

AGENDA

PLANNING COMMISSION

of the

CITY OF HANFORD

COUNCIL CHAMBERS
400 N. Douty St.
5:30 PM, Tuesday, December 28, 2021

Commissioners will meet in person in the Council Chambers. The meeting will also be livestreamed on the City's website: <http://livestream.hanford.city/>

CALL TO ORDER

ROLL CALL

INVOCATION

FLAG SALUTE

PUBLIC COMMENT

*This is the time for citizens to comment on subject matters not on the agenda and that are within the jurisdiction of the Commission. This is also the public's opportunity to request an item from the Consent Calendar be pulled for discussion purposes or to comment on any item on the agenda. Comments related to Public Hearing items will be heard at the time the item is discussed. A maximum of **three minutes** is allowed for each speaker. Please begin your comments by stating your name and providing your city of residence.*

CONSENT CALENDAR

Consent Calendar items are considered routine and will be enacted in one motion. There will be no separate discussion of these matters unless a request is made and then the item will be removed from the Consent Calendar to be discussed and voted upon by a separate motion.

Approval of the Minutes of the November 9, 2021 Meeting

PUBLIC HEARING

1. **Conditional Use Permit No. 2021-08, a request to convert a former retail store into a vocational school in the MX-D Downtown Mixed Use zone district. The project is located at 308 E. Sixth Street (APN 012-044-009).**
2. **Vesting Tentative Tract 934: A request by Precision Civil Engineering, Inc. to subdivide 36.48 acres into 161 and a 66,216 sq. ft. storm-drainage basin single-family residential lots in the R-L-5 Low-Density Residential zone district. Mitigated Negative Declaration No. 2021-100: An initial study was prepared and it was determined that the project will not result in significant impacts to the environment with the incorporation of mitigation measures; therefore, Mitigated Negative Declaration 2021-100 has been prepared. The project is located at the southeast corner of 13th Avenue and Grangeville Boulevard (APN 009-050-001 through -005).**

DIRECTOR'S COMMENTS

COMMISSIONERS' ITEMS OF INTEREST

ADJOURNMENT

Materials related to an item on this Agenda submitted to the Planning Commission after distribution of the agenda packet are available to public inspection in the Planning Division Office located at 317 N. Douty Street, Hanford, California 93230, during normal business hours. Such documents are also available at the city's website, www.cityofhanfordca.com subject to staff's ability to post documents before the meeting.

If you need a disability-related modification or accommodation, including auxiliary aids or services, to participate in this meeting, please contact the Planning Division's office, 559-585-2580, 317 N. Douty Street, Hanford, California 93230, at least 2 days prior to the meeting {28 CFR 35.102.35.104 ADA Title II}

APPEALS:

Any action of the Planning Commission, which is a final project decision, may be appealed to the City Council by the applicant or any adversely affected person. To file an appeal, an appeal application and filing fee of \$1,000.00 must be submitted to the Community Development Department, 317 N. Douty Street, Hanford, California, within ten (10) days following the date of the final decision of the Planning Commission.



**AGENDA
STAFF REPORT**

MEETING DATE: 12/28/2021	AGENDA SECTION:
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SUBJECT:

Approval of the Minutes of the November 9, 2021 Meeting

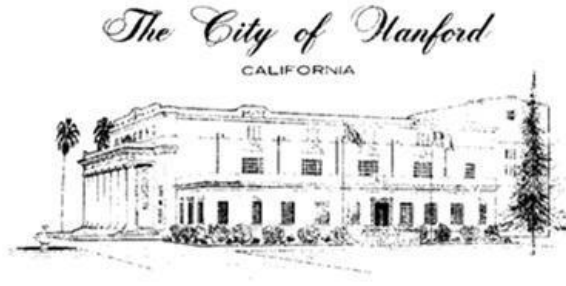
RECOMMENDATION:

Approve the minutes of the November 9, 2021 meeting.

FISCAL IMPACT:

ATTACHMENTS:

11-09-21



MINUTES
PLANNING COMMISSION
of the
CITY OF HANFORD

COUNCIL CHAMBERS
400 N. Douty Street
5:30 p.m., Tuesday, November 9, 2021

CALL TO ORDER

Chairperson SANCHEZ called the meeting to order at 5:30 p.m.

ROLL CALL

Attendee Name	Title	Status	Arrived
Richard Douglas		Present	5:08 PM
Travis Paden		Present	5:10 PM
Martin Devine		Present	5:11 PM
Jacob Sanchez		Present	5:08 PM

INVOCATION

Major Daniel Henderson, Salvation Army

FLAG SALUTE

Commissioner DOUGLAS led the flag salute.

PUBLIC COMMENT

*This is the time for citizens to comment on subject matters not on the agenda and that are within the jurisdiction of the Commission. This is also the public's opportunity to request an item from the Consent Calendar be pulled for discussion purposes or to comment on any item on the agenda. Comments related to Public Hearing items will be heard at the time the item is discussed. A maximum of **three minutes** is allowed for each speaker. Please begin your comments by stating your name and providing your city of residence.*

None.

