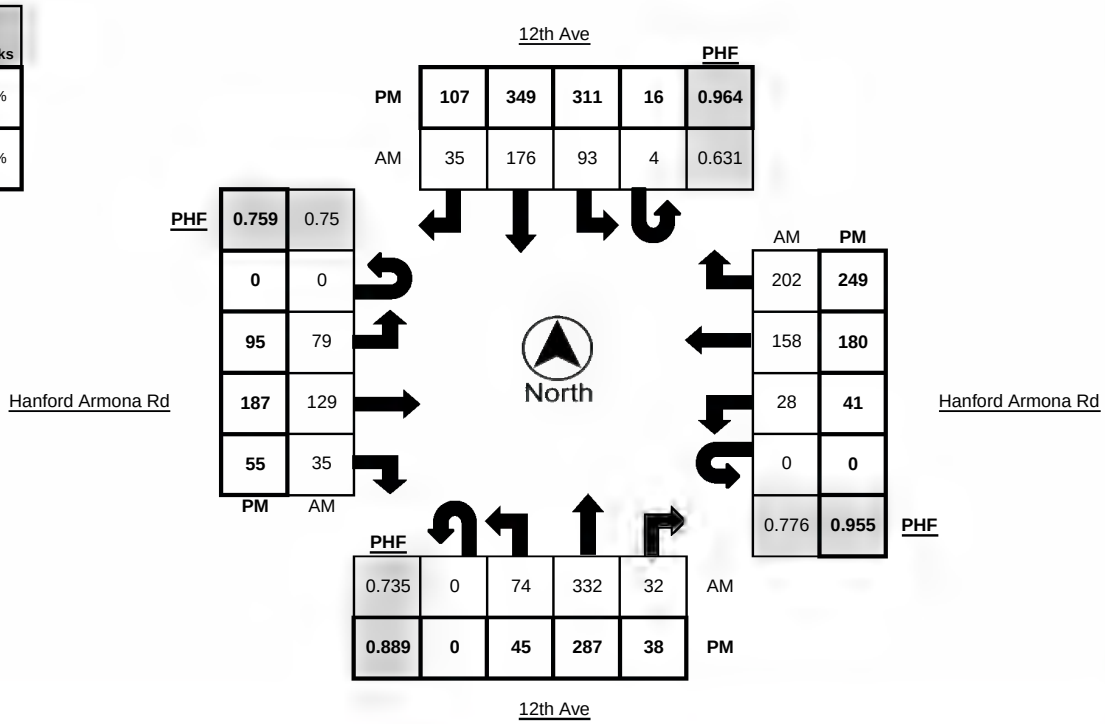
LOCATION 12th Ave @ Hanford Armona Rd
LATITUDE 36.3135
COUNTY Kings
LONGITUDE -119.6730
COLLECTION DATE Thursday, May 04, 2023
WEATHER Clear

	Northbound					Southbound					Eastbound					Westbound				
Time	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
6:00 AM - 6:15 AM	0	8	26	3	0	0	8	23	1	0	0	5	17	4	0	0	1	24	22	0
6:15 AM - 6:30 AM	0	10	29	1	0	0	4	10	3	2	0	9	18	3	0	0	2	16	19	1
6:30 AM - 6:45 AM	0	14	33	8	1	0	8	14	5	4	0	9	25	2	0	0	5	26	23	0
6:45 AM - 7:00 AM	0	6	38	2	2	0	14	10	5	2	0	17	40	6	2	0	3	21	29	1
7:00 AM - 7:15 AM	0	14	36	8	2	0	18	23	2	2	0	11	21	8	0	0	8	25	30	1
7:15 AM - 7:30 AM	0	21	68	4	0	0	18	43	7	4	0	11	25	7	2	0	6	30	47	2
7:30 AM - 7:45 AM	0	21	116	12	3	1	19	47	8	5	0	29	39	11	3	0	6	54	57	4
7:45 AM - 8:00 AM	0	18	112	8	1	3	38	63	18	2	0	28	44	9	0	0	8	49	68	0
TOTAL	**0**	**112**	**458**	**46**	**9**	**4**	**127**	**233**	**49**	**21**	**0**	**119**	**229**	**50**	**7**	**0**	**39**	**245**	**295**	**9**

	Northbound					Southbound					Eastbound					Westbound				
Time	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	0	11	64	13	2	9	59	66	26	2	0	22	51	13	2	0	9	46	63	1
4:15 PM - 4:30 PM	0	2	75	8	1	2	74	93	19	4	0	15	40	23	0	0	7	43	54	0
4:30 PM - 4:45 PM	0	8	102	9	2	4	78	70	26	1	0	19	51	9	0	0	1	30	57	0
4:45 PM - 5:00 PM	0	9	79	10	1	6	81	91	25	1	0	17	39	8	0	0	17	33	73	0
5:00 PM - 5:15 PM	0	12	64	9	3	1	72	88	33	0	0	29	42	11	2	0	7	44	64	1
5:15 PM - 5:30 PM	0	11	63	9	1	4	82	89	25	0	0	33	62	16	1	0	11	47	53	1
5:30 PM - 5:45 PM	0	13	81	10	1	5	76	81	24	1	0	16	44	20	0	0	6	56	59	0
5:45 PM - 6:00 PM	0	8	71	11	1	2	76	74	33	0	0	23	32	19	0	0	10	40	50	1
TOTAL	**0**	**74**	**599**	**79**	**12**	**33**	**598**	**652**	**211**	**9**	**0**	**174**	**361**	**119**	**5**	**0**	**68**	**339**	**473**	**4**

	Northbound					Southbound					Eastbound					Westbound				
PEAK HOUR	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 8:00 AM	0	74	332	32	6	4	93	176	35	13	0	79	129	35	5	0	28	158	202	7
4:45 PM - 5:45 PM	0	45	287	38	6	16	311	349	107	2	0	95	187	55	3	0	41	180	249	2

	PHF	Trucks
AM	0.739	2.3%
PM	0.970	0.7%



Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

Turning Movement Report

Prepared For:
Ruettgers & Schuler Civil Engineers
1800 30th St, Ste 260
Bakersfield, CA 93301

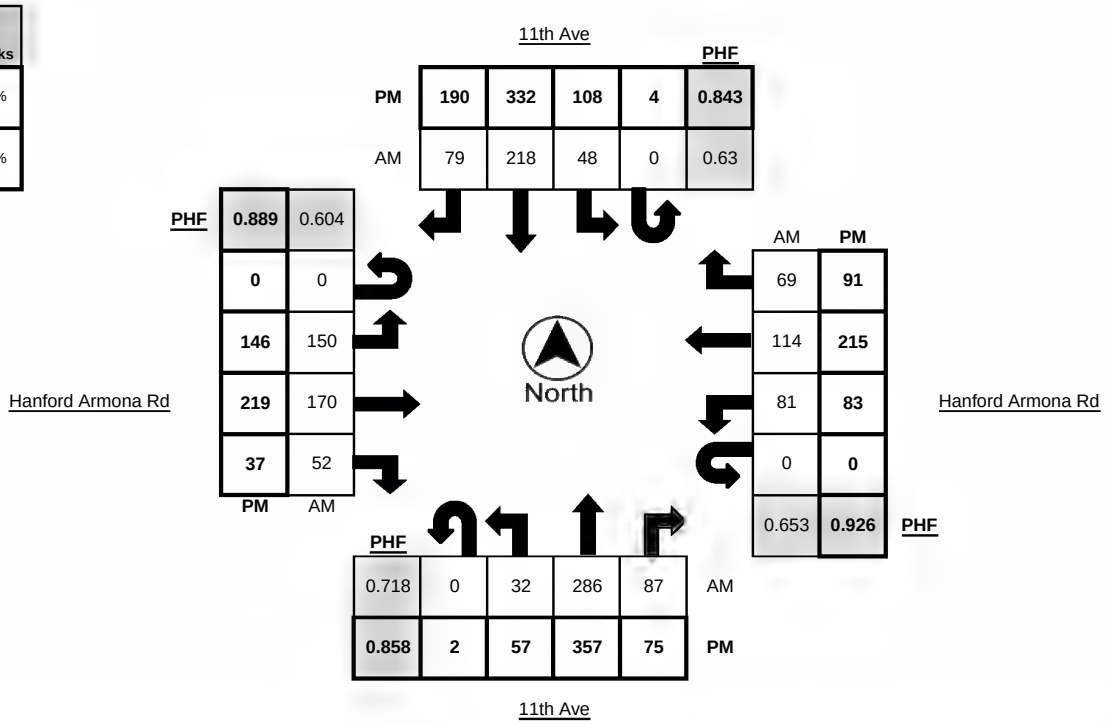
LOCATION 11th Ave @ Hanford Armona Rd
LATITUDE 36.3134
COUNTY Kings
LONGITUDE -119.6550
COLLECTION DATE Thursday, May 04, 2023
WEATHER Clear

	Northbound					Southbound					Eastbound					Westbound				
Time	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
6:00 AM - 6:15 AM	0	3	31	7	0	0	4	28	2	1	0	9	12	3	0	0	5	9	4	2
6:15 AM - 6:30 AM	0	6	28	9	1	0	2	27	6	0	0	5	20	2	0	0	5	13	4	2
6:30 AM - 6:45 AM	0	5	42	9	0	0	4	19	9	1	0	10	19	5	0	0	5	12	11	2
6:45 AM - 7:00 AM	0	1	40	9	4	0	4	35	5	2	0	11	22	4	3	0	1	11	9	0
7:00 AM - 7:15 AM	0	4	38	8	2	0	3	38	10	6	0	21	31	6	2	0	11	23	6	1
7:15 AM - 7:30 AM	0	6	53	21	7	0	11	43	14	3	0	22	23	10	2	0	20	20	16	3
7:30 AM - 7:45 AM	0	12	93	29	1	0	15	55	19	4	0	49	43	13	8	0	23	27	17	2
7:45 AM - 8:00 AM	0	10	102	29	1	0	19	82	36	3	0	58	73	23	2	0	27	44	30	1
TOTAL	**0**	**47**	**427**	**121**	**16**	**0**	**62**	**327**	**101**	**20**	**0**	**185**	**243**	**66**	**17**	**0**	**97**	**159**	**97**	**13**

	Northbound					Southbound					Eastbound					Westbound				
Time	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	1	16	81	13	2	0	25	77	37	2	0	33	39	14	3	0	20	48	22	2
4:15 PM - 4:30 PM	0	15	65	13	2	1	20	91	45	1	0	40	41	12	2	0	23	49	11	4
4:30 PM - 4:45 PM	1	21	83	22	0	1	29	60	43	4	0	27	53	9	1	0	25	54	21	0
4:45 PM - 5:00 PM	0	12	94	14	2	1	30	81	47	1	0	35	46	8	2	0	21	51	23	0
5:00 PM - 5:15 PM	0	13	109	21	0	2	27	107	52	1	0	46	56	9	1	0	19	60	26	0
5:15 PM - 5:30 PM	1	11	71	18	2	0	22	84	48	0	0	38	64	11	1	0	18	50	21	2
5:30 PM - 5:45 PM	1	16	69	17	2	1	21	69	35	3	0	39	51	11	2	0	14	49	28	0
5:45 PM - 6:00 PM	0	9	76	18	1	2	17	61	34	0	0	18	47	4	1	0	15	50	23	1
TOTAL	**4**	**113**	**648**	**136**	**11**	**8**	**191**	**630**	**341**	**12**	**0**	**276**	**397**	**78**	**13**	**0**	**155**	**411**	**175**	**9**

	Northbound					Southbound					Eastbound					Westbound				
PEAK HOUR	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 8:00 AM	0	32	286	87	11	0	48	218	79	16	0	150	170	52	14	0	81	114	69	7
4:30 PM - 5:30 PM	2	57	357	75	4	4	108	332	190	6	0	146	219	37	5	0	83	215	91	2

	PHF	Trucks
AM	0.650	3.5%
PM	0.876	0.9%



Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

Turning Movement Report

Prepared For:
Ruettgers & Schuler Civil Engineers
1800 30th St, Ste 260
Bakersfield, CA 93301

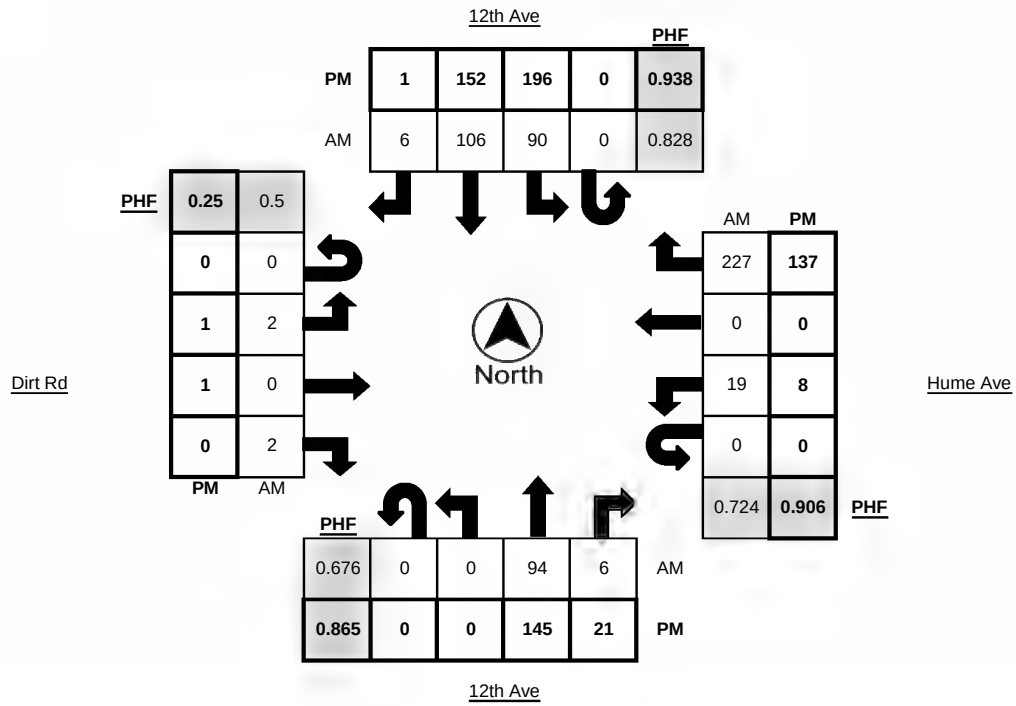
LOCATION 12th Ave @ Hume Ave
LATITUDE 36.3057
COUNTY Kings
LONGITUDE -119.6729
COLLECTION DATE Thursday, May 04, 2023
WEATHER Clear

	Northbound					Southbound					Eastbound					Westbound				
Time	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
6:00 AM - 6:15 AM	0	0	9	2	0	0	10	16	0	0	0	0	0	0	0	0	2	0	15	0
6:15 AM - 6:30 AM	0	0	8	0	0	0	8	12	0	1	0	1	0	0	0	0	5	0	17	0
6:30 AM - 6:45 AM	0	0	11	1	1	0	10	23	2	3	0	0	0	0	0	0	1	0	27	1
6:45 AM - 7:00 AM	0	1	14	0	0	0	15	25	1	1	0	0	0	0	0	0	2	0	12	0
7:00 AM - 7:15 AM	0	0	13	0	0	0	9	22	1	2	0	0	0	0	0	0	5	0	29	2
7:15 AM - 7:30 AM	0	0	18	0	0	0	26	35	0	1	0	2	0	0	0	0	3	0	48	1
7:30 AM - 7:45 AM	0	0	33	4	1	0	28	25	3	6	0	0	0	1	0	0	5	0	80	2
7:45 AM - 8:00 AM	0	0	30	2	0	0	27	24	2	1	0	0	0	1	0	0	6	0	70	5
TOTAL	**0**	**1**	**136**	**9**	**2**	**0**	**133**	**182**	**9**	**15**	**0**	**3**	**0**	**2**	**0**	**0**	**29**	**0**	**298**	**11**

	Northbound					Southbound					Eastbound					Westbound				
Time	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	0	0	36	4	0	0	41	28	0	2	0	0	0	0	0	0	2	0	31	2
4:15 PM - 4:30 PM	0	0	37	1	1	0	49	40	1	2	0	0	0	0	0	0	3	0	25	0
4:30 PM - 4:45 PM	0	0	42	4	4	0	37	32	0	0	0	1	0	0	1	0	4	0	36	3
4:45 PM - 5:00 PM	0	0	43	4	0	0	56	36	1	0	0	1	1	0	0	0	1	0	29	0
5:00 PM - 5:15 PM	0	0	36	4	0	0	48	40	0	1	0	0	0	0	0	0	1	0	37	1
5:15 PM - 5:30 PM	0	0	25	6	0	0	39	47	0	0	0	0	0	0	0	0	3	0	37	0
5:30 PM - 5:45 PM	0	0	41	7	0	0	53	29	0	1	0	0	0	0	0	0	3	0	34	1
5:45 PM - 6:00 PM	0	0	32	4	1	0	39	30	0	0	0	0	0	0	0	0	0	0	22	0
TOTAL	**0**	**0**	**292**	**34**	**6**	**0**	**362**	**282**	**2**	**6**	**0**	**2**	**1**	**0**	**1**	**0**	**17**	**0**	**251**	**7**

	Northbound					Southbound					Eastbound					Westbound				
PEAK HOUR	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 8:00 AM	0	0	94	6	1	0	90	106	6	10	0	2	0	2	0	0	19	0	227	10
4:45 PM - 5:45 PM	0	0	145	21	0	0	196	152	1	2	0	1	1	0	0	0	8	0	137	2

	PHF	Trucks
AM	0.771	3.8%
PM	0.962	0.6%



Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

Turning Movement Report

Prepared For:
Ruettgers & Schuler Civil Engineers
1800 30th St, Ste 260
Bakersfield, CA 93301

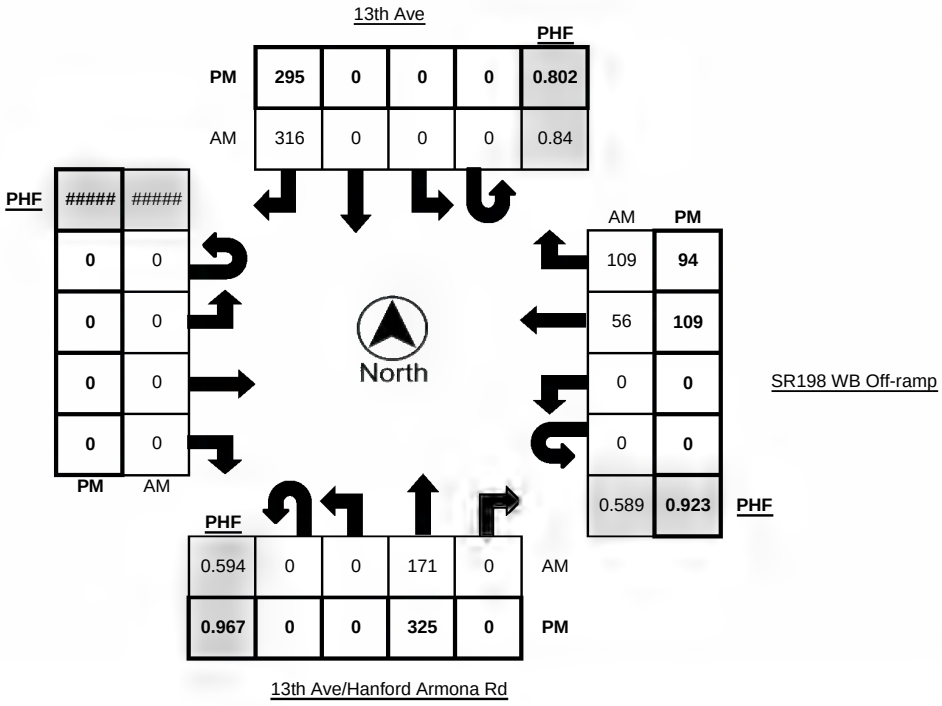
LOCATION 13th Ave @ SR198 WB Offramp
LATITUDE 36.3151
COUNTY Kings
LONGITUDE -119.6910
COLLECTION DATE Tuesday, May 09, 2023
WEATHER Clear

	Northbound					Southbound					Eastbound					Westbound				
Time	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
6:00 AM - 6:15 AM	0	0	10	0	1	0	0	0	34	0	0	0	0	0	0	0	0	5	12	0
6:15 AM - 6:30 AM	0	0	18	0	1	0	0	0	33	0	0	0	0	0	0	0	0	1	4	0
6:30 AM - 6:45 AM	0	0	21	0	0	0	0	0	40	0	0	0	0	0	0	0	0	4	9	1
6:45 AM - 7:00 AM	0	0	16	0	1	0	0	0	49	0	0	0	0	0	0	0	0	9	13	0
7:00 AM - 7:15 AM	0	0	24	0	0	0	0	0	79	1	0	0	0	0	0	0	0	11	9	0
7:15 AM - 7:30 AM	0	0	24	0	2	0	0	0	61	0	0	0	0	0	0	0	0	11	22	0
7:30 AM - 7:45 AM	0	0	51	0	3	0	0	0	94	0	0	0	0	0	0	0	0	12	30	0
7:45 AM - 8:00 AM	0	0	72	0	1	0	0	0	82	2	0	0	0	0	0	0	0	22	48	0
TOTAL	**0**	**0**	**236**	**0**	**9**	**0**	**0**	**0**	**472**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**75**	**147**	**1**

	Northbound					Southbound					Eastbound					Westbound				
Time	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	0	0	83	0	2	0	0	0	92	1	0	0	0	0	0	0	0	27	23	0
4:15 PM - 4:30 PM	0	0	84	0	0	0	0	0	50	0	0	0	0	0	0	0	0	31	20	1
4:30 PM - 4:45 PM	0	0	77	0	0	0	0	0	78	0	0	0	0	0	0	0	0	28	27	3
4:45 PM - 5:00 PM	0	0	81	0	0	0	0	0	75	0	0	0	0	0	0	0	0	23	24	0
5:00 PM - 5:15 PM	0	0	86	0	0	0	0	0	57	1	0	0	0	0	0	0	0	23	24	2
5:15 PM - 5:30 PM	0	0	78	0	0	0	0	0	67	0	0	0	0	0	0	0	0	29	30	1
5:30 PM - 5:45 PM	0	0	69	0	0	0	0	0	68	1	0	0	0	0	0	0	0	21	30	0
5:45 PM - 6:00 PM	0	0	73	0	0	0	0	0	58	0	0	0	0	0	0	0	0	29	29	1
TOTAL	**0**	**0**	**631**	**0**	**2**	**0**	**0**	**0**	**545**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**211**	**207**	**8**

	Northbound					Southbound					Eastbound					Westbound				
PEAK HOUR	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 8:00 AM	0	0	171	0	6	0	0	0	316	3	0	0	0	0	0	0	0	56	109	0
4:00 PM - 5:00 PM	0	0	325	0	2	0	0	0	295	1	0	0	0	0	0	0	0	109	94	4

	PHF	Trucks
AM	0.728	1.4%
PM	0.914	0.9%



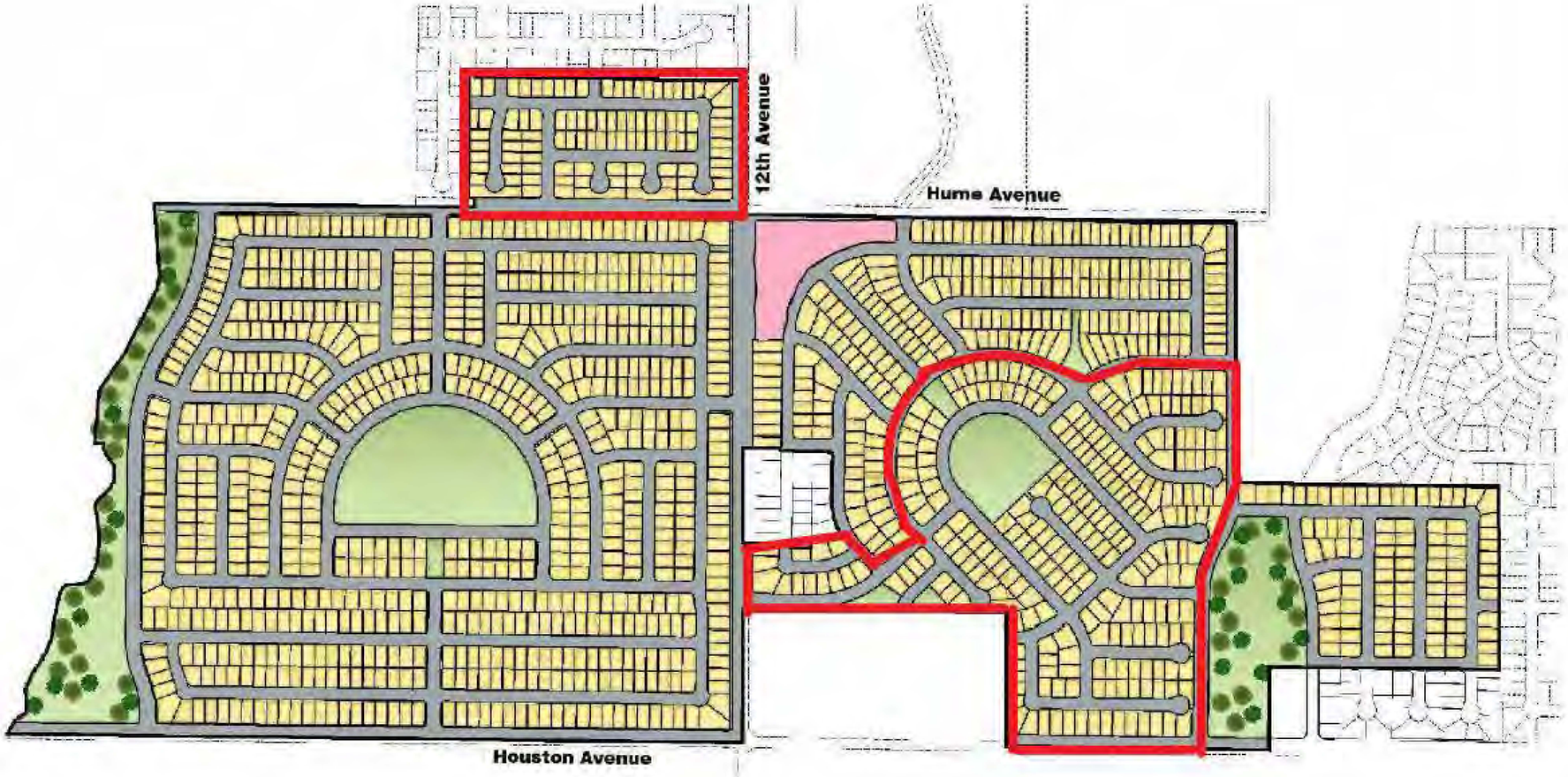
TRIP GENERATION
LIVE OAK DEVELOPMENT
TRACTS 1 AND 2

ITE *Trip Generation Manual*, 11th Edition

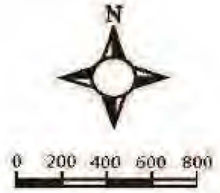
Land Use			Daily Trips		AM Peak Hour Trips			PM Peak Hour Trips		
ITE Code	Development Type	Variable	ADT Rate	ADT	Rate	IN Split Trips	OUT Split Trips	Rate	IN Split Trips	OUT Split Trips
210	Single-Family Detached Housing	313 Dwelling Units	eq	2,883	eq	26% 55	74% 156	eq	63% 183	37% 107

Figure 3-1
Land Use Illustrative

Legend



Land Use		Acres	Units
	Low Density Residential (LD)	336.1	1,542
	Parks (P)	17.9	0
	Commercial (C)	4.4	0
	Open Space/ Conservative (OS)	31.6	0
	Total	**390.0**	**1,542**



TRIP GENERATION
LIVE OAK DEVELOPMENT
FULL BUILDOUT

ITE *Trip Generation Manual*, 11th Edition

Land Use			Daily Trips		AM Peak Hour Trips			PM Peak Hour Trips		
ITE Code	Development Type	Variable	ADT Rate	ADT	Rate	IN Split Trips	OUT Split Trips	Rate	IN Split Trips	OUT Split Trips
210	Single-Family Detached Housing	1,542 Dwelling Units	eq	12,501	eq	26% 233	74% 665	eq	63% 819	37% 481

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	155	0	453	30	988	0	0	1175	563
Future Volume (veh/h)	0	0	0	155	0	453	30	988	0	0	1175	563
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1723	0	1723	1723	1870	0	0	1870	1723
Adj Flow Rate, veh/h				168	0	492	33	1074	0	0	1277	612
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				714	0	576	41	2445	0	0	3159	903
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.22	0.00	0.22	0.01	0.23	0.00	0.00	0.62	0.62
Unsig. Movement Delay												
Ln Grp Delay, s/veh				28.8	0.0	42.4	71.0	20.4	0.0	0.0	9.1	15.3
Ln Grp LOS				C		D	E	C			A	B
Approach Vol, veh/h					660			1107			1889	
Approach Delay, s/veh					38.9			21.9			11.1	
Approach LOS					D			C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	9.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		65.9	24.1		6.2	59.7		
Change Period (Y+Rc), s		5.5	4.0		4.0	5.5		
Max Green (Gmax), s		56.5	24.0		6.0	46.5		
Max Allow Headway (MAH), s		4.0	4.3		4.1	4.1		
Max Q Clear (g_c+I1), s		25.4	18.5		3.8	26.8		
Green Ext Time (g_e), s		5.3	1.5		0.0	9.3		
Prob of Phs Call (p_c)		1.00	1.00		0.56	1.00		
Prob of Max Out (p_x)		0.00	0.69		1.00	0.32		

Left-Turn Movement Data						
Assigned Mvmt			3		5	1
Mvmt Sat Flow, veh/h			3183		1641	0

Through Movement Data						
Assigned Mvmt		2	8			6
Mvmt Sat Flow, veh/h		3647	0			5274

Right-Turn Movement Data						
Assigned Mvmt		12	18			16
Mvmt Sat Flow, veh/h		0	2569			1460

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0

Lane Assignment			L		L (Prot)			
Lanes in Grp	0	0	2	0	1	0	0	0
Grp Vol (v), veh/h	0	0	168	0	33	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1591	0	1641	0	0	0
Q Serve Time (g_s), s	0.0	0.0	3.9	0.0	1.8	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	3.9	0.0	1.8	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1591	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	55.7	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	714	0	41	0	0	0
V/C Ratio (X)	0.00	0.00	0.24	0.00	0.81	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	852	0	109	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.88	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	28.6	0.0	44.4	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.2	0.0	26.6	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	28.8	0.0	71.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	1.4	0.0	0.7	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	1.4	0.0	1.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.13	0.00	0.06	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	1074	0	0	0	1277	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1702	0	0
Q Serve Time (g_s), s	0.0	23.4	0.0	0.0	0.0	11.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	23.4	0.0	0.0	0.0	11.4	0.0	0.0
Lane Grp Cap (c), veh/h	0	2445	0	0	0	3159	0	0
V/C Ratio (X)	0.00	0.44	0.00	0.00	0.00	0.40	0.00	0.00
Avail Cap (c_a), veh/h	0	2445	0	0	0	3159	0	0
Upstream Filter (I)	0.00	0.88	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	19.9	0.0	0.0	0.0	8.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.4	0.0	0.0	0.0	9.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	10.7	0.0	0.0	0.0	3.1	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	10.9	0.0	0.0	0.0	3.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.50	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	2	0	0	1	0	0
Grp Vol (v), veh/h	0	0	492	0	0	612	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1285	0	0	1460	0	0
Q Serve Time (g_s), s	0.0	0.0	16.5	0.0	0.0	24.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	16.5	0.0	0.0	24.8	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	576	0	0	903	0	0
V/C Ratio (X)	0.00	0.00	0.85	0.00	0.00	0.68	0.00	0.00
Avail Cap (c_a), veh/h	0	0	688	0	0	903	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	33.5	0.0	0.0	11.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	8.9	0.0	0.0	4.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	42.4	0.0	0.0	15.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	4.7	0.0	0.0	5.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.7	0.0	0.0	1.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	5.4	0.0	0.0	6.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.33	0.00	0.00	1.40	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	19.4
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	437	0	34	0	0	0	0	581	115	0	817	0
Future Volume (veh/h)	437	0	34	0	0	0	0	581	115	0	817	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	0	1723				0	1870	1723	0	1870	1723
Adj Flow Rate, veh/h	475	0	37				0	632	125	0	888	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Opposing Right Turn Influence	Yes						No			No		
Cap, veh/h	598	0	274				0	2143	423	0	2574	1057
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	1.00	2.00	2.00
Prop Arrive On Green	0.19	0.00	0.19				0.00	1.00	1.00	0.00	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	37.3	0.0	30.7				0.0	0.5	0.5	0.0	0.3	0.0
Ln Grp LOS	D		C					A	A		A	
Approach Vol, veh/h		512						757			888	
Approach Delay, s/veh		36.8						0.5			0.3	
Approach LOS		D						A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Case No		8.0		9.0		7.0		
Phs Duration (G+Y+Rc), s		69.2		20.8		69.2		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green (Gmax), s		48.5		32.0		48.5		
Max Allow Headway (MAH), s		4.0		4.1		4.0		
Max Q Clear (g_c+I1), s		2.0		14.8		2.0		
Green Ext Time (g_e), s		2.9		2.0		4.2		
Prob of Phs Call (p_c)		1.00		1.00		1.00		
Prob of Max Out (p_x)		0.00		0.00		0.00		

Left-Turn Movement Data						
Assigned Mvmt		5		7		1
Mvmt Sat Flow, veh/h		0		3183		0

Through Movement Data						
Assigned Mvmt		2		4		6
Mvmt Sat Flow, veh/h		3052		0		3647

Right-Turn Movement Data						
Assigned Mvmt		12		14		16
Mvmt Sat Flow, veh/h		584		1460		1460

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	0

Lane Assignment				L				
Lanes in Grp	0	0	0	2	0	0	0	0
Grp Vol (v), veh/h	0	0	0	475	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1591	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	12.8	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	12.8	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1591	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	65.2	0.0	0.0	0.0	65.2	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	598	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.79	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	1135	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	34.9	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	37.3	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	4.5	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	4.7	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	379	0	0	0	888	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1287	0	0	0	2574	0	0
V/C Ratio (X)	0.00	0.29	0.00	0.00	0.00	0.34	0.00	0.00
Avail Cap (c_a), veh/h	0	1287	0	0	0	2574	0	0
Upstream Filter (I)	0.00	0.93	0.00	0.00	0.00	0.93	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.5	0.0	0.0	0.0	0.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	378	0	37	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1765	0	1460	0	1460	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.33	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1279	0	274	0	1057	0	0
V/C Ratio (X)	0.00	0.30	0.00	0.13	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1279	0	521	0	1057	0	0
Upstream Filter (I)	0.00	0.93	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	30.5	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.5	0.0	30.7	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.6	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	9.1
HCM 7th LOS	A

Intersection	
Intersection Delay, s/veh	3.4
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	530	386	0	264
Demand Flow Rate, veh/h	541	394	0	269
Vehicles Circulating, veh/h	420	88	247	256
Vehicles Exiting, veh/h	100	159	377	88
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	2.4	3.0	0.0	5.7
Approach LOS	A	A	-	A

Lane	Left	Bypass	Left	Bypass	Left	Left	Bypass
Designated Moves	LT	R	LT	R	LTR	LT	R
Assumed Moves	LT		LT		LTR	LT	
RT Channelized		Free		Free			Free
Lane Util	1.000		1.000		1.000	1.000	
Follow-Up Headway, s	2.609		2.609		2.609	2.609	
Critical Headway, s	4.976		4.976		4.976	4.976	
A (Intercept)	1380		1380		1380	1380	
B (Slope)	1.02e-3		1.02e-3		1.02e-3	1.02e-3	
Entry Flow, veh/h	204	337	256	138	0	264	5
Cap Entry Lane, veh/h	899	1938	1261	1938	1073	1063	1938
Entry HV Adj Factor	0.979	0.980	0.981	0.980	1.000	0.980	0.980
Flow Entry, veh/h	200	330	251	135	0	259	5
Cap Entry, veh/h	880	1900	1237	1900	1073	1041	1900
V/C Ratio	0.227	0.174	0.203	0.071	0.000	0.248	0.003
Control Delay, s/veh	6.4	0.0	4.7	0.0	3.4	5.8	0.0
LOS	A	A	A	A	A	A	A
95th %tile Queue, veh	1	1	1	0	0	1	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	224	3	145	0	0	0	0	262	33	145	196	0
Future Volume (veh/h)	224	3	145	0	0	0	0	262	33	145	196	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723				0	1870	1723	1723	1870	0
Adj Flow Rate, veh/h	243	3	158				0	285	36	158	213	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	295	0	263				0	1190	150	462	601	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.18	0.18	0.18				0.00	0.73	0.71	0.73	0.73	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	41.3	0.0	36.1				0.0	0.0	4.4	5.6	0.0	0.0
Ln Grp LOS	D		D						A	A		
Approach Vol, veh/h		401						321			371	
Approach Delay, s/veh		39.2						4.4			5.6	
Approach LOS		D						A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Case No		8.0		9.0		8.0		
Phs Duration (G+Y+Rc), s		69.8		20.2		69.8		
Change Period (Y+Rc), s		5.5		4.1		5.5		
Max Green (Gmax), s		51.5		28.9		51.5		
Max Allow Headway (MAH), s		4.0		4.2		4.4		
Max Q Clear (g_c+I1), s		7.2		14.8		12.8		
Green Ext Time (g_e), s		1.2		1.3		1.6		
Prob of Phs Call (p_c)		1.00		1.00		1.00		
Prob of Max Out (p_x)		0.00		0.01		0.00		

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		
Mvmt Sat Flow, veh/h		0		1641		553		

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		1628		0		823		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		206		1460		0		

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	0

Lane Assignment				L		L+T		
Lanes in Grp	0	0	0	1	0	1	0	0
Grp Vol (v), veh/h	0	0	0	243	0	371	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1641	0	1376	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	12.8	0.0	5.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	12.8	0.0	10.8	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1641	0	1075	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	65.8	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	60.6	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	5.6	0.0	0.0
Time to First Blk (g_f), s	0.0	65.8	0.0	0.0	0.0	2.7	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	0.00	0.43	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	295	0	1063	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.82	0.00	0.35	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	529	0	1063	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	35.5	0.0	4.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	5.7	0.0	0.9	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	41.3	0.0	5.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	4.7	0.0	1.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.5	0.0	0.3	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	5.2	0.0	1.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.37	0.00	0.31	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		T+R		R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	321	0	158	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1833	0	1460	0	0	0	0
Q Serve Time (g_s), s	0.0	5.2	0.0	9.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.2	0.0	9.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.11	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1341	0	263	0	0	0	0
V/C Ratio (X)	0.00	0.24	0.00	0.60	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1341	0	470	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	4.0	0.0	33.9	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	2.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.4	0.0	36.1	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.1	0.0	2.9	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.2	0.0	3.1	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.11	0.00	0.22	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	17.6
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	259	83	33	204	0	93	0	36	0	0	0
Future Vol, veh/h	0	259	83	33	204	0	93	0	36	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	282	90	36	222	0	101	0	39	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	222	0	0	372	0	0	620	620	327	575	665	222
Stage 1	-	-	-	-	-	-	327	327	-	293	293	-
Stage 2	-	-	-	-	-	-	293	293	-	282	372	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1347	-	-	1187	-	-	400	404	715	429	381	818
Stage 1	-	-	-	-	-	-	686	648	-	715	670	-
Stage 2	-	-	-	-	-	-	715	670	-	725	619	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1347	-	-	1187	-	-	386	390	715	392	367	818
Mov Cap-2 Maneuver	-	-	-	-	-	-	386	390	-	392	367	-
Stage 1	-	-	-	-	-	-	686	648	-	690	647	-
Stage 2	-	-	-	-	-	-	690	647	-	686	619	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	1.13	16.83	0
HCM LOS			C	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	443	1347	-	-	251	-	-	-
HCM Lane V/C Ratio	0.316	-	-	-	0.03	-	-	-
HCM Control Delay (s/veh)	16.8	0	-	-	8.1	0	-	0
HCM Lane LOS	C	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	1.3	0	-	-	0.1	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	194	44	36	154	247	40	308	37	328	338	109
Future Volume (veh/h)	98	194	44	36	154	247	40	308	37	328	338	109
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	107	211	48	39	167	268	43	335	40	357	367	118
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	122	287	224	235	416	325	202	1823	216	453	1068	339
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.67	1.67	1.67
Prop Arrive On Green	0.07	0.15	0.15	0.14	0.22	0.22	0.25	1.00	1.00	0.67	0.67	0.64
Unsig. Movement Delay												
Ln Grp Delay, s/veh	87.2	40.0	33.8	34.1	30.5	44.1	31.0	0.4	0.4	26.4	10.9	11.5
Ln Grp LOS	F	D	C	C	C	D	C	A	A	C	B	B
Approach Vol, veh/h		366			474			418			842	
Approach Delay, s/veh		53.0			38.5			3.5			17.6	
Approach LOS		D			D			A			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	4	3	6	5	7	8
Case No		4.0	3.0	2.0	6.4	2.0	2.0	3.0
Phs Duration (G+Y+Rc), s		55.3	17.8	16.9	40.2	15.1	10.7	24.0
Change Period (Y+Rc), s		5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green (Gmax), s		45.4	22.9	5.2	35.9	4.0	5.2	22.9
Max Allow Headway (MAH), s		4.0	4.1	4.1	4.6	4.1	4.1	4.2
Max Q Clear (g_c+I1), s		2.0	11.7	3.9	33.8	3.9	7.8	17.7
Green Ext Time (g_e), s		1.3	0.6	0.0	0.9	0.0	0.0	0.8
Prob of Phs Call (p_c)		1.00	1.00	0.62	1.00	0.66	0.93	1.00
Prob of Max Out (p_x)		0.00	0.01	1.00	1.00	1.00	1.00	0.67

Left-Turn Movement Data								
Assigned Mvmt				3	1	5	7	
Mvmt Sat Flow, veh/h				1641	928	1641	1641	

Through Movement Data								
Assigned Mvmt		2	4		6			8
Mvmt Sat Flow, veh/h		3200	1870		2654			1870

Right-Turn Movement Data								
Assigned Mvmt		12	14		16			18
Mvmt Sat Flow, veh/h		379	1460		842			1460

Left Lane Group Data								
Assigned Mvmt	0	0	0	3	1	5	7	0

Lane Assignment				L (Prot)	L	L (Prot)	L (Prot)	
Lanes in Grp	0	0	0	1	1	1	1	0
Grp Vol (v), veh/h	0	0	0	39	357	43	107	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1641	928	1641	1641	0
Q Serve Time (g_s), s	0.0	0.0	0.0	1.9	31.8	1.9	5.8	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.9	31.8	1.9	5.8	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	928	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	36.2	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	36.2	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	31.8	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	235	453	202	122	0
V/C Ratio (X)	0.00	0.00	0.00	0.17	0.79	0.21	0.88	0.00
Avail Cap (c_a), veh/h	0	0	0	235	466	202	122	0
Upstream Filter (I)	0.00	0.00	0.00	0.95	0.95	0.95	1.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	33.8	14.0	30.5	41.2	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	12.4	0.5	46.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	34.1	26.4	31.0	87.2	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.7	2.7	0.7	2.2	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	1.6	0.0	1.6	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.7	4.3	0.7	3.7	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.36	0.54	0.09	0.63	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	4	0	6	0	0	8
Lane Assignment		T	T		T			T
Lanes in Grp	0	1	1	0	1	0	0	1
Grp Vol (v), veh/h	0	185	211	0	244	0	0	167
Grp Sat Flow (s), veh/h/ln	0	1777	1870	0	1777	0	0	1870
Q Serve Time (g_s), s	0.0	0.0	9.7	0.0	5.3	0.0	0.0	6.9
Cycle Q Clear Time (g_c), s	0.0	0.0	9.7	0.0	5.3	0.0	0.0	6.9
Lane Grp Cap (c), veh/h	0	1012	287	0	715	0	0	416
V/C Ratio (X)	0.00	0.18	0.73	0.00	0.34	0.00	0.00	0.40
Avail Cap (c_a), veh/h	0	1012	507	0	738	0	0	507
Upstream Filter (I)	0.00	0.95	1.00	0.00	0.95	0.00	0.00	0.95
Uniform Delay (d1), s/veh	0.0	0.0	36.3	0.0	9.7	0.0	0.0	29.9
Incr Delay (d2), s/veh	0.0	0.4	3.6	0.0	1.2	0.0	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.4	40.0	0.0	10.9	0.0	0.0	30.5
1st-Term Q (Q1), veh/ln	0.0	0.0	4.1	0.0	1.6	0.0	0.0	2.8

2nd-Term Q (Q2), veh/ln	0.0	0.1	0.3	0.0	0.2	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.1	4.4	0.0	1.8	0.0	0.0	2.9
%ile Storage Ratio (RQ%)	0.00	0.00	0.02	0.00	0.03	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	14	0	16	0	0	18
Lane Assignment		T+R	R		T+R			R
Lanes in Grp	0	1	1	0	1	0	0	1
Grp Vol (v), veh/h	0	190	48	0	241	0	0	268
Grp Sat Flow (s), veh/h/ln	0	1802	1460	0	1719	0	0	1460
Q Serve Time (g_s), s	0.0	0.0	2.6	0.0	5.6	0.0	0.0	15.7
Cycle Q Clear Time (g_c), s	0.0	0.0	2.6	0.0	5.6	0.0	0.0	15.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.21	1.00	0.00	0.49	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	1027	224	0	691	0	0	325
V/C Ratio (X)	0.00	0.19	0.21	0.00	0.35	0.00	0.00	0.82
Avail Cap (c_a), veh/h	0	1027	396	0	714	0	0	396
Upstream Filter (I)	0.00	0.95	1.00	0.00	0.95	0.00	0.00	0.95
Uniform Delay (d1), s/veh	0.0	0.0	33.3	0.0	10.1	0.0	0.0	33.3
Incr Delay (d2), s/veh	0.0	0.4	0.5	0.0	1.3	0.0	0.0	10.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.4	33.8	0.0	11.5	0.0	0.0	44.1
1st-Term Q (Q1), veh/ln	0.0	0.0	0.9	0.0	1.6	0.0	0.0	5.1
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.3	0.0	0.0	1.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.9	0.0	1.9	0.0	0.0	6.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.22	0.00	0.03	0.00	0.00	3.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	25.7
HCM 7th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	219	37	83	215	91	59	357	75	112	332	190
Future Volume (veh/h)	146	219	37	83	215	91	59	357	75	112	332	190
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	159	238	40	90	234	99	64	388	82	122	361	207
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	508	1026	801	570	684	289	243	678	529	247	678	529
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.55	0.55	0.55	0.55	0.55	0.53	0.36	0.36	0.36	0.36	0.36	0.36
Unsig. Movement Delay												
Ln Grp Delay, s/veh	17.8	10.9	9.5	13.8	0.0	12.4	31.2	23.8	19.5	35.5	23.3	21.8
Ln Grp LOS	B	B	A	B		B	C	C	B	D	C	C
Approach Vol, veh/h		437			423			534			690	
Approach Delay, s/veh		13.3			12.7			24.0			25.0	
Approach LOS		B			B			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		5.0		5.0		6.0
Phs Duration (G+Y+Rc), s		36.6		53.4		36.6		53.4
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5
Max Green (Gmax), s		37.5		41.5		37.5		41.5
Max Allow Headway (MAH), s		4.3		4.5		4.4		4.3
Max Q Clear (g_c+I1), s		22.1		21.4		29.1		12.5
Green Ext Time (g_e), s		1.9		1.8		2.0		1.7
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.02		0.00		0.35		0.00

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		777		964		850		1014

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1248

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1460		1460		1460		528

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3

Lane Assignment		L		L		L		L
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	64	0	159	0	122	0	90
Grp Sat Flow (s), veh/h/ln	0	777	0	964	0	850	0	1014
Q Serve Time (g_s), s	0.0	6.4	0.0	9.9	0.0	12.1	0.0	4.5
Cycle Q Clear Time (g_c), s	0.0	20.1	0.0	19.4	0.0	27.1	0.0	10.5
Perm LT Sat Flow (s_l), veh/h/ln	0	777	0	964	0	850	0	1014
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	32.6	0.0	49.4	0.0	32.6	0.0	49.4
Perm LT Serve Time (g_u), s	0.0	18.9	0.0	39.9	0.0	17.6	0.0	43.4
Perm LT Q Serve Time (g_ps), s	0.0	6.4	0.0	9.9	0.0	12.1	0.0	4.5
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	243	0	508	0	247	0	570
V/C Ratio (X)	0.00	0.26	0.00	0.31	0.00	0.49	0.00	0.16
Avail Cap (c_a), veh/h	0	298	0	508	0	307	0	570
Upstream Filter (I)	0.00	1.00	0.00	0.69	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	30.6	0.0	16.7	0.0	34.0	0.0	13.2
Incr Delay (d2), s/veh	0.0	0.6	0.0	1.1	0.0	1.5	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	31.2	0.0	17.8	0.0	35.5	0.0	13.8
1st-Term Q (Q1), veh/ln	0.0	1.1	0.0	1.9	0.0	2.3	0.0	0.9
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.1	0.0	2.0	0.0	2.4	0.0	1.0
%ile Storage Ratio (RQ%)	0.00	0.26	0.00	0.52	0.00	0.87	0.00	0.25
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	388	0	238	0	361	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	0
Q Serve Time (g_s), s	0.0	15.0	0.0	5.9	0.0	13.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	15.0	0.0	5.9	0.0	13.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	678	0	1026	0	678	0	0
V/C Ratio (X)	0.00	0.57	0.00	0.23	0.00	0.53	0.00	0.00
Avail Cap (c_a), veh/h	0	810	0	1026	0	810	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.69	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	23.1	0.0	10.5	0.0	22.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.4	0.0	0.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	23.8	0.0	10.9	0.0	23.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.8	0.0	2.0	0.0	5.3	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	6.0	0.0	2.1	0.0	5.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.09	0.00	0.01	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	82	0	40	0	207	0	333
Grp Sat Flow (s), veh/h/ln	0	1460	0	1460	0	1460	0	1775
Q Serve Time (g_s), s	0.0	3.4	0.0	1.1	0.0	9.5	0.0	9.5
Cycle Q Clear Time (g_c), s	0.0	3.4	0.0	1.1	0.0	9.5	0.0	9.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.30
Lane Grp Cap (c), veh/h	0	529	0	801	0	529	0	974
V/C Ratio (X)	0.00	0.15	0.00	0.05	0.00	0.39	0.00	0.34
Avail Cap (c_a), veh/h	0	633	0	801	0	633	0	974
Upstream Filter (I)	0.00	1.00	0.00	0.69	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	19.4	0.0	9.4	0.0	21.3	0.0	11.4
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.1	0.0	0.5	0.0	1.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.5	0.0	9.5	0.0	21.8	0.0	12.4
1st-Term Q (Q1), veh/ln	0.0	1.0	0.0	0.3	0.0	2.9	0.0	3.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.1	0.0	0.3	0.0	2.9	0.0	3.3
%ile Storage Ratio (RQ%)	0.00	0.27	0.00	0.16	0.00	0.37	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	19.8
HCM 7th LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	9	139	146	18	180	155
Future Volume (veh/h)	9	139	146	18	180	155
Number	3	18	2	12	1	6
Initial Q, veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Lanes Open During Work Zone						
Adj Sat Flow, veh/h/ln	1723	1723	1870	1723	1723	1870
Adj Flow Rate, veh/h	10	151	159	20	196	168
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Opposing Right Turn Influence	Yes				Yes	
Cap, veh/h	207	184	1278	161	925	1468
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.67	1.67
Prop Arrive On Green	0.13	0.13	0.78	0.78	1.00	1.00
Unsig. Movement Delay						
Ln Grp Delay, s/veh	34.7	47.0	0.0	2.5	0.6	0.2
Ln Grp LOS	C	D		A	A	A
Approach Vol, veh/h	161		179			364
Approach Delay, s/veh	46.2		2.5			0.4
Approach LOS	D		A			A

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8			6		
Case No		8.0	9.0			6.0		
Phs Duration (G+Y+Rc), s		74.6	15.4			74.6		
Change Period (Y+Rc), s		4.0	4.0			4.0		
Max Green (Gmax), s		53.0	29.0			53.0		
Max Allow Headway (MAH), s		4.0	4.3			4.4		
Max Q Clear (g_c+I1), s		4.1	11.1			4.7		
Green Ext Time (g_e), s		0.6	0.5			1.5		
Prob of Phs Call (p_c)		1.00	0.98			1.00		
Prob of Max Out (p_x)		0.00	0.00			0.00		

Left-Turn Movement Data								
Assigned Mvmt		5	3			1		
Mvmt Sat Flow, veh/h		0	1641			1110		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		1629	0			1870		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		205	1460			0		

Left Lane Group Data								
Assigned Mvmt	0	5	3	0	0	1	0	0

Lane Assignment			L			L		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	10	0	0	196	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1641	0	0	1110	0	0
Q Serve Time (g_s), s	0.0	0.0	0.5	0.0	0.0	0.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.5	0.0	0.0	2.7	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1641	0	0	1110	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	70.6	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	68.5	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
Time to First Blk (g_f), s	0.0	70.6	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	207	0	0	925	0	0
V/C Ratio (X)	0.00	0.00	0.05	0.00	0.00	0.21	0.00	0.00
Avail Cap (c_a), veh/h	0	0	529	0	0	925	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.98	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	34.6	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	34.7	0.0	0.0	0.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.03	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	168	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	1468	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1468	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment		T+R	R					
Lanes in Grp	0	1	1	0	0	0	0	0
Grp Vol (v), veh/h	0	179	151	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1833	1460	0	0	0	0	0
Q Serve Time (g_s), s	0.0	2.1	9.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	2.1	9.1	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.11	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1439	184	0	0	0	0	0
V/C Ratio (X)	0.00	0.12	0.82	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1439	470	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	2.3	38.3	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	8.6	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.5	47.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.3	3.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.4	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.3	3.4	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.03	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	11.4
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	179	0	453	30	1012	0	0	1215	563
Future Volume (veh/h)	0	0	0	179	0	453	30	1012	0	0	1215	563
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1723	0	1723	1723	1870	0	0	1870	1723
Adj Flow Rate, veh/h				195	0	492	33	1100	0	0	1321	612
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				716	0	578	41	2443	0	0	3156	902
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.22	0.00	0.22	0.01	0.23	0.00	0.00	0.62	0.62
Unsig. Movement Delay												
Ln Grp Delay, s/veh				29.0	0.0	42.2	71.0	20.7	0.0	0.0	9.3	15.4
Ln Grp LOS				C		D	E	C			A	B
Approach Vol, veh/h					687			1133			1933	
Approach Delay, s/veh					38.5			22.1			11.2	
Approach LOS					D			C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	9.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		65.9	24.1		6.2	59.6		
Change Period (Y+Rc), s		5.5	4.0		4.0	5.5		
Max Green (Gmax), s		56.5	24.0		6.0	46.5		
Max Allow Headway (MAH), s		4.0	4.3		4.1	4.1		
Max Q Clear (g_c+I1), s		26.0	18.5		3.8	26.8		
Green Ext Time (g_e), s		5.5	1.6		0.0	9.5		
Prob of Phs Call (p_c)		1.00	1.00		0.56	1.00		
Prob of Max Out (p_x)		0.01	0.69		1.00	0.33		

Left-Turn Movement Data						
Assigned Mvmt			3		5	1
Mvmt Sat Flow, veh/h			3183		1641	0

Through Movement Data						
Assigned Mvmt		2	8			6
Mvmt Sat Flow, veh/h		3647	0			5274

Right-Turn Movement Data						
Assigned Mvmt		12	18			16
Mvmt Sat Flow, veh/h		0	2569			1460

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0

Lane Assignment			L		L (Prot)			
Lanes in Grp	0	0	2	0	1	0	0	0
Grp Vol (v), veh/h	0	0	195	0	33	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1591	0	1641	0	0	0
Q Serve Time (g_s), s	0.0	0.0	4.6	0.0	1.8	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	4.6	0.0	1.8	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1591	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	55.6	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	716	0	41	0	0	0
V/C Ratio (X)	0.00	0.00	0.27	0.00	0.81	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	852	0	109	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.88	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	28.8	0.0	44.4	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.2	0.0	26.6	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	29.0	0.0	71.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	1.6	0.0	0.7	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	1.6	0.0	1.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.15	0.00	0.06	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	1100	0	0	0	1321	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1702	0	0
Q Serve Time (g_s), s	0.0	24.0	0.0	0.0	0.0	12.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	24.0	0.0	0.0	0.0	12.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	2443	0	0	0	3156	0	0
V/C Ratio (X)	0.00	0.45	0.00	0.00	0.00	0.42	0.00	0.00
Avail Cap (c_a), veh/h	0	2443	0	0	0	3156	0	0
Upstream Filter (I)	0.00	0.88	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	20.1	0.0	0.0	0.0	8.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.7	0.0	0.0	0.0	9.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	11.1	0.0	0.0	0.0	3.3	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	11.2	0.0	0.0	0.0	3.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.51	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	2	0	0	1	0	0
Grp Vol (v), veh/h	0	0	492	0	0	612	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1285	0	0	1460	0	0
Q Serve Time (g_s), s	0.0	0.0	16.5	0.0	0.0	24.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	16.5	0.0	0.0	24.8	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	578	0	0	902	0	0
V/C Ratio (X)	0.00	0.00	0.85	0.00	0.00	0.68	0.00	0.00
Avail Cap (c_a), veh/h	0	0	688	0	0	902	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	33.4	0.0	0.0	11.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	8.8	0.0	0.0	4.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	42.2	0.0	0.0	15.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	4.7	0.0	0.0	5.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.7	0.0	0.0	1.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	5.4	0.0	0.0	6.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.33	0.00	0.00	1.40	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	19.5
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	437	0	34	0	0	0	0	605	129	0	881	0
Future Volume (veh/h)	437	0	34	0	0	0	0	605	129	0	881	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	0	1723				0	1870	1723	0	1870	1723
Adj Flow Rate, veh/h	475	0	37				0	658	140	0	958	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Opposing Right Turn Influence	Yes						No			No		
Cap, veh/h	596	0	273				0	2114	449	0	2577	1059
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	1.00	2.00	2.00
Prop Arrive On Green	0.19	0.00	0.19				0.00	1.00	1.00	0.00	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	37.5	0.0	30.7				0.0	0.6	0.6	0.0	0.4	0.0
Ln Grp LOS	D		C					A	A		A	
Approach Vol, veh/h		512						798			958	
Approach Delay, s/veh		37.0						0.6			0.4	
Approach LOS		D						A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Case No		8.0		9.0		7.0		
Phs Duration (G+Y+Rc), s		69.3		20.7		69.3		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green (Gmax), s		50.5		30.0		50.5		
Max Allow Headway (MAH), s		4.1		4.1		4.0		
Max Q Clear (g_c+I1), s		2.0		14.8		2.0		
Green Ext Time (g_e), s		3.1		1.9		4.7		
Prob of Phs Call (p_c)		1.00		1.00		1.00		
Prob of Max Out (p_x)		0.00		0.01		0.00		

Left-Turn Movement Data						
Assigned Mvmt		5		7		1
Mvmt Sat Flow, veh/h		0		3183		0

Through Movement Data						
Assigned Mvmt		2		4		6
Mvmt Sat Flow, veh/h		3009		0		3647

Right-Turn Movement Data						
Assigned Mvmt		12		14		16
Mvmt Sat Flow, veh/h		620		1460		1460

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	0

Lane Assignment				L				
Lanes in Grp	0	0	0	2	0	0	0	0
Grp Vol (v), veh/h	0	0	0	475	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1591	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	12.8	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	12.8	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1591	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	65.3	0.0	0.0	0.0	65.3	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	596	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.80	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	1065	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	34.9	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	37.5	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	4.6	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	4.8	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	401	0	0	0	958	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1288	0	0	0	2577	0	0
V/C Ratio (X)	0.00	0.31	0.00	0.00	0.00	0.37	0.00	0.00
Avail Cap (c_a), veh/h	0	1288	0	0	0	2577	0	0
Upstream Filter (I)	0.00	0.89	0.00	0.00	0.00	0.93	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.6	0.0	0.0	0.0	0.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	397	0	37	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1759	0	1460	0	1460	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.35	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1275	0	273	0	1059	0	0
V/C Ratio (X)	0.00	0.31	0.00	0.14	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1275	0	488	0	1059	0	0
Upstream Filter (I)	0.00	0.89	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	30.5	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.6	0.0	30.7	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.6	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	8.7
HCM 7th LOS	A

Intersection	
Intersection Delay, s/veh	3.5
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	539	411	0	264
Demand Flow Rate, veh/h	550	419	0	269
Vehicles Circulating, veh/h	440	88	256	281
Vehicles Exiting, veh/h	105	168	397	88
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	2.6	3.3	0.0	5.9
Approach LOS	A	A	-	A

Lane	Left	Bypass	Left	Bypass	Left	Left	Bypass
Designated Moves	LT	R	LT	R	LTR	LT	R
Assumed Moves	LT		LT		LTR	LT	
RT Channelized		Free		Free			Free
Lane Util	1.000		1.000		1.000	1.000	
Follow-Up Headway, s	2.609		2.609		2.609	2.609	
Critical Headway, s	4.976		4.976		4.976	4.976	
A (Intercept)	1380		1380		1380	1380	
B (Slope)	1.02e-3		1.02e-3		1.02e-3	1.02e-3	
Entry Flow, veh/h	213	337	281	138	0	264	5
Cap Entry Lane, veh/h	881	1938	1261	1938	1063	1036	1938
Entry HV Adj Factor	0.979	0.980	0.982	0.980	1.000	0.980	0.980
Flow Entry, veh/h	209	330	276	135	0	259	5
Cap Entry, veh/h	863	1900	1239	1900	1063	1015	1900
V/C Ratio	0.242	0.174	0.223	0.071	0.000	0.255	0.003
Control Delay, s/veh	6.7	0.0	4.9	0.0	3.4	6.0	0.0
LOS	A	A	A	A	A	A	A
95th %tile Queue, veh	1	1	1	0	0	1	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	224	11	145	0	0	0	0	262	65	145	196	0
Future Volume (veh/h)	224	11	145	0	0	0	0	262	65	145	196	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723				0	1870	1723	1723	1870	0
Adj Flow Rate, veh/h	243	12	158				0	285	71	158	213	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	295	0	262				0	1057	263	449	585	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.18	0.18	0.18				0.00	0.73	0.71	0.73	0.73	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	41.4	0.0	36.2				0.0	0.0	4.6	5.9	0.0	0.0
Ln Grp LOS	D		D						A	A		
Approach Vol, veh/h		401						356			371	
Approach Delay, s/veh		39.3						4.6			5.9	
Approach LOS		D						A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Case No		8.0		9.0		8.0		
Phs Duration (G+Y+Rc), s		69.8		20.2		69.8		
Change Period (Y+Rc), s		5.5		4.1		5.5		
Max Green (Gmax), s		52.5		27.9		52.5		
Max Allow Headway (MAH), s		4.1		4.2		4.4		
Max Q Clear (g_c+I1), s		8.0		14.8		14.1		
Green Ext Time (g_e), s		1.3		1.2		1.7		
Prob of Phs Call (p_c)		1.00		1.00		1.00		
Prob of Max Out (p_x)		0.00		0.02		0.00		

Left-Turn Movement Data						
Assigned Mvmt		5		7		1
Mvmt Sat Flow, veh/h		0		1641		536

Through Movement Data						
Assigned Mvmt		2		4		6
Mvmt Sat Flow, veh/h		1445		0		799

Right-Turn Movement Data						
Assigned Mvmt		12		14		16
Mvmt Sat Flow, veh/h		360		1460		0

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	0

Lane Assignment				L		L+T		
Lanes in Grp	0	0	0	1	0	1	0	0
Grp Vol (v), veh/h	0	0	0	243	0	371	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1641	0	1335	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	12.8	0.0	6.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	12.8	0.0	12.1	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1641	0	1042	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	65.8	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	59.8	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	6.1	0.0	0.0
Time to First Blk (g_f), s	0.0	65.8	0.0	0.0	0.0	2.7	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	0.00	0.43	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	295	0	1034	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.82	0.00	0.36	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	510	0	1034	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	35.6	0.0	4.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	5.8	0.0	1.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	41.4	0.0	5.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	4.7	0.0	1.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.5	0.0	0.3	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	5.2	0.0	1.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.37	0.00	0.31	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		T+R		R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	356	0	158	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1806	0	1460	0	0	0	0
Q Serve Time (g_s), s	0.0	6.0	0.0	9.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	6.0	0.0	9.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.20	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1321	0	262	0	0	0	0
V/C Ratio (X)	0.00	0.27	0.00	0.60	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1321	0	454	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	4.1	0.0	34.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	2.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.6	0.0	36.2	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.2	0.0	2.9	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.4	0.0	3.1	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.13	0.00	0.22	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	17.4
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	299	83	33	227	0	93	0	36	0	0	0
Future Vol, veh/h	0	299	83	33	227	0	93	0	36	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	325	90	36	247	0	101	0	39	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	247	0	0	415	0	0	689	689	370	643	734	247
Stage 1	-	-	-	-	-	-	370	370	-	318	318	-
Stage 2	-	-	-	-	-	-	318	318	-	325	415	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1319	-	-	1144	-	-	360	369	676	386	347	792
Stage 1	-	-	-	-	-	-	650	620	-	693	653	-
Stage 2	-	-	-	-	-	-	693	653	-	687	592	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1319	-	-	1144	-	-	347	356	676	351	335	792
Mov Cap-2 Maneuver	-	-	-	-	-	-	347	356	-	351	335	-
Stage 1	-	-	-	-	-	-	650	620	-	668	630	-
Stage 2	-	-	-	-	-	-	668	630	-	648	592	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	1.05	18.7	0
HCM LOS			C	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	402	1319	-	-	228	-	-	-
HCM Lane V/C Ratio	0.349	-	-	-	0.031	-	-	-
HCM Control Delay (s/veh)	18.7	0	-	-	8.2	0	-	0
HCM Lane LOS	C	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	1.5	0	-	-	0.1	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	239	55	36	230	247	59	308	37	328	338	173
Future Volume (veh/h)	136	239	55	36	230	247	59	308	37	328	338	173
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	148	260	60	39	250	268	64	335	40	357	367	188
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	153	337	263	225	419	327	177	1757	208	448	907	457
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.67	1.67	1.67
Prop Arrive On Green	0.09	0.18	0.18	0.14	0.22	0.22	0.22	1.00	1.00	0.66	0.66	0.63
Unsig. Movement Delay												
Ln Grp Delay, s/veh	103.1	38.9	32.0	34.6	32.5	43.3	33.8	0.4	0.4	27.5	11.9	12.7
Ln Grp LOS	F	D	C	C	C	D	C	A	A	C	B	B
Approach Vol, veh/h		468			557			439			912	
Approach Delay, s/veh		58.3			37.9			5.3			18.2	
Approach LOS		E			D			A			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	4	3	6	5	7	8
Case No		4.0	3.0	2.0	6.4	2.0	2.0	3.0
Phs Duration (G+Y+Rc), s		53.4	20.2	16.4	39.7	13.7	12.4	24.2
Change Period (Y+Rc), s		5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green (Gmax), s		43.7	24.6	5.2	34.2	4.0	6.9	22.9
Max Allow Headway (MAH), s		4.0	4.1	4.1	4.6	4.1	4.1	4.2
Max Q Clear (g_c+I1), s		2.0	13.9	3.9	34.7	5.0	10.1	17.7
Green Ext Time (g_e), s		1.3	0.8	0.0	0.0	0.0	0.0	1.0
Prob of Phs Call (p_c)		1.00	1.00	0.62	1.00	0.80	0.98	1.00
Prob of Max Out (p_x)		0.00	0.03	1.00	1.00	1.00	1.00	0.68

Left-Turn Movement Data								
Assigned Mvmt				3	1	5	7	
Mvmt Sat Flow, veh/h				1641	928	1641	1641	

Through Movement Data								
Assigned Mvmt		2	4		6			8
Mvmt Sat Flow, veh/h		3200	1870		2287			1870

Right-Turn Movement Data								
Assigned Mvmt		12	14		16			18
Mvmt Sat Flow, veh/h		379	1460		1153			1460

Left Lane Group Data								
Assigned Mvmt	0	0	0	3	1	5	7	0

Lane Assignment				L (Prot)	L	L (Prot)	L (Prot)	
Lanes in Grp	0	0	0	1	1	1	1	0
Grp Vol (v), veh/h	0	0	0	39	357	64	148	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1641	928	1641	1641	0
Q Serve Time (g_s), s	0.0	0.0	0.0	1.9	32.7	3.0	8.1	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.9	32.7	3.0	8.1	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	928	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	35.7	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	35.7	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	32.7	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	225	448	177	153	0
V/C Ratio (X)	0.00	0.00	0.00	0.17	0.80	0.36	0.97	0.00
Avail Cap (c_a), veh/h	0	0	0	225	448	177	153	0
Upstream Filter (I)	0.00	0.00	0.00	0.93	0.93	0.95	1.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	34.3	14.7	32.6	40.7	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	12.8	1.2	62.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	34.6	27.5	33.8	103.1	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.7	2.8	1.1	3.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	1.6	0.1	2.7	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.7	4.4	1.1	5.7	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.37	0.56	0.14	0.96	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	4	0	6	0	0	8
Lane Assignment		T	T		T			T
Lanes in Grp	0	1	1	0	1	0	0	1
Grp Vol (v), veh/h	0	185	260	0	284	0	0	250
Grp Sat Flow (s), veh/h/ln	0	1777	1870	0	1777	0	0	1870
Q Serve Time (g_s), s	0.0	0.0	11.9	0.0	6.6	0.0	0.0	10.8
Cycle Q Clear Time (g_c), s	0.0	0.0	11.9	0.0	6.6	0.0	0.0	10.8
Lane Grp Cap (c), veh/h	0	976	337	0	705	0	0	419
V/C Ratio (X)	0.00	0.19	0.77	0.00	0.40	0.00	0.00	0.60
Avail Cap (c_a), veh/h	0	976	542	0	705	0	0	507
Upstream Filter (I)	0.00	0.95	1.00	0.00	0.93	0.00	0.00	0.93
Uniform Delay (d1), s/veh	0.0	0.0	35.1	0.0	10.3	0.0	0.0	31.3
Incr Delay (d2), s/veh	0.0	0.4	3.8	0.0	1.6	0.0	0.0	1.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.4	38.9	0.0	11.9	0.0	0.0	32.5
1st-Term Q (Q1), veh/ln	0.0	0.0	5.0	0.0	1.9	0.0	0.0	4.4

2nd-Term Q (Q2), veh/ln	0.0	0.1	0.4	0.0	0.3	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.1	5.3	0.0	2.2	0.0	0.0	4.6
%ile Storage Ratio (RQ%)	0.00	0.00	0.03	0.00	0.04	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	14	0	16	0	0	18
Lane Assignment		T+R	R		T+R			R
Lanes in Grp	0	1	1	0	1	0	0	1
Grp Vol (v), veh/h	0	190	60	0	271	0	0	268
Grp Sat Flow (s), veh/h/ln	0	1802	1460	0	1663	0	0	1460
Q Serve Time (g_s), s	0.0	0.0	3.2	0.0	7.1	0.0	0.0	15.7
Cycle Q Clear Time (g_c), s	0.0	0.0	3.2	0.0	7.1	0.0	0.0	15.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.21	1.00	0.00	0.69	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	990	263	0	660	0	0	327
V/C Ratio (X)	0.00	0.19	0.23	0.00	0.41	0.00	0.00	0.82
Avail Cap (c_a), veh/h	0	990	423	0	660	0	0	396
Upstream Filter (I)	0.00	0.95	1.00	0.00	0.93	0.00	0.00	0.93
Uniform Delay (d1), s/veh	0.0	0.0	31.5	0.0	11.0	0.0	0.0	33.2
Incr Delay (d2), s/veh	0.0	0.4	0.4	0.0	1.8	0.0	0.0	10.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.4	32.0	0.0	12.7	0.0	0.0	43.3
1st-Term Q (Q1), veh/ln	0.0	0.0	1.0	0.0	2.0	0.0	0.0	5.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.3	0.0	0.0	0.9
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.1	1.1	0.0	2.3	0.0	0.0	6.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.27	0.00	0.04	0.00	0.00	3.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	28.3
HCM 7th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	235	44	83	244	91	70	357	75	112	332	226
Future Volume (veh/h)	168	235	44	83	244	91	70	357	75	112	332	226
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	183	255	48	90	265	99	76	388	82	122	361	246
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	487	1029	803	555	714	267	236	675	527	245	675	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.55	0.55	0.55	0.55	0.55	0.53	0.36	0.36	0.36	0.36	0.36	0.36
Unsig. Movement Delay												
Ln Grp Delay, s/veh	19.3	10.9	9.5	14.1	0.0	12.7	32.2	24.0	19.6	35.7	23.4	22.7
Ln Grp LOS	B	B	A	B		B	C	C	B	D	C	C
Approach Vol, veh/h		486			454			546			729	
Approach Delay, s/veh		13.9			12.9			24.5			25.3	
Approach LOS		B			B			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		5.0		5.0		6.0
Phs Duration (G+Y+Rc), s		36.5		53.5		36.5		53.5
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5
Max Green (Gmax), s		35.5		43.5		35.5		43.5
Max Allow Headway (MAH), s		4.3		4.5		4.4		4.3
Max Q Clear (g_c+I1), s		23.8		24.8		29.2		13.1
Green Ext Time (g_e), s		1.8		2.0		1.8		1.9
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.09		0.00		0.62		0.00