Attachment: 11-09-21 (11-09-21 Minutes)

CONSENT CALENDAR

Consent Calendar items are considered routine and will be enacted in one motion. There will be no separate discussion of these matters unless a request is made and then the item will be removed from the Consent Calendar to be discussed and voted upon by a separate motion.

Motion to approve the Consent Calendar.

RESULT:	APPROVED [UNANIMOUS]
MOVER:	Richard Douglas
SECONDER:	Travis Paden
AYES:	Douglas, Paden, Devine, Sanchez

Approval of the Minutes of the October 26, 2021 Meeting

PUBLIC HEARING

Conditional Use Permit No. 2021-03, a request to operate two preschool classrooms in the R-M Medium Density Residential zone district. The project is located at 302 E. Tenth Street (APN 010-224-023).

Chairperson SANCHEZ opened the public hearing at 5:33 p.m. and called for the staff report.

Assistant Planner Manha presented the staff report, recommended approval, and invited questions of staff.

Chairperson SANCHEZ then opened Public Comment:

FAVOR

Michelle Dove spoke in favor of the project.

OPPOSED

None.

Following brief questions of staff, Chairperson SANCHEZ closed Public Comment and the public hearing at 5:45 p.m. and called for a motion.

Motion to adopt Resolution No. 2021-27, approving Conditional Use Permit No. 2021-03.

RESULT:	APPROVED [UNANIMOUS]
MOVER:	Travis Paden
SECONDER:	Martin Devine, Commissioner
AYES:	Douglas, Paden, Devine, Sanchez

DIRECTOR'S COMMENTS

Acting Community Development Director Myers announced that there will not be a meeting November 23, 2021.

COMMISSIONERS' ITEMS OF INTEREST

Commissioner DOUGLAS noted that the Parks and Recreation Commissioners have logo shirts. He asked if it would be possible to get Planning Commissioner shirts. Acting Director Myers will check with Parks and Community Services Director Albert for information.

ADJOURNMENT

Chairperson SANCHEZ adjourned the meeting at 5:42 p.m.

Respectfully submitted,

Diana Black
Recording Secretary

Attachment: 11-09-21 (11-09-21 Minutes)



AGENDA STAFF REPORT

MEETING DATE: 12/28/2021	AGENDA SECTION: 1
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SUBJECT:

Conditional Use Permit No. 2021-08, a request to convert a former retail store into a vocational school in the MX-D Downtown Mixed Use zone district. The project is located at 308 E. Sixth Street (APN 012-044-009).

See staff report attached.

FISCAL IMPACT:

ATTACHMENTS:

Staff Report - CUP 2021-08
 Resolution No. 2021-28
 Attachment 1: operational statement
 Attachment 2: Site Plan
 Attachment 3: SPR 2021-28 Approval Letter
 Attachment 4: Central Parking Improvement District
 Attachment 5: Notice of Exemption No. 2021-75

**CITY OF HANFORD PLANNING COMMISSION
STAFF REPORT
Tuesday, December 28, 2021**

PROJECT: Conditional Use Permit No. 2021-08, a request to convert a former retail store into a vocational school in the MX-D Downtown Mixed Use zone district.

LOCATION: The project is located at 308 E. Sixth Street (APN 012-044-009).

PLANNER: Mark Manha, Assistant Planner

STAFF RECOMMENDATION

Staff recommends that the Planning Commission:

1. Adopt Resolution No. 2021-28, approving Conditional Use Permit No. 2021-08.

RECOMMENDED MOTION

1. I move to adopt Resolution No. 2021-28, approving Conditional Use Permit No. 2021-08.

PROJECT DESCRIPTION

The project is a request to convert a former retail store into a vocational school located in the MX-D Downtown Mixed Use zone district. Per the operational statement provided (see **Attachment 1**), the school will teach cosmetology and barbering students how to perform haircutting, hairstyling, skin care, and nail services. The use of a school; charter, trade, vocational, business, or professional requires a conditional use permit in the MX-D Downtown Mixed Use zone district.

Project Location

The proposed project is located at 308 E. Sixth Street (APN 012-044-009) (see Figure 1, below).

Entitlement

The applicant has submitted Site Plan Review No. 2021-28 for the project, proposing the conversion of the structure into a facility for cosmetology education (see **Attachment 2**). Site Plan Review No. 2021-28 was reviewed by the Site Plan Review Committee. Conditions of approval appear in the approval letter (see **Attachment 3**). All conditions of approval cited in the site plan review approval letter are also conditions of approval for this conditional use permit application.

Figure 1:
Land Use (property outlined in red)

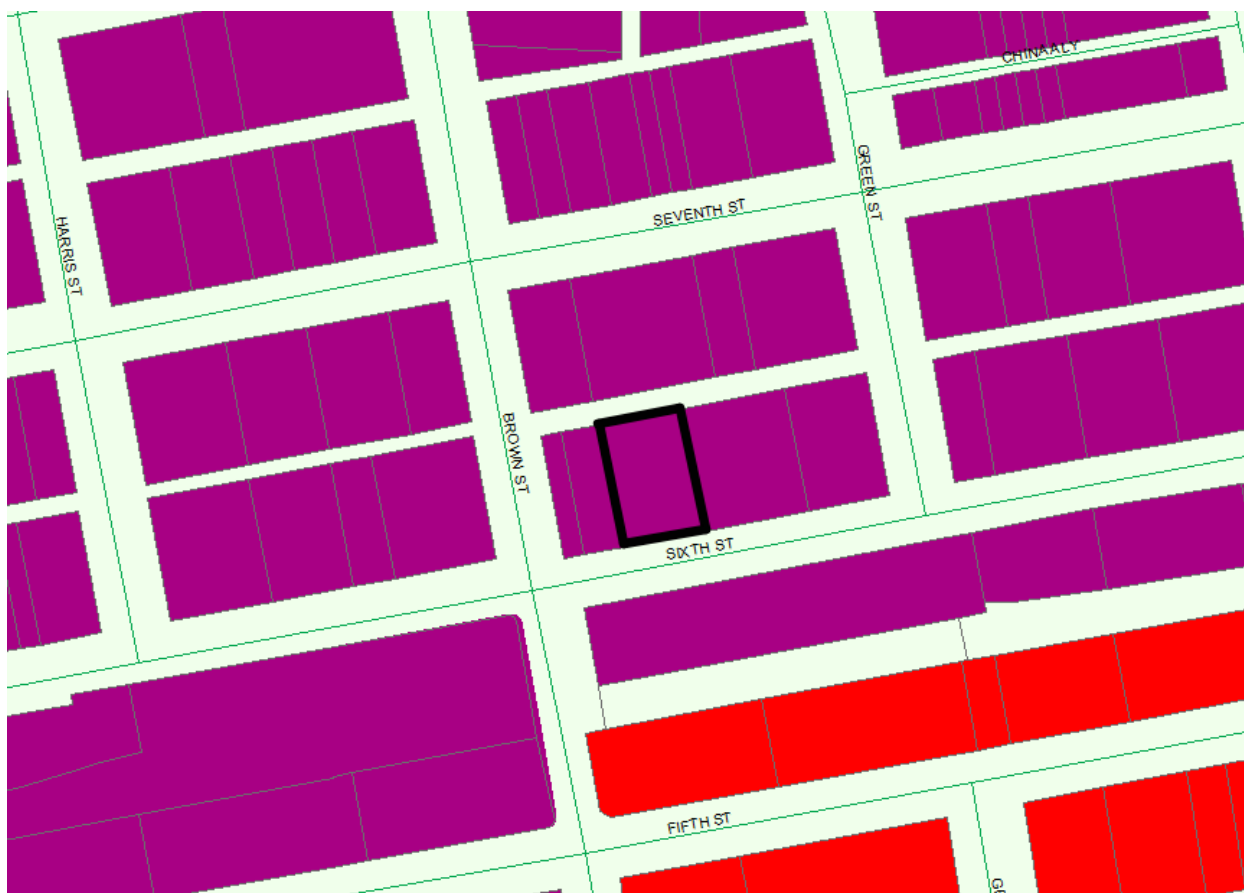


BACKGROUND INFORMATION

General Plan Designation

The General Plan designates the property as Downtown Mixed Use (see Figure 2, below). In accordance with General Plan Policy L70, Hanford shall define the uses allowed in the Downtown Mixed Use land use designation to include a wide range of retail, financial, governmental, professional, business, service, dining, and entertainment activities, along with high density residential dwellings. Typical uses include small retail shops, eating and drinking establishments, townhomes, apartments, markets, professional services, convenience stores, beauty salons, and other similar uses. Vertical and horizontal mixed-use developments are encouraged. The use of this site as a cosmetology school supports this policy, as it is a use similar to other existing permitted uses in the MX-D Downtown Mixed Use zone district.

Figure 2:
General Plan Designation (property outlined in bold)
Downtown Mixed Use



Zoning Designation

The property is zoned MX-D Downtown Mixed Use, which corresponds with the General Plan designation (see Figure 3, below). The applicant seeks to allow a vocational school in the MX-D Downtown Mixed Use zone district. According to the Commercial, Office, and Industrial Zone Use Table, presented in Table 17.08.030 of the Hanford Municipal Code, a school; charter, trade, vocational, art, business, or professional requires a Conditional Use Permit in the MX-D Downtown Mixed Use zone district (see Figure 4, below). A “school; charter, trade, vocational, business, or professional” means a facility that is operated either with public funds under a charter contract or with private funds, and that offers specific educational instruction to children and/or adults. This use includes charter schools, secretarial schools, beauty and cosmetology schools, modeling schools, language schools, computer or electronics training schools, arts schools, and automotive repair schools, and similar specialized schools.