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		749		937		850		991

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1298

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1460		1460		1460		485

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3

Lane Assignment		L		L		L		L
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	76	0	183	0	122	0	90
Grp Sat Flow (s), veh/h/ln	0	749	0	937	0	850	0	991
Q Serve Time (g_s), s	0.0	8.0	0.0	12.4	0.0	12.2	0.0	4.7
Cycle Q Clear Time (g_c), s	0.0	21.8	0.0	22.8	0.0	27.2	0.0	11.1
Perm LT Sat Flow (s_l), veh/h/ln	0	749	0	937	0	850	0	991
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	32.5	0.0	49.5	0.0	32.5	0.0	49.5
Perm LT Serve Time (g_u), s	0.0	18.7	0.0	39.0	0.0	17.4	0.0	43.1
Perm LT Q Serve Time (g_ps), s	0.0	8.0	0.0	12.4	0.0	12.2	0.0	4.7
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	236	0	487	0	245	0	555
V/C Ratio (X)	0.00	0.32	0.00	0.38	0.00	0.50	0.00	0.16
Avail Cap (c_a), veh/h	0	274	0	487	0	287	0	555
Upstream Filter (I)	0.00	1.00	0.00	0.62	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	31.4	0.0	17.9	0.0	34.2	0.0	13.4
Incr Delay (d2), s/veh	0.0	0.8	0.0	1.4	0.0	1.6	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	32.2	0.0	19.3	0.0	35.7	0.0	14.1
1st-Term Q (Q1), veh/ln	0.0	1.3	0.0	2.3	0.0	2.3	0.0	0.9
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.2	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.4	0.0	2.5	0.0	2.4	0.0	1.0
%ile Storage Ratio (RQ%)	0.00	0.32	0.00	0.63	0.00	0.87	0.00	0.25
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	388	0	255	0	361	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	0
Q Serve Time (g_s), s	0.0	15.1	0.0	6.4	0.0	13.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	15.1	0.0	6.4	0.0	13.8	0.0	0.0
Lane Grp Cap (c), veh/h	0	675	0	1029	0	675	0	0
V/C Ratio (X)	0.00	0.57	0.00	0.25	0.00	0.53	0.00	0.00
Avail Cap (c_a), veh/h	0	769	0	1029	0	769	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.62	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	23.2	0.0	10.5	0.0	22.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.4	0.0	0.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	24.0	0.0	10.9	0.0	23.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.9	0.0	2.1	0.0	5.4	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.1	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	6.0	0.0	2.2	0.0	5.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.09	0.00	0.01	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	82	0	48	0	246	0	364
Grp Sat Flow (s), veh/h/ln	0	1460	0	1460	0	1460	0	1783
Q Serve Time (g_s), s	0.0	3.4	0.0	1.4	0.0	11.7	0.0	10.5
Cycle Q Clear Time (g_c), s	0.0	3.4	0.0	1.4	0.0	11.7	0.0	10.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.27
Lane Grp Cap (c), veh/h	0	527	0	803	0	527	0	981
V/C Ratio (X)	0.00	0.16	0.00	0.06	0.00	0.47	0.00	0.37
Avail Cap (c_a), veh/h	0	600	0	803	0	600	0	981
Upstream Filter (I)	0.00	1.00	0.00	0.62	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	19.5	0.0	9.4	0.0	22.1	0.0	11.6
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.1	0.0	0.6	0.0	1.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.6	0.0	9.5	0.0	22.7	0.0	12.7
1st-Term Q (Q1), veh/ln	0.0	1.0	0.0	0.4	0.0	3.5	0.0	3.3
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.1	0.0	0.4	0.0	3.6	0.0	3.6
%ile Storage Ratio (RQ%)	0.00	0.27	0.00	0.19	0.00	0.46	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	20.1
HCM 7th LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	9	139	146	18	180	155
Future Volume (veh/h)	9	139	146	18	180	155
Number	3	18	2	12	1	6
Initial Q, veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Lanes Open During Work Zone						
Adj Sat Flow, veh/h/ln	1723	1723	1870	1723	1723	1870
Adj Flow Rate, veh/h	10	151	159	20	196	168
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Opposing Right Turn Influence	Yes				Yes	
Cap, veh/h	207	184	1278	161	925	1468
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.67	1.67
Prop Arrive On Green	0.13	0.13	0.78	0.78	1.00	1.00
Unsig. Movement Delay						
Ln Grp Delay, s/veh	34.7	47.0	0.0	2.5	0.5	0.2
Ln Grp LOS	C	D		A	A	A
Approach Vol, veh/h	161		179			364
Approach Delay, s/veh	46.2		2.5			0.4
Approach LOS	D		A			A

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8			6		
Case No		8.0	9.0			6.0		
Phs Duration (G+Y+Rc), s		74.6	15.4			74.6		
Change Period (Y+Rc), s		4.0	4.0			4.0		
Max Green (Gmax), s		53.0	29.0			53.0		
Max Allow Headway (MAH), s		4.0	4.3			4.4		
Max Q Clear (g_c+I1), s		4.1	11.1			4.7		
Green Ext Time (g_e), s		0.6	0.5			1.5		
Prob of Phs Call (p_c)		1.00	0.98			1.00		
Prob of Max Out (p_x)		0.00	0.00			0.00		

Left-Turn Movement Data								
Assigned Mvmt		5	3			1		
Mvmt Sat Flow, veh/h		0	1641			1110		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		1629	0			1870		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		205	1460			0		

Left Lane Group Data								
Assigned Mvmt	0	5	3	0	0	1	0	0

Lane Assignment			L			L		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	10	0	0	196	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1641	0	0	1110	0	0
Q Serve Time (g_s), s	0.0	0.0	0.5	0.0	0.0	0.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.5	0.0	0.0	2.7	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1641	0	0	1110	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	70.6	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	68.5	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
Time to First Blk (g_f), s	0.0	70.6	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	207	0	0	925	0	0
V/C Ratio (X)	0.00	0.00	0.05	0.00	0.00	0.21	0.00	0.00
Avail Cap (c_a), veh/h	0	0	529	0	0	925	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.96	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	34.6	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	34.7	0.0	0.0	0.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.03	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	168	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	1468	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1468	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.96	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment		T+R	R					
Lanes in Grp	0	1	1	0	0	0	0	0
Grp Vol (v), veh/h	0	179	151	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1833	1460	0	0	0	0	0
Q Serve Time (g_s), s	0.0	2.1	9.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	2.1	9.1	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.11	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1439	184	0	0	0	0	0
V/C Ratio (X)	0.00	0.12	0.82	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1439	470	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	2.3	38.3	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	8.6	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.5	47.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.3	3.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.4	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.3	3.4	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.03	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	11.4
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	182	0	469	31	1049	0	0	1256	584
Future Volume (veh/h)	0	0	0	182	0	469	31	1049	0	0	1256	584
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1723	0	1723	1723	1870	0	0	1870	1723
Adj Flow Rate, veh/h				198	0	510	34	1140	0	0	1365	635
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				732	0	591	42	2428	0	0	3135	896
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.23	0.00	0.23	0.01	0.23	0.00	0.00	0.61	0.61
Unsig. Movement Delay												
Ln Grp Delay, s/veh				29.0	0.0	43.7	72.3	21.5	0.0	0.0	9.7	16.7
Ln Grp LOS				C		D	E	C			A	B
Approach Vol, veh/h					708			1174			2000	
Approach Delay, s/veh					39.6			23.0			11.9	
Approach LOS					D			C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	9.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		66.2	24.8		6.3	59.9		
Change Period (Y+Rc), s		5.5	4.0		4.0	5.5		
Max Green (Gmax), s		57.5	24.0		6.0	47.5		
Max Allow Headway (MAH), s		4.0	4.3		4.1	4.1		
Max Q Clear (g_c+I1), s		27.3	19.4		3.9	29.0		
Green Ext Time (g_e), s		5.8	1.5		0.0	9.6		
Prob of Phs Call (p_c)		1.00	1.00		0.58	1.00		
Prob of Max Out (p_x)		0.01	0.89		1.00	0.39		

Left-Turn Movement Data						
Assigned Mvmt			3		5	1
Mvmt Sat Flow, veh/h			3183		1641	0

Through Movement Data						
Assigned Mvmt		2	8			6
Mvmt Sat Flow, veh/h		3647	0			5274

Right-Turn Movement Data						
Assigned Mvmt		12	18			16
Mvmt Sat Flow, veh/h		0	2569			1460

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0

Lane Assignment			L		L (Prot)			
Lanes in Grp	0	0	2	0	1	0	0	0
Grp Vol (v), veh/h	0	0	198	0	34	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1591	0	1641	0	0	0
Q Serve Time (g_s), s	0.0	0.0	4.6	0.0	1.9	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	4.6	0.0	1.9	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1591	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	55.9	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	732	0	42	0	0	0
V/C Ratio (X)	0.00	0.00	0.27	0.00	0.82	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	843	0	108	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.87	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	28.8	0.0	44.9	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.2	0.0	27.4	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	29.0	0.0	72.3	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	1.6	0.0	0.7	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	1.6	0.0	1.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.16	0.00	0.07	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	1140	0	0	0	1365	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1702	0	0
Q Serve Time (g_s), s	0.0	25.3	0.0	0.0	0.0	12.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	25.3	0.0	0.0	0.0	12.8	0.0	0.0
Lane Grp Cap (c), veh/h	0	2428	0	0	0	3135	0	0
V/C Ratio (X)	0.00	0.47	0.00	0.00	0.00	0.44	0.00	0.00
Avail Cap (c_a), veh/h	0	2428	0	0	0	3135	0	0
Upstream Filter (I)	0.00	0.87	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	21.0	0.0	0.0	0.0	9.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	21.5	0.0	0.0	0.0	9.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	11.7	0.0	0.0	0.0	3.6	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	11.9	0.0	0.0	0.0	3.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.54	0.00	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	2	0	0	1	0	0
Grp Vol (v), veh/h	0	0	510	0	0	635	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1285	0	0	1460	0	0
Q Serve Time (g_s), s	0.0	0.0	17.4	0.0	0.0	27.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	17.4	0.0	0.0	27.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	591	0	0	896	0	0
V/C Ratio (X)	0.00	0.00	0.86	0.00	0.00	0.71	0.00	0.00
Avail Cap (c_a), veh/h	0	0	680	0	0	896	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	33.7	0.0	0.0	12.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	10.0	0.0	0.0	4.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	43.7	0.0	0.0	16.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	4.9	0.0	0.0	6.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.8	0.0	0.0	1.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	5.7	0.0	0.0	7.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.35	0.00	0.00	1.56	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	20.3
HCM 7th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	452	0	35	0	0	0	0	630	133	0	907	0
Future Volume (veh/h)	452	0	35	0	0	0	0	630	133	0	907	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	0	1723				0	1870	1723	0	1870	1723
Adj Flow Rate, veh/h	491	0	38				0	685	145	0	986	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Opposing Right Turn Influence	Yes						No			No		
Cap, veh/h	612	0	281				0	2104	445	0	2561	1052
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	1.00	2.00	2.00
Prop Arrive On Green	0.19	0.00	0.19				0.00	1.00	1.00	0.00	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	37.6	0.0	30.7				0.0	0.6	0.6	0.0	0.4	0.0
Ln Grp LOS	D		C					A	A		A	
Approach Vol, veh/h		529						830			986	
Approach Delay, s/veh		37.1						0.6			0.4	
Approach LOS		D						A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Case No		8.0		9.0		7.0		
Phs Duration (G+Y+Rc), s		69.6		21.4		69.6		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green (Gmax), s		50.5		31.0		50.5		
Max Allow Headway (MAH), s		4.1		4.1		4.0		
Max Q Clear (g_c+I1), s		2.0		15.4		2.0		
Green Ext Time (g_e), s		3.3		2.0		4.9		
Prob of Phs Call (p_c)		1.00		1.00		1.00		
Prob of Max Out (p_x)		0.00		0.01		0.00		

Left-Turn Movement Data						
Assigned Mvmt		5		7		1
Mvmt Sat Flow, veh/h		0		3183		0

Through Movement Data						
Assigned Mvmt		2		4		6
Mvmt Sat Flow, veh/h		3012		0		3647

Right-Turn Movement Data						
Assigned Mvmt		12		14		16
Mvmt Sat Flow, veh/h		617		1460		1460

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	0

Lane Assignment				L				
Lanes in Grp	0	0	0	2	0	0	0	0
Grp Vol (v), veh/h	0	0	0	491	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1591	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	13.4	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	13.4	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1591	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	65.6	0.0	0.0	0.0	65.6	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	612	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.80	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	1088	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	35.1	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	37.6	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	4.8	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	417	0	0	0	986	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1281	0	0	0	2561	0	0
V/C Ratio (X)	0.00	0.33	0.00	0.00	0.00	0.38	0.00	0.00
Avail Cap (c_a), veh/h	0	1281	0	0	0	2561	0	0
Upstream Filter (I)	0.00	0.89	0.00	0.00	0.00	0.92	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.6	0.0	0.0	0.0	0.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	413	0	38	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1759	0	1460	0	1460	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.35	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1268	0	281	0	1052	0	0
V/C Ratio (X)	0.00	0.33	0.00	0.14	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1268	0	499	0	1052	0	0
Upstream Filter (I)	0.00	0.89	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	30.5	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.6	0.0	30.7	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.7	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	8.8
HCM 7th LOS	A

Intersection	
Intersection Delay, s/veh	3.7
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	552	430	0	278
Demand Flow Rate, veh/h	564	439	0	284
Vehicles Circulating, veh/h	463	90	264	294
Vehicles Exiting, veh/h	110	174	417	90
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	2.7	3.3	0.0	6.2
Approach LOS	A	A	-	A

Lane	Left	Bypass	Left	Bypass	Left	Left	Bypass
Designated Moves	LT	R	LT	R	LTR	LT	R
Assumed Moves	LT		LT		LTR	LT	
RT Channelized		Free		Free			Free
Lane Util	1.000		1.000		1.000	1.000	
Follow-Up Headway, s	2.609		2.609		2.609	2.609	
Critical Headway, s	4.976		4.976		4.976	4.976	
A (Intercept)	1380		1380		1380	1380	
B (Slope)	1.02e-3		1.02e-3		1.02e-3	1.02e-3	
Entry Flow, veh/h	218	346	294	145	0	279	5
Cap Entry Lane, veh/h	861	1938	1259	1938	1054	1022	1938
Entry HV Adj Factor	0.979	0.980	0.979	0.980	1.000	0.980	0.980
Flow Entry, veh/h	213	339	288	142	0	273	5
Cap Entry, veh/h	843	1900	1232	1900	1054	1002	1900
V/C Ratio	0.253	0.178	0.234	0.075	0.000	0.273	0.003
Control Delay, s/veh	7.0	0.0	5.0	0.0	3.4	6.3	0.0
LOS	A	A	A	A	A	A	A
95th %tile Queue, veh	1	1	1	0	0	1	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	236	10	153	0	0	0	0	271	64	150	203	0
Future Volume (veh/h)	236	10	153	0	0	0	0	271	64	150	203	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723				0	1870	1723	1723	1870	0
Adj Flow Rate, veh/h	257	11	166				0	295	70	163	221	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	425	0	378				0	662	157	368	390	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.26	0.26	0.26				0.00	0.45	0.40	0.45	0.45	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	10.4	0.0	9.4				0.0	0.0	5.7	6.6	0.0	0.0
Ln Grp LOS	B		A						A	A		
Approach Vol, veh/h		423						365			384	
Approach Delay, s/veh		10.0						5.7			6.6	
Approach LOS		B						A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Case No		8.0		9.0		8.0		
Phs Duration (G+Y+Rc), s		16.6		11.2		16.6		
Change Period (Y+Rc), s		5.5		4.1		5.5		
Max Green (Gmax), s		52.5		27.9		52.5		
Max Allow Headway (MAH), s		4.1		4.2		4.4		
Max Q Clear (g_c+I1), s		5.9		5.8		9.3		
Green Ext Time (g_e), s		1.4		1.5		1.8		
Prob of Phs Call (p_c)		1.00		0.96		1.00		
Prob of Max Out (p_x)		0.00		0.00		0.00		

Left-Turn Movement Data									
Assigned Mvmt		5		7		1			
Mvmt Sat Flow, veh/h		0		1641		404			

Through Movement Data									
Assigned Mvmt		2		4		6			
Mvmt Sat Flow, veh/h		1461		0		861			

Right-Turn Movement Data									
Assigned Mvmt		12		14		16			
Mvmt Sat Flow, veh/h		347		1460		0			

Left Lane Group Data									
Assigned Mvmt	0	5	0	7	0	1	0	0	

Lane Assignment				L		L+T		
Lanes in Grp	0	0	0	1	0	1	0	0
Grp Vol (v), veh/h	0	0	0	257	0	384	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1641	0	1265	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	3.8	0.0	3.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	3.8	0.0	7.3	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1641	0	1033	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	12.6	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	8.7	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0
Time to First Blk (g_f), s	0.0	12.6	0.0	0.0	0.0	2.1	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	0.00	0.42	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	425	0	757	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.61	0.00	0.51	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	1656	0	2817	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	9.0	0.0	6.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.4	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	10.4	0.0	6.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.5	0.0	0.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.7	0.0	0.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.05	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		T+R		R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	365	0	166	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1808	0	1460	0	0	0	0
Q Serve Time (g_s), s	0.0	3.9	0.0	2.6	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	3.9	0.0	2.6	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.19	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	819	0	378	0	0	0	0
V/C Ratio (X)	0.00	0.45	0.00	0.44	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	3518	0	1473	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.3	0.0	8.6	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.8	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.7	0.0	9.4	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.4	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.03	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	7.5
HCM 7th LOS	A

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	323	87	34	231	0	99	0	38	0	0	0
Future Vol, veh/h	0	323	87	34	231	0	99	0	38	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	351	95	37	251	0	108	0	41	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	251	0	0	446	0	0	723	723	398	676	771	251
Stage 1	-	-	-	-	-	-	398	398	-	325	325	-
Stage 2	-	-	-	-	-	-	325	325	-	351	446	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1314	-	-	1115	-	-	341	352	651	367	331	788
Stage 1	-	-	-	-	-	-	628	603	-	687	649	-
Stage 2	-	-	-	-	-	-	687	649	-	666	574	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1314	-	-	1115	-	-	328	339	651	331	318	788
Mov Cap-2 Maneuver	-	-	-	-	-	-	328	339	-	331	318	-
Stage 1	-	-	-	-	-	-	628	603	-	661	624	-
Stage 2	-	-	-	-	-	-	661	624	-	623	574	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	1.07	20.41	0
HCM LOS			C	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	381	1314	-	-	231	-	-	-
HCM Lane V/C Ratio	0.391	-	-	-	0.033	-	-	-
HCM Control Delay (s/veh)	20.4	0	-	-	8.3	0	-	0
HCM Lane LOS	C	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	1.8	0	-	-	0.1	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	246	54	37	234	254	59	320	38	340	351	171
Future Volume (veh/h)	136	246	54	37	234	254	59	320	38	340	351	171
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	148	267	59	40	254	276	64	348	41	370	382	186
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	151	343	268	225	427	333	164	1755	205	449	939	451
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.67	1.67	1.67
Prop Arrive On Green	0.09	0.18	0.18	0.14	0.23	0.23	0.20	1.00	1.00	0.67	0.67	0.65
Unsig. Movement Delay												
Ln Grp Delay, s/veh	107.3	39.2	32.0	35.1	32.6	44.7	35.4	0.4	0.4	29.7	11.5	12.3
Ln Grp LOS	F	D	C	D	C	D	D	A	A	C	B	B
Approach Vol, veh/h		474			570			453			938	
Approach Delay, s/veh		59.6			38.7			5.4			18.9	
Approach LOS		E			D			A			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	4	3	6	5	7	8
Case No		4.0	3.0	2.0	6.4	2.0	2.0	3.0
Phs Duration (G+Y+Rc), s		53.8	20.7	16.5	40.7	13.1	12.4	24.8
Change Period (Y+Rc), s		5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green (Gmax), s		44.7	24.5	5.3	35.2	4.0	6.9	22.9
Max Allow Headway (MAH), s		4.0	4.1	4.1	4.6	4.1	4.1	4.2
Max Q Clear (g_c+I1), s		2.0	14.4	4.0	38.7	5.1	10.2	18.4
Green Ext Time (g_e), s		1.3	0.8	0.0	0.0	0.0	0.0	0.9
Prob of Phs Call (p_c)		1.00	1.00	0.64	1.00	0.80	0.98	1.00
Prob of Max Out (p_x)		0.00	0.04	1.00	1.00	1.00	1.00	0.88

Left-Turn Movement Data								
Assigned Mvmt				3	1	5	7	
Mvmt Sat Flow, veh/h				1641	916	1641	1641	

Through Movement Data								
Assigned Mvmt		2	4		6			8
Mvmt Sat Flow, veh/h		3205	1870		2328			1870

Right-Turn Movement Data								
Assigned Mvmt		12	14		16			18
Mvmt Sat Flow, veh/h		375	1460		1118			1460

Left Lane Group Data								
Assigned Mvmt	0	0	0	3	1	5	7	0

Lane Assignment				L (Prot)	L	L (Prot)	L (Prot)	
Lanes in Grp	0	0	0	1	1	1	1	0
Grp Vol (v), veh/h	0	0	0	40	370	64	148	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1641	916	1641	1641	0
Q Serve Time (g_s), s	0.0	0.0	0.0	2.0	36.7	3.1	8.2	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	2.0	36.7	3.1	8.2	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	916	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	36.7	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	36.7	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	36.7	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	225	449	164	151	0
V/C Ratio (X)	0.00	0.00	0.00	0.18	0.82	0.39	0.98	0.00
Avail Cap (c_a), veh/h	0	0	0	225	449	164	151	0
Upstream Filter (I)	0.00	0.00	0.00	0.93	0.93	0.95	1.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	34.7	14.9	34.0	41.2	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	14.8	1.4	66.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	35.1	29.7	35.4	107.3	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.7	2.9	1.1	3.1	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	1.8	0.1	2.8	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.8	4.7	1.2	5.9	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.38	0.60	0.15	0.99	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	4	0	6	0	0	8
Lane Assignment		T	T		T			T
Lanes in Grp	0	1	1	0	1	0	0	1
Grp Vol (v), veh/h	0	192	267	0	290	0	0	254
Grp Sat Flow (s), veh/h/ln	0	1777	1870	0	1777	0	0	1870
Q Serve Time (g_s), s	0.0	0.0	12.4	0.0	6.7	0.0	0.0	11.0
Cycle Q Clear Time (g_c), s	0.0	0.0	12.4	0.0	6.7	0.0	0.0	11.0
Lane Grp Cap (c), veh/h	0	973	343	0	717	0	0	427
V/C Ratio (X)	0.00	0.20	0.78	0.00	0.40	0.00	0.00	0.59
Avail Cap (c_a), veh/h	0	973	534	0	717	0	0	502
Upstream Filter (I)	0.00	0.95	1.00	0.00	0.93	0.00	0.00	0.93
Uniform Delay (d1), s/veh	0.0	0.0	35.4	0.0	10.0	0.0	0.0	31.3
Incr Delay (d2), s/veh	0.0	0.4	3.8	0.0	1.6	0.0	0.0	1.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.4	39.2	0.0	11.5	0.0	0.0	32.6
1st-Term Q (Q1), veh/ln	0.0	0.0	5.2	0.0	1.9	0.0	0.0	4.6

2nd-Term Q (Q2), veh/ln	0.0	0.1	0.4	0.0	0.3	0.0	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.1	5.6	0.0	2.2	0.0	0.0	4.7
%ile Storage Ratio (RQ%)	0.00	0.00	0.03	0.00	0.04	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	14	0	16	0	0	18
Lane Assignment		T+R	R		T+R			R
Lanes in Grp	0	1	1	0	1	0	0	1
Grp Vol (v), veh/h	0	197	59	0	278	0	0	276
Grp Sat Flow (s), veh/h/ln	0	1803	1460	0	1669	0	0	1460
Q Serve Time (g_s), s	0.0	0.0	3.1	0.0	7.2	0.0	0.0	16.4
Cycle Q Clear Time (g_c), s	0.0	0.0	3.1	0.0	7.2	0.0	0.0	16.4
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.21	1.00	0.00	0.67	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	987	268	0	673	0	0	333
V/C Ratio (X)	0.00	0.20	0.22	0.00	0.41	0.00	0.00	0.83
Avail Cap (c_a), veh/h	0	987	417	0	673	0	0	391
Upstream Filter (I)	0.00	0.95	1.00	0.00	0.93	0.00	0.00	0.93
Uniform Delay (d1), s/veh	0.0	0.0	31.6	0.0	10.6	0.0	0.0	33.4
Incr Delay (d2), s/veh	0.0	0.4	0.4	0.0	1.7	0.0	0.0	11.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.4	32.0	0.0	12.3	0.0	0.0	44.7
1st-Term Q (Q1), veh/ln	0.0	0.0	1.0	0.0	2.0	0.0	0.0	5.3
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.3	0.0	0.0	1.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.1	1.1	0.0	2.3	0.0	0.0	6.3
%ile Storage Ratio (RQ%)	0.00	0.00	0.27	0.00	0.04	0.00	0.00	3.21
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	28.9
HCM 7th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	174	249	45	85	247	94	72	371	78	116	345	231
Future Volume (veh/h)	174	249	45	85	247	94	72	371	78	116	345	231
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	189	271	49	92	268	102	78	403	85	126	375	251
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	469	1010	788	530	697	265	237	696	543	246	696	543
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.54	0.54	0.54	0.54	0.54	0.52	0.37	0.37	0.37	0.37	0.37	0.37
Unsig. Movement Delay												
Ln Grp Delay, s/veh	20.8	11.6	10.1	15.3	0.0	13.5	32.2	23.7	19.2	35.9	23.1	22.3
Ln Grp LOS	C	B	B	B		B	C	C	B	D	C	C
Approach Vol, veh/h		509			462			566			752	
Approach Delay, s/veh		14.9			13.8			24.2			25.0	
Approach LOS		B			B			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		5.0		5.0		6.0
Phs Duration (G+Y+Rc), s		37.9		53.1		37.9		53.1
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5
Max Green (Gmax), s		36.5		43.5		36.5		43.5
Max Allow Headway (MAH), s		4.4		4.5		4.4		4.3
Max Q Clear (g_c+I1), s		24.8		26.5		30.6		14.2
Green Ext Time (g_e), s		1.9		2.1		1.8		1.9
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.10		0.00		0.70		0.00

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		736		932		836		976

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1291

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1460		1460		1460		491

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3

Lane Assignment		L		L		L		L
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	78	0	189	0	126	0	92
Grp Sat Flow (s), veh/h/ln	0	736	0	932	0	836	0	976
Q Serve Time (g_s), s	0.0	8.5	0.0	13.5	0.0	12.9	0.0	5.1
Cycle Q Clear Time (g_c), s	0.0	22.8	0.0	24.5	0.0	28.6	0.0	12.2
Perm LT Sat Flow (s_l), veh/h/ln	0	736	0	932	0	836	0	976
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	33.9	0.0	49.1	0.0	33.9	0.0	49.1
Perm LT Serve Time (g_u), s	0.0	19.5	0.0	38.1	0.0	18.2	0.0	42.0
Perm LT Q Serve Time (g_ps), s	0.0	8.5	0.0	13.5	0.0	12.9	0.0	5.1
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	237	0	469	0	246	0	530
V/C Ratio (X)	0.00	0.33	0.00	0.40	0.00	0.51	0.00	0.17
Avail Cap (c_a), veh/h	0	271	0	469	0	284	0	530
Upstream Filter (I)	0.00	1.00	0.00	0.57	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	31.4	0.0	19.3	0.0	34.3	0.0	14.5
Incr Delay (d2), s/veh	0.0	0.8	0.0	1.5	0.0	1.6	0.0	0.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	32.2	0.0	20.8	0.0	35.9	0.0	15.3
1st-Term Q (Q1), veh/ln	0.0	1.4	0.0	2.5	0.0	2.4	0.0	1.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.2	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.4	0.0	2.7	0.0	2.5	0.0	1.1
%ile Storage Ratio (RQ%)	0.00	0.33	0.00	0.69	0.00	0.91	0.00	0.27
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	403	0	271	0	375	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	0
Q Serve Time (g_s), s	0.0	15.7	0.0	7.1	0.0	14.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	15.7	0.0	7.1	0.0	14.3	0.0	0.0
Lane Grp Cap (c), veh/h	0	696	0	1010	0	696	0	0
V/C Ratio (X)	0.00	0.58	0.00	0.27	0.00	0.54	0.00	0.00
Avail Cap (c_a), veh/h	0	781	0	1010	0	781	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.57	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	22.9	0.0	11.3	0.0	22.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.9	0.0	0.4	0.0	0.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	23.7	0.0	11.6	0.0	23.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	6.1	0.0	2.4	0.0	5.6	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.1	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	6.3	0.0	2.5	0.0	5.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.09	0.00	0.01	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	85	0	49	0	251	0	370
Grp Sat Flow (s), veh/h/ln	0	1460	0	1460	0	1460	0	1782
Q Serve Time (g_s), s	0.0	3.5	0.0	1.5	0.0	11.9	0.0	11.1
Cycle Q Clear Time (g_c), s	0.0	3.5	0.0	1.5	0.0	11.9	0.0	11.1
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.28
Lane Grp Cap (c), veh/h	0	543	0	788	0	543	0	962
V/C Ratio (X)	0.00	0.16	0.00	0.06	0.00	0.46	0.00	0.38
Avail Cap (c_a), veh/h	0	610	0	788	0	610	0	962
Upstream Filter (I)	0.00	1.00	0.00	0.57	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	19.0	0.0	10.0	0.0	21.7	0.0	12.3
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.1	0.0	0.6	0.0	1.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.2	0.0	10.1	0.0	22.3	0.0	13.5
1st-Term Q (Q1), veh/ln	0.0	1.1	0.0	0.4	0.0	3.6	0.0	3.6
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.1	0.0	0.4	0.0	3.7	0.0	3.9
%ile Storage Ratio (RQ%)	0.00	0.28	0.00	0.21	0.00	0.47	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	20.3
HCM 7th LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	9	142	172	19	193	175
Future Volume (veh/h)	9	142	172	19	193	175
Number	3	18	2	12	1	6
Initial Q, veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Lanes Open During Work Zone						
Adj Sat Flow, veh/h/ln	1723	1723	1870	1723	1723	1870
Adj Flow Rate, veh/h	10	154	187	21	210	190
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Opposing Right Turn Influence	Yes				Yes	
Cap, veh/h	210	187	1295	145	897	1466
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.13	0.13	0.78	0.78	0.78	0.78
Unsig. Movement Delay						
Ln Grp Delay, s/veh	34.9	47.4	0.0	2.6	3.9	2.5
Ln Grp LOS	C	D		A	A	A
Approach Vol, veh/h	164		208			400
Approach Delay, s/veh	46.6		2.6			3.3
Approach LOS	D		A			A

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8			6		
Case No		8.0	9.0			6.0		
Phs Duration (G+Y+Rc), s		75.3	15.7			75.3		
Change Period (Y+Rc), s		4.0	4.0			4.0		
Max Green (Gmax), s		55.0	28.0			55.0		
Max Allow Headway (MAH), s		4.0	4.3			4.4		
Max Q Clear (g_c+I1), s		4.5	11.4			9.9		
Green Ext Time (g_e), s		0.7	0.5			1.7		
Prob of Phs Call (p_c)		1.00	0.98			1.00		
Prob of Max Out (p_x)		0.00	0.00			0.00		

Left-Turn Movement Data								
Assigned Mvmt		5	3			1		
Mvmt Sat Flow, veh/h		0	1641			1081		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		1652	0			1870		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		185	1460			0		

Left Lane Group Data								
Assigned Mvmt	0	5	3	0	0	1	0	0

Lane Assignment			L			L		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	10	0	0	210	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1641	0	0	1081	0	0
Q Serve Time (g_s), s	0.0	0.0	0.5	0.0	0.0	5.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.5	0.0	0.0	7.9	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1641	0	0	1081	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	71.3	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	68.8	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	5.3	0.0	0.0
Time to First Blk (g_f), s	0.0	71.3	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	210	0	0	897	0	0
V/C Ratio (X)	0.00	0.00	0.05	0.00	0.00	0.23	0.00	0.00
Avail Cap (c_a), veh/h	0	0	505	0	0	897	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.95	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	34.8	0.0	0.0	3.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	0.0	0.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	34.9	0.0	0.0	3.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.2	0.0	0.0	0.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.2	0.0	0.0	0.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.03	0.00	0.00	0.09	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	190	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	1466	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1466	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.95	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment		T+R	R					
Lanes in Grp	0	1	1	0	0	0	0	0
Grp Vol (v), veh/h	0	208	154	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1837	1460	0	0	0	0	0
Q Serve Time (g_s), s	0.0	2.5	9.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	2.5	9.4	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.10	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1440	187	0	0	0	0	0
V/C Ratio (X)	0.00	0.14	0.82	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1440	449	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	2.4	38.7	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	8.7	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.6	47.4	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.3	3.1	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.5	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.4	3.6	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.03	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	12.3
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	206	0	469	31	1073	0	0	1296	584
Future Volume (veh/h)	0	0	0	206	0	469	31	1073	0	0	1296	584
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1723	0	1723	1723	1870	0	0	1870	1723
Adj Flow Rate, veh/h				224	0	510	34	1166	0	0	1409	635
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				729	0	589	41	2470	0	0	3225	922
HCM Platoon Ratio				1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.23	0.00	0.23	0.02	0.47	0.00	0.00	0.63	0.63
Unsig. Movement Delay												
Ln Grp Delay, s/veh				33.5	0.0	48.5	79.7	15.3	0.0	0.0	10.2	16.7
Ln Grp LOS				C		D	E	B			B	B
Approach Vol, veh/h					734			1200			2044	
Approach Delay, s/veh					43.9			17.1			12.2	
Approach LOS					D			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	9.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		76.3	27.7		6.6	69.7		
Change Period (Y+Rc), s		5.5	4.0		4.0	5.5		
Max Green (Gmax), s		66.5	28.0		6.0	56.5		
Max Allow Headway (MAH), s		4.0	4.3		4.1	4.1		
Max Q Clear (g_c+I1), s		25.4	21.9		4.1	31.5		
Green Ext Time (g_e), s		6.2	1.9		0.0	11.5		
Prob of Phs Call (p_c)		1.00	1.00		0.63	1.00		
Prob of Max Out (p_x)		0.00	0.59		1.00	0.27		

Left-Turn Movement Data						
Assigned Mvmt			3		5	1
Mvmt Sat Flow, veh/h			3183		1641	0

Through Movement Data						
Assigned Mvmt		2	8			6
Mvmt Sat Flow, veh/h		3647	0			5274

Right-Turn Movement Data						
Assigned Mvmt		12	18			16
Mvmt Sat Flow, veh/h		0	2569			1460

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0

Lane Assignment			L		L (Prot)			
Lanes in Grp	0	0	2	0	1	0	0	0
Grp Vol (v), veh/h	0	0	224	0	34	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1591	0	1641	0	0	0
Q Serve Time (g_s), s	0.0	0.0	6.1	0.0	2.1	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	6.1	0.0	2.1	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1591	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	65.7	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	729	0	41	0	0	0
V/C Ratio (X)	0.00	0.00	0.31	0.00	0.83	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	860	0	95	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.86	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	33.2	0.0	50.9	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.2	0.0	28.8	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	33.5	0.0	79.7	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	2.2	0.0	0.8	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	2.2	0.0	1.2	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.21	0.00	0.07	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	1166	0	0	0	1409	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1702	0	0
Q Serve Time (g_s), s	0.0	23.4	0.0	0.0	0.0	14.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	23.4	0.0	0.0	0.0	14.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	2470	0	0	0	3225	0	0
V/C Ratio (X)	0.00	0.47	0.00	0.00	0.00	0.44	0.00	0.00
Avail Cap (c_a), veh/h	0	2470	0	0	0	3225	0	0
Upstream Filter (I)	0.00	0.86	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	14.7	0.0	0.0	0.0	9.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.3	0.0	0.0	0.0	10.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	9.6	0.0	0.0	0.0	4.3	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	9.7	0.0	0.0	0.0	4.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.45	0.00	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	2	0	0	1	0	0
Grp Vol (v), veh/h	0	0	510	0	0	635	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1285	0	0	1460	0	0
Q Serve Time (g_s), s	0.0	0.0	19.9	0.0	0.0	29.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	19.9	0.0	0.0	29.5	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	589	0	0	922	0	0
V/C Ratio (X)	0.00	0.00	0.87	0.00	0.00	0.69	0.00	0.00
Avail Cap (c_a), veh/h	0	0	694	0	0	922	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	38.6	0.0	0.0	12.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	9.9	0.0	0.0	4.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	48.5	0.0	0.0	16.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	5.8	0.0	0.0	7.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.8	0.0	0.0	1.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	6.6	0.0	0.0	8.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.41	0.00	0.00	1.74	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	19.5
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	452	0	35	0	0	0	0	654	147	0	971	0
Future Volume (veh/h)	452	0	35	0	0	0	0	654	147	0	971	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	0	1723				0	1870	1723	0	1870	1723
Adj Flow Rate, veh/h	491	0	38				0	711	160	0	1055	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Opposing Right Turn Influence	Yes						No			No		
Cap, veh/h	599	0	275				0	2121	477	0	2615	1074
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	2.00	2.00
Prop Arrive On Green	0.19	0.00	0.19				0.00	0.74	0.72	0.00	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	43.4	0.0	35.4				0.0	5.4	5.5	0.0	0.4	0.0
Ln Grp LOS	D		D					A	A		A	
Approach Vol, veh/h		529						871			1055	
Approach Delay, s/veh		42.8						5.4			0.4	
Approach LOS		D						A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Case No		8.0		9.0		7.0		
Phs Duration (G+Y+Rc), s		80.5		23.5		80.5		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green (Gmax), s		59.5		35.0		59.5		
Max Allow Headway (MAH), s		4.1		4.1		4.0		
Max Q Clear (g_c+I1), s		11.2		17.4		2.0		
Green Ext Time (g_e), s		3.5		2.1		5.4		
Prob of Phs Call (p_c)		1.00		1.00		1.00		
Prob of Max Out (p_x)		0.00		0.00		0.00		

Left-Turn Movement Data						
Assigned Mvmt		5		7		1
Mvmt Sat Flow, veh/h		0		3183		0

Through Movement Data						
Assigned Mvmt		2		4		6
Mvmt Sat Flow, veh/h		2976		0		3647

Right-Turn Movement Data						
Assigned Mvmt		12		14		16
Mvmt Sat Flow, veh/h		648		1460		1460

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	0

Lane Assignment				L				
Lanes in Grp	0	0	0	2	0	0	0	0
Grp Vol (v), veh/h	0	0	0	491	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1591	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	15.4	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	15.4	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1591	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	76.5	0.0	0.0	0.0	76.5	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	599	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.82	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	1074	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	40.5	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	43.4	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	5.9	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.29	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	438	0	0	0	1055	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1307	0	0	0	2615	0	0
V/C Ratio (X)	0.00	0.34	0.00	0.00	0.00	0.40	0.00	0.00
Avail Cap (c_a), veh/h	0	1307	0	0	0	2615	0	0
Upstream Filter (I)	0.00	0.78	0.00	0.00	0.00	0.91	0.00	0.00
Uniform Delay (d1), s/veh	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.4	0.0	0.0	0.0	0.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	2.3	0.0	0.0	0.0	0.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	433	0	38	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1754	0	1460	0	1460	0	0
Q Serve Time (g_s), s	0.0	9.2	0.0	2.3	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	9.2	0.0	2.3	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.37	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1290	0	275	0	1074	0	0
V/C Ratio (X)	0.00	0.34	0.00	0.14	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1290	0	493	0	1074	0	0
Upstream Filter (I)	0.00	0.78	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	4.9	0.0	35.2	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.5	0.0	35.4	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.1	0.0	0.8	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	2.3	0.0	0.8	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.02	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	11.3
HCM 7th LOS	B

Intersection	
Intersection Delay, s/veh	3.9
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	561	455	0	278
Demand Flow Rate, veh/h	573	464	0	284
Vehicles Circulating, veh/h	483	90	273	319
Vehicles Exiting, veh/h	115	183	437	90
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	2.9	3.6	0.0	6.4
Approach LOS	A	A	-	A

Lane	Left	Bypass	Left	Bypass	Left	Left	Bypass
Designated Moves	LT	R	LT	R	LTR	LT	R
Assumed Moves	LT		LT		LTR	LT	
RT Channelized		Free		Free			Free
Lane Util	1.000		1.000		1.000	1.000	
Follow-Up Headway, s	2.609		2.609		2.609	2.609	
Critical Headway, s	4.976		4.976		4.976	4.976	
A (Intercept)	1380		1380		1380	1380	
B (Slope)	1.02e-3		1.02e-3		1.02e-3	1.02e-3	
Entry Flow, veh/h	227	346	319	145	0	279	5
Cap Entry Lane, veh/h	843	1938	1259	1938	1045	997	1938
Entry HV Adj Factor	0.979	0.980	0.980	0.980	1.000	0.980	0.980
Flow Entry, veh/h	222	339	313	142	0	273	5
Cap Entry, veh/h	826	1900	1234	1900	1045	977	1900
V/C Ratio	0.269	0.178	0.253	0.075	0.000	0.280	0.003
Control Delay, s/veh	7.3	0.0	5.2	0.0	3.4	6.5	0.0
LOS	A	A	A	A	A	A	A
95th %tile Queue, veh	1	1	1	0	0	1	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	236	18	153	0	0	0	0	271	96	150	203	0
Future Volume (veh/h)	236	18	153	0	0	0	0	271	96	150	203	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723				0	1870	1723	1723	1870	0
Adj Flow Rate, veh/h	257	20	166				0	295	104	163	221	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	421	0	375				0	612	216	356	388	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.26	0.25	0.26				0.00	0.46	0.41	0.46	0.46	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	10.8	0.0	9.7				0.0	0.0	5.9	6.7	0.0	0.0
Ln Grp LOS	B		A						A	A		
Approach Vol, veh/h		423						399			384	
Approach Delay, s/veh		10.4						5.9			6.7	
Approach LOS		B						A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Case No		8.0		9.0		8.0		
Phs Duration (G+Y+Rc), s		17.3		11.3		17.3		
Change Period (Y+Rc), s		5.5		4.1		5.5		
Max Green (Gmax), s		52.5		27.9		52.5		
Max Allow Headway (MAH), s		4.1		4.2		4.5		
Max Q Clear (g_c+I1), s		6.5		5.9		10.0		
Green Ext Time (g_e), s		1.5		1.5		1.8		
Prob of Phs Call (p_c)		1.00		0.97		1.00		
Prob of Max Out (p_x)		0.00		0.00		0.00		

Left-Turn Movement Data						
Assigned Mvmt		5		7		1
Mvmt Sat Flow, veh/h		0		1641		380

Through Movement Data						
Assigned Mvmt		2		4		6
Mvmt Sat Flow, veh/h		1321		0		836

Right-Turn Movement Data						
Assigned Mvmt		12		14		16
Mvmt Sat Flow, veh/h		466		1460		0

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	0

Lane Assignment				L		L+T		
Lanes in Grp	0	0	0	1	0	1	0	0
Grp Vol (v), veh/h	0	0	0	257	0	384	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1641	0	1217	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	3.9	0.0	3.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	3.9	0.0	8.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1641	0	1001	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	13.3	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	8.8	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0
Time to First Blk (g_f), s	0.0	13.3	0.0	0.0	0.0	2.3	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	0.00	0.42	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	421	0	743	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.61	0.00	0.52	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	1606	0	2672	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	9.4	0.0	6.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.4	0.0	0.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	10.8	0.0	6.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.6	0.0	0.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.7	0.0	0.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		T+R		R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	399	0	166	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1787	0	1460	0	0	0	0
Q Serve Time (g_s), s	0.0	4.5	0.0	2.7	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	4.5	0.0	2.7	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.26	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	828	0	375	0	0	0	0
V/C Ratio (X)	0.00	0.48	0.00	0.44	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	3372	0	1429	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.5	0.0	8.9	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.8	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.9	0.0	9.7	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.1	0.0	0.4	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.4	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.03	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	7.7
HCM 7th LOS	A

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	363	87	34	254	0	99	0	38	0	0	0
Future Vol, veh/h	0	363	87	34	254	0	99	0	38	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	395	95	37	276	0	108	0	41	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	276	0	0	489	0	0	792	792	442	745	839	276
Stage 1	-	-	-	-	-	-	442	442	-	350	350	-
Stage 2	-	-	-	-	-	-	350	350	-	395	489	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1287	-	-	1074	-	-	307	322	616	330	302	763
Stage 1	-	-	-	-	-	-	595	576	-	666	633	-
Stage 2	-	-	-	-	-	-	666	633	-	631	549	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1287	-	-	1074	-	-	295	309	616	296	290	763
Mov Cap-2 Maneuver	-	-	-	-	-	-	295	309	-	296	290	-
Stage 1	-	-	-	-	-	-	595	576	-	639	607	-
Stage 2	-	-	-	-	-	-	639	607	-	588	549	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	1	23.19	0
HCM LOS			C	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	344	1287	-	-	213	-	-	-
HCM Lane V/C Ratio	0.432	-	-	-	0.034	-	-	-
HCM Control Delay (s/veh)	23.2	0	-	-	8.5	0	-	0
HCM Lane LOS	C	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	2.1	0	-	-	0.1	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	174	291	66	37	310	256	78	320	38	334	351	235
Future Volume (veh/h)	174	291	66	37	310	256	78	320	38	334	351	235
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	189	316	72	40	337	278	85	348	41	363	382	255
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	242	605	472	75	414	323	132	486	57	505	777	512
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.15	0.32	0.32	0.05	0.22	0.22	0.08	0.15	0.14	0.31	0.38	0.36
Unsig. Movement Delay												
Ln Grp Delay, s/veh	53.1	26.4	22.5	48.7	42.4	21.5	46.4	51.7	52.3	33.2	24.4	25.3
Ln Grp LOS	D	C	C	D	D	C	D	D	D	C	C	C
Approach Vol, veh/h		577			655			474			1000	
Approach Delay, s/veh		34.7			33.9			51.0			27.8	
Approach LOS		C			C			D			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	2	1	3	4	5	6	7	8
Case No	4.0	2.0	2.0	3.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	18.1	32.6	8.2	34.1	11.5	39.2	17.7	24.6
Change Period (Y+Rc), s	* 5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green (Gmax), s	* 20	17.0	7.3	27.9	9.3	26.5	12.3	22.9
Max Allow Headway (MAH), s	4.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Max Q Clear (g_c+I1), s	11.7	20.3	4.2	14.8	6.7	15.6	12.3	17.9
Green Ext Time (g_e), s	0.9	0.0	0.0	1.1	0.0	1.9	0.0	1.2
Prob of Phs Call (p_c)	1.00	1.00	0.64	1.00	0.89	1.00	0.99	1.00
Prob of Max Out (p_x)	0.11	1.00	1.00	0.01	1.00	0.12	1.00	0.76

Left-Turn Movement Data								
Assigned Mvmt		1	3		5		7	
Mvmt Sat Flow, veh/h		1641	1641		1641		1641	

Through Movement Data								
Assigned Mvmt	2			4		6		8
Mvmt Sat Flow, veh/h	3205			1870		2052		1870

Right-Turn Movement Data								
Assigned Mvmt	12			14		16		18
Mvmt Sat Flow, veh/h	375			1460		1352		1460

Left Lane Group Data								
Assigned Mvmt	0	1	3	0	5	0	7	0

Lane Assignment		L (Prot)	L (Prot)		L (Prot)		L (Prot)	
Lanes in Grp	0	1	1	0	1	0	1	0
Grp Vol (v), veh/h	0	363	40	0	85	0	189	0
Grp Sat Flow (s), veh/h/ln	0	1641	1641	0	1641	0	1641	0
Q Serve Time (g_s), s	0.0	18.3	2.2	0.0	4.7	0.0	10.3	0.0
Cycle Q Clear Time (g_c), s	0.0	18.3	2.2	0.0	4.7	0.0	10.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	505	75	0	132	0	242	0
V/C Ratio (X)	0.00	0.72	0.54	0.00	0.65	0.00	0.78	0.00
Avail Cap (c_a), veh/h	0	505	155	0	191	0	243	0
Upstream Filter (I)	0.00	0.92	0.90	0.00	0.95	0.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	28.6	43.4	0.0	41.5	0.0	38.2	0.0
Incr Delay (d2), s/veh	0.0	4.5	5.3	0.0	4.9	0.0	14.9	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	33.2	48.7	0.0	46.4	0.0	53.1	0.0
1st-Term Q (Q1), veh/ln	0.0	6.5	0.8	0.0	1.8	0.0	3.8	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.1	0.0	0.2	0.0	1.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	7.1	1.0	0.0	1.9	0.0	4.8	0.0
%ile Storage Ratio (RQ%)	0.00	0.90	0.49	0.00	0.25	0.00	0.82	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	2	0	0	4	0	6	0	8
Lane Assignment	T			T		T		T
Lanes in Grp	1	0	0	1	0	1	0	1
Grp Vol (v), veh/h	192	0	0	316	0	330	0	337
Grp Sat Flow (s), veh/h/ln	1777	0	0	1870	0	1777	0	1870
Q Serve Time (g_s), s	9.5	0.0	0.0	12.8	0.0	13.2	0.0	15.9
Cycle Q Clear Time (g_c), s	9.5	0.0	0.0	12.8	0.0	13.2	0.0	15.9
Lane Grp Cap (c), veh/h	269	0	0	605	0	673	0	414
V/C Ratio (X)	0.71	0.00	0.00	0.52	0.00	0.49	0.00	0.81
Avail Cap (c_a), veh/h	417	0	0	605	0	673	0	491
Upstream Filter (I)	0.95	0.00	0.00	1.00	0.00	0.92	0.00	0.90
Uniform Delay (d1), s/veh	37.5	0.0	0.0	25.6	0.0	22.0	0.0	34.4
Incr Delay (d2), s/veh	14.2	0.0	0.0	0.8	0.0	2.3	0.0	8.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	51.7	0.0	0.0	26.4	0.0	24.4	0.0	42.4
1st-Term Q (Q1), veh/ln	3.9	0.0	0.0	5.1	0.0	4.9	0.0	6.6

2nd-Term Q (Q2), veh/ln	1.1	0.0	0.0	0.1	0.0	0.4	0.0	0.9
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	4.9	0.0	0.0	5.3	0.0	5.3	0.0	7.5
%ile Storage Ratio (RQ%)	0.04	0.00	0.00	0.03	0.00	0.09	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	12	0	0	14	0	16	0	18
Lane Assignment	T+R			R		T+R		R
Lanes in Grp	1	0	0	1	0	1	0	1
Grp Vol (v), veh/h	197	0	0	72	0	307	0	278
Grp Sat Flow (s), veh/h/ln	1803	0	0	1460	0	1627	0	1460
Q Serve Time (g_s), s	9.7	0.0	0.0	3.3	0.0	13.6	0.0	7.7
Cycle Q Clear Time (g_c), s	9.7	0.0	0.0	3.3	0.0	13.6	0.0	7.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.21	0.00	0.00	1.00	0.00	0.83	0.00	1.00
Lane Grp Cap (c), veh/h	273	0	0	472	0	616	0	323
V/C Ratio (X)	0.72	0.00	0.00	0.15	0.00	0.50	0.00	0.86
Avail Cap (c_a), veh/h	423	0	0	472	0	616	0	383
Upstream Filter (I)	0.95	0.00	0.00	1.00	0.00	0.92	0.00	0.90
Uniform Delay (d1), s/veh	37.7	0.0	0.0	22.4	0.0	22.6	0.0	7.2
Incr Delay (d2), s/veh	14.5	0.0	0.0	0.1	0.0	2.6	0.0	14.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	52.3	0.0	0.0	22.5	0.0	25.3	0.0	21.5
1st-Term Q (Q1), veh/ln	4.0	0.0	0.0	1.0	0.0	4.7	0.0	4.8
2nd-Term Q (Q2), veh/ln	1.1	0.0	0.0	0.0	0.0	0.5	0.0	1.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	5.1	0.0	0.0	1.0	0.0	5.1	0.0	6.1
%ile Storage Ratio (RQ%)	0.05	0.00	0.00	0.26	0.00	0.09	0.00	3.10
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	34.8
HCM 7th LOS	C

Notes

* HCM 7th Edition computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	196	265	52	85	276	94	83	371	78	116	345	267
Future Volume (veh/h)	196	265	52	85	276	94	83	371	78	116	345	267
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	213	288	57	92	300	102	90	403	85	126	375	290
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	397	871	680	469	621	211	298	756	590	318	756	590
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.47	0.47	0.47	0.47	0.47	0.44	0.40	0.40	0.40	0.40	0.40	0.40
Unsig. Movement Delay												
Ln Grp Delay, s/veh	20.3	10.6	9.2	13.8	0.0	11.9	20.1	14.5	11.7	21.7	14.1	14.2
Ln Grp LOS	C	B	A	B		B	C	B	B	C	B	B
Approach Vol, veh/h		558			494			578			791	
Approach Delay, s/veh		14.1			12.3			14.9			15.4	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		5.0		5.0		6.0
Phs Duration (G+Y+Rc), s		28.8		32.6		28.8		32.6
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5
Max Green (Gmax), s		34.5		44.5		34.5		44.5
Max Allow Headway (MAH), s		4.4		4.6		4.4		4.3
Max Q Clear (g_c+I1), s		17.8		24.7		20.3		12.1
Green Ext Time (g_e), s		2.3		2.5		3.0		2.1
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.02		0.01		0.11		0.00

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		710		905		836		954

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1335

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1460		1460		1460		454

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3

Lane Assignment		L		L		L		L
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	90	0	213	0	126	0	92
Grp Sat Flow (s), veh/h/ln	0	710	0	905	0	836	0	954
Q Serve Time (g_s), s	0.0	6.6	0.0	13.1	0.0	8.3	0.0	4.1
Cycle Q Clear Time (g_c), s	0.0	15.8	0.0	22.7	0.0	18.3	0.0	10.1
Perm LT Sat Flow (s_l), veh/h/ln	0	710	0	905	0	836	0	954
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	24.8	0.0	28.6	0.0	24.8	0.0	28.6
Perm LT Serve Time (g_u), s	0.0	15.7	0.0	19.0	0.0	14.8	0.0	22.6
Perm LT Q Serve Time (g_ps), s	0.0	6.6	0.0	13.1	0.0	8.3	0.0	4.1
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	298	0	397	0	318	0	469
V/C Ratio (X)	0.00	0.30	0.00	0.54	0.00	0.40	0.00	0.20
Avail Cap (c_a), veh/h	0	427	0	653	0	470	0	738
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	19.5	0.0	19.2	0.0	20.9	0.0	13.6
Incr Delay (d2), s/veh	0.0	0.6	0.0	1.1	0.0	0.8	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.1	0.0	20.3	0.0	21.7	0.0	13.8
1st-Term Q (Q1), veh/ln	0.0	0.9	0.0	2.2	0.0	1.3	0.0	0.7
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.9	0.0	2.3	0.0	1.4	0.0	0.7
%ile Storage Ratio (RQ%)	0.00	0.22	0.00	0.58	0.00	0.51	0.00	0.18
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	403	0	288	0	375	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	0
Q Serve Time (g_s), s	0.0	10.1	0.0	6.0	0.0	9.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	10.1	0.0	6.0	0.0	9.2	0.0	0.0
Lane Grp Cap (c), veh/h	0	756	0	871	0	756	0	0
V/C Ratio (X)	0.00	0.53	0.00	0.33	0.00	0.50	0.00	0.00
Avail Cap (c_a), veh/h	0	1096	0	1400	0	1096	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	13.9	0.0	10.4	0.0	13.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.2	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.5	0.0	10.6	0.0	14.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	3.2	0.0	1.7	0.0	2.9	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.3	0.0	1.8	0.0	3.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.01	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	85	0	57	0	290	0	402
Grp Sat Flow (s), veh/h/ln	0	1460	0	1460	0	1460	0	1789
Q Serve Time (g_s), s	0.0	2.3	0.0	1.3	0.0	9.1	0.0	9.6
Cycle Q Clear Time (g_c), s	0.0	2.3	0.0	1.3	0.0	9.1	0.0	9.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.25
Lane Grp Cap (c), veh/h	0	590	0	680	0	590	0	833
V/C Ratio (X)	0.00	0.14	0.00	0.08	0.00	0.49	0.00	0.48
Avail Cap (c_a), veh/h	0	855	0	1093	0	855	0	1339
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	11.6	0.0	9.1	0.0	13.6	0.0	11.5
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.1	0.0	0.6	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.7	0.0	9.2	0.0	14.2	0.0	11.9
1st-Term Q (Q1), veh/ln	0.0	0.6	0.0	0.3	0.0	2.2	0.0	2.7
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.6	0.0	0.3	0.0	2.3	0.0	2.8
%ile Storage Ratio (RQ%)	0.00	0.15	0.00	0.16	0.00	0.30	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	14.4
HCM 7th LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	9	142	172	19	193	175
Future Volume (veh/h)	9	142	172	19	193	175
Number	3	18	2	12	1	6
Initial Q, veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Lanes Open During Work Zone						
Adj Sat Flow, veh/h/ln	1723	1723	1870	1723	1723	1870
Adj Flow Rate, veh/h	10	154	187	21	210	190
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Opposing Right Turn Influence	Yes				Yes	
Cap, veh/h	207	184	1316	148	903	1490
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.13	0.13	0.80	0.80	0.80	0.80
Unsig. Movement Delay						
Ln Grp Delay, s/veh	40.0	53.9	0.0	2.6	3.9	2.5
Ln Grp LOS	D	D		A	A	A
Approach Vol, veh/h	164		208			400
Approach Delay, s/veh	53.1		2.6			3.3
Approach LOS	D		A			A

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8			6		
Case No		8.0	9.0			6.0		
Phs Duration (G+Y+Rc), s		86.9	17.1			86.9		
Change Period (Y+Rc), s		4.0	4.0			4.0		
Max Green (Gmax), s		64.0	32.0			64.0		
Max Allow Headway (MAH), s		4.0	4.3			4.4		
Max Q Clear (g_c+I1), s		4.7	12.7			10.4		
Green Ext Time (g_e), s		0.7	0.5			1.7		
Prob of Phs Call (p_c)		1.00	0.99			1.00		
Prob of Max Out (p_x)		0.00	0.00			0.00		

Left-Turn Movement Data								
Assigned Mvmt		5	3			1		
Mvmt Sat Flow, veh/h		0	1641			1081		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		1652	0			1870		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		185	1460			0		

Left Lane Group Data								
Assigned Mvmt	0	5	3	0	0	1	0	0

Lane Assignment			L			L		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	10	0	0	210	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1641	0	0	1081	0	0
Q Serve Time (g_s), s	0.0	0.0	0.6	0.0	0.0	5.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.6	0.0	0.0	8.4	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1641	0	0	1081	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	82.9	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	80.2	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	5.7	0.0	0.0
Time to First Blk (g_f), s	0.0	82.9	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	207	0	0	903	0	0
V/C Ratio (X)	0.00	0.00	0.05	0.00	0.00	0.23	0.00	0.00
Avail Cap (c_a), veh/h	0	0	505	0	0	903	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.90	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	39.9	0.0	0.0	3.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	40.0	0.0	0.0	3.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.2	0.0	0.0	0.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.2	0.0	0.0	0.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.04	0.00	0.00	0.10	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	190	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	1490	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1490	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.90	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment		T+R	R					
Lanes in Grp	0	1	1	0	0	0	0	0
Grp Vol (v), veh/h	0	208	154	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1837	1460	0	0	0	0	0
Q Serve Time (g_s), s	0.0	2.7	10.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	2.7	10.7	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.10	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1464	184	0	0	0	0	0
V/C Ratio (X)	0.00	0.14	0.84	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1464	449	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	2.4	44.4	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	9.5	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.6	53.9	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.4	3.7	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.5	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.5	4.1	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.03	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	13.7
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	240	0	636	44	1473	0	0	1741	817
Future Volume (veh/h)	0	0	0	240	0	636	44	1473	0	0	1741	817
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1723	0	1723	1723	1870	0	0	1870	1723
Adj Flow Rate, veh/h				261	0	691	48	1601	0	0	1892	888
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				916	0	739	63	2266	0	0	2794	799
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.29	0.00	0.29	0.08	1.00	0.00	0.00	0.55	0.55
Unsig. Movement Delay												
Ln Grp Delay, s/veh				29.5	0.0	55.3	70.4	1.4	0.0	0.0	18.6	91.0
Ln Grp LOS				C		E	E	A			B	F
Approach Vol, veh/h					952			1649			2780	
Approach Delay, s/veh					48.2			3.4			41.7	
Approach LOS					D			A			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		6	5		
Case No		4.0	9.0		7.0	2.0		
Phs Duration (G+Y+Rc), s		71.6	34.4		62.0	9.6		
Change Period (Y+Rc), s		5.5	4.0		* 5.5	5.5		
Max Green (Gmax), s		65.5	31.0		* 57	5.0		
Max Allow Headway (MAH), s		4.0	4.3		4.1	4.1		
Max Q Clear (g_c+I1), s		2.0	29.8		60.0	5.0		
Green Ext Time (g_e), s		10.7	0.6		0.0	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	0.76		
Prob of Max Out (p_x)		0.00	1.00		1.00	1.00		

Left-Turn Movement Data						
Assigned Mvmt			3		1	5
Mvmt Sat Flow, veh/h			3183		0	1641

Through Movement Data						
Assigned Mvmt		2	8		6	
Mvmt Sat Flow, veh/h		3647	0		5274	

Right-Turn Movement Data						
Assigned Mvmt		12	18		16	
Mvmt Sat Flow, veh/h		0	2569		1460	

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	1	5	0	0

Lane Assignment			L			L (Prot)		
Lanes in Grp	0	0	2	0	0	1	0	0
Grp Vol (v), veh/h	0	0	261	0	0	48	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1591	0	0	1641	0	0
Q Serve Time (g_s), s	0.0	0.0	6.7	0.0	0.0	3.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	6.7	0.0	0.0	3.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1591	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	58.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	916	0	0	63	0	0
V/C Ratio (X)	0.00	0.00	0.28	0.00	0.00	0.76	0.00	0.00
Avail Cap (c_a), veh/h	0	0	934	0	0	77	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.74	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	29.3	0.0	0.0	48.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.2	0.0	0.0	21.9	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	29.5	0.0	0.0	70.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	2.4	0.0	0.0	1.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	2.4	0.0	0.0	1.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.23	0.00	0.00	0.10	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	6	0	0	0
Lane Assignment		T			T			
Lanes in Grp	0	2	0	0	3	0	0	0
Grp Vol (v), veh/h	0	1601	0	0	1892	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	1702	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	28.3	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	28.3	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	2266	0	0	2794	0	0	0
V/C Ratio (X)	0.00	0.71	0.00	0.00	0.68	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	2266	0	0	2794	0	0	0
Upstream Filter (I)	0.00	0.74	0.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	17.3	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.4	0.0	0.0	1.3	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	1.4	0.0	0.0	18.6	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	9.3	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.0	0.3	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.4	0.0	0.0	9.7	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.00	0.07	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	18	0	16	0	0	0
Lane Assignment			R		R			
Lanes in Grp	0	0	2	0	1	0	0	0
Grp Vol (v), veh/h	0	0	691	0	888	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1285	0	1460	0	0	0
Q Serve Time (g_s), s	0.0	0.0	27.8	0.0	58.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	27.8	0.0	58.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	739	0	799	0	0	0
V/C Ratio (X)	0.00	0.00	0.93	0.00	1.11	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	754	0	799	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	36.8	0.0	24.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	18.6	0.0	67.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	55.3	0.0	91.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	8.0	0.0	16.5	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	1.9	0.0	14.9	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	9.9	0.0	31.3	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.61	0.00	6.37	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	22.3	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	31.1
HCM 7th LOS	C

Notes

* HCM 7th Edition computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	613	0	48	0	0	0	0	934	194	0	1258	0
Future Volume (veh/h)	613	0	48	0	0	0	0	934	194	0	1258	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	0	1723				0	1870	1723	0	1870	1723
Adj Flow Rate, veh/h	666	0	52				0	1015	211	0	1367	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Opposing Right Turn Influence	Yes						No			No		
Cap, veh/h	771	0	354				0	2002	415	0	2428	998
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	2.00	2.00
Prop Arrive On Green	0.24	0.00	0.24				0.00	0.68	0.67	0.00	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	45.0	0.0	31.7				0.0	8.7	8.9	0.0	0.7	0.0
Ln Grp LOS	D		C					A	A		A	
Approach Vol, veh/h		718						1226			1367	
Approach Delay, s/veh		44.0						8.8			0.7	
Approach LOS		D						A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Case No		8.0		9.0		7.0		
Phs Duration (G+Y+Rc), s		76.4		29.6		76.4		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green (Gmax), s		63.5		33.0		63.5		
Max Allow Headway (MAH), s		4.1		4.1		4.0		
Max Q Clear (g_c+I1), s		20.1		23.3		2.0		
Green Ext Time (g_e), s		5.7		2.3		8.1		
Prob of Phs Call (p_c)		1.00		1.00		1.00		
Prob of Max Out (p_x)		0.00		0.18		0.00		

Left-Turn Movement Data						
Assigned Mvmt		5		7		1
Mvmt Sat Flow, veh/h		0		3183		0

Through Movement Data						
Assigned Mvmt		2		4		6
Mvmt Sat Flow, veh/h		3024		0		3647

Right-Turn Movement Data						
Assigned Mvmt		12		14		16
Mvmt Sat Flow, veh/h		608		1460		1460

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	0

Lane Assignment				L				
Lanes in Grp	0	0	0	2	0	0	0	0
Grp Vol (v), veh/h	0	0	0	666	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1591	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1591	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	72.4	0.0	0.0	0.0	72.4	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	771	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.86	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	994	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	38.5	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	6.5	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	45.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	7.7	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	8.4	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.42	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	615	0	0	0	1367	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	17.8	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	17.8	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1214	0	0	0	2428	0	0
V/C Ratio (X)	0.00	0.51	0.00	0.00	0.00	0.56	0.00	0.00
Avail Cap (c_a), veh/h	0	1214	0	0	0	2428	0	0
Upstream Filter (I)	0.00	0.41	0.00	0.00	0.00	0.77	0.00	0.00
Uniform Delay (d1), s/veh	0.0	8.1	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.0	0.0	0.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.7	0.0	0.0	0.0	0.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	5.2	0.0	0.0	0.0	0.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.09	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	611	0	52	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1761	0	1460	0	1460	0	0
Q Serve Time (g_s), s	0.0	18.1	0.0	3.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	18.1	0.0	3.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.35	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1203	0	354	0	998	0	0
V/C Ratio (X)	0.00	0.51	0.00	0.15	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1203	0	456	0	998	0	0
Upstream Filter (I)	0.00	0.41	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	8.3	0.0	31.6	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.9	0.0	31.7	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.1	0.0	1.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	5.3	0.0	1.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.09	0.00	0.03	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	13.1
HCM 7th LOS	B

Intersection	
Intersection Delay, s/veh	6.0
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	699	682	0	440
Demand Flow Rate, veh/h	713	696	0	448
Vehicles Circulating, veh/h	725	114	346	461
Vehicles Exiting, veh/h	175	232	653	114
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.4	4.4	0.0	10.9
Approach LOS	A	A	-	B

Lane	Left	Bypass	Left	Bypass	Left	Left	Bypass
Designated Moves	LT	R	LT	R	LTR	LT	R
Assumed Moves	LT		LT		LTR	LT	
RT Channelized		Free		Free			Free
Lane Util	1.000		1.000		1.000	1.000	
Follow-Up Headway, s	2.609		2.609		2.609	2.609	
Critical Headway, s	4.976		4.976		4.976	4.976	
A (Intercept)	1380		1380		1380	1380	
B (Slope)	1.02e-3		1.02e-3		1.02e-3	1.02e-3	
Entry Flow, veh/h	274	439	461	235	0	439	9
Cap Entry Lane, veh/h	659	1938	1228	1938	970	862	1938
Entry HV Adj Factor	0.981	0.980	0.980	0.980	1.000	0.981	0.980
Flow Entry, veh/h	269	430	452	230	0	431	9
Cap Entry, veh/h	646	1900	1203	1900	970	846	1900
V/C Ratio	0.416	0.226	0.375	0.121	0.000	0.509	0.005
Control Delay, s/veh	11.6	0.0	6.7	0.0	3.7	11.1	0.0
LOS	B	A	A	A	A	B	A
95th %tile Queue, veh	2	1	2	0	0	3	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	383	12	248	0	0	0	0	366	76	203	274	0
Future Volume (veh/h)	383	12	248	0	0	0	0	366	76	203	274	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723				0	1870	1723	1723	1870	0
Adj Flow Rate, veh/h	416	13	270				0	398	83	221	298	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	499	0	444				0	841	175	308	379	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.30	0.30	0.30				0.00	0.56	0.54	0.56	0.56	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	25.4	0.0	18.9				0.0	0.0	8.2	15.0	0.0	0.0
Ln Grp LOS	C		B						A	B		
Approach Vol, veh/h		686						481			519	
Approach Delay, s/veh		22.8						8.2			15.0	
Approach LOS		C						A			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Case No		8.0		9.0		8.0		
Phs Duration (G+Y+Rc), s		37.2		22.0		37.2		
Change Period (Y+Rc), s		5.5		4.1		5.5		
Max Green (Gmax), s		55.5		24.9		55.5		
Max Allow Headway (MAH), s		4.1		4.2		4.6		
Max Q Clear (g_c+I1), s		11.5		16.0		29.0		
Green Ext Time (g_e), s		1.9		1.9		2.7		
Prob of Phs Call (p_c)		1.00		1.00		1.00		
Prob of Max Out (p_x)		0.00		0.26		0.00		

Left-Turn Movement Data						
Assigned Mvmt		5		7		1
Mvmt Sat Flow, veh/h		0		1641		394

Through Movement Data						
Assigned Mvmt		2		4		6
Mvmt Sat Flow, veh/h		1501		0		676

Right-Turn Movement Data						
Assigned Mvmt		12		14		16
Mvmt Sat Flow, veh/h		313		1460		0

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	0

Lane Assignment				L		L+T		
Lanes in Grp	0	0	0	1	0	1	0	0
Grp Vol (v), veh/h	0	0	0	416	0	519	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1641	0	1070	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	14.0	0.0	17.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	14.0	0.0	27.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1641	0	928	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	33.2	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	23.7	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	17.6	0.0	0.0
Time to First Blk (g_f), s	0.0	33.2	0.0	0.0	0.0	2.6	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	0.00	0.43	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	499	0	686	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.83	0.00	0.76	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	693	0	1207	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	19.2	0.0	13.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	6.2	0.0	1.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	25.4	0.0	15.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	4.1	0.0	4.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.9	0.0	0.3	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	5.0	0.0	4.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.36	0.00	0.91	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		T+R		R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	481	0	270	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1814	0	1460	0	0	0	0
Q Serve Time (g_s), s	0.0	9.5	0.0	9.3	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	9.5	0.0	9.3	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.17	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1017	0	444	0	0	0	0
V/C Ratio (X)	0.00	0.47	0.00	0.61	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1747	0	617	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.9	0.0	17.6	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	1.3	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.2	0.0	18.9	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.1	0.0	2.5	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	2.2	0.0	2.6	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.21	0.00	0.19	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	16.2
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	67.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	728	136	43	289	0	181	0	70	0	0	0
Future Vol, veh/h	0	728	136	43	289	0	181	0	70	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	791	148	47	314	0	197	0	76	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	314	0	0	939	0	0	1273	1273	865	1199	1347	314
Stage 1	-	-	-	-	-	-	865	865	-	408	408	-
Stage 2	-	-	-	-	-	-	408	408	-	791	939	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1246	-	-	730	-	-	~ 144	167	353	162	151	726
Stage 1	-	-	-	-	-	-	348	371	-	620	597	-
Stage 2	-	-	-	-	-	-	620	597	-	383	343	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1246	-	-	730	-	-	~ 133	154	353	117	139	726
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 133	154	-	117	139	-
Stage 1	-	-	-	-	-	-	348	371	-	572	551	-
Stage 2	-	-	-	-	-	-	572	551	-	300	343	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	1.33	$ 386.96	0
HCM LOS			F	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	161	1246	-	-	233	-	-	-
HCM Lane V/C Ratio	1.694	-	-	-	0.064	-	-	-
HCM Control Delay (s/veh)	$ 387	0	-	-	10.3	0	-	0
HCM Lane LOS	F	A	-	-	B	A	-	A
HCM 95th %tile Q(veh)	19.3	0	-	-	0.2	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	174	360	71	51	336	349	75	447	54	476	491	216
Future Volume (veh/h)	174	360	71	51	336	349	75	447	54	476	491	216
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	189	391	77	55	365	379	82	486	59	517	534	235
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	219	575	449	673	1093	853	122	564	68	551	1053	462
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.13	0.31	0.31	0.41	0.58	0.58	0.07	0.18	0.16	0.34	0.44	0.43
Unsig. Movement Delay												
Ln Grp Delay, s/veh	79.1	42.7	51.0	21.7	13.6	11.5	60.1	67.4	68.2	59.3	24.8	25.2
Ln Grp LOS	E	D	D	C	B	B	E	E	E	E	C	C
Approach Vol, veh/h		657			799			627			1286	
Approach Delay, s/veh		54.2			13.2			66.8			38.8	
Approach LOS		D			B			E			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	2	1	4	3	5	6	7	8
Case No	4.0	2.0	3.0	2.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	25.2	44.3	40.9	54.5	12.9	56.6	20.0	75.4
Change Period (Y+Rc), s	* 5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green (Gmax), s	* 20	39.0	35.4	5.4	11.6	45.6	14.5	26.3
Max Allow Headway (MAH), s	4.0	4.1	4.0	4.1	4.1	4.1	4.1	4.2
Max Q Clear (g_c+I1), s	19.8	38.7	24.0	4.5	7.8	21.5	15.5	16.8
Green Ext Time (g_e), s	0.0	0.1	1.3	0.0	0.1	3.0	0.0	2.2
Prob of Phs Call (p_c)	1.00	1.00	1.00	0.84	0.93	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	1.00	0.00	1.00	1.00	0.01	1.00	0.00

Left-Turn Movement Data								
Assigned Mvmt		1		3	5		7	
Mvmt Sat Flow, veh/h		1641		1641	1641		1641	

Through Movement Data								
Assigned Mvmt	2		4			6		8
Mvmt Sat Flow, veh/h	3192		1870			2403		1870

Right-Turn Movement Data								
Assigned Mvmt	12		14			16		18
Mvmt Sat Flow, veh/h	386		1460			1054		1460

Left Lane Group Data								
Assigned Mvmt	0	1	0	3	5	0	7	0

Lane Assignment		L (Prot)		L (Prot)	L (Prot)		L (Prot)	
Lanes in Grp	0	1	0	1	1	0	1	0
Grp Vol (v), veh/h	0	517	0	55	82	0	189	0
Grp Sat Flow (s), veh/h/ln	0	1641	0	1641	1641	0	1641	0
Q Serve Time (g_s), s	0.0	36.7	0.0	2.5	5.8	0.0	13.5	0.0
Cycle Q Clear Time (g_c), s	0.0	36.7	0.0	2.5	5.8	0.0	13.5	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	551	0	673	122	0	219	0
V/C Ratio (X)	0.00	0.94	0.00	0.08	0.67	0.00	0.86	0.00
Avail Cap (c_a), veh/h	0	554	0	673	179	0	219	0
Upstream Filter (I)	0.00	0.80	0.00	0.87	0.93	0.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	38.7	0.0	21.6	54.1	0.0	50.9	0.0
Incr Delay (d2), s/veh	0.0	20.6	0.0	0.0	5.9	0.0	28.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	59.3	0.0	21.7	60.1	0.0	79.1	0.0
1st-Term Q (Q1), veh/ln	0.0	13.7	0.0	0.9	2.3	0.0	5.3	0.0
2nd-Term Q (Q2), veh/ln	0.0	3.2	0.0	0.0	0.2	0.0	1.7	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	16.9	0.0	0.9	2.5	0.0	7.0	0.0
%ile Storage Ratio (RQ%)	0.00	2.14	0.00	0.46	0.32	0.00	1.19	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	2	0	4	0	0	6	0	8
Lane Assignment	T		T			T		T
Lanes in Grp	1	0	1	0	0	1	0	1
Grp Vol (v), veh/h	270	0	391	0	0	394	0	365
Grp Sat Flow (s), veh/h/ln	1777	0	1870	0	0	1777	0	1870
Q Serve Time (g_s), s	17.7	0.0	22.0	0.0	0.0	19.2	0.0	12.1
Cycle Q Clear Time (g_c), s	17.7	0.0	22.0	0.0	0.0	19.2	0.0	12.1
Lane Grp Cap (c), veh/h	314	0	575	0	0	779	0	1093
V/C Ratio (X)	0.86	0.00	0.68	0.00	0.00	0.51	0.00	0.33
Avail Cap (c_a), veh/h	314	0	575	0	0	779	0	1093
Upstream Filter (I)	0.93	0.00	1.00	0.00	0.00	0.80	0.00	0.87
Uniform Delay (d1), s/veh	48.0	0.0	36.4	0.0	0.0	24.3	0.0	12.9
Incr Delay (d2), s/veh	19.4	0.0	6.4	0.0	0.0	0.4	0.0	0.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	67.4	0.0	42.7	0.0	0.0	24.8	0.0	13.6
1st-Term Q (Q1), veh/ln	7.4	0.0	9.4	0.0	0.0	7.5	0.0	4.5