Figure 3:
Zoning Designation (property outlined in bold)
MX-D Downtown Mixed Use

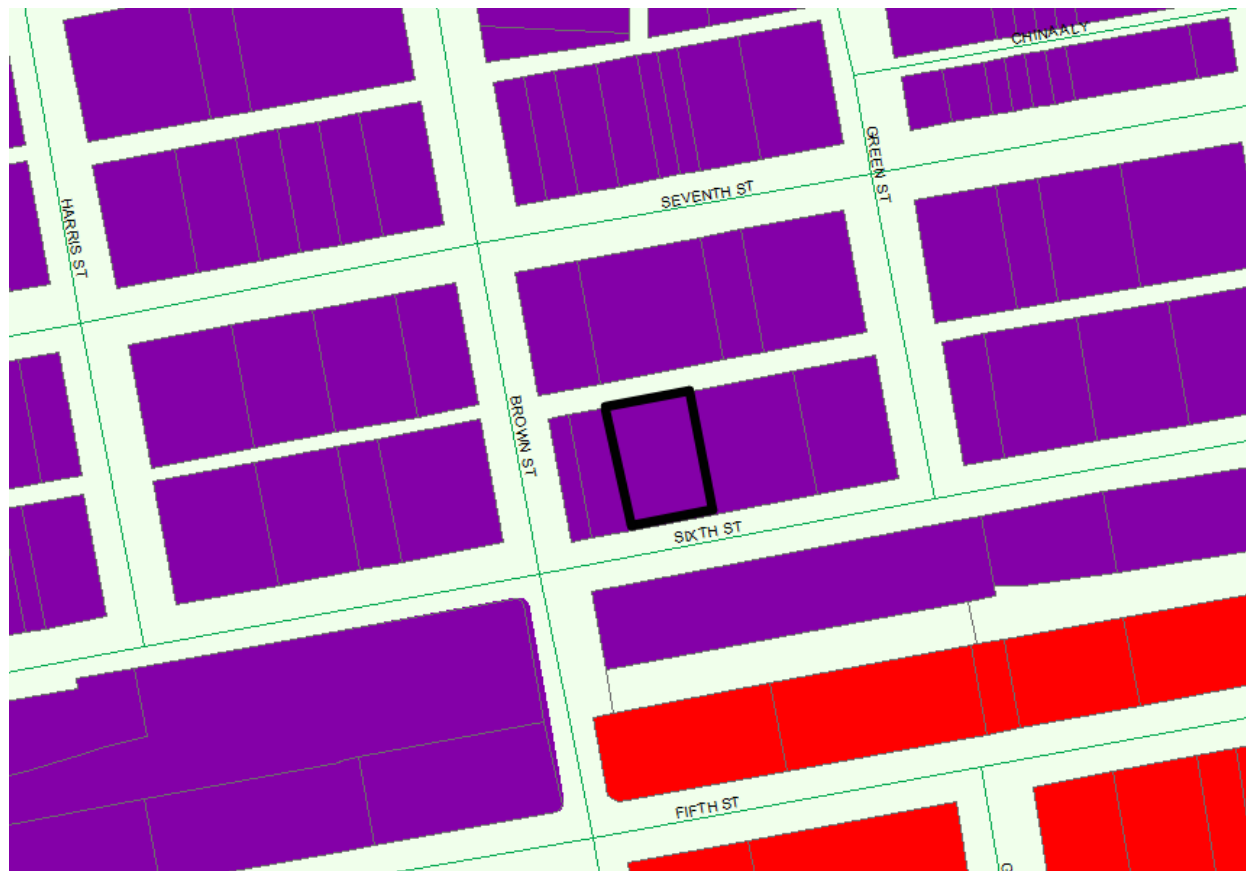


Figure 4:
Land Use Table

Commercial, Office, and Industrial Zone Use Table																
P = Use Is Permitted by Right C = Use Requires Conditional Use Permit A = Use Requires Administrative Use Permit T = Use Requires Temporary Use Permit Blank = Use Is Not Allowed																
Land Uses		Commercial Zones				Mixed Use Zones			Industrial and Office Zones				Other Zones			Specific Land Use Standards (See Identified Section)
		C-N	C-R	C-S	C-H	MX-N	MX-C	MX-D	O-R	O	I-L	I-H	AP	PF	CO	
C13	School; charter, trade, vocational, art, business, or professional		C	P			C	C	C	C	C			P		

PROJECT EVALUATION

Conformance with the standards of the MX-D Downtown Mixed Use zone district

17.28.030 Site Area

In the MX-D Downtown Mixed Use zone district, the minimum site area shall be 5,000 square feet, unless a smaller site is approved with a conditional use permit in accordance with Chapter 17.80. The subject property is 15,000 square feet. The property exceeds the site area requirement for the MX-D Downtown Mixed Use zone district.

17.28.040 Lot Dimensions

In the MX-D Downtown Mixed Use zone district, the minimum lot frontage shall be 40 feet, unless a reciprocal use agreement for shared common access and parking areas is recorded with the Kings County recorder's office. The project site has approximately 100 feet of street frontage. The property exceeds the lot frontage requirement for the MX-D Downtown Mixed Use zone district.

17.28.050 Coverage

The maximum coverage of the lot shall be determined by the combined building setback area requirements, open space requirements, and off-street parking and loading requirements. All required building setbacks, landscaping, off-street parking and loading requirements were evaluated and mandated as part of the site plan review process.