2nd-Term Q (Q2), veh/ln	1.7	0.0	1.0	0.0	0.0	0.1	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	9.1	0.0	10.4	0.0	0.0	7.6	0.0	4.7
%ile Storage Ratio (RQ%)	0.08	0.00	0.05	0.00	0.00	0.13	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	12	0	14	0	0	16	0	18
Lane Assignment	T+R		R			T+R		R
Lanes in Grp	1	0	1	0	0	1	0	1
Grp Vol (v), veh/h	275	0	77	0	0	375	0	379
Grp Sat Flow (s), veh/h/ln	1801	0	1460	0	0	1681	0	1460
Q Serve Time (g_s), s	17.8	0.0	5.9	0.0	0.0	19.5	0.0	14.8
Cycle Q Clear Time (g_c), s	17.8	0.0	5.9	0.0	0.0	19.5	0.0	14.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.21	0.00	1.00	0.00	0.00	0.63	0.00	1.00
Lane Grp Cap (c), veh/h	318	0	449	0	0	736	0	853
V/C Ratio (X)	0.87	0.00	0.17	0.00	0.00	0.51	0.00	0.44
Avail Cap (c_a), veh/h	318	0	449	0	0	736	0	853
Upstream Filter (I)	0.93	0.00	1.00	0.00	0.00	0.80	0.00	0.87
Uniform Delay (d1), s/veh	48.2	0.0	50.2	0.0	0.0	24.8	0.0	10.0
Incr Delay (d2), s/veh	20.0	0.0	0.8	0.0	0.0	0.5	0.0	1.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	68.2	0.0	51.0	0.0	0.0	25.2	0.0	11.5
1st-Term Q (Q1), veh/ln	7.6	0.0	1.6	0.0	0.0	7.2	0.0	3.9
2nd-Term Q (Q2), veh/ln	1.8	0.0	0.1	0.0	0.0	0.1	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	9.4	0.0	1.7	0.0	0.0	7.3	0.0	4.3
%ile Storage Ratio (RQ%)	0.09	0.00	0.43	0.00	0.00	0.13	0.00	2.18
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	40.9
HCM 7th LOS	D

Notes

* HCM 7th Edition computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	269	429	69	109	308	119	97	520	109	163	484	311
Future Volume (veh/h)	269	429	69	109	308	119	97	520	109	163	484	311
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	292	466	75	118	335	129	105	565	118	177	526	338
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	366	970	758	354	667	257	170	759	592	172	759	592
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.52	0.52	0.52	0.52	0.52	0.50	0.41	0.41	0.41	0.41	0.41	0.41
Unsig. Movement Delay												
Ln Grp Delay, s/veh	42.5	17.1	13.1	28.1	0.0	18.7	50.7	30.8	20.5	125.6	28.8	25.7
Ln Grp LOS	D	B	B	C		B	D	C	C	F	C	C
Approach Vol, veh/h		833			582			788			1041	
Approach Delay, s/veh		25.7			20.6			31.9			44.2	
Approach LOS		C			C			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		5.0		5.0		6.0
Phs Duration (G+Y+Rc), s		47.0		59.0		47.0		59.0
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5
Max Green (Gmax), s		41.5		53.5		41.5		53.5
Max Allow Headway (MAH), s		4.5		4.6		4.5		4.5
Max Q Clear (g_c+I1), s		45.0		55.9		45.0		30.7
Green Ext Time (g_e), s		0.0		0.0		0.0		2.6
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		1.00		0.00		1.00		0.00

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		590		855		698		796

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1286

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1460		1460		1460		495

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3

Lane Assignment		L		L		L		L
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	105	0	292	0	177	0	118
Grp Sat Flow (s), veh/h/ln	0	590	0	855	0	698	0	796
Q Serve Time (g_s), s	0.0	18.4	0.0	35.8	0.0	15.7	0.0	11.8
Cycle Q Clear Time (g_c), s	0.0	43.0	0.0	53.9	0.0	43.0	0.0	28.7
Perm LT Sat Flow (s_l), veh/h/ln	0	590	0	855	0	698	0	796
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	43.0	0.0	55.0	0.0	43.0	0.0	55.0
Perm LT Serve Time (g_u), s	0.0	18.4	0.0	36.9	0.0	15.7	0.0	38.1
Perm LT Q Serve Time (g_ps), s	0.0	18.4	0.0	35.8	0.0	15.7	0.0	11.8
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	170	0	366	0	172	0	354
V/C Ratio (X)	0.00	0.62	0.00	0.80	0.00	1.03	0.00	0.33
Avail Cap (c_a), veh/h	0	170	0	366	0	172	0	354
Upstream Filter (I)	0.00	1.00	0.00	0.47	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	44.1	0.0	34.2	0.0	48.2	0.0	25.5
Incr Delay (d2), s/veh	0.0	6.6	0.0	8.4	0.0	77.3	0.0	2.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	50.7	0.0	42.5	0.0	125.6	0.0	28.1
1st-Term Q (Q1), veh/ln	0.0	2.6	0.0	6.7	0.0	4.4	0.0	2.1
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.9	0.0	3.7	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.9	0.0	7.6	0.0	8.0	0.0	2.3
%ile Storage Ratio (RQ%)	0.00	0.67	0.00	1.92	0.00	2.92	0.00	0.59
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	565	0	466	0	526	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	0
Q Serve Time (g_s), s	0.0	27.3	0.0	16.9	0.0	24.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	27.3	0.0	16.9	0.0	24.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	759	0	970	0	759	0	0
V/C Ratio (X)	0.00	0.74	0.00	0.48	0.00	0.69	0.00	0.00
Avail Cap (c_a), veh/h	0	759	0	970	0	759	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.47	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	26.8	0.0	16.3	0.0	26.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	4.0	0.0	0.8	0.0	2.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	30.8	0.0	17.1	0.0	28.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	10.9	0.0	6.3	0.0	9.9	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.2	0.0	0.6	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	11.8	0.0	6.5	0.0	10.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.17	0.00	0.03	0.00	0.11	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	118	0	75	0	338	0	464
Grp Sat Flow (s), veh/h/ln	0	1460	0	1460	0	1460	0	1781
Q Serve Time (g_s), s	0.0	5.5	0.0	2.8	0.0	19.0	0.0	18.1
Cycle Q Clear Time (g_c), s	0.0	5.5	0.0	2.8	0.0	19.0	0.0	18.1
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.28
Lane Grp Cap (c), veh/h	0	592	0	758	0	592	0	924
V/C Ratio (X)	0.00	0.20	0.00	0.10	0.00	0.57	0.00	0.50
Avail Cap (c_a), veh/h	0	592	0	758	0	592	0	924
Upstream Filter (I)	0.00	1.00	0.00	0.47	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	20.4	0.0	12.9	0.0	24.4	0.0	16.8
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.1	0.0	1.3	0.0	1.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.5	0.0	13.1	0.0	25.7	0.0	18.7
1st-Term Q (Q1), veh/ln	0.0	1.7	0.0	0.8	0.0	5.9	0.0	6.4
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.5
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.8	0.0	0.8	0.0	6.1	0.0	6.9
%ile Storage Ratio (RQ%)	0.00	0.45	0.00	0.42	0.00	0.78	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	32.2
HCM 7th LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	11	173	288	33	365	323
Future Volume (veh/h)	11	173	288	33	365	323
Number	3	18	2	12	1	6
Initial Q, veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Lanes Open During Work Zone						
Adj Sat Flow, veh/h/ln	1723	1723	1870	1723	1723	1870
Adj Flow Rate, veh/h	12	188	313	36	397	351
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Opposing Right Turn Influence	Yes				Yes	
Cap, veh/h	239	213	1282	148	759	1457
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.15	0.15	0.78	0.78	0.78	0.78
Unsig. Movement Delay						
Ln Grp Delay, s/veh	39.0	73.0	0.0	3.6	9.0	3.5
Ln Grp LOS	D	E		A	A	A
Approach Vol, veh/h	200		349			748
Approach Delay, s/veh	71.0		3.6			6.4
Approach LOS	E		A			A

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8			6		
Case No		8.0	9.0			6.0		
Phs Duration (G+Y+Rc), s		86.5	19.5			86.5		
Change Period (Y+Rc), s		4.0	4.0			4.0		
Max Green (Gmax), s		81.0	17.0			81.0		
Max Allow Headway (MAH), s		4.0	4.3			4.7		
Max Q Clear (g_c+I1), s		7.5	15.4			28.3		
Green Ext Time (g_e), s		1.3	0.1			4.2		
Prob of Phs Call (p_c)		1.00	1.00			1.00		
Prob of Max Out (p_x)		0.00	1.00			0.00		

Left-Turn Movement Data								
Assigned Mvmt		5	3			1		
Mvmt Sat Flow, veh/h		0	1641			950		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		1647	0			1870		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		189	1460			0		

Left Lane Group Data								
Assigned Mvmt	0	5	3	0	0	1	0	0

Lane Assignment			L			L		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	12	0	0	397	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1641	0	0	950	0	0
Q Serve Time (g_s), s	0.0	0.0	0.7	0.0	0.0	20.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.7	0.0	0.0	26.3	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1641	0	0	950	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	82.5	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	77.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	20.8	0.0	0.0
Time to First Blk (g_f), s	0.0	82.5	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	239	0	0	759	0	0
V/C Ratio (X)	0.00	0.00	0.05	0.00	0.00	0.52	0.00	0.00
Avail Cap (c_a), veh/h	0	0	263	0	0	759	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.86	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	39.0	0.0	0.0	6.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	0.0	2.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	39.0	0.0	0.0	9.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.3	0.0	0.0	2.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.3	0.0	0.0	3.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.04	0.00	0.00	0.41	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	351	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	5.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	5.4	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	1457	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1457	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.86	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment		T+R	R					
Lanes in Grp	0	1	1	0	0	0	0	0
Grp Vol (v), veh/h	0	349	188	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1836	1460	0	0	0	0	0
Q Serve Time (g_s), s	0.0	5.5	13.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.5	13.4	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.10	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1430	213	0	0	0	0	0
V/C Ratio (X)	0.00	0.24	0.88	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1430	234	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	3.2	44.4	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	28.6	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.6	73.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.1	4.6	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	1.7	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.2	6.3	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.05	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	15.6
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	264	0	636	44	1497	0	0	1781	817
Future Volume (veh/h)	0	0	0	264	0	636	44	1497	0	0	1781	817
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1723	0	1723	1723	1870	0	0	1870	1723
Adj Flow Rate, veh/h				287	0	691	48	1627	0	0	1936	888
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				911	0	736	306	2833	0	0	2848	814
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.29	0.00	0.29	0.37	1.00	0.00	0.00	0.56	0.56
Unsig. Movement Delay												
Ln Grp Delay, s/veh				29.3	0.0	55.8	27.3	0.6	0.0	0.0	17.7	82.1
Ln Grp LOS				C		E	C	A			B	F
Approach Vol, veh/h					978			1675			2824	
Approach Delay, s/veh					48.0			1.4			38.0	
Approach LOS					D			A			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		6	5		
Case No		4.0	9.0		7.0	2.0		
Phs Duration (G+Y+Rc), s		87.1	33.7		62.0	25.1		
Change Period (Y+Rc), s		5.5	4.0		* 5.5	5.5		
Max Green (Gmax), s		64.5	30.0		* 57	4.0		
Max Allow Headway (MAH), s		4.0	4.3		4.1	4.1		
Max Q Clear (g_c+I1), s		2.0	29.3		60.0	4.0		
Green Ext Time (g_e), s		11.1	0.4		0.0	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	0.75		
Prob of Max Out (p_x)		0.00	1.00		1.00	1.00		

Left-Turn Movement Data								
Assigned Mvmt			3		1	5		
Mvmt Sat Flow, veh/h			3183		0	1641		

Through Movement Data								
Assigned Mvmt		2	8		6			
Mvmt Sat Flow, veh/h		3647	0		5274			

Right-Turn Movement Data								
Assigned Mvmt		12	18		16			
Mvmt Sat Flow, veh/h		0	2569		1460			

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	1	5	0	0

Lane Assignment			L			L (Prot)		
Lanes in Grp	0	0	2	0	0	1	0	0
Grp Vol (v), veh/h	0	0	287	0	0	48	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1591	0	0	1641	0	0
Q Serve Time (g_s), s	0.0	0.0	7.4	0.0	0.0	2.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	7.4	0.0	0.0	2.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1591	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	58.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	911	0	0	306	0	0
V/C Ratio (X)	0.00	0.00	0.31	0.00	0.00	0.16	0.00	0.00
Avail Cap (c_a), veh/h	0	0	921	0	0	306	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.73	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	29.1	0.0	0.0	27.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	29.3	0.0	0.0	27.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	2.6	0.0	0.0	0.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	2.6	0.0	0.0	0.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.25	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	6	0	0	0
Lane Assignment		T			T			
Lanes in Grp	0	2	0	0	3	0	0	0
Grp Vol (v), veh/h	0	1627	0	0	1936	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	1702	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	28.1	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	28.1	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	2833	0	0	2848	0	0	0
V/C Ratio (X)	0.00	0.57	0.00	0.00	0.68	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	2833	0	0	2848	0	0	0
Upstream Filter (I)	0.00	0.73	0.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	16.4	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.0	1.3	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.6	0.0	0.0	17.7	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	9.1	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.4	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	9.4	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.07	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	18	0	16	0	0	0
Lane Assignment			R		R			
Lanes in Grp	0	0	2	0	1	0	0	0
Grp Vol (v), veh/h	0	0	691	0	888	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1285	0	1460	0	0	0
Q Serve Time (g_s), s	0.0	0.0	27.3	0.0	58.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	27.3	0.0	58.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	736	0	814	0	0	0
V/C Ratio (X)	0.00	0.00	0.94	0.00	1.09	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	744	0	814	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	36.2	0.0	23.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	19.6	0.0	59.1	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	55.8	0.0	82.1	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	7.9	0.0	16.1	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	2.0	0.0	13.4	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	9.9	0.0	29.5	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.60	0.00	5.99	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	18.5	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	28.6
HCM 7th LOS	C

Notes

* HCM 7th Edition computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	613	0	48	0	0	0	0	958	208	0	1322	0
Future Volume (veh/h)	613	0	48	0	0	0	0	958	208	0	1322	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	0	1723				0	1870	1723	0	1870	1723
Adj Flow Rate, veh/h	666	0	52				0	1041	226	0	1437	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Opposing Right Turn Influence	Yes						No			No		
Cap, veh/h	767	0	352				0	1984	429	0	2427	997
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	2.00	2.00
Prop Arrive On Green	0.24	0.00	0.24				0.00	0.68	0.67	0.00	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	45.1	0.0	31.2				0.0	8.9	9.1	0.0	0.8	0.0
Ln Grp LOS	D		C					A	A		A	
Approach Vol, veh/h		718						1267			1437	
Approach Delay, s/veh		44.1						9.0			0.8	
Approach LOS		D						A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Case No		8.0		9.0		7.0		
Phs Duration (G+Y+Rc), s		75.0		29.0		75.0		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green (Gmax), s		63.5		31.0		63.5		
Max Allow Headway (MAH), s		4.1		4.1		4.0		
Max Q Clear (g_c+I1), s		20.7		22.9		2.0		
Green Ext Time (g_e), s		6.0		2.1		8.8		
Prob of Phs Call (p_c)		1.00		1.00		1.00		
Prob of Max Out (p_x)		0.01		0.29		0.00		

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		
Mvmt Sat Flow, veh/h		0		3183		0		

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		2999		0		3647		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		629		1460		1460		

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	0

Lane Assignment				L				
Lanes in Grp	0	0	0	2	0	0	0	0
Grp Vol (v), veh/h	0	0	0	666	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1591	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1591	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	71.0	0.0	0.0	0.0	71.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	767	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.87	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	952	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	37.9	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	7.3	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	45.1	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	7.5	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	8.3	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.42	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	635	0	0	0	1437	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	18.4	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	18.4	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1213	0	0	0	2427	0	0
V/C Ratio (X)	0.00	0.52	0.00	0.00	0.00	0.59	0.00	0.00
Avail Cap (c_a), veh/h	0	1213	0	0	0	2427	0	0
Upstream Filter (I)	0.00	0.45	0.00	0.00	0.00	0.75	0.00	0.00
Uniform Delay (d1), s/veh	0.0	8.1	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	0.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.9	0.0	0.0	0.0	0.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.1	0.0	0.0	0.0	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.3	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	5.3	0.0	0.0	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.09	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	632	0	52	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1757	0	1460	0	1460	0	0
Q Serve Time (g_s), s	0.0	18.7	0.0	2.9	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	18.7	0.0	2.9	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.36	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1200	0	352	0	997	0	0
V/C Ratio (X)	0.00	0.53	0.00	0.15	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1200	0	437	0	997	0	0
Upstream Filter (I)	0.00	0.45	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	8.3	0.0	31.1	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	9.1	0.0	31.2	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.2	0.0	1.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	5.5	0.0	1.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	0.03	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	12.9
HCM 7th LOS	B

Intersection	
Intersection Delay, s/veh	6.3
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	707	707	0	440
Demand Flow Rate, veh/h	721	722	0	448
Vehicles Circulating, veh/h	745	114	354	487
Vehicles Exiting, veh/h	181	240	673	114
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.8	4.7	0.0	11.4
Approach LOS	A	A	-	B

Lane	Left	Bypass	Left	Bypass	Left	Left	Bypass
Designated Moves	LT	R	LT	R	LTR	LT	R
Assumed Moves	LT		LT		LTR	LT	
RT Channelized		Free		Free			Free
Lane Util	1.000		1.000		1.000	1.000	
Follow-Up Headway, s	2.609		2.609		2.609	2.609	
Critical Headway, s	4.976		4.976		4.976	4.976	
A (Intercept)	1380		1380		1380	1380	
B (Slope)	1.02e-3		1.02e-3		1.02e-3	1.02e-3	
Entry Flow, veh/h	282	439	487	235	0	439	9
Cap Entry Lane, veh/h	645	1938	1228	1938	962	840	1938
Entry HV Adj Factor	0.981	0.980	0.980	0.980	1.000	0.981	0.980
Flow Entry, veh/h	277	430	477	230	0	431	9
Cap Entry, veh/h	633	1900	1204	1900	962	824	1900
V/C Ratio	0.437	0.226	0.396	0.121	0.000	0.523	0.005
Control Delay, s/veh	12.2	0.0	6.9	0.0	3.7	11.7	0.0
LOS	B	A	A	A	A	B	A
95th %tile Queue, veh	2	1	2	0	0	3	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	383	20	248	0	0	0	0	366	108	203	274	0
Future Volume (veh/h)	383	20	248	0	0	0	0	366	108	203	274	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723				0	1870	1723	1723	1870	0
Adj Flow Rate, veh/h	416	22	270				0	398	117	221	298	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	488	0	435				0	801	235	300	373	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.30	0.30	0.30				0.00	0.58	0.55	0.58	0.58	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	30.0	0.0	20.7				0.0	0.0	8.5	16.1	0.0	0.0
Ln Grp LOS	C		C						A	B		
Approach Vol, veh/h		686						515			519	
Approach Delay, s/veh		26.3						8.5			16.1	
Approach LOS		C						A			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Case No		8.0		9.0		8.0		
Phs Duration (G+Y+Rc), s		40.7		23.0		40.7		
Change Period (Y+Rc), s		5.5		4.1		5.5		
Max Green (Gmax), s		56.3		24.1		56.3		
Max Allow Headway (MAH), s		4.1		4.2		4.6		
Max Q Clear (g_c+I1), s		12.9		17.2		32.5		
Green Ext Time (g_e), s		2.1		1.7		2.7		
Prob of Phs Call (p_c)		1.00		1.00		1.00		
Prob of Max Out (p_x)		0.00		0.46		0.00		

Left-Turn Movement Data									
Assigned Mvmt		5		7		1			
Mvmt Sat Flow, veh/h		0		1641		380			

Through Movement Data									
Assigned Mvmt		2		4		6			
Mvmt Sat Flow, veh/h		1389		0		646			

Right-Turn Movement Data									
Assigned Mvmt		12		14		16			
Mvmt Sat Flow, veh/h		408		1460		0			

Left Lane Group Data									
Assigned Mvmt	0	5	0	7	0	1	0	0	

Lane Assignment				L		L+T		
Lanes in Grp	0	0	0	1	0	1	0	0
Grp Vol (v), veh/h	0	0	0	416	0	519	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1641	0	1026	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	15.2	0.0	19.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	15.2	0.0	30.5	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1641	0	900	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	36.7	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	25.8	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	19.6	0.0	0.0
Time to First Blk (g_f), s	0.0	36.7	0.0	0.0	0.0	2.6	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	0.00	0.43	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	488	0	672	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.85	0.00	0.77	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	623	0	1092	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	21.0	0.0	14.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	8.9	0.0	1.9	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	30.0	0.0	16.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	4.7	0.0	4.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	1.2	0.0	0.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	5.9	0.0	5.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.42	0.00	1.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		T+R		R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	515	0	270	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1797	0	1460	0	0	0	0
Q Serve Time (g_s), s	0.0	10.9	0.0	10.1	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	10.9	0.0	10.1	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.23	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1036	0	435	0	0	0	0
V/C Ratio (X)	0.00	0.50	0.00	0.62	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1631	0	555	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	8.1	0.0	19.3	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	1.5	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.5	0.0	20.7	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.5	0.0	2.8	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	2.7	0.0	3.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.25	0.00	0.21	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	17.9
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	79.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	768	136	43	312	0	181	0	70	0	0	0
Future Vol, veh/h	0	768	136	43	312	0	181	0	70	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	835	148	47	339	0	197	0	76	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	339	0	0	983	0	0	1341	1341	909	1267	1415	339
Stage 1	-	-	-	-	-	-	909	909	-	433	433	-
Stage 2	-	-	-	-	-	-	433	433	-	835	983	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1220	-	-	703	-	-	~ 129	152	333	146	137	703
Stage 1	-	-	-	-	-	-	329	354	-	601	582	-
Stage 2	-	-	-	-	-	-	601	582	-	362	327	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1220	-	-	703	-	-	~ 119	140	333	103	126	703
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 119	140	-	103	126	-
Stage 1	-	-	-	-	-	-	329	354	-	552	534	-
Stage 2	-	-	-	-	-	-	552	534	-	279	327	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	1.27	$ 475.29	0
HCM LOS			F	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	145	1220	-	-	218	-	-	-
HCM Lane V/C Ratio	1.885	-	-	-	0.067	-	-	-
HCM Control Delay (s/veh)	$ 475.3	0	-	-	10.5	0	-	0
HCM Lane LOS	F	A	-	-	B	A	-	A
HCM 95th %tile Q(veh)	20.9	0	-	-	0.2	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	212	405	82	51	412	349	94	447	54	392	491	280
Future Volume (veh/h)	212	405	82	51	412	349	94	447	54	392	491	280
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	230	440	89	55	448	379	102	486	59	426	534	304
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	234	658	513	89	492	384	144	564	68	466	815	463
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.14	0.35	0.35	0.05	0.26	0.26	0.09	0.18	0.16	0.28	0.37	0.36
Unsig. Movement Delay												
Ln Grp Delay, s/veh	105.4	38.3	27.6	64.6	63.2	49.1	59.7	67.4	68.2	58.4	33.0	33.7
Ln Grp LOS	F	D	C	E	E	D	E	E	E	E	C	C
Approach Vol, veh/h		759			882			647			1264	
Approach Delay, s/veh		57.4			57.3			66.5			41.8	
Approach LOS		E			E			E			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	2	1	3	4	5	6	7	8
Case No	4.0	2.0	2.0	3.0	2.0	4.0	2.0	3.0
Phs Duration (G+Y+Rc), s	25.2	38.1	10.5	46.2	14.5	48.8	21.1	35.6
Change Period (Y+Rc), s	* 5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green (Gmax), s	* 20	35.0	5.4	39.4	13.0	40.2	15.6	29.2
Max Allow Headway (MAH), s	4.0	4.1	4.1	4.0	4.1	4.1	4.1	4.1
Max Q Clear (g_c+I1), s	19.8	32.1	5.9	25.9	9.3	26.6	18.8	29.8
Green Ext Time (g_e), s	0.0	0.5	0.0	1.7	0.1	2.9	0.0	0.0
Prob of Phs Call (p_c)	1.00	1.00	0.84	1.00	0.97	1.00	1.00	1.00
Prob of Max Out (p_x)	1.00	1.00	1.00	0.00	1.00	0.11	1.00	0.00

Left-Turn Movement Data								
Assigned Mvmt		1	3		5		7	
Mvmt Sat Flow, veh/h		1641	1641		1641		1641	

Through Movement Data								
Assigned Mvmt	2			4		6		8
Mvmt Sat Flow, veh/h	3192			1870		2183		1870

Right-Turn Movement Data								
Assigned Mvmt	12			14		16		18
Mvmt Sat Flow, veh/h	386			1460		1241		1460

Left Lane Group Data								
Assigned Mvmt	0	1	3	0	5	0	7	0

Lane Assignment		L (Prot)	L (Prot)		L (Prot)		L (Prot)	
Lanes in Grp	0	1	1	0	1	0	1	0
Grp Vol (v), veh/h	0	426	55	0	102	0	230	0
Grp Sat Flow (s), veh/h/ln	0	1641	1641	0	1641	0	1641	0
Q Serve Time (g_s), s	0.0	30.1	3.9	0.0	7.3	0.0	16.8	0.0
Cycle Q Clear Time (g_c), s	0.0	30.1	3.9	0.0	7.3	0.0	16.8	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	466	89	0	144	0	234	0
V/C Ratio (X)	0.00	0.91	0.62	0.00	0.71	0.00	0.98	0.00
Avail Cap (c_a), veh/h	0	499	94	0	198	0	234	0
Upstream Filter (I)	0.00	0.77	0.83	0.00	0.93	0.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	41.5	55.5	0.0	53.2	0.0	51.3	0.0
Incr Delay (d2), s/veh	0.0	16.8	9.0	0.0	6.4	0.0	54.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	58.4	64.6	0.0	59.7	0.0	105.4	0.0
1st-Term Q (Q1), veh/ln	0.0	11.4	1.6	0.0	2.9	0.0	6.6	0.0
2nd-Term Q (Q2), veh/ln	0.0	2.2	0.2	0.0	0.3	0.0	3.5	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	13.6	1.8	0.0	3.1	0.0	10.1	0.0
%ile Storage Ratio (RQ%)	0.00	1.73	0.91	0.00	0.40	0.00	1.71	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	2	0	0	4	0	6	0	8
Lane Assignment	T			T		T		T
Lanes in Grp	1	0	0	1	0	1	0	1
Grp Vol (v), veh/h	270	0	0	440	0	434	0	448
Grp Sat Flow (s), veh/h/ln	1777	0	0	1870	0	1777	0	1870
Q Serve Time (g_s), s	17.7	0.0	0.0	23.9	0.0	24.3	0.0	27.8
Cycle Q Clear Time (g_c), s	17.7	0.0	0.0	23.9	0.0	24.3	0.0	27.8
Lane Grp Cap (c), veh/h	314	0	0	658	0	663	0	492
V/C Ratio (X)	0.86	0.00	0.00	0.67	0.00	0.65	0.00	0.91
Avail Cap (c_a), veh/h	314	0	0	658	0	663	0	492
Upstream Filter (I)	0.93	0.00	0.00	1.00	0.00	0.77	0.00	0.83
Uniform Delay (d1), s/veh	48.0	0.0	0.0	33.0	0.0	31.2	0.0	42.8
Incr Delay (d2), s/veh	19.4	0.0	0.0	5.3	0.0	1.8	0.0	20.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	67.4	0.0	0.0	38.3	0.0	33.0	0.0	63.2
1st-Term Q (Q1), veh/ln	7.4	0.0	0.0	10.1	0.0	9.7	0.0	12.1

2nd-Term Q (Q2), veh/ln	1.7	0.0	0.0	1.0	0.0	0.3	0.0	2.8
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	9.1	0.0	0.0	11.1	0.0	10.1	0.0	14.9
%ile Storage Ratio (RQ%)	0.08	0.00	0.00	0.05	0.00	0.18	0.00	0.07
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	12	0	0	14	0	16	0	18
Lane Assignment	T+R			R		T+R		R
Lanes in Grp	1	0	0	1	0	1	0	1
Grp Vol (v), veh/h	275	0	0	89	0	404	0	379
Grp Sat Flow (s), veh/h/ln	1801	0	0	1460	0	1647	0	1460
Q Serve Time (g_s), s	17.8	0.0	0.0	5.1	0.0	24.6	0.0	15.2
Cycle Q Clear Time (g_c), s	17.8	0.0	0.0	5.1	0.0	24.6	0.0	15.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.21	0.00	0.00	1.00	0.00	0.75	0.00	1.00
Lane Grp Cap (c), veh/h	318	0	0	513	0	615	0	384
V/C Ratio (X)	0.87	0.00	0.00	0.17	0.00	0.66	0.00	0.99
Avail Cap (c_a), veh/h	318	0	0	513	0	615	0	384
Upstream Filter (I)	0.93	0.00	0.00	1.00	0.00	0.77	0.00	0.83
Uniform Delay (d1), s/veh	48.2	0.0	0.0	26.9	0.0	31.7	0.0	10.6
Incr Delay (d2), s/veh	20.0	0.0	0.0	0.7	0.0	2.0	0.0	38.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	68.2	0.0	0.0	27.6	0.0	33.7	0.0	49.1
1st-Term Q (Q1), veh/ln	7.6	0.0	0.0	1.7	0.0	9.2	0.0	4.1
2nd-Term Q (Q2), veh/ln	1.8	0.0	0.0	0.1	0.0	0.3	0.0	4.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	9.4	0.0	0.0	1.8	0.0	9.5	0.0	8.2
%ile Storage Ratio (RQ%)	0.09	0.00	0.00	0.45	0.00	0.17	0.00	4.18
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	53.5
HCM 7th LOS	D

Notes

* HCM 7th Edition computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	291	445	76	109	337	119	108	520	109	163	484	347
Future Volume (veh/h)	291	445	76	109	337	119	108	520	109	163	484	347
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	316	484	83	118	366	129	117	565	118	177	526	377
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	361	977	762	356	690	243	165	727	568	167	727	568
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.52	0.52	0.52	0.52	0.52	0.51	0.39	0.39	0.39	0.39	0.39	0.39
Unsig. Movement Delay												
Ln Grp Delay, s/veh	52.1	14.2	11.0	22.6	0.0	14.9	53.2	29.4	18.5	128.8	26.9	25.6
Ln Grp LOS	D	B	B	C		B	D	C	B	F	C	C
Approach Vol, veh/h		883			613			800			1080	
Approach Delay, s/veh		27.5			16.4			31.3			43.2	
Approach LOS		C			B			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		5.0		5.0		6.0
Phs Duration (G+Y+Rc), s		39.0		51.0		39.0		51.0
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5
Max Green (Gmax), s		33.5		45.5		33.5		45.5
Max Allow Headway (MAH), s		4.6		4.7		4.5		4.4
Max Q Clear (g_c+I1), s		37.0		49.0		37.0		27.4
Green Ext Time (g_e), s		0.0		0.0		0.0		2.7
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		1.00		1.00		1.00		0.02

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		568		831		698		778

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1321

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1460		1460		1460		466

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3

Lane Assignment		L		L		L		L
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	117	0	316	0	177	0	118
Grp Sat Flow (s), veh/h/ln	0	568	0	831	0	698	0	778
Q Serve Time (g_s), s	0.0	13.5	0.0	30.4	0.0	11.2	0.0	10.4
Cycle Q Clear Time (g_c), s	0.0	35.0	0.0	47.0	0.0	35.0	0.0	25.4
Perm LT Sat Flow (s_l), veh/h/ln	0	568	0	831	0	698	0	778
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	35.0	0.0	47.0	0.0	35.0	0.0	47.0
Perm LT Serve Time (g_u), s	0.0	13.5	0.0	30.4	0.0	11.2	0.0	32.0
Perm LT Q Serve Time (g_ps), s	0.0	13.5	0.0	30.4	0.0	11.2	0.0	10.4
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	165	0	361	0	167	0	356
V/C Ratio (X)	0.00	0.71	0.00	0.88	0.00	1.06	0.00	0.33
Avail Cap (c_a), veh/h	0	165	0	361	0	167	0	356
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	40.1	0.0	31.5	0.0	42.1	0.0	22.0
Incr Delay (d2), s/veh	0.0	13.1	0.0	20.6	0.0	86.8	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	53.2	0.0	52.1	0.0	128.8	0.0	22.6
1st-Term Q (Q1), veh/ln	0.0	2.5	0.0	6.4	0.0	3.5	0.0	1.7
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	2.1	0.0	4.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.1	0.0	8.5	0.0	7.5	0.0	1.7
%ile Storage Ratio (RQ%)	0.00	0.70	0.00	2.15	0.00	2.73	0.00	0.44
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	565	0	484	0	526	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	0
Q Serve Time (g_s), s	0.0	23.8	0.0	15.0	0.0	21.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	23.8	0.0	15.0	0.0	21.5	0.0	0.0
Lane Grp Cap (c), veh/h	0	727	0	977	0	727	0	0
V/C Ratio (X)	0.00	0.78	0.00	0.50	0.00	0.72	0.00	0.00
Avail Cap (c_a), veh/h	0	727	0	977	0	727	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	24.1	0.0	13.9	0.0	23.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	5.3	0.0	0.4	0.0	3.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	29.4	0.0	14.2	0.0	26.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	9.1	0.0	5.2	0.0	8.2	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	1.1	0.0	0.1	0.0	0.7	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	10.2	0.0	5.3	0.0	9.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.15	0.00	0.03	0.00	0.09	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	118	0	83	0	377	0	495
Grp Sat Flow (s), veh/h/ln	0	1460	0	1460	0	1460	0	1787
Q Serve Time (g_s), s	0.0	4.8	0.0	2.6	0.0	19.1	0.0	16.6
Cycle Q Clear Time (g_c), s	0.0	4.8	0.0	2.6	0.0	19.1	0.0	16.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.26
Lane Grp Cap (c), veh/h	0	568	0	762	0	568	0	933
V/C Ratio (X)	0.00	0.21	0.00	0.11	0.00	0.66	0.00	0.53
Avail Cap (c_a), veh/h	0	568	0	762	0	568	0	933
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	18.3	0.0	10.9	0.0	22.7	0.0	14.4
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.1	0.0	2.9	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.5	0.0	11.0	0.0	25.6	0.0	14.9
1st-Term Q (Q1), veh/ln	0.0	1.4	0.0	0.7	0.0	5.7	0.0	5.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.5	0.0	0.7	0.0	6.2	0.0	5.6
%ile Storage Ratio (RQ%)	0.00	0.37	0.00	0.36	0.00	0.79	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	31.4
HCM 7th LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	11	173	288	33	365	323
Future Volume (veh/h)	11	173	288	33	365	323
Number	3	18	2	12	1	6
Initial Q, veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Lanes Open During Work Zone						
Adj Sat Flow, veh/h/ln	1723	1723	1870	1723	1723	1870
Adj Flow Rate, veh/h	12	188	313	36	397	351
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Opposing Right Turn Influence	Yes				Yes	
Cap, veh/h	240	213	1279	147	758	1453
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.15	0.15	0.78	0.78	0.78	0.78
Unsig. Movement Delay						
Ln Grp Delay, s/veh	38.3	71.0	0.0	3.6	8.7	3.5
Ln Grp LOS	D	E		A	A	A
Approach Vol, veh/h	200		349			748
Approach Delay, s/veh	69.0		3.6			6.2
Approach LOS	E		A			A

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8			6		
Case No		8.0	9.0			6.0		
Phs Duration (G+Y+Rc), s		84.8	19.2			84.8		
Change Period (Y+Rc), s		4.0	4.0			4.0		
Max Green (Gmax), s		79.0	17.0			79.0		
Max Allow Headway (MAH), s		4.0	4.3			4.7		
Max Q Clear (g_c+I1), s		7.4	15.1			28.0		
Green Ext Time (g_e), s		1.3	0.1			4.2		
Prob of Phs Call (p_c)		1.00	1.00			1.00		
Prob of Max Out (p_x)		0.00	1.00			0.00		

Left-Turn Movement Data								
Assigned Mvmt		5	3			1		
Mvmt Sat Flow, veh/h		0	1641			950		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		1647	0			1870		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		189	1460			0		

Left Lane Group Data								
Assigned Mvmt	0	5	3	0	0	1	0	0

Lane Assignment			L			L		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	12	0	0	397	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1641	0	0	950	0	0
Q Serve Time (g_s), s	0.0	0.0	0.7	0.0	0.0	20.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.7	0.0	0.0	26.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1641	0	0	950	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	80.8	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	75.3	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	20.6	0.0	0.0
Time to First Blk (g_f), s	0.0	80.8	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	240	0	0	758	0	0
V/C Ratio (X)	0.00	0.00	0.05	0.00	0.00	0.52	0.00	0.00
Avail Cap (c_a), veh/h	0	0	268	0	0	758	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.74	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	38.2	0.0	0.0	6.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	0.0	1.9	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	38.3	0.0	0.0	8.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.2	0.0	0.0	2.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.3	0.0	0.0	3.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.04	0.00	0.00	0.39	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	351	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	5.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	5.4	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	1453	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1453	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment		T+R	R					
Lanes in Grp	0	1	1	0	0	0	0	0
Grp Vol (v), veh/h	0	349	188	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1836	1460	0	0	0	0	0
Q Serve Time (g_s), s	0.0	5.4	13.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.4	13.1	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.10	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1427	213	0	0	0	0	0
V/C Ratio (X)	0.00	0.24	0.88	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1427	239	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	3.2	43.5	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	27.5	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.6	71.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.0	4.5	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	1.6	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.2	6.1	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.05	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	15.2
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	45	0	396	29	736	0	0	494	276
Future Volume (veh/h)	0	0	0	45	0	396	29	736	0	0	494	276
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1723	0	1723	1723	1870	0	0	1870	1723
Adj Flow Rate, veh/h				49	0	430	32	800	0	0	537	300
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				646	0	521	625	2521	0	0	1364	390
HCM Platoon Ratio				1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.20	0.00	0.20	0.26	0.48	0.00	0.00	0.27	0.27
Unsig. Movement Delay												
Ln Grp Delay, s/veh				29.1	0.0	38.6	21.3	10.5	0.0	0.0	27.9	44.0
Ln Grp LOS				C		D	C	B			C	D
Approach Vol, veh/h					479			832			837	
Approach Delay, s/veh					37.6			10.9			33.7	
Approach LOS					D			B			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		6	5		
Case No		4.0	9.0		7.0	2.0		
Phs Duration (G+Y+Rc), s		67.8	22.2		28.0	39.8		
Change Period (Y+Rc), s		5.5	4.0		* 5.5	5.5		
Max Green (Gmax), s		52.5	28.0		* 39	10.0		
Max Allow Headway (MAH), s		4.0	4.3		4.1	4.1		
Max Q Clear (g_c+I1), s		14.5	16.4		19.1	3.3		
Green Ext Time (g_e), s		3.7	1.7		3.5	0.0		
Prob of Phs Call (p_c)		1.00	1.00		1.00	0.55		
Prob of Max Out (p_x)		0.00	0.05		0.02	0.03		

Left-Turn Movement Data						
Assigned Mvmt			3		1	5
Mvmt Sat Flow, veh/h			3183		0	1641

Through Movement Data						
Assigned Mvmt		2	8		6	
Mvmt Sat Flow, veh/h		3647	0		5274	

Right-Turn Movement Data						
Assigned Mvmt		12	18		16	
Mvmt Sat Flow, veh/h		0	2569		1460	

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	1	5	0	0

Lane Assignment			L			L (Prot)		
Lanes in Grp	0	0	2	0	0	1	0	0
Grp Vol (v), veh/h	0	0	49	0	0	32	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1591	0	0	1641	0	0
Q Serve Time (g_s), s	0.0	0.0	1.1	0.0	0.0	1.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	1.1	0.0	0.0	1.3	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1591	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	24.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	646	0	0	625	0	0
V/C Ratio (X)	0.00	0.00	0.08	0.00	0.00	0.05	0.00	0.00
Avail Cap (c_a), veh/h	0	0	994	0	0	625	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.93	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	29.0	0.0	0.0	21.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	29.1	0.0	0.0	21.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.4	0.0	0.0	0.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.4	0.0	0.0	0.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.04	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	6	0	0	0
Lane Assignment		T			T			
Lanes in Grp	0	2	0	0	3	0	0	0
Grp Vol (v), veh/h	0	800	0	0	537	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	1702	0	0	0
Q Serve Time (g_s), s	0.0	12.5	0.0	0.0	7.8	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	12.5	0.0	0.0	7.8	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	2521	0	0	1364	0	0	0
V/C Ratio (X)	0.00	0.32	0.00	0.00	0.39	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	2521	0	0	2269	0	0	0
Upstream Filter (I)	0.00	0.93	0.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	10.1	0.0	0.0	27.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.9	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.5	0.0	0.0	27.9	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	4.0	0.0	0.0	2.9	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	4.1	0.0	0.0	3.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.19	0.00	0.00	0.02	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	18	0	16	0	0	0
Lane Assignment			R		R			
Lanes in Grp	0	0	2	0	1	0	0	0
Grp Vol (v), veh/h	0	0	430	0	300	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1285	0	1460	0	0	0
Q Serve Time (g_s), s	0.0	0.0	14.4	0.0	17.1	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	14.4	0.0	17.1	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	521	0	390	0	0	0
V/C Ratio (X)	0.00	0.00	0.83	0.00	0.77	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	802	0	649	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	34.3	0.0	30.4	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	4.2	0.0	13.6	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	38.6	0.0	44.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	4.1	0.0	5.4	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.3	0.0	1.5	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	4.4	0.0	6.9	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.27	0.00	1.40	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	25.7
HCM 7th LOS	C

Notes

* HCM 7th Edition computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	302	0	18	0	0	0	0	498	106	0	279	0
Future Volume (veh/h)	302	0	18	0	0	0	0	498	106	0	279	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	0	1723				0	1870	1723	0	1870	1723
Adj Flow Rate, veh/h	328	0	20				0	541	115	0	303	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Opposing Right Turn Influence	Yes						No			No		
Cap, veh/h	438	0	201				0	2261	479	0	2753	1131
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	1.00	2.00	2.00
Prop Arrive On Green	0.14	0.00	0.14				0.00	1.00	1.00	0.00	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	39.9	0.0	34.2				0.0	0.4	0.4	0.0	0.1	0.0
Ln Grp LOS	D		C					A	A		A	
Approach Vol, veh/h		348						656			303	
Approach Delay, s/veh		39.6						0.4			0.1	
Approach LOS		D						A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Case No		8.0		9.0		7.0		
Phs Duration (G+Y+Rc), s		73.7		16.3		73.7		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green (Gmax), s		48.5		32.0		48.5		
Max Allow Headway (MAH), s		4.1		4.1		4.0		
Max Q Clear (g_c+I1), s		2.0		10.9		2.0		
Green Ext Time (g_e), s		2.5		1.4		1.2		
Prob of Phs Call (p_c)		1.00		1.00		1.00		
Prob of Max Out (p_x)		0.00		0.00		0.00		

Left-Turn Movement Data						
Assigned Mvmt		5		7		1
Mvmt Sat Flow, veh/h		0		3183		0

Through Movement Data						
Assigned Mvmt		2		4		6
Mvmt Sat Flow, veh/h		3012		0		3647

Right-Turn Movement Data						
Assigned Mvmt		12		14		16
Mvmt Sat Flow, veh/h		618		1460		1460

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	0

Lane Assignment				L				
Lanes in Grp	0	0	0	2	0	0	0	0
Grp Vol (v), veh/h	0	0	0	328	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1591	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	8.9	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	8.9	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1591	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	69.7	0.0	0.0	0.0	69.7	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	438	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.75	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	1135	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	37.3	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	39.9	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	329	0	0	0	303	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1377	0	0	0	2753	0	0
V/C Ratio (X)	0.00	0.24	0.00	0.00	0.00	0.11	0.00	0.00
Avail Cap (c_a), veh/h	0	1377	0	0	0	2753	0	0
Upstream Filter (I)	0.00	0.96	0.00	0.00	0.00	0.99	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.4	0.0	0.0	0.0	0.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	327	0	20	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1759	0	1460	0	1460	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.35	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1363	0	201	0	1131	0	0
V/C Ratio (X)	0.00	0.24	0.00	0.10	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1363	0	521	0	1131	0	0
Upstream Filter (I)	0.00	0.96	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	33.9	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.4	0.0	34.2	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.4	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	10.8
HCM 7th LOS	B

Intersection	
Intersection Delay, s/veh	4.6
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	410	375	0	208
Demand Flow Rate, veh/h	418	382	0	212
Vehicles Circulating, veh/h	322	120	313	316
Vehicles Exiting, veh/h	204	193	281	120
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.2	4.4	0.0	5.6
Approach LOS	A	A	-	A

Lane	Left	Bypass	Left	Bypass	Left	Left	Bypass
Designated Moves	LT	R	LT	R	LTR	LT	R
Assumed Moves	LT		LT		LTR	LT	
RT Channelized		Free		Free			Free
Lane Util	1.000		1.000		1.000	1.000	
Follow-Up Headway, s	2.609		2.609		2.609	2.609	
Critical Headway, s	4.976		4.976		4.976	4.976	
A (Intercept)	1380		1380		1380	1380	
B (Slope)	1.02e-3		1.02e-3		1.02e-3	1.02e-3	
Entry Flow, veh/h	272	146	316	66	0	210	2
Cap Entry Lane, veh/h	994	1938	1221	1938	1003	1000	1938
Entry HV Adj Factor	0.982	0.980	0.981	0.980	1.000	0.979	0.980
Flow Entry, veh/h	267	143	310	65	0	206	2
Cap Entry, veh/h	975	1900	1198	1900	1003	979	1900
V/C Ratio	0.274	0.075	0.259	0.034	0.000	0.210	0.001
Control Delay, s/veh	6.4	0.0	5.3	0.0	3.6	5.7	0.0
LOS	A	A	A	A	A	A	A
95th %tile Queue, veh	1	0	1	0	0	1	0

HCM 7th Edition methodology does not support Non-NEMA phasing.

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	176	34	21	277	0	37	0	13	0	0	0
Future Vol, veh/h	0	176	34	21	277	0	37	0	13	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	191	37	23	301	0	40	0	14	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	301	0	0	228	0	0	557	557	210	538	575	301
Stage 1	-	-	-	-	-	-	210	210	-	347	347	-
Stage 2	-	-	-	-	-	-	347	347	-	191	228	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1260	-	-	1340	-	-	441	439	830	454	429	739
Stage 1	-	-	-	-	-	-	792	729	-	669	635	-
Stage 2	-	-	-	-	-	-	669	635	-	810	715	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1260	-	-	1340	-	-	432	430	830	437	420	739
Mov Cap-2 Maneuver	-	-	-	-	-	-	432	430	-	437	420	-
Stage 1	-	-	-	-	-	-	792	729	-	655	622	-
Stage 2	-	-	-	-	-	-	655	622	-	797	715	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0.54	13.19	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	494	1260	-	-	127	-	-	-
HCM Lane V/C Ratio	0.11	-	-	-	0.017	-	-	-
HCM Control Delay (s/veh)	13.2	0	-	-	7.7	0	-	0
HCM Lane LOS	B	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0.4	0	-	-	0.1	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	129	35	28	158	202	74	332	32	97	176	35
Future Volume (veh/h)	79	129	35	28	158	202	74	332	32	97	176	35
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	86	140	38	30	172	220	80	361	35	105	191	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	134	217	169	260	361	282	125	1939	187	509	1399	273
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Prop Arrive On Green	0.08	0.12	0.12	0.16	0.19	0.19	0.15	1.00	1.00	0.94	0.94	0.91
Unsig. Movement Delay												
Ln Grp Delay, s/veh	45.1	41.2	22.4	32.7	33.3	40.5	41.7	0.3	0.3	2.3	1.7	2.0
Ln Grp LOS	D	D	C	C	C	D	D	A	A	A	A	A
Approach Vol, veh/h		264			422			476			334	
Approach Delay, s/veh		39.8			37.0			7.3			2.0	
Approach LOS		D			D			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	4	3	5	6	8	7
Case No		4.0	3.0	2.0	2.0	6.3	3.0	2.0
Phs Duration (G+Y+Rc), s		57.3	14.4	18.3	10.8	46.5	21.4	11.3
Change Period (Y+Rc), s		5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green (Gmax), s		40.5	28.3	4.7	9.5	25.5	23.5	9.5
Max Allow Headway (MAH), s		4.0	4.1	4.1	4.1	4.5	4.2	4.1
Max Q Clear (g_c+I1), s		2.0	8.4	3.4	6.1	2.8	14.9	6.6
Green Ext Time (g_e), s		1.4	0.5	0.0	0.0	1.3	1.0	0.0
Prob of Phs Call (p_c)		1.00	1.00	0.53	0.86	1.00	1.00	0.88
Prob of Max Out (p_x)		0.00	0.00	1.00	1.00	0.00	0.13	1.00

Left-Turn Movement Data								
Assigned Mvmt				3	5	1		7
Mvmt Sat Flow, veh/h				1641	1641	910		1641

Through Movement Data								
Assigned Mvmt		2	4			6	8	
Mvmt Sat Flow, veh/h		3275	1870			2965	1870	

Right-Turn Movement Data								
Assigned Mvmt		12	14			16	18	
Mvmt Sat Flow, veh/h		316	1460			578	1460	

Left Lane Group Data								
Assigned Mvmt	0	0	0	3	5	1	0	7

Lane Assignment				L (Prot)	L (Prot)	L		L (Prot)
Lanes in Grp	0	0	0	1	1	1	0	1
Grp Vol (v), veh/h	0	0	0	30	80	105	0	86
Grp Sat Flow (s), veh/h/ln	0	0	0	1641	1641	910	0	1641
Q Serve Time (g_s), s	0.0	0.0	0.0	1.4	4.1	0.8	0.0	4.6
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.4	4.1	0.8	0.0	4.6
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	910	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	42.5	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	42.5	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	0	0	260	125	509	0	134
V/C Ratio (X)	0.00	0.00	0.00	0.12	0.64	0.21	0.00	0.64
Avail Cap (c_a), veh/h	0	0	0	260	201	509	0	201
Upstream Filter (I)	0.00	0.00	0.00	0.99	0.86	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	32.5	37.0	1.4	0.0	40.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	4.7	0.9	0.0	5.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	32.7	41.7	2.3	0.0	45.1
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.5	1.5	0.1	0.0	1.7
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.5	1.6	0.2	0.0	1.9
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.27	0.21	0.03	0.00	0.32
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	4	0	0	6	8	0
Lane Assignment		T	T			T	T	
Lanes in Grp	0	1	1	0	0	1	1	0
Grp Vol (v), veh/h	0	195	140	0	0	113	172	0
Grp Sat Flow (s), veh/h/ln	0	1777	1870	0	0	1777	1870	0
Q Serve Time (g_s), s	0.0	0.0	6.4	0.0	0.0	0.4	7.4	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	6.4	0.0	0.0	0.4	7.4	0.0
Lane Grp Cap (c), veh/h	0	1052	217	0	0	838	361	0
V/C Ratio (X)	0.00	0.19	0.64	0.00	0.00	0.13	0.48	0.00
Avail Cap (c_a), veh/h	0	1052	619	0	0	838	520	0
Upstream Filter (I)	0.00	0.86	1.00	0.00	0.00	1.00	0.99	0.00
Uniform Delay (d1), s/veh	0.0	0.0	38.0	0.0	0.0	1.4	32.3	0.0
Incr Delay (d2), s/veh	0.0	0.3	3.2	0.0	0.0	0.3	1.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.3	41.2	0.0	0.0	1.7	33.3	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	2.7	0.0	0.0	0.1	3.1	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.1	0.2	0.0	0.0	0.1	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	2.9	0.0	0.0	0.2	3.2	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.01	0.00	0.00	0.00	0.02	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	14	0	0	16	18	0
Lane Assignment		T+R	R			T+R	R	
Lanes in Grp	0	1	1	0	0	1	1	0
Grp Vol (v), veh/h	0	201	38	0	0	116	220	0
Grp Sat Flow (s), veh/h/ln	0	1814	1460	0	0	1766	1460	0
Q Serve Time (g_s), s	0.0	0.0	1.6	0.0	0.0	0.5	12.9	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	1.6	0.0	0.0	0.5	12.9	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.17	1.00	0.00	0.00	0.33	1.00	0.00
Lane Grp Cap (c), veh/h	0	1074	169	0	0	833	282	0
V/C Ratio (X)	0.00	0.19	0.22	0.00	0.00	0.14	0.78	0.00
Avail Cap (c_a), veh/h	0	1074	483	0	0	833	406	0
Upstream Filter (I)	0.00	0.86	1.00	0.00	0.00	1.00	0.99	0.00
Uniform Delay (d1), s/veh	0.0	0.0	21.7	0.0	0.0	1.6	34.5	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.7	0.0	0.0	0.3	6.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.3	22.4	0.0	0.0	2.0	40.5	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.7	0.0	0.0	0.1	4.2	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.5	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.7	0.0	0.0	0.2	4.7	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.19	0.00	0.00	0.00	2.37	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	20.2
HCM 7th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	170	52	81	114	69	32	286	87	48	218	79
Future Volume (veh/h)	150	170	52	81	114	69	32	286	87	48	218	79
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	163	185	57	88	124	75	35	311	95	52	237	86
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	745	1225	956	727	715	432	224	479	374	177	479	374
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.65	0.65	0.65	0.65	0.65	0.64	0.26	0.26	0.26	0.26	0.26	0.26
Unsig. Movement Delay												
Ln Grp Delay, s/veh	8.7	6.2	5.7	7.5	0.0	6.5	34.2	31.3	27.0	38.9	29.3	26.8
Ln Grp LOS	A	A	A	A		A	C	C	C	D	C	C
Approach Vol, veh/h		405			287			441			375	
Approach Delay, s/veh		7.1			6.8			30.6			30.0	
Approach LOS		A			A			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		5.0		5.0		6.0
Phs Duration (G+Y+Rc), s		27.1		62.9		27.1		62.9
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5
Max Green (Gmax), s		37.5		41.5		37.5		41.5
Max Allow Headway (MAH), s		4.2		4.4		4.3		4.4
Max Q Clear (g_c+I1), s		15.4		12.2		20.3		8.6
Green Ext Time (g_e), s		1.6		1.6		1.3		1.2
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.00		0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		973		1090		902		1048

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1091

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1460		1460		1460		660

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3

Lane Assignment		L		L		L		L
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	35	0	163	0	52	0	88
Grp Sat Flow (s), veh/h/ln	0	973	0	1090	0	902	0	1048
Q Serve Time (g_s), s	0.0	2.9	0.0	6.2	0.0	4.9	0.0	3.2
Cycle Q Clear Time (g_c), s	0.0	12.6	0.0	10.2	0.0	18.3	0.0	6.6
Perm LT Sat Flow (s_l), veh/h/ln	0	973	0	1090	0	902	0	1048
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	23.1	0.0	58.9	0.0	23.1	0.0	58.9
Perm LT Serve Time (g_u), s	0.0	13.3	0.0	54.9	0.0	9.7	0.0	55.5
Perm LT Q Serve Time (g_ps), s	0.0	2.9	0.0	6.2	0.0	4.9	0.0	3.2
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	224	0	745	0	177	0	727
V/C Ratio (X)	0.00	0.16	0.00	0.22	0.00	0.29	0.00	0.12
Avail Cap (c_a), veh/h	0	397	0	745	0	337	0	727
Upstream Filter (I)	0.00	1.00	0.00	0.96	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	33.9	0.0	8.1	0.0	38.0	0.0	7.2
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.6	0.0	0.9	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	34.2	0.0	8.7	0.0	38.9	0.0	7.5
1st-Term Q (Q1), veh/ln	0.0	0.6	0.0	1.1	0.0	1.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.6	0.0	1.2	0.0	1.1	0.0	0.6
%ile Storage Ratio (RQ%)	0.00	0.15	0.00	0.31	0.00	0.38	0.00	0.15
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	311	0	185	0	237	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	0
Q Serve Time (g_s), s	0.0	13.4	0.0	3.4	0.0	9.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	13.4	0.0	3.4	0.0	9.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	479	0	1225	0	479	0	0
V/C Ratio (X)	0.00	0.65	0.00	0.15	0.00	0.49	0.00	0.00
Avail Cap (c_a), veh/h	0	810	0	1225	0	810	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.96	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	29.9	0.0	5.9	0.0	28.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.5	0.0	0.3	0.0	0.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	31.3	0.0	6.2	0.0	29.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.4	0.0	0.9	0.0	4.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.1	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.6	0.0	1.0	0.0	4.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.08	0.00	0.01	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	95	0	57	0	86	0	199
Grp Sat Flow (s), veh/h/ln	0	1460	0	1460	0	1460	0	1752
Q Serve Time (g_s), s	0.0	4.7	0.0	1.3	0.0	4.2	0.0	4.0
Cycle Q Clear Time (g_c), s	0.0	4.7	0.0	1.3	0.0	4.2	0.0	4.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.38
Lane Grp Cap (c), veh/h	0	374	0	956	0	374	0	1147
V/C Ratio (X)	0.00	0.25	0.00	0.06	0.00	0.23	0.00	0.17
Avail Cap (c_a), veh/h	0	633	0	956	0	633	0	1147
Upstream Filter (I)	0.00	1.00	0.00	0.96	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	26.6	0.0	5.6	0.0	26.5	0.0	6.2
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.1	0.0	0.3	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	27.0	0.0	5.7	0.0	26.8	0.0	6.5
1st-Term Q (Q1), veh/ln	0.0	1.5	0.0	0.3	0.0	1.3	0.0	1.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.5	0.0	0.3	0.0	1.4	0.0	1.2
%ile Storage Ratio (RQ%)	0.00	0.39	0.00	0.15	0.00	0.17	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	19.6
HCM 7th LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	19	227	94	6	90	106
Future Volume (veh/h)	19	227	94	6	90	106
Number	3	18	2	12	1	6
Initial Q, veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Lanes Open During Work Zone						
Adj Sat Flow, veh/h/ln	1723	1723	1870	1723	1723	1870
Adj Flow Rate, veh/h	21	247	102	7	98	115
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Opposing Right Turn Influence	Yes				Yes	
Cap, veh/h	323	288	1235	85	903	1335
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Prop Arrive On Green	0.20	0.20	0.71	0.71	1.00	1.00
Unsig. Movement Delay						
Ln Grp Delay, s/veh	29.5	42.2	0.0	4.0	0.3	0.1
Ln Grp LOS	C	D		A	A	A
Approach Vol, veh/h	268		109			213
Approach Delay, s/veh	41.2		4.0			0.2
Approach LOS	D		A			A

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8			6		
Case No		8.0	9.0			6.0		
Phs Duration (G+Y+Rc), s		68.3	21.7			68.3		
Change Period (Y+Rc), s		4.0	4.0			4.0		
Max Green (Gmax), s		36.0	46.0			36.0		
Max Allow Headway (MAH), s		4.0	4.3			4.2		
Max Q Clear (g_c+I1), s		3.6	16.7			3.8		
Green Ext Time (g_e), s		0.3	1.1			0.8		
Prob of Phs Call (p_c)		1.00	1.00			1.00		
Prob of Max Out (p_x)		0.00	0.00			0.00		

Left-Turn Movement Data								
Assigned Mvmt		5	3			1		
Mvmt Sat Flow, veh/h		0	1641			1183		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		1730	0			1870		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		119	1460			0		

Left Lane Group Data								
Assigned Mvmt	0	5	3	0	0	1	0	0

Lane Assignment			L			L		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	21	0	0	98	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1641	0	0	1183	0	0
Q Serve Time (g_s), s	0.0	0.0	0.9	0.0	0.0	0.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.9	0.0	0.0	1.8	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1641	0	0	1183	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	64.3	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	62.6	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Time to First Blk (g_f), s	0.0	64.3	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	323	0	0	903	0	0
V/C Ratio (X)	0.00	0.00	0.06	0.00	0.00	0.11	0.00	0.00
Avail Cap (c_a), veh/h	0	0	839	0	0	903	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	29.4	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	29.5	0.0	0.0	0.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.3	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.06	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	115	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	1335	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1335	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment		T+R	R					
Lanes in Grp	0	1	1	0	0	0	0	0
Grp Vol (v), veh/h	0	109	247	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1849	1460	0	0	0	0	0
Q Serve Time (g_s), s	0.0	1.6	14.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.6	14.7	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.06	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1320	288	0	0	0	0	0
V/C Ratio (X)	0.00	0.08	0.86	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1320	746	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	3.9	34.9	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	7.3	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.0	42.2	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.4	4.8	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.4	5.4	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.04	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	19.5
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	52	0	396	29	770	0	0	506	276
Future Volume (veh/h)	0	0	0	52	0	396	29	770	0	0	506	276
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1723	0	1723	1723	1870	0	0	1870	1723
Adj Flow Rate, veh/h				57	0	430	32	837	0	0	550	300
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				647	0	522	40	2520	0	0	3269	935
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.20	0.00	0.20	0.02	0.71	0.00	0.00	0.64	0.64
Unsig. Movement Delay												
Ln Grp Delay, s/veh				29.2	0.0	38.5	70.9	5.3	0.0	0.0	6.6	8.2
Ln Grp LOS				C		D	E	A			A	A
Approach Vol, veh/h					487			869			850	
Approach Delay, s/veh					37.4			7.7			7.2	
Approach LOS					D			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	9.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		67.8	22.2		6.2	61.6		
Change Period (Y+Rc), s		5.5	4.0		4.0	5.5		
Max Green (Gmax), s		52.5	28.0		10.0	38.5		
Max Allow Headway (MAH), s		4.0	4.3		4.1	4.1		
Max Q Clear (g_c+I1), s		10.1	16.4		3.7	10.4		
Green Ext Time (g_e), s		3.9	1.8		0.0	3.8		
Prob of Phs Call (p_c)		1.00	1.00		0.55	1.00		
Prob of Max Out (p_x)		0.00	0.05		0.05	0.00		

Left-Turn Movement Data						
Assigned Mvmt			3		5	1
Mvmt Sat Flow, veh/h			3183		1641	0

Through Movement Data						
Assigned Mvmt		2	8			6
Mvmt Sat Flow, veh/h		3647	0			5274

Right-Turn Movement Data						
Assigned Mvmt		12	18			16
Mvmt Sat Flow, veh/h		0	2569			1460

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0

Lane Assignment			L		L (Prot)			
Lanes in Grp	0	0	2	0	1	0	0	0
Grp Vol (v), veh/h	0	0	57	0	32	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1591	0	1641	0	0	0
Q Serve Time (g_s), s	0.0	0.0	1.3	0.0	1.7	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	1.3	0.0	1.7	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1591	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	57.6	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	647	0	40	0	0	0
V/C Ratio (X)	0.00	0.00	0.09	0.00	0.80	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	994	0	182	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.93	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	29.1	0.0	43.7	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	27.2	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	29.2	0.0	70.9	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.5	0.0	0.7	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.5	0.0	1.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.04	0.00	0.06	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	837	0	0	0	550	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1702	0	0
Q Serve Time (g_s), s	0.0	8.1	0.0	0.0	0.0	3.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	8.1	0.0	0.0	0.0	3.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	2520	0	0	0	3269	0	0
V/C Ratio (X)	0.00	0.33	0.00	0.00	0.00	0.17	0.00	0.00
Avail Cap (c_a), veh/h	0	2520	0	0	0	3269	0	0
Upstream Filter (I)	0.00	0.93	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.0	0.0	0.0	0.0	6.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.3	0.0	0.0	0.0	6.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.8	0.0	0.0	0.0	1.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.9	0.0	0.0	0.0	1.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.09	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	2	0	0	1	0	0
Grp Vol (v), veh/h	0	0	430	0	0	300	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1285	0	0	1460	0	0
Q Serve Time (g_s), s	0.0	0.0	14.4	0.0	0.0	8.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	14.4	0.0	0.0	8.4	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	522	0	0	935	0	0
V/C Ratio (X)	0.00	0.00	0.82	0.00	0.00	0.32	0.00	0.00
Avail Cap (c_a), veh/h	0	0	802	0	0	935	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	34.3	0.0	0.0	7.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	4.2	0.0	0.0	0.9	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	38.5	0.0	0.0	8.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	4.1	0.0	0.0	1.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.3	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	4.4	0.0	0.0	2.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.27	0.00	0.00	0.43	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	14.1
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	302	0	18	0	0	0	0	532	127	0	298	0
Future Volume (veh/h)	302	0	18	0	0	0	0	532	127	0	298	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	0	1723				0	1870	1723	0	1870	1723
Adj Flow Rate, veh/h	328	0	20				0	578	138	0	324	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Opposing Right Turn Influence	Yes						No			No		
Cap, veh/h	437	0	200				0	2206	525	0	2754	1131
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.33	1.33	1.00	2.00	2.00
Prop Arrive On Green	0.14	0.00	0.14				0.00	1.00	1.00	0.00	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	40.0	0.0	34.2				0.0	0.4	0.4	0.0	0.1	0.0
Ln Grp LOS	D		C					A	A		A	
Approach Vol, veh/h		348						716			324	
Approach Delay, s/veh		39.6						0.4			0.1	
Approach LOS		D						A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Case No		8.0		9.0		7.0		
Phs Duration (G+Y+Rc), s		73.7		16.3		73.7		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green (Gmax), s		49.5		31.0		49.5		
Max Allow Headway (MAH), s		4.1		4.1		4.0		
Max Q Clear (g_c+I1), s		2.0		10.9		2.0		
Green Ext Time (g_e), s		2.8		1.3		1.3		
Prob of Phs Call (p_c)		1.00		1.00		1.00		
Prob of Max Out (p_x)		0.00		0.00		0.00		

Left-Turn Movement Data						
Assigned Mvmt		5		7		1
Mvmt Sat Flow, veh/h		0		3183		0

Through Movement Data						
Assigned Mvmt		2		4		6
Mvmt Sat Flow, veh/h		2941		0		3647

Right-Turn Movement Data						
Assigned Mvmt		12		14		16
Mvmt Sat Flow, veh/h		678		1460		1460

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	0

Lane Assignment				L				
Lanes in Grp	0	0	0	2	0	0	0	0
Grp Vol (v), veh/h	0	0	0	328	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1591	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	8.9	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	8.9	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1591	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	69.7	0.0	0.0	0.0	69.7	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	437	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.75	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	1100	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	37.3	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	360	0	0	0	324	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1377	0	0	0	2754	0	0
V/C Ratio (X)	0.00	0.26	0.00	0.00	0.00	0.12	0.00	0.00
Avail Cap (c_a), veh/h	0	1377	0	0	0	2754	0	0
Upstream Filter (I)	0.00	0.94	0.00	0.00	0.00	0.99	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.4	0.0	0.0	0.0	0.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	356	0	20	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1748	0	1460	0	1460	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.39	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1355	0	200	0	1131	0	0
V/C Ratio (X)	0.00	0.26	0.00	0.10	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1355	0	504	0	1131	0	0
Upstream Filter (I)	0.00	0.94	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	34.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.4	0.0	34.2	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.4	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	10.2
HCM 7th LOS	B

Intersection	
Intersection Delay, s/veh	4.9
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	413	412	0	208
Demand Flow Rate, veh/h	421	420	0	212
Vehicles Circulating, veh/h	351	120	316	354
Vehicles Exiting, veh/h	213	196	310	120
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.4	4.8	0.0	5.9
Approach LOS	A	A	-	A

Lane	Left	Bypass	Left	Bypass	Left	Left	Bypass
Designated Moves	LT	R	LT	R	LTR	LT	R
Assumed Moves	LT		LT		LTR	LT	
RT Channelized		Free		Free			Free
Lane Util	1.000		1.000		1.000	1.000	
Follow-Up Headway, s	2.609		2.609		2.609	2.609	
Critical Headway, s	4.976		4.976		4.976	4.976	
A (Intercept)	1380		1380		1380	1380	
B (Slope)	1.02e-3		1.02e-3		1.02e-3	1.02e-3	
Entry Flow, veh/h	275	146	354	66	0	210	2
Cap Entry Lane, veh/h	965	1938	1221	1938	1000	962	1938
Entry HV Adj Factor	0.982	0.980	0.980	0.980	1.000	0.979	0.980
Flow Entry, veh/h	270	143	347	65	0	206	2
Cap Entry, veh/h	947	1900	1196	1900	1000	942	1900
V/C Ratio	0.285	0.075	0.290	0.034	0.000	0.218	0.001
Control Delay, s/veh	6.7	0.0	5.7	0.0	3.6	6.0	0.0
LOS	A	A	A	A	A	A	A
95th %tile Queue, veh	1	0	1	0	0	1	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	3	81	0	0	0	0	310	27	122	141	0
Future Volume (veh/h)	80	3	81	0	0	0	0	310	27	122	141	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723				0	1870	1723	1723	1870	0
Adj Flow Rate, veh/h	87	3	88				0	337	29	133	153	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	142	0	126				0	1400	120	547	609	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.09	0.09	0.09				0.00	0.82	0.81	0.82	0.82	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	43.9	0.0	46.7				0.0	0.0	2.1	2.2	0.0	0.0
Ln Grp LOS	D		D						A	A		
Approach Vol, veh/h		175						366			286	
Approach Delay, s/veh		45.3						2.1			2.2	
Approach LOS		D						A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Case No		8.0		9.0		8.0		
Phs Duration (G+Y+Rc), s		78.2		11.8		78.2		
Change Period (Y+Rc), s		5.5		4.1		5.5		
Max Green (Gmax), s		56.5		23.9		56.5		
Max Allow Headway (MAH), s		4.0		4.2		4.5		
Max Q Clear (g_c+I1), s		5.9		7.3		7.2		
Green Ext Time (g_e), s		1.3		0.5		1.3		
Prob of Phs Call (p_c)		1.00		0.99		1.00		
Prob of Max Out (p_x)		0.00		0.00		0.00		

Left-Turn Movement Data									
Assigned Mvmt		5		7		1			
Mvmt Sat Flow, veh/h		0		1641		592			

Through Movement Data									
Assigned Mvmt		2		4		6			
Mvmt Sat Flow, veh/h		1698		0		739			

Right-Turn Movement Data									
Assigned Mvmt		12		14		16			
Mvmt Sat Flow, veh/h		146		1460		0			

Left Lane Group Data									
Assigned Mvmt	0	5	0	7	0	1	0	0	

Lane Assignment				L		L+T		
Lanes in Grp	0	0	0	1	0	1	0	0
Grp Vol (v), veh/h	0	0	0	87	0	286	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1641	0	1331	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	4.6	0.0	1.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	4.6	0.0	5.2	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1641	0	1032	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	74.2	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	70.3	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0
Time to First Blk (g_f), s	0.0	74.2	0.0	0.0	0.0	2.3	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	0.00	0.47	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	142	0	1156	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.61	0.00	0.25	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	438	0	1156	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	39.7	0.0	1.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	4.2	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	43.9	0.0	2.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.7	0.0	0.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.9	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.13	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		T+R		R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	366	0	88	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1844	0	1460	0	0	0	0
Q Serve Time (g_s), s	0.0	3.9	0.0	5.3	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	3.9	0.0	5.3	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.08	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1521	0	126	0	0	0	0
V/C Ratio (X)	0.00	0.24	0.00	0.70	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1521	0	389	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	1.7	0.0	40.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	6.8	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.1	0.0	46.7	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	1.8	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	2.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.14	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	11.3
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	189	34	21	311	0	37	0	13	0	0	0
Future Vol, veh/h	0	189	34	21	311	0	37	0	13	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	205	37	23	338	0	40	0	14	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	338	0	0	242	0	0	608	608	224	589	626	338
Stage 1	-	-	-	-	-	-	224	224	-	384	384	-
Stage 2	-	-	-	-	-	-	384	384	-	205	242	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1221	-	-	1324	-	-	408	411	816	420	401	704
Stage 1	-	-	-	-	-	-	779	718	-	639	612	-
Stage 2	-	-	-	-	-	-	639	612	-	797	705	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1221	-	-	1324	-	-	399	402	816	404	392	704
Mov Cap-2 Maneuver	-	-	-	-	-	-	399	402	-	404	392	-
Stage 1	-	-	-	-	-	-	779	718	-	626	599	-
Stage 2	-	-	-	-	-	-	626	599	-	783	705	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0.49	13.86	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	460	1221	-	-	114	-	-	-
HCM Lane V/C Ratio	0.118	-	-	-	0.017	-	-	-
HCM Control Delay (s/veh)	13.9	0	-	-	7.8	0	-	0
HCM Lane LOS	B	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0.4	0	-	-	0.1	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	193	51	28	180	202	80	332	32	97	176	54
Future Volume (veh/h)	134	193	51	28	180	202	80	332	32	97	176	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	146	210	55	30	196	220	87	361	35	105	191	59
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	202	517	403	66	361	282	474	1802	174	226	585	175
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Prop Arrive On Green	0.12	0.28	0.28	0.04	0.19	0.19	0.29	0.55	0.53	0.07	0.07	0.07
Unsig. Movement Delay												
Ln Grp Delay, s/veh	43.9	27.1	4.7	47.0	34.0	40.9	24.2	10.6	10.7	49.0	37.7	38.1
Ln Grp LOS	D	C	A	D	C	D	C	B	B	D	D	D
Approach Vol, veh/h		411			446			483			355	
Approach Delay, s/veh		30.1			38.3			13.1			41.2	
Approach LOS		C			D			B			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	6	5	7	8
Case No		4.0	2.0	3.0	6.4	2.0	2.0	3.0
Phs Duration (G+Y+Rc), s		53.5	7.6	28.9	23.5	30.0	15.1	21.4
Change Period (Y+Rc), s		5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green (Gmax), s		37.1	4.7	31.7	23.1	8.5	13.5	22.9
Max Allow Headway (MAH), s		4.0	4.1	4.1	4.5	4.1	4.1	4.2
Max Q Clear (g_c+I1), s		7.1	3.6	10.2	17.3	5.6	9.7	14.9
Green Ext Time (g_e), s		1.3	0.0	0.8	0.7	0.0	0.1	1.0
Prob of Phs Call (p_c)		1.00	0.53	1.00	1.00	0.89	0.97	1.00
Prob of Max Out (p_x)		0.00	1.00	0.00	0.55	1.00	1.00	0.18

Left-Turn Movement Data								
Assigned Mvmt			3		1	5	7	
Mvmt Sat Flow, veh/h			1641		910	1641	1641	

Through Movement Data								
Assigned Mvmt		2		4	6			8
Mvmt Sat Flow, veh/h		3275		1870	2693			1870

Right-Turn Movement Data								
Assigned Mvmt		12		14	16			18
Mvmt Sat Flow, veh/h		316		1460	808			1460