17.28.060 Building Setback Area

No structure is permitted to be placed within a building setback area.

Front-Building Setback

In the MX-D Downtown Mixed Use zone district, there is no required front building setback area. The building setback is zero feet from the front lot line, which satisfies the requirement of the MX-D Downtown Mixed Use zone district.

Side-Building Setback

The side building setback area shall be zero feet, except where the side lot line abuts an R-L, R-M, R-H, OR, O, PF, AP, or CO zone district, then the side building setback area shall be 15 feet. Since the property is not adjacent to any of the stated zone districts, the side setback area is zero feet. The existing side setback from the western lot line is 24 feet, and the existing side setback from the eastern lot line is zero feet. The side setback requirement for the MX-D Downtown Mixed Use zone district is satisfied.

Rear-Building Setback

The rear building setback may be zero feet from the rear lot line, except where the rear lot line abuts a public street or an R-L, R-M, R-H, OR, O, PF, AP, or CO zone district, then the rear building setback shall be 15 feet. Since the rear lot line is not adjacent to a public street or any of

the stated zone districts, the proposed rear setback area is zero feet. The rear building setback area will be zero feet from the rear lot line, which meets the requirement.

17.28.070 Distances Between Structures

All distances allowed by the building code are allowed. The project was reviewed by the Building Department during the Site Plan Review process and found to meet all distances allowed by the building code.

17.28.080 Height of Structures

The maximum height of structures in the MX-D Downtown Mixed Use zone district is 100 feet. The existing building is a single-story structure. There are no changes proposed to the existing building height. The single-story structure does not exceed the zone district height limitations.

17.28.090 Driveways

In the MX-D Downtown Mixed Use zone district, wherever possible, developments shall share driveways to minimize the number of driveways on public streets. New driveways near street corners shall be located a minimum 100 feet from the radius curve of the curb, unless otherwise specifically approved by the City Engineer. Sites with alleys should utilize alley access to minimize driveways on streets to the greatest extent possible. There is one existing driveway on site, which will remain for site access. The alley will be used to access the proposed trash enclosure. No new driveways are proposed. This satisfies the driveway requirements for the MX-D Downtown Mixed Use zone district.

17.28.100 Off-Street Parking

There are no existing parking spaces on site. There is on-street parking available along East Sixth Street. Chapter 17.54.040 of the Hanford Municipal Code requires 1 space per employee plus 10 spaces per classroom for “school; trade, vocational, art, business, or professional” uses. For changes of use in the Central Parking and Business Improvement District, as shown in **Attachment 4**, parking requirements are based on the difference between the proposed use and the previous use. Additional parking or the payment of an in-lieu fee if additional parking is not provided will be required only if the proposed use requires more on-site parking than the previous use. Based on the calculation for parking requirements for a change of use stated below, no additional parking is required.

Calculation:

CALCULATING PARKING REQUIREMENT AND PARKING IN LIEU FEES IN THE DOWNTOWN PARKING IMPROVEMENT DISTRICT

Proposed Use	Vocational school
Total # of Classrooms and Employees	1 classroom, 3 employees
Parking Requirement Per Municipal Code	10 per classroom, 1 per employee
Total Parking Required	(A) 13

Previous Use	Retail
Total Square Feet	7,244 sq. ft.
Parking Requirement of Previous Use	1 space per 300 square feet
Total Parking Credit	(B) 24

Parking Requirement

Total Parking Required (A) Less Total Parking Credit (B) equals New Parking Demand (C)

13 - (B) 24 = (C) -9; No Parking Spaces Required

17.28.110 Usable Open Space

In the MX-D Downtown Mixed Use zone district, there is no standard requirement for minimum usable open space. However, conditional uses may be required to provide usable open space as a condition of approval. The applicant is not proposing to provide usable open space. They will not be required to provide usable open space. The site meets the usable open space requirement.

17.28.130 Screening, Fences, and Walls

Properties in the MX-D Downtown Mixed Use zone district shall meet the screening, fences, and walls standards in Section 17.28.130 of the Hanford Municipal Code. There is an existing chain link fence surrounding the site. There are no proposed changes to the existing fence. The only new wall proposed is the trash enclosure provided to adequately screen the trash bins from view. According to Section 17.28.130, "a block wall with a minimum height of seven feet shall be provided along any side or rear lot line that abuts an R-L, R-M, R-H, OR, PF, AP, or CO zone district." The property is only adjacent to properties in the MX-D Downtown Mixed Use zone district; no block wall is required. The project satisfies all screening, fence, and wall regulations for the MX-D Downtown Mixed Use zone district.

17.28.140 Signs

All signage must follow the standards set in Chapter 17.56 of the Hanford Municipal Code. For permanent building signs, there is a size limit of two sq. ft. per one lineal foot of building frontage up to 100 sq. ft. on primary building frontage, and one sq. ft. per one lineal foot up to 100 sq. ft. on secondary building frontage; signs may only have external illumination or exposed neon illumination. Permanent freestanding signs are not permitted in the MX-D Downtown Mixed Use zone district.

Signage requires a separate application and will be evaluated at the time of submittal.