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	1	5	7	0

Lane Assignment			L (Prot)		L	L (Prot)	L (Prot)	
Lanes in Grp	0	0	1	0	1	1	1	0
Grp Vol (v), veh/h	0	0	30	0	105	87	146	0
Grp Sat Flow (s), veh/h/ln	0	0	1641	0	910	1641	1641	0
Q Serve Time (g_s), s	0.0	0.0	1.6	0.0	10.2	3.6	7.7	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	1.6	0.0	15.3	3.6	7.7	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	910	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	19.5	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	14.5	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	10.2	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	0	66	0	226	474	202	0
V/C Ratio (X)	0.00	0.00	0.46	0.00	0.46	0.18	0.72	0.00
Avail Cap (c_a), veh/h	0	0	113	0	277	474	273	0
Upstream Filter (I)	0.00	0.00	0.99	0.00	1.00	0.86	1.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	42.2	0.0	42.3	24.0	38.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	4.8	0.0	6.7	0.2	6.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	47.0	0.0	49.0	24.2	43.9	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.6	0.0	2.4	1.3	2.9	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.1	0.0	0.4	0.0	0.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.7	0.0	2.9	1.3	3.2	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.35	0.00	0.36	0.16	0.54	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	6	0	0	8
Lane Assignment		T		T	T			T
Lanes in Grp	0	1	0	1	1	0	0	1
Grp Vol (v), veh/h	0	195	0	210	124	0	0	196
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	1777	0	0	1870
Q Serve Time (g_s), s	0.0	5.0	0.0	8.2	6.0	0.0	0.0	8.5
Cycle Q Clear Time (g_c), s	0.0	5.0	0.0	8.2	6.0	0.0	0.0	8.5
Lane Grp Cap (c), veh/h	0	978	0	517	386	0	0	361
V/C Ratio (X)	0.00	0.20	0.00	0.41	0.32	0.00	0.00	0.54
Avail Cap (c_a), veh/h	0	978	0	690	486	0	0	507
Upstream Filter (I)	0.00	0.86	0.00	1.00	1.00	0.00	0.00	0.99
Uniform Delay (d1), s/veh	0.0	10.2	0.0	26.6	35.5	0.0	0.0	32.7
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.5	2.2	0.0	0.0	1.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.6	0.0	27.1	37.7	0.0	0.0	34.0
1st-Term Q (Q1), veh/ln	0.0	1.6	0.0	3.3	2.5	0.0	0.0	3.5

2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.7	0.0	3.4	2.7	0.0	0.0	3.7
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.02	0.05	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	16	0	0	18
Lane Assignment		T+R		R	T+R			R
Lanes in Grp	0	1	0	1	1	0	0	1
Grp Vol (v), veh/h	0	201	0	55	126	0	0	220
Grp Sat Flow (s), veh/h/ln	0	1814	0	1460	1725	0	0	1460
Q Serve Time (g_s), s	0.0	5.1	0.0	1.1	6.3	0.0	0.0	12.9
Cycle Q Clear Time (g_c), s	0.0	5.1	0.0	1.1	6.3	0.0	0.0	12.9
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.17	0.00	1.00	0.47	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	998	0	403	374	0	0	282
V/C Ratio (X)	0.00	0.20	0.00	0.14	0.34	0.00	0.00	0.78
Avail Cap (c_a), veh/h	0	998	0	539	471	0	0	396
Upstream Filter (I)	0.00	0.86	0.00	1.00	1.00	0.00	0.00	0.99
Uniform Delay (d1), s/veh	0.0	10.3	0.0	4.6	35.7	0.0	0.0	34.5
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.2	2.4	0.0	0.0	6.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.7	0.0	4.7	38.1	0.0	0.0	40.9
1st-Term Q (Q1), veh/ln	0.0	1.6	0.0	0.8	2.6	0.0	0.0	4.2
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.3	0.0	0.0	0.5
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.8	0.0	0.8	2.8	0.0	0.0	4.7
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.20	0.05	0.00	0.00	2.38
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	29.7
HCM 7th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	195	61	81	122	69	35	286	87	48	218	90
Future Volume (veh/h)	180	195	61	81	122	69	35	286	87	48	218	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	196	212	66	88	133	75	38	311	95	52	237	98
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	738	1226	957	700	736	415	222	479	374	177	479	374
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.66	0.66	0.66	0.66	0.66	0.64	0.26	0.26	0.26	0.26	0.26	0.26
Unsig. Movement Delay												
Ln Grp Delay, s/veh	9.3	6.3	5.7	7.8	0.0	6.5	34.4	31.4	27.0	39.0	29.3	27.1
Ln Grp LOS	A	A	A	A		A	C	C	C	D	C	C
Approach Vol, veh/h		474			296			444			387	
Approach Delay, s/veh		7.5			6.9			30.7			30.1	
Approach LOS		A			A			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		5.0		5.0		6.0
Phs Duration (G+Y+Rc), s		27.0		63.0		27.0		63.0
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5
Max Green (Gmax), s		34.5		44.5		34.5		44.5
Max Allow Headway (MAH), s		4.2		4.4		4.3		4.4
Max Q Clear (g_c+I1), s		15.4		14.0		20.3		9.3
Green Ext Time (g_e), s		1.6		2.0		1.3		1.2
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.00		0.01		0.00

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		963		1081		902		1014

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1123

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1460		1460		1460		633

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3

Lane Assignment		L		L		L		L
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	38	0	196	0	52	0	88
Grp Sat Flow (s), veh/h/ln	0	963	0	1081	0	902	0	1014
Q Serve Time (g_s), s	0.0	3.2	0.0	7.8	0.0	4.9	0.0	3.3
Cycle Q Clear Time (g_c), s	0.0	12.9	0.0	12.0	0.0	18.3	0.0	7.3
Perm LT Sat Flow (s_l), veh/h/ln	0	963	0	1081	0	902	0	1014
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	23.0	0.0	59.0	0.0	23.0	0.0	59.0
Perm LT Serve Time (g_u), s	0.0	13.3	0.0	54.7	0.0	9.7	0.0	55.0
Perm LT Q Serve Time (g_ps), s	0.0	3.2	0.0	7.8	0.0	4.9	0.0	3.3
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	222	0	738	0	177	0	700
V/C Ratio (X)	0.00	0.17	0.00	0.27	0.00	0.29	0.00	0.13
Avail Cap (c_a), veh/h	0	361	0	738	0	307	0	700
Upstream Filter (I)	0.00	1.00	0.00	0.94	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	34.0	0.0	8.4	0.0	38.0	0.0	7.5
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.8	0.0	0.9	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	34.4	0.0	9.3	0.0	39.0	0.0	7.8
1st-Term Q (Q1), veh/ln	0.0	0.7	0.0	1.4	0.0	1.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.7	0.0	1.6	0.0	1.1	0.0	0.6
%ile Storage Ratio (RQ%)	0.00	0.16	0.00	0.40	0.00	0.38	0.00	0.16
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	311	0	212	0	237	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	0
Q Serve Time (g_s), s	0.0	13.4	0.0	4.0	0.0	9.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	13.4	0.0	4.0	0.0	9.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	479	0	1226	0	479	0	0
V/C Ratio (X)	0.00	0.65	0.00	0.17	0.00	0.50	0.00	0.00
Avail Cap (c_a), veh/h	0	748	0	1226	0	748	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.94	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	29.9	0.0	6.0	0.0	28.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.5	0.0	0.3	0.0	0.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	31.4	0.0	6.3	0.0	29.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.4	0.0	1.1	0.0	4.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.1	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.6	0.0	1.2	0.0	4.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.08	0.00	0.01	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	95	0	66	0	98	0	208
Grp Sat Flow (s), veh/h/ln	0	1460	0	1460	0	1460	0	1756
Q Serve Time (g_s), s	0.0	4.7	0.0	1.5	0.0	4.8	0.0	4.2
Cycle Q Clear Time (g_c), s	0.0	4.7	0.0	1.5	0.0	4.8	0.0	4.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.36
Lane Grp Cap (c), veh/h	0	374	0	957	0	374	0	1151
V/C Ratio (X)	0.00	0.25	0.00	0.07	0.00	0.26	0.00	0.18
Avail Cap (c_a), veh/h	0	584	0	957	0	584	0	1151
Upstream Filter (I)	0.00	1.00	0.00	0.94	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	26.7	0.0	5.6	0.0	26.7	0.0	6.2
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.1	0.0	0.4	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	27.0	0.0	5.7	0.0	27.1	0.0	6.5
1st-Term Q (Q1), veh/ln	0.0	1.5	0.0	0.3	0.0	1.5	0.0	1.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.5	0.0	0.4	0.0	1.6	0.0	1.2
%ile Storage Ratio (RQ%)	0.00	0.39	0.00	0.18	0.00	0.20	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	19.3
HCM 7th LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	19	227	94	6	90	106
Future Volume (veh/h)	19	227	94	6	90	106
Number	3	18	2	12	1	6
Initial Q, veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Lanes Open During Work Zone						
Adj Sat Flow, veh/h/ln	1723	1723	1870	1723	1723	1870
Adj Flow Rate, veh/h	21	247	102	7	98	115
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Opposing Right Turn Influence	Yes				Yes	
Cap, veh/h	323	288	1235	85	903	1335
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.20	0.20	0.71	0.71	0.71	0.71
Unsig. Movement Delay						
Ln Grp Delay, s/veh	29.5	42.2	0.0	4.0	4.8	4.0
Ln Grp LOS	C	D		A	A	A
Approach Vol, veh/h	268		109			213
Approach Delay, s/veh	41.2		4.0			4.4
Approach LOS	D		A			A

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8			6		
Case No		8.0	9.0			6.0		
Phs Duration (G+Y+Rc), s		68.3	21.7			68.3		
Change Period (Y+Rc), s		4.0	4.0			4.0		
Max Green (Gmax), s		36.0	46.0			36.0		
Max Allow Headway (MAH), s		4.0	4.3			4.2		
Max Q Clear (g_c+I1), s		3.6	16.7			6.1		
Green Ext Time (g_e), s		0.3	1.1			0.8		
Prob of Phs Call (p_c)		1.00	1.00			1.00		
Prob of Max Out (p_x)		0.00	0.00			0.00		

Left-Turn Movement Data								
Assigned Mvmt		5	3			1		
Mvmt Sat Flow, veh/h		0	1641			1183		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		1730	0			1870		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		119	1460			0		

Left Lane Group Data								
Assigned Mvmt	0	5	3	0	0	1	0	0

Lane Assignment			L			L		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	21	0	0	98	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1641	0	0	1183	0	0
Q Serve Time (g_s), s	0.0	0.0	0.9	0.0	0.0	2.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.9	0.0	0.0	4.1	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1641	0	0	1183	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	64.3	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	62.6	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0
Time to First Blk (g_f), s	0.0	64.3	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	323	0	0	903	0	0
V/C Ratio (X)	0.00	0.00	0.06	0.00	0.00	0.11	0.00	0.00
Avail Cap (c_a), veh/h	0	0	839	0	0	903	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.99	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	29.4	0.0	0.0	4.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	29.5	0.0	0.0	4.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.3	0.0	0.0	0.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.3	0.0	0.0	0.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.06	0.00	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	115	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	1335	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1335	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.99	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	3.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment		T+R	R					
Lanes in Grp	0	1	1	0	0	0	0	0
Grp Vol (v), veh/h	0	109	247	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1849	1460	0	0	0	0	0
Q Serve Time (g_s), s	0.0	1.6	14.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.6	14.7	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.06	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1320	288	0	0	0	0	0
V/C Ratio (X)	0.00	0.08	0.86	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1320	746	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	3.9	34.9	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	7.3	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.0	42.2	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.4	4.8	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.4	5.4	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.04	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	21.1
HCM 7th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	54	0	410	30	797	0	0	524	286
Future Volume (veh/h)	0	0	0	54	0	410	30	797	0	0	524	286
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1723	0	1723	1723	1870	0	0	1870	1723
Adj Flow Rate, veh/h				59	0	446	33	866	0	0	570	311
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				669	0	540	41	2495	0	0	3231	924
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.21	0.00	0.21	0.01	0.23	0.00	0.00	0.63	0.63
Unsig. Movement Delay												
Ln Grp Delay, s/veh				28.7	0.0	38.1	71.9	17.7	0.0	0.0	7.0	8.7
Ln Grp LOS				C		D	E	B			A	A
Approach Vol, veh/h					505			899			881	
Approach Delay, s/veh					37.0			19.7			7.6	
Approach LOS					D			B			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	9.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		67.2	22.8		6.2	60.9		
Change Period (Y+Rc), s		5.5	4.0		4.0	5.5		
Max Green (Gmax), s		51.5	29.0		10.0	37.5		
Max Allow Headway (MAH), s		4.0	4.3		4.1	4.1		
Max Q Clear (g_c+I1), s		20.3	16.9		3.8	10.9		
Green Ext Time (g_e), s		4.0	1.9		0.0	3.9		
Prob of Phs Call (p_c)		1.00	1.00		0.56	1.00		
Prob of Max Out (p_x)		0.00	0.05		0.05	0.00		

Left-Turn Movement Data						
Assigned Mvmt			3		5	1
Mvmt Sat Flow, veh/h			3183		1641	0

Through Movement Data						
Assigned Mvmt		2	8			6
Mvmt Sat Flow, veh/h		3647	0			5274

Right-Turn Movement Data						
Assigned Mvmt		12	18			16
Mvmt Sat Flow, veh/h		0	2569			1460

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0

Lane Assignment			L		L (Prot)			
Lanes in Grp	0	0	2	0	1	0	0	0
Grp Vol (v), veh/h	0	0	59	0	33	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1591	0	1641	0	0	0
Q Serve Time (g_s), s	0.0	0.0	1.3	0.0	1.8	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	1.3	0.0	1.8	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1591	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	56.9	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	669	0	41	0	0	0
V/C Ratio (X)	0.00	0.00	0.09	0.00	0.81	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	1029	0	182	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.92	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	28.6	0.0	44.4	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	27.5	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	28.7	0.0	71.9	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.5	0.0	0.7	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.5	0.0	1.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.04	0.00	0.06	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	866	0	0	0	570	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1702	0	0
Q Serve Time (g_s), s	0.0	18.3	0.0	0.0	0.0	4.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	18.3	0.0	0.0	0.0	4.2	0.0	0.0
Lane Grp Cap (c), veh/h	0	2495	0	0	0	3231	0	0
V/C Ratio (X)	0.00	0.35	0.00	0.00	0.00	0.18	0.00	0.00
Avail Cap (c_a), veh/h	0	2495	0	0	0	3231	0	0
Upstream Filter (I)	0.00	0.92	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	17.3	0.0	0.0	0.0	6.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.7	0.0	0.0	0.0	7.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	8.5	0.0	0.0	0.0	1.1	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	8.6	0.0	0.0	0.0	1.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.39	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	2	0	0	1	0	0
Grp Vol (v), veh/h	0	0	446	0	0	311	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1285	0	0	1460	0	0
Q Serve Time (g_s), s	0.0	0.0	14.9	0.0	0.0	8.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	14.9	0.0	0.0	8.9	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	540	0	0	924	0	0
V/C Ratio (X)	0.00	0.00	0.83	0.00	0.00	0.34	0.00	0.00
Avail Cap (c_a), veh/h	0	0	831	0	0	924	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	34.0	0.0	0.0	7.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	4.1	0.0	0.0	1.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	38.1	0.0	0.0	8.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	4.2	0.0	0.0	2.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	4.6	0.0	0.0	2.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.28	0.00	0.00	0.47	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	18.8
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	312	0	19	0	0	0	0	553	130	0	308	0
Future Volume (veh/h)	312	0	19	0	0	0	0	553	130	0	308	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	0	1723				0	1870	1723	0	1870	1723
Adj Flow Rate, veh/h	339	0	21				0	601	141	0	335	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Opposing Right Turn Influence	Yes						No			No		
Cap, veh/h	448	0	206				0	2204	516	0	2741	1126
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	1.00	2.00	2.00
Prop Arrive On Green	0.14	0.00	0.14				0.00	1.00	1.00	0.00	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	39.8	0.0	33.9				0.0	0.5	0.5	0.0	0.1	0.0
Ln Grp LOS	D		C					A	A		A	
Approach Vol, veh/h		360						742			335	
Approach Delay, s/veh		39.5						0.5			0.1	
Approach LOS		D						A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Case No		8.0		9.0		7.0		
Phs Duration (G+Y+Rc), s		73.4		16.6		73.4		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green (Gmax), s		50.5		30.0		50.5		
Max Allow Headway (MAH), s		4.1		4.1		4.0		
Max Q Clear (g_c+I1), s		2.0		11.2		2.0		
Green Ext Time (g_e), s		2.9		1.4		1.4		
Prob of Phs Call (p_c)		1.00		1.00		1.00		
Prob of Max Out (p_x)		0.00		0.00		0.00		

Left-Turn Movement Data									
Assigned Mvmt		5		7		1			
Mvmt Sat Flow, veh/h		0		3183		0			

Through Movement Data									
Assigned Mvmt		2		4		6			
Mvmt Sat Flow, veh/h		2951		0		3647			

Right-Turn Movement Data									
Assigned Mvmt		12		14		16			
Mvmt Sat Flow, veh/h		669		1460		1460			

Left Lane Group Data									
Assigned Mvmt	0	5	0	7	0	1	0	0	

Lane Assignment				L				
Lanes in Grp	0	0	0	2	0	0	0	0
Grp Vol (v), veh/h	0	0	0	339	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1591	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	9.2	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	9.2	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1591	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	69.4	0.0	0.0	0.0	69.4	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	448	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.76	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	1065	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	37.2	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	39.8	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	373	0	0	0	335	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1371	0	0	0	2741	0	0
V/C Ratio (X)	0.00	0.27	0.00	0.00	0.00	0.12	0.00	0.00
Avail Cap (c_a), veh/h	0	1371	0	0	0	2741	0	0
Upstream Filter (I)	0.00	0.93	0.00	0.00	0.00	0.99	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.5	0.0	0.0	0.0	0.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	369	0	21	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1750	0	1460	0	1460	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.38	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1350	0	206	0	1126	0	0
V/C Ratio (X)	0.00	0.27	0.00	0.10	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1350	0	488	0	1126	0	0
Upstream Filter (I)	0.00	0.93	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	33.7	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.5	0.0	33.9	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.4	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	10.1
HCM 7th LOS	B

Intersection	
Intersection Delay, s/veh	5.0
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	425	428	0	219
Demand Flow Rate, veh/h	433	436	0	224
Vehicles Circulating, veh/h	367	124	325	367
Vehicles Exiting, veh/h	221	201	325	124
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.5	4.9	0.0	6.2
Approach LOS	A	A	-	A

Lane	Left	Bypass	Left	Bypass	Left	Left	Bypass
Designated Moves	LT	R	LT	R	LTR	LT	R
Assumed Moves	LT		LT		LTR	LT	
RT Channelized		Free		Free			Free
Lane Util	1.000		1.000		1.000	1.000	
Follow-Up Headway, s	2.609		2.609		2.609	2.609	
Critical Headway, s	4.976		4.976		4.976	4.976	
A (Intercept)	1380		1380		1380	1380	
B (Slope)	1.02e-3		1.02e-3		1.02e-3	1.02e-3	
Entry Flow, veh/h	282	151	367	69	0	222	2
Cap Entry Lane, veh/h	949	1938	1216	1938	991	949	1938
Entry HV Adj Factor	0.982	0.980	0.980	0.980	1.000	0.980	0.980
Flow Entry, veh/h	277	148	360	68	0	217	2
Cap Entry, veh/h	932	1900	1192	1900	991	930	1900
V/C Ratio	0.297	0.078	0.302	0.036	0.000	0.234	0.001
Control Delay, s/veh	7.0	0.0	5.8	0.0	3.6	6.2	0.0
LOS	A	A	A	A	A	A	A
95th %tile Queue, veh	1	0	1	0	0	1	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	2	85	0	0	0	0	321	27	126	146	0
Future Volume (veh/h)	84	2	85	0	0	0	0	321	27	126	146	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723				0	1870	1723	1723	1870	0
Adj Flow Rate, veh/h	91	2	92				0	349	29	137	159	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	147	0	131				0	1399	116	538	605	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.09	0.09	0.09				0.00	0.82	0.80	0.82	0.82	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	43.7	0.0	46.5				0.0	0.0	2.2	2.4	0.0	0.0
Ln Grp LOS	D		D						A	A		
Approach Vol, veh/h		183						378			296	
Approach Delay, s/veh		45.1						2.2			2.4	
Approach LOS		D						A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Case No		8.0		9.0		8.0		
Phs Duration (G+Y+Rc), s		77.9		12.1		77.9		
Change Period (Y+Rc), s		5.5		4.1		5.5		
Max Green (Gmax), s		56.5		23.9		56.5		
Max Allow Headway (MAH), s		4.0		4.2		4.5		
Max Q Clear (g_c+I1), s		6.2		7.5		7.7		
Green Ext Time (g_e), s		1.4		0.5		1.3		
Prob of Phs Call (p_c)		1.00		0.99		1.00		
Prob of Max Out (p_x)		0.00		0.00		0.00		

Left-Turn Movement Data						
Assigned Mvmt		5		7		1
Mvmt Sat Flow, veh/h		0		1641		584

Through Movement Data						
Assigned Mvmt		2		4		6
Mvmt Sat Flow, veh/h		1703		0		737

Right-Turn Movement Data						
Assigned Mvmt		12		14		16
Mvmt Sat Flow, veh/h		142		1460		0

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	0

Lane Assignment				L		L+T		
Lanes in Grp	0	0	0	1	0	1	0	0
Grp Vol (v), veh/h	0	0	0	91	0	296	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1641	0	1321	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	4.8	0.0	1.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	4.8	0.0	5.7	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1641	0	1021	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	73.9	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	69.8	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0
Time to First Blk (g_f), s	0.0	73.9	0.0	0.0	0.0	2.3	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	0.00	0.46	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	147	0	1143	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.62	0.00	0.26	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	438	0	1143	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	39.5	0.0	1.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	4.2	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	43.7	0.0	2.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.8	0.0	0.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	2.0	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.14	0.00	0.07	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		T+R		R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	378	0	92	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1845	0	1460	0	0	0	0
Q Serve Time (g_s), s	0.0	4.2	0.0	5.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	4.2	0.0	5.5	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.08	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1516	0	131	0	0	0	0
V/C Ratio (X)	0.00	0.25	0.00	0.70	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1516	0	389	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	1.8	0.0	39.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	6.7	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.2	0.0	46.5	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	1.8	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.4	0.0	2.1	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.15	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	11.4
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	205	36	22	316	0	40	0	14	0	0	0
Future Vol, veh/h	0	205	36	22	316	0	40	0	14	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	223	39	24	343	0	43	0	15	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	343	0	0	262	0	0	634	634	242	614	653	343
Stage 1	-	-	-	-	-	-	242	242	-	391	391	-
Stage 2	-	-	-	-	-	-	391	391	-	223	262	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1216	-	-	1302	-	-	392	397	796	404	387	699
Stage 1	-	-	-	-	-	-	761	705	-	633	607	-
Stage 2	-	-	-	-	-	-	633	607	-	780	692	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1216	-	-	1302	-	-	383	388	796	387	378	699
Mov Cap-2 Maneuver	-	-	-	-	-	-	383	388	-	387	378	-
Stage 1	-	-	-	-	-	-	761	705	-	619	593	-
Stage 2	-	-	-	-	-	-	619	593	-	765	692	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0.51	14.37	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	443	1216	-	-	117	-	-	-
HCM Lane V/C Ratio	0.133	-	-	-	0.018	-	-	-
HCM Control Delay (s/veh)	14.4	0	-	-	7.8	0	-	0
HCM Lane LOS	B	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0.5	0	-	-	0.1	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	197	49	29	189	208	82	345	33	101	183	54
Future Volume (veh/h)	132	197	49	29	189	208	82	345	33	101	183	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	143	214	53	32	205	226	89	375	36	110	199	59
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	199	294	229	265	369	288	135	1797	172	459	1147	331
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Prop Arrive On Green	0.12	0.16	0.16	0.16	0.20	0.20	0.16	1.00	1.00	0.84	0.84	0.81
Unsig. Movement Delay												
Ln Grp Delay, s/veh	43.6	39.6	19.6	32.5	33.9	41.2	41.1	0.4	0.4	5.5	4.7	5.1
Ln Grp LOS	D	D	B	C	C	D	D	A	A	A	A	A
Approach Vol, veh/h		410			463			500			368	
Approach Delay, s/veh		38.4			37.4			7.7			5.1	
Approach LOS		D			D			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	4	3	5	6	7	8
Case No		4.0	3.0	2.0	2.0	6.3	2.0	3.0
Phs Duration (G+Y+Rc), s		53.3	18.1	18.5	11.4	41.9	14.9	21.7
Change Period (Y+Rc), s		5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green (Gmax), s		37.1	31.6	4.8	8.5	23.1	13.5	22.9
Max Allow Headway (MAH), s		4.0	4.1	4.1	4.1	4.5	4.1	4.2
Max Q Clear (g_c+I1), s		2.0	11.8	3.5	6.6	4.3	9.6	15.2
Green Ext Time (g_e), s		1.4	0.8	0.0	0.0	1.4	0.1	1.0
Prob of Phs Call (p_c)		1.00	1.00	0.55	0.89	1.00	0.97	1.00
Prob of Max Out (p_x)		0.00	0.00	1.00	1.00	0.00	1.00	0.22

Left-Turn Movement Data								
Assigned Mvmt				3	5	1	7	
Mvmt Sat Flow, veh/h				1641	1641	898	1641	

Through Movement Data								
Assigned Mvmt		2	4			6		8
Mvmt Sat Flow, veh/h		3278	1870			2721		1870

Right-Turn Movement Data								
Assigned Mvmt		12	14			16		18
Mvmt Sat Flow, veh/h		313	1460			785		1460

Left Lane Group Data								
Assigned Mvmt	0	0	0	3	5	1	7	0

Lane Assignment				L (Prot)	L (Prot)	L	L (Prot)	
Lanes in Grp	0	0	0	1	1	1	1	0
Grp Vol (v), veh/h	0	0	0	32	89	110	143	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1641	1641	898	1641	0
Q Serve Time (g_s), s	0.0	0.0	0.0	1.5	4.6	2.3	7.6	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.5	4.6	2.3	7.6	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	898	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	37.9	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	37.9	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	265	135	459	199	0
V/C Ratio (X)	0.00	0.00	0.00	0.12	0.66	0.24	0.72	0.00
Avail Cap (c_a), veh/h	0	0	0	265	182	459	273	0
Upstream Filter (I)	0.00	0.00	0.00	0.99	0.86	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	32.3	36.4	4.3	38.1	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	4.7	1.2	5.6	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	32.5	41.1	5.5	43.6	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.6	1.6	0.3	2.8	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.2	0.2	0.3	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.6	1.8	0.5	3.1	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.29	0.23	0.06	0.53	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	4	0	0	6	0	8
Lane Assignment		T	T			T		T
Lanes in Grp	0	1	1	0	0	1	0	1
Grp Vol (v), veh/h	0	202	214	0	0	128	0	205
Grp Sat Flow (s), veh/h/ln	0	1777	1870	0	0	1777	0	1870
Q Serve Time (g_s), s	0.0	0.0	9.8	0.0	0.0	1.2	0.0	8.9
Cycle Q Clear Time (g_c), s	0.0	0.0	9.8	0.0	0.0	1.2	0.0	8.9
Lane Grp Cap (c), veh/h	0	974	294	0	0	749	0	369
V/C Ratio (X)	0.00	0.21	0.73	0.00	0.00	0.17	0.00	0.56
Avail Cap (c_a), veh/h	0	974	688	0	0	749	0	507
Upstream Filter (I)	0.00	0.86	1.00	0.00	0.00	1.00	0.00	0.99
Uniform Delay (d1), s/veh	0.0	0.0	36.1	0.0	0.0	4.2	0.0	32.6
Incr Delay (d2), s/veh	0.0	0.4	3.5	0.0	0.0	0.5	0.0	1.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.4	39.6	0.0	0.0	4.7	0.0	33.9
1st-Term Q (Q1), veh/ln	0.0	0.0	4.1	0.0	0.0	0.4	0.0	3.7

2nd-Term Q (Q2), veh/ln	0.0	0.1	0.3	0.0	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.1	4.4	0.0	0.0	0.5	0.0	3.8
%ile Storage Ratio (RQ%)	0.00	0.00	0.02	0.00	0.00	0.01	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	14	0	0	16	0	18
Lane Assignment		T+R	R			T+R		R
Lanes in Grp	0	1	1	0	0	1	0	1
Grp Vol (v), veh/h	0	209	53	0	0	130	0	226
Grp Sat Flow (s), veh/h/ln	0	1814	1460	0	0	1729	0	1460
Q Serve Time (g_s), s	0.0	0.0	2.2	0.0	0.0	1.4	0.0	13.2
Cycle Q Clear Time (g_c), s	0.0	0.0	2.2	0.0	0.0	1.4	0.0	13.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.17	1.00	0.00	0.00	0.45	0.00	1.00
Lane Grp Cap (c), veh/h	0	994	229	0	0	729	0	288
V/C Ratio (X)	0.00	0.21	0.23	0.00	0.00	0.18	0.00	0.79
Avail Cap (c_a), veh/h	0	994	537	0	0	729	0	396
Upstream Filter (I)	0.00	0.86	1.00	0.00	0.00	1.00	0.00	0.99
Uniform Delay (d1), s/veh	0.0	0.0	19.0	0.0	0.0	4.6	0.0	34.3
Incr Delay (d2), s/veh	0.0	0.4	0.5	0.0	0.0	0.5	0.0	6.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.4	19.6	0.0	0.0	5.1	0.0	41.2
1st-Term Q (Q1), veh/ln	0.0	0.0	0.9	0.0	0.0	0.4	0.0	4.3
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.1	1.0	0.0	0.0	0.5	0.0	4.8
%ile Storage Ratio (RQ%)	0.00	0.00	0.24	0.00	0.00	0.01	0.00	2.46
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	22.3
HCM 7th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	187	204	63	83	125	71	37	297	90	50	226	93
Future Volume (veh/h)	187	204	63	83	125	71	37	297	90	50	226	93
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	203	222	68	90	136	77	40	323	98	54	246	101
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	723	1210	944	681	725	411	226	494	386	178	494	386
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.65	0.65	0.65	0.65	0.65	0.63	0.26	0.26	0.26	0.26	0.26	0.26
Unsig. Movement Delay												
Ln Grp Delay, s/veh	9.9	6.7	6.0	8.3	0.0	6.9	34.1	30.9	26.5	38.8	28.8	26.5
Ln Grp LOS	A	A	A	A		A	C	C	C	D	C	C
Approach Vol, veh/h		493			303			461			401	
Approach Delay, s/veh		7.9			7.3			30.2			29.6	
Approach LOS		A			A			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		5.0		5.0		6.0
Phs Duration (G+Y+Rc), s		27.8		62.2		27.8		62.2
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5
Max Green (Gmax), s		34.5		44.5		34.5		44.5
Max Allow Headway (MAH), s		4.2		4.4		4.3		4.4
Max Q Clear (g_c+I1), s		15.8		14.9		21.0		9.8
Green Ext Time (g_e), s		1.6		2.1		1.3		1.3
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.00		0.02		0.00

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		952		1076		890		1003

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1121

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1460		1460		1460		635

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3

Lane Assignment		L		L		L		L
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	40	0	203	0	54	0	90
Grp Sat Flow (s), veh/h/ln	0	952	0	1076	0	890	0	1003
Q Serve Time (g_s), s	0.0	3.3	0.0	8.4	0.0	5.2	0.0	3.6
Cycle Q Clear Time (g_c), s	0.0	13.4	0.0	12.9	0.0	19.0	0.0	7.8
Perm LT Sat Flow (s_l), veh/h/ln	0	952	0	1076	0	890	0	1003
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	23.8	0.0	58.2	0.0	23.8	0.0	58.2
Perm LT Serve Time (g_u), s	0.0	13.8	0.0	53.8	0.0	10.0	0.0	53.9
Perm LT Q Serve Time (g_ps), s	0.0	3.3	0.0	8.4	0.0	5.2	0.0	3.6
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	226	0	723	0	178	0	681
V/C Ratio (X)	0.00	0.18	0.00	0.28	0.00	0.30	0.00	0.13
Avail Cap (c_a), veh/h	0	355	0	723	0	299	0	681
Upstream Filter (I)	0.00	1.00	0.00	0.94	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	33.7	0.0	9.0	0.0	37.9	0.0	7.9
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.9	0.0	0.9	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	34.1	0.0	9.9	0.0	38.8	0.0	8.3
1st-Term Q (Q1), veh/ln	0.0	0.7	0.0	1.5	0.0	1.0	0.0	0.6
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.7	0.0	1.7	0.0	1.1	0.0	0.7
%ile Storage Ratio (RQ%)	0.00	0.17	0.00	0.43	0.00	0.40	0.00	0.17
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	323	0	222	0	246	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	0
Q Serve Time (g_s), s	0.0	13.8	0.0	4.3	0.0	10.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	13.8	0.0	4.3	0.0	10.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	494	0	1210	0	494	0	0
V/C Ratio (X)	0.00	0.65	0.00	0.18	0.00	0.50	0.00	0.00
Avail Cap (c_a), veh/h	0	748	0	1210	0	748	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.94	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	29.4	0.0	6.4	0.0	28.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.5	0.0	0.3	0.0	0.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	30.9	0.0	6.7	0.0	28.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.6	0.0	1.2	0.0	4.1	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.1	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.8	0.0	1.3	0.0	4.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.08	0.00	0.01	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	98	0	68	0	101	0	213
Grp Sat Flow (s), veh/h/ln	0	1460	0	1460	0	1460	0	1756
Q Serve Time (g_s), s	0.0	4.8	0.0	1.6	0.0	4.9	0.0	4.5
Cycle Q Clear Time (g_c), s	0.0	4.8	0.0	1.6	0.0	4.9	0.0	4.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.36
Lane Grp Cap (c), veh/h	0	386	0	944	0	386	0	1136
V/C Ratio (X)	0.00	0.25	0.00	0.07	0.00	0.26	0.00	0.19
Avail Cap (c_a), veh/h	0	584	0	944	0	584	0	1136
Upstream Filter (I)	0.00	1.00	0.00	0.94	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	26.1	0.0	5.9	0.0	26.2	0.0	6.5
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.1	0.0	0.4	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	26.5	0.0	6.0	0.0	26.5	0.0	6.9
1st-Term Q (Q1), veh/ln	0.0	1.5	0.0	0.3	0.0	1.6	0.0	1.2
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.6	0.0	0.4	0.0	1.6	0.0	1.3
%ile Storage Ratio (RQ%)	0.00	0.39	0.00	0.19	0.00	0.20	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	19.3
HCM 7th LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	19	232	105	6	97	127
Future Volume (veh/h)	19	232	105	6	97	127
Number	3	18	2	12	1	6
Initial Q, veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Lanes Open During Work Zone						
Adj Sat Flow, veh/h/ln	1723	1723	1870	1723	1723	1870
Adj Flow Rate, veh/h	21	252	114	7	105	138
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Opposing Right Turn Influence	Yes				Yes	
Cap, veh/h	329	293	1239	76	888	1329
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Prop Arrive On Green	0.20	0.20	0.71	0.71	1.00	1.00
Unsig. Movement Delay						
Ln Grp Delay, s/veh	29.2	42.1	0.0	4.2	0.3	0.2
Ln Grp LOS	C	D		A	A	A
Approach Vol, veh/h	273		121			243
Approach Delay, s/veh	41.1		4.2			0.2
Approach LOS	D		A			A

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8			6		
Case No		8.0	9.0			6.0		
Phs Duration (G+Y+Rc), s		67.9	22.1			67.9		
Change Period (Y+Rc), s		4.0	4.0			4.0		
Max Green (Gmax), s		37.0	45.0			37.0		
Max Allow Headway (MAH), s		4.0	4.3			4.2		
Max Q Clear (g_c+I1), s		3.8	17.0			4.1		
Green Ext Time (g_e), s		0.4	1.1			0.9		
Prob of Phs Call (p_c)		1.00	1.00			1.00		
Prob of Max Out (p_x)		0.00	0.00			0.00		

Left-Turn Movement Data								
Assigned Mvmt		5	3			1		
Mvmt Sat Flow, veh/h		0	1641			1170		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		1744	0			1870		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		107	1460			0		

Left Lane Group Data								
Assigned Mvmt	0	5	3	0	0	1	0	0

Lane Assignment			L			L		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	21	0	0	105	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1641	0	0	1170	0	0
Q Serve Time (g_s), s	0.0	0.0	0.9	0.0	0.0	0.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.9	0.0	0.0	2.1	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1641	0	0	1170	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	63.9	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	62.1	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Time to First Blk (g_f), s	0.0	63.9	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	329	0	0	888	0	0
V/C Ratio (X)	0.00	0.00	0.06	0.00	0.00	0.12	0.00	0.00
Avail Cap (c_a), veh/h	0	0	820	0	0	888	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.99	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	29.1	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	29.2	0.0	0.0	0.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.3	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.06	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	138	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	1329	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1329	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.99	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment		T+R	R					
Lanes in Grp	0	1	1	0	0	0	0	0
Grp Vol (v), veh/h	0	121	252	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1851	1460	0	0	0	0	0
Q Serve Time (g_s), s	0.0	1.8	15.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.8	15.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.06	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1315	293	0	0	0	0	0
V/C Ratio (X)	0.00	0.09	0.86	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1315	730	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	4.0	34.8	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	7.3	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.2	42.1	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.4	4.9	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.6	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.5	5.5	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.04	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	18.5
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	61	0	410	30	831	0	0	536	286
Future Volume (veh/h)	0	0	0	61	0	410	30	831	0	0	536	286
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1723	0	1723	1723	1870	0	0	1870	1723
Adj Flow Rate, veh/h				66	0	446	33	903	0	0	583	311
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				669	0	540	41	2494	0	0	3229	923
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.21	0.00	0.21	0.05	1.00	0.00	0.00	0.63	0.63
Unsig. Movement Delay												
Ln Grp Delay, s/veh				28.7	0.0	38.0	70.1	0.4	0.0	0.0	7.0	8.7
Ln Grp LOS				C		D	E	A			A	A
Approach Vol, veh/h					512			936			894	
Approach Delay, s/veh					36.8			2.8			7.6	
Approach LOS					D			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	9.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		67.2	22.8		6.2	60.9		
Change Period (Y+Rc), s		5.5	4.0		4.0	5.5		
Max Green (Gmax), s		51.5	29.0		10.0	37.5		
Max Allow Headway (MAH), s		4.0	4.3		4.1	4.1		
Max Q Clear (g_c+I1), s		2.0	16.9		3.8	11.0		
Green Ext Time (g_e), s		4.3	1.9		0.0	4.0		
Prob of Phs Call (p_c)		1.00	1.00		0.56	1.00		
Prob of Max Out (p_x)		0.00	0.05		0.05	0.00		

Left-Turn Movement Data						
Assigned Mvmt			3		5	1
Mvmt Sat Flow, veh/h			3183		1641	0

Through Movement Data						
Assigned Mvmt		2	8			6
Mvmt Sat Flow, veh/h		3647	0			5274

Right-Turn Movement Data						
Assigned Mvmt		12	18			16
Mvmt Sat Flow, veh/h		0	2569			1460

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0

Lane Assignment			L		L (Prot)			
Lanes in Grp	0	0	2	0	1	0	0	0
Grp Vol (v), veh/h	0	0	66	0	33	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1591	0	1641	0	0	0
Q Serve Time (g_s), s	0.0	0.0	1.5	0.0	1.8	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	1.5	0.0	1.8	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1591	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	56.9	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	669	0	41	0	0	0
V/C Ratio (X)	0.00	0.00	0.10	0.00	0.81	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	1029	0	182	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.92	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	28.7	0.0	42.5	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	27.5	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	28.7	0.0	70.1	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.5	0.0	0.7	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.5	0.0	1.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.05	0.00	0.06	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	903	0	0	0	583	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1702	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0
Lane Grp Cap (c), veh/h	0	2494	0	0	0	3229	0	0
V/C Ratio (X)	0.00	0.36	0.00	0.00	0.00	0.18	0.00	0.00
Avail Cap (c_a), veh/h	0	2494	0	0	0	3229	0	0
Upstream Filter (I)	0.00	0.92	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	6.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.4	0.0	0.0	0.0	7.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	1.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	2	0	0	1	0	0
Grp Vol (v), veh/h	0	0	446	0	0	311	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1285	0	0	1460	0	0
Q Serve Time (g_s), s	0.0	0.0	14.9	0.0	0.0	9.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	14.9	0.0	0.0	9.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	540	0	0	923	0	0
V/C Ratio (X)	0.00	0.00	0.83	0.00	0.00	0.34	0.00	0.00
Avail Cap (c_a), veh/h	0	0	831	0	0	923	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	34.0	0.0	0.0	7.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	4.1	0.0	0.0	1.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	38.0	0.0	0.0	8.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	4.2	0.0	0.0	2.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	4.6	0.0	0.0	2.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.28	0.00	0.00	0.47	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	12.1
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	312	0	19	0	0	0	0	587	151	0	327	0
Future Volume (veh/h)	312	0	19	0	0	0	0	587	151	0	327	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	0	1723				0	1870	1723	0	1870	1723
Adj Flow Rate, veh/h	339	0	21				0	638	164	0	355	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Opposing Right Turn Influence	Yes						No			No		
Cap, veh/h	448	0	205				0	2160	554	0	2742	1126
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	1.00	2.00	2.00
Prop Arrive On Green	0.14	0.00	0.14				0.00	1.00	1.00	0.00	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	39.8	0.0	33.9				0.0	0.5	0.5	0.0	0.1	0.0
Ln Grp LOS	D		C					A	A		A	
Approach Vol, veh/h		360						802			355	
Approach Delay, s/veh		39.5						0.5			0.1	
Approach LOS		D						A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Case No		8.0		9.0		7.0		
Phs Duration (G+Y+Rc), s		73.4		16.6		73.4		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green (Gmax), s		51.5		29.0		51.5		
Max Allow Headway (MAH), s		4.1		4.1		4.0		
Max Q Clear (g_c+I1), s		2.0		11.2		2.0		
Green Ext Time (g_e), s		3.2		1.3		1.5		
Prob of Phs Call (p_c)		1.00		1.00		1.00		
Prob of Max Out (p_x)		0.00		0.00		0.00		

Left-Turn Movement Data						
Assigned Mvmt		5		7		1
Mvmt Sat Flow, veh/h		0		3183		0

Through Movement Data						
Assigned Mvmt		2		4		6
Mvmt Sat Flow, veh/h		2893		0		3647

Right-Turn Movement Data						
Assigned Mvmt		12		14		16
Mvmt Sat Flow, veh/h		719		1460		1460

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	0

Lane Assignment				L				
Lanes in Grp	0	0	0	2	0	0	0	0
Grp Vol (v), veh/h	0	0	0	339	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1591	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	9.2	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	9.2	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1591	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	69.4	0.0	0.0	0.0	69.4	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	448	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.76	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	1029	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	37.2	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	39.8	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	405	0	0	0	355	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1371	0	0	0	2742	0	0
V/C Ratio (X)	0.00	0.30	0.00	0.00	0.00	0.13	0.00	0.00
Avail Cap (c_a), veh/h	0	1371	0	0	0	2742	0	0
Upstream Filter (I)	0.00	0.91	0.00	0.00	0.00	0.99	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.5	0.0	0.0	0.0	0.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	397	0	21	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1741	0	1460	0	1460	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.41	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1343	0	205	0	1126	0	0
V/C Ratio (X)	0.00	0.30	0.00	0.10	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1343	0	472	0	1126	0	0
Upstream Filter (I)	0.00	0.91	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	33.7	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.5	0.0	33.9	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.4	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	9.7
HCM 7th LOS	A

Intersection	
Intersection Delay, s/veh	5.3
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	429	466	0	219
Demand Flow Rate, veh/h	437	475	0	224
Vehicles Circulating, veh/h	396	124	329	406
Vehicles Exiting, veh/h	231	205	354	124
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.8	5.3	0.0	6.5
Approach LOS	A	A	-	A

Lane	Left	Bypass	Left	Bypass	Left	Left	Bypass
Designated Moves	LT	R	LT	R	LTR	LT	R
Assumed Moves	LT		LT		LTR	LT	
RT Channelized		Free		Free			Free
Lane Util	1.000		1.000		1.000	1.000	
Follow-Up Headway, s	2.609		2.609		2.609	2.609	
Critical Headway, s	4.976		4.976		4.976	4.976	
A (Intercept)	1380		1380		1380	1380	
B (Slope)	1.02e-3		1.02e-3		1.02e-3	1.02e-3	
Entry Flow, veh/h	286	151	406	69	0	222	2
Cap Entry Lane, veh/h	921	1938	1216	1938	987	912	1938
Entry HV Adj Factor	0.982	0.980	0.981	0.980	1.000	0.980	0.980
Flow Entry, veh/h	281	148	398	68	0	217	2
Cap Entry, veh/h	905	1900	1193	1900	987	893	1900
V/C Ratio	0.310	0.078	0.334	0.036	0.000	0.243	0.001
Control Delay, s/veh	7.3	0.0	6.2	0.0	3.6	6.5	0.0
LOS	A	A	A	A	A	A	A
95th %tile Queue, veh	1	0	1	0	0	1	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	5	85	0	0	0	0	321	37	126	146	0
Future Volume (veh/h)	84	5	85	0	0	0	0	321	37	126	146	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723				0	1870	1723	1723	1870	0
Adj Flow Rate, veh/h	91	5	92				0	349	40	137	159	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	147	0	131				0	1353	155	534	600	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.09	0.09	0.09				0.00	0.82	0.80	0.82	0.82	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	43.7	0.0	46.5				0.0	0.0	2.3	2.4	0.0	0.0
Ln Grp LOS	D		D						A	A		
Approach Vol, veh/h		183						389			296	
Approach Delay, s/veh		45.1						2.3			2.4	
Approach LOS		D						A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Case No		8.0		9.0		8.0		
Phs Duration (G+Y+Rc), s		77.9		12.1		77.9		
Change Period (Y+Rc), s		5.5		4.1		5.5		
Max Green (Gmax), s		56.5		23.9		56.5		
Max Allow Headway (MAH), s		4.0		4.2		4.5		
Max Q Clear (g_c+I1), s		6.4		7.5		8.0		
Green Ext Time (g_e), s		1.4		0.5		1.4		
Prob of Phs Call (p_c)		1.00		0.99		1.00		
Prob of Max Out (p_x)		0.00		0.00		0.00		

Left-Turn Movement Data						
Assigned Mvmt		5		7		1
Mvmt Sat Flow, veh/h		0		1641		579

Through Movement Data						
Assigned Mvmt		2		4		6
Mvmt Sat Flow, veh/h		1648		0		731

Right-Turn Movement Data						
Assigned Mvmt		12		14		16
Mvmt Sat Flow, veh/h		189		1460		0

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	0

Lane Assignment				L		L+T		
Lanes in Grp	0	0	0	1	0	1	0	0
Grp Vol (v), veh/h	0	0	0	91	0	296	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1641	0	1309	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	4.8	0.0	1.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	4.8	0.0	6.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1641	0	1010	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	73.9	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	69.6	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0
Time to First Blk (g_f), s	0.0	73.9	0.0	0.0	0.0	2.3	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	0.00	0.46	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	147	0	1134	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.62	0.00	0.26	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	438	0	1134	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	39.5	0.0	1.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	4.2	0.0	0.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	43.7	0.0	2.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.8	0.0	0.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	2.0	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.14	0.00	0.07	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		T+R		R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	389	0	92	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1836	0	1460	0	0	0	0
Q Serve Time (g_s), s	0.0	4.4	0.0	5.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	4.4	0.0	5.5	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.10	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1509	0	131	0	0	0	0
V/C Ratio (X)	0.00	0.26	0.00	0.70	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1509	0	389	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	1.8	0.0	39.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	6.7	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.3	0.0	46.5	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	1.8	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.4	0.0	2.1	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.15	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	11.3
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	218	36	22	350	0	40	0	14	0	0	0
Future Vol, veh/h	0	218	36	22	350	0	40	0	14	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	237	39	24	380	0	43	0	15	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	380	0	0	276	0	0	685	685	257	665	704	380
Stage 1	-	-	-	-	-	-	257	257	-	428	428	-
Stage 2	-	-	-	-	-	-	428	428	-	237	276	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1178	-	-	1287	-	-	362	371	782	373	361	667
Stage 1	-	-	-	-	-	-	748	695	-	605	584	-
Stage 2	-	-	-	-	-	-	605	584	-	766	682	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1178	-	-	1287	-	-	354	362	782	358	353	667
Mov Cap-2 Maneuver	-	-	-	-	-	-	354	362	-	358	353	-
Stage 1	-	-	-	-	-	-	748	695	-	590	571	-
Stage 2	-	-	-	-	-	-	590	571	-	751	682	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0.46	15.18	0
HCM LOS			C	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	412	1178	-	-	106	-	-	-
HCM Lane V/C Ratio	0.142	-	-	-	0.019	-	-	-
HCM Control Delay (s/veh)	15.2	0	-	-	7.9	0	-	0
HCM Lane LOS	C	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0.5	0	-	-	0.1	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	261	65	29	211	209	88	345	33	101	183	73
Future Volume (veh/h)	188	261	65	29	211	209	88	345	33	101	183	73
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	204	284	71	32	229	227	96	375	36	110	199	79
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	261	592	462	67	371	290	147	1668	159	417	941	361
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	2.00	2.00	2.00
Prop Arrive On Green	0.16	0.32	0.32	0.04	0.20	0.20	0.03	0.17	0.16	0.75	0.75	0.72
Unsig. Movement Delay												
Ln Grp Delay, s/veh	46.6	25.4	22.2	47.2	34.6	41.1	48.9	22.6	22.6	9.0	8.0	8.7
Ln Grp LOS	D	C	C	D	C	D	D	C	C	A	A	A
Approach Vol, veh/h		559			488			507			388	
Approach Delay, s/veh		32.7			38.5			27.6			8.5	
Approach LOS		C			D			C			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6	7	8
Case No		4.0	2.0	3.0	2.0	6.3	2.0	3.0
Phs Duration (G+Y+Rc), s		49.8	7.7	32.5	12.1	37.7	18.3	21.9
Change Period (Y+Rc), s		5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green (Gmax), s		35.1	4.8	33.6	7.5	22.1	15.5	22.9
Max Allow Headway (MAH), s		4.0	4.1	4.1	4.1	4.5	4.1	4.2
Max Q Clear (g_c+I1), s		11.0	3.7	13.0	7.2	5.7	12.7	15.3
Green Ext Time (g_e), s		1.4	0.0	1.2	0.0	1.5	0.2	1.1
Prob of Phs Call (p_c)		1.00	0.55	1.00	0.91	1.00	0.99	1.00
Prob of Max Out (p_x)		0.00	1.00	0.00	1.00	0.01	1.00	0.24

Left-Turn Movement Data								
Assigned Mvmt			3		5	1	7	
Mvmt Sat Flow, veh/h			1641		1641	898	1641	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3278		1870		2511		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		313		1460		963		1460

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	7	0

Lane Assignment			L (Prot)		L (Prot)	L	L (Prot)	
Lanes in Grp	0	0	1	0	1	1	1	0
Grp Vol (v), veh/h	0	0	32	0	96	110	204	0
Grp Sat Flow (s), veh/h/ln	0	0	1641	0	1641	898	1641	0
Q Serve Time (g_s), s	0.0	0.0	1.7	0.0	5.2	3.7	10.7	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	1.7	0.0	5.2	3.7	10.7	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	898	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	33.7	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	33.7	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	0	67	0	147	417	261	0
V/C Ratio (X)	0.00	0.00	0.47	0.00	0.65	0.26	0.78	0.00
Avail Cap (c_a), veh/h	0	0	115	0	164	417	310	0
Upstream Filter (I)	0.00	0.00	0.99	0.00	0.86	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	42.2	0.0	42.3	7.5	36.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	5.0	0.0	6.6	1.5	10.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	47.2	0.0	48.9	9.0	46.6	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.7	0.0	2.0	0.5	4.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.1	0.0	0.3	0.2	0.7	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.7	0.0	2.3	0.7	4.7	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.38	0.00	0.29	0.09	0.80	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	202	0	284	0	139	0	229
Grp Sat Flow (s), veh/h/ln	0	1777	0	1870	0	1777	0	1870
Q Serve Time (g_s), s	0.0	8.9	0.0	11.0	0.0	2.1	0.0	10.1
Cycle Q Clear Time (g_c), s	0.0	8.9	0.0	11.0	0.0	2.1	0.0	10.1
Lane Grp Cap (c), veh/h	0	904	0	592	0	666	0	371
V/C Ratio (X)	0.00	0.22	0.00	0.48	0.00	0.21	0.00	0.62
Avail Cap (c_a), veh/h	0	904	0	729	0	666	0	507
Upstream Filter (I)	0.00	0.86	0.00	1.00	0.00	1.00	0.00	0.99
Uniform Delay (d1), s/veh	0.0	22.1	0.0	24.8	0.0	7.3	0.0	33.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.6	0.0	0.7	0.0	1.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	22.6	0.0	25.4	0.0	8.0	0.0	34.6
1st-Term Q (Q1), veh/ln	0.0	3.5	0.0	4.4	0.0	0.7	0.0	4.2

2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.6	0.0	4.5	0.0	0.8	0.0	4.3
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.02	0.00	0.01	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	209	0	71	0	139	0	227
Grp Sat Flow (s), veh/h/ln	0	1814	0	1460	0	1697	0	1460
Q Serve Time (g_s), s	0.0	9.0	0.0	3.1	0.0	2.4	0.0	13.3
Cycle Q Clear Time (g_c), s	0.0	9.0	0.0	3.1	0.0	2.4	0.0	13.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.17	0.00	1.00	0.00	0.57	0.00	1.00
Lane Grp Cap (c), veh/h	0	923	0	462	0	636	0	290
V/C Ratio (X)	0.00	0.23	0.00	0.15	0.00	0.22	0.00	0.78
Avail Cap (c_a), veh/h	0	923	0	569	0	636	0	396
Upstream Filter (I)	0.00	0.86	0.00	1.00	0.00	1.00	0.00	0.99
Uniform Delay (d1), s/veh	0.0	22.1	0.0	22.1	0.0	7.9	0.0	34.2
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.2	0.0	0.8	0.0	6.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	22.6	0.0	22.2	0.0	8.7	0.0	41.1
1st-Term Q (Q1), veh/ln	0.0	3.6	0.0	1.0	0.0	0.7	0.0	4.3
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.8	0.0	1.0	0.0	0.9	0.0	4.9
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.25	0.00	0.01	0.00	2.47
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	28.0
HCM 7th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	217	229	72	83	133	71	40	297	90	50	226	104
Future Volume (veh/h)	217	229	72	83	133	71	40	297	90	50	226	104
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	236	249	78	90	145	77	43	323	98	54	246	113
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	716	1211	945	655	744	395	224	494	385	178	494	385
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.65	0.65	0.65	0.65	0.65	0.63	0.26	0.26	0.26	0.26	0.26	0.26
Unsig. Movement Delay												
Ln Grp Delay, s/veh	10.6	6.8	6.1	8.7	0.0	6.9	34.3	31.0	26.5	38.9	28.9	26.8
Ln Grp LOS	B	A	A	A		A	C	C	C	D	C	C
Approach Vol, veh/h		563			312			464			413	
Approach Delay, s/veh		8.3			7.4			30.3			29.6	
Approach LOS		A			A			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		5.0		5.0		6.0
Phs Duration (G+Y+Rc), s		27.7		62.3		27.7		62.3
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5
Max Green (Gmax), s		32.5		46.5		32.5		46.5
Max Allow Headway (MAH), s		4.2		4.4		4.3		4.4
Max Q Clear (g_c+I1), s		15.8		17.0		21.0		10.6
Green Ext Time (g_e), s		1.6		2.4		1.2		1.3
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.01		0.00		0.05		0.00

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		942		1067		890		970

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1150

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1460		1460		1460		611

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3

Lane Assignment		L		L		L		L
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	43	0	236	0	54	0	90
Grp Sat Flow (s), veh/h/ln	0	942	0	1067	0	890	0	970
Q Serve Time (g_s), s	0.0	3.6	0.0	10.3	0.0	5.2	0.0	3.7
Cycle Q Clear Time (g_c), s	0.0	13.7	0.0	15.0	0.0	19.0	0.0	8.6
Perm LT Sat Flow (s_l), veh/h/ln	0	942	0	1067	0	890	0	970
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	23.7	0.0	58.3	0.0	23.7	0.0	58.3
Perm LT Serve Time (g_u), s	0.0	13.7	0.0	53.6	0.0	9.9	0.0	53.4
Perm LT Q Serve Time (g_ps), s	0.0	3.6	0.0	10.3	0.0	5.2	0.0	3.7
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	224	0	716	0	178	0	655
V/C Ratio (X)	0.00	0.19	0.00	0.33	0.00	0.30	0.00	0.14
Avail Cap (c_a), veh/h	0	331	0	716	0	279	0	655
Upstream Filter (I)	0.00	1.00	0.00	0.91	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	33.9	0.0	9.5	0.0	37.9	0.0	8.2
Incr Delay (d2), s/veh	0.0	0.4	0.0	1.1	0.0	0.9	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	34.3	0.0	10.6	0.0	38.9	0.0	8.7
1st-Term Q (Q1), veh/ln	0.0	0.8	0.0	1.8	0.0	1.0	0.0	0.6
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.8	0.0	2.1	0.0	1.1	0.0	0.7
%ile Storage Ratio (RQ%)	0.00	0.18	0.00	0.53	0.00	0.40	0.00	0.18
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	323	0	249	0	246	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	0
Q Serve Time (g_s), s	0.0	13.8	0.0	4.9	0.0	10.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	13.8	0.0	4.9	0.0	10.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	494	0	1211	0	494	0	0
V/C Ratio (X)	0.00	0.65	0.00	0.21	0.00	0.50	0.00	0.00
Avail Cap (c_a), veh/h	0	707	0	1211	0	707	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.91	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	29.5	0.0	6.5	0.0	28.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.5	0.0	0.4	0.0	0.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	31.0	0.0	6.8	0.0	28.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.6	0.0	1.4	0.0	4.1	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.1	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.8	0.0	1.5	0.0	4.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.08	0.00	0.01	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	98	0	78	0	113	0	222
Grp Sat Flow (s), veh/h/ln	0	1460	0	1460	0	1460	0	1760
Q Serve Time (g_s), s	0.0	4.8	0.0	1.8	0.0	5.6	0.0	4.7
Cycle Q Clear Time (g_c), s	0.0	4.8	0.0	1.8	0.0	5.6	0.0	4.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.35
Lane Grp Cap (c), veh/h	0	385	0	945	0	385	0	1139
V/C Ratio (X)	0.00	0.25	0.00	0.08	0.00	0.29	0.00	0.19
Avail Cap (c_a), veh/h	0	552	0	945	0	552	0	1139
Upstream Filter (I)	0.00	1.00	0.00	0.91	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	26.1	0.0	5.9	0.0	26.4	0.0	6.5
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.2	0.0	0.4	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	26.5	0.0	6.1	0.0	26.8	0.0	6.9
1st-Term Q (Q1), veh/ln	0.0	1.5	0.0	0.4	0.0	1.8	0.0	1.2
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.6	0.0	0.4	0.0	1.8	0.0	1.4
%ile Storage Ratio (RQ%)	0.00	0.39	0.00	0.22	0.00	0.23	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	19.0
HCM 7th LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	19	232	105	6	97	127
Future Volume (veh/h)	19	232	105	6	97	127
Number	3	18	2	12	1	6
Initial Q, veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Lanes Open During Work Zone						
Adj Sat Flow, veh/h/ln	1723	1723	1870	1723	1723	1870
Adj Flow Rate, veh/h	21	252	114	7	105	138
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Opposing Right Turn Influence	Yes				Yes	
Cap, veh/h	329	293	1239	76	888	1329
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Prop Arrive On Green	0.20	0.20	0.71	0.71	1.00	1.00
Unsig. Movement Delay						
Ln Grp Delay, s/veh	29.2	42.1	0.0	4.2	0.3	0.2
Ln Grp LOS	C	D		A	A	A
Approach Vol, veh/h	273		121			243
Approach Delay, s/veh	41.1		4.2			0.2
Approach LOS	D		A			A

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8			6		
Case No		8.0	9.0			6.0		
Phs Duration (G+Y+Rc), s		67.9	22.1			67.9		
Change Period (Y+Rc), s		4.0	4.0			4.0		
Max Green (Gmax), s		37.0	45.0			37.0		
Max Allow Headway (MAH), s		4.0	4.3			4.2		
Max Q Clear (g_c+I1), s		3.8	17.0			4.1		
Green Ext Time (g_e), s		0.4	1.1			0.9		
Prob of Phs Call (p_c)		1.00	1.00			1.00		
Prob of Max Out (p_x)		0.00	0.00			0.00		

Left-Turn Movement Data								
Assigned Mvmt		5	3			1		
Mvmt Sat Flow, veh/h		0	1641			1170		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		1744	0			1870		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		107	1460			0		

Left Lane Group Data								
Assigned Mvmt	0	5	3	0	0	1	0	0

Lane Assignment			L			L		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	21	0	0	105	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1641	0	0	1170	0	0
Q Serve Time (g_s), s	0.0	0.0	0.9	0.0	0.0	0.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.9	0.0	0.0	2.1	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1641	0	0	1170	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	63.9	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	62.1	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Time to First Blk (g_f), s	0.0	63.9	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	329	0	0	888	0	0
V/C Ratio (X)	0.00	0.00	0.06	0.00	0.00	0.12	0.00	0.00
Avail Cap (c_a), veh/h	0	0	820	0	0	888	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.99	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	29.1	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	29.2	0.0	0.0	0.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.3	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.06	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	138	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	1329	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1329	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.99	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment		T+R	R					
Lanes in Grp	0	1	1	0	0	0	0	0
Grp Vol (v), veh/h	0	121	252	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1851	1460	0	0	0	0	0
Q Serve Time (g_s), s	0.0	1.8	15.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.8	15.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.06	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1315	293	0	0	0	0	0
V/C Ratio (X)	0.00	0.09	0.86	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1315	730	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	4.0	34.8	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	7.3	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.2	42.1	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.4	4.9	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.6	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.5	5.5	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.04	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	18.5
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	70	0	556	43	1113	0	0	728	401
Future Volume (veh/h)	0	0	0	70	0	556	43	1113	0	0	728	401
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1723	0	1723	1723	1870	0	0	1870	1723
Adj Flow Rate, veh/h				76	0	604	47	1210	0	0	791	436
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				866	0	699	57	2275	0	0	2863	819
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.27	0.00	0.27	0.07	1.00	0.00	0.00	0.56	0.56
Unsig. Movement Delay												
Ln Grp Delay, s/veh				24.5	0.0	38.5	62.0	0.8	0.0	0.0	10.5	14.9
Ln Grp LOS				C		D	E	A			B	B
Approach Vol, veh/h					680			1257			1227	
Approach Delay, s/veh					36.9			3.0			12.1	
Approach LOS					D			A			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	9.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		61.6	28.4		7.2	54.5		
Change Period (Y+Rc), s		5.5	4.0		4.0	5.5		
Max Green (Gmax), s		49.5	31.0		7.0	38.5		
Max Allow Headway (MAH), s		4.0	4.3		4.1	4.1		
Max Q Clear (g_c+I1), s		2.0	22.1		4.5	18.8		
Green Ext Time (g_e), s		6.6	2.2		0.0	5.5		
Prob of Phs Call (p_c)		1.00	1.00		0.69	1.00		
Prob of Max Out (p_x)		0.00	0.26		1.00	0.09		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			3183		1641	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3647	0			5274		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	2569			1460		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0

Lane Assignment			L		L (Prot)			
Lanes in Grp	0	0	2	0	1	0	0	0
Grp Vol (v), veh/h	0	0	76	0	47	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1591	0	1641	0	0	0
Q Serve Time (g_s), s	0.0	0.0	1.6	0.0	2.5	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	1.6	0.0	2.5	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1591	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	50.5	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	866	0	57	0	0	0
V/C Ratio (X)	0.00	0.00	0.09	0.00	0.82	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	1100	0	128	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.84	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	24.4	0.0	41.6	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	20.5	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	24.5	0.0	62.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.6	0.0	0.9	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.6	0.0	1.3	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.05	0.00	0.08	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	1210	0	0	0	791	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1702	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	7.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	7.2	0.0	0.0
Lane Grp Cap (c), veh/h	0	2275	0	0	0	2863	0	0
V/C Ratio (X)	0.00	0.53	0.00	0.00	0.00	0.28	0.00	0.00
Avail Cap (c_a), veh/h	0	2275	0	0	0	2863	0	0
Upstream Filter (I)	0.00	0.84	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	10.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.8	0.0	0.0	0.0	10.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	2.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	2	0	0	1	0	0
Grp Vol (v), veh/h	0	0	604	0	0	436	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1285	0	0	1460	0	0
Q Serve Time (g_s), s	0.0	0.0	20.1	0.0	0.0	16.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	20.1	0.0	0.0	16.8	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	699	0	0	819	0	0
V/C Ratio (X)	0.00	0.00	0.86	0.00	0.00	0.53	0.00	0.00
Avail Cap (c_a), veh/h	0	0	888	0	0	819	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	31.2	0.0	0.0	12.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	7.3	0.0	0.0	2.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	38.5	0.0	0.0	14.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	5.6	0.0	0.0	4.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.7	0.0	0.0	0.6	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	6.3	0.0	0.0	4.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.39	0.00	0.00	1.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	13.8
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	424	0	25	0	0	0	0	814	185	0	428	0
Future Volume (veh/h)	424	0	25	0	0	0	0	814	185	0	428	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	0	1723				0	1870	1723	0	1870	1723
Adj Flow Rate, veh/h	461	0	27				0	885	201	0	465	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Opposing Right Turn Influence	Yes						No			No		
Cap, veh/h	573	0	263				0	2106	478	0	2602	1069
HCM Platoon Ratio	1.00	1.00	1.00				1.00	0.33	0.33	1.00	0.33	0.33
Prop Arrive On Green	0.18	0.00	0.18				0.00	0.24	0.24	0.00	0.24	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	38.1	0.0	31.0				0.0	18.7	18.8	0.0	12.8	0.0
Ln Grp LOS	D		C					B	B		B	
Approach Vol, veh/h		488						1086			465	
Approach Delay, s/veh		37.7						18.7			12.8	
Approach LOS		D						B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Case No		8.0		9.0		7.0		
Phs Duration (G+Y+Rc), s		69.9		20.1		69.9		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green (Gmax), s		54.5		26.0		54.5		
Max Allow Headway (MAH), s		4.1		4.1		4.0		
Max Q Clear (g_c+I1), s		25.4		14.5		11.3		
Green Ext Time (g_e), s		4.6		1.6		2.0		
Prob of Phs Call (p_c)		1.00		1.00		1.00		
Prob of Max Out (p_x)		0.01		0.04		0.00		

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		
Mvmt Sat Flow, veh/h		0		3183		0		

Through Movement Data								
Assigned Mvmt		2		4		6		
Mvmt Sat Flow, veh/h		2970		0		3647		

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		
Mvmt Sat Flow, veh/h		653		1460		1460		

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	0

Lane Assignment				L				
Lanes in Grp	0	0	0	2	0	0	0	0
Grp Vol (v), veh/h	0	0	0	461	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1591	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	12.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	12.5	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1591	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	65.9	0.0	0.0	0.0	65.9	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	573	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.80	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	923	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	35.4	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.7	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	38.1	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	4.4	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	4.7	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.23	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	546	0	0	0	465	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	23.4	0.0	0.0	0.0	9.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	23.4	0.0	0.0	0.0	9.3	0.0	0.0
Lane Grp Cap (c), veh/h	0	1301	0	0	0	2602	0	0
V/C Ratio (X)	0.00	0.42	0.00	0.00	0.00	0.18	0.00	0.00
Avail Cap (c_a), veh/h	0	1301	0	0	0	2602	0	0
Upstream Filter (I)	0.00	0.70	0.00	0.00	0.00	0.97	0.00	0.00
Uniform Delay (d1), s/veh	0.0	18.0	0.0	0.0	0.0	12.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.7	0.0	0.0	0.0	12.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	10.8	0.0	0.0	0.0	2.8	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	11.0	0.0	0.0	0.0	2.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.19	0.00	0.00	0.00	0.13	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	540	0	27	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1753	0	1460	0	1460	0	0
Q Serve Time (g_s), s	0.0	23.4	0.0	1.4	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	23.4	0.0	1.4	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.37	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1283	0	263	0	1069	0	0
V/C Ratio (X)	0.00	0.42	0.00	0.10	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1283	0	423	0	1069	0	0
Upstream Filter (I)	0.00	0.70	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	18.1	0.0	30.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.8	0.0	31.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	10.7	0.0	0.5	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	10.9	0.0	0.5	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.19	0.00	0.01	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	21.9
HCM 7th LOS	C

Intersection	
Intersection Delay, s/veh	8.0
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	537	676	0	344
Demand Flow Rate, veh/h	548	689	0	351
Vehicles Circulating, veh/h	566	157	424	575
Vehicles Exiting, veh/h	356	267	500	157
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.2	7.1	0.0	10.9
Approach LOS	A	A	-	B

Lane	Left	Bypass	Left	Bypass	Left	Left	Bypass
Designated Moves	LT	R	LT	R	LTR	LT	R
Assumed Moves	LT		LT		LTR	LT	
RT Channelized		Free		Free			Free
Lane Util	1.000		1.000		1.000	1.000	
Follow-Up Headway, s	2.609		2.609		2.609	2.609	
Critical Headway, s	4.976		4.976		4.976	4.976	
A (Intercept)	1380		1380		1380	1380	
B (Slope)	1.02e-3		1.02e-3		1.02e-3	1.02e-3	
Entry Flow, veh/h	357	191	575	114	0	348	3
Cap Entry Lane, veh/h	775	1938	1176	1938	895	768	1938
Entry HV Adj Factor	0.981	0.980	0.981	0.980	1.000	0.981	0.980
Flow Entry, veh/h	350	187	564	112	0	341	3
Cap Entry, veh/h	760	1900	1153	1900	895	753	1900
V/C Ratio	0.461	0.098	0.489	0.059	0.000	0.453	0.002
Control Delay, s/veh	11.0	0.0	8.5	0.0	4.0	10.9	0.0
LOS	B	A	A	A	A	B	A
95th %tile Queue, veh	2	0	3	0	0	2	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	137	2	139	0	0	0	0	433	33	171	197	0
Future Volume (veh/h)	137	2	139	0	0	0	0	433	33	171	197	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723				0	1870	1723	1723	1870	0
Adj Flow Rate, veh/h	149	2	151				0	471	36	186	214	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	215	0	191				0	1339	102	460	510	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.13	0.13	0.13				0.00	0.78	0.76	0.78	0.78	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	41.4	0.0	45.0				0.0	0.0	3.7	5.4	0.0	0.0
Ln Grp LOS	D		D						A	A		
Approach Vol, veh/h		300						507			400	
Approach Delay, s/veh		43.2						3.7			5.4	
Approach LOS		D						A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Case No		8.0		9.0		8.0		
Phs Duration (G+Y+Rc), s		74.2		15.8		74.2		
Change Period (Y+Rc), s		5.5		4.1		5.5		
Max Green (Gmax), s		61.5		18.9		61.5		
Max Allow Headway (MAH), s		4.0		4.2		4.7		
Max Q Clear (g_c+I1), s		9.5		11.0		17.4		
Green Ext Time (g_e), s		2.0		0.7		2.1		
Prob of Phs Call (p_c)		1.00		1.00		1.00		
Prob of Max Out (p_x)		0.00		0.14		0.00		

Left-Turn Movement Data						
Assigned Mvmt		5		7		1
Mvmt Sat Flow, veh/h		0		1641		514

Through Movement Data						
Assigned Mvmt		2		4		6
Mvmt Sat Flow, veh/h		1716		0		653

Right-Turn Movement Data						
Assigned Mvmt		12		14		16
Mvmt Sat Flow, veh/h		131		1460		0

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	0

Lane Assignment				L		L+T		
Lanes in Grp	0	0	0	1	0	1	0	0
Grp Vol (v), veh/h	0	0	0	149	0	400	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1641	0	1167	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	7.8	0.0	7.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	7.8	0.0	15.4	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1641	0	906	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	70.2	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	62.7	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	7.9	0.0	0.0
Time to First Blk (g_f), s	0.0	70.2	0.0	0.0	0.0	2.3	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	0.00	0.46	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	215	0	969	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.69	0.00	0.41	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	346	0	969	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	37.4	0.0	4.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	4.0	0.0	1.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	41.4	0.0	5.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	2.9	0.0	0.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.3	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	3.1	0.0	1.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.22	0.00	0.22	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		T+R		R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	507	0	151	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1847	0	1460	0	0	0	0
Q Serve Time (g_s), s	0.0	7.5	0.0	9.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	7.5	0.0	9.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.07	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1441	0	191	0	0	0	0
V/C Ratio (X)	0.00	0.35	0.00	0.79	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1441	0	308	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	3.0	0.0	37.9	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	7.1	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.7	0.0	45.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.0	0.0	3.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.4	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.3	0.0	3.4	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.12	0.00	0.24	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	14.1
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	481	56	28	395	0	72	0	25	0	0	0
Future Vol, veh/h	0	481	56	28	395	0	72	0	25	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	523	61	30	429	0	78	0	27	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	429	0	0	584	0	0	1043	1043	553	1013	1074	429
Stage 1	-	-	-	-	-	-	553	553	-	490	490	-
Stage 2	-	-	-	-	-	-	490	490	-	523	584	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1130	-	-	991	-	-	207	229	532	217	220	626
Stage 1	-	-	-	-	-	-	517	514	-	560	549	-
Stage 2	-	-	-	-	-	-	560	549	-	537	498	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1130	-	-	991	-	-	199	220	532	198	211	626
Mov Cap-2 Maneuver	-	-	-	-	-	-	199	220	-	198	211	-
Stage 1	-	-	-	-	-	-	517	514	-	537	526	-
Stage 2	-	-	-	-	-	-	537	526	-	510	498	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0.58	31.78	0
HCM LOS			D	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	237	1130	-	-	119	-	-	-
HCM Lane V/C Ratio	0.445	-	-	-	0.031	-	-	-
HCM Control Delay (s/veh)	31.8	0	-	-	8.7	0	-	0
HCM Lane LOS	D	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	2.1	0	-	-	0.1	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	163	272	63	40	294	286	112	482	46	141	255	69
Future Volume (veh/h)	163	272	63	40	294	286	112	482	46	141	255	69
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	177	296	68	43	320	311	122	524	50	153	277	75
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	233	822	642	79	646	504	305	673	64	212	413	110
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33
Prop Arrive On Green	0.14	0.44	0.44	0.05	0.35	0.35	0.06	0.07	0.06	0.04	0.05	0.04
Unsig. Movement Delay												
Ln Grp Delay, s/veh	47.0	18.0	3.3	47.4	25.9	14.8	38.2	46.7	46.9	49.8	43.4	43.9
Ln Grp LOS	D	B	A	D	C	B	D	D	D	D	D	D
Approach Vol, veh/h		541			674			696			505	
Approach Delay, s/veh		25.7			22.1			45.3			45.5	
Approach LOS		C			C			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	2	1	3	4	6	5	7	8
Case No	4.0	2.0	2.0	3.0	4.0	2.0	2.0	3.0
Phs Duration (G+Y+Rc), s	22.5	15.6	8.3	43.5	17.4	20.7	16.8	35.1
Change Period (Y+Rc), s	* 5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green (Gmax), s	* 20	12.0	5.4	32.4	21.6	8.6	13.5	24.3
Max Allow Headway (MAH), s	4.0	4.1	4.1	4.1	4.1	4.1	4.1	4.2
Max Q Clear (g_c+I1), s	16.2	10.3	4.3	11.5	11.0	8.4	11.3	14.2
Green Ext Time (g_e), s	0.8	0.1	0.0	1.2	0.9	0.0	0.1	1.8
Prob of Phs Call (p_c)	1.00	0.98	0.66	1.00	1.00	0.95	0.99	1.00
Prob of Max Out (p_x)	1.00	1.00	1.00	0.00	0.03	1.00	1.00	0.00

Left-Turn Movement Data								
Assigned Mvmt		1	3			5	7	
Mvmt Sat Flow, veh/h		1641	1641			1641	1641	

Through Movement Data								
Assigned Mvmt	2			4	6			8
Mvmt Sat Flow, veh/h	3279			1870	2777			1870

Right-Turn Movement Data								
Assigned Mvmt	12			14	16			18
Mvmt Sat Flow, veh/h	312			1460	738			1460

Left Lane Group Data								
Assigned Mvmt	0	1	3	0	0	5	7	0

Lane Assignment		L (Prot)	L (Prot)			L (Prot)	L (Prot)	
Lanes in Grp	0	1	1	0	0	1	1	0
Grp Vol (v), veh/h	0	153	43	0	0	122	177	0
Grp Sat Flow (s), veh/h/ln	0	1641	1641	0	0	1641	1641	0
Q Serve Time (g_s), s	0.0	8.3	2.3	0.0	0.0	6.4	9.3	0.0
Cycle Q Clear Time (g_c), s	0.0	8.3	2.3	0.0	0.0	6.4	9.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	212	79	0	0	305	233	0
V/C Ratio (X)	0.00	0.72	0.54	0.00	0.00	0.40	0.76	0.00
Avail Cap (c_a), veh/h	0	246	126	0	0	305	273	0
Upstream Filter (I)	0.00	0.99	0.98	0.00	0.00	0.86	1.00	0.00
Uniform Delay (d1), s/veh	0.0	41.5	41.9	0.0	0.0	37.4	37.1	0.0
Incr Delay (d2), s/veh	0.0	8.3	5.6	0.0	0.0	0.7	9.9	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	49.8	47.4	0.0	0.0	38.2	47.0	0.0
1st-Term Q (Q1), veh/ln	0.0	3.3	0.9	0.0	0.0	2.5	3.5	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.1	0.0	0.0	0.1	0.6	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	3.8	1.0	0.0	0.0	2.6	4.1	0.0
%ile Storage Ratio (RQ%)	0.00	0.49	0.51	0.00	0.00	0.33	0.69	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	2	0	0	4	6	0	0	8
Lane Assignment	T			T	T			T
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	283	0	0	296	175	0	0	320
Grp Sat Flow (s), veh/h/ln	1777	0	0	1870	1777	0	0	1870
Q Serve Time (g_s), s	14.1	0.0	0.0	9.5	8.7	0.0	0.0	12.2
Cycle Q Clear Time (g_c), s	14.1	0.0	0.0	9.5	8.7	0.0	0.0	12.2
Lane Grp Cap (c), veh/h	365	0	0	822	265	0	0	646
V/C Ratio (X)	0.78	0.00	0.00	0.36	0.66	0.00	0.00	0.50
Avail Cap (c_a), veh/h	419	0	0	822	456	0	0	646
Upstream Filter (I)	0.86	0.00	0.00	1.00	0.99	0.00	0.00	0.98
Uniform Delay (d1), s/veh	39.9	0.0	0.0	16.8	40.6	0.0	0.0	23.3
Incr Delay (d2), s/veh	6.8	0.0	0.0	1.2	2.8	0.0	0.0	2.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	46.7	0.0	0.0	18.0	43.4	0.0	0.0	25.9
1st-Term Q (Q1), veh/ln	6.5	0.0	0.0	3.5	3.8	0.0	0.0	4.8

2nd-Term Q (Q2), veh/ln	0.7	0.0	0.0	0.3	0.2	0.0	0.0	0.5
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	7.2	0.0	0.0	3.8	4.0	0.0	0.0	5.2
%ile Storage Ratio (RQ%)	0.07	0.00	0.00	0.02	0.07	0.00	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	12	0	0	14	16	0	0	18
Lane Assignment	T+R			R	T+R			R
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	291	0	0	68	177	0	0	311
Grp Sat Flow (s), veh/h/ln	1814	0	0	1460	1738	0	0	1460
Q Serve Time (g_s), s	14.2	0.0	0.0	1.1	9.0	0.0	0.0	9.8
Cycle Q Clear Time (g_c), s	14.2	0.0	0.0	1.1	9.0	0.0	0.0	9.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.17	0.00	0.00	1.00	0.42	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	372	0	0	642	259	0	0	504
V/C Ratio (X)	0.78	0.00	0.00	0.11	0.68	0.00	0.00	0.62
Avail Cap (c_a), veh/h	427	0	0	642	446	0	0	504
Upstream Filter (I)	0.86	0.00	0.00	1.00	0.99	0.00	0.00	0.98
Uniform Delay (d1), s/veh	40.0	0.0	0.0	3.0	40.8	0.0	0.0	9.3
Incr Delay (d2), s/veh	6.9	0.0	0.0	0.3	3.1	0.0	0.0	5.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	46.9	0.0	0.0	3.3	43.9	0.0	0.0	14.8
1st-Term Q (Q1), veh/ln	6.7	0.0	0.0	0.7	3.9	0.0	0.0	4.4
2nd-Term Q (Q2), veh/ln	0.7	0.0	0.0	0.1	0.2	0.0	0.0	0.8
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	7.4	0.0	0.0	0.7	4.1	0.0	0.0	5.1
%ile Storage Ratio (RQ%)	0.07	0.00	0.00	0.19	0.07	0.00	0.00	2.60
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	34.5
HCM 7th LOS	C

Notes

* HCM 7th Edition computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	285	343	97	106	158	91	51	417	127	70	318	126
Future Volume (veh/h)	285	343	97	106	158	91	51	417	127	70	318	126
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	310	373	105	115	172	99	55	453	138	76	346	137
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	590	1081	844	479	644	370	233	623	487	171	623	487
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.58	0.58	0.58	0.58	0.58	0.56	0.33	0.33	0.33	0.33	0.33	0.33
Unsig. Movement Delay												
Ln Grp Delay, s/veh	19.1	10.8	8.9	15.7	0.0	10.3	32.7	30.6	22.4	40.5	25.6	22.4
Ln Grp LOS	B	B	A	B		B	C	C	C	D	C	C
Approach Vol, veh/h		788			386			646			559	
Approach Delay, s/veh		13.8			11.9			29.1			26.8	
Approach LOS		B			B			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		5.0		5.0		6.0
Phs Duration (G+Y+Rc), s		34.0		56.0		34.0		56.0
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5
Max Green (Gmax), s		28.5		50.5		28.5		50.5
Max Allow Headway (MAH), s		4.2		4.4		4.4		4.6
Max Q Clear (g_c+I1), s		21.2		28.7		30.0		19.0
Green Ext Time (g_e), s		1.6		3.5		0.0		1.8
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.40		0.00		1.00		0.00

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		840		1021		760		844

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1114

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1460		1460		1460		641

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3

Lane Assignment		L		L		L		L
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	55	0	310	0	76	0	115
Grp Sat Flow (s), veh/h/ln	0	840	0	1021	0	760	0	844
Q Serve Time (g_s), s	0.0	5.2	0.0	19.6	0.0	8.8	0.0	7.5
Cycle Q Clear Time (g_c), s	0.0	18.8	0.0	26.7	0.0	28.0	0.0	17.0
Perm LT Sat Flow (s_l), veh/h/ln	0	840	0	1021	0	760	0	844
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	30.0	0.0	52.0	0.0	30.0	0.0	52.0
Perm LT Serve Time (g_u), s	0.0	16.4	0.0	45.0	0.0	10.8	0.0	42.5
Perm LT Q Serve Time (g_ps), s	0.0	5.2	0.0	19.6	0.0	8.8	0.0	7.5
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	233	0	590	0	171	0	479
V/C Ratio (X)	0.00	0.24	0.00	0.53	0.00	0.44	0.00	0.24
Avail Cap (c_a), veh/h	0	233	0	590	0	171	0	479
Upstream Filter (I)	0.00	1.00	0.00	0.89	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	32.2	0.0	16.2	0.0	38.7	0.0	14.5
Incr Delay (d2), s/veh	0.0	0.5	0.0	3.0	0.0	1.8	0.0	1.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	32.7	0.0	19.1	0.0	40.5	0.0	15.7
1st-Term Q (Q1), veh/ln	0.0	1.0	0.0	3.8	0.0	1.5	0.0	1.2
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.5	0.0	0.1	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.0	0.0	4.3	0.0	1.6	0.0	1.4
%ile Storage Ratio (RQ%)	0.00	0.23	0.00	1.09	0.00	0.58	0.00	0.35
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	453	0	373	0	346	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	0
Q Serve Time (g_s), s	0.0	19.2	0.0	9.5	0.0	13.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	19.2	0.0	9.5	0.0	13.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	623	0	1081	0	623	0	0
V/C Ratio (X)	0.00	0.73	0.00	0.35	0.00	0.55	0.00	0.00
Avail Cap (c_a), veh/h	0	623	0	1081	0	623	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.89	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	26.4	0.0	10.0	0.0	24.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	4.2	0.0	0.8	0.0	1.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	30.6	0.0	10.8	0.0	25.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	7.6	0.0	3.0	0.0	5.4	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.2	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	8.3	0.0	3.3	0.0	5.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.12	0.00	0.02	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	138	0	105	0	137	0	271
Grp Sat Flow (s), veh/h/ln	0	1460	0	1460	0	1460	0	1755
Q Serve Time (g_s), s	0.0	6.3	0.0	2.9	0.0	6.2	0.0	7.0
Cycle Q Clear Time (g_c), s	0.0	6.3	0.0	2.9	0.0	6.2	0.0	7.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.37
Lane Grp Cap (c), veh/h	0	487	0	844	0	487	0	1014
V/C Ratio (X)	0.00	0.28	0.00	0.12	0.00	0.28	0.00	0.27
Avail Cap (c_a), veh/h	0	487	0	844	0	487	0	1014
Upstream Filter (I)	0.00	1.00	0.00	0.89	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	22.1	0.0	8.6	0.0	22.1	0.0	9.6
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.3	0.0	0.3	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	22.4	0.0	8.9	0.0	22.4	0.0	10.3
1st-Term Q (Q1), veh/ln	0.0	1.9	0.0	0.7	0.0	1.9	0.0	2.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.0	0.0	0.8	0.0	2.0	0.0	2.3
%ile Storage Ratio (RQ%)	0.00	0.50	0.00	0.41	0.00	0.25	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	20.7
HCM 7th LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	24	283	179	11	183	228
Future Volume (veh/h)	24	283	179	11	183	228
Number	3	18	2	12	1	6
Initial Q, veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Lanes Open During Work Zone						
Adj Sat Flow, veh/h/ln	1723	1723	1870	1723	1723	1870
Adj Flow Rate, veh/h	26	308	195	12	199	248
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Opposing Right Turn Influence	Yes				Yes	
Cap, veh/h	391	348	1173	72	763	1258
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Prop Arrive On Green	0.24	0.24	0.67	0.67	1.00	1.00
Unsig. Movement Delay						
Ln Grp Delay, s/veh	26.6	42.6	0.0	5.7	0.9	0.3
Ln Grp LOS	C	D		A	A	A
Approach Vol, veh/h	334		207			447
Approach Delay, s/veh	41.3		5.7			0.6
Approach LOS	D		A			A

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8			6		
Case No		8.0	9.0			6.0		
Phs Duration (G+Y+Rc), s		64.5	25.5			64.5		
Change Period (Y+Rc), s		4.0	4.0			4.0		
Max Green (Gmax), s		47.0	35.0			47.0		
Max Allow Headway (MAH), s		4.0	4.3			4.4		
Max Q Clear (g_c+I1), s		5.7	20.3			7.1		
Green Ext Time (g_e), s		0.7	1.1			1.9		
Prob of Phs Call (p_c)		1.00	1.00			1.00		
Prob of Max Out (p_x)		0.00	0.01			0.00		

Left-Turn Movement Data								
Assigned Mvmt		5	3			1		
Mvmt Sat Flow, veh/h		0	1641			1082		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		1744	0			1870		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		107	1460			0		

Left Lane Group Data								
Assigned Mvmt	0	5	3	0	0	1	0	0

Lane Assignment			L			L		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	26	0	0	199	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1641	0	0	1082	0	0
Q Serve Time (g_s), s	0.0	0.0	1.1	0.0	0.0	1.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	1.1	0.0	0.0	5.1	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1641	0	0	1082	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	60.5	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	56.8	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0
Time to First Blk (g_f), s	0.0	60.5	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	391	0	0	763	0	0
V/C Ratio (X)	0.00	0.00	0.07	0.00	0.00	0.26	0.00	0.00
Avail Cap (c_a), veh/h	0	0	638	0	0	763	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.88	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	26.5	0.0	0.0	0.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	0.0	0.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	26.6	0.0	0.0	0.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.4	0.0	0.0	0.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.07	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	248	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	1258	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1258	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.88	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment		T+R	R					
Lanes in Grp	0	1	1	0	0	0	0	0
Grp Vol (v), veh/h	0	207	308	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1851	1460	0	0	0	0	0
Q Serve Time (g_s), s	0.0	3.7	18.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	3.7	18.3	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.06	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1245	348	0	0	0	0	0
V/C Ratio (X)	0.00	0.17	0.88	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1245	568	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.4	33.1	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	9.5	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.7	42.6	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.0	5.9	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.9	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.1	6.8	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.05	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	15.4
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	77	0	556	43	1147	0	0	740	401
Future Volume (veh/h)	0	0	0	77	0	556	43	1147	0	0	740	401
Number				3	8	18	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1723	0	1723	1723	1870	0	0	1870	1723
Adj Flow Rate, veh/h				84	0	604	47	1247	0	0	804	436
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				864	0	698	57	2280	0	0	2873	822
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.27	0.00	0.27	0.07	1.00	0.00	0.00	0.56	0.56
Unsig. Movement Delay												
Ln Grp Delay, s/veh				24.9	0.0	39.1	62.2	0.8	0.0	0.0	10.6	14.9
Ln Grp LOS				C		D	E	A			B	B
Approach Vol, veh/h					688			1294			1240	
Approach Delay, s/veh					37.4			3.0			12.1	
Approach LOS					D			A			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8		5	6		
Case No		4.0	9.0		2.0	7.0		
Phs Duration (G+Y+Rc), s		62.4	28.6		7.2	55.2		
Change Period (Y+Rc), s		5.5	4.0		4.0	5.5		
Max Green (Gmax), s		50.5	31.0		7.0	39.5		
Max Allow Headway (MAH), s		4.0	4.3		4.1	4.1		
Max Q Clear (g_c+I1), s		2.0	22.4		4.6	18.9		
Green Ext Time (g_e), s		6.9	2.2		0.0	5.6		
Prob of Phs Call (p_c)		1.00	1.00		0.70	1.00		
Prob of Max Out (p_x)		0.00	0.28		1.00	0.08		

Left-Turn Movement Data								
Assigned Mvmt			3		5	1		
Mvmt Sat Flow, veh/h			3183		1641	0		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		3647	0			5274		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		0	2569			1460		

Left Lane Group Data								
Assigned Mvmt	0	0	3	0	5	1	0	0

Lane Assignment			L		L (Prot)			
Lanes in Grp	0	0	2	0	1	0	0	0
Grp Vol (v), veh/h	0	0	84	0	47	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1591	0	1641	0	0	0
Q Serve Time (g_s), s	0.0	0.0	1.8	0.0	2.6	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	1.8	0.0	2.6	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1591	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	51.2	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	864	0	57	0	0	0
V/C Ratio (X)	0.00	0.00	0.10	0.00	0.82	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	1088	0	126	0	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.83	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	24.8	0.0	42.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	20.2	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	24.9	0.0	62.2	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.6	0.0	0.9	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.6	0.0	1.3	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.06	0.00	0.08	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	3	0	0
Grp Vol (v), veh/h	0	1247	0	0	0	804	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1702	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	7.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	7.4	0.0	0.0
Lane Grp Cap (c), veh/h	0	2280	0	0	0	2873	0	0
V/C Ratio (X)	0.00	0.55	0.00	0.00	0.00	0.28	0.00	0.00
Avail Cap (c_a), veh/h	0	2280	0	0	0	2873	0	0
Upstream Filter (I)	0.00	0.83	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	10.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.8	0.0	0.0	0.0	10.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	2.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment			R			R		
Lanes in Grp	0	0	2	0	0	1	0	0
Grp Vol (v), veh/h	0	0	604	0	0	436	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1285	0	0	1460	0	0
Q Serve Time (g_s), s	0.0	0.0	20.4	0.0	0.0	16.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	20.4	0.0	0.0	16.9	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	698	0	0	822	0	0
V/C Ratio (X)	0.00	0.00	0.87	0.00	0.00	0.53	0.00	0.00
Avail Cap (c_a), veh/h	0	0	878	0	0	822	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	31.6	0.0	0.0	12.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	7.6	0.0	0.0	2.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	39.1	0.0	0.0	14.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	5.7	0.0	0.0	4.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.7	0.0	0.0	0.6	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	6.4	0.0	0.0	4.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.39	0.00	0.00	1.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	13.8
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	424	0	25	0	0	0	0	848	206	0	447	0
Future Volume (veh/h)	424	0	25	0	0	0	0	848	206	0	447	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	0	1723				0	1870	1723	0	1870	1723
Adj Flow Rate, veh/h	461	0	27				0	922	224	0	486	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Opposing Right Turn Influence	Yes						No			No		
Cap, veh/h	570	0	261				0	2082	505	0	2609	1072
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	0.33	0.33
Prop Arrive On Green	0.18	0.00	0.18				0.00	0.73	0.72	0.00	0.24	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	39.2	0.0	31.4				0.0	5.5	5.7	0.0	13.1	0.0
Ln Grp LOS	D		C					A	A		B	
Approach Vol, veh/h		488						1146			486	
Approach Delay, s/veh		38.7						5.6			13.1	
Approach LOS		D						A			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Case No		8.0		9.0		7.0		
Phs Duration (G+Y+Rc), s		70.8		20.2		70.8		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green (Gmax), s		56.5		25.0		56.5		
Max Allow Headway (MAH), s		4.1		4.1		4.0		
Max Q Clear (g_c+I1), s		13.9		14.7		11.9		
Green Ext Time (g_e), s		5.2		1.5		2.1		
Prob of Phs Call (p_c)		1.00		1.00		1.00		
Prob of Max Out (p_x)		0.00		0.07		0.00		

Left-Turn Movement Data						
Assigned Mvmt		5		7		1
Mvmt Sat Flow, veh/h		0		3183		0

Through Movement Data						
Assigned Mvmt		2		4		6
Mvmt Sat Flow, veh/h		2929		0		3647

Right-Turn Movement Data						
Assigned Mvmt		12		14		16
Mvmt Sat Flow, veh/h		688		1460		1460

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	0

Lane Assignment				L				
Lanes in Grp	0	0	0	2	0	0	0	0
Grp Vol (v), veh/h	0	0	0	461	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1591	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	12.7	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	12.7	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1591	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	66.8	0.0	0.0	0.0	66.8	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	570	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	878	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	35.9	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	39.2	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	4.5	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	4.8	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	577	0	0	0	486	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	11.6	0.0	0.0	0.0	9.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	11.6	0.0	0.0	0.0	9.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	1305	0	0	0	2609	0	0
V/C Ratio (X)	0.00	0.44	0.00	0.00	0.00	0.19	0.00	0.00
Avail Cap (c_a), veh/h	0	1305	0	0	0	2609	0	0
Upstream Filter (I)	0.00	0.67	0.00	0.00	0.00	0.97	0.00	0.00
Uniform Delay (d1), s/veh	0.0	4.8	0.0	0.0	0.0	12.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.5	0.0	0.0	0.0	13.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.3	0.0	0.0	0.0	3.1	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	2.6	0.0	0.0	0.0	3.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.00	0.00	0.14	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	569	0	27	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1747	0	1460	0	1460	0	0
Q Serve Time (g_s), s	0.0	11.9	0.0	1.4	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	11.9	0.0	1.4	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.39	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1282	0	261	0	1072	0	0
V/C Ratio (X)	0.00	0.44	0.00	0.10	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1282	0	403	0	1072	0	0
Upstream Filter (I)	0.00	0.67	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	4.9	0.0	31.2	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.7	0.0	31.4	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.4	0.0	0.5	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	2.6	0.0	0.5	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.02	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	14.9
HCM 7th LOS	B

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	540	713	0	344
Demand Flow Rate, veh/h	551	727	0	351
Vehicles Circulating, veh/h	595	157	427	613
Vehicles Exiting, veh/h	365	270	529	157
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.6	7.7	0.0	11.6
Approach LOS	A	A	-	B

Lane	Left	Bypass	Left	Bypass	Left	Left	Bypass
Designated Moves	LT	R	LT	R	LTR	LT	R
Assumed Moves	LT		LT		LTR	LT	
RT Channelized		Free		Free			Free
Lane Util	1.000		1.000		1.000	1.000	
Follow-Up Headway, s	2.609		2.609		2.609	2.609	
Critical Headway, s	4.976		4.976		4.976	4.976	
A (Intercept)	1380		1380		1380	1380	
B (Slope)	1.02e-3		1.02e-3		1.02e-3	1.02e-3	
Entry Flow, veh/h	360	191	613	114	0	348	3
Cap Entry Lane, veh/h	752	1938	1176	1938	893	738	1938
Entry HV Adj Factor	0.981	0.980	0.980	0.980	1.000	0.981	0.980
Flow Entry, veh/h	353	187	601	112	0	341	3
Cap Entry, veh/h	738	1900	1152	1900	893	725	1900
V/C Ratio	0.479	0.098	0.521	0.059	0.000	0.471	0.002
Control Delay, s/veh	11.7	0.0	9.1	0.0	4.0	11.7	0.0
LOS	B	A	A	A	A	B	A
95th %tile Queue, veh	3	0	3	0	0	3	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	137	5	139	0	0	0	0	433	43	171	197	0
Future Volume (veh/h)	137	5	139	0	0	0	0	433	43	171	197	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723				0	1870	1723	1723	1870	0
Adj Flow Rate, veh/h	149	5	151				0	471	47	186	214	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	302	0	269				0	879	88	385	377	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.18	0.18	0.18				0.00	0.53	0.47	0.53	0.53	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	11.3	0.0	12.1				0.0	0.0	4.8	5.5	0.0	0.0
Ln Grp LOS	B		B						A	A		
Approach Vol, veh/h		300						518			400	
Approach Delay, s/veh		11.7						4.8			5.5	
Approach LOS		B						A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Case No		8.0		9.0		8.0		
Phs Duration (G+Y+Rc), s		18.5		9.1		18.5		
Change Period (Y+Rc), s		5.5		4.1		5.5		
Max Green (Gmax), s		61.5		18.9		61.5		
Max Allow Headway (MAH), s		4.0		4.2		4.7		
Max Q Clear (g_c+I1), s		7.2		4.6		10.8		
Green Ext Time (g_e), s		2.0		0.9		2.2		
Prob of Phs Call (p_c)		1.00		0.90		1.00		
Prob of Max Out (p_x)		0.00		0.00		0.00		

Left-Turn Movement Data						
Assigned Mvmt		5		7		1
Mvmt Sat Flow, veh/h		0		1641		368

Through Movement Data						
Assigned Mvmt		2		4		6
Mvmt Sat Flow, veh/h		1673		0		718

Right-Turn Movement Data						
Assigned Mvmt		12		14		16
Mvmt Sat Flow, veh/h		167		1460		0

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	0

Lane Assignment				L		L+T		
Lanes in Grp	0	0	0	1	0	1	0	0
Grp Vol (v), veh/h	0	0	0	149	0	400	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1641	0	1087	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	2.2	0.0	3.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	2.2	0.0	8.8	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1641	0	897	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	14.5	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	9.3	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0
Time to First Blk (g_f), s	0.0	14.5	0.0	0.0	0.0	2.3	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	0.00	0.46	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	302	0	762	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.49	0.00	0.52	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	1133	0	2934	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	10.1	0.0	5.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.2	0.0	0.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	11.3	0.0	5.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.5	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.03	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment		T+R		R				
Lanes in Grp	0	1	0	1	0	0	0	0
Grp Vol (v), veh/h	0	518	0	151	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1840	0	1460	0	0	0	0
Q Serve Time (g_s), s	0.0	5.2	0.0	2.6	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.2	0.0	2.6	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.09	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	967	0	269	0	0	0	0
V/C Ratio (X)	0.00	0.54	0.00	0.56	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	4214	0	1008	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	4.4	0.0	10.2	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	1.8	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.8	0.0	12.1	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.5	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.04	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	6.8
HCM 7th LOS	A

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	494	56	28	429	0	72	0	25	0	0	0
Future Vol, veh/h	0	494	56	28	429	0	72	0	25	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	537	61	30	466	0	78	0	27	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	466	0	0	598	0	0	1095	1095	567	1064	1125	466
Stage 1	-	-	-	-	-	-	567	567	-	527	527	-
Stage 2	-	-	-	-	-	-	527	527	-	537	598	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1095	-	-	979	-	-	191	214	523	201	205	596
Stage 1	-	-	-	-	-	-	508	507	-	534	528	-
Stage 2	-	-	-	-	-	-	534	528	-	528	491	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1095	-	-	979	-	-	183	205	523	182	196	596
Mov Cap-2 Maneuver	-	-	-	-	-	-	183	205	-	182	196	-
Stage 1	-	-	-	-	-	-	508	507	-	512	506	-
Stage 2	-	-	-	-	-	-	512	506	-	500	491	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0.54	35.55	0
HCM LOS			E	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	220	1095	-	-	110	-	-	-
HCM Lane V/C Ratio	0.479	-	-	-	0.031	-	-	-
HCM Control Delay (s/veh)	35.5	0	-	-	8.8	0	-	0
HCM Lane LOS	E	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	2.4	0	-	-	0.1	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	218	336	79	40	316	286	118	482	46	141	255	88
Future Volume (veh/h)	218	336	79	40	316	286	118	482	46	141	255	88
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	237	365	86	43	343	311	128	524	50	153	277	96
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	293	833	650	79	589	460	289	664	63	207	397	135
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.18	0.45	0.45	0.05	0.31	0.31	0.18	0.20	0.19	0.13	0.15	0.14
Unsig. Movement Delay												
Ln Grp Delay, s/veh	49.3	18.9	3.6	47.4	29.9	18.4	34.0	40.6	40.8	50.5	39.2	40.2
Ln Grp LOS	D	B	A	D	C	B	C	D	D	D	D	D
Approach Vol, veh/h		688			697			702			526	
Approach Delay, s/veh		27.4			25.9			39.5			42.8	
Approach LOS		C			C			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	2	1	3	4	6	5	7	8
Case No	4.0	2.0	2.0	3.0	4.0	2.0	2.0	3.0
Phs Duration (G+Y+Rc), s	22.2	15.4	8.3	44.1	17.7	19.9	20.1	32.3
Change Period (Y+Rc), s	* 5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green (Gmax), s	* 21	10.0	5.4	33.3	20.5	8.8	15.8	22.9
Max Allow Headway (MAH), s	4.0	4.1	4.1	4.1	4.1	4.1	4.1	4.2
Max Q Clear (g_c+I1), s	15.7	10.1	4.3	14.1	11.3	8.3	14.5	15.8
Green Ext Time (g_e), s	1.0	0.0	0.0	1.5	0.9	0.0	0.1	1.6
Prob of Phs Call (p_c)	1.00	0.98	0.66	1.00	1.00	0.96	1.00	1.00
Prob of Max Out (p_x)	0.68	1.00	1.00	0.00	0.08	1.00	1.00	0.00

Left-Turn Movement Data								
Assigned Mvmt		1	3			5	7	
Mvmt Sat Flow, veh/h		1641	1641			1641	1641	

Through Movement Data								
Assigned Mvmt	2			4	6			8
Mvmt Sat Flow, veh/h	3279			1870	2605			1870

Right-Turn Movement Data								
Assigned Mvmt	12			14	16			18
Mvmt Sat Flow, veh/h	312			1460	883			1460

Left Lane Group Data								
Assigned Mvmt	0	1	3	0	0	5	7	0

Lane Assignment		L (Prot)	L (Prot)			L (Prot)	L (Prot)	
Lanes in Grp	0	1	1	0	0	1	1	0
Grp Vol (v), veh/h	0	153	43	0	0	128	237	0
Grp Sat Flow (s), veh/h/ln	0	1641	1641	0	0	1641	1641	0
Q Serve Time (g_s), s	0.0	8.1	2.3	0.0	0.0	6.3	12.5	0.0
Cycle Q Clear Time (g_c), s	0.0	8.1	2.3	0.0	0.0	6.3	12.5	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	207	79	0	0	289	293	0
V/C Ratio (X)	0.00	0.74	0.54	0.00	0.00	0.44	0.81	0.00
Avail Cap (c_a), veh/h	0	210	126	0	0	289	315	0
Upstream Filter (I)	0.00	0.99	0.97	0.00	0.00	0.86	1.00	0.00
Uniform Delay (d1), s/veh	0.0	37.9	41.9	0.0	0.0	33.1	35.5	0.0
Incr Delay (d2), s/veh	0.0	12.6	5.5	0.0	0.0	0.9	13.8	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	50.5	47.4	0.0	0.0	34.0	49.3	0.0
1st-Term Q (Q1), veh/ln	0.0	3.0	0.9	0.0	0.0	2.3	4.6	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.1	0.0	0.0	0.1	1.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
%ile Back of Q (50%), veh/ln	0.0	3.7	1.0	0.0	0.0	2.4	5.7	0.0
%ile Storage Ratio (RQ%)	0.00	0.48	0.51	0.00	0.00	0.30	0.96	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	2	0	0	4	6	0	0	8
Lane Assignment	T			T	T			T
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	283	0	0	365	187	0	0	343
Grp Sat Flow (s), veh/h/ln	1777	0	0	1870	1777	0	0	1870
Q Serve Time (g_s), s	13.6	0.0	0.0	12.1	9.0	0.0	0.0	13.8
Cycle Q Clear Time (g_c), s	13.6	0.0	0.0	12.1	9.0	0.0	0.0	13.8
Lane Grp Cap (c), veh/h	360	0	0	833	271	0	0	589
V/C Ratio (X)	0.79	0.00	0.00	0.44	0.69	0.00	0.00	0.58
Avail Cap (c_a), veh/h	440	0	0	833	434	0	0	589
Upstream Filter (I)	0.86	0.00	0.00	1.00	0.99	0.00	0.00	0.97
Uniform Delay (d1), s/veh	34.0	0.0	0.0	17.2	36.1	0.0	0.0	25.9
Incr Delay (d2), s/veh	6.6	0.0	0.0	1.7	3.1	0.0	0.0	4.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	40.6	0.0	0.0	18.9	39.2	0.0	0.0	29.9
1st-Term Q (Q1), veh/ln	5.4	0.0	0.0	4.5	3.6	0.0	0.0	5.5

2nd-Term Q (Q2), veh/ln	0.7	0.0	0.0	0.4	0.2	0.0	0.0	0.7
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	6.0	0.0	0.0	4.9	3.8	0.0	0.0	6.2
%ile Storage Ratio (RQ%)	0.06	0.00	0.00	0.02	0.07	0.00	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	12	0	0	14	16	0	0	18
Lane Assignment	T+R			R	T+R			R
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	291	0	0	86	186	0	0	311
Grp Sat Flow (s), veh/h/ln	1814	0	0	1460	1711	0	0	1460
Q Serve Time (g_s), s	13.7	0.0	0.0	1.4	9.3	0.0	0.0	10.6
Cycle Q Clear Time (g_c), s	13.7	0.0	0.0	1.4	9.3	0.0	0.0	10.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.17	0.00	0.00	1.00	0.52	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	368	0	0	650	261	0	0	460
V/C Ratio (X)	0.79	0.00	0.00	0.13	0.71	0.00	0.00	0.68
Avail Cap (c_a), veh/h	450	0	0	650	418	0	0	460
Upstream Filter (I)	0.86	0.00	0.00	1.00	0.99	0.00	0.00	0.97
Uniform Delay (d1), s/veh	34.2	0.0	0.0	3.1	36.6	0.0	0.0	10.9
Incr Delay (d2), s/veh	6.6	0.0	0.0	0.4	3.6	0.0	0.0	7.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	40.8	0.0	0.0	3.6	40.2	0.0	0.0	18.4
1st-Term Q (Q1), veh/ln	5.5	0.0	0.0	0.9	3.6	0.0	0.0	4.7
2nd-Term Q (Q2), veh/ln	0.7	0.0	0.0	0.1	0.3	0.0	0.0	1.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	6.2	0.0	0.0	0.9	3.9	0.0	0.0	5.6
%ile Storage Ratio (RQ%)	0.06	0.00	0.00	0.24	0.07	0.00	0.00	2.86
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	33.4
HCM 7th LOS	C

Notes

* HCM 7th Edition computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	315	368	106	106	166	91	54	417	127	70	318	137
Future Volume (veh/h)	315	368	106	106	166	91	54	417	127	70	318	137
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1723	1870	1723	1723	1870	1723	1723	1870	1723	1723	1870	1723
Adj Flow Rate, veh/h	342	400	115	115	180	99	59	453	138	76	346	149
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	602	1110	866	473	673	370	215	596	465	156	596	465
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.59	0.59	0.59	0.59	0.59	0.58	0.32	0.32	0.32	0.32	0.32	0.32
Unsig. Movement Delay												
Ln Grp Delay, s/veh	19.4	10.3	8.4	15.4	0.0	9.7	34.9	33.5	23.7	43.2	27.3	23.9
Ln Grp LOS	B	B	A	B		A	C	C	C	D	C	C
Approach Vol, veh/h		857			394			650			571	
Approach Delay, s/veh		13.7			11.4			31.6			28.6	
Approach LOS		B			B			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		5.0		5.0		6.0
Phs Duration (G+Y+Rc), s		33.0		58.0		33.0		58.0
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5
Max Green (Gmax), s		27.5		52.5		27.5		52.5
Max Allow Headway (MAH), s		4.2		4.5		4.4		4.6
Max Q Clear (g_c+I1), s		21.9		31.5		30.9		19.8
Green Ext Time (g_e), s		1.4		3.9		0.0		1.9
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.66		0.00		1.00		0.00

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		831		1013		760		816

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1134

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1460		1460		1460		624

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3

Lane Assignment		L		L		L		L
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	59	0	342	0	76	0	115
Grp Sat Flow (s), veh/h/ln	0	831	0	1013	0	760	0	816
Q Serve Time (g_s), s	0.0	5.8	0.0	22.4	0.0	9.1	0.0	7.7
Cycle Q Clear Time (g_c), s	0.0	19.9	0.0	29.5	0.0	28.9	0.0	17.8
Perm LT Sat Flow (s_l), veh/h/ln	0	831	0	1013	0	760	0	816
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	29.0	0.0	54.0	0.0	29.0	0.0	54.0
Perm LT Serve Time (g_u), s	0.0	14.9	0.0	46.9	0.0	9.2	0.0	43.9
Perm LT Q Serve Time (g_ps), s	0.0	5.8	0.0	22.4	0.0	9.1	0.0	7.7
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	215	0	602	0	156	0	473
V/C Ratio (X)	0.00	0.27	0.00	0.57	0.00	0.49	0.00	0.24
Avail Cap (c_a), veh/h	0	215	0	602	0	156	0	473
Upstream Filter (I)	0.00	1.00	0.00	0.85	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	34.2	0.0	16.1	0.0	40.9	0.0	14.2
Incr Delay (d2), s/veh	0.0	0.7	0.0	3.3	0.0	2.4	0.0	1.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	34.9	0.0	19.4	0.0	43.2	0.0	15.4
1st-Term Q (Q1), veh/ln	0.0	1.1	0.0	4.2	0.0	1.6	0.0	1.2
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.6	0.0	0.1	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.1	0.0	4.8	0.0	1.7	0.0	1.4
%ile Storage Ratio (RQ%)	0.00	0.26	0.00	1.22	0.00	0.61	0.00	0.35
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	453	0	400	0	346	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	0
Q Serve Time (g_s), s	0.0	19.8	0.0	10.1	0.0	14.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	19.8	0.0	10.1	0.0	14.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	596	0	1110	0	596	0	0
V/C Ratio (X)	0.00	0.76	0.00	0.36	0.00	0.58	0.00	0.00
Avail Cap (c_a), veh/h	0	596	0	1110	0	596	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.85	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	27.9	0.0	9.6	0.0	25.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	5.7	0.0	0.8	0.0	1.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	33.5	0.0	10.3	0.0	27.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	7.9	0.0	3.2	0.0	5.6	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.9	0.0	0.2	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	8.8	0.0	3.4	0.0	5.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.13	0.00	0.02	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	138	0	115	0	149	0	279
Grp Sat Flow (s), veh/h/ln	0	1460	0	1460	0	1460	0	1758
Q Serve Time (g_s), s	0.0	6.5	0.0	3.2	0.0	7.0	0.0	7.1
Cycle Q Clear Time (g_c), s	0.0	6.5	0.0	3.2	0.0	7.0	0.0	7.1
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.35
Lane Grp Cap (c), veh/h	0	465	0	866	0	465	0	1043
V/C Ratio (X)	0.00	0.30	0.00	0.13	0.00	0.32	0.00	0.27
Avail Cap (c_a), veh/h	0	465	0	866	0	465	0	1043
Upstream Filter (I)	0.00	1.00	0.00	0.85	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	23.3	0.0	8.2	0.0	23.5	0.0	9.1
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.3	0.0	0.4	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	23.7	0.0	8.4	0.0	23.9	0.0	9.7
1st-Term Q (Q1), veh/ln	0.0	2.0	0.0	0.8	0.0	2.2	0.0	2.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.1	0.0	0.8	0.0	2.2	0.0	2.3
%ile Storage Ratio (RQ%)	0.00	0.52	0.00	0.43	0.00	0.29	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	21.5
HCM 7th LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	24	283	179	11	183	228
Future Volume (veh/h)	24	283	179	11	183	228
Number	3	18	2	12	1	6
Initial Q, veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Lanes Open During Work Zone						
Adj Sat Flow, veh/h/ln	1723	1723	1870	1723	1723	1870
Adj Flow Rate, veh/h	26	308	195	12	199	248
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Opposing Right Turn Influence	Yes				Yes	
Cap, veh/h	391	348	1175	72	764	1261
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.24	0.24	0.67	0.67	0.67	0.67
Unsig. Movement Delay						
Ln Grp Delay, s/veh	26.9	43.4	0.0	5.7	8.2	5.9
Ln Grp LOS	C	D		A	A	A
Approach Vol, veh/h	334		207			447
Approach Delay, s/veh	42.1		5.7			6.9
Approach LOS	D		A			A

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2	8			6		
Case No		8.0	9.0			6.0		
Phs Duration (G+Y+Rc), s		65.3	25.7			65.3		
Change Period (Y+Rc), s		4.0	4.0			4.0		
Max Green (Gmax), s		48.0	35.0			48.0		
Max Allow Headway (MAH), s		4.0	4.3			4.4		
Max Q Clear (g_c+I1), s		5.7	20.5			13.3		
Green Ext Time (g_e), s		0.7	1.1			1.9		
Prob of Phs Call (p_c)		1.00	1.00			1.00		
Prob of Max Out (p_x)		0.00	0.01			0.00		

Left-Turn Movement Data								
Assigned Mvmt		5	3			1		
Mvmt Sat Flow, veh/h		0	1641			1082		

Through Movement Data								
Assigned Mvmt		2	8			6		
Mvmt Sat Flow, veh/h		1744	0			1870		

Right-Turn Movement Data								
Assigned Mvmt		12	18			16		
Mvmt Sat Flow, veh/h		107	1460			0		

Left Lane Group Data								
Assigned Mvmt	0	5	3	0	0	1	0	0

Lane Assignment			L			L		
Lanes in Grp	0	0	1	0	0	1	0	0
Grp Vol (v), veh/h	0	0	26	0	0	199	0	0
Grp Sat Flow (s), veh/h/ln	0	0	1641	0	0	1082	0	0
Q Serve Time (g_s), s	0.0	0.0	1.1	0.0	0.0	7.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	1.1	0.0	0.0	11.3	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1641	0	0	1082	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	61.3	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	57.6	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	7.5	0.0	0.0
Time to First Blk (g_f), s	0.0	61.3	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	391	0	0	764	0	0
V/C Ratio (X)	0.00	0.00	0.07	0.00	0.00	0.26	0.00	0.00
Avail Cap (c_a), veh/h	0	0	631	0	0	764	0	0
Upstream Filter (I)	0.00	0.00	1.00	0.00	0.00	0.87	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	26.8	0.0	0.0	7.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	0.0	0.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	26.9	0.0	0.0	8.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.4	0.0	0.0	1.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.4	0.0	0.0	1.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.07	0.00	0.00	0.18	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	8	0	0	6	0	0
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	248	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	1261	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1261	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.87	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	5.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	18	0	0	16	0	0
Lane Assignment		T+R	R					
Lanes in Grp	0	1	1	0	0	0	0	0
Grp Vol (v), veh/h	0	207	308	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1851	1460	0	0	0	0	0
Q Serve Time (g_s), s	0.0	3.7	18.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	3.7	18.5	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.06	1.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	1248	348	0	0	0	0	0
V/C Ratio (X)	0.00	0.17	0.89	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1248	562	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.4	33.5	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	9.9	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.7	43.4	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.0	6.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	1.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.1	6.9	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.05	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	18.6
HCM 7th LOS	B

CARLSBAD
CLOVIS
IRVINE
LOS ANGELES
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROSEVILLE
SAN LUIS OBISPO

MEMORANDUM

DATE: March 03, 2023

TO: Linda J Hakimi, PE

FROM: Ambarish Mukherjee, P.E., AICP

SUBJECT: Silicon Valley Ranch Residential Project Vehicle Miles Traveled (VMT) Analysis Memorandum

LSA has prepared a Vehicle Miles Traveled (VMT) Analysis Memorandum (Memo) for the proposed Silicon Valley Ranch residential development (project) in the City of Hanford (City). The project will be located at the southwest corner of 12th Ave and Hanford-Armona Rd (south of State Highway 198) in the City. The Project proposes to develop 22 acres with up to 342 single family dwelling units.

BACKGROUND

On December 28, 2018, the California Office of Administrative Law cleared the revised California Environmental Quality Act (CEQA) guidelines for use. Among the changes to the guidelines was removal of vehicle delay and level of service from consideration under CEQA. With the adopted guidelines, transportation impacts are to be evaluated based on a project's effect on vehicle miles traveled (VMT).

The project is located within the jurisdiction of City of Hanford. The City recently adopted its Senate Bill 743 (SB 743) guidelines, and therefore, the VMT analysis has been based upon the methodology and significant threshold criteria identified in the "City of Hanford - VMT Thresholds and Implementation Guidelines, November 2022" (guidelines).

The guidelines include multiple screening criteria for small to medium sized land use projects to be screened out of a detailed VMT analysis. The project was reviewed with all screening criteria from the guidelines and it was determined that the project doesn't meet any screening criteria. Therefore, a detailed VMT analysis was conducted for the project.

VMT Metrics and Thresholds

The project consists of residential land uses only and the guidelines established use of VMT per capita to evaluate residential land uses. Also, as per the guidelines, the definition of the region was established as Kings County and the threshold for evaluation of land use projects was established as 13%. Therefore, the project will constitute a significant impact if the project VMT per capita is greater than 87% of the baseline VMT per capita of Kings County. Numerically, based on the guidelines if the project VMT per capita is greater than 8.99, then project will have a significant VMT impact.

The Kings County Association of Governments (KCAG) Travel Demand Model (TDM) is the regional travel demand model applicable to jurisdictions within Kings County including the City for evaluating project VMT. Therefore, based on the guidelines, KCAG TDM was used to conduct project VMT analysis.

Project Traffic Analysis Zone Update

To calculate the project VMT, the first step was to update the TAZs in the model that include the project area. The project should be isolated in the travel model to estimate project VMT. KCAG TDM includes ability to add new TAZs. One new TAZ was used to model the project land use. The project land use (dwelling units) was input into the model as households in the newly created zone for modeling purposes. No project specific network modifications were conducted. Model run was conducted for existing/base year scenario with updated model inputs. The outputs from this updated model run were utilized to estimate project specific VMT metrics.

VMT ANALYSIS

As mentioned above, the outputs from the updated model run were used to estimate project VMT per capita. Table A shows the VMT analysis results using the county as the region. As shown in Table A, VMT per capita metric for the project is 6.9% higher than the regional threshold. As mentioned above, the regional/countywide average VMT per capita and the threshold were obtained from the City's guidelines (Table E: Significance Thresholds for VMT Analysis).

Table A: Project and Threshold VMT per Capita

	Silicon Valley Ranch (project)	City of Hanford VMT Threshold *	Difference	Percentage Difference
VMT per capita	9.61	8.99	0.62	6.9%

Source: Kings County Association of Governments (KCAG) Travel Demand Model
** Threshold obtained from City of Hanford VMT Thresholds and Implementation Guidelines, November 2022*
*Threshold is 87% of regional baseline (10.33*0.87 = 8.99)*

Conclusion

As mentioned before, the project consists of residential land uses only. The City's guidelines recommend use of VMT per capita to evaluate residential projects. Also, based on the guidelines the project would constitute a significant VMT impact if the project VMT per capita is greater than 87% of the baseline Kings County VMT per capita. As shown in Table A, the project VMT per capita is higher than the threshold and hence the project has a significant VMT impact.

Detailed VMT calculation for the project is included in Appendix A.

ATTACHMENT

Appendix A –VMT Calculation Worksheet

LSA

Appendix A
VMT Calculations
Silicon Valley Ranch

2018	Silicon Valley Ranch (Project)	City of Hanford Threshold*
Total Households	342	
Total Population	1,069	
Homebased Production (HBP) VMT	10,274	
HBP VMT per capita	9.61	8.99

Source: Kings County Association of Governments (KCAG) Travel Demand Model

**: Threshold Obtained from City of Hanford VMT Thresholds and Implementation Guidelines, November 2022*

FINAL ENVIRONMENTAL IMPACT REPORT

CITY OF HANFORD

SILICON VALLEY RANCH RESIDENTIAL PROJECT

(SCH #2024060956)

FEBRUARY 2025

FINAL ENVIRONMENTAL IMPACT REPORT

SILICON VALLEY RANCH RESIDENTIAL PROJECT

(SCH #2024060956)

Prepared for:

City of Hanford
317 N. Douty Street
Hanford, CA 93230
Contact Person: Gabrielle Myers, Senior Planner
Phone: 559-585-2578

Consultant:

5080 California Avenue, Suite 220
Bakersfield, CA 93309
Contact: Jaymie L. Brauer
Phone: (661) 616-2600

February 2025

Project #220056

Table of Contents

List of Acronyms and Abbreviations v

CHAPTER 1 - Executive Summary *1-1*

1.1 - Introduction 1-1
1.2 - Project Summary 1-1
1.2.1 - Project Location 1-1
1.2.2 - Project Description 1-2
1.3 - Lead Agency, Responsible Agency, and Trustee Agencies 1-2
1.4 - Summary of Project Objectives 1-3
1.5 - Scope of the Environmental Impact Report 1-3
1.6 - Notice of Preparation 1-4
1.7 - Public Review of the Draft EIR 1-4
1.8 - Environmental Impacts 1-5
1.8.1 - Impacts Not Further Considered in This EIR 1-5
1.8.2 - Impacts of the Proposed Project 1-5
1.9 - Summary of Project Alternatives 1-16
1.9.1 - Alternatives Considered and Rejected 1-16
1.9.2 - Alternatives Considered and Evaluated 1-16
1.10 - Environmentally Superior Alternative 1-17
1.11 - Growth Inducement 1-17
1.12 - Irreversible Impacts 1-20
1.13 - Areas of Controversy 1-20
1.14 - Issues to be Resolved 1-20
1.15 - Executive Summary Matrix 1-20

CHAPTER 2 - Introduction *2-1*

2.1 - Overview 2-1
2.2 - Purpose of This Environmental Impact Report 2-1
2.2.1 - Issues to be Resolved 2-2
2.3 - Terminology 2-2
2.4 - Decision-Making Process 2-4
2.4.1 - Notice of Preparation (NOP) 2-5
2.4.2 - Scoping Meeting 2-5
2.5 - Availability of the Draft EIR 2-8
2.6 - Format and Content 2-8
2.6.1 - Required EIR Content and Organization 2-8
2.7 - Responsible and Trustee Agencies 2-10
2.7.1 - Local Agencies 2-10
2.7.2 - State Agencies 10
2.7.3 - Federal Agencies 2-11

2.8 - Incorporation by Reference 2-11
2.9 - Sources 2-11

CHAPTER 3 - Project Description 3-1

3.1 - Project Overview 3-1
3.2 - Project Location and Environmental Setting 3-1
3.2.1 - Regional Setting 3-1
3.2.2 - Local Setting 3-1
3.2.3 - Project Location 3-5
3.3 - Project Objectives 3-5
3.4 - Proposed Project 3-5
3.5 - Entitlements Required 3-7
3.5.1 - Other Responsible Agencies 3-8
3.6 - Cumulative Projects 3-8

CHAPTER 4 - Environmental Impact Analyses 4-1

4.1 - Land Use and Planning 4-1
4.1.1 - Introduction 4-1
4.1.2 - Environmental Setting 4-1
4.1.3 - Regulatory Setting 4-2
4.1.4 - Impacts and Mitigation Measures 4-16
4.2 - Transportation 4-36
4.2.1 - Introduction 4-36
4.2.2 - Environmental Setting 4-36
4.2.3 - Regulatory Setting 4-41
4.2.4 - Impacts and Mitigation Measures 4-52
4.3 - Approach to Environmental Analysis 4-60
4.4 - Environmental Topics 4-61
4.5 - Organization of Issue Areas 4-61
4.6 - Level of Significance 4-62
4.7 - Format Used for Impact Analysis and Mitigation Measures 4-62

CHAPTER 5 - Consequences of Project Implementation 5-1

5.1 - Environmental Effects Found to be Less than Significant 5-1
5.1.1 - Potential for Less than Significant Impacts to Occur 5-1
5.1.2 - Potential for Less than Significant Impacts to Occur with Incorporation of Mitigation Measures 5-8
5.2 - Significant Environmental Effects that Cannot be Avoided 5-8
5.3 - Growth Inducing Impacts 5-9
5.4 - Significant Irreversible Changes 5-9

CHAPTER 6 - Alternatives 6-1

6.1 - Introduction 6-1

6.1.1 - Significant Impacts of the Project 6-2
6.1.2 - Other Impacts of the Project 6-11
6.2 - Project Objectives 6-11
6.3 - Alternatives Considered but Rejected 6-12
6.4 - Alternatives Considered and Evaluated 6-12
6.4.1 - Alternative A - No Project Alternative 6-12
6.4.2 - Alternative B - Reduced Project Alternative 6-13
6.4.3 - Alternative C – Multi-Family Alternative 6-13
6.4.4 - Alternative D – Different Site Alternative 6-14
6.5 - Environmentally Superior Alternative 6-15

CHAPTER 7 - Response to Comments 7-1

CHAPTER 8 - Organizations and Persons Consulted 8-1

CHAPTER 9 - List of Preparers 9-1

CHAPTER 10 - References 10-1

List of Figures

Figure 3-1 Regional Location 3-2
Figure 3-2 Project Site 3-3
Figure 3-3 Sphere of Influence 3-4
Figure 3-4 Tentative Tract Map 943 3-6
Figure 4-1 Southwest Planning Area- Entitled Properties 4-1

List of Tables

Table 1-1 Summary of Significant Impacts of the Project 1-14
Table 1-2 Comparison of Alternatives Impacts 1-19
Table 1-3 Summary of Mitigation 1-21
Table 2-1 Summary of Written Comments on Notice of Preparation 2-6
Table 2-2 Summary of Oral Comments on Notice of Preparation 2-8
Table 4.1-1 Project Site and Surrounding Land Uses and Zoning Classifications 4-2
Table 4.1-2 Project Consistency with the Kings County General Plan and City of Hanford General Plan 4-3
Table 4.2-1 Existing Arterial Streets 4-36
Table 4.2-2 Existing Collector Streets 4-37
Table 4.2-3 City of Hanford VMT Thresholds 4-52
Table 4.2-4 Unsignalized Intersection Level of Service Criteria 4-54
Table 4.2-5 Signalized Intersection Level of Service Criteria 4-54
Table 4.2-6 Intersection Level of Service Weekday AM Peak Hour 4-54
Table 4.2-7 Intersection Level of Service Weekday PM Peak Hour 4-55

Table 5-1 Summary of Significant Impacts of the Proposed Project.....5-8
Table 6-1 Summary of Alternatives Impacts.....6-16

List of Acronyms and Abbreviations

ADT	Average Daily Trips
BMP	best management practices
BSA	Biological Survey Area
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CTC	California Transportation Commission
DTSC	Department of Toxic Substances Control
EBR	eastbound right turn lane
EBTR	eastbound through and right turn lane
EIR	Environmental Quality Act
ESA	Environmental Site Assessment
FAR	Floor Area Ratio
FMMP	Farmland Monitoring and Mapping Program
GHG	Greenhouse gas
HCM	Highway Capacity Manual
HERO	Human and Ecological Risk Office
HHRA	Human Health Risk Assessment
HJO	Hanford Municipal Airport
HSR	Highspeed Rail
IS	Initial Study
IS/NOP	Initial Study/Notice of Preparation
ITE	Institute of Transportation Engineers
KART	Kings Area Rural Transit
KCAG	Kings County Association of Governments
KCAPTA	Kings County Area Public Transit
LAFCo	Local Agency Formation Commission
LOS	Level of Service
MDB&M	Mount Diablo Base and Meridian
NHD	National Hydrography Dataset
NOA	Notice of Availability
NOC	Notice of Completion
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NWI	National Wetlands Inventory
NWS	National Weather Service
OCPs	Pesticides and Organochlorine Pesticides
OPR	Office of Planning and Research
PEA	Preliminary Endangerment Assessment
PG&E	Pacific Gas and Electric

PRC	Public Resources Code
RHNA	Regional Housing Needs Allocation
RTIP	Regional Transportation Improvement Plan
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCE	Southern California Edison Company
SCG	Southern California Gas Company
SCS	Sustainable Communities Strategy
sf	square feet
SJVAPCD	San Joaquin Valley Air Pollution Control District
SOI	Sphere of Influence
SOV	single-occupant vehicle
SR	State Route
STIP	State Transportation Improvement Program
SWPPP	Stormwater Pollution and Prevention Plan
TA	Technical Advisory
TIS	Traffic Impact Analysis
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VMT	Vehicle Miles Traveled
WSA	Water Supply Assessment

CHAPTER 1 - EXECUTIVE SUMMARY

1.1 - Introduction

This focused Environmental Impact Report (EIR) has been prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts associated with the construction of 326 single-family residences, internal roads, a 2.86-acre drainage retention basin, and a 3.58-acre park on an approximately 88.9-acre site (Project). An approximate 13.87-acre portion of the Project site is intended to be sectioned off from the Project via a lot line adjustment. The Project is located in the Sphere of Influence (SOI) of the City of Hanford, California, and an annexation of the land is proposed.

The purpose of this EIR is to inform public agency decision-makers, representatives of affected and responsible agencies, the public, and other interested parties of the potential environmental effects that may result from the Project. In addition to identifying potential environmental effects, this EIR also identifies methods by which these impacts can be mitigated, reduced, minimized, or avoided.

The study area for the analysis of the project and cumulative impacts is the Hanford city limits, the portions of Kings County located adjacent to the City. The applicable cumulative projections include growth projections from the Hanford General Plan and the Kings County General Plan.

These clarifications found in the Final EIR fall within the scope of the original Project analysis included in the draft focused EIR, and do not result in an increase in impacts or any new impacts. No new significant environmental impacts would result from the recommended clarifications herein. Therefore, it is opinion of the lead agency that no substantial revisions have been made that would require recirculation of the draft EIR pursuant to State CEQA Guidelines Section 15073.5 (*Recirculation of a Environmental Impact Report Prior to Certification*).

1.2 - Project Summary

1.2.1 - PROJECT LOCATION

The Silicon Valley Ranch Residential Development Project is located south of Hanford Armona Road, in the SOI of the City of Hanford. The Project encompasses approximately 88.9 acres (APN 011-040-008, 010, and 027) and is bordered by undeveloped and rural residential lands on the west and south; a church and undeveloped land to the north; and residential uses to the east. The Project is located within Section 3, Township 19 South, Range 21, East Mount Diablo Base and Meridian (MDB&M).

1.2.2 - PROJECT DESCRIPTION

The Project proposes to construct a 326-lot residential subdivision within the City of Hanford SOI. The Project will be annexed into the City under a separate application. An approximately 13.87-acre portion of the site at the northeast corner of the property is intended to be removed via a lot-line adjustment. The Project will be developed with a 326-unit single-family subdivision, a 3.58-acre park, and a 2.86-acre retention basin. Lots will range between 5,000 to 7,000 square feet and will be developed with single-family residential units. Associated utility and right-of-way infrastructure would also be developed in accordance with City of Hanford standards and regulations.

Approvals include:

- Approval of Tentative Tract Map #943.
- Prezoning – Because the Project site does not currently have a City of Hanford zoning designation, prezoning of the site is required. The Project site would be prezoned to the R-L-5 zone (Low Density Residential, 5,000 square feet).
- Annexation into the city limits by Kings County Local Agency Formation Commission (LAFCo).

Development of the Project is anticipated to occur over a 12-month period. Construction equipment will vary over the course of development and will include the following:

- Excavators/earth-moving equipment
- Depending on the foundation system, auger rig, or pile-driving rig
- All-terrain forklifts
- A man/material hoist
- Truck cranes and potentially a tower crane (pending permit approval)
- Concrete trucks
- Dump trucks
- Street sweepers/water trucks for dust control
- Construction delivery trucks (typically box trucks or flatbeds)
- Small tools (generators, light plants, compactors, air compressors

1.3 - Lead Agency, Responsible Agency, and Trustee Agencies

The Lead Agency for the proposed Project is the City of Hanford. The City is the public agency that has the principal responsibility for carrying out or disapproving the Project.

The responsible agencies are State and local public agencies other than the Lead Agency that have the authority to carry out or approve a project or that are required to approve a portion of a project for which the Lead Agency is preparing or has prepared an EIR or Negative Declaration. A complete list of agencies that may have authority as a responsible or trustee agency is listed in Chapter 2, *Introduction*.

1.4 - Summary of Project Objectives

The Project has the following objectives as identified by the project proponent:

- Provide a variety of housing opportunities with a range of styles, sizes, and values that will be designed to satisfy existing and future demand for quality housing in the area.
- Provide a sense of community and walkability within the development through the use of street patterns, parks/open space areas, landscaping, and other Project amenities.
- Create a successful and financially feasible Project by meeting the needs as outlined in the General Plan regarding housing needs of the City.
- Provide a residential development that assists the City in meeting its General Plan and Housing Element requirements and objectives.

1.5 - Scope of the Environmental Impact Report

The scope of this EIR is based on the Project description outlined in Chapter 2, *Project Description* and the Notice of Preparation (NOP) (Appendix A), focusing review of environmental resources that could result in potentially significant impacts on environmental resources. Chapter 4, *Environmental Impact Analysis,* identifies two resources related to the Project that were determined to be subject to potentially significant impacts in the NOP scoping process, and these are addressed in the following sections:

- 4.1 – Land Use Planning- Potential conflicts with an adopted land use plan, policy, or regulation
- 4.2 – Transportation and Traffic- all impacts

Sections 4.1 and 4.2 provide detailed discussions of the environmental setting, regulatory setting, methodology for impact assessment for the resource, impacts associated with the Project, and mitigation measures designed to reduce significant impacts where required and when feasible. Cumulative impacts also are discussed.

This EIR examines the potential direct and cumulative impacts of the proposed Project. These impacts were determined through a rigorous process mandated by CEQA in which existing conditions are compared and contrasted with conditions that would exist once the Project is implemented. The significance of each identified impact was determined using CEQA thresholds informed by local thresholds of significance. The following categories are used for classifying impacts.

- **Significant and Unavoidable:** Significant impacts that cannot be feasibly mitigated or avoided. No measures could be taken to avoid or reduce these adverse effects to achieve insignificant or negligible levels. Even after the application of feasible mitigation measures, the residual impact would be significant. If the Project is approved with significant and unavoidable impacts, decision-makers are required to adopt a Statement of Overriding Considerations pursuant to CEQA Section 15093

explaining why the benefits of the Project outweigh the potential damage caused by these significant unavoidable impacts.

- **Less than Significant with Mitigation:** Such impacts can be reduced to a less-than-significant level with feasible mitigation, which can include incorporating changes to the Project. If the proposed Project is approved with significant but mitigable impacts, decision-makers are required to make findings pursuant to CEQA Section 15091, stating that impacts have been mitigated to the maximum extent feasible and the residual impact would not be significant.

- **Less than Significant:** These adverse but less-than-significant impacts do not require mitigation, nor do they require findings to be made.

- **No Impact:** Such impacts are considered to not exist with the implementation of the proposed Project or have been found to not apply to the proposed Project.

1.6 - Notice of Preparation

The contents of this EIR were established based on the findings in the NOP and attached materials, as well as public and agency input during the scoping period. The City issued a NOP on June 21, 2024, to request comments on the scope of the EIR. The NOP was published online at https://www.cityofhanfordca.com/1236/Current-Projects. The NOP was circulated to relevant agencies, community organizations, and interested individuals in the City. A public scoping workshop was held on July 8, 2024; a 30-day public comments period closed on July 22, 2024 (CEQA Guidelines §15082). A copy of the NOP and comments received during the NOP review period are included in Appendix A.

1.7 - Public Review of the Draft EIR

Upon completion and circulation of this Draft EIR, the City of Hanford prepared and filed a Notice of Completion (NOC with the California Office of Planning and Research/State Clearinghouse to begin the public review period (Public Resources Code, Section 21161). Concurrent with the NOC, the City of Hanford distributed a Notice of Availability (NOA) in accordance with Section 15087 of the CEQA Guidelines. The NOA was mailed to the organizations and individuals who previously requested such a notice to comply with Public Resources Code Section 21092(b)(3). This Draft EIR was distributed to the California Office of Planning and Research/State Clearinghouse, published in the Fresno Bee newspaper to comply with Section 15087 of the State CEQA Guidelines, and was distributed to affected agencies, surrounding cities and municipalities, and all interested parties. During the public review period, this Draft EIR, including the appendices, will be available for review at the following location:

City of Hanford Community Development Department
CIVIC CENTER BUILDING
317 N Douty St, Hanford, CA 93230

In addition, the Draft EIR, including the appendices, will be available for review at the following City of Hanford website:

https://www.cityofhanfordca.com/1236/Current-Projects

Agencies, organizations, individuals, and all other interested parties not previously contacted or who did not respond to the NOP or attended the scoping meeting currently have the opportunity to comment on this Draft EIR during the 45-day public review period. Written comments on this Draft EIR should be addressed to:

Attn: Gabrielle Myers, Senior Planner
City of Hanford Community Development Department
CIVIC CENTER BUILDING
317 N Douty St, Hanford, CA 93230

Email: gmyers@hanfordca.gov

1.8 - Environmental Impacts

Section 15128 of the CEQA Guidelines requires that an EIR contain a statement briefly indicating the reasons that various, possible, new significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR. The ~~County~~ City has engaged the public to participate in the scoping of the environmental document.

The contents of this Draft EIR were established based on the NOP prepared in accordance with the CEQA Guidelines, as well as public and agency input that was received during the scoping process. The comments to the NOP are found in Appendix A of this document. Based on the findings of the NOP and the results of scoping, a determination was made that this EIR must contain a comprehensive analysis of Land Use and Planning as well as Transportation and Traffic related issues identified in Appendix G of the CEQA Guidelines.

1.8.1 - Impacts Not Further Considered in This EIR

As discussed in Appendix A, the Project was determined to have impacts with regard to each of the impact thresholds. Therefore, all environmental issues related to Land Use and Planning as well as Transportation and Traffic as they are presented in Appendix G of the CEQA Guidelines are analyzed further in this EIR.

1.8.2 - Impacts of the Proposed Project

No Potential for Impacts to Occur

The potential environmental effects of the Project and mitigation measures are discussed in detail in Chapter 4 of this EIR. After a full analysis, the following effects were determined to have no potential for impacts to occur:

Aesthetics

- Impact 4.1-1: Have a substantial adverse effect on a scenic vista
- Impact 4.1-2: Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway

Agriculture and Forest Resources

- Impact 4.2-2: Conflict with existing zoning for agricultural use or a Williamson Act contract
- Impact 4.2-3: Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), or timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Productions (as defined in Government Code Section 51104(g))
- Impact 4.2-4: Result in the loss of forest land or conversion of forest land to non-forest use

Biological Resources

- Impact 4.4-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
- Impact 4.4-6: Conflict with provisions of an adopted habitat conservation plan, natural communities' conservation plan, or other approved local, regional, or State habitat conservation plan

Geology and Soils

- Impact 4.7-8: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater

Hazards and Hazardous Materials

- Impact 4.9-7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires

Hydrology and Water Quality

- Impact 4.10-6: In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation

Land Use and Planning

- Impact 4.11-1: Physically divide an established community

Mineral Resources

- Impact 4.12-1: Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State

- Impact 4.12-2: Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan

Noise

- Impact 4.13-3: For a Project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels

Population and Housing

- Impact 4.14-2: Displace substantial number of existing people or housing necessitating the construction

Recreation

- Impact 4.16-2: Include recreational facilities or require construction or expansion of recreational facilities that might have an adverse physical effect on the environment

Potential for Less than Significant Impacts

Potential environmental effects of the Project and mitigation measures are discussed in detail in Chapter 4 of this EIR. After a full analysis, the following effects were determined to have less-than-significant impacts to occur:

Aesthetics

- Impact 4.1-3: Substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality

- Impact 4.1-4: Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area

Agriculture and Forest Resources

- Impact 4.2-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use

- Impact 4.2-5: Involve other changes in the existing environment which, because of their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use

Air Quality

- Impact 4.3-1: Conflict with or obstruct implementation of the applicable air quality plan

- Impact 4.3-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or State ambient air quality standard

- Impact 4.3-3: Expose sensitive receptors to substantial pollutant concentrations

- Impact 4.3-4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people

Biological Resources

- Impact 4.4-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service

- Impact 4.4-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service

- Impact 4.4-3: Have a substantial adverse effect on State or federally Protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means

- Impact 4.4-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites

Cultural Resources

- Impact 4.5-1: Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5

- Impact 4.5-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5

- Impact 4.5-3: Disturb any human remains, including those interred outside of dedicated cemeteries

Energy

- Impact 4.6-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation

- Impact 4.6-2: Conflict with or obstruct a State or local plan for renewable energy or energy efficiency

Geology and Soils

- Impact 4.7-1(i): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving the rupture of a known earthquake fault as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42

- Impact 4.7-1(ii): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking

- Impact 4.7-1(iii): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction

- Impact 4.7-1(iv): Directly or indirectly cause potentially substantial adverse effects, including the risk of loss, injury, or death involving landslides

- Impact 4.7-2: Result in substantial soil erosion or loss of topsoil

- Impact 4.7-3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse

- Impact 4.7-4: Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property

- Impact 4.7-6: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

Greenhouse Gas Emissions

- Impact 4.8-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment

- Impact 4.8-2: Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases

Hazards and Hazardous Materials

- Impact 4.9-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials

- Impact 4.9-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment

- Impact 4.9-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school

- Impact 4.9-4: Create a hazard to the public or the environment as a result of being located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5

- Impact 4.9-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area

- Impact 4.9-6: Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan

Hydrology and Water Quality

- Impact 4.10-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality

- Impact 4.10-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin

- Impact 4.10-3(i): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site

- Impact 4.10-3(ii): Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river or through the addition of

impervious surfaces, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site

- Impact 4.10-3(iii): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantially additional sources of polluted runoff

- Impact 4.10-3(iv): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows

- Impact 4.10-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan

Land Use Planning

- Impact 4.11-1: Cause a significant environmental impact due to a conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect

Noise

- Impact 4.13-1: Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies

- Impact 4.13-2: Generation of excessive ground-borne vibration or ground-borne noise levels

Population and Housing

- Impact 4.14-1: Induce substantial unplanned population growth in an area, either directly or indirectly

Public Services

- Impact 4.15-1(i): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection

- Impact 4.15-1(ii): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or

physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for police protection services

- Impact 4.15-1(iii): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service Ratios, response times, or other performance objectives for school services

- Impact 4.15-1(iv): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for park services

- Impact 4.15-1(v): Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for other public facilities

Recreation

- Impact 4.16-1: Result in increased use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration would occur or be accelerated

Transportation

- Impact 4.17-3: Substantially increase hazards due to a geometric design feature or incompatible uses

- Impact 4.17-4: Result in inadequate emergency access

Tribal Cultural Resources

- Impact 4.18-1: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California register of historical resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)

- Impact 4.18-2: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site,

feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Subdivision (c) of Public Resources Code Section 5024.1.

Utilities and Service Systems

- Impact 4.19-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects

- Impact 4.19-2: Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed

- Impact 4.19-3: Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments

- Impact 4.19-4: Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals

- Impact 4.19-5: Comply with federal, State, and local management and reduction statutes and regulations related to solid waste

Wildfire

- Impact 4.20-1: Substantially impair an adopted emergency response plan or emergency evacuation plan

- Impact 4.20-2: Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire

- Impact 4.20-3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment

- Impact 4.20-4: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes

Potential for Less than Significant Impacts to Occur with Incorporation of Mitigation Measures

The potential environmental effects of the Project and mitigation measures are discussed in detail in Chapter 4 of this EIR.

Land Use

- Impact 4.17-1: Cause a significant environmental impact due to a conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Transportation

- Impact 4.2-1 - Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

- Impact 4.17-2: Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Unavoidable Significant Adverse Impacts

Section 15126.2(b) of the CEQA Guidelines requires that the EIR describe any significant impacts, including those that can be mitigated but not reduced to less-than-significant levels. The potential environmental effects of the Project and proposed mitigation measures are discussed in detail in Chapter 4 of this EIR. The following environmental impacts were determined to be significant and unavoidable impacts (refer to Table 1-1, *Summary of Significant Impacts of the Project*).

Table 1-1
Summary of Significant Impacts of the Project

Resources	Project Impacts	Cumulative Impacts
Land Use Impact 4.1	As evaluated in detail in Table 4.1-2, the Project is consistent with the goals and policies of the City of Hanford General Plan and Kings County General Plan. The Project is consistent with both Kings County and City of Hanford General Plan policy. Therefore, impacts are considered ***less than significant***	Potential land use impacts require evaluation on a case-by-case basis because of the interactive effects of a specific development and its immediate environment. Other projects being proposed in the area would similarly be analyzed for consistency with the pertinent City General Plan and Kings County General Plan goals and policies. Therefore, as proposed the Project would be consistent with the goals

Resources	Project Impacts	Cumulative Impacts
		and policies of the City's General Plan and would therefore not contribute to a cumulatively considerable impact regarding land use. Cumulative impacts are ***less than significant***.
Transportation and Traffic Impact 4.1	The Project will impact the 12th Avenue and Hanford Armona Road intersection. It is recommended that the existing eastbound right turn lane will change to an eastbound through and right turn lane. Implementation of MM 4.2-1 would allow the studied intersection to operate at an acceptable LOS under City LOS standards and reduce impacts to ***less than significant.***	Cumulative impacts are assessed with the proposed Project and the 12 projects located within a one-half mile of the Project site as identified by the City of Hanford. Eleven of the 12 projects are entitled and either under construction or are anticipated to be under construction in the future. The projects that are entitled are included in and are consistent with the General Plan. Therefore, they are included in the KCAG travel demand model. The growth rates used to determine future traffic volumes would therefore reflect traffic from these projects. Cumulative impacts related to LOS would be ***less than significant with mitigation measures incorporated.***
Transportation and Traffic Impact 4.2	Due to the Project's location, it was determined that Vehicle Miles Travelled (VMT) would exceed the City of Hanford's adopted VMT per capita threshold. No applicable and feasible mitigation measures were identified to reduce VMT below thresholds. Therefore, impacts are considered ***significant and unavoidable.***	Because the proposed Project is determined to have a significant and unavoidable impact by exceeding VMT thresholds on a project level, the cumulative impacts would also be considered ***significant and unavoidable***.

Significant Cumulative Impacts

According to Section 15355 of the CEQA Guidelines, the term *cumulative impa*cts "refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Individual effects that may contribute

to a cumulative impact may be from a single project or a number of separate projects. Individually, the impacts of a project may be relatively minor, but when considered along with impacts of other closely related or nearby projects, including newly proposed projects, the effects could be cumulatively considerable.

This EIR has considered the potential cumulative effects of the proposed Project. Impacts for the following issue areas have been found to be cumulatively considerable:

- Transportation and Traffic

This significant cumulative impact is discussed in the applicable section of Chapter 4, *Environmental Analysis*, of this EIR.

1.9 - Summary of Project Alternatives

Below is a summary of the alternatives to the proposed Project, that have been considered but rejected as well as those alternatives that have been considered and evaluated in Chapter 6, *Alternatives to the Proposed Project.*

1.9.1 - Alternatives Considered and Rejected

There are no Project alternatives that were considered and rejected.

1.9.2 - Alternatives Considered and Evaluated

- *Alternative A (No Project Alternative)*. Under the No Project Alternative, the Project area would remain unchanged, and there would be no residential units or parks constructed.

- *Alternative B – Reduced Project Alternative*. This alternative would decrease the number of single-family residential houses from 326 to 242.

- *Alternative C – Multi-Family Alternative*. This alternative would replace the proposed single-family residential with multi-family apartments at a density of at least 14.5 dwelling units per gross acre (1,088 units). The Medium Density Residential was utilized to follow General Plan designations north of the Project site.

- *Alternative D– Different Sites Alternative*. This alternative would relocate the Project to a different site in order to be located nearer to corridor mixed use where a mix of commercial and office uses would be available in addition to be located closer to major transit corridors. This alternative would place the Project on the east side of the City, bounded by Lacey Boulevard to the south, 9 1/4 Avenue to the west, State Route 43 to the east, and Grangeville Boulevard to the north.

1.10 - Environmentally Superior Alternative

CEQA requires that the City identify an Environmentally Superior Alternative. If the No Project Alternative is the Environmentally Superior Alternative, the City must identify an Environmentally Superior Alternative among the other alternatives considered in the EIR (CEQA Guidelines, Section 15126.6). This alternatives analysis includes three additional Project alternatives –Alternative B - Reduced Project, Alternative C - Multi-Family, and Alternative D - Different Site.

Based on the evaluation of the three alternatives, Alternative C – Multi-Family would reduce significant and unavoidable environmental impacts relating to VMT due to the increase in density. Alternative C increased density from 9.1 dwelling units/acre (du/ac) to 14.5 du/ac for a 13 percent VMT reduction, while fulfilling most of the objectives of the proposed Project and is therefore the Environmentally Superior Alternative.

1.11 - Growth Inducement

The City of Hanford General Plan recognizes that certain forms of growth are beneficial, both economically and socially. Section 15126.2(d) of the CEQA Guidelines provides the following guidance on growth-inducing impacts: a project is identified as growth-inducing if it "could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment."

Growth inducement can be a result of a new development that requires an increase in dwelling units or an increase in employment, removes barriers to development, or provides resources that lead to secondary growth. The Project would add new residential uses. It is anticipated that the construction workforce would commute to the site each day from local communities, and the majority would likely come from the existing labor pool as construction workers travel from site to site as needed. Construction staff not drawn from the local labor pool would stay in any of the local hotels in local communities.