17.28.150 General Provisions and Standards

In the MX-D Downtown Mixed Use zone district, all businesses, services, and processes shall be conducted entirely within a completely enclosed permanently fixed structure, except where specifically permitted by this title. All on-site services will be conducted entirely within a completely enclosed permanently fixed structure. Structures and the use of structures or land shall be subject to the requirements and standards prescribed in Chapter 17.50. A suitable area shall be provided on-site for collection of trash and recyclable materials; refuse storage areas shall be adequately screened from view and designed to meet the minimum recommended dimensional standards as determined by the City Engineer. A trash enclosure shall be constructed on-site, as shown in **Attachment 2**.

All requirements of the MX-D Downtown Mixed Use zone district, prescribed by Chapter 17.28 of the Hanford Municipal Code, are satisfied.

FINDINGS FOR APPROVAL: CONDITIONAL USE PERMIT NO. 2021-08

Conditional Use Permit No. 2021-08

In taking action on a Conditional Use Permit, the Planning Commission must make the appropriate findings, in accordance with Section 17.80.030 of the Hanford Municipal Code:

1. The proposed use would not impair the integrity and character of the zoning district in which it is to be located;

ANALYSIS: The proposed use will not impair the integrity and character of the MX-D Downtown Mixed Use zone district. The use is consistent with the regulations set forth in Chapter 17.28 of the City of Hanford's Municipal Code for the MX-D Downtown Mixed Use zone district. The use of a cosmetology school is listed as a permitted use with the approval of a Conditional Use Permit in the MX-D Downtown Mixed Use zone district, as prescribed in the Land Use Table in Section 17.08.030. There are other existing educational facilities in the MX-D Downtown Mixed Use zone district.

2. The proposed use would be compatible with existing land uses and future permitted land uses within the zoning district in which the proposed use is to be located;

ANALYSIS: The proposed cosmetology school is compatible with existing and future permitted land uses in the MX-D Downtown Mixed Use zone district. The use is consistent with the regulations set forth in the Hanford Municipal Code Section 17.28 for the MX-D Downtown Mixed Use zone district. There are other existing educational facilities in the MX-D Downtown Mixed Use zone district.

3. The proposed use is consistent with the General Plan;

ANALYSIS: In accordance with General Plan Policy L70, Hanford shall define the uses allowed in the Downtown Mixed Use land use designation to include a wide range of retail, financial, governmental, professional, business, service, dining, and entertainment activities, along with high density residential dwellings. Typical uses include small retail shops, eating and drinking establishments, townhomes, apartments, markets, professional services, convenience stores, beauty salons, and other similar uses. Vertical and horizontal mixed-use developments are encouraged. The use of this site as a cosmetology school supports this policy, as it is a permitted use similar to other existing permitted uses in the MX-D Downtown Mixed Use zone district.

4. There will not be significant effects upon the quality of the environment and natural resources;

ANALYSIS: This project is categorically exempt from further environmental review, as per Section 15301 Existing Facilities of the California Environmental Quality Act (CEQA) Guidelines. A Notice of Exemption has been prepared and is attached as **Attachment 5**.

5. The proposed location, size, design, and operating characteristics of the proposed use would not be detrimental to the public interests, health, safety, convenience, or welfare of the city and that any incompatible impacts of the proposed use are mitigated by conditions of approval.

ANALYSIS: This application has been reviewed by the various City departments and evaluated for conformity with the requirements of Chapter 17.28 of the Hanford Municipal Code. The use of this site for a cosmetology school is compliant with the Hanford Municipal Code. Any improvements required for public health, safety, and welfare have been applied to the project as conditions of approval in Site Plan Review No. 2021-28 and the resolution.

PUBLIC COMMENTS

A Notice of Public Hearing for a Conditional Use Permit was noticed in the local newspaper on December 17, 2021 and mailed to property owners within 300 feet of the project site on December 16, 2021. No comments were received, as of the date of preparation of this report.

ENVIRONMENTAL ASSESSMENT

This project is categorically exempt from further environmental review, as per Section 15301 Existing Facilities of the California Environmental Quality Act (CEQA) Guidelines. There are no exceptions to this exemption, as per Section 15300.2 Exceptions of the California Environmental Quality Act (CEQA) Guidelines. A Notice of Exemption has been prepared and is attached as **Attachment 5**.

CONDITIONS OF APPROVAL

Project approval shall be subject to the conditions of approval for Site Plan Review No. 2021-28, and the condition below:

Conditional Use Permit No. 2021-08:

1. The applicant operates consistent with their approved operational statement.

RECOMMENDATION

Staff recommends that the Planning Commission:

1. Adopt Resolution No. 2021-28, approving Conditional Use Permit No. 2021-08.

Applicant/Property Owner:

Diana Rodriguez
2048 Grant St.
Selma, CA 93662

RESOLUTION NO. 2021-28

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF HANFORD PERTAINING TO CONDITIONAL USE PERMIT NO. 2021-08, A REQUEST TO CONVERT A FORMER RETAIL STORE INTO A VOCATIONAL SCHOOL IN THE MX-D DOWNTOWN MIXED USE ZONE DISTRICT. THE PROJECT IS LOCATED AT 308 E. SIXTH STREET (APN 012-044-009).

At a regular meeting of the City of Hanford Planning Commission duly called and held on December 28, 2021 on motion of Commissioner _____, seconded by Commissioner _____, and duly carried, the following resolution was adopted:

WHEREAS, Conditional Use Permit No. 2021-08, a request to convert a former retail store into a vocational school in the MX-D Downtown Mixed Use zone district, as shown in **Exhibit A**, has been reviewed by the Planning Commission of the City of Hanford in accordance with Title 17.80 of the Hanford Municipal Code; and

WHEREAS, the project is located at 308 E. Sixth Street (APN 012-044-009); and

WHEREAS, staff, the various governmental departments, and the Planning Commission have given careful consideration to this conditional use permit and have made recommendations thereon; and

WHEREAS, the project is exempt from environmental review, per Section 15301 Existing Facilities of the California Environmental Quality Act of the California Environmental Quality Act (CEQA) Guidelines and a Notice of Exemption has been prepared; and

WHEREAS, on the basis of the facts and evidence provided in the staff report and the written and oral evidence presented at the public hearing, the Planning Commission hereby makes the following findings pursuant to Section 17.80.030 of the Hanford Municipal Code:

1. The proposed use would not impair the integrity and character of the zoning district in which it is to be located;

ANALYSIS: The proposed use will not impair the integrity and character of the MX-D Downtown Mixed Use zone district. The use is consistent with the regulations set forth in Chapter 17.28 of the City of Hanford's Municipal Code for the MX-D Downtown Mixed Use zone district. The use of a cosmetology school is listed as a permitted use with the approval of a Conditional Use Permit in the MX-D Downtown Mixed Use zone district, as prescribed in the Land Use Table in Section 17.08.030. There are other existing educational facilities in the MX-D Downtown Mixed Use zone district.

2. The proposed use would be compatible with existing land uses and future permitted land uses within the zoning district in which the proposed use is to be located;

ANALYSIS: The proposed cosmetology school is compatible with existing and future permitted land uses in the MX-D Downtown Mixed Use zone district. The use is consistent with the regulations set forth in the Hanford Municipal Code Section 17.28 for the MX-D Downtown Mixed Use zone district. There are other existing educational facilities in the MX-D Downtown Mixed Use zone district.

3. The proposed use is consistent with the General Plan;

ANALYSIS: In accordance with General Plan Policy L70, Hanford shall define the uses allowed in the Downtown Mixed Use land use designation to include a wide range of retail, financial, governmental, professional, business, service, dining, and entertainment activities, along with high density residential dwellings. Typical uses include small retail shops, eating and drinking establishments, townhomes, apartments, markets, professional services, convenience stores, beauty salons, and other similar uses. Vertical and horizontal mixed-use developments are encouraged. The use of this site as a cosmetology school supports this policy, as it is a permitted use similar to other existing permitted uses in the MX-D Downtown Mixed Use zone district.

4. There will not be significant effects upon the quality of the environment and natural resources;

ANALYSIS: This project is categorically exempt from further environmental review, as per Section 15301 Existing Facilities of the California Environmental Quality Act (CEQA) Guidelines. A Notice of Exemption has been prepared.

5. The proposed location, size, design, and operating characteristics of the proposed use would not be detrimental to the public interests, health, safety, convenience or welfare of the city and that any incompatible impacts of the proposed use are mitigated by conditions of approval.

ANALYSIS: This application has been reviewed by the various City departments and evaluated for conformity with the requirements of Chapter 17.28 of the Hanford Municipal Code. The use of this site for a cosmetology school is compliant with the Hanford Municipal Code. Any improvements or mitigations required for public health, safety, and welfare have been applied to the project as conditions of approval in Site Plan Review No. 2021-28 and the resolution.

THEREFORE, BE IT RESOLVED that Conditional Use Permit No. 2021-08 be approved, subject to the conditions of approval for Site Plan Review No. 2021-28, attached as **Exhibit B**, and the condition below:

1. The applicant operates consistent with their approved operational statement, attached as **Exhibit C**.

EXPIRATION

This Conditional Use Application Permit shall become null and void two (2) years after the effective date of approval, unless, prior to the expiration, the use for which the permit was approved has commenced. Prior to expiration of a permit, a person having authority to file an application may file a written request with the Community Development Director for extension of a permit that may otherwise expire. The request for extension will be taken to the Planning Commission, who may extend the expiration of the permit by one year.

PASSED AND ADOPTED at a regular meeting of the Hanford City Planning Commission by the following vote:

AYES:	Commissioners
NOES:	Commissioners

ABSTAIN: Commissioners
ABSENT: Commissioners

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

I, **Mary E. Beatie**, Interim Secretary of the City of Hanford Planning Commission, do hereby certify the foregoing Resolution was duly passed and adopted by the Planning Commission of the City of Hanford at a regular meeting thereof held on the 28th day of December 2021.