With respect to residential land uses, the Project does not include the addition of any residentially designated uses, nor does it include typical elements that would directly or indirectly affect population or housing (i.e., extension of roads or other infrastructure). The Project would accordingly not directly result in population growth of the City.

Therefore, this Project would not result in a large increase in employment. In addition, the Project is situated in urbanized areas within the City of Hanford, where public services exist. The Project would accordingly accommodate planned growth and not induce unplanned growth.

With respect to removing barriers to development, such as by providing access to previously undeveloped areas, the Project is not anticipated to result in significant growth inducement. The Project does not include the construction of infrastructure that could provide for future residential development; it does not remove barriers to off-site development.

Although the Project accommodates planned economic growth at suitable locations, the net increase in population on the Project site would be less than significant.

Table 1-2
Comparison of Alternatives Impacts

Environmental Resource	Project	Alternative A	Alternative B	Alternative C	Alternative D
Land Use and Planning: Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect	Less than significant	Similar	Similar	Similar	Similar
Land Use and Planning: Cumulative Impacts associated with land use plan, policy, or regulation	Less than significant	Similar	Similar	Similar	Similar
Transportation and Traffic: Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities	Less than significant with mitigation incorporated	Fewer	Fewer	Similar	Similar
Transportation and Traffic: Cumulative Impacts associated with LOS	Less than significant with mitigation incorporated	Fewer	Fewer	Similar	Similar
Transportation and Traffic: Conflict or be Inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b)	Significant / Unavoidable	Fewer	Similar	Fewer	Similar
Transportation and Traffic: Cumulative Impacts associated with VMT	Significant / Unavoidable	Fewer	Similar	Fewer	Similar
Meet Project Objectives?	Yes	No	Yes	Yes	Yes
Reduce Any Significant and Unavoidable Impacts to No Impact or Less than Significant?	No	Yes	No	Yes	No

1.12 - Irreversible Impacts

Section 15126.2(c) of the CEQA Guidelines defines an irreversible impact as an impact that uses nonrenewable resources during the initial and continued phases of a project. Irreversible impacts can also result from damage caused by environmental accidents associated with a project. Irretrievable commitments of resources should be evaluated to ensure that such consumption is justified. Buildout of a project would commit nonrenewable resources during project construction and ongoing utility services during project operations. During project operations, oil, gas, and other nonrenewable resources would be consumed. Therefore, an irreversible commitment of nonrenewable resources would occur as a result of long-term project operations. However, assuming that those commitments occur in accordance with the adopted goals, policies, and implementation measures of the City of Hanford General Plan, as a matter of public policy, those commitments have been determined to be acceptable. The City of Hanford General Plan ensures that any irreversible environmental changes associated with those commitments will be minimized.

1.13 - Areas of Controversy

No areas of controversy were identified through written agency, and public comments received during the scoping period. Public comments received during scoping are provided in Appendix A and summarized in Section 2.4 of Chapter 2, *Introduction*. In summary, the following issues were identified during scoping and are addressed in the appropriate sections of Chapter 4, *Environmental Analysis*:

- Land Use and Planning
  - Consistency with the General Plan
- Transportation
  - Level of Service
  - Vehicle Miles Traveled

1.14 - Issues to be Resolved

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain issues to be resolved, which includes the choices among alternatives and whether or how to mitigate significant impacts. The major issues to be resolved regarding the Project include decisions by the Lead agency as to whether or not:

- The Draft EIR adequately describes the environmental impacts of the Project.
- The recommended mitigation measures should be adopted or modified.
- Additional mitigation measures need to be applied.

1.15 - Executive Summary Matrix

Table 1-3 below summarizes the impacts, mitigation measures, and the resulting level of significance after mitigation for the relevant environmental issue areas evaluated for the proposed project. Table 1-3 is intended to provide an overview; narrative discussions for the issue areas are included in the corresponding sections of this Draft EIR.

Table 1-3
Summary of Mitigation

Impacts	Mitigation Measures	Level of Significance
Section 4.1 Land Use and Planning		
4.1-2: Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect	No mitigation is required.	Less than significant
Section 4.2 Traffic		
4.2-1: Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities	MM 4.17-1: The Project proponent or developer shall be required to pay their fair share costs for the needed improvements. This includes changing the 12th Avenue and Hanford Armona Road intersection eastbound right turn lane to an eastbound through lane and a right turn lane. The fair share cost for the improvement is calculated at 18.94% and shall be collected by the City of Hanford at the appropriate time.	Less than significant
4.2-2: Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)	No mitigation is required.	Significant and Unavoidable

CHAPTER 2 - INTRODUCTION

2.1 - Overview

The City of Hanford (City) will be the Lead Agency pursuant to the requirements of the California Environmental Quality Act (CEQA) and will be responsible for preparing an Environmental Impact Report (EIR) pursuant to CEQA (Public Resources Code (PRC) Section 21000 et seq.) and the CEQA Guidelines. In accordance with Section 15082 of the CEQA Guidelines, the City published a Notice of Preparation (NOP). This EIR will be used by the City to evaluate the potential environmental impacts that could result from implementation of the Project and develop changes in the proposed Project and/or adopt mitigation measures that would address those impacts.

This EIR has been prepared pursuant to the following relevant State statutes and guidelines:

- CEQA (Public Resources Code, Section 21000 et seq.).
- CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, Section 15000 et seq.).

The overall purposes of the CEQA process are to:

- Identify the significant effects to the environment of a project, identify alternatives, and indicate the manner in which those significant effects can be avoided or mitigated.
- Provide for full disclosure of the project's environmental effects to the public, the agency decision-makers who will approve or deny the project, and responsible and trustee agencies charged with managing resources (e.g., wildlife, air quality) that may be affected by the project.
- Provide a forum for public participation in the decision-making process with respect to environmental effects.

2.2 - Purpose of This Environmental Impact Report

An EIR is a public informational document used in the planning and decision-making process. This project-level EIR will analyze the environmental impacts of the Project. The City of Hanford Planning Commission and City Council will consider the information in the EIR, including the public comments and staff response to those comments, during the public hearing process. As a legislative action, the final decision is made by the Board of Supervisors, who may approve, conditionally approve, or deny the Project. The purpose of an EIR is to identify:

- The significant potential impacts of the Project on the environment and indicate the manner in which those significant impacts can be avoided or mitigated.
- Any unavoidable adverse impact that cannot be mitigated.

- Reasonable and feasible alternatives to the Project that would eliminate any significant adverse environmental impacts or reduce the impacts to a less-than-significant level.

An EIR also discloses growth-inducing impacts; impacts found not to be significant; and significant cumulative impacts of the project when taken into consideration with past, present, and reasonably anticipated future projects.

CEQA requires an EIR that reflects the independent judgment of the Lead Agency regarding the impacts, the level of significance of the impacts both before and after mitigation, and mitigation measures proposed to reduce the impacts. A Draft EIR is circulated to responsible agencies, trustee agencies with resources affected by the project, and interested agencies and individuals. The purposes of public and agency review of a Draft EIR include sharing expertise, disclosing agency analyses, checking for accuracy, detecting omissions, discovering public concerns, and soliciting mitigation measures and alternatives capable of avoiding or reducing the significant effects of the project, while still attaining most of the basic objectives of the Project.

Reviewers of a Draft EIR are requested to focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the Project might be avoided or mitigated. Comments are most helpful when they suggest additional specific alternatives or mitigation measures that would provide better ways to avoid or mitigate significant environmental effects.

2.2.1 - Issues to be Resolved

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain issues to be resolved, which includes the choices among alternatives and whether or how to mitigate significant impacts. The major issues to be resolved regarding the Project include decisions by the Lead agency as to whether or not:

- The Draft EIR adequately describes the environmental impacts of the Project.
- The recommended mitigation measures should be adopted or modified.
- Additional mitigation measures need to be applied.

2.3 - Terminology

To assist reviewers in understanding this EIR, the following terms are defined:

- *Project* means the whole of an action that has the potential for resulting in a direct physical change in the environment. or a reasonably foreseeable indirect physical change in the environment.

- *Environment* means the physical conditions that exist in the area, and which will be affected by a proposed project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. The area involved is

where significant direct or indirect impacts would occur as a result of the Project. The environment includes both natural and manmade (artificial) conditions.

- *Impacts* analyzed under CEQA must be related to a physical change. Impacts are:
    - Direct or primary impacts that would be caused by a proposed project and would occur at the same time and place.
    - Indirect or secondary impacts that would be caused by a proposed project and would be later in time or farther removed in distance but would still be reasonably foreseeable. Indirect or secondary impacts may include growth-inducing impacts and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.
    - The California Supreme Court recently ruled that the environment's impact on a project falls outside the scope of CEQA except to the extent that impacts from a project exacerbate such impacts. This EIR includes the environment's impacts on a project for informational purposes and addresses the exacerbation component of the Court's decision.

- *Significant impact on the environment* means a substantial, or potentially substantial, adverse change in any of the physical conditions in the area affected by a proposed project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. An economic or social change by itself is not considered a significant impact on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.

- *Mitigation* consists of measures that avoid or substantially reduce a proposed project's significant environmental impacts by:
    - Avoiding the impact altogether by not taking a certain action or parts of an action.
    - Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
    - Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
    - Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
    - Compensating for the impact by replacing or providing substitute resources or environments.

- *Cumulative impacts* are two or more individual impacts that, when considered together, are considerable or that compound or increase other environmental impacts. The following statements also apply when considering cumulative impacts:
    - The individual impacts may be changes resulting from a single project or separate projects.

- The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over time.

This EIR uses a variety of terms to describe the level of significance of adverse impacts. These terms are defined as follows:

- *Less than significant*. An impact that is adverse but that does not exceed the defined thresholds of significance. Less-than-significant impacts do not require mitigation.

- *Significant*. An impact that exceeds the defined thresholds of significance and would or could cause a substantial adverse change in the environment. Mitigation measures are recommended to eliminate the impact or reduce it to a less-than-significant level.

- *Significant and unavoidable*. An impact that exceeds the defined thresholds of significance and cannot be eliminated or reduced to a less-than-significant level through the implementation of mitigation measures.

2.4 - Decision-Making Process

CEQA requires Lead Agencies to solicit and consider input from other interested agencies, citizen groups, and individual members of the public. CEQA also requires a project to be monitored after it has been permitted to ensure that mitigation measures are carried out.

CEQA requires the Lead Agency to provide the public with full disclosure of the expected environmental consequences of a proposed project and with an opportunity to provide comments. In accordance with CEQA, the following is the process for public participation in the decision-making process:

- **Notice of Preparation**. The City of Hanford prepared and circulated a Notice of Preparation (NOP) to responsible, trustee, and local agencies for review and comment on June 21, 2024. The NOP and responses to the NOP are included in Appendix A of this EIR. In conjunction with this public notice, a scoping meeting was held on July 8, 2024, at Hanford City Hall, located in the Training Room, 319 N Douty St, Hanford, CA 93230.

- **Draft EIR Preparation**. A Draft EIR is prepared, incorporating public and agency responses to the NOP and scoping process. The Draft EIR is circulated for review and comment to appropriate agencies and additional individuals and interest groups who have requested to be notified of EIR projects. Per Section 15105 of the CEQA Guidelines, the City of Hanford will provide for a 45-day public review period on the Draft EIR. The City will subsequently respond to each comment on the Draft EIR received in writing through a Response to Comments chapter in the Final EIR. The Response to Comments will be provided to each agency or person who provided

written comments on the EIR a minimum of 10 business days before the scheduled City Council hearing on the Final EIR.

- **Preparation and Certification of Final EIR**. The City of Hanford will consider the Final EIR and the Project, acting in an advisory capacity to the City Council. Upon receipt of the Planning Commission's recommendation, the City Council will also consider the Final EIR, and all public comments and take final action on the Project. At least one public hearing will be held by both the Planning Commission and City Council to consider the Final EIR, take public testimony, and then approve, conditionally approve, or deny the Project.

2.4.1 - Notice of Preparation (NOP)

Pursuant to Section 15082 of the CEQA Guidelines, as amended, the City of Hanford circulated a NOP to the State Clearinghouse, public agencies, special districts, and members of the public for a public review period beginning June 21, 2024, and ending July 22, 2024. The purpose of the NOP is to formally convey that the City, as the Lead Agency, solicited input regarding the scope and proposed content of the EIR. The NOP and all comment letters are provided in Appendix A of this EIR.

2.4.2 - Scoping Meeting

Pursuant to Section 15206 of the CEQA Guidelines, the Lead Agency is required to conduct at least one scoping meeting for all projects of Statewide, regional, or area-wide significance. The scoping meeting is for jurisdictional agencies and interested persons or groups to provide comments regarding, but not limited to, the range of actions, alternatives, mitigation measures, and environmental effects to be analyzed. The City of Hanford hosted a scoping meeting at 5:00 p.m. on July 8, 2024, at Hanford City Hall, located in Training Room, 319 N Douty St, Hanford, CA 93230.

NOP and Scoping Meeting Results

One comment letter was submitted during the scoping process. No oral comments were presented during the July 8, 2024, scoping meeting. Specific concerns raised in written and oral comments received during the NOP public review period are discussed below. The NOP and all comments received are included in Appendix A, along with the Summary of Proceedings from the scoping meeting.

NOP Written Comments

The City received one letter with substantive comments in response to the NOP. The comments are summarized in Table 2-1, *Summary of Written Comments on Notice of Preparation/Initial Study*.

Table 2-1
Summary of Written Comments on Notice of Preparation

Commenter	Summary of Comment
Federal Agencies	No federal agencies submitted comments in response to the IS/NOP.
California State Clearinghouse and Planning Unit (letter dated July 5, 2019)	Notifies reviewing agencies of their ability to review and provide comments on the NOP within 30 days of its receipt from the Lead Agency.
California Department of Toxic Substances Control (letter dated July 9, 2024)	The Department of Toxic Substances Control (DTSC) provided comments regarding the suitability of the site for residential use due to the past agricultural activities and potential past use of pesticides in addition to other potential contaminants. The comment letter is provided along with the IS/NOP in Appendix A. Responses to DTSC comments are provided below.
Local Agencies Members of the Public	No local agencies or members of the public submitted comments in response to the NOP.

1. California Department of Toxic Substances Control

Comment 1: That all imported soil and fill materials should be tested to ensure any contaminants of concern are within DTSC's and U.S. Environmental Protection Agency (USEPA) Regional Screen Levels for the intended land use. To minimize the possibility of introducing contaminated soil and fill material there should be documentation of the origins of the soil or fill material and, if applicable, sampling be conducted to ensure that the imported soil and fill material meets the screening levels outlined in DTSC's Preliminary Endangerment Assessment (PEA) Guidance Manual for the intended land use. The soil sampling should include analysis based on the source of the fill and knowledge of the prior land use. Additional information can be found by visiting DTSC's Human and Ecological Risk Office (HERO) webpage.

Response: The Hanford Municipal Code requires that a grading plan be submitted for review and approval. The contents of the grading plan include specifications covering construction and material requirements, and a soils engineering report, which shall include data regarding the nature, distribution, and strength of existing soils; conclusions and recommendations for grading procedures; criteria for corrective measures when necessary; and opinions and recommendations covering adequacy of sites to be developed by the proposed grading. Should imported fill be necessary for the Project, the grading plan to be approved by the City will address the use of clean soil and fill pursuant to State and local requirements including Municipal Code and California Building Code standards.

Comment 2: When agricultural crops and/or land uses are proposed or rezoned for residential use, a number of contaminants of concern can be present. The Lead Agency shall

identify the amounts of Pesticides and Organochlorine Pesticides (OCPs) historically used on the property. If present, OCPs requiring further analysis are Dichlorodiphenyltrichloroethane, toxaphene, and dieldrin. Additionally, any level of arsenic present would require further analysis and sampling and must meet Human Health Risk Assessment Note Number 3 approved thresholds outlined in the PEA Guidance Manual. If they do not, remedial action must take place to mitigate them below those thresholds.

Response: A Phase I and Phase 2 Environmental Site Assessment (ESA) was prepared to determine if actual or potential environmental conditions involving the subjects are present and has been included as Appendix A in this Draft EIR (GeoTeck, Inc., 2024). Phase I ESA included a reconnaissance survey of the site and surrounding properties, interviews with appropriate representatives and regulatory agency personnel, and review of environmental databases, public records, and historical documents. The Phase I and 2 ESA also provided limited soils sampling to determine if any soil contamination was present. With respect to OCPs, five soil samples contained detectable concentrations of OCPs, however, those concentrations are below the EPA Regional Screening Level for residential soils. The concentration of the metal arsenic in all of the soil samples was above screening levels for residential soils, as determined by DTSC. However, the USEPA and the DTSC have acknowledged that naturally occurring arsenic in southern California typically exceeds the maximum screening level, with levels recorded up to 12 mg/kg in many areas (Human Health Risk Assessment (HHRA) Note Number 11 - Southern California Ambient Arsenic Screening Level). The test results for all of the soil samples are below the typically detected levels of arsenic in the southern California area. Therefore, the Phase I and 2 ESA concluded that no recognized environmental condition or concern is present on the site.

Comment 3: Additional contaminants of concern may be found in mixing/loading/storage area, drainage ditches, farmhouses, or any other outbuildings and should be sampled and analyzed. If smudge pots had been routinely utilized, additional sampling for Polycyclic Aromatic Hydrocarbons and/or Total Petroleum Hydrocarbons may be required.

Response: The Phase I and 2 ESA site investigation concluded that no recognized environmental condition in connection with the subject site had been identified. The survey of the site and historic document research did not reveal any contamination of concern related to historic use of the site for agriculture.

IS/NOP Oral Comments

The City received no oral comments in response to the NOP at the scoping meeting. The comments are summarized in Table 2-2, *Summary of Oral Comments on Notice of Preparation*.

Table 2-2
Summary of Oral Comments on Notice of Preparation

Commenter	Summary of Comment
Federal Agencies	No federal agencies commented in response to the NOP during the scoping meeting.
State Agencies	No local agencies commented in response to the NOP during the scoping meeting.
Local Agencies	No local agencies commented in response to the NOP during the scoping meeting.
Interested Parties	No interested parties commented in response to the NOP during the scoping meeting.

2.5 - Availability of the Draft EIR

This Draft EIR is being distributed directly to agencies, organizations, and interested groups and persons for comment during a 45-day formal review period in accordance with Section 15087 of the CEQA Guidelines. This Draft EIR and the full administrative record for the Project, including all studies, is available for review during normal business hours Monday through Friday at the City of Hanford Community Development Department, located at:

City of Hanford Community Development Department
CIVIC CENTER BUILDING
317 N Douty St, Hanford, CA 93230

2.6 - Format and Content

This Draft EIR addresses the potential environmental effects of the Project and was prepared following input from the public and the responsible and affected agencies, through the EIR scoping process, as discussed previously. The contents of this Draft EIR were established based on the findings in the NOP and public and agency input. Based on the findings of the NOP, a determination was made that an EIR was required to address potentially significant environmental effects on the following resources:

- Land Use and Planning
- Transportation

2.6.1 - Required EIR Content and Organization

The content and organization of this Draft EIR are designed to meet the requirements of CEQA, the CEQA Guidelines, and the Kern County CEQA Implementation Document, as well as to present issues, analysis, mitigation, and other information in a logical and understandable way. This Draft EIR is organized into the following sections:

- Chapter 1, *"Executive Summary,"* provides a Project description and a summary of the environmental impacts and mitigation measures.

- Chapter 2, *"Introduction,"* provides CEQA compliance information, an overview of the decision-making process, organization of the EIR, and a responsible and trustee agency list.

- Chapter 3, *"Project Description,"* provides a description of the location, characteristics, objectives, and the relationship of the Project to other plans and policies.

- Chapter 4, *"Environmental Setting, Impacts, and Mitigation Measures,"* contains a detailed environmental analysis of the existing conditions, project impacts, mitigation measures, and unavoidable adverse impacts.

- Chapter 5, *"Consequences of Project Implementation (Mandatory CEQA Sections),"* presents an analysis of the Project's cumulative and growth-inducing impacts and other CEQA requirements, including significant and unavoidable impacts and irreversible commitment of resources.

- Chapter 6, *"Alternatives,"* describes a reasonable range of alternatives to the Project that could reduce the significant environmental effects that cannot be avoided.

- Chapter 7, *"Responses to Comments,"* is reserved for responses to comments on this Draft EIR.

- Chapter 8, *"Organizations and Persons Consulted,"* lists the organizations and persons contacted during the preparation of this Draft EIR.

- Chapter 9, *"Preparers,"* identifies persons involved in the preparation of the Draft EIR.

- Chapter 10, *"Bibliography,"* identifies reference sources for the Draft EIR.

- *"Appendices"* provide information and technical studies that support the environmental analysis contained within the Draft EIR.

The analysis of each environmental category in Chapter 4 is organized as follows:

- *"Introduction"* provides a brief overview of the purpose of the section being analyzed with regard to the Project.

- *"Environmental Setting"* describes the physical conditions that exist at this time and that may influence or affect the topic being analyzed.

- *"Regulatory Setting"* provides State and federal laws, the City of Hanford General Plan (GP) goals, policies, and implementation measures that apply to the topic being analyzed.

- *"Impacts and Mitigation Measures"* discusses the impacts of the Project in each category, including direct, indirect, and cumulative impacts, presents the

determination of the level of significance, and provides a discussion of feasible mitigation measures to reduce any impacts.

2.7 - Responsible and Trustee Agencies

Projects or actions undertaken by the Lead Agency, in this case, the City of Hanford, may require subsequent oversight, approvals, or permits from other public agencies in order to be implemented. Other such agencies are referred to as *"responsible agencies"* and *"trustee agencies."* Pursuant to Sections 15381 and 15386 of the CEQA Guidelines, as amended, responsible agencies and trustee agencies are defined as follows:

- A *"responsible agency"* is a public agency that proposes to carry out or approve a project, for which a Lead Agency is preparing or has prepared an EIR or Negative Declaration. For the purposes of CEQA, the term *"responsible agency"* includes all public agencies other than the Lead Agency that have discretionary approval power over the project (Section 15381).

- A *"trustee agency"* is a State agency having jurisdiction by law over natural resources affected by a project that is held in trust for the people of the State of California (Section 15386).

The various public, private, and political agencies and jurisdictions with a particular interest in the Project include, but are not limited to, the following:

2.7.1 - Local Agencies

- Pacific Gas and Electric (PG&E)
- San Joaquin Valley Air Pollution Control District (SJVAPCD)
- County of Kings
- Southern California Edison Company (SCE)
- Southern California Gas Company (SCG)

2.7.2 - State Agencies

- California Air Resources Board (CARB)
- California Department of Transportation (Caltrans)
- California Department of Fish and Wildlife (CDFW)
- California Integrated Waste Management Board
- Department of Water Resources
- Governor's Office of Planning and Research
- Regional Water Quality Control Board (RWQCB), Central Valley Region
- Department of Toxic Substances Control (DTSC)
- California Environmental Protection Agency

2.7.3 - FEDERAL AGENCIES

- U.S. Environmental Protection Agency (USEPA)
- U.S. Fish and Wildlife Service (USFWS)

2.8 - Incorporation by Reference

In accordance with Section 15150 of the CEQA Guidelines to reduce the size of the report, the following documents are hereby incorporated by reference into this Draft EIR and are available for public review at the City of Hanford Community Development Department.

- City of Hanford 2035 General Plan Update
- City of Hanford 2035 General Plan Update Master EIR
- City of Hanford Subdivision Ordinance
- City of Hanford Zoning Ordinance
- City of Hanford Housing Element
- City of Hanford Vehicle Miles Travelled Threshold and Implementation Guidelines

2.9 - Sources

This Draft EIR is dependent upon information from many sources. Some sources are studies or reports that have been prepared specifically for this document. Other sources provide background information related to one or more issue areas that are discussed in this document. The sources and references used in the preparation of this Draft EIR are listed in Chapter 10, *Bibliography,* and are available for review during normal business hours at the:

City of Hanford Community Development Department
CIVIC CENTER BUILDING
317 N Douty St, Hanford, CA 93230

CHAPTER 3 - PROJECT DESCRIPTION

3.1 - Project Overview

This Environmental Impact Report (EIR) has been prepared to identify and evaluate potential environmental impacts associated with the construction of 326 single-family residences, internal roads, a 2.86-acre drainage retention basin, and a 3.58-acre park on an approximately 88.9-acre site (Project). An approximately 13.87-acre portion of the site at the northeast corner of the property is intended to be removed via a lot-line adjustment. The Project is within the City of Hanford's Sphere of Influence (SOI) but will be annexed into the City (Figure 3-1 - *Regional Location;* Figure 3-2 – *Project Area*).

3.2 - Project Location and Environmental Setting

3.2.1 - REGIONAL SETTING

The City of Hanford (City) is located 30 miles south of the City of Fresno and 20 miles west of the City of Visalia in the northern portion of Kings County, California. Kings County is one of eight counties that comprise the San Joaquin Valley, which is bound on the west by the Coast Range Mountains, on the east by the Sierra Nevada, on the south by the Tehachapi Mountains, and on the north by the Sacramento River Delta area. Kings County is bordered by Monterey County to the west, Tulare County to the east, Kern County to the south, and Fresno County to the north. Like much of the greater San Joaquin Valley, Kings County has remained predominantly an agricultural area. There are four incorporated cities in Kings County. Hanford is the largest of the four cities in physical size and population. Figure 3-1 provides the regional location of Hanford.

3.2.2 - LOCAL SETTING

The City has a total area of approximately 17 square miles and, as of January 1, 2020, had a population of 57,339 residents, which was about 38 percent of the total population of Kings County. The City's elevation is approximately 249 feet above mean sea level, and the topography of Hanford is relatively flat, indicative of the floor of the San Joaquin Valley where the City resides. Armona, Home Garden, and Grangeville are unincorporated communities located near Hanford. The Naval Air Station Lemoore is located 16 miles west of Hanford. Santa Rosa Rancheria, the reservation of the Santa Rosa Indian Community, is located eight miles southwest of Hanford.

The applicant is proposing a 75.02-acre single-family residential development in the City's southwest Planning Area boundary. Figure 3-3 shows the current city limits. This figure also shows the City's current Primary Sphere of Influence (SOI) and Secondary SOI. A Primary SOI is defined as "the probable physical boundaries and service area of a local agency." The City's Primary SOI represents an assumption of the City's probable future physical boundaries and service. A Secondary SOI serves as an identification of the "areas of interest" between local agencies.

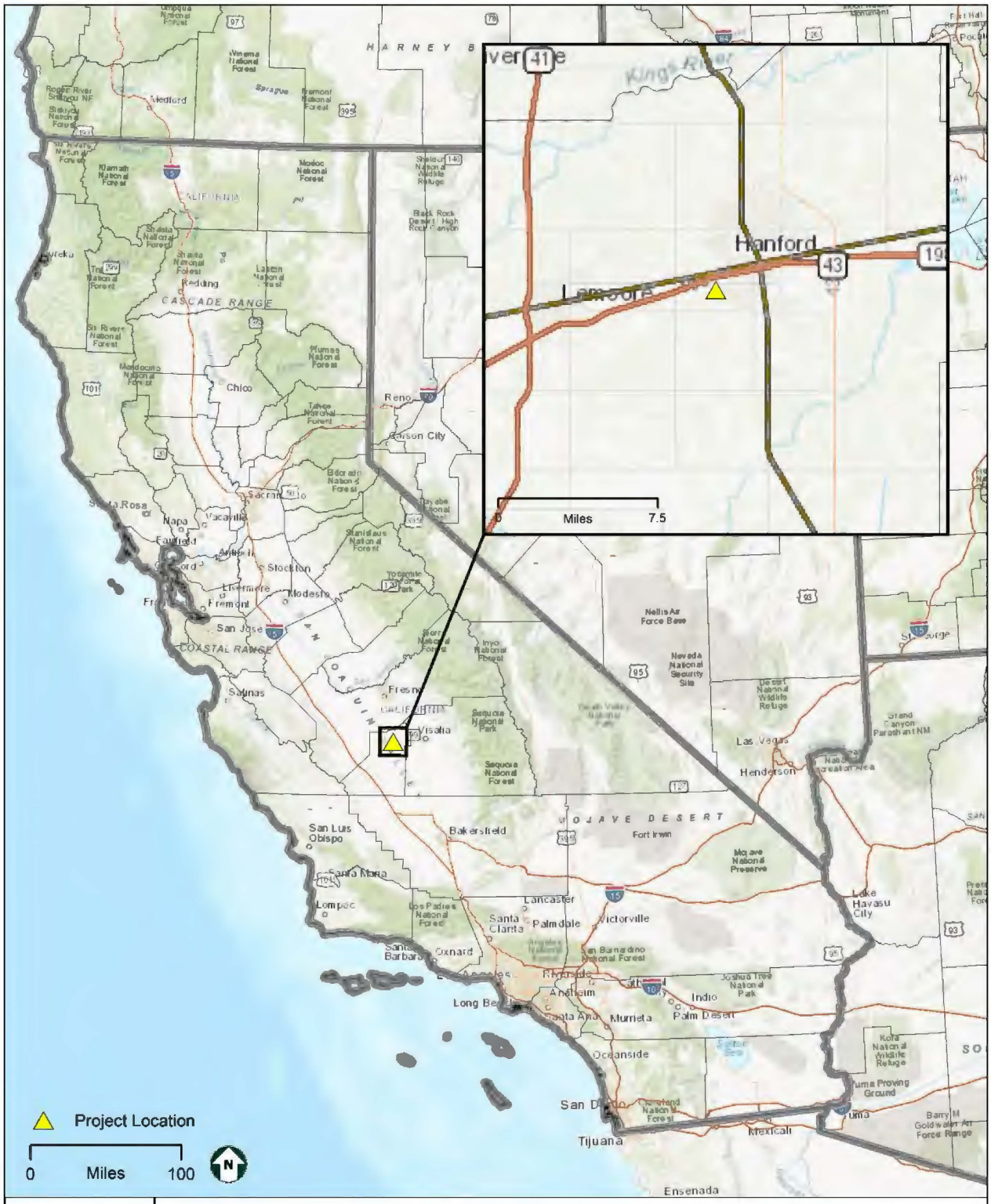


Figure 3-1
Regional Location

Figure 3-2
Project Site

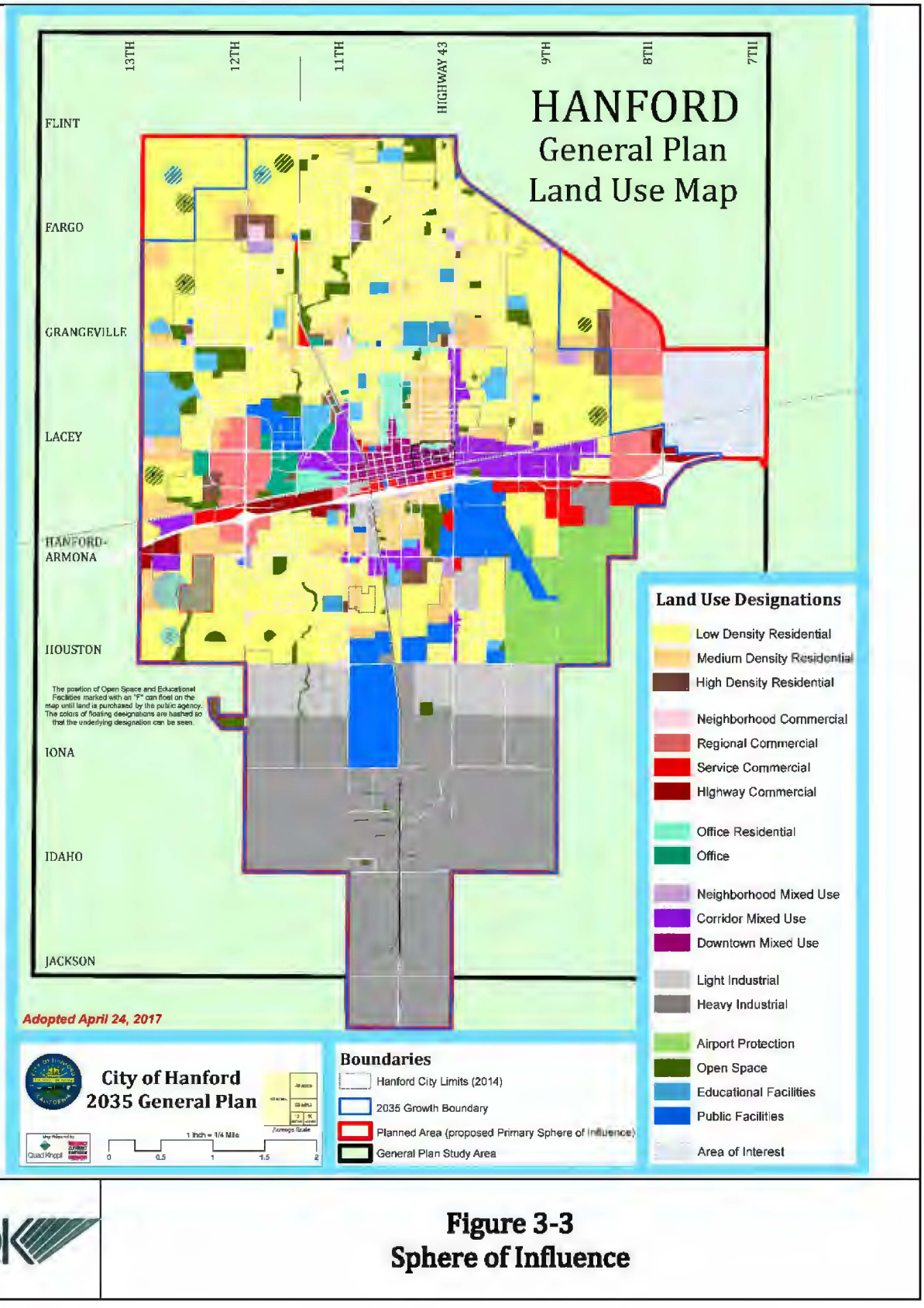


Figure 3-3
Sphere of Influence

3.2.3 - PROJECT LOCATION

The Silicon Valley Ranch Residential Development Project is located south of Hanford Armona Road, in the sphere of influence of the City of Hanford. The Project encompasses approximately 88.9 acres (APN 011-040-008, 010, and 027) and is bordered by undeveloped and rural residential lands on the west and south; a church and undeveloped land to the north; and residential uses to the east. The Project is located within Section 3, Township 19 South, Range 21 East Mount Diablo Base and Meridian (MDB&M). Figure 3-3 shows the location of the Project in relation to the city limits.

3.3 - Project Objectives

State CEQA Guidelines require that the EIR project description include a statement of the objectives of the proposed Project as outlined by the project proponent. The primary objectives of the Project are to:

- Provide a variety of housing opportunities with a range of styles, sizes, and values that will be designed to satisfy existing and future demand for quality housing in the area.
- Provide a sense of community and walkability within the development through the use of street patterns, parks/open space areas, landscaping, and other Project amenities.
- Create a successful and financially feasible Project by meeting the housing needs of the area.
- Provide a residential development that assists the City in meeting its General Plan and Housing Element requirements and objectives.

3.4 - Proposed Project

The Project proposes to construct a 326-lot residential subdivision within the City of Hanford Sphere of Influence (Figure 3-4). The Project will be annexed into the City under a separate application. An approximately 13.87-acre portion of the site at the northeast corner of the property is intended to be removed via a lot-line adjustment. The Project will be developed with a 326-unit single-family subdivision, a 3.58-acre park, and a 2.86-acre retention basin. Lots will range between 5,000 to 7,000 square feet and will be developed with single-family residential units. Associated utility and right-of-way infrastructure would also be developed in accordance with City of Hanford standards and regulations.

In order for the Project to be constructed, approval of the following actions is required:

- Approval of Tentative Tract Map 943.
- Prezoning – Because the Project site does not currently have a City of Hanford zoning designation, prezoning of the site is required. The Project would be prezoned to the R-L-5 (Low Density Residential, 5,000 square feet).
- Annexation into the city limits by Kings County Local Agency Formation Commission (LAFCo).

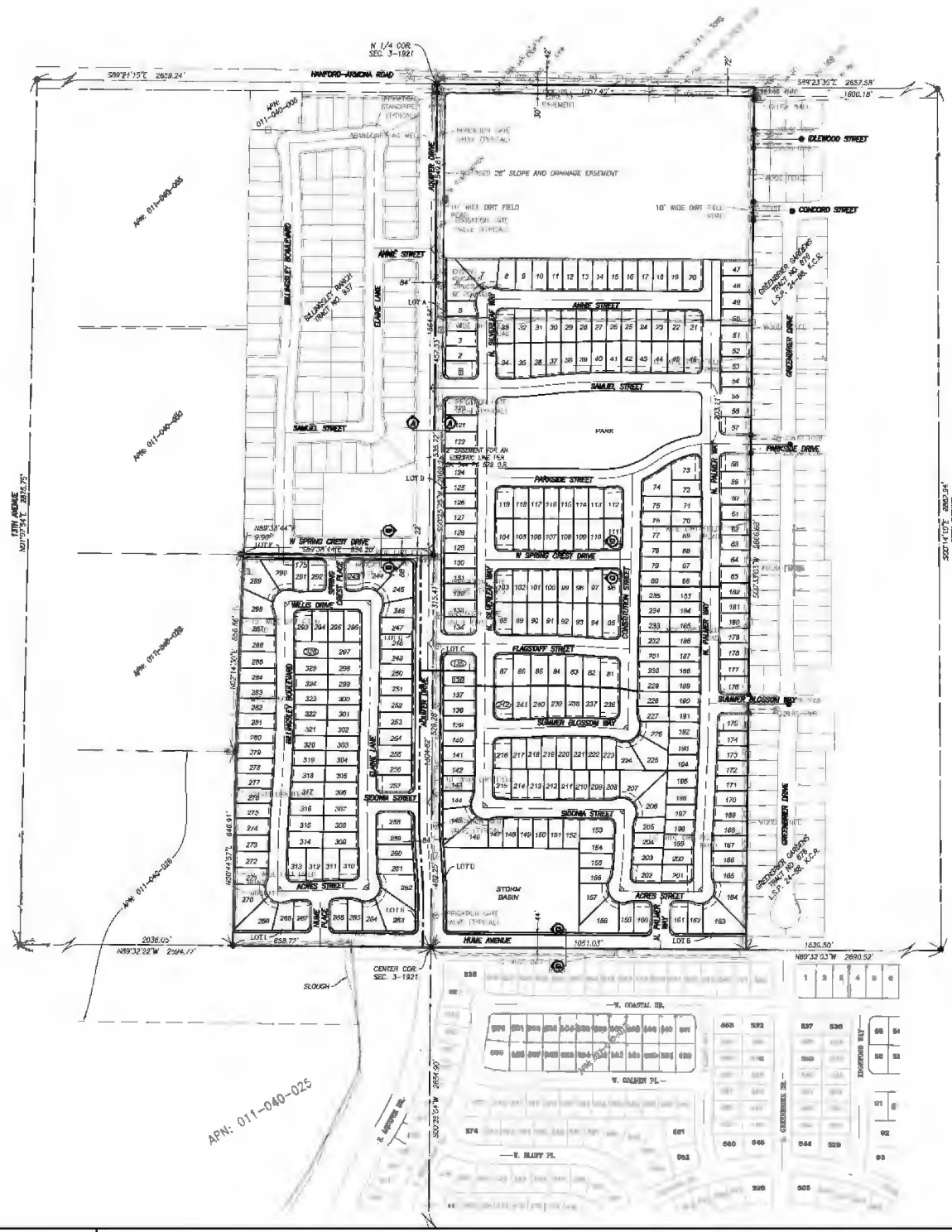


Figure 3-4
Tentative Tract Map 943

Development of the Project is anticipated to occur over a 12-month period. Construction equipment will vary over the course of development and will include the following:

- Excavators/earth-moving equipment
- Depending on the foundation system, auger rig, or pile-driving rig
- All-terrain forklifts
- A man/material hoist
- Truck cranes and potentially a tower crane (pending permit approval)
- Concrete trucks
- Dump trucks
- Street sweepers/water trucks for dust control
- Construction delivery trucks (typically box trucks or flatbeds)
- Small tools (generators, light plants, compactors, air compressors

3.5 - Entitlements Required

The City is the Lead Agency for the proposed Project, consistent with State CEQA Guidelines Section 15065(b). As such, this EIR will be used by the City to evaluate the potential environmental impacts that could result from implementation of the Project and develop changes in the proposed Project, and/or adopt mitigation measures that would address those impacts.

The Hanford City Council will consider the adoption of the Project after certification of the Final EIR. Pursuant to CEQA Guidelines Section 15093, the decision-makers must "*balance, as applicable, the economic, legal, social, technological, or other benefits of a proposed project against its unavoidable environmental risks when determining whether to approve the project. If the specific economic, legal, social, technological, or other benefits of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered 'acceptable'*."

If the City, as the Lead Agency, approves the proposed Project and significant, unavoidable environmental impacts have been documented, a Statement of Overriding Considerations must be written, which shall state the specific reasons to support the approval based on the Final EIR and/or other information in the record.

Implementation of the proposed Project would require the following regulatory and/or legislative actions by the Hanford City Council, following the recommendation from the Planning Commission:

- Certify the Final EIR.
- Consider and adopt Findings and a Statement of Overriding Considerations, as necessary.
- Approve Tentative Tract Map 943.
- Adopt an Ordinance approving the prezoning of the site as R-L-5 Low-Density Residential.

- Initiate Annexation by filing an application with Kings County LAFCo.

3.5.1 - OTHER RESPONSIBLE AGENCIES

Future activities related to development may require consideration and approval from a variety of agencies, who will be CEQA responsible or trustee agencies in this environmental process. The specific responsible agencies may vary depending upon the nature of the planned activity, location, and the resources impacted by the proposed subdivision. A preliminary list of potentially responsible and trustee agencies is provided below:

- Kings County LAFCo
- San Joaquin Valley Air Pollution Control District (SJVAPCD)

3.6 - Cumulative Projects

CEQA requires that an EIR evaluate cumulative impacts. Cumulative impacts are the Project's impacts combined with the impacts of other related past, present, and reasonably foreseeable future projects. As set forth in the CEQA Guidelines, the discussion of cumulative impacts must reflect the severity of the impacts, as well as the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of environmental impacts attributable to the Project alone. As stated in CEQA, Public Resources Code, Section 21083(b)(2), "a project may have a significant effect on the environment if the possible effects of a project are individually limited but cumulatively considerable."

According to the CEQA Guidelines:

Cumulative impacts refer to two or more individual effects, which, when considered together, are considerable and compound or increase other environmental impacts.

- The individual effects may be changes resulting from a single project or a number of separate projects.
- The cumulative impact from several projects is the change in the environment, which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (California Code of Regulations [CCR], Title 14, Division 6, Chapter 3, §15355).

In addition, as stated in the CEQA Guidelines, it should be noted that:

The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed Project's incremental effects are cumulatively considerable (CCR, Title 14, Division 6, Chapter 3, Section 15064[I][5]).

Cumulative impact discussions for each environmental topic area are provided at the end of each technical analysis contained within Chapter 4, under *Impacts and Mitigation Measures*. The cumulative impacts discussions explain the geographic scope of the area affected by each cumulative effect (e.g., immediate project vicinity, city, county, watershed, or air basin). The geographic area considered for each cumulative impact depends upon the impact that is being analyzed. For example, in assessing aesthetic impacts, the pertinent geographic study area is the vicinity of the areas of new development under the proposed plan from which the new development can be publicly viewed and may contribute to a significant cumulative visual effect. In assessing macro-scale air quality impacts, on the other hand, all development within the air basin contributes to regional emissions of criteria pollutants, and basin-wide projections of emissions are the best tool for determining the cumulative effect.

Section 15130 of the CEQA Guidelines permits two different methodologies for the completion of the cumulative impact analysis:

- The 'list' approach permits the use of a list of past, present, and probable future projects producing related or cumulative impacts, including projects both within and outside the city.

- The 'projections' approach allows the use of a summary of projections contained in an adopted plan or related planning document, such as a regional transportation plan, or in an EIR prepared for such a plan. The projections may be supplemented with additional information such as regional modeling.

This EIR uses the list approach and below is a list of similar projects within a 1.5-mile radius of the Project site. The project list provided by the Lead Agency includes the following projects.

1. Live Oak North (Tract 902, 99 single-family units, under construction)
2. Billingsly (Tentative Tract 927, 95 single-family units, not under construction)
3. Stonehaven (Tentative Tract 940, 82 single-family units, not under construction)
4. Live Oak West (Entitled under Live Oak Master Plan and Tentative Tract 909, 642 units, not under construction)
5. Live Oak East (Tract 865 and 881, 448 single-family units, under construction)
6. Live Oak East II (Tentative Tract 912, 94 single-family units, not under construction)
7. Fairfield Inn Hotel (80 units, under construction)
8. The Enclave (Tract 915, 66 single-family units, under construction)
9. The Village (100 multi-family units, under construction)
10. 216-unit apartment complex (not under construction)
11. Proposed medical mixed use complex (not entitled)
12. Monte Vista (40 high-density single-family units, under construction)

The following provides a summary of the cumulative impact scope for each impact area:

- Land Use and Planning: The analysis of the proposed Project addresses cumulative impacts related to consistency with the City of Hanford General Plan and other applicable planning documents.

- Transportation and Traffic: The analysis of the proposed Project addresses cumulative impacts to the transportation network in Hanford and the surrounding area.

CHAPTER 4 - ENVIRONMENTAL IMPACT ANALYSES

4.1 - Land Use and Planning

4.1.1 - INTRODUCTION

This section describes the affected environment and regulatory setting of the proposed Project for impacts that may affect land use and planning. It also describes the environmental and regulatory setting and discusses the need for mitigation measures where applicable. The information is based, in part, on a review of the proposed Project's consistency with the City of Hanford General Plan, City Zoning Ordinance, Kings County General Plan, and Kings County LAFCo regulations.

4.1.2 - ENVIRONMENTAL SETTING

On-Site Land Uses

The Project site has historically been used as an agricultural field and does not contain any structures.

As discussed in the scoping Initial Study (IS) prepared with the NOP (Appendix A), the site contains both Prime Farmland and Farmland of Statewide Importance as designed by the California Department of Conservation, Farmland Mapping and Monitoring Program (FMMP) (California Department of Conservation, 2022). The Project site is located within the Sphere of Influence (SOI) of the City and is designated for Low Density Residential under their General Plan. The Project site is not subject to a Williamson Act Land Use contract.

The Project site is located in Flood Zone X, an area of minimal flood hazard, and outside of the 100-year flood zone. Furthermore, the Project site is not located within the Special Flood Hazard Area (Zone A, V, A99, AE, AO, AH, VE, or AR). Per the National Hydrography Dataset (NHD) and National Wetlands Inventory (NWI), the Project site does not contain a delineated wetland, water feature, or potentially jurisdictional water body or wetland that may fall under the jurisdiction of federal and/or State regulatory agencies.

The Kings County General Plan states that there are limited excavation operations of soil, sand, and gravel for commercial use within Kings County. In 2009, the County had only one surface mining permit for a non-active gravel operation, and two agricultural reclamation sites that were fully reclaimed (Kings County, 2010). The City of Hanford General Plan further states that there have been no efforts to attempt extraction of mineral resources within or near the General Plan Planning Area. The Project site does not contain a mineral resource extraction area. Per the California Department of Conservation Well Finder online mapping application, the Project site does not contain an active or abandoned well site.

As shown in Table 4.1-1, *Project Site and Surrounding Land Uses and Zoning Classifications*, the Project site has a Kings County General Plan designation of Limited Agriculture, 10 acres, and a City of Hanford General Plan designation of Low Density Residential. The Project

proposes to annex into the City of Hanford's city limits and will be prezoned to the R-L-5 (Low Density Residential, 5,000 square feet) to be consistent with the City General Plan designation.

Surrounding Land Uses

Land uses in the region and immediate area of the Project site consist of agricultural operations and residential development. Immediately north of the Project site is agricultural land improved with row crops and single-family residences, and the Koinonia Church. The area west and south of the Project site consists of rural residential and undeveloped land. Land to the east is mainly developed with single-family residential. The nearest residences are located along the eastern boundary of the Project site.

As summarized in Table 4.1-1, surrounding land uses are designated Low Density Residential, Medium Density Residential, and Open Space under the City of Hanford General Plan Land Use Map. A small portion west of the Project site is located outside of the city limits and is designated as Limited Agriculture under the Kings County General Plan.

Table 4.1-1
Project Site and Surrounding Land Uses and Zoning Classifications

	Existing Land Use	Existing General Plan Designation	Existing Zoning
Project Site	Undeveloped Land	Low Density Residential	Prezone: R-L-5
Surrounding Land Use			
North	Agriculture, Rural Residential, Church	Medium Density Residential	R-M (Medium Density Residential)
East	Single-Family Residential	Low Density Residential	R-L-5 (Low Density Residential, 5,000 square feet)
South	Undeveloped	Open Space and Low Density Residential	R-L-5 and CO (Conservation)
West	Rural Residential, Undeveloped	Limited Agriculture, 5 Acres (Kings County) Low Density Residential (City of Hanford)	R-L-5 (City of Hanford) AL10 (Limited Agriculture, 10 acres) (Kings County)

4.1.3 - REGULATORY SETTING

This section summarizes the Land Use and Planning policies, laws, and regulations that apply to the proposed Project. This information provides context for the impact discussion related to the Project's consistency with applicable regulatory conditions.

Federal

No federal plans, policies, regulations, or laws are applicable for this issue area.

State

There are no State regulations for this issue area.

Regional

KINGS COUNTY LOCAL AREA FORMATION COMMISSION (LAFCO)

Kings County LAFCo is responsible for coordinating logical and timely changes in local governmental boundaries, conducting special studies that review ways to reorganize, simplify and streamline governmental structure and preparing a SOI for each city and special district within each county. The Commission's efforts are directed to seeing that services are provided efficiently and economically while ensuring that agricultural and open-space lands are protected. A SOI is a planning boundary outside of an agency's legal boundary that designates the agency's probable future boundary and service area. The purpose of the SOI is to ensure the provision of efficient services while discouraging urban sprawl and premature conversion of agricultural and open space lands by preventing overlapping jurisdictions and duplication of services. A secondary SOI has been established by Kings County LAFCo which is beyond the primary SOI and includes additional territory that serves only as an area of planning interest to the city. When a city desires to alter its boundary and add additional contiguous land into its jurisdictional control through an annexation, the city must first obtain LAFCo approval.

The Kings County LAFCo adopted standards to review proposals of all changes or organization or reorganization of cities and special districts and are reflected in the Kings County LAFCo Policies and Procedure Manual. Both favorable and unfavorable factors are listed, and the existence of favorable or unfavorable factors should not decide approval or denial; however a substantial number of favorable, or unfavorable, factors may be the determining factor of approval or denial of the proposal.

Standards for Annexation to Cities and Special Districts Providing Urban Services

1. *Favorable Factors:*

    a. *Proposal would eliminate or reduce in size, islands, near islands or other gross distortions of existing city and district boundaries.*
    b. *The proposed area is urban in character and should be provided with municipal or urban type services.*
    c. *The proposed area is close to urban development and municipal type services and would enhance its potential of full development.*
    d. *The proposal is required by a governmental agency for annexation of its publicly owned property.*

e. *The proposed annexation conforms to the adopted general plan.*
f. *The boundaries are definite and certain.*
g. *The proposed area is consistent with the sphere of influence.*
h. *Request for annexation comes with the consent of all land owners as shown on the last assessment roll.*

2. *Unfavorable Factors:*

a. *The proposed annexation would create extensive corridors or peninsulas extending into an unincorporated area, and would cause further distortion of existing city boundaries.*
b. *The proposed annexation would result in a premature intrusion of urbanization into an agricultural area.*
c. *Extension of city services is financially infeasible for the foreseeable future.*
d. *The area is presently rural or agricultural and no urban development appears to be imminent.*
e. *The proposed annexation is motivated by land speculation or other motives not in the public's best interest.*
f. *Boundaries of the proposal do not include appropriate area or are otherwise improperly drawn.*
g. *The proposal is inconsistent with adopted sphere of influence and adopted general plan.*

Local

KINGS COUNTY GENERAL PLAN

The 2035 Kings County General Plan provides a future vision for the county and guides the physical growth and development of the unincorporated portion of Kings County. The Kings County General Plan is also intended to conserve the County's resources through the year 2035 in a manner consistent with the goals of the people of Kings County. The Kings County General Plan includes the following goal, objective and policies regarding annexation.

LU Goal E1: Urban Fringe areas continue to allow existing uses, while land remains intended for probable future urban growth and expansion of Cities where urban level municipal services are provided.

LU Objective E1.1: Require new development in city fringe areas (except a single-family house or secondary dwelling unit on an existing lot) to annex to the city, and encourage existing developed fringe areas to annex to the City where the City the closest and most logical municipal service provide.

LU Policy E1.1.1: Require urban growth to be contiguous to existing urban development and annex to a city in order to ensure coordinated urban growth according to that City's General Plan policies. Commercial and industrial development may be considered for development

in the County when annexation is not feasible or practical but must develop public improvements to City standards.

CITY OF HANFORD GENERAL PLAN

The Hanford General Plan serves as the community's guide for the continued development, enhancement, and revitalization of the City of Hanford. The General Plan includes the following policies related to land use and annexations that are relevant to this analysis:

Chapter 3 Land Use and Community Design

Goal L1: A well planned community that grows in an organized fashion.

Goal L3: Limitation of urban sprawl-style development patterns in new growth areas.

Goal L4: Adequate land available to meet housing needs for all citizens through the year 2035.

Goal L5: Stable, high quality neighborhoods with housing integrated with schools, parks, and availability of everyday commercial goods and services.

Goal L6: A wide range of housing choices that insure opportunities for a variety of age groups, lifestyles, and income levels.

Goal L7: Residential densities that encourage both compact and infill development.

Goal L30: Preservation and enhancement of Hanford's unique character and achievement of an optimal balance of residential, commercial, industrial, public, and open space land uses.

Goal L32: Improvement in Hanford's quality of life through use of practical design principles and standards.

Goal L38: Revitalized Arterial corridors that accommodate a mix of nonresidential and residential uses that generate activity and economic vitality and improve the visual character.

Policy L1 Planned Area Boundary

Designate a Planned Area Boundary to serve as the limits of the area to be planned for urban development.

Policy L2 2035 Growth Boundary

Designate a 2035 Growth Boundary to serve as the limits of the area to be developed with urban uses during the 2015 to 2035 planning period. Locate the 2035 Growth Boundary along major roadways and other natural or manmade physical features that can serve as a physical boundary between urban and agricultural uses.

Policy L3 Developable Land Inventory

Include enough land within the 2035 Growth Boundary to meet the project land needs to accommodate growth through the year 2035, along with a 35% market flexibility factor that acknowledges existing constraints to development of some parcels.

Policy L4 New Development within Boundary

Approve new urban development only within the 2035 Growth Boundary.

Policy L6 Agriculture and the Urban Fringe

Recognize and protect the right of agricultural uses within the growth boundary to exist and continue to operate in proximity to new development on the fringes of the City.

Policy L7 Primary Sphere of Influence

Support and pursue an amendment of the City of Hanford's Primary Sphere of Influence to be coterminous to the Planned Area Boundary.

Policy L15 Initiation of Annexations

Consider initiation of annexation of land into the City of Hanford only when the following criteria are met:

1. The land is within the Primary Sphere of Influence.
2. The capacity of the water, sewer, fie, school, and police services are adequate to service the area to be annexed, or will be adequate at the time that development occurs.
3. Land for development within the city limits is insufficient to meet the current land use needs.
4. The territory to be annexed is contiguous to existing developed areas.

Policy L18 Compatibility with Surrounding Neighborhoods

Ensure that new development is compatible with existing and surrounding neighborhoods.

Policy L24 Availability of Infrastructure

Ensure that new residential developments have sufficient urban infrastructure and public facilities to accommodate the number and type of development being proposed.

Policy L27 Mix of Densities in Neighborhoods

Encourage mixing of residential densities and lot sizes within neighborhoods.

Policy L29 Agriculture

Recognize the right of agriculture to exist and continue to operate in proximity to the new residential development on the fringes of the city. Deed restrictions may be required which inform future residents of the right of agriculture to continue within the limits of the law without interference or protect from nearby property owners.

Policy L33 Size of Lots in the Low Density Residential Land Use Designation

While it is recognized that existing lot sizes of 10,000 to 40,000 square feet are included in this designation, new individual lot sizes shall range from 5,000 to 10,000 square feet in size. Under Planned Unit Development provisions, smaller lot sizes at higher densities may be permitted when clustered around shared open space amenities or through density bonus policies.

Policy L114 Services and Facilities

Include easily accessible services and facilities within each neighborhood to meet the daily needs of neighborhood residents. Most residents should life within a ½ mile walking distance of schools, parks and retail services.

Policy L120 Encroachment of Incompatible Land Uses

Protect residential neighborhoods from the encroachment of land uses that may have a negative impact on the residential living environment.

Policy L147 Hanford-Armona Road Residential and Mixed Use Development

Encourage residential and mixed use developed in the Hanford-Armona Road Corridor between 10th and 13th Avenues.

Chapter 4 Transportation and Circulation

Policy T1 Coordination of Circulation and Land Use

Develop a circulation network that reinforces the desired land use pattern for Hanford, as identified in the land use element.

Policy T29 Maximum Level of Service

Maintain a peak hour Level of Service E on streets and intersections within the area bounded by Highway 198, 10th Avenue, 11th Avenue, and Florinda Avenue, inclusive of these streets. Maintain a peak hour Level of Service D on all other streets and intersections with the Planned Growth Boundary.

Policy T33 Street improvements and Priorities

Prioritize street improvements with emphasis on current and forecasted service levels.

Policy T36 Traffic Impact Fees

Periodically review and update the traffic impact fee program to ensure new development contributes its fair share of funding for new street, intersection, and highway improvements.

Policy T40 Pedestrian and Bicycle Placemaking

Promote pedestrian and bicycle improvements that improve connectivity between neighborhoods, provide opportunities for distinctive neighborhood features, and foster a greater sense of community.

Policy T48 Traffic Calming

Consider the use of traffic calming designs such as roundabouts, bulb-outs, and other traffic calming designs, where they will improve the operation or LOS of a street.

Policy T49 Subdivision Connectivity

Design subdivision to maximize connectivity both internally and with other surrounding development.

Policy T51 Alternative Design Standards

Consider alternative roadway design standards for new residential and mixed use development for future streets that may include:

- Narrower street widths on local roadways.
- Smaller turning radii geometrics on street intersections to improve safety for pedestrians.
- Tree lined streets in parkways between the curb and sidewalk.
- Roundabouts in lieu of traffic signals where appropriate conditions exist to maximize intersection efficiency, maintain continuous traffic flow, and reduce accident severity.

Policy T64 Bicycle Network Master Planning

Maintain a Bicycle Master Plan to coordinate existing and planned infrastructure to support, encourage and promote bicycle transportation, with effective connections to downtown, major shopping areas, mixed use neighborhoods, community facilities, schools, parks, and employment areas.

Policy T70 Pedestrian Connections

Increase connectivity through direct and safe pedestrian connections to public amenities, neighborhoods, village centers and other destinations throughout the city.

Chapter 5 Open Space, Conservation and Recreation

Goal 08: The equitable distribution of parks throughout the community that are well designed, accessible, and integrated with the surrounding neighborhood.

Goal 09 Parks provided at a combined ratio of 2.5 acres per 1,000 residents.

Policy 01 Boundary between Urban and Agricultural Uses

Utilize the Planned Area Boundary as the long term boundary line between urban uses and agricultural uses and prohibit non-agricultural development outside the Planned Area Boundary.

Policy 02 Agricultural Buffer

Coordinate land use policies and designations with Kings County to provide for a buffer between the urban area of Hanford and the surrounding unincorporated communities.

Policy 04 Interim Agricultural Use

Retain existing agricultural areas as an interim use inside the Planned Area Boundary and support agricultural operations until such time that the areas are needed for logical urban expansion.

Policy 012 Soil Erosion

Require new development to implement measures to minimize soil erosion related to construction.

Policy 015 Energy-efficient Design Features

Require that new development incorporate energy-efficient design features for HVAC, lighting systems, and insulation meet or exceed California Code of Regulations Title 24.

Policy 016 Vegetation to Conserve Energy

Encourage the use of native and drought tolerant shade trees and vines on southern and western exposure building walls as an energy conservation technique.

Policy 021 Water Conservation Ordinance

Actively enforce and periodically update the City Water Conservation Ordinance.

Policy 022 Water Conservation Efforts

Actively encourage water conservation by both agricultural and urban water users.

Policy 024 Drought Tolerant Vegetation

Promote the use of drought-tolerant vegetation to minimize water consumption by providing information to developers, designers, and homebuyers.

Policy 025 Recharge Basins

Protect existing groundwater recharge basins and natural and manmade sloughs and seek the establishment of new basins within and around Hanford.

Policy 028 Water Availability in Emergencies

Ensure that public and private water facilities have adequate capacity to supply emergency needs.

Policy 029 Water Conservation Measures for New Development

Encourage new development projects to include water conservation measures, including use of graywater, reclaimed, or recycled water for landscaping, water-conserving plumbing fixtures and appliances, and water-efficient landscapes.

Policy 030 Storm Water Pollution Prevention

Implement the NPDES Stormwater Permit and for those properties exempt from the Permit, require a storm water pollution prevention plan, including use of best management practices, to control erosion and sedimentation during construction.

Policy 031 Provision of Open Space Areas

Preserve and enhance natural open space areas.

Policy 035 Impacts from Development

Ensure that potential impacts to biological resources and sensitive habitat are carefully evaluated when considering development projects.

Policy 036 Nonnative Invasive Species

Manage or eliminate nonnative invasive species from City-owned property and open space.

Policy 037 Mature Trees

Promote the preservation of existing mature trees and encourage the planting of appropriate shade trees

Policy 038 Native Tree Species and Drought Tolerant Vegetation

Encourage the planting of native tree species and drought-tolerant vegetation.

Policy 039 Endangered Wildlife and Habitat

Establish programs in connection with environmental review processes that protect endangered wildlife and their habitats.

Policy 040 Sensitive Wildlife

Work with state, federal, and local agencies on the preservation of sensitive wildlife species in the City.

Policy 044 Flexible Land Use Standards

Adopt flexible land use and design standards to allow the adaptive reuse of historic buildings with a variety of economically viable uses, while minimizing impacts to the historic value and character of sites and structures.

Policy 046 Archaeological Site Consultation

Consult with appropriate Native American associations about potential archaeological sites in the beginning stages of the development review process.

Policy 047 Archaeological Site Study

Require archaeological studies by a certified archaeologist in areas of archaeological potential significance prior to approval of development projects.

Policy 048 Cultural Site Consultation

Consult with the California Archaeological Inventory Southern San Joaquin Valley at California State University, Bakersfield about potential cultural sites on projects that could have an impact on cultural resources.

Policy 049 Cultural Site Discovery

Halt construction at a development site if cultural resources are encountered unexpectedly during construction.

Policy 050 Parks, Recreation, and Open Space Master Plan

Prepare and periodically update a Parks, Recreation, and Open Space Master Plan to plan for new growth identified in the land use element.

Policy 057 Neighborhood Parks

Establish neighborhood parks generally between 2 and 5 acres in size at locations easily accessed by residents of the neighborhood.

Policy 058 Neighborhood Parks Service Area

Neighborhood parks shall have a general service are of approximately ½ mile radius, and situated to avoid patrons having to cross arterial streets, railroad lines and major waterways.

Policy 064 Park Visibility

Parks shall be designed to promote a safe and clean environment for recreation. New neighborhoods shall be designed so that common side and rear residential property lines with parks are minimized and visibility of parks from public streets is maximized.

Policy 065 Development Impact Fee for Parks

Adopt and periodically update a park development impact fee to fund new neighborhood and community parks needed to serve new growth.

Chapter 6 Public Facilities and Services

Goal P1: Adequate water quality and quantity to meet existing and planned needs.

Goal P2: Adequate wastewater collection and treatment to meet both existing and planned needs.

Goal P3: Adequate and effective stormwater collection and disposal to meet both existing and planned needs.

Goal P5: Adequate solid waste disposal capacity to meet existing and future demands.

Goal P12: Adequate provision of school facilities to serve projected growth.

Policy P1 Adequate Water Services

Provide adequate water services to sup[port the level of development identified in the land use element.

Policy P3 Water Supply and Fire Flow Availability

Condition approval of new development projects and water service extensions on the availability of adequate water supply and the ability to meet domestic and fire flow needs of the area.

Policy P7 New Water Infrastructure

Require developers to fund and install new water distribution facilities to service their new developments.

Policy P8 Impact Fees for Water Facilities

Adopt and periodically update a water impact fee to fund community-wide water supply, treatment, and distribution infrastructure needed to serve new growth.

Policy P9 Sufficient Collection and Treatment

Ensure provision of sufficient wastewater collection and treatment facilities to support the existing and new growth identified in the land use element.

Policy P13 New Wastewater Infrastructure

Require developers to fund and install new wastewater collection facilities to service their new development.

Policy P14 Impact Fees for Wastewater Facilities

Adopt and periodically update a wastewater impact fee to fund community-wide wastewater collection and treatment needed to serve new growth.

Policy P15 Adequate Storm Water Services

Provide adequate storm water drainage infrastructure to support the level of development identified in the land use element.

Policy P17 Adequate Storm Water Drainage Improvements Availability

Condition approval of development projects on the provision of adequate storm water drainage improvements.

Policy P21 New Storm Water Drainage Infrastructure

Require developers to fund and install new storm water drainage facilities to service their new developments.

Policy P22 Impact Fees for Wastewater Facilities

Adopt and periodically update a wastewater drainage impact fee to fund area-wide storm water drainage needed to serve new growth.

Policy P24 New Development Run-Off Volumes

Require new development to discharge storm water runoff at volumes no greater than the capacity of any portion of the existing downstream system by utilizing detention or retention or other approved methods, unless the project is providing drainage infrastructure in accordance with an adopted drainage plan.

Policy P37 Impact Fees for Police Facilities

Require new development to provide funding to meet the cost of providing vehicles, equipment, and structures, to meet the needs for new population growth.

Policy P46 Building Design for Safety

Encourage building designs that help to reduce crime and improve resident safety.

Policy P47 Lighting for Safety

Facilitate public safety through the placement and design of outdoor lighting, while respecting the privacy of surrounding properties.

Policy P52 Impact Fees for Fire Facilities

Require developers to contribute impact fees to fund the cost of providing fire facilities needed to support new population growth and development.

Policy P59 Fire and Building Codes

Continue to enforce the California Fire Code, California Building Code, and Hanford Municipal Code to mitigate threats to safety and property.

Policy P79 Impact Fees for General Government Facilities

Require developers to contribute impact fees to fund the cost of providing expanded general government facilities needed to support new population growth and development.

Chapter 7 Health, Safety, and Noise

Goal H1: Reduced impacts to human life, property, the local economy, and the environment resulting from natural hazards, human-trade hazards, and noise.

Goal H5: Protection from the harmful effects of hazardous materials.

Goal H7: Protection from the harmful and annoying effects of excessive noise.

Goal H8: Protection of the City's economical base by preventing incompatible land uses from encroaching upon existing or planned noise-producing uses.

Policy H15 Building Codes and Standards for Earthquakes

Maintain and enforce current building codes and standards to reduce the potential for structural failure caused by ground shaking and other geologic hazards.

Policy H17 Geologic and Soils Studies

Require geologic and soils studies to identify potential hazards as part of the approval process for all new development prior to grading activities where questionable conditions exist.

Policy H20 New Development Requirements for Flood Protection

Require new development to provide onsite drainage or contribute towards their fair share cost of off-site drainage facilities to handle surface runoff.

Policy H27 Fire Code

Ensure that all new buildings are constructed to current Fire Code Standards.

Policy H34 Sensitive Receptors

Avoid siting uses with new sensitive receptors near existing industrial facilities that use or produce hazardous materials or may emit toxic air contaminants.

Policy H39 Aircraft Noise

Evaluate proposed development proposals against the land use policies of the Kings County Airport Land Use Compatibility Plan.

Policy H41 Interior Noise Exposure

Adopt State Noise Insulation Standards (California Code of Regulations, Title 24) and Chapter 35 of the Uniform Building Code concerning interior noise exposure for new single, multi-family housing. Hotels, and motels.

Policy H42 Noise Evaluation for New Development

Evaluate proposed development proposals against existing and future noise levels from ground transportation noise sources.

Policy H50 Sound Walls

Utilize sound walls at the perimeter of new residential developments to protect from noise generated by transportation corridors.

Policy H53 Land Use Zones that Encourage Health Food Sales

Designate land use zones that allow for convenience stores, supermarkets, and neighborhood markets that stock nutritional food choices in every existing and planned neighborhood.

Policy H60 Health and Land Use Decisions

Consider environmental justice issues as they are related to potential health impacts associated with land use decisions, including enforcement actions, to reduce the adverse health effects of hazardous materials, industrial activities, and other undesirable land uses on residents regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location.

Policy H61 Public Amenities

Consider environmental justice issues as they are related to the equitable provisions of desirable public amenities such as parks, recreational facilities, and other beneficial uses that improve the quality of life.

Policy H65 Comfortable Walking and Biking Environments

Provide comfortable environments and destinations for walking and bicycling to integrate physical activity into daily routines.

Policy H66 Non-Vehicular Access

Improve, bicycle, pedestrian, and public transportation access to residential areas, education and childcare facilities, employment centers, commercial centers, recreational areas, and other destination points.

Policy H68 New Growth Areas

Encourage land use pattern, density, and mix of uses in new growth areas that minimize the number of vehicle miles traveled and support viable choices for public transit, bicycling, and walking.

Policy H69 Separation between Incompatible Land Uses and Residential Neighborhoods

Maintain a separation between uses that are incompatible with residential neighborhoods.

4.1.4 - Impacts and Mitigation Measures

Methodology

The potential impacts associated with the Project are evaluated on a qualitative basis through a comparison of the existing land use and the proposed land uses, considering the applicable planning goals and policies identified above. Compliance with the aforementioned goals and policies is illustrated in consistency tables provided in the Project Impacts section below. The change in the land use on the project site is significant if the effect described under the thresholds of significance below occurs as a result of the project. The evaluation of the project impacts is based on professional judgment, analysis of the County's land use policies and the significance criteria suggested in in California Environmental Quality Act

(CEQA) Guidelines Appendix G, which the County has determined appropriate for this Draft EIR.

Thresholds of Significance

As identified in CEQA Guidelines Appendix G, to determine whether a project could potentially have a significant adverse effect on land use. A project could have a significant adverse effect on land use if the project would:

a. *Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?*

Project Impacts

Impact 4.1-2 - Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The City of Hanford General Plan establishes land use policies and regulations that are applicable to the Project. In addition to the City of Hanford General Plan, applicable policies and regulations of the Kings County General Plan and Kings County LAFCo were identified as they pertain to annexations of land. The following discussion evaluates the Project's consistency with these plans, policies, and regulations in the lands for which the City and responsible agencies has jurisdiction. Implementation of the proposed Project would require approval of an annexation request from Kings County LAFCo, and approval of a prezoning of the land to a compatible City of Hanford zone district, and tentative tract map with the City of Hanford Planning Commission and City Council.

The Project site has a General Plan designation of Low Density Residential and would be prezoned R-L-5. Per the City General Plan zoning matrix, the R-L-5 zone district is compatible with the General Plan designation. Approval of the tentative map subject to the provisions of the City of Hanford municipal code would allow subdivision of the Project area into lot sizes consistent with the R-L-5 zone district. Pursuant to Table 17.08.020, the proposed development of single-family dwellings throughout the subdivided Project area are permitted uses under the R-L-5 zone district.

Table 4.1-2 presents an evaluation of the Project's consistency with the City of Hanford General Plan and Kings County General Plan. The table lists the goals and policies identified above in the regulatory setting and provides analysis on the Project's general consistency with overarching policies. Additionally, the table provides goals and policies of issue areas that are presented in more detail in other sections of the EIR. As evaluated in detail in Table 4.1-2 below, the Project is consistent with the goals and policies of the City of Hanford General Plan and Kings County General Plan.

The applicant is proposing a 75.02-acre single-family residential development in the southwest planning area. Available land for new development within the Low-Density Residential land use designation is limited in the southwest planning area of the City. The majority of the properties designated for Low-Density Residential development have been developed or entitled, as shown in Figure 4.1-1, below. The proposed Project is considered implementation of the General Plan.

As described in Section 4.1-3, Regulatory Setting, Regional, the Project requires approval of an annexation request from Kings County LAFCo. The Kings County LAFCo Policy and Procedures Manual establishes standards for review of annexations that provide favorable and unfavorable factors to be considered with an application for annexation. Consistent with both Kings County and City of Hanford General Plan policy, application for annexation of land within the SOI of the City would occur with Kings County LAFCo and a decision would be made by the Kings County LAFCo Commissioners.

MITIGATION MEASURES

None

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

Cumulative Setting Impacts and Mitigation Measures

CUMULATIVE SETTING

The study area for the analysis of cumulative impacts is the City of Hanford and the unincorporated portions of Kings County located adjacent to the city limits. The applicable cumulative projections include growth projections from the City of Hanford General Plan and the Kings County General Plan.

The City of Hanford General Plan was last adopted in the year 2017. Anticipated development within the General Plan includes 15,695 residential units needed between 2013 and 2035. The County of Kings General Plan was last adopted in the year 2010. The County General Plan was prepared to accommodate population growth through the year 2035. The General Plan estimates an additional 1,464 residential units to be constructed in the "Non-District County" area.

The Kings County 2016-2024 Housing Element, which includes Hanford, quantifies the number housing needs based on demographic trends noting an approximate 4,832 housing units under the new construction category. The total number of housing units is further defined with income categories stating 549 new construction units for extremely low income, 548 new units for very low income, 821 new units for low income, 865 units for moderate income, and 2,049 units for above-moderate income.

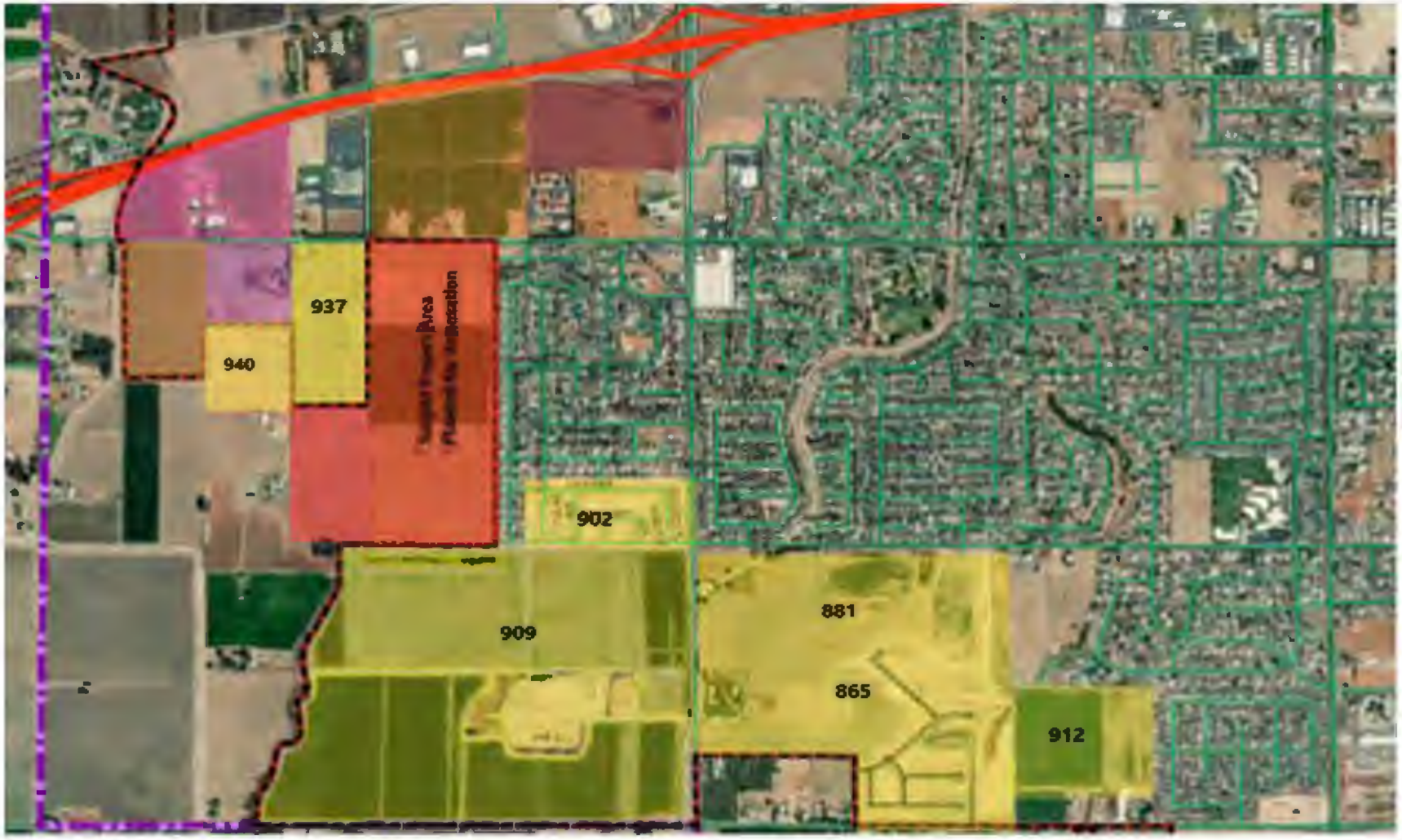


Figure 4-1
Southwest Planning Area- Entitled Properties

CUMULATIVE IMPACTS

As noted in Section 3.6- Cumulative Projects, there are 12 residential housing projects within a 1.5-mile radius of the Project site. Of these, six are under construction and the remaining six are being reviewed for entitlements or have completed the process.

~~As discussed in the Cumulative Project List section of the draft EIR, 12 similar projects are proposed within a one and a half-mile radius of the proposed Project, the geographic scope being the City of Hanford General Plan planning area.~~ The Project and future development is required to be consistent with the City of Hanford General Plan and other applicable planning documents. Cumulative projects requiring additional consideration including rezones, General Plan Amendments, and annexation would require approval by the County. Consistency with the City's applicable General Plan policies and Zoning Ordinance (and any other applicable planning documents) would ensure compliance and orderly development of the proposed Project and other related cumulative projects. Additionally, all cumulative projects are subject to environmental review and compliance with all federal, State, and local policies and plans. As such, cumulative impacts related to land use would be less than significant.

All related projects would be required to undergo environmental review, in accordance with the requirements of CEQA. Like the proposed Project, each related project would also be required to demonstrate consistency with all applicable planning documents governing the project site, including the General Plan, applicable specific plans and the City Zoning Ordinance. The proposed Project's incremental contribution to the less than significant cumulative impacts would not be cumulatively considerable. The anticipated impacts of the proposed Project in conjunction with cumulative development in the area of the Project site would increase the urbanization and result in the loss of agricultural space within the San Joaquin Valley region. However, potential land use impacts require evaluation on a case-by-case basis because of the interactive effects of a specific development and its immediate environment.

Further, as described in the NOP/IS, the General Plan identifies the Project parcel as within the Planned Area Boundary, and is prezoned and designated Low Density Residential. The parcels to the north are designated as Medium Density Residential and all other abutting properties as Low Density Residential. The designations indicate that the City anticipates future non-agricultural development in this area.

In addition, the irrigation pipeline along Hanford Armona Road that conveyed surface water from the irrigation water district was previously severed by the surrounding residential development. There is not sufficient groundwater available via the existing well due to changes in the Sustainable Groundwater Management Act (SGMA) to support cultivation on the Project site. Therefore, the land cannot be used for agricultural uses in the future.

As noted in the General Plan, build out of the Planned Area as a result of the General Plan Update would, over the 2014 to 2035 planning period, convert approximately 2,706 acres of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland to non-

agricultural use. Future development would have to adhere to the Hanford Municipal Code Chapter 16.40.110 (Right to Farm) and proposed goals and policies of the General Plan Update related to agriculture. However, the loss of this farmland as a result of the General Plan Update would be significant and unavoidable, and there is no reasonable and feasible mitigation to reduce the project level or cumulative impact.

As shown in Table 4.1-2 below, the proposed project would be consistent with the goals and policies of the Hanford General Plan~~and would not lead to the premature conversion of agricultural land.~~

MITIGATION MEASURES

No mitigation measures are required.

CUMULATIVE LEVEL OF SIGNIFICANCE

Cumulative impacts would be ***less than significant***.

Table 4.1-2
Project Consistency with the Kings County General Plan and City of Hanford General Plan

Goals and Policies	Consistency Determination	Project Consistency
	Kings County General Plan	
LU Goal E1: Urban Fringe areas continue to allow existing uses, while land remains intended for probable future urban growth and expansion of Cities where urban-level municipal services are provided.	Consistent	The Project site is located within the SOI of the City of Hanford and is designated for low density residential under the City General Plan. The City of Hanford Water System Master Plan and Sewer System Master Plan indicate that municipal services are available or anticipated for development and would be able to service the Project.
LU Objective E1.1: Require new development in city fringe areas (except a single-family house or secondary dwelling unit on an existing lot) to annex to the city, and encourage existing developed fringe areas to annex to the City where the City the closest and most logical municipal service provide.	Consistent	The Project site is located adjacent to the current city limits and proposes annexation into the City. Per the City's Water System and Sewer System Master Plans, municipal services are either available or proposed for development and would be able to service the Project.
LU Policy E1.1.1: Require urban growth to be contiguous to existing urban development and annex to a city in order to ensure coordinated urban growth according to that City's General Plan policies. Commercial and industrial development may be considered for development in the County when annexation is not feasible	Consistent	The Project site is located adjacent to current city limits and is within the SOI of Hanford. The site is proposed to be prezoned for low density residential and is consistent with its General Plan designation. The Project proposes to annex into the City of Hanford and follows the urban growth principles of the City's General Plan.

Goals and Policies	Consistency Determination	Project Consistency
or practical but must develop public improvements to City standards.		
City of Hanford General Plan		
Chapter 3: Land Use and Community Design		
Goal L1: A well-planned community that grows in an organized fashion.	Consistent	The Project follows the General Plan designation of the site for low density residential and proposes a prezoning of R-L-5 (Low Density Residential, 5,000 square feet). Development of the subdivided lots would be subject to review, approval, and inspection by the City. This includes compliance with Zoning Ordinance development standards.
Goal L3: Limitation of urban sprawl-style development patterns in new growth areas.	Consistent	The Project follows the General Plan buildout forecast by providing single-family residential lots for an area designated for low density residential uses. The Project is located within the SOI of the City and is adjacent to existing single-family residences. The Project continues orderly City expansion as planned in the General Plan.
Goal L4: Adequate land available to meet housing needs for all citizens through the year 2035.	Consistent	The Project site encompasses approximately 88.9 acres. A 13.87-acre portion is anticipated to be removed via a lot-line adjustment,
Goal L5: Stable, high-quality neighborhoods with housing integrated with schools, parks, and availability of	Consistent	Pursuant to the City of Hanford General Plan and Zoning Map, there is a variety of commercial areas, recreational spaces, and school sites within a one-mile radius of the Project site. A mix of commercially zoned and

Goals and Policies	Consistency Determination	Project Consistency
everyday commercial goods and services.		existing commercial areas are located east, west, and north of the site. The proposed residential subdivision would meet the adopted standards of the City Municipal Code and Zoning Ordinance.
Goal L6: A wide range of housing choices that insure opportunities for a variety of age groups, lifestyles, and income levels.	Consistent	The Project site is proposed to be prezoned R-L-5 and consistent with the General Plan designation of Low Density Residential. The Project proposes a 326-lot residential subdivision with lots ranging between 5,000 to 7,000 square feet meeting the minimum lot size requirements of the City Zoning Ordinance. The lot size range allows for a variety of single-family residences to be developed.
Goal L7: Residential densities that encourage both compact and infill development.	Consistent	~~The Project site will be prezoned R-L-5, consistent with the General Plan designation of Low Density Residential.~~ The lots proposed range between 5,000 to 7,000 square feet and meet the minimum lot size and density and are some of the most compact parcels allowed in this zone district. The surrounding area is intended to be developed with residential development in the future. The various home and lot sizes offer prospective homebuyers flexibility and options to purchase an affordable home within their budget.
Goal L30: Preservation and enhancement of Hanford's unique	Consistent	The Project is consistent with the General Plan buildout as the site is designated for Low

Goals and Policies	Consistency Determination	Project Consistency
character and achievement of an optimal balance of residential, commercial, industrial, public, and open space land uses.		Density Residential and is proposed to be prezoned R-L-5. The Project will comply with the City's development standards to ensure the visual characteristics of the homes being constructed are well designed, appealing and fit with the overall character of the City.
Goal L32: Improvement in Hanford's quality of life through use of practical design principles and standards.	Consistent	Prior to Project construction, the proposed single-family residences, utility/infrastructure installation, and right-of-way development would be subject to review under the adopted development standards of the City including Municipal Code, Zoning Ordinance, and City utility design standards. Review and approval of ministerial building and grading permits ensure consistency for building and design standards throughout the City.
Goal L38: Revitalized Arterial corridors that accommodate a mix of nonresidential and residential uses that generate activity and economic vitality and improve the visual character.	Consistent	The Project site is located directly south of Hanford Armona Road, a designated Arterial road. The Project is consistent with General Plan buildout assumptions for Low Density Residential and adds 326 residential lots, a ponding basin, and a neighborhood park.
Policy L1 Planned Area Boundary: Designate a Planned Area Boundary to serve as the limits of the area to be planned for urban development.	Consistent	The Project site is located within the Planned Area Boundary and SOI of the City of Hanford. The site is designated for Low Density Residential under the General Plan.
Policy L2 2035 Growth Boundary: Designate a 2035 Growth Boundary to	Consistent	See Project Consistency Finding **Policy L1.**

Goals and Policies	Consistency Determination	Project Consistency
serve as the limits of the area to be developed with urban uses during the 2015 to 2035 planning period. Locate the 2035 Growth Boundary along major roadways and other natural or manmade physical features that can serve as a physical boundary between urban and agricultural uses.		
Policy L3 Developable Land Inventory: Include enough land within the 2035 Growth Boundary to meet the project land needs to accommodate growth through the year 2035, along with a 35% market flexibility factor that acknowledges existing constraints to development of some parcels.	Consistent	The Project proposes residential development consistent with the General Plan designation for Low Density Residential and will accommodate anticipated population growth by providing 326 residential lots.
Policy L4 New Development within Boundary: Approve new urban development only within the 2035 Growth Boundary.	Consistent	See Project Consistency Finding **Policy L1.**
Policy L6 Agriculture and the Urban Fringe: Recognize and protect the right of agricultural uses within the growth boundary to exist and continue to operate in proximity to new development on the fringes of the City.	Consistent	Currently, the Project site is zoned AL20 under Kings County jurisdiction. The proposed Project will annex the site into the City of Hanford and follow City General Plan buildout for Low Density Residential. Parcels located adjacent to city limits under Kings County jurisdiction will continue to be zoned appropriately for limited agriculture until the annexation of land within the SOI to the City

Goals and Policies	Consistency Determination	Project Consistency
		occurs. The development and future residents are subject to City municipal code requirements including the "Right-to-Farm" standards due to its proximity to existing agriculture uses.
Policy L7 Primary Sphere of Influence: Support and pursue an amendment of the City of Hanford's Primary Sphere of Influence to be coterminous to the Planned Area Boundary.	Consistent	See Project Consistency Finding **Policy L1.**
Policy L15 Initiation of Annexations: Consider initiation of annexation of land into the City of Hanford only when the following criteria are met: 1. The land is within the Primary Sphere of Influence. 2. The capacity of the water, sewer, fire, school, and police services are adequate to service the area to be annexed or will be adequate at the time that development occurs. 3. Land for development within the city limits is insufficient to meet the current land use needs.	Consistent	The Project proposes annexation of the subject parcels into the City of Hanford. The Project meets the criteria: 1. The Project site is located within the Primary SOI. 2. Per the City of Hanford Water System Master Plan and Sewer System Master Plan, city services are available or anticipated for development to service urban development along Hanford Armona Road. 3. The City of Hanford has designated this area for Low Density Residential and it is located within the Primary SOI. <u>As such, the City has determined that this area is suitable for residential development</u>. The surrounding area has

Goals and Policies	Consistency Determination	Project Consistency
4. The territory to be annexed is contiguous to existing developed areas.		been made available for development and has municipal services in close proximity to make such development feasible. ~~Alternative infill sites within the city limits may not be available for development due to a number of variables including availability, municipal services connections, or other~~ Although there is land available for housing in the city,- that land is not available for purchase or there are physical constraints or there are no city services available to connect. The applicant is proposing a 75.02-acre single-family residential development in the southwest planning area. Available land for new development within the Low-Density Residential land use designation is limited in the southwest planning area of the City. The majority of the properties designated for Low-Density Residential development have been developed or entitled, as shown in Figure 4-4. The proposal is considered an implementation of the General Plan. 4. The Project site located adjacent to city limits in all directions. The annexation

Goals and Policies	Consistency Determination	Project Consistency
		of the Project site will not create a County island.
Policy L18 Compatibility with Surrounding Neighborhoods: Ensure that new development is compatible with existing and surrounding neighborhoods.	Consistent	Per the City of Hanford General Plan, there is similarly designated and compatible with the existing and surrounding neighborhood. Land to the north is designated for Medium Density Residential, and land south, east, and west are designated for Low Density Residential. There is an existing single-family subdivision located directly east of the Project. Therefore, the proposed development would be compatible with the existing Low Density Residential to the east, and compatible with future Medium Density and Low Density Residential anticipated for sites north, south, and west of the Project site.
Policy L24 Availability of Infrastructure: Ensure that new residential developments have sufficient urban infrastructure and public facilities to accommodate the number and type of development being proposed.	Consistent	Per the City of Hanford Water System Master Plan and Sewer System Master Plan, water and sewer infrastructure exists or is anticipated to be developed to service residential development north and south of Hanford-Armona Road. The prepared initial study attached with the NOP determined that the City of Hanford has enough utility capacity to service the residential lots associated with the Project.
Policy L27 Mix of Densities in Neighborhoods: Encourage mixing of	Consistent	The Project proposes a prezone of R-L-5 which is consistent with the General Plan designation of Low Density Residential. The subdivision

Goals and Policies	Consistency Determination	Project Consistency
residential densities and lot sizes within neighborhoods.		proposes lots between 5,000 and 7,000 square feet, which is consistent with the City Zoning Ordinance and provides a mix of lot sizes for this new residential subdivision. The options to buy homes with various lot and house size choices ensures opportunities for a variety of age groups, lifestyles, and income levels that are visually attractive and accommodate the future housing demand in Hanford.
Policy L29 Agriculture: Recognize the right of agriculture to exist and continue to operate in proximity to the new residential development on the fringes of the city. Deed restrictions may be required which inform future residents of the right of agriculture to continue within the limits of the law without interference or protection from nearby property owners.	Consistent	The City of Hanford has adopted "Right-to-Farm" provisions that accept the inherent potential inconveniences and discomforts associated with agricultural activities and operations. The Project is located adjacent to existing agriculture uses and is subject to the "Right-to-Farm" provisions as adopted in the city Municipal Code, although deed restrictions are not imposed by the City.
Policy L33 Size of Lots in the Low Density Residential Land Use Designation: While it is recognized that existing lot sizes of 10,000 to 40,000 square feet are included in this designation, new individual lot sizes shall range from 5,000 to 10,000 square feet in size. Under Planned Unit Development provisions, smaller lot sizes at higher densities may be permitted when clustered around	Consistent	The Project proposes lots sizes between 5,000 square feet and 7,000 square feet. The Project is consistent with the minimum lot size requirements of the Low Density Residential land use designation and the proposed prezone of R-L-5.

Goals and Policies	Consistency Determination	Project Consistency
shared open space amenities or through density bonus policies.		
Policy L114 Services and Facilities: Include easily accessible services and facilities within each neighborhood to meet the daily needs of neighborhood residents. Most residents should live within a ½ mile walking distance of schools, parks and retail services.	Consistent	The Project site is located in proximity to a variety of services, including commercial services approximately 0.3 miles east of the Project site and a larger community commercial area approximately 0.5 miles north. The Project proposes the development of a neighborhood park to be utilized by residents of the development and provide recreational opportunities to existing and future residents. Additionally, Centennial Park is located approximately 0.6 miles east of the Project site. The nearest existing school site is approximately one mile east of the Project site. Therefore, there is a variety of accessible services and facilities within reach of the proposed Project site.
Policy L120 Encroachment of Incompatible Land Uses: Protect residential neighborhoods from the encroachment of land uses that may have a negative impact on the residential living environment.	Consistent	Per the City of Hanford General Plan, a mixture of residential and commercial uses are proposed in proximity to the Project site. There are no incompatible land uses adjacent to or in proximity of the site that would negatively impact the residential living environment.
Policy L147 Hanford-Armona Road Residential and Mixed Use Development: Encourage residential and mixed use developed in the	Consistent	The Project is consistent with the General Plan land designation of Low Density Residential.

Goals and Policies	Consistency Determination	Project Consistency
Hanford-Armona Road Corridor between 10th and 13th Avenues.		The Project proposes 326 residential zoned lots.
	Chapter 4: Transportation and Circulation	
Policy T1 Coordination of Circulation and Land Use: Develop a circulation network that reinforces the desired land use pattern for Hanford, as identified in the land use element.	Consistent	The Project proposes to access the subdivision from Hanford Armona Road and adjacent local roads. Access from Hanford Armona Road and internal roadways are subject to the design standards adopted by the City of Hanford.
Policy T29 Maximum Level of Service: Maintain a peak hour Level of Service E on streets and intersections within the area bounded by Highway 198, 10th Avenue, 11th Avenue, and Florinda Avenue, inclusive of these streets. Maintain a peak hour Level of Service D on all other streets and intersections with the Planned Growth Boundary.	Consistent	The prepared Traffic Impact Analysis (TIA) found Level of Service for the 13th Avenue and Hanford Armona Road intersection would operate at LOS E by the year 2043. To mitigate Project impacts on the intersection, signalization of the intersection was found to raise the LOS from LOS F to LOS A. Therefore, with implementation of the mitigation measure MM 4.2-1, the Project would be consistent with Policy T29.
Policy T33 Street improvements and Priorities: Prioritize street improvements with emphasis on current and forecasted service levels.	Consistent	The Project is expected to pay Traffic Impact Fees and pay its fair share towards improvements to the intersection that is anticipated to perform below LOS standards as identified in the Traffic Impact Analysis.
Policy T36 Traffic Impact Fees: Periodically review and update the traffic impact fee program to ensure new development contributes its fair share of funding for new street,	Consistent	The Project proponent will pay Traffic Impact Fees as required by the City.

Goals and Policies	Consistency Determination	Project Consistency
intersection, and highway improvements.		
Policy T40 Pedestrian and Bicycle Placemaking: Promote pedestrian and bicycle improvements that improve connectivity between neighborhoods, provide opportunities for distinctive neighborhood features, and foster a greater sense of community.	Consistent	The Project proposes to connect to the existing residential neighborhood to the east, Hume Avenue to the south, and Hanford Armona Road to the north. Right-of-way improvements including pedestrian and bicycle-related enhancements would be developed pursuant to standards adopted in the City development code.
Policy T49 Subdivision Connectivity: Design subdivision to maximize connectivity both internally and with other surrounding development. •	Consistent	The Project has right-of-way connections to the existing subdivision to the east and proposes access to proposed subdivisions to the south and west.
Policy T64 Bicycle Network Master Planning: Maintain a Bicycle Master Plan to coordinate existing and planned infrastructure to support, encourage, and promote bicycle transportation, with effective connections to downtown, major shopping areas, mixed use neighborhoods, community facilities, schools, parks, and employment areas.	Consistent	The 2035 Pedestrian and Bicycle Plan slates Hanford Armona Road and Hume Avenue for Class II Bike Lanes. The Project would not conflict with the adopted Pedestrian and Bicycle Plan.

Goals and Policies	Consistency Determination	Project Consistency
Policy T70 Pedestrian Connections: Increase connectivity through direct and safe pedestrian connections to public amenities, neighborhoods, village centers, and other destinations throughout the city.	Consistent	The proposed subdivision connects to existing and proposed neighborhoods to the east, west, and south. The Project would be developed to City of Hanford development code standards and provide access to Hanford Armona Road to the north, and Hume Avenue to the south where connection to commercial development exists east and north of the Project site.
Chapter 5: Open Space, Conservation and Recreation		
Goal O8: The equitable distribution of parks throughout the community that are well-designed, accessible, and integrated with the surrounding neighborhood.	Consistent	In addition to the proposed park located within the Project site, residents are within approximately half a mile of Centennial Park. The proposed park is located towards the northern portion of the Project site with internal roadways providing access to the neighborhood park to all residents of the subdivision. Proposed access points from surrounding proposed and existing neighborhoods will also have access to the proposed park.
Goal O9: Parks provided at a combined ratio of 3.5 acres per 1,000 residents.	Consistent	The Project proposes a 326-lot single-family residential subdivision on an 88.9-acre Project site. Assuming an average person per unit of 3.11 (U.S. Census), the Project would have approximately 1,014 residents. Per the performance standard of 3.5 acres per 1,000 residents, the Project would need approximately 3.55 acres of park space. Therefore, with the anticipated population, the

Goals and Policies	Consistency Determination	Project Consistency
		proposed 3.58-acre park would be sufficient to meet Goal O9.
Policy O1 Boundary between Urban and Agricultural Uses: Utilize the Planned Area Boundary as the long term boundary line between urban uses and agricultural uses and prohibit non-agricultural development outside the Planned Area Boundary.	Consistent	The Project site is located within the SOI/Planned Area Boundary. The Project proposes a single-family residential subdivision and does not conflict with the General Plan designation for low density residential.
Policy O2 Agricultural Buffer: Coordinate land use policies and designations with Kings County to provide for a buffer between the urban area of Hanford and the surrounding unincorporated communities.	Consistent	Per the Kings County General Plan, land within the SOI of a city is designated for limited agriculture to serve as the buffer between agriculture and the urban boundary of the City. The area outside of the SOI would continue to hold its limited agriculture or general agriculture designation.
Policy O4 Interim Agricultural Use: Retain existing agricultural areas as an interim use inside the Planned Area Boundary and support agricultural operations until such time that the areas are needed for logical urban expansion.	Consistent	The Project is following the correct procedures to change its County designation of limited agriculture to the City's low density residential designation by providing a consistent prezone and annexation request. The site is located within the primary SOI and is adjacent to the current city limits.
Policy O12 Soil Erosion: Require new development to implement measures to minimize soil erosion related to construction.	Consistent	The California Regional Water Quality Control Board requires that construction projects disturbing more than one acre of land will need to prepare and seek approval of a NPDES permit and SWPPP. The NPDES permit and

Goals and Policies	Consistency Determination	Project Consistency
		SWPPP address best management practices (BMP) to minimize soil erosion and prevent pollution on surface and groundwater. The Project is also required to be constructed in compliance with City adopted development standards which include the California Building Code.
Policy O15 Energy-efficient Design Features: Require that new development incorporate energy-efficient design features for HVAC, lighting systems, and insulation to meet or exceed California Code of Regulations Title 24.	Consistent	As noted, the Project is required to be constructed in compliance with the California Building Code and City development standards. These standards include compliance with the California Code of Regulations, Title 24, Part 11.
Policy O16 Vegetation to Conserve Energy: Encourage the use of native and drought-tolerant shade trees and vines on southern and western exposure building walls as an energy conservation technique.	Consistent	The Project will comply with the adopted City development code standards and the California Building Code. The California Building Code also provides recommendations for energy-saving standards in the Green Code, Title 24, Part 11.
Policy O21 Water Conservation Ordinance: Actively enforce and periodically update the City Water Conservation Ordinance.	Consistent	The Project proposes a connection to City services for water. Future residents would be subject to and comply with the provisions of the City Water Conservation Ordinance.
Policy O22 Water Conservation Efforts: Actively encourage water conservation	Consistent	See Consistency Finding Policy O21

Goals and Policies	Consistency Determination	Project Consistency
by both agricultural and urban water users.		
Policy O24 Drought Tolerant Vegetation: Promote the use of drought-tolerant vegetation to minimize water consumption by providing information to developers, designers, and homebuyers.	Consistent	Development of the Project including landscaping is subject to the City Municipal Code. Landscaping is to be reviewed and approved by the City which can include the use of drought-tolerant vegetation.
Policy O25 Recharge Basins: Protect existing groundwater recharge basins and natural and manmade sloughs and seek the establishment of new basins within and around Hanford.	Consistent	The Project proposes the development of a 2.86-acre basin for stormwater management in addition to groundwater recharge. The basin would be developed in accordance with Municipal Code requirements.
Policy O28 Water Availability in Emergencies: Ensure that public and private water facilities have adequate capacity to supply emergency needs.	Consistent	The Water Supply Assessment prepared for the IS/NOP (Appendix A) determined that the City of Hanford has sufficient water supplies to service the daily and potential emergency needs of the Project.
Policy O29 Water Conservation Measures for New Development: Encourage new development projects to include water conservation measures, including the use of graywater, reclaimed, or recycled water for landscaping, water-conserving plumbing fixtures and	Consistent	Project construction is subject to compliance with the adopted development code and California Building Code including the CalGreen Code (Title 24, Part 11). The standards include the use of water-efficient appliances, and plumbing fixtures <u>such as low flow toilets and showers, and drip irrigation and drought tolerant plants for outdoor landscaping.</u> The Project proposes connection to City services and will comply with water

Goals and Policies	Consistency Determination	Project Consistency
appliances, and water-efficient landscapes.		conservation measures implemented by the City.
Policy O30 Storm Water Pollution Prevention: Implement the NPDES Stormwater Permit and for those properties exempt from the Permit, require a stormwater pollution prevention plan, including the use of best management practices, to control erosion and sedimentation during construction.	Consistent	Per NPDES Permit and SWPPP requirements, the Project will disturb more than one acre of land. Therefore, preparation and approval of the NPDES and SWPPP from the Regional Water Quality Control Board will be necessary as a regulatory requirement.
Policy O35 Impacts from Development: Ensure that potential impacts to biological resources and sensitive habitat are carefully evaluated when considering development projects.	Consistent	A reconnaissance survey of the Project site and a 50-foot buffer (Biological Survey Area, or BSA) was conducted for the IS/NOP (Appendix A) to determine the presence of a sensitive species of habitat. The IS/NOP determined that the site does not contain a special status species or sensitive habitat. A preconstruction survey would be conducted to ensure no species are present at the time of construction and avoidance measures would be implemented as necessary.
Policy O36 Nonnative Invasive Species: Manage or eliminate nonnative invasive species from City-owned property and open space.	Consistent	The proposed park design is subject to review and approval by the City. The use of non-native invasive species or require intensive water usage would not be approved.

Goals and Policies	Consistency Determination	Project Consistency
Policy O37 Mature Trees: Promote the preservation of existing mature trees and encourage the planting of appropriate shade trees	Consistent	Under Municipal Code standards, landscaping including the planting of street trees would be complied with. The survey of the Project site indicated that mature trees are not present on the site.
Policy O38 Native Tree Species and Drought-Tolerant Vegetation: Encourage the planting of native tree species and drought-tolerant vegetation.	Consistent	Development of the Project including landscaping is subject to the City Municipal Code. Landscaping is to be reviewed and approved by the City which can include the use of native tree species and drought-tolerant vegetation.
Policy O39 Endangered Wildlife and Habitat: Establish programs in connection with environmental review processes that protect endangered wildlife and their habitats.	Consistent	The reconnaissance survey as part of the IS/NOP did not identify a special status species or sensitive habitat where protection of an endangered species or sensitive habitat is necessary. A preconstruction survey would be conducted to determine the presence of a special-status species and avoidance measures would be implemented as necessary.
Policy O40 Sensitive Wildlife: Work with state, federal, and local agencies on the preservation of sensitive wildlife species in the City.	Consistent	The reconnaissance survey as part of the IS/NOP did not identify a special status species or sensitive habitat where consultation with a State or federal agency is necessary.
Policy O44 Flexible Land Use Standards: Adopt flexible land use and design standards to allow the adaptive reuse of historic buildings with a variety of economically viable uses,	Consistent	The Project is proposed on land that has historically been utilized for agricultural purposes and is improved with a single-family residence. The single-family residence has not been found to be historically significant. The

Goals and Policies	Consistency Determination	Project Consistency
while minimizing impacts to the historic value and character of sites and structures.		IS/NOP determined that no impacts to historical structures would occur as a result of the Project.
Policy O46 Archaeological Site Consultation: Consult with appropriate Native American associations about potential archaeological sites in the beginning stages of the development review process.	Consistent	A cultural resource records search and requests for tribal consultations pursuant to Assembly Bill 52 were conducted. The records search indicated negative results, and tribal consultation was conducted and completed with no identification of an archaeological site.
Policy O47 Archaeological Site Study: Require archaeological studies by a certified archaeologist in areas of archaeological potential significance prior to approval of development projects.	Consistent	A review of the Project site within the IS/NOP for archaeological significance provided negative results.
Policy O48 Cultural Site Consultation: Consult with the California Archaeological Inventory Southern San Joaquin Valley at California State University, Bakersfield about potential cultural sites on projects that could have an impact on cultural resources.	Consistent	A Sacred Lands Files search was conducted with the Native American Heritage Commission and a records search with the Southern San Joaquin Valley Information Center. Both searches found that the Project site does not contain a cultural resource.
Policy O49 Cultural Site Discovery: Halt construction at a development site if cultural resources are encountered unexpectedly during construction.	Consistent	There is no indication that a cultural resource is likely to be found at the Project site, however, the Project proponent will comply with Policy O49 and halt construction if a

Goals and Policies	Consistency Determination	Project Consistency
		cultural resource is unexpectedly encountered during construction.
Policy O50 Parks, Recreation, and Open Space Master Plan: Prepare and periodically update a Parks, Recreation, and Open Space Master Plan to plan for new growth identified in the land use element.	Consistent	The Project does not conflict with the goals and policies established in the Parks, Recreation, and Open Space Master Plan. The Project proposes the establishment of a neighborhood park approximately 3.58 acres in size and meets the 3.5 acre per 1,000 resident performance goal of the General Plan and Parks, Recreation, and Open Space Master Plan.
Policy O57 Neighborhood Parks: Establish neighborhood parks generally between 2 and 5 acres in size at locations easily accessed by residents of the neighborhood.	Consistent	The Project proposes a neighborhood park approximately 3.58 acres in size and provides internal circulation that provides access for the entirety of the subdivision and surrounding neighborhoods.
Policy O58 Neighborhood Parks Service Area: Neighborhood parks shall have a general service area of approximately ½ mile radius, and situated to avoid patrons having to cross arterial streets, railroad lines, and major waterways.	Consistent	The proposed neighborhood park provides access to the entirety of the subdivision through internal right-of-way circulation. Proposed roads also connect with existing and proposed subdivisions to the east, west, and south where access to the park is available.
Policy O64 Park Visibility: Parks shall be designed to promote a safe and clean environment for recreation. New neighborhoods shall be designed so that common side and rear residential property lines with parks are	Consistent	The proposed park is located internally within the neighborhood and is not directly adjacent to residential property lines.

Goals and Policies	Consistency Determination	Project Consistency
minimized and the visibility of parks from public streets is maximized.		
Policy O65 Development Impact Fee for Parks: Adopt and periodically update a park development impact fee to fund new neighborhood and community parks needed to serve new growth.	Consistent	The Project proponent will pay the Parks Impact Fee as part of their permitting process.
	Chapter 6: Public Facilities and Services	
Goal P1: Adequate water quality and quantity to meet existing and planned needs.	Consistent	The prepared Water Supply Assessment (WSA) included with the IS/NOP determined that the City of Hanford has the capacity to service the Project.
Goal P2: Adequate wastewater collection and treatment to meet both existing and planned needs.	Consistent	The City of Hanford Sewer System Master Plan accounts for future development within their service area and planned area boundary. As the Project site is located within the planned area boundary, wastewater needs for the development are accounted for in the General Plan buildout. Costs related to future sewer extensions where the Project would be built are addressed through the use of impact fees that are to be paid by the Project proponent for their fair share of costs associated with extending service.
Goal P3: Adequate and effective stormwater collection and disposal to meet both existing and planned needs.	Consistent	The City of Hanford Storm Drainage System Master Plan accounts for future development within their service area and planned area boundary. As the Project site is located within

Goals and Policies	Consistency Determination	Project Consistency
		the planned area boundary, stormwater drainage needs for the development are accounted for in the General Plan buildout. The Project proposes the use of a stormwater drainage basin within the neighborhood to address stormwater collection, however, should the extension of City services be necessary, costs related to future stormwater drainage extensions where the Project would be built are addressed through the use of impact fees that are to be paid by the Project proponent for their fair share of costs associated with extending service.
Goal P5: Adequate solid waste disposal capacity to meet existing and future demands.	Consistent	Solid waste disposal is managed by the Kings County Waste Management Authority and licensed waste haulers. Solid waste would be sent to the Kettleman Hills Landfill which has a remaining capacity of 17.4 million cubic yards. The IS/NOP determined that construction and operation-related solid waste would have a less than significant impact on solid waste disposal capacity for existing and future demands. The NOP/IS also noted that the California Solid Waste Reuse and Recycling Access Act of 1991, as amended, requires expanded or new development Projects to incorporate storage areas for recycling bins into the proposed Project design. Recycling of construction-related materials will comply with City and State requirements. Once

Goals and Policies	Consistency Determination	Project Consistency
		operational, the development will include the required waste receptacles for the separation of recyclable materials from those that would be sent to the landfill for disposal.
Goal P12: Adequate provision of school facilities to serve projected growth.	Consistent	The City of Hanford has six elementary school districts and one high school district within the Planning Area. The Project site would be located within the Sierra Pacific High School area and the Armona Union Elementary School per the General Plan Background Report. The siting of a new school site is determined by the school district; however, the Project proponent is required to pay development impact fees for the school district to account for impacts related to new residential development and the subsequent new population that would utilize school facilities.
Policy P1 Adequate Water Services: Provide adequate water services to support the level of development identified in the land use element.	Consistent	The prepared Water Supply Assessment (WSA) included with the IS/NOP determined that the City of Hanford has the capacity to service the Project. The Project site is located within the planning area boundary and is accounted for in the General Plan buildout. Development impact fees for the fair share costs of service extensions will be assessed and paid for by the Project proponent at the time of construction.
Policy P3 Water Supply and Fire Flow Availability: Condition approval of new	Consistent	The prepared Water Supply Assessment (WSA) included with the IS/NOP determined

Goals and Policies	Consistency Determination	Project Consistency
development projects and water service extensions on the availability of adequate water supply and the ability to meet domestic and fire flow needs of the area.		that the City of Hanford has the capacity to service the Project.
Policy P7 New Water Infrastructure: Require developers to fund and install new water distribution facilities to service their new developments.	Consistent	The Project proponent will be required to install internal water distribution infrastructure and facilities that will connect with City infrastructure. These improvements will be subject to City development standards.
Policy P8 Impact Fees for Water Facilities: Adopt and periodically update a water impact fee to fund community-wide water supply, treatment, and distribution infrastructure needed to serve new growth.	Consistent	The Project proponent will be subject to development impact fees associated with water service.
Policy P9 Sufficient Collection and Treatment: Ensure provision of sufficient wastewater collection and treatment facilities to support the existing and new growth identified in the land use element.	Consistent	See Consistency Finding Goal P2.
Policy P13 New Wastewater Infrastructure: Require developers to fund and install new wastewater	Consistent	See Consistency Finding Goal P2.

Goals and Policies	Consistency Determination	Project Consistency
collection facilities to service their new development.		
Policy P14 Impact Fees for Wastewater Facilities: Adopt and periodically update a wastewater impact fee to fund community-wide wastewater collection and treatment needed to serve new growth.	Consistent	See Consistency Finding Goal P2.
Policy P15 Adequate Storm Water Services: Provide adequate stormwater drainage infrastructure to support the level of development identified in the land use element.	Consistent	See Consistency Finding Goal P3. The proposed stormwater basin and internal infrastructure of the subdivision will be built to City development standards.
Policy P17 Adequate Storm Water Drainage Improvements Availability: Condition approval of development projects on the provision of adequate stormwater drainage improvements.	Consistent	See Consistency Finding Goal P3 and Policy P15.
Policy P21 New Stormwater Drainage Infrastructure: Require developers to fund and install new stormwater drainage facilities to service their new developments.	Consistent	See Consistency Finding Goal P3 and Policy P15.
Policy P22 Impact Fees for Wastewater Facilities: Adopt and periodically update a wastewater drainage impact	Consistent	The Project proponent will be subject to development impact fees associated with wastewater service.

Goals and Policies	Consistency Determination	Project Consistency
fee to fund area-wide stormwater drainage needed to serve new growth.		
Policy P24 New Development Run-Off Volumes: Require new development to discharge stormwater runoff at volumes no greater than the capacity of any portion of the existing downstream system by utilizing detention or retention or other approved methods, unless the project is providing drainage infrastructure in accordance with an adopted drainage plan.	Consistent	See Consistency Finding Goal P3 and Policy P15.
Policy P37 Impact Fees for Police Facilities: Require new development to provide funding to meet the cost of providing vehicles, equipment, and structures, to meet the needs for new population growth.	Consistent	The Project proponent will be subject to development impact fees associated with City police services.
Policy P46 Building Design for Safety: Encourage building designs that help to reduce crime and improve resident safety.	Consistent	The Project includes the construction of a park within the subdivision. The park will be designed to meet the City's 5.7.6 Park Design and Maintenance Policy O64 Park Visibility standards that call for new neighborhoods to be designed so that common side and rear residential property lines with parks are minimized and visibility of parks from public streets is maximized. The "Eyes On the Park" design has all the surrounding houses facing the park, which will provide more visibility to

Goals and Policies	Consistency Determination	Project Consistency
		the park to help to reduce crime. The park may also use security lighting as well. ~~The Project will be built pursuant to municipal code standards adopted by the City of Hanford.~~
Policy P47 Lighting for Safety: Facilitate public safety through the placement and design of outdoor lighting, while respecting the privacy of surrounding properties.	Consistent	The Project will be built pursuant to the development code and zoning ordinance standards adopted by the City of Hanford. This includes exterior lighting standards under Section 17.50.140 of the Municipal Code.
Policy P52 Impact Fees for Fire Facilities: Require developers to contribute impact fees to fund the cost of providing fire facilities needed to support new population growth and development.	Consistent	The Project proponent will be subject to development impact fees associated with City fire services.
Policy P59 Fire and Building Codes: Continue to enforce the California Fire Code, California Building Code, and Hanford Municipal Code to mitigate threats to safety and property.	Consistent	The Project will be constructed in compliance with City adopted development standards including the California Building Code, California Fire Code, and Hanford Municipal Code.
Policy P79 Impact Fees for General Government Facilities: Require developers to contribute impact fees to fund the cost of providing expanded general government facilities needed to support new population growth and development.	Consistent	The Project proponent will be subject to development impact fees associated with City services.

Goals and Policies	Consistency Determination	Project Consistency
	Chapter 7: Health, Safety, and Noise	
Goal H1: Reduced impacts to human life, property, the local economy, and the environment resulting from natural hazards, human-trade hazards, and noise.	Consistent	As determined in the IS/NOP, the Project has been determined to be less than significantly impacted by natural hazards, hazardous materials, and noise.
Goal H5: Protection from the harmful effects of hazardous materials.	Consistent	As reported in the IS/NOP, the Project site does not contain a hazardous waste facility, a cleanup site, or oil extraction well site. The potential use of limited amounts of hazardous materials related to construction would not create a significant impact. Hazardous materials are required to be handled in accordance with federal, State, and local statutes and regulations. The Project does not create a significant hazard to the public or environment as there is minimal use of hazardous materials related to the operation of the Project.
Goal H7: Protection from the harmful and annoying effects of excessive noise.	Consistent	Project construction and operation are subject to the provisions of the adopted City of Hanford Noise Ordinance. Construction activities would occur between the hours of 7:00 a.m. and 8:00 p.m. consistent with the Noise Ordinance. Residents of the subdivision are subject to and protected by the Noise Ordinance for excessive noise.
Goal H8: Protection of the City's economical base by preventing	Consistent	The proposed development of a single-family residential subdivision and prezoning of the

Goals and Policies	Consistency Determination	Project Consistency
incompatible land uses from encroaching upon existing or planned noise-producing uses.		site to R-L-5 is consistent with the City General Plan designation of low density residential. Surrounding land uses under the City General Plan include low density residential, medium density residential, and conservation. The Project does not result in an encroachment of incompatible land uses.
Policy H15 Building Codes and Standards for Earthquakes: Maintain and enforce current building codes and standards to reduce the potential for structural failure caused by ground shaking and other geologic hazards.	Consistent	Project construction is subject to the standards of the adopted Municipal Code which includes compliance with the California Building Code.
Policy H17 Geologic and Soils Studies: Require geologic and soils studies to identify potential hazards as part of the approval process for all new development prior to grading activities where questionable conditions exist.	Consistent	Prior to development of the Project, geologic and soil studies of the site would be conducted to determine site conditions and applicable development methods. No geologic or soil-related hazard has been identified on the site and has been confirmed in a prepared Phase I Site Assessment (Appendix A).
Policy H20 New Development Requirements for Flood Protection: Require new development to provide onsite drainage or contribute towards their fair share cost of off-site drainage facilities to handle surface runoff.	Consistent	The Project site is not located or near a special flood hazard zone. Construction activities will be subject to the conditions of approval for the approved NPDES permit and SWPPP. Drainage improvements including the drainage basin will be developed in accordance to adopted City development standards.

Goals and Policies	Consistency Determination	Project Consistency
Policy H27 Fire Code: Ensure that all new buildings are constructed to current Fire Code Standards.	Consistent	Project construction is subject to the Fire Code development standards and would be reviewed and approved by City Fire Department Staff prior to issuance of permits.
Policy H34 Sensitive Receptors: Avoid siting uses with new sensitive receptors near existing industrial facilities that use or produce hazardous materials or may emit toxic air contaminants.	Consistent	The Project site is located approximately 1.4 miles west of the nearest industrial zoned area and is not subject to hazardous materials or toxic air contaminants.
Policy H39 Aircraft Noise: Evaluate proposed development proposals against the land use policies of the Kings County Airport Land Use Compatibility Plan.	Consistent	The Project site is located approximately 2.7 miles west of the Hanford Municipal Airport and is outside of the Airport Overlay District and buffer established by the Kings County Airport Land Use Compatibility Plan.
Policy H41 Interior Noise Exposure: Adopt State Noise Insulation Standards (California Code of Regulations, Title 24) and Chapter 35 of the Uniform Building Code concerning interior noise exposure for new single, multi-family housing. Hotels, and motels.	Consistent	The Project will comply with the Municipal Code and California Building Code standards for noise insulation and development of single-family housing.
Policy H42 Noise Evaluation for New Development: Evaluate proposed development proposals against existing and future noise levels from ground transportation noise sources.	Consistent	The IS/NOP determined that design of the Project including the use of a six-foot block wall would reduce noise emanating from the proposed residences and protect residences

Goals and Policies	Consistency Determination	Project Consistency
		from noise generated from Hanford Armona Road.
Policy H50 Sound Walls: Utilize sound walls at the perimeter of new residential developments to protect from noise generated by transportation corridors.	Consistent	See Consistency Finding Policy H50.
Policy H53 Land Use Zones that Encourage Health Food Sales: Designate land use zones that allow for convenience stores, supermarkets, and neighborhood markets that stock nutritional food choices in every existing and planned neighborhood.	Consistent	The Project site is located along Hanford Armona Road and is in proximity to various commercial designated areas to the north, east, and west. A large Regional Commercial area exists to the north, smaller Neighborhood Commercial and Neighborhood Mixed Use exists east of the site, and planned Highway Commercial, and Corridor Mixed Use are present west of the site. These commercial areas will provide a variety of commercial opportunities for the proposed Project.
Policy H60 Health and Land Use Decisions: Consider environmental justice issues as they are related to potential health impacts associated with land use decisions, including enforcement actions, to reduce the adverse health effects of hazardous materials, industrial activities, and other undesirable land uses on residents regardless of age, culture,	Consistent	The Project site is located towards the southwestern portion of the City where established residential and commercial uses exist. Industrial activities are located towards the central and extreme southern portions of the city which are located more than a mile from the Project site and would not provide undesirable land uses or significant impacts to future and existing residents.

Goals and Policies	Consistency Determination	Project Consistency
ethnicity, gender, race, socioeconomic status, or geographic location.		
Policy H61 Public Amenities: Consider environmental justice issues as they are related to the equitable provisions of desirable public amenities such as parks, recreational facilities, and other beneficial uses that improve the quality of life.	Consistent	The Project proposes the development of a neighborhood park to be utilized by residents of the proposed subdivision and existing adjacent residents. Additionally, the Project site is in proximity where access to additional recreational facilities is available.
Policy H65 Comfortable Walking and Biking Environments: Provide comfortable environments and destinations for walking and bicycling to integrate physical activity into daily routines.	Consistent	The Project would develop pedestrian facilities in accordance with adopted Municipal Code development standards. The Project would not conflict with the 2016 City adopted Pedestrian and Bicycle Master Plan.
Policy H66 Non-Vehicular Access: Improve, bicycle, pedestrian, and public transportation access to residential areas, education and childcare facilities, employment centers, commercial centers, recreational areas, and other destination points.	Consistent	The Project would develop internal circulation and pedestrian facilities in accordance with adopted Municipal Code development standards. The Project would not conflict with the 2016 City adopted Pedestrian and Bicycle Master Plan or the Kings Area Regional Transit route access.
Policy H68 New Growth Areas: Encourage land use pattern, density, and mix of uses in new growth areas that minimize the number of vehicle miles traveled and support viable	Consistent	The Project proposed development of internal circulation and pedestrian facilities in accordance with City Municipal Code requirements. The site is located adjacent to Hanford Armona Road where access to bicycle lanes and public transit is within walking

Goals and Policies	Consistency Determination	Project Consistency
choices for public transit, bicycling, and walking.		distance to reduce potential vehicle miles traveled. The nearest public transit station is located at the intersection of Hanford Armona Road and 12th Avenue located approximately a half-mile east of the Project site.
Policy H69 Separation between Incompatible Land Uses and Residential Neighborhoods: Maintain a separation between uses that are incompatible with residential neighborhoods.	Consistent	The Project site is located towards the southwestern portion of the City where established residential and commercial uses exist. Industrial activities are located towards the central and extreme southern portions of the city which are located more than a mile from the Project site. The Project is being proposed, consistent with the City General Plan and Zoning Map.

4.2 - Transportation

4.2.1 - Introduction

This section describes the potential impacts to the transportation system associated with the proposed Silicon Valley Ranch Project (Project). The impact analysis examines the roadway, transit, bicycle, pedestrian, rail, and aviation components of the transportation system in the City of Hanford. To provide a context for the impact analysis, this section begins with the environmental setting, which describes the existing physical and operational conditions of the transportation system. Followed by the relevant regulatory framework, which influences the transportation system and provides the basis for impact significance thresholds that are used in the impact analysis findings and recommended mitigation measures.

4.2.2 - Environmental Setting

Roadway Network

The roadway network in the City is a traditional grid-based network of north/south and east/west streets, except for portions of the downtown area, whose grid-based network of streets is angled, consistent with the northeast/southwest railroad alignment. Almost all of the major streets in the City are regularly spaced at half-mile intervals. The grid system provides high levels of accessibility (i.e., travel choices) for residents. The road network is divided into five categories: State Highways, Arterial Streets, Collector Streets, Local Streets, and Alleys (see Tables 4.2-1 and 4.2-2). Hanford has five north/south arterials, 14 east/west arterials, 12 north/south collectors, seven east/west collectors, and numerous local and alleyway streets. Freeways are under the jurisdiction of the State and are outside of City control, but have been assessed for the purposes of this EIR section due to their location within the Project area.

Table 4.2-1
Existing Arterial Streets

North/South Arterial Streets	
Street Name	**Limits**
13th Avenue	Houston Avenue to Fargo Avenue
12th Avenue	Idaho Avenue to Flint Avenue
11th Avenue Jackson	Avenue to Flint Avenue
10th Avenue Jackson	Avenue to Hwy 43
9th Avenue	Houston Avenue to Lacey Boulevard
East/West Arterial Streets	
Street Name	**Limits**
Jackson Avenue	11th Avenue to 10th Avenue
Idaho Avenue	12th Avenue to 10th Avenue
Iona Avenue	12th Avenue to 10th Avenue

Street Name	Limits
Houston Avenue	13th Avenue to SR 43
Hanford-Armona Road	13th Avenue to 10th Avenue, 9th Avenue to SR 43
3rd Street (one way)	11th Avenue to 10th Avenue
4th Street (one way)	11th Avenue to 10th Avenue
6th Street	11th Avenue to 10th Avenue
7th Street	Mall Drive to 10th Avenue
E. Lacey Boulevard	10th Avenue to SR 43
W. Lacey Boulevard	13th Avenue to Irwin Street
Grangeville Boulevard	13th Avenue to SR 43
Fargo Avenue	13th Avenue to SR 43
Flint Avenue	12th Avenue to SR 43

Table 4.2-2
Existing Collector Streets

North/South Collector Streets	
Street Name	**Limits**
Campus University	6th Street to Grangeville Boulevard
Greenfield Street	Lacey Boulevard to Centennial Drive
Rodgers Street	11th Avenue to Mallard Way (potentially to Cortner Street)
Redington Street	4th Street to Grangeville Boulevard
Irwin Street	4th Street to Grangeville Boulevard
Harris Street	6th Street to Grangeville Boulevard
Fitzgerald Lane	Grangeville Boulevard to Fargo Avenue
Douty Street	Hanford-Armona Road to Flint Avenue
Kensington Street	Grangeville Boulevard to Fargo Avenue
9 ¼ Avenue	Lacey Boulevard to Leland Way
Centennial Drive	Lacey Boulevard to Heather Lane
Glacier Way	Fargo Avenue to Flint Avenue
East/West Collector Streets	
Street Name	**Limits**
Hume Street	12th Avenue to 11th Avenue
3rd Street	10th Avenue to 9th Avenue
Garner Street	Lacey Boulevard to 11th Avenue
Ivy Street	10th Avenue to 11th Avenue
Florinda Street	11th Avenue to 9 ¼ Avenue
Malone Street	Douty Street to 10th Avenue
McCreary Street	11th Avenue to Douty Street

State Facilities

The State facilities in the City of Hanford are listed below and are operated and maintained by Caltrans.

- State Route (SR) 198 is an east-west State highway that begins at U.S. Route 101 (US 101) south of King City and ends in Sequoia National Park. It connects the California Central Coast to the San Joaquin Valley, running through Hanford and Visalia. SR 198 intersects the major north-south routes in the Central Valley, including Interstate 5 (I-5) and SR 41, 43, 33, and 99. The portion of SR 198 through Hanford was upgraded to a four-lane freeway in the 1960s. In 2012, the portion from Hanford to SR 99 was upgraded to a four-lane expressway. Interchanges within the Planning Area are located at Highway 43, 10th Avenue, 11th Avenue, 12th Avenue, and 13th Avenue.

- SR 43 is a north-south State highway running roughly parallel to SR 99, connecting Shafter, Wasco, Corcoran, Hanford, and Selma. Arterial access is limited within the Planning Area to intersections at Flint Avenue, Fargo Avenue, 10th Avenue, Grangeville Boulevard, Lacey Boulevard, Hanford-Armona Road, and Houston Avenue.

Public Transportation

The largest provider of public transit services within Kings County is the Kings County Area Public Transit Agency (KCAPTA). KCAPTA is an intra-governmental agency with representatives from Avenal, Kings County, Hanford, and Lemoore and is responsible for the operation of the Kings Area Rural Transit (KART). KART offers a scheduled daily bus service from Hanford to Armona, Lemoore, the Lemoore Naval Air Station, Visalia, Corcoran, Stratford, Kettleman City, and Avenal.

There are currently eight fixed routes that circulate throughout the City and operate as early as 6:30 a.m. until as late as 9:00 p.m. The Fresno route, with service every Monday, Wednesday, and Friday, includes stops at Children's Hospital, Veterans Hospital, Community Regional Medical Center, St. Agnes Medical Center, and Kaiser Permanente Medical Center, as well as access to the downtown area with a stop at Fulton Mall. KART also offers limited service on Saturdays. In addition, KART provides regular transportation service to Visalia Monday through Friday.

KART began a scheduled fixed-route bus service for Hanford in July of 1991. The scheduled bus service operates Monday through Friday from 7:30 a.m. to 11:00 p.m. Expansion of the service is planned as new retail developments are built. West Hills College in Lemoore is served by the system, as are educational institutions in Visalia, including the College of Sequoias, Galen College, San Joaquin Business College, and Chapman College.

Dial-A-Ride is an origin-to-destination service available to eligible residents of Hanford, Lemoore, Armona, and Avenal. The KART dial-a-ride operates from 7:00 a.m. to 11:00 p.m. Monday through Friday and, on Saturday, from 9:00 a.m. to 4:00 p.m.

Park-and-Ride lots provide a meeting place where drivers can safely park and join carpools or vanpools or utilize existing public transit. Park-and-Ride lots are generally located near community entrances, major highways, or local arterials where conveniently scheduled transit service is provided. Lots are designed exclusively for commuters, or they can consist

of an area of parking spaces in complementary land uses such as shopping centers and churches. Hanford has one Park-and-Ride facility located at the northeastern entrance of the City at 10th Avenue and SR 43. There are a number of informal Park and Ride lots located in various communities throughout Kings County and served by KCAPTA vanpools. One of the largest is the old Wal-Mart parking lot located on the northwest corner of 12th Avenue and Lacey Avenue in Hanford.

The San Joaquin Valley Air Pollution Control District (SJVAPCD) provides funding for public transportation kiosks and the construction of Park-and-Ride lots. The purpose of this program is to encourage commuter rideshare activities as an alternative to single-occupant vehicle (SOV) commutes. Funds are available for eligible projects that meet specific program criteria on a first-come, first-served basis until the program funds are exhausted.

KART defines vanpooling as 7 to 15 persons who commute together in a van-type vehicle and who share the operating expenses. The KART vanpool program provides passengers with reliable transportation to and from work. The vanpool program is not only to provide safe travel to work but to provide alternative transportation options, which would ultimately reduce the number of vehicles on the road. Vanpooling is somewhat different from carpooling, though it is based upon the same principle: reducing single-occupant commuting. KART established a vanpool program for riders to the Corcoran and Avenal State prisons in 2001 and has purchased additional vans to implement new vanpools. The program has become very successful with 180 vans in service in 2009 and extends to the areas of Tulare, Kings, Kern, Madera, Ventura, Monterey, and Fresno counties. CalVans has grown to include more than 200 vanpools tailored to meet the needs of commuters, plus nearly 150 vans specially designed for farm workers. The SJVAPCD offers Vanpool Voucher Incentive Programs. The program is meant to encourage commuter rideshare practices among frequent long-distance riders in the San Joaquin Valley.

Bicycle and Pedestrian Circulation

Nearly all arterials in the city limits have been designated as bikeways except 13th Avenue, Houston Avenue, and Lacey Boulevard. Some collector streets have been identified as bikeways, including Pepper Drive, Glacier Way, Irwin Street, and Rodgers Street. Encore Drive, Nell Way, Leland Way, Fitzgerald Lane, Centennial Drive, Florinda Street, McCreary Avenue, Mall Drive, Liberty Street, Sangiovese Street, University Avenue, Greenfield Avenue, and Hume Drive.

The San Joaquin Valley Railroad has also been designated as a location for an east-west bike path. The railway corridor is not abandoned, and currently, there are no plans to abandon it. Any possible bike path will need to be located within an easement adjacent to the railroad line but not in the railway easement.

Rail/Highway Freight

Almost 87 percent of the total freight tonnage is moved out of the Valley by truck, while rail accounts for 11 percent. BNSF and SJVR railroads provide freight service to the Hanford

area. The BNSF mainline is double tracked through the entire Planning Area. Over time, it is expected that the number of trains using the system will increase as demand for rail service increases. The BNSF Railroad currently operates between 25 and 30 trains per day on the system. SJVR has a limited schedule of one train per day. The development of new industry along the SJVR right-of-way has prompted renewed investment in the east/west service. SJVR anticipates an increase to three round trips per week and in the speed of trains using this route. Planning for improvements must include identifying future surface crossings that are needed to implement the City's circulation system. In the process of improving the SJVR trackage, existing street crossings need to be modernized to ensure safety and adequate operational standards for both rail and vehicular traffic.

Amtrak Passenger Service

Amtrak provides passenger rail service from Hanford to the San Francisco Bay Area and Sacramento and service to Southern California by a combination of rail and bus. Freight service is available from both the BNSF Railway and the San Joaquin Valley Railroad. The Amtrak San Joaquin passenger train provides regularly scheduled intercity passenger rail service to Kings County. Stops are made daily at the Hanford and Corcoran stations for each northbound and southbound train. Stops along the San Joaquin line also include Bakersfield, Wasco, Fresno, Madera, Merced, Turlock, Modesto, Stockton, Antioch, Martinez, Richmond, Emeryville, and Oakland, with connecting bus service to Los Angeles, Sacramento, San Francisco, and many other points in Northern and Southern California. Passengers can transfer to the Amtrak Coast Starlight, which continues north to Portland and Seattle. Trains are accessible to the disabled and provide onboard bicycle racks, checked baggage, and food services.

High-Speed Train

In addition to the airport, train, and bus travel mentioned above, the California High-Speed Rail (HSR) will also serve as a regional transportation system ~~for~~ to the central valley communities, with stations in Fresno, Hanford, Bakersfield and ~~surrounding communities~~ other proposed cities within the central Valley. The proposed HSR line, if approved and funded, would ultimately extend through the San Joaquin Valley, linking San Francisco with Los Angeles. The initial construction section is planned to start in Madera County just north of Bakersfield, with a station located in Fresno's downtown, aligned with Mariposa Street. In November 2013, the California High-Speed Rail Commission identified the preferred route through the Planning Area. The selected route, which runs along the eastern edge of Hanford, roughly follows a north-south route near the high-voltage power lines between 7th and Avenue 8th Avenue.

Aviation

Hanford Municipal Airport (HJO) is the only public aviation facility in Kings County. The airport does not offer commercial flights. The airport is located on the southeast edge of Hanford and is owned and operated by the City of Hanford. The airport enforces City, State,

and federal aviation regulations and administers airport leases, tie-downs, hangars, shelters, fueling, and their overall maintenance.

At present, airport property totals approximately 295 acres. Airport acreage consists of a runway and full-length parallel taxiway, transient and based tie-down aprons, and aircraft storage areas. The runway's current length is 5,180 feet, 75 feet wide, and oriented roughly north/south. The runway is designed to accommodate aircraft with wingspans of up to 79 feet and speeds of up to 121 knots. The runway can accommodate larger aircraft on an occasional basis. Currently, the aircraft parking capacity totals 116 spaces and includes 37 hangar units, 30 shade hangar units, and 49 tie-downs.

Hanford Municipal Airport also serves as a base for the National Weather Service (NWS). The primary function of NWS is to provide current and forecasted weather conditions in the area (e.g., humidity, wind speed, barometer, dewpoint, temperature, and visibility).

4.2.3 - REGULATORY SETTING

This section summarizes the transportation policies, laws, and regulations that apply to the proposed Project. This information provides context for the impact discussion related to the Project's consistency with applicable regulatory conditions.

Federal

No federal plans, policies, regulations, or laws pertaining to transportation are applicable.

State

CALIFORNIA DEPARTMENT OF TRANSPORTATION

The California Department of Transportation (Caltrans) is responsible for operating and maintaining the State highway system. In the Project vicinity, State Routes 43 and 198, along with all the freeway ramp terminal intersections, fall under Caltrans jurisdiction. Caltrans provides administrative support for transportation programming decisions made by the California Transportation Commission (CTC) for State funding programs. The State Transportation Improvement Program (STIP) is a multi-year capital improvement program that sets priorities and funds transportation projects envisioned in long-range transportation plans.

SENATE BILL 743

Senate Bill 743, passed in 2013, required the California Governor's Office of Planning and Research (OPR) to develop new CEQA Guidelines that address traffic metrics under CEQA. As stated in the legislation, upon adoption of the new guidelines, "automobile delay, as described solely by the level of service (LOS) or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the guidelines, if any."

In December 2018, OPR and the State Natural Resources Agency submitted the updated CEQA Guidelines to the Office of Administrative Law for final approval to implement SB 743. The Office of Administrative Law subsequently approved the updated CEQA Guidelines, thus, implementing SB 743 and making vehicle miles traveled (VMT) the primary metric used to analyze transportation impacts.

COMPLETE STREETS

The California Complete Streets Act (Act) requires general plans updated after January 30, 2011, to develop a plan for a multi-modal transportation system. The goal of the Act is to encourage cities to rethink policies that emphasize automobile circulation and prioritize motor vehicle improvements and come up with creative solutions that emphasize all modes of transportation. Complete Streets design has many advantages. When people have more transportation options, there are fewer traffic jams, and the overall capacity of the transportation network increases. Additionally, increased transit ridership, walking, and biking can reduce air pollution, energy consumption, and greenhouse gas emissions while improving the overall travel experience for road users. Providing more transportation options will allow the City to meet its future travel demands without solely relying on motorized vehicles.

While there is no standard design template for a Complete Street, it generally includes one or more of the following features: bicycle lanes, wide shoulders, well-designed and well-placed crosswalks, crossing islands in appropriate midblock locations, bus pullouts or special bus lanes, audible and accessible pedestrian signals, sidewalk bulb-outs, center medians, street trees, planter strips, and ground cover. Complete Streets create a sense of place and improve public safety due to their emphasis on comprehensively encouraging pedestrian activity. The Act is implemented through the City's Active Transportation Plan and General Plan.

Regional

KINGS COUNTY ASSOCIATION OF GOVERNMENTS (KCAG)

The KCAG is the State-designated Regional Transportation Planning Agency (RTPA) recognized by the State's Business, Transportation, and Housing Agency. KCAG is responsible for:

- Administering the Regional Transportation Plan.
- Preparing a Regional Transportation Improvement Program and the Federal Transportation Improvement Program.
- Reviewing the State Transportation Improvement Program and other State transportation programs.
- Monitoring local public transit operations.
- Overseeing federal transportation grant proposals.
- Administering the Local Transportation Fund and State Transit Assistance funds.

Other objectives of KCAG include facilitating planning on a regional scale with an emphasis on transportation, finding and researching problems in urban growth, and considering common concerns of its constituent agencies. KCAG aims to tackle the issues that the members have in common but could not otherwise handle individually.

2018 Kings County Regional Transportation Plan

The 2018 Regional Transportation Plan (RTP) is a comprehensive assessment of all forms of transportation available in Kings County and the needs for travel and goods movement through the year 2042. The 2018 RTP update was accomplished within the framework of the KCAG, with assistance from Avenal, Corcoran, Hanford, Lemoore, and Kings County. The Santa Rosa Tachi-Yokut Tribe was also consulted during the development of the RTP. Caltrans District 6 and the San Joaquin Valley Air Pollution Control District staff provided invaluable service by furnishing helpful information, comments, and general support (KCAG, 2022).

2022 Regional Transportation Improvement Program (2022 RTIP)

The Regional Transportation Improvement Program (RTIP) is a list of transportation projects and programs to be funded and implemented over the next three years. KCAG submits this document to Caltrans and amends the program on a quarterly cycle (KCAG, 2022).

Local

City of Hanford General Plan

The Hanford General Plan serves as the community's guide for the continued development, enhancement, and revitalization of the City of Hanford. The General Plan includes the following policies related to transportation and circulation that are relevant to this analysis:

Policy T1 Coordination of Circulation and Land Use

Develop a circulation network that reinforces the desired land use pattern for Hanford, as identified in the Land Use Element.

Policy T2 Street Classification System

Designate a functional street classification system that includes Highways, Major Arterials, Arterials, Collectors, Minor Collectors, and Local streets.

Policy T3 Circulation Map

Identify the locations of existing and future Highways, Major Arterials, Arterials, Collectors, and Minor Collectors with the Planned Area Boundary on the Circulation Map. Locations shown shall be fixed, with allowance for slight variation from the depicted alignments of new Collectors and Minor Collectors.

Policy T4 Regional System Improvements

Identify and support improvements to regional transportation system improvements both within and outside the Planning Area that will improve mobility to and from Hanford. Policy T5 Funding Sources and Improvements coordinate with Caltrans and KCAG for funding and timely construction of programmed State highway and interchange improvements.

Policy T6 Highway Improvements

Coordinate with Caltrans to identify needed improvements to highway facilities in the City.

Policy T7 Highway 198 and 9th Avenue

Identify any program improvements necessary to maintain LOS standards at the intersection of SR 198 and 9th Avenue.

Policy T8 Highway 43 Access Limitations

Limit new direct access to Highway 43, and require building setbacks and offers of dedication to accommodate future widening.

Policy T9 Highway 43 Intersection Limitations

Limit roadway intersections with Highway 43 to Flint Avenue, 10th Avenue, Fargo Avenue, future 9th Avenue, Grangeville Boulevard, Lacey Boulevard, Hanford-Armona Road, Houston Avenue, Iona Avenue, Idaho Avenue, and Jackson Avenue.

Policy T10 Purpose of Major Arterials

Major Arterials shall provide through traffic movement around the edge of Hanford on continuous routes with very limited access to abutting property and local streets.

Policy T11 Designation of Major Arterials

Major Arterials shall be designated on Flint Avenue between 13th Avenue and SR 43, on 13th Avenue between Flint Avenue and Houston Avenue, and Houston Avenue between 13th Avenue and SR 43.

Policy T12 Access to Major Arterials

New access to Major Arterials shall be limited to new intersections with Arterials and Collectors, and where the Major Arterial is a property's only legal access to a public right of way.

Policy T13 Purpose of Arterials

Arterials shall provide for through traffic movement on continuous routes through Hanford with limited access to abutting property.

Policy T14 Designation of Arterials

Arterials shall be designated generally on the one-mile grid of streets within the Planned Area Boundary. The specific streets designated are Flint Avenue, Fargo Avenue, Grangeville Boulevard, Lacey Boulevard, Hanford-Armona Road, Houston Avenue, Iona Avenue, Idaho Avenue, 7th Avenue, 9th Avenue, 10th Avenue, 11th Avenue, 12th Avenue, and 13th Avenue.

Policy T15 Access to Major Arterials

New access to Arterials from new local streets and new driveways shall be limited to maximize through traffic movements.

Policy T16 Consolidation of Arterial Access Points

Encourage the consolidation or elimination of driveways, access points, and curb cuts along existing Arterials.

Policy T17 Purpose of Collectors

Collectors shall provide traffic movement within a limited area and connect local roads to the Arterial street system.

Policy T18 Designation of Collectors

Collectors shall be designated generally at half-mile intervals between Arterials in new growth areas and on selected existing through streets that connect to two or more Arterials.

Policy T19 Access to Collectors

New access to Collectors from new local streets and abutting property is generally permitted but may be limited in some cases depending on planned roadway capacity and adjacent land use development patterns.

Policy T20 Purpose of Minor Collectors

Minor Collectors shall provide internal traffic movement within a neighborhood and connect local roads to Collectors and/or Arterials.

Policy T21 Designation of Collectors

Minor Collectors shall be designated in developed areas without a half-mile Collector interval and/or where the street is not wide enough to be designated a Collector.

Policy T22 Access to Collectors

Minor Collectors shall have no access limitations.

Policy T23 Purpose of Local Streets

Local streets shall provide internal traffic movement within a neighborhood and direct access to abutting property.

Policy T24 Block Lengths

Adopt standards for block lengths for new local streets to promote ease of movement and connectivity.

Policy T25 Cul-de-sacs

Construct cul-de-sacs on all permanent dead-end streets. New cul-de-sacs shall be discouraged in commercial and industrial developments. Adopt maximum lengths of new local streets with cul-de-sacs.

Policy T26 Cul-de-sac

Non-motorized connectivity encourages sidewalks and breaks in perimeter walls to allow pedestrian, bicycle, and visual access from cul-de-sac streets to other nearby streets.

Policy T27 Maintenance of Local Streets

Adopt policies that incorporate the use of maintenance districts to fund local street maintenance.

Policy T28 Alleys

Generally discourage new alleys, but allow in limited cases when effectively incorporated into the overall neighborhood design. Fund the maintenance of new alleys with maintenance districts.

Policy T29 Maximum Level of Service

Maintain a peak hour LOS E on streets and intersections within the area bounded by Highway 198, 10th Avenue, 11th Avenue, and Florinda Avenue, inclusive of these streets. Maintain a peak hour LOS D on all other streets and intersections with the Planned Growth Boundary.

Policy T30 Capital Improvement Program

Include the acquisition of right-of-way and the construction and maintenance of streets in the City Capital Improvement Program.

Policy T31 Coordination with Development Approvals

Coordinate additions and modifications to the roadway system with land development approvals.

Policy T32 Ultimate Rights-of-Way

Acquire control of land within ultimate right-of-way of Arterial and Collector streets during early stages of development.

Policy T33 Street Improvements and Priorities

Prioritize street improvements with emphasis on current and forecasted service levels.

Policy T34 Kings County Regional Transportation Plan

Local circulation system improvements shall be consistent with the goals and objectives stated in the Kings County Regional Transportation Plan.

Policy T35 Caltrans Coordination

Coordinate with Caltrans to identify needed improvements to its highway facilities in the City and implement necessary programs to assist in improving State Route 43 and 198 and its interchanges/intersections with local roadways.

Policy T36 Traffic Impact Fees

Periodically review and update the traffic impact fee program to ensure new development contributes its fair share of funding for new streets, intersections, and highway improvements.

Policy T37 Shade Trees in Planter Strips

Where adequate space permits, include street trees planted in planter strips between the curb and sidewalk to shade paved street surfaces.

Policy T38 Operational Improvements First

Maximize operational improvements before widening existing streets even when they do not meet current width standards.

Policy T39 Accommodating All Modes of Traffic

Plan, design, and construct new transportation improvement projects to safely accommodate the needs of pedestrians, bicyclists, transit riders, motorists, and persons of all abilities.

Policy T40 Pedestrian and Bicycle Placemaking

Promote pedestrian and bicycle improvements that improve connectivity between neighborhoods, provide opportunities for distinctive neighborhood features, and foster a greater sense of community.

Policy T41 Streetscape Enhancements

Strive to improve the visual character of roadway corridors by improving streetscapes with amenities such as street trees, pedestrian-scaled lighting, underground utilities, water-efficient landscaping, and streetscape furniture.

Policy T42 Existing Sound Walls and Fences

Encourage landscaping improvements along walls and fences adjacent to major streets to discourage graffiti and enhance visual character.

Policy T43 Safe Routes to Schools Programs

Promote Safe Routes to Schools Programs for all schools serving the City.

Policy T44 Funding

Seek outside funding for Safe Routes to Schools projects.

Policy T45 Truck Routes

Minimize the adverse impact of truck traffic on the community by designating, maintaining, and enforcing a system of designated truck routes.

Policy T46 Good Movement Strategies

Coordinate with regional transportation agencies to plan and implement goods movement strategies, including those that improve mobility, deliver goods efficiently, and minimize negative environmental impacts.

Policy T47 Truck Parking

Identify locations where heavy truck parking is acceptable and where it is prohibited based upon adjacent land use designations.

Policy T48 Traffic Calming

Consider the use of traffic-calming designs such as roundabouts, bulb-outs, and other traffic-calming designs, which will improve the operation or LOS of a street.

Policy T49 Subdivision Connectivity

Design subdivisions to maximize connectivity both internally and with other surrounding development.

Policy T50 Carpool Programs

Encourage the use of carpooling, vanpooling, and flexible employment hours.

Policy T51 Alternative Design Standards

Consider alternative roadway design standards for new residential and mixed use development for future streets that may include:

- Narrower street widths on local roadways.
- Smaller turning radii geometrics on street intersections to improve safety for pedestrians.
- Tree-lined streets in parkways between the curb and sidewalk.
- Roundabouts in lieu of traffic signals where appropriate conditions exist to maximize intersection efficiency, maintain continuous traffic flow, and reduce accident severity.

Policy T65 Bicycle Network Master Planning

Maintain a Bicycle Master Plan to coordinate existing and planned infrastructure to support, encourage, and promote bicycle transportation, with effective connections to downtown, major shopping areas, mixed use neighborhoods, community facilities, schools, parks, and employment areas.

Policy T70 Pedestrian Connections

Increase connectivity through direct and safe pedestrian connections to public amenities, neighborhoods, village centers, and other destinations throughout the city.

CITY OF HANFORD VMT THRESHOLDS AND IMPLEMENTATION GUIDELINES

The City of Hanford adopted a set of vehicle miles traveled (VMT) thresholds to support the shift from a delay-based analysis (LOS) to VMT. The adopted VMT Thresholds and Implementation Guidelines. The City VMT Guidelines provide implementation of CEQA VMT metrics as applicable to the City of Hanford through the establishment of VMT screening criteria and VMT analysis thresholds.

City VMT Guidelines provide a list of screening criteria for projects and activities that may result in a reduction of VMT and GHG emissions. If a project meets one or more of the following screening factors, the project may be presumed to produce a less than significant VMT impact:

- The project is within 0.5 miles (mi) of a transit priority area or a high-quality transit area and is consistent with the Regional Transportation Plan (RTP)/ Sustainable Communities Strategy (SCS), has a floor area ratio (FAR) equal or greater than 0.75, does not provide more parking than what is required by the City's Municipal Code, or does not reduce the number of affordable residential units. In accordance with SB 743, "transit priority areas" are defined as "an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program. A "major transit stop" means: "a site containing an existing rail transit

station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service of 15 minutes or less during the morning and afternoon peak commute periods." A high-quality transit area or corridor is a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. (See Pub. Resources Code, § 21099, subds. (a)(7), (b)(1).)

- The project includes local-serving retail with a combined area of less than 55,000 square feet (sf). Whether a retail project is local-serving or not will be determined at the discretion of the City. As included in Appendix A, a list of recently completed local serving retail projects (as identified by the City) demonstrates that retail projects up to 55,000 sf could be considered as local serving. Additionally, as shown in Table B, retail projects up to 125,000 sf would not have a significant GHG impact. As explained in section 3.1.1, projects not having a significant GHG impact would not also have a significant VMT impact. However, based on substantial evidence for justifying local serving retail, as included in Appendix A, the City establishes retail projects less than 55,000 sf to be screened out.

- Redevelopment projects that result in an equal or net reduction in VMT can be considered to have less than significant VMT impact. A net reduction in VMT would occur if the land use proposed by the project would generate less VMT than the existing land use.

- The project includes 100 percent affordable housing units. Affordable housing units consists of low-income households and research has shown that low-income households produce lower VMT compared to a market-rate housing unit.

- A project consistent with the City's General Plan can be successfully screened if the project would generate fewer than 1,000 average daily trips (ADT), while a project not consistent with the City's General Plan can be screened if the project would generate fewer than 500 ADT. Consistency with the General Plan is required because the GHG and therefore VMT reduction targets for MPOs were established by CARB and are included in the RTPs. The RTP utilizes the latest version of City's General Plan for analyzing GHG emissions.