Mary E. Beatie, Interim Secretary

Attachment: Resolution No. 2021-28 (CUP 2021-08)

Exhibit A
Site Plan

Attachment: Resolution No. 2021-28 (CUP 2021-08)

SHEET INDEX	
SHEET	DESCRIPTION
1	SITE PLAN

Exhibit B
Site Plan Review Approval Letter – Conditions of Approval

Attachment: Resolution No. 2021-28 (CUP 2021-08)

City of HANFORD

CALIFORNIA 93230
CITY OFFICES 317 NORTH DOUTY STREET



MAYOR
FRANCISCO RAMIREZ
VICE MAYOR
DIANE SHARP
COUNCIL MEMBERS
AMANDA SALTRAY
KALISH MORROW
ART BRIENO
CITY MANAGER
MARIO CIFUENTEZ

DATE: November 18, 2021

PROJECT: Site Plan Review 2021-28 (502-1173) Revision 2

APPLICANT: Diana Rodriguez

LOCATION: 308 E. Sixth St. (APN 012-044-009)

PROPOSAL: Vocational school

ZONING: MX-D Downtown Mixed Use

SITE PLAN REVIEW COMMITTEE REVIEW DATE: August 4, 2021

Enclosed for your review are the comments and decisions of the Site Plan Review Committee. Please review all comments, since they may impact your project:

- ☐ **RESUBMIT:** Major changes to your plans are required prior to accepting construction drawings for a building permit. A meeting with the Site Plan Review Committee is not required.
- ☐ **MEETING REQUIRED:** During site plan review, concerns were identified, schedule a meeting with the following prior to resubmittal:
- | | |
|--------------------------------------|---|
| ☐ Planning | ☐ Building |
| ☐ Fire | ☐ Engineering |
| ☐ Solid Waste | ☐ Police |
| ☐ Wastewater | ☐ Parks and Recreation |

☒ **REVISE AND PROCEED**

- ☒ Approved subject to the following and the attached conditions of approval.
- ☒ Submit plans for a building permit between the hours of 8:00 a.m. and 4:00 p.m.
- ☒ Your Plans must be reviewed by:
- | | |
|---|--|
| ☐ City Council | ☒ Planning Commission CUP |
| ☐ Parking and Traffic Commission | ☐ Parks and Recreation Commission |
| ☐ Other: _____ | |

Signed,

Mark Manha

Mark Manha, Assistant Planner
Community Development Department

November 18, 2021
DATE

Attachment: Resolution No. 2021-28 (CUP 2021-08)

EXPIRATION

A site plan approval shall expire one (1) year from its approval date, unless a building permit application has been submitted or the use has commenced. Prior to expiration, the Community Development Director may extend the permit expiration date by one (1) year if there is substantial evidence that the applicant is diligently pursuing building permit approval or commencement of the use (Hanford Municipal Code Section 17.72.070).

CALIFORNIA ENVIRONMENTAL QUALITY ACT

Site Plan Review is a ministerial action, therefore not subject to the California Environmental Quality Act (CEQA) (CEQA Guidelines 15268 and MC 17.70.070). **Exemption No. 2021-75**

COMMENTS AND CONDITIONS OF APPROVAL

THE FOLLOWING DEPARTMENT COMMENTS AND CONDITIONS ARE ATTACHED:

- ☒ PLANNING
- ☒ BUILDING
- ☒ ENGINEERING
- ☐ SOLID WASTE
- ☐ WASTEWATER
- ☐ POLICE
- ☒ FIRE
- ☐ PARKS AND RECREATION

DEFENSE AND INDEMNIFICATION PROVISION

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.

APPLICANT'S STATEMENT (Must be signed prior to issuance of a building permit)

I have reviewed a copy of the Site Plan Review Approval No. 2021-28 Revision 2 and I understand that the proposed construction and/or land use is dependent upon the fulfillment of the conditions of approval and construction of all required public improvements prior to use, inauguration, or occupancy, unless other arrangements are approved.

Applicant or Authorized Representative

PLANNING DIVISION
SITE PLAN REVIEW COMMENTS

MEETING DATE: August 4, 2021

SITE PLAN NUMBER: 2021-28 (FILE 502-1173) REVISION 2

CONTACT: Mark Manha, Assistant Planner: (559) 585-2583

General Plan Designation: Downtown Mixed Use

Zoning: MX-D Downtown Mixed Use

Other Special Districts: N/A

Planning Division Recommendation: ☒ Revise and Proceed ☐ Resubmit

The project does meet the requirements of the Hanford Municipal Code, development standards and other codes and policies.

Correction(s):

- None.

Required Entitlements:

- Conditional Use Permit; already applied

MX-D Downtown Mixed Use - all checked comments shall apply

General:

- ☒ That approval of this project does not exempt compliance with all applicable sections of the Zoning Ordinance, Public Works Improvement Standards, fees, or other City Ordinances.
- ☒ That all approved proposals of the applicant be conditions of development, if not mentioned herein.
- ☒ That the site be developed according to the approved site plan, titled Site Plan Review No. 2021-28 Revision 2 with minor modifications to be approved by the Community Development Department.
- ☒ That no expansion of the use which would tend to increase the projected scale