- Institutional/government and public service uses that support community health, safety and welfare may also be screened from subsequent CEQA VMT analysis. These facilities (e.g., police stations, fire stations, government offices, utilities, public libraries, community centers, and refuse stations) would be a part of the community and, as public services, the VMT would be accounted for within the community. A decision whether a particular project can be categorized as a public service facility will be determined at the discretion of the City. Similarly, any other similar use not included in the list can be approved on a case-by-case basis by the City as applicable. As such, these uses would result in reduction in total VMT due to the proximity of these services within the community. Additionally, many of these facilities would generate fewer than 1,000 ADT and/or use vehicles other than passenger-cars or

light-duty trucks. These other vehicle fleets are subject to regulation outside of CEQA, such as the California Air Resources Board (CARB) and San Joaquin Valley Air Pollution Control District.

- Local parks, daycare centers, student housing projects on or adjacent to a college campus, local-serving gas stations, banks, and K–12 public schools.

- Projects located in areas with low VMT may be screened out from further CEQA analysis. The TA acknowledges that residential and office projects located in areas having a low VMT, (which incorporate features such as density, mix of uses, transit accessibility), tend to exhibit similarly low VMT. Also, areas that are mapped as low VMT areas do not need to prepare any additional VMT analysis. Therefore, residential, office, industrial, or mixed-use projects that are consistent with the City's General Plan and located within low VMT areas (using the City of Hanford VMT Screening Tool2 and applying appropriate thresholds) can be presumed to have similar low VMT profiles and could be screened out from the need for further VMT analysis. It should be noted that if a project constitutes a General Plan Amendment or Zone Change, such projects will be evaluated on a case-by-case basis. Figures 4, 5, and 6 illustrate the VMT per capita, VMT per employee, and VMT per service population screening maps for the City.

- The 2022 State CEQA Guidelines Section 15007 (c) states that "if a document meets the content requirements in effect when the document is sent out for public review, the document shall not need to be revised to conform to any new content requirements in Guideline amendments taking effect before the document is finally approved." Therefore, if a development/land use plan/transportation project is already cleared by a certified Environmental Impact Report (EIR) or an adopted Negative Declaration/Mitigated Negative Declaration, then subsequent projects that are consistent with the approved project will not require a new VMT analysis unless mandated by another section of the CEQA Guidelines.

If the project meets any one of the screening criteria, it may be presumed to have a less than significant transportation impact. No further VMT analysis would then be necessary, The CEQA document shall enumerate the screening criteria and how the project meets or exceeds that applicable VMT threshold. If project screening does not apply, a VMT analysis will be required. The extent of this analysis may be a simple algebraic demonstration or a more sophisticated traffic modeling exercise. For all projects that require a VMT analysis, use of the KCAG TDM is required unless the project includes a special land use that is difficult to analyze using a travel demand model. For the latter, the City may require a qualitative analysis or an analysis using empirical data as applicable to the project. Next, the project-generated VMT (per capita, per employee, per service population, or total) is compared to the appropriate significance threshold. If the project VMT metric is less than the significance threshold, the project is presumed to create a less-than-significant impact. No further VMT analysis for CEQA purposes would be required.

Table 4.2-3
City of Hanford VMT Thresholds

VMT Metric	Threshold	Regional Average
VMT per Capita	8.99	10.33
VMT per Employee	16.95	19.48
VMT per Service Population	21.84	25.10

Source: City of Hanford VMT Thresholds and Implementation Guidelines

Should project VMT metrics exceed the significance threshold stated in Table 4.2-3, mitigation measures will be required.

4.2.4 - IMPACTS AND MITIGATION MEASURES

Methodology

As stated above, SB 743 requires all CEQA analyses relating to transportation impacts to be conducted using the vehicle miles traveled (VMT) metric. As the City of Hanford and KCAG have adopted guidelines and thresholds for VMT, the screening and thresholds from their guidelines are utilized to determine if an impact occurs as a result of the Project. A Traffic Impact Study (TIS) Report was prepared for this Project (see Appendix B) (Ruettgers and Schuler Civil Engineers, 2024).

Thresholds of Significance

The following criteria, as established in Appendix G of the CEQA Guidelines, will be utilized to determine if a project could potentially have a significant impact:

a) *Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?*

b) *Conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b)?*

Project Impacts

Impact 4.2-1 - Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

The first step to determining Project trip generation is to assess the impacts that the Project may have on the surrounding roadway network in the City of Hanford. The trip generation rates for the proposed Project were obtained from the 11th Edition of the Trip Generation Manual published by the Institute of Transportation Engineers (ITE). The ITE uses a Land Use Code classification assigned to a type of land use by the Institute of Transportation Engineers in the version of "Trip Generation" adopted by the City (Ruettgers and Schuler Civil Engineers, 2024). At build-out, the Project is estimated to generate a maximum of 2,993 daily trips, 219 AM peak hour trips, and 302 PM peak hour trips.

As noted in the regulatory section above, the Hanford General Plan has policies related to traffic systems. The General Plan has established LOS E as the acceptable level on streets and intersections within the area bounded by State Route 198, 10th Avenue, 11th Avenue, and Florinda Avenue, and a peak hour LOS D on all other streets and intersections within the Planned Growth Boundary. The County of Kings has established LOS D as the acceptable level of traffic congestion on County roads. Since the study facilities for this Project lie outside of the SR 198, 10th Avenue, 11th Avenue, and Florinda Avenue boundary, the LOS D threshold was utilized to evaluate the potential significance of LOS impacts to the City of Hanford roadway facilities and the County of Kings facilities.

Existing Level of Service Analysis

The following roadways and corresponding intersections were analyzed in the TIA:

- 11th Avenue
- 12th Avenue
- 13th Avenue
- Hanford-Armona Road
- Hume Avenue
- State Route 198

As noted in the TIA for this Project (Appendix B), all study intersections currently operate at an acceptable LOS during both AM and PM peak periods.

Existing Plus Project Traffic Conditions

Access to and from the Project site will be from four main access points and two internal access points connecting to the existing easterly adjacent subdivision. One access point will be from Hanford-Armona Road. Three access points will be located along the south side of the site providing access to Hume Avenue.

The TIA analyzed the location of the existing and proposed roadways and access points relative to those in the vicinity of the Project site. Based on this review, all proposed roadways and access points are proposed in locations that minimize traffic-operational impacts to existing and future roadway networks.

A capacity analysis of the study intersections was conducted utilizing the Transportation Research Board's *Highway Capacity Manual* (HCM), which is a standard method with concepts and methods that guide analysts and jurisdictions on how to evaluate a particular type of intersection or roadway segment, based on what can be extensive national or international datasets of operational performance. The capacity analysis was based on the City's available existing traffic and operational data, and produced estimates for the following traffic scenarios:

- Existing Year (2024)
- Existing Year (2024) + Project

- Opening Year (2026)
- Opening Year (2026) +Project
- Future Year (2044)
- Future Year (2044) + Project

LOS criteria for unsignalized and signalized intersections as defined in HCM are presented in Tables 4.2-4 and 4.2-5 below.

Table 4.2-4
Unsignalized Intersection Level of Service Criteria

Level of Service	Average Control Delay (sec/veh)	Expected Delay to Minor Street Traffic
A	≤ 10	Little or no delay
B	> 10 and ≤ 15	Short delays
C	> 15 and ≤ 25	Average delays
D	> 25 and ≤ 35	Long delays
E	> 35 and ≤ 50	Very long delays
F	> 50	Extreme delays

Source: Appendix B

Table 4.2-5
Signalized Intersection Level of Service Criteria

Level of Service	Average Control Delay (sec/veh)	Volume-to-Capacity Ratio
A	≤ 10	< 0.60
B	> 10 and ≤ 20	0.61 - 0.70
C	> 20 and ≤ 35	0.71 - 0.80
D	> 35 and ≤ 55	0.81 - 0.90
E	> 55 and ≤ 80	0.91 - 1.00
F	> 80	> 1.00

Source: Appendix B

Tables 4.2-6 and 4.2-7 summarize the Weekday AM and PM Peak Hour LOS for study area intersections. Based on the analysis prepared, two intersections are projected to operate at below the acceptable LOS in the 2044 and 2044 + Project scenarios.

Table 4.2-6
Intersection Level of Service Weekday AM Peak Hour

ID#	Intersection	Control Type	2024	2024+Project	2026	2026+Project	2044	2044+Project	2044+Project w/Mitigation
1	12th Ave & SR 198 WB Ramps	Signal	B	B	B	B	B	B	-
2	12th Ave & SR	Signal	B	B	B	B	B	B	-

ID#	Intersection	Control Type	2024	2024+Project	2026	2026+Project	2044	2044+Project	2044+Project w/Mitigation
3	198 EB Ramps SR 198 WB Ramps & Hanford Armona Rd	Roundabout	A	A	A	A	B	C	-
4	SR 198 EB Ramps & Hanford Armona Rd	NB	B	B	B	B	C	C	-
5	13th Ave & Hanford Armona Rd	NB SB Signal	B A -	B A -	B A -	C A -	D (31.4) A -	F (35.0) A -	- - A
6	12th Ave & Hanford Armona Rd	Signal	C	C	C	C	C	C	C
7	11th Ave & Hanford Armona Rd	Signal	B	B	B	B	C	C	-
8	12th Ave & Hume Ave	WB	B	B	B	B	C	C	-

Source: Appendix B

Table 4.2-7
Intersection Level of Service Weekday PM Peak Hour

ID#	Intersection	Control Type	2024	2024+Project	2026	2026+Project	2044	2044+Project	2044+Project w/Mitigation
1	12th Ave & SR 198 WB Ramps	Signal	B	B	C	B	C	C	-
2	12th Ave & SR 198 EB Ramps	Signal	A	A	A	B	B	B	-
3	SR 198 WB Ramps & Hanford Armona Rd	Roundabout	A	A	A	A	B	B	-
4	SR 198 EB Ramps & Hanford Armona Rd	NB	B	B	B	B	C	C	-
5	13th Ave & Hanford Armona Rd	NB SB Signal	C A -	C A -	C A -	C A -	F (>300) A -	F (>300) A -	- - B
6	12th Ave & Hanford Armona Rd	Signal	C	C	C	C	D (40.9)	D (42.1)	C
7	11th Ave & Hanford Armona Rd	Signal	B	B	C	C	C	C	-
8	12th Ave & Hume Ave	WB	B	B	B	B	C	C	-

Source: Appendix B

Annual growth rates ranging between 1.10 and 5.03 percent were applied to the existing peak hour volumes to estimate future volumes for the years 2026 (opening year) and 2044 (horizon year). These growth rates were estimated based on the TIA's review of data from the KCAG travel demand model. The KCAG travel demand model takes into account in-construction and anticipated to-be-constructed projects, which includes 11 out of the 12 projects identified by the City within a 1.5-mile radius of the Project site. The remaining project (Grangeville Mixed Use Project) is currently under environmental review and the scope of intersections does not overlap with the proposed Project, therefore little to no influence on traffic from the Grangeville Project would occur on the proposed Project. Future peak hour volumes for the years 2026 and 2044 both without and with project traffic include peak hour trip estimates for two tracts of the Live Oak development, a master planned community located northwest, southwest, and southeast quadrants of 12th Avenue and Hume Avenue which are under construction. As found in the TIA, there are two intersections that will need improvements by the 2044 year to maintain or improve the operational level of service of the street system in the vicinity of the Project.

As noted in the Traffic Impact Study (TIS) prepared for the Project, signal warrant criteria were met for the 13th Avenue and Hanford Armona Road intersection, which is included in the City's traffic impact fee program (Ruettgers and Schuler Civil Engineers, 2024). However, it is important to note that a signal warrant defines the minimum condition under which signalization of an intersection might be warranted. Meeting this threshold does not suggest traffic signals are required, but rather, that other traffic factors and conditions be considered to determine whether signals are truly justified. Pursuant to General Plan Policy T36, the Project proponent will be required to pay traffic development impact fees. The provision of an intersection signalization would be determined by the City of Hanford. Improvement costs for signalization are within the purview of traffic development impact fees as required in Policy T36, therefore eventual signalization of the intersection by the City would address the LOS deficiency caused by General Plan buildout (2044) and Project development (2044+Project).

For the 12th Avenue and Hanford Armona Road intersection, the TIA recommends improvements be made to the eastbound roadway to include changing the existing eastbound right turn lane (EBR) to an eastbound through and right turn lane (EBTR). As identified in the City's TIF, the Project proponent would be required to pay their fair share cost for the needed improvement to ensure that the intersection by the year 2044, operates at an acceptable LOS (Ruettgers and Schuler Civil Engineers, 2024). The inclusion of fair share cost payment is recommended as a Mitigation Measure and is included as MM 4.2-1.

Implementation of MM 4.2-1 would allow the studied intersection to operate at an acceptable LOS under City LOS standards and reduce impacts to less than significant.

MITIGATION MEASURES

MM 4.2-1: The Project proponent or developer shall be required to pay their fair share of costs for the needed improvements. This includes changing the 12th Avenue and Hanford

Armona Road intersection eastbound right turn lane to an eastbound through lane and a right turn lane.

The fair share cost for the improvement is calculated at 18.94% and shall be collected by the City of Hanford at the appropriate time. The fair share fees were determined as part of the analysis in the TIS (Ruettgers and Schuler Civil Engineers, 2024)

LEVEL OF SIGNIFICANCE

Impacts would be *less than significant with implementation of mitigation measures*.

Impact 4.2-2 - Conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b)

The VMT Analysis prepared for this Project (Appendix B) follows the guide of the City of Hanford VMT Thresholds and Implementation Guidelines, dated November 2022 (VMT Guidelines) to analyze the Project's VMT and compare them to the established VMT threshold.

Land use developments meeting one or more of the screening criteria contained in the VMT Guidelines are presumed to create a less than significant transportation impact and no further VMT analysis is required. These criteria relate to project type, size, location, proximity to transit, and trip-making potential. The project does not meet any of the screening criteria. Therefore, a detailed VMT analysis is required and is included as Appendix B.

For projects that are not screened out, a quantitative analysis of VMT impacts must be prepared and compared against the adopted VMT thresholds of significance. According to the VMT Guidelines, residential developments that generate more than 8.99 daily VMT for residential VMT per capita would be considered to have a significant transportation impact.

Baseline VMT

The first step in a VMT analysis is to establish the baseline average VMT, which requires the definition of a region. The established region for the Project is Kings County, which is modeled by the KCAG.

Based on the VMT analysis included in the TIS, the Project would result in 9.61 VMT per capita and exceed the 8.99 VMT per capita threshold. As a result, it is recommended that the Project implement VMT mitigation measures for the residential component to reduce VMT per Capita. In order to reduce VMTs, a project must decrease the number of vehicle miles travels to and from the Project site. For land development projects, VMT mitigation focuses on measures that reduce the number and/or length of single-occupant vehicle trips generated by the Project. According to the VMT Guidelines, proposed mitigation to reduce project VMT "must be supported by substantial evidence illustrating that the measure(s) will mitigate VMT impacts to less than significant."

The *VMT Guidelines cite the Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health Equity: Designed for Local Governments, Communities, and Project Developers*, California Air Pollution Control Officers Association, December 2021 (CAPCOA Handbook) as a source for mitigation measures with quantitative methods for estimating VMT reduction (Ruettgers and Schuler Civil Engineers, 2024).

Below are quantitative measures contained in the CAPCOA Handbook for residential projects in suburban areas. Measure identifiers are shown within parentheses, and italicized text addresses the applicability of each measure to the Project.

- Increase residential density to a level higher than the national average (T-1)

  Applicable, but not feasible*: The residential density for the project is 6.5 dwelling units/acre (326 single-family homes/50 acres of developable land). As stated in the CAPCOA Handbook, the national average is 9.1 dwelling units/acre and includes apartments, townhomes and condominiums in addition to detached single-family housing.*

  Below is the VMT reduction formula in the CAPCOA Handbook for this measure (-0.22

  = VMT elasticity factor).

  VMT reduction = [(project du/acre – 9.1 du/acre) / 9.1 du/acre] x (-0.22)

  Assuming no change in the amount of developable land, the project would need at least 455 dwelling units to reach the national average and be credited for any reduction in project VMT. Moreover, the project would require a total of 590 dwelling units to mitigate the impact of project VMT to a less than significant level. Such an increase in project residential density (approximately 80 percent) would not be feasible. Per the General Plan and the allowable density in the zone district, an increase in density is not feasible without a zone change and General Plan Amendment to increase residential density beyond what is allowed.

- Provide easy access to high-quality public transit (T-3)

  Not applicable: *Because the project does not meet implementation requirements. Project must be located within 0.5 miles of a high frequency transit station (either rail or bus rapid transit with headways of less than 15 minutes).*

- Integrate affordable and below market rate housing (T-4)

  Not applicable*: Because the project does not meet implementation requirements. Project must be a multifamily residential development permanently dedicated as affordable housing for lower income families. This project is not a low income housing project, therefore it is not applicable and the VTM analysis applies.*

- Provide electric vehicle charging infrastructure (T-14)

  Not applicable to single-family residential projects*: Mitigation potential available only to developments with buildings that have designated parking areas (e.g., commercial, educational, retail and multifamily housing).*

- Limit residential parking supply (T-15)

  Not applicable: *The measure is ineffective in locations where unrestricted street parking or other off-street parking is available and has adequate capacity to accommodate project-related vehicle parking demand.*

- Unbundle residential parking costs from property costs (T-16)

  Not applicable*: There are no residential parking costs associated with the project.*

As noted, the measures listed above are found to be infeasible (Ruettgers and Schuler Civil Engineers, 2024). There are no applicable and feasible mitigation measures available to reduce VMT below the adopted City and County thresholds. Other valley cities have adopted VTM thresholds and applicable mitigation measures. Kings County and the City have not adopted mitigation measures or other measures to implement or guidance to create feasible mitigation. Measures such as purchasing bicycles for home buyers, added bike lanes and new bus routes have not been either accepted by the City of shown to be an effective way to reduce VTM_Therefore, the Project is expected to result in a significant transportation impact under CEQA.

MITIGATION MEASURES

No mitigation measures

LEVEL OF SIGNIFICANCE

Impacts would be ***significant and unavoidable***.

Cumulative Setting Impacts and Mitigation Measures

CUMULATIVE SETTING

The study area for the analysis of cumulative impacts is the City of Hanford and unincorporated portions of Kings County located adjacent to the city limits. Cumulative impacts are assessed with the proposed Project and the 12 projects located within a one-half mile of the Project site as identified by the City of Hanford. Eleven of the 12 projects are entitled and either under construction or are anticipated to be under construction in the future. The projects that are entitled are included in and are consistent with the General Plan. Therefore, those projects are included in the KCAG travel demand model. The growth rates used to determine future traffic volumes would therefore reflect traffic from these projects. One of the projects is currently under environmental review, the Grangeville Mixed

Use Project. A review of the scope of intersections in the Grangeville traffic study did not overlap with any of the intersections included in the Silicon Valley Ranch TIS. Therefore, there would be little to no influence of traffic from the Grangeville project on the Silicon Valley Ranch project.

CUMULATIVE IMPACTS

As noted above, use of the KCAG travel demand model and estimates provided in the TIS (Appendix B), impacts related to LOS would be less than significant with mitigation measures incorporated for the proposed Project and for the cumulative year 2044. Based on the analysis in the TIS, cumulative impacts for LOS would be less than significant with mitigation incorporated.

As for VMT, Project impacts are considered significant and unavoidable. This is in large part due to the lack of applicable and feasible VMT mitigation measures. The cumulative impacts for the City of Hanford would be considered significant and unavoidable.

MITIGATION MEASURES

Implementation of MM 4.17-1.

CUMULATIVE LEVEL OF SIGNIFICANCE

Cumulative impacts for LOS would be ***less than significant with mitigation incorporated.***

Cumulative impacts for VMT would be ***significant and unavoidable.***

4.3 - Approach to Environmental Analysis

Section 4.1 of this Draft EIR contains discussions of the environmental setting, regulatory setting, thresholds of significance, and potential environmental impacts related to the construction and operation of the proposed Project. These sections also include a discussion of mitigation measures and the level of significance after the implementation of mitigation measures.

Section 15125(a) of the CEQA Guidelines identifies that an EIR includes a description of the physical environmental conditions in the vicinity of the Project. This environmental setting will normally constitute the baseline physical conditions by which a Lead Agency determines whether an impact is significant.

The study area for the analysis of the Project and cumulative impacts is the Hanford city limits, the portions of Kings County located adjacent to the City. The applicable cumulative projections include growth projections from the Hanford General Plan and the Kings County General Plan.

The regulatory setting includes a discussion of the regulatory environment as it existed prior to the implementation of the Project. There is federal, State, regional, and local regulations

identified within each environmental issue discussion, where appropriate. It is acknowledged that although the existing City of Hanford development codes currently guide development within the City.

The impact analysis contains a discussion of Project-specific impacts as well as cumulative impacts. The Project that is evaluated is the construction of 326 single-family residences, internal roads, a 2.86-acre drainage retention basin, and a 3.58-acre park on an approximately 88.9-acre site (Project). Lots will range between 5,000 and 7,000 square feet. Associated utility and right-of-way infrastructure would be developed in accordance with City standards and regulations. Specific components of the Project are not separately evaluated; however, the Project, as a whole, is evaluated. The Project, as a whole, is referred to as the proposed Project or Project, throughout this EIR.

The impacts within the impact analysis section are identified as *no impact, less-than-significant impact, potentially significant impact,* or *significant impact*. The project-specific impacts address the potential environmental impacts that could occur under the development activity anticipated to occur with the proposed Project.

4.4 - Environmental Topics

The potential environmental effects associated with the implementation of the proposed Project are analyzed in the following topical environmental issue areas:

- Land Use Planning
- Transportation
- Mandatory Findings of Significance

4.5 - Organization of Issue Areas

Each environmental issue section contains the following components:

- Introduction - includes a brief discussion of the information used for the analysis.

- Environmental Setting - identifies and describes the existing physical environmental conditions of the Project area associated with each of the impact sections.

- Regulatory Setting - provides an understanding of the regulatory environment that exists prior to the implementation of the Project. This discussion includes the applicable goals, objectives, and policies from the City of Hanford 2035 General Plan as well as other regulations that currently exist.

- Methodology – identifies which criteria, technical documents, or formulas were used to analyze specific environmental impacts.

- Thresholds of Significance - identifies thresholds from Appendix G of the CEQA Guidelines that assist in determining the significance of an impact. Some thresholds

include a more detailed discussion to address the City of Hanford's or other local agency's specific significance criteria for the Project area.

- Project Impacts - describes environmental changes to the existing physical conditions that may occur if the proposed Project is implemented and evaluates these changes with respect to the CEQA thresholds of significance. This section includes a Project-specific impact analysis and a cumulative impact analysis. Mitigation measures are identified for the potentially significant project and cumulative impacts, if determined feasible. The mitigation measures are those measures that could avoid, minimize, or reduce an environmental impact. This section also includes a discussion of the level of significance after mitigation that describes the level of impact significance remaining after mitigation measures are implemented.

4.6 - Level of Significance

Determining the severity of the project and cumulative impacts is fundamental to achieving the objectives of CEQA. CEQA Guidelines Section 15091 requires that decision-makers mitigate, as completely as is feasible, the significant impacts identified in Project EIR. If the Project EIR identifies any significant unmitigated impacts, CEQA Guidelines Section 15093 requires decision-makers in approving a project to adopt a Statement of Overriding Considerations that explains why the benefits of the project outweigh the adverse environmental consequences identified in the EIR.

The level of significance for each impact examined in this EIR is determined by considering the predicted magnitude of the impact against the applicable threshold. Thresholds are developed using criteria from the CEQA Guidelines and checklist; federal, State, and local regulatory schemes; local/regional plans and ordinances; accepted practice; consultation with agencies and recognized experts; and other professional opinions. When adopting or using thresholds of significance, a Lead Agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence.

4.7 - Format Used for Impact Analysis and Mitigation Measures

The format adopted in this EIR to present the evaluation of impacts is described and illustrated below.

Summary Heading of Impact

Impact 4.1-1: An impact summary heading appears immediately preceding the impact description (Summary Heading of Impact in this example). The impact number correlates to the section of the report (4.1 for Aesthetics in this example) and the sequential order of the impact (1 in this example) within that section. To the right of the impact number is the impact statement, which identifies the potential impact, corresponding to CEQA thresholds.

Project Impact Analysis

A narrative analysis follows the impact statement. The analysis identifies the significant environmental effects of the proposed Project on the environment, based on an examination of the changes in the existing physical conditions in the affected area as they exist at the time the Notice of Preparation is published. Direct and indirect significant effects of the Project on the environment are identified and described for both the short-term and long-term effects. The analysis includes relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services.

Cumulative Impact Analysis

A narrative analysis of cumulative impacts follows the project impacts section. The cumulative impacts analysis includes a discussion of the level of impact that would occur if the proposed Project, in combination with cumulative development, as described in Chapter 1 - *Executive Summary* of this EIR, are implemented. If the combined level of impact is *no impact* or *less-than-significant* impact, the Project's incremental effect would be less than cumulatively considerable. If the combined level of impact is *significant*, the Project's incremental effect is determined to be cumulatively considerable. The discussion of cumulative impacts is guided by the standards of practicality and reasonableness and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.

Mitigation Measures

Mitigation measures to reduce potential project-specific and cumulative impacts include a summary heading and description using the format presented below:

MM 4.4-1: Project-specific or cumulative mitigation is identified that would reduce the impact to the lowest degree feasible. The mitigation number links the particular mitigation to the impact section with which it is associated (Impact 4.4-1 in this example).

Level of Significance After Mitigation

This section identifies the resulting level of significance of the project-specific or cumulative impact following mitigation.

CHAPTER 5 - CONSEQUENCES OF PROJECT IMPLEMENTATION

5.1 - Environmental Effects Found to be Less than Significant

Section 15128 of the California Environmental Quality Act (CEQA) Guidelines requires that an Environmental Impact Report (EIR) "contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR."

The City of Hanford has engaged the public in the scoping of the environmental document. Comments received during scoping have been considered in the process of identifying issue areas that should receive attention in the EIR. The contents of this EIR were established based on the Notice of Preparation (NOP) prepared in accordance with the CEQA Guidelines and on public and agency input received during the scoping process.

After further study and environmental review in this EIR, direct and indirect impacts of the proposed Project (not including cumulative impacts) would be less than significant or could be reduced to less-than-significant levels with mitigation measures for the resource areas listed below.

5.1.1 - POTENTIAL FOR LESS THAN SIGNIFICANT IMPACTS TO OCCUR

Aesthetics

- Impact 4.1-3: Substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from publicly accessible vantage point). If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality

- Impact 4.1-4: Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area

Agriculture and Forestry Resources

- Impact 4.2-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use

- Impact 4.2-5: Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use

Air Quality

- Impact 4.3-1: Conflict with or obstruct implementation of the applicable air quality plan
- Impact 4.3-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or State ambient air quality standard
- Impact 4.3-3: Expose sensitive receptor to substantial pollutant concentrations
- Impact 4.3-4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people

Biological Resources

- Impact 4.4-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service
- Impact 4.4-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service
- Impact 4.4-3: Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means
- Impact 4.4-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites

Cultural Resources

- Impact 4.5-1: Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5
- Impact 4.5-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5
- Impact 4.5-3: Disturb any human remains, including those interred outside of formal cemeteries

Energy

- Impact 4.6-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during Project construction or operation

- Impact 4.6-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency

Geology and Soils

- Impact 4.7-1: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving the rupture of a known earthquake fault

- Impact 4.7-2: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking

- Impact 4.7-3: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction

- Impact 4.7-4: Directly or indirectly cause potentially substantial adverse effects, including the risk of loss, injury, or death involving landslides

- Impact 4.7-5: Result in substantial soil erosion or loss of topsoil

- Impact 4.7-6: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse

- Impact 4.7-7: Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property

- Impact 4.7-9: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

Greenhouse Gas Emissions

- Impact 4.8-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment

- Impact 4.8-2: Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases

Hazards and Hazardous Materials

- Impact 4.9-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials

- Impact 4.9-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment

- Impact 4.9-3: Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school

- Impact 4.9-4: Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment

- Impact 4.9-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area

- Impact 4.9-6: Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan

Hydrology and Water Quality

- Impact 4.10-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality

- Impact 4.10-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin

- Impact 4.10-3(i): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site

- Impact 4.10-3(ii): Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river or through the addition of impervious surfaces, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site

- Impact 4.10-3(iii): Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff

- Impact 4.10-3(iv): Impede or redirect flood flows

- Impact 4.10-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan

Land Use and Planning

- Impact 4.1-2 (Impact 4.11-2 of Appendix G): Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect

Noise

- Impact 4.13-1: Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies

- Impact 4.13-2: Generation of excessive ground-borne vibration or ground-borne noise levels

Population and Housing

- Impact 4.14-1: Induce substantial unplanned population growth in an area, either directly or indirectly

Public Services

- Impact 4.15-1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or to other performance objectives for any of the public services for fire protection services

- Impact 4.15-2: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for police protection services

- Impact 4.15-3: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause

significant environmental impacts in order to maintain acceptable service Ratios, response times, or other performance objectives for school services

- Impact 4.15-4: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for park services

- Impact 4.15-5: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for other public facilities

Recreation

- Impact 4.16-1: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated

Transportation and Traffic

- Impact 4.17-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)

- Impact 4.17-4: Result in inadequate emergency access

Tribal Cultural Resources

- Impact 4.18-1(i): Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)

- Impact 4.18-1(ii): Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the Lead Agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code

Section 5024.1, the Lead Agency shall consider the significance of the resource to a California Native American tribe

Utilities and Service Systems

- Impact 4.19-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which would cause significant environmental effects

- Impact 4.19-2: Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed

- Impact 4.19-3: Result in a determination by the wastewater treatment provider that serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments

- Impact 4.19-4: Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals

- Impact 4.19-5: Comply with federal, state, and local management and reduction statutes and regulations related to solid waste

Wildfire

- Impact 4.20-1: Substantially impair an adopted emergency response plan or emergency evacuation plan

- Impact 4.20-2: Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire

- Impact 4.20-3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment

- Impact 4.20-4: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes

5.1.2 - Potential for Less than Significant Impacts to Occur with Incorporation of Mitigation Measures

Potential environmental effects of the Project and mitigation measures are discussed in detail in Chapter 4 of this EIR. After a full analysis, the following effects were determined to be less than significant with the incorporation of mitigation measures.

Transportation

- Impact 4.2-1 (Impact 4.17-1 of Appendix G): Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities

5.2 - Significant Environmental Effects that Cannot be Avoided

Section 15126.2(b) of the CEQA Guidelines requires that the EIR describe any significant impacts, including those that can be mitigated but not reduced to less-than-significant levels. Potential environmental effects of the project and proposed mitigation measures are discussed in detail in Chapter 4, *Environmental Analysis*, of this EIR.

The environmental impacts determined to be significant and unavoidable are described in Table 5-1, *Summary of Significant Impacts of the Proposed Project*.

Table 5-1
Summary of Significant Impacts of the Proposed Project

Resources	Project Impacts	Cumulative Impacts
Transportation and Traffic Impact 4.2-2 (Impact 4.17-2 of Appendix G)	VMT associated with the Project is estimated to be at 9.61 VMT per Capita and would exceed City of Hanford adopted VMT per Capita thresholds of 8.99. Since the Project exceeds the City's adopted VMT threshold and as is noted in that document and the TIS prepared for the Project, no feasible mitigation has been identified in that document to reduce impacts, permanent (operation) impacts are considered significant and unavoidable.	No feasible mitigation measure has been identified that would be feasible and reduce Project impacts to a less than significant impact. For these reasons, the proposed Project would have a **significant and unavoidable** cumulatively considerable contribution to VMT generation.

5.3 - Growth Inducing Impacts

Growth inducement can be a result of new development that requires an increase in dwelling units or an increase in employment, removes barriers to development, or provides resources that lead to secondary growth. Development pressures are a result of economic investment in a particular locality. These pressures help to structure the local politics of growth and the local jurisdiction's policies related to growth management and land use. The land use policies established by the City will regulate growth in the City.

CEQA does not consider growth inducement to be necessarily detrimental, beneficial, or of significance to the environment. Typically, the growth inducing potential of a project is considered significant if it fosters growth or a concentration of population in excess of what is assumed in pertinent master plans, land use plans, or in projections made by regional planning agencies. Significant growth impacts could also be manifested through the provision of infrastructure or service capacity to accommodate growth beyond the levels currently permitted by local or regional plans and policies. In general, growth induced by a project is considered a significant impact if it directly or indirectly affects the ability of agencies to provide needed public services, or if it can be demonstrated that the potential growth significantly affects the environment in some other way

The Project is situated in a growing urbanized area, where substantial employment and housing opportunities will continue to grow. The Project would accordingly accommodate planned growth and not induce unplanned growth. The proposed Project would create a relatively minor amount of new (temporary) employment opportunities during construction; however, those positions would likely be readily filled by the existing employment base.

With respect to removing barriers to development, such as by providing access to previously undeveloped areas, the Project is not anticipated to result in significant growth inducement. The Project does not include the construction of infrastructure that could provide for future residential development; it does not remove barriers to off-site development. Although the Project accommodates planned economic growth at suitable locations, the net increase in population on the Project site would be less than significant.

5.4 - Significant Irreversible Changes

As stated in the CEQA Guidelines, an EIR must address any significant irreversible environmental change that would result from project implementation. According to Section 15126.2(c) of the CEQA Guidelines, such a change would occur if one of the following scenarios occurs:

- *The Project would involve a large commitment of nonrenewable resources*.
  The proposed Project would not result in land use changes that will commit future generations to uses that are not already prevalent either on the present Project site or throughout the mostly urbanized Project area.

- *Irreversible damage can result from environmental accidents associated with the Project*.
  Potential environmental accidents of concern include those events that would adversely affect the environment or public because of the nature or quantity of materials released and the receptors exposed to that release.
- *The proposed consumption of resources is not justified (e.g., the Project would result in the wasteful use of energy).*
  Consumption of nonrenewable resources includes issues related to increased energy consumption, conservation of agricultural lands, and lost access to mining reserves. There would be an irretrievable commitment of labor, capital, and materials used during construction and operation of the Project. Nonrenewable resources would be committed, primarily in the form of fossil fuels such as fuel, oil, natural gas, and gasoline used by equipment associated with construction of the Project. The consumption of other non-renewable or slow renewable resources would also occur. These resources would include lumber and other forest products, sand and gravel, asphalt, and metals such as steel, copper, and lead.

  However, as noted, with the lack of a viable surface water or groundwater source, the land cannot be successfully cultivated, therefore the land would go fallow and remain unused until a different land use was proposed.

  During the operational phase of the proposed Project, energy would be used for lighting, heating, cooling, and other requirements and petroleum products would be used by vehicles associated with the residents of the proposed development. The use of these resources would not be substantial and would not constitute a significant effect.

The environmental effects of the proposed Project are thoroughly discussed in Chapter 4, *Environmental Impact Analysis*, of this EIR and summarized in the Executive Summary. Implementation of the proposed Project would commit nonrenewable resources during any construction activities and the construction of the proposed residential subdivision ~~future cannabis-related facility operations. Future cannabis-related operations, oil, gas, and other nonrenewable resources would be consumed for the cultivation, manufacturing, distribution, and retail sales of cannabis products.~~ Therefore, an irreversible commitment of nonrenewable resources would occur as a result of the proposed Project. However, assuming that those commitments occur in accordance with the adopted goals, policies, and implementation measures of the Hanford General Plan, as a matter of public policy, those commitments have been determined to be acceptable. The policies of the Hanford General Plan ensure that any irreversible environmental changes associated with those commitments will be minimized.

CHAPTER 6 - ALTERNATIVES

6.1 - Introduction

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) describe a range of reasonable alternatives to the Project or to the location of the Project site that could feasibly avoid or lessen any significant environmental impacts of the Project while attaining most of the Project's basic objectives. An EIR also must compare and evaluate the environmental effects and comparative merits of the alternatives. This chapter describes alternatives considered but eliminated from further consideration, including the reasons for elimination, and compares the environmental impacts of several alternatives retained with those of the Project.

The following are key provisions of the CEQA Guidelines (Section 15126.6):

- The discussion of alternatives shall focus on alternatives to the Project or its location that are capable of avoiding or substantially lessening any significant effects of the Project, even if these alternatives would impede to some degree the attainment of the Project objectives or would be costlier.

- The No Project Alternative shall be evaluated, along with its impacts. The no project analysis shall discuss the existing conditions at the time the Notice of Preparation was published, as well as what would be reasonably expected to occur in the foreseeable future if the Project were not approved, based on current plans and consistent with available infrastructure and community services.

- The range of alternatives required in an EIR is governed by a "rule of reason;" therefore, the EIR must evaluate only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the Project.

- For alternative locations, only locations that would avoid or substantially lessen any of the significant effects of the Project need to be considered for inclusion in the EIR.

- An EIR need not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote and speculative.

The range of feasible alternatives is selected and discussed in a manner to foster meaningful public participation and informed decision-making. Among the factors that may be taken into account when addressing the feasibility of alternatives, as described in Section 15126.6(f)(1) of the CEQA Guidelines, are environmental impacts, site suitability, economic viability, availability of infrastructure, general plan consistency, regulatory limitations, jurisdictional boundaries, and whether the Project proponent could reasonably acquire, control, or otherwise have access to an alternative site. An EIR need not consider an alternative whose effects could not be reasonably identified, whose implementation is remote or speculative, and that would not achieve the basic project objectives.

Under case law and CEQA Section 15126.6(f), the discussion of alternatives need not be exhaustive and is subject to a rule of reason. CEQA Section 15126.6(d) states that "if an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternatives shall be discussed, but in less detail than the significant effects of the project as proposed." Determining factors that may be used to eliminate alternatives from detailed consideration in an EIR are (a) failure to meet most of the basic project objectives, (b) infeasibility, or (c) inability to avoid significant environmental impacts. CEQA Section 15364 defines "feasibility" as "Capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors."

The Project has the potential to have significant adverse effects, at either a project level or cumulative level, on aesthetics, agriculture, air quality, biological resources, greenhouse gas emissions, noise, population, and housing at the Project site. Even with the mitigation measures described in Chapter 4, *Environmental Analysis*, of this EIR, impacts in these issue areas would be significant and unavoidable. Therefore, per the CEQA Guidelines, this section discusses alternatives that are capable of avoiding or substantially lessening the effects on these resources. Significant, unavoidable impacts of the Project are summarized below. Following these summaries, Section 6.2, *Project Objectives*, restates the Project proponent's objectives. Section 6.3, *Alternatives Eliminated from Further Consideration*, presents alternatives to the Project that were considered but eliminated for further analysis. Section 6.4, *Alternatives Analyzed in This EIR*, presents alternatives fully analyzed in this EIR, provides a comparison of alternatives, and makes a determination about the environmentally superior alternative.

6.1.1 - Significant Impacts of the Project

The implementation of the proposed Project would result in significant and unavoidable impacts and significant impacts prior to mitigation incorporated. These potential significant and unavoidable impacts and less-than-significant impacts with mitigation incorporated are evaluated for each of the alternatives that are considered and evaluated as discussed below.

No Potential for Impacts to Occur

Potential environmental effects of the Project and mitigation measures are discussed in detail in Chapter 4 of this EIR. After a full analysis, the following effects were determined to have no potential for impacts to occur:

Aesthetics

- Impact 4.1-1: Have a substantial adverse effect on a scenic vista
- Impact 4.1-2: Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway

Agriculture and Forest Resources

- Impact 4.2-2: Conflict with existing zoning for agricultural use or a Williamson Act contract

- Impact 4.2-3: Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), or timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Productions (as defined in Government Code Section 51104(g))

- Impact 4.2-4: Result in the loss of forest land or conversion of forest land to non-forest use

Biological Resources

- Impact 4.4-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance

- Impact 4.4-6: Conflict with provisions of an adopted habitat conservation plan, natural communities conservation plan, or other approved local, regional, or State habitat conservation plan

Geology and Soils

- Impact 4.7-8: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater

Hazards and Hazardous Materials

- Impact 4.9-7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires

Hydrology and Water Quality

- Impact 4.10-4: In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation

Land Use and Planning

- Impact 4.11-1: Physically divide an established community

Mineral Resources

- Impact 4.12-1: Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State

- Impact 4.12-2: Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan

Noise

- Impact 4.13-3: For a Project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels

Population and Housing

- Impact 4.14-2: Displace substantial number of existing people or housing necessitating the construction

Recreation

- Impact 4.16-2: Include recreational facilities or require construction or expansion of recreational facilities that might have an adverse physical effect on the environment

Potential for Less than Significant Impacts

Potential environmental effects of the Project and mitigation measures are discussed in detail in Chapter 4 of this EIR. After a full analysis, the following effects were determined to have less than significant impacts to occur:

Aesthetics

- Impact 4.1-3: Substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality

- Impact 4.1-4: Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area

Agriculture and Forest Resources

- Impact 4.2-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use

- Impact 4.2-5: Involve other changes in the existing environment which, because of their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use

Air Quality

- Impact 4.3-1: Conflict with or obstruct implementation of the applicable air quality plan
- Impact 4.3-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or State ambient air quality standard
- Impact 4.3-3: Expose sensitive receptors to substantial pollutant concentrations
- Impact 4.3-4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people

Biological Resources

- Impact 4.4-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service
- Impact 4.4-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service
- Impact 4.4-3: Have a substantial adverse effect on State or federally Protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means
- Impact 4.4-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites

Cultural Resources

- Impact 4.5-1: Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5
- Impact 4.5-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5
- Impact 4.5-3: Disturb any human remains, including those interred outside of dedicated cemeteries

Energy

- Impact 4.6-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation

- Impact 4.6-2: Conflict with or obstruct a State or local plan for renewable energy or energy efficiency

Geology and Soils

- Impact 4.7-1: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving the rupture of a known earthquake fault

- Impact 4.7-2: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking

- Impact 4.7-3: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction

- Impact 4.7-4: Directly or indirectly cause potentially substantial adverse effects, including the risk of loss, injury, or death involving landslides

- Impact 4.7-5: Result in substantial soil erosion or loss of topsoil

- Impact 4.7-6: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse

- Impact 4.7-7: Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property

- Impact 4.7-9: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

Greenhouse Gas Emissions

- Impact 4.8.1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment

- Impact 4.8.2: Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases

Hazards and Hazardous Materials

- Impact 4.9-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials

- Impact 4.9-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment

- Impact 4.9-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school

- Impact 4.9-4: Create a hazard to the public or the environment as a result of being located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5

- Impact 4.9-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area

- Impact 4.9-6: Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan

Hydrology and Water Quality

- Impact 4.10-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality

- Impact 4.10-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin

- Impact 4.10-3(i): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site

- Impact 4.10-3(ii): Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river or through the addition of impervious surfaces, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site

- Impact 4.10-3(iii): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the

addition of impervious surfaces, in a manner which would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantially additional sources of polluted runoff

- Impact 4.10-3(iv): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows

- Impact 4.10-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan

Land Use and Planning

- Impact 4.1-2 (Impact 4.11-2 of CEQA Appendix G): Cause a significant environmental impact due to a conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect

Noise

- Impact 4.13-1: Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies

- Impact 4.13-2: Generation of excessive ground-borne vibration or ground-borne noise levels

Population and Housing

- Impact 4.14-1: Induce substantial unplanned population growth in an area, either directly or indirectly

Public Services

- Impact 4.15-1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection

- Impact 4.15-2: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for police protection services

- Impact 4.15-3: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service Ratios, response times, or other performance objectives for school services

- Impact 4.15-4: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for park services

- Impact 4.15-5: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for other public facilities

Recreation

- Impact 4.16-1: Result in increased use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration would occur or be accelerated

Transportation

- Impact 4.17-3: Substantially increase hazards due to a geometric design feature or incompatible uses

- Impact 4.17-4: Result in inadequate emergency access

Tribal Cultural Resources

- Impact 4.18-1: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California register of historical resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)

- Impact 4.18-2: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its

discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Subdivision (c) of Public Resources Code Section 5024.1

Utilities and Service Systems

- Impact 4.19-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects

- Impact 4.19-2: Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed

- Impact 4.19-3: Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments

- Impact 4.19-4: Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals

- Impact 4.19-5: Comply with federal, State, and local management and reduction statutes and regulations related to solid waste

Wildfire

- Impact 4.20-1: Substantially impair an adopted emergency response plan or emergency evacuation plan

- Impact 4.20-2: Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire

- Impact 4.20-3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment

- Impact 4.20-4: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes

Potential for Less than Significant Impacts to Occur with Incorporation of Mitigation Measures

Potential environmental effects of the Project and mitigation measures are discussed in detail in Chapter 4 of this EIR. After a full analysis, the following effect was determined to be less than significant with the incorporation of mitigation measures.

Transportation

- Impact 4.2-1 (Impact 4.17-1 of CEQA Appendix G): Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities

Potential for Significant and Unavoidable Impacts to Occur

Potential environmental effects of the Project and mitigation measures are discussed in detail in Chapter 4 of this EIR. After a full analysis, the following effects were determined to have potential for significant and unavoidable impacts to occur:

Transportation

- Impact 4.2-2 (Impact 4.17-2 of CEQA Appendix G): Conflict or be inconsistent with CEQA Guidelines 15064.3, Subdivision (b)

6.1.2 - Other Impacts of the Project

Impacts of the Project on the other resources evaluated in this EIR were found to be either less than significant or less than significant after mitigation. Therefore, consideration of alternatives that would further reduce impacts on these resources is not required by CEQA. Only alternatives that reduce or substantially lessen the Project's impacts on aesthetics, agriculture, air quality, biological resources, greenhouse gas emissions, noise, or population and housing are considered in this EIR. If one of the alternatives would cause a greater adverse impact on another resource, these impacts are disclosed in Section 6.4, *Alternatives Analyzed in this EIR*. Otherwise, impacts to the remaining resources evaluated in this EIR are not discussed further in this section.

6.2 - Project Objectives

The Project has the following objectives:

1. Provide a variety of housing opportunities with a range of styles, sizes, and values that will be designed to satisfy existing and future demand for quality housing in the area.

2. Provide a sense of community and walkability within the development through the use of street patterns, parks/open space areas, landscaping, and other Project amenities.

3. Create a successful and financially feasible Project by meeting the housing needs of the area.

4. Provide a residential development that assists the City in meeting its General Plan and Housing Element requirements and objectives.

CEQA requires that an EIR describe a reasonable range of alternatives to the Project, or to the location of the Project, that would avoid or substantially lessen any of the significant effects of the Project and that would feasibly attain most of the basic Project objectives (Title 14, Section 15126.6). Attainment of the Project objectives is discussed for each retained alternative in Section 6.4.

6.3 - Alternatives Considered but Rejected

There are no Project alternatives that were considered and rejected.

6.4 - Alternatives Considered and Evaluated

An evaluation of three alternatives that were considered and evaluated is provided below. These alternatives represent a reasonable range of alternatives to the proposed Project. This analysis includes alternatives that could feasibly accomplish some of the basic objectives of the proposed Project and could potentially avoid or substantially lessen one or more of the significant effects. The following is an evaluation of each of the alternatives to the proposed Project that were further considered for analysis. Table 6-1, below, provides a summary of the impacts comparison between the proposed Project and the Project alternatives.

6.4.1 - Alternative A - No Project Alternative

Under the No Project Alternative, the Project area would remain unchanged and there would be no residential units or parks constructed. The No Project Alternative would keep the site as agriculture and remain under the jurisdiction of Kings County. As no change would occur, the Project site would continue to be consistent with the Kings County General Plan land use designation and zoning of Limited Agriculture, 10 acres (AL10). meet the State Regional Housing Needs Allocation (RHNA) for new housing in the City under the Housing Element of the City General Plan.

The No Project Alternative would not: (a) address the City's current and projected housing needs by providing a range of single-family residences; (b) meet any of the General Plan policies or objectives related to meeting the housing needs of all citizens, or provide; (c) provide residential housing opportunities for a wide range of housing choices that insure opportunities for a variety of age groups, lifestyles, and income levels that are visually

attractive and accommodate the future housing demand in Hanford; (d) establish a mixture of housing types, sizes and densities that collectively provide for local and regional housing demand; (e) provide infrastructure that meets the City standards and is integrated with existing and planned facilities and connections; and (f) develop a project that meets City standards by implementing a logical phasing plan for development of public infrastructure improvements.

With regard to transportation impacts, the No Project Alternative would result in no new trips generated. Therefore, the No Project Alternative would reduce the less than significant impact associated with LOS thresholds and significant and unavoidable impact relating to VMT.. The No Project Alternative would not fulfill the objectives of the Project or assist the City in meeting its housing goals as outlined in the General Plan.

6.4.2 - ALTERNATIVE B - REDUCED PROJECT ALTERNATIVE

This alternative would decrease the number of single-family residential houses from 326 to 242. As described in this draft EIR, the proposal to approve the tentative tract map, annex the site into the City, and prezoning the site to R-L-5 would remain the same. With **Alternative B** a similar outcome to the proposed Project would occur with regard to County and City General Plan consistency. The annexation would meet County and LAFCo objectives in addition to providing planned City expansion within their SOI. This alternative will meet all Project objectives but would have a reduced positive effect of assisting the City in meeting regional housing needs. Under **Alternative B***,* overall VMT for the Project would decrease; however, per capita VMT impacts of significant and unavoidable would remain the same as the proposed Project. With regard to City LOS thresholds, overall trip generation would be reduced, resulting in lessened impacts on studied intersections. However, this reduction is still likely to exceed LOS thresholds cumulatively, and require mitigation as indicated in this draft EIR to improve the impacted intersection of 12th Avenue and Hanford Armona Road. Impacts regarding LOS would continue to be *less than significant with mitigation incorporated*.

6.4.3 - ALTERNATIVE C – MULTI-FAMILY ALTERNATIVE

This alternative would replace the proposed single-family residential with multi-family apartments at a density of at least 14.5 dwelling units per gross acre (1,088 units). The Project site is currently designated by the General Plan for low-density residential and prezoned R-L-5. The proposed Project request would be modified to include a General Plan Amendment and a Zone Change to Medium Density Residential (R-M) to allow multi-family apartments. Although it is not guaranteed that multifamily housing would be rented at rates to meet the criteria as very low or low incoming housing, if such units were constructed and rented at those rates, they would help the City meet the housing requirements for new very low or low income housing in the City under the Housing Element of the City General Plan.

With regard to the addition of a General Plan Amendment, consistency findings with General Plan goals and policies would be necessary to determine if the proposed Medium Density Residential land use would comply. However, due to its proximity to designated Medium

Density Residential land northerly adjacent to the Project site, consistency findings can likely be made as availability of City services, implementation of pedestrian, bicycle, and vehicle standards, and payment of impact fees would still be applicable to the development.

Under **Alternative C**, the overall density increase could result in higher trips generated, which in turn, may cause impacts to LOS and VMT. It has been theorized that residents who live in very low or low income housing tend to utilize mass transit. Although it is unknown, if the multifamily housing met the criteria for very low or low income housing, LOS might not increase with the use in mass transit. However, if the multifamily units were considered as moderate or above moderate income units, the Project could generate a rise in vehicle trips due to an increased number of residents originating from the Project site, and would result in higher utilization of intersections in the vicinity of the site. Therefore, depending on the income category the multifamily housing units, **Alternative C** could decrease LOS impacts or could negatively impact LOS for the studied intersections and would potentially require additional mitigation/improvements to intersections to meet LOS standards.

In regard to VMT, the City of Hanford has adopted VMT Thresholds and Implementation Guidelines, which was utilized for the proposed Project to determine impacts, as noted in the TIS prepared for the Project (Ruettgers and Schuler Civil Engineers, 2024). With regard to the adopted screening criteria and VMT thresholds, **Alternative C** does not meet the screening criteria and could generate more than 1,000 average daily trips, is not located within 0.5 miles of a transit priority area and is not located within an area where existing VMT per capita is low. The City's VMT Guidelines cite the *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health Equity: Designed for Local Governments, Communities, and Project Developers,* California Air Pollution Control Officers Association, December 2021 (CAPCOA Handbook) as a source for measures with quantitative methods for estimating VMT reduction.

It was found that in the CAPCOA Handbook, that an increase in density over the national average (9.1 dwelling units per acre) can result in a VMT reduction. Assuming no change in the amount of developable land, the Project would need at least 455 dwelling units to reach the national average and be credited for any reduction in project VMT. Moreover, the project would require a total of 590 dwelling units to mitigate the impact of project VMT to a less-than-significant level. (Ruettgers and Schuler Civil Engineers, 2024). As **Alternative C** proposes a density larger than the national average, it can be seen that a reduction in Project VMT would occur. Therefore, VMT under **Alternative C** would result in a less than significant impact.

6.4.4 - ALTERNATIVE D – DIFFERENT SITE ALTERNATIVE

This alternative would relocate the Project to a different site in order to be located nearer to corridor mixed use where a mix of commercial and office uses would be available in addition to being located closer to major transit corridors. This alternative would locate the Project on the east side of the City, bounded by Lacey Boulevard to the south, 9 1/4 Avenue to the west, State Route 43 to the east, and Grangeville Boulevard to the north. This alternative will meet all Project objectives and would assist the City in meeting its housing needs.

Additionally, **Alternative D** would result in similar conditions as the proposed Project, consistency findings with Kings County and LAFCo for annexation, and General Plan conformity with the City can be made. With regard to LOS standards, the alternative site would require an analysis of intersections in the vicinity of the site and the comparisons of future conditions at the chosen intersections. It can be assumed that under **Alternative D**, impacts to LOS at intersections could occur similar to the proposed Project. Dependent on the LOS grade found as a result of Project implementation, mitigation measures for intersection improvements and the use of transportation impact fees per General Plan policy would be applicable to **Alternative D** and therefore result in similar impacts as the proposed Project.

Under **Alternative D**, overall VMT per capita for the Project would still exceed City VMT thresholds as the majority of the site is located within a high VMT area and cannot be screened out using the City's screening thresholds, the *VMT Guidelines cite the Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health Equity: Designed for Local Governments, Communities, and Project Developers*, California Air Pollution Control Officers Association, December 2021 (CAPCOA Handbook) as a source for mitigation measures with quantitative methods for estimating VMT reduction (Ruettgers and Schuler Civil Engineers, 2024), in addition to no changes made to the Project lot count. Therefore, per capita, VMT would remain similar to the proposed Project as there are no other factors including proximity to high-quality transit corridors that could provide VMT reductions. Impacts would continue to be *significant and unavoidable*. In addition, the applicant does not currently own either of these properties and it is not known if the current owners are willing to sell these properties.

6.5 - Environmentally Superior Alternative

CEQA requires that the City identify an Environmentally Superior Alternative. If the No Project Alternative is the Environmentally Superior Alternative, the City must identify an Environmentally Superior Alternative among the other alternatives considered in the EIR (CEQA Guidelines, Section 15126.6). This alternatives analysis includes three other Project alternatives –Alternative B - Reduced Project, Alternative C - Multi-Family, and Alternative D - Different Site.

Based on the evaluation of the three alternatives, Alternative C – Multi-Family could reduce the significant and unavoidable environmental impacts relating to VMT if the criteria for very low or low income units was met, LOS impacts would not increase with the increased density of units. while fulfilling most of the objectives of the proposed Project. Although this is speculative, if realized, Alternative C would be considered the Environmentally Superior Alternative. However, if the multifamily units are considered moderate or above moderate, it is unlikely that VMT impacts would be reduced to less than significant impacts, and LOS impacts might increase and require additional mitigation measures.

Table 6-1
Summary of Alternatives Impacts

Environmental Resource	Project	Alternative A	Alternative B	Alternative C	Alternative D
Land Use and Planning: Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect	Less than significant	Similar	Similar	Similar	Similar
Land Use and Planning: Cumulative Impacts associated with land use plan, policy, or regulation	Less than significant	Similar	Similar	Similar	Similar
Transportation and Traffic: Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities	Less than significant with mitigation incorporated	Fewer	Fewer	Fewer/Similar	Similar
Transportation and Traffic: Cumulative Impacts associated with LOS	Less than significant with mitigation incorporated	Fewer	Fewer	Fewer/Similar	Similar
Transportation and Traffic: Conflict or be Inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b)	Significant / Unavoidable	Fewer	Similar	Fewer/Similar	Similar
Transportation and Traffic: Cumulative Impacts associated with VMT	Significant / Unavoidable	Fewer	Similar	Fewer/Similar	Similar
Meet Project Objectives	Yes	No	Yes	Yes	Yes
Reduce Any Significant and Unavoidable Impacts to No Impact or Less than Significant	No	Yes	No	Possibly	No

CHAPTER 7 - RESPONSE TO COMMENTS

Pursuant to CEQA Guidelines Section 15087m the drafted Focused EIR was circulated for public comment for 45 days, from November 26, 2024 through January 9, 2025.

No comments were received during the public comment period.

However, some revisions were made to the text of the draft EIR. Clarifications and modifications to the Draft EIR text are shown with underline and text removed from the Draft EIR is shown with ~~strikethrough~~. The revisions, as outlined fall within the scope of the original project analysis included in the draft EIR and do not result in an increase to any identified impacts or produce any new impacts. No significant new environmental impact would result from the changes. Therefore, no significant revisions have been made that would require recirculation of the Draft EIR pursuant to CEQA Guidelines Section 15088.5 (Recirculation of an EIR Prior to Certification).

CHAPTER 8 - ORGANIZATIONS AND PERSONS CONSULTED

Note: All of the below entities were either notified or contacted directly to ask for or directly receive consultation on their applicable area of expertise with respect to this proposed Project. This may not be an all-inclusive list.

Federal Agencies

- U.S. Department of Agriculture/Natural Resources Conservation Service
- U.S. Environmental Protection Agency—Region IX
- U.S. Fish and Wildlife Service

State Agencies

- California Air Resources Board
- California Highway Patrol
- California Department of Conservation
- California Department of Toxic Substances Control
- California Department of Parks and Recreation
- California State Department of Water Resources
- California Department of Fish and Wildlife
- California Department of Forestry and Fire Protection
- California Department of Health Services
- Native American Heritage Commission
- California Department of Transportation District 6
- Regional Water Quality Control Board/Central Valley Region
- State Clearinghouse Office of Planning and Research

Regional and Local

- Kings County Public Works Department
- Kings County Sheriff's Department
- City of Hanford Public Works Department
- City of Hanford Community Development Department
- City of Hanford Parks & Recreation Department
- City of Hanford Police Department
- City of Hanford Airport Department
- Hanford Elementary School District
- Hanford Joint Union High School District
- Pacific Gas & Electric Company
- San Joaquin Valley Unified Air Pollution Control District
- Southern San Joaquin Valley Information Center
- Southern California Gas Company
- Southern California Edison

Native American Consultation

In accordance with Assembly Bill 52 and the California Tribal Consultation guidelines, the appropriate native groups were consulted with respect to the Project's potential impacts on Native American places, features, and objects. As of the writing of this report, staff have not received any comments from consulted tribes regarding the department's AB 52 request. Staff notes consultation with appropriate Native American groups per AB 52 requirements has occurred.

CHAPTER 9 - LIST OF PREPARERS

Lead Agency

CITY OF HANFORD

Jason Waters – Deputy City Manager, Director of Community Development
Gabrielle Myers – Senior Planner, Community Development Department

Technical Assistance

QK

Jaymie L. Brauer, Principal Planner

Thomas Kobayashi, Senior Associate Planner

RUETTGERS & SCHULER, CIVIL ENGINEERS

Ian Parks, PE, RCE

GEO TECK, INC

Kyle R. McHargue, CEG, Project Geologist

Anna M. Scott, Project Geologist

CHAPTER 10 - REFERENCES

California Department of Conservation. (2022). *California Farmland Mapping and Monitoring Program*. Retrieved from California Important Farmland Finder: https://maps.conservation.ca.gov/DLRP/CIFF/

GeoTeck, Inc. (2024). *Phase I and Limited Phase II Environmental Site Assessment, Westing Tentative Subdivision Map No. 943.*

KCAG. (2022). *KCAG 2018 RTP.* Retrieved from https://www.kingscog.org/rtp_adopted

Kings County. (2010). *County of Kings 2035 General Plan.*

Kings County Council of Governments. (2020). *KCAG VMT and Parcels*. Retrieved from ArcGIS: https://www.arcgis.com/home/item.html?id=e62d55a0d03841a0aa41f3655c5f4770

Ruettgers and Schuler Civil Engineers. (2024). *Traffic Study, Silicon Valley Ranch.*

BEFORE THE LOCAL AGENCY FORMATION COMMISSION
COUNTY OF KINGS, STATE OF CALIFORNIA

* * * * *

IN THE MATTER OF APPROVING HANFORD ANNEXATION NO. 161)

Resolution No. 25-06
Re: LAFCO Case No. 25-02

WHEREAS, on April 2, 2025, an application was accepted for filing by the City of Hanford with the Executive Officer and certified complete on July 23, 2025, to annex certain territory to the City of Hanford and detach the same territory from the Kings River Conservation District and Excelsior-Kings River Resource Conservation District; and

WHEREAS, the reorganization represents 100 percent consent of all landowners within the subject territory; and

WHEREAS, the Executive Officer's report, with recommendations, was forwarded to officers, persons, and public agencies as prescribed by law and was reviewed at said public meeting held before LAFCO on August 27, 2025; and

WHEREAS, the Commission has duly considered the Executive Officer's Report, testimony, and the proposal; and

WHEREAS, the proposed reorganization is considered within the scope of the 2035 Hanford General Plan and its associated Environmental Impact Report (EIR); and

WHEREAS, on March 18, 2025, the City of Hanford determined that the project would result in significant impacts to the environment. The Environmental Impact Report (EIR) identified transportation and Traffic as a significant unavoidable impact. The project's Vehicle Miles Travelled (VMT) and Cumulative VMT would exceed the City's VMT thresholds and is considered significant and unavoidable. A mitigation monitoring and reporting program and a Statement of Overriding Considerations were adopted for this project.

NOW, THEREFORE, THE LOCAL AGENCY FORMATION COMMISSION OF KINGS COUNTY RESOLVED AS FOLLOWS:

1. The Commission finds that:

   a) It is a Responsible Agency under the California Environmental Quality Act Guidelines, Section 15096.

   b) The reorganization is being taken pursuant to the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000.

   c) The distinctive short form designation of the reorganization is "City of Hanford Annexation No. 161".

d) The City of Hanford is the applicant who requested annexation of APN 011-040-027, 038, 040 (previously 011-040-008, 010 & 027) (hereinafter the "subject territory") to proceed and all of the property owners have given consent to the annexation.

e) The proposed reorganization conforms to the adopted Sphere of Influence for the City of Hanford as adopted by LAFCO of Kings County and became effective July 24, 2024.

f) The subject territory is considered uninhabited.

g) All property owners and registered voters within the subject territory and within a 300 foot radius were duly noticed of the public hearing

h) All of the factors required by Government Code Section 56668 have been considered by the Commission before rendering a decision.

i) The reorganization is necessary to provide services to planned, well-ordered, and efficient urban development patterns that include appropriate consideration of the preservation of open-space lands within those urban development patterns.

j) The regular county assessment roll will be utilized for this reorganization.

k) The affected territory will not be taxed for existing general bonded indebtedness.

2. The Commission has reviewed the Environmental Impact Report as described above and utilized by the City of Hanford for this project and has relied on the EIR and the Statement of Overriding Considerations for this action.

3. The Commission approves LAFCO Case No. 25-02, Hanford Annexation No. 161 by adopting Resolution No. 25-04 and order the annexation to the City of Hanford and detachment from the Kings River Conservation District, and Excelsior-Kings River Conservation District subject to the following conditions:

    a) The Kings County Local Agency Formation Commission be designated as the conducting authority for the "Hanford Annexation No. 161" and be authorized to proceed with legal steps necessary to complete the annexation without notice, hearing or election.

    b) The City prepare a final map for recordation with an accompanying legal description that meets Board of Equalization Standards.

    c) The City shall provide a sufficient fee deposit with LAFCO to cover all administrative processing prior to final recording of the Certificate of Completion.

4. The legal description for the annexation to the City of Hanford is attached as Exhibit A and the same area would be removed from the Kings River Conservation District and Excelsior-Kings River Resource Conservation District.

The foregoing Resolution was adopted upon a motion by Commissioner _____, seconded by Commissioner _____, at a regular meeting held August 27, 2025 by the following vote:

AYES: Commissioners –
NOES: Commissioners –
ABSENT: Commissioner
ABSTAIN: Commissioner

LOCAL AGENCY FORMATION COMMISSION OF KINGS COUNTY

_____
Joe Neves, Chairman

WITNESS, my hand this _____ day of August, 2025.

_____
Chuck Kinney, Executive Officer

Exhibit A

ANNEXATION NO. 161
ANNEXATION TO THE CITY OF HANFORD
GEOGRAPHICAL DESCRIPTION

Portions of the Northeast and Northwest Quarters of Section 3, Township 19 South, Range 21 East, MDB&M, in the State of California, County of Kings described as follows:

Beginning at the Northwest corner of said Northeast Quarter being a point on the existing city limits of the City of Hanford;

Thence along the existing city limits the following courses:

1. South 89°23'35" East along the North line of last said Quarter, a distance of 1,057.40 feet to the Northwest corner of County Tract 876 as depicted on a map recorded in Book 24 at Page 88 of Licensed Surveyors' Plats in the Office of the Kings County Recorder;
2. South 00°33'03" West, along the West line of last said Tract, a distance of 2,866.68 feet to a point on the South line of said Northeast Quarter;
3. North 89°32'03" West along said South line of said Northeast Quarter, a distance of 1051.03 feet to the Center Quarter Corner of said Section 3;
4. North 89°32'22" West along the South line of said Northwest Quarter a distance of 261.40 feet to an angle point in the city limits of the City of Hanford per LAFCO Resolution No. 05-17 as depicted on a map recorded in Book 21, at page 66 of Licensed Surveyors' Plats in the Office of the Kings County Recorder;

Thence leaving the existing city limits of the City of Hanford the following courses:

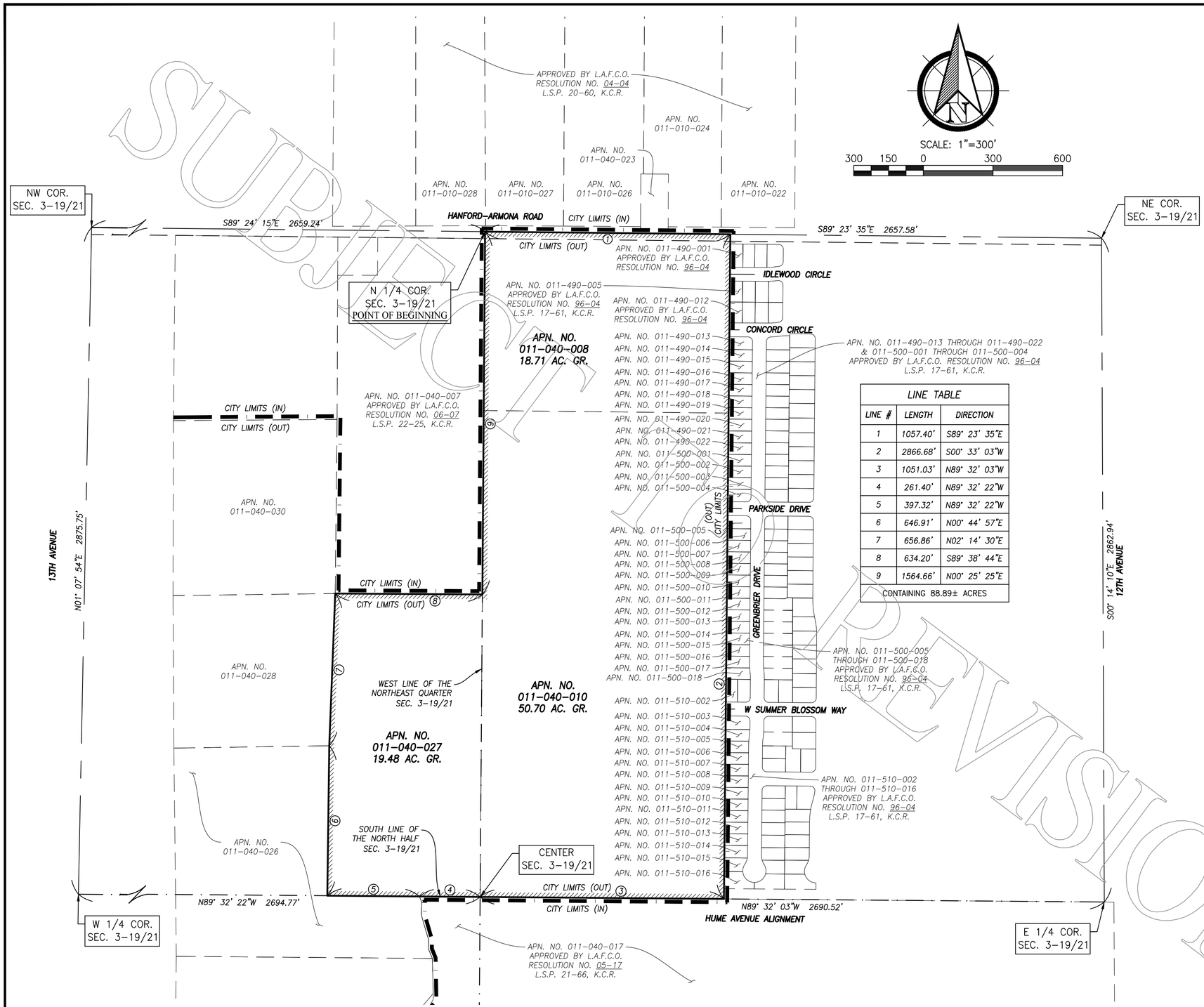
5. Continuing along said South line of the Northwest Quarter, North 89°32'22" West a distance of 397.32 feet to the southwest corner of Parcel 2 as shown on a map recorded in Book 5 at Page 72 of Parcel Maps of Licensed Surveyors' Plats in the Office of the Kings County Recorder;
6. North 00°44'57" East, along the west line of last said Parcel 2 a distance of 646.91 feet to and angle point in said west line of said Parcel 2;
7. Continuing along the West line of said Parcel 2, North 02°14'30" East, a distance of 656.86 feet to the Northwest corner of said Parcel 2, also being a point on the existing city limits of the City of Hanford;

Thence along the existing city limits the following courses:

8. South 89°38'44" East along the North line of said Parcel 2 a distance of 634.20 feet to the Northeast corner of said Parcel 2, also being a point on the west line of said Northeast Quarter;
9. Thence North 00°25'25" East, along last said West line, a distance of 1,564.66 feet to the Point of Beginning

Containing 88.89 Acres more or less.

DRAFT



SCALE: 1"=300'

300 150 0 300 600

LINE TABLE		
LINE #	LENGTH	DIRECTION
1	1057.40'	S89° 23' 35"E
2	2866.68'	S00° 33' 03"W
3	1051.03'	N89° 32' 03"W
4	261.40'	N89° 32' 22"W
5	397.32'	N89° 32' 22"W
6	646.91'	N00° 44' 57"E
7	656.86'	N02° 14' 30"E
8	634.20'	S89° 38' 44"E
9	1564.66'	N00° 25' 25"E
CONTAINING 88.89± ACRES		

MAP OF TERRITORY ANNEXED TO THE CITY OF HANFORD

AND DETACHED FROM THE KINGS RIVER CONSERVATION DISTRICT AND THE EXCELSIOR-KINGS RIVER RESOURCE CONSERVATION DISTRICT, CITY OF HANFORD REORGANIZATION NO. ____.

THIS MAP WAS PREPARED BY ME ON _____,
AND IS BASED UPON RECORD DATA AND LAFCO RESOLUTION NO. _____, DATED _____.

PRELIMINARY

JOHN A. ZUMWALT, R.C.E. 21489

REGISTERED PROFESSIONAL ENGINEER
JOHN A. ZUMWALT
21489
CIVIL
STATE OF CALIFORNIA

LEGEND

CITY LIMITS

BOUNDARY OF PROPERTIES TO BE ANNEXED

① COURSE SEGMENT NUMBER

CERTIFICATION OF COMPLETION

RECORDED AS DOCUMENT NO. _____

FEE _____
DOCUMENT NO. _____

RECORDED AT THE REQUEST OF THE LOCAL AGENCY FORMATION COMMISSION OF KINGS COUNTY.

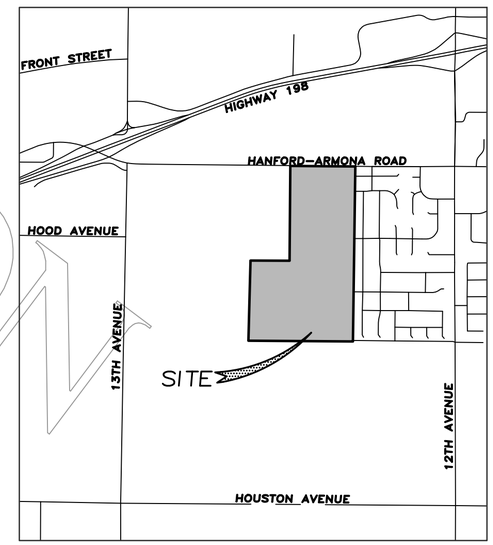
AT _____ MINUTES PAST _____ O'CLOCK _____, M.,
_____, 20____ IN VOLUME _____ OF LICENSED SURVEYORS' PLATS, PAGE _____, KINGS COUNTY, STATE OF CALIFORNIA.

KRISTINE LEE
COUNTY RECORDER

BY: _____
DEPUTY

VICINITY MAP

Not to Scale



SUBJECT TO REVISION

ZUMWALT HANSEN INC. A GK Company
609 N. IRWIN ST. HANFORD, CA. 93230 PH. (559) 582-1056

FILE NO. 220056

ONE SHEET ONLY

Local Agency Formation Commission
OF KINGS COUNTY

Date: August 27, 2025

To: LAFCO Commissioners
From: Chuck Kinney, Executive Officer

Subject: Request Authorization to attend the 2025 CALAFCO Conference and designate voting delegate

Background

The annual CALAFCO Conference registration is now open, and this year's conference runs from October 22-24, 2025. This year's conference is in San Diego. The conference will have several informative sessions as well as the CALAFCO business meeting where voting delegates from each LAFCO vote for CALAFCO Board representatives. Typically, the Executive Officer attends and on occasion one LAFCO Commissioner member will attend. The LAFCO FY Budget for 2025/2026 planned for the attendance of one LAFCO staff member and one LAFCO Commissioner to attend this year's CALAFCO Conference, however this year's Staff Workshop is local and we will have sufficient funds for two LAFCO staff members to attend the conference. If there is no Commission member interest to attend, then the Executive Officer typically serves as the LAFCO voting delegate.

Registration is $700 per person. The following expenses are estimated for this workshop per attendee:

Registration:	$700
Hotel:	$900 three nights each person ($249 per night plus tax and parking)
Travel:	$250 County vehicle and gas estimate
Meals:	$250 per diem allowance
Est. Total:	$2,100

The LAFCO FY Budget for 2025/2026 currently has $8,000 in Training and Travel related accounts. This budget includes estimated expenses for staff to attend the Annual Conference and Staff Workshop held in the spring. If a Commission member is interested in attending, the Training and Travel related account could pay for one member to attend.

Request

The Executive Officer requests LAFCO Commission authorization for the Executive Officer and the Assistant Executive Officer to attend the 2025 CALAFCO Conference and designate the LAFCO voting delegate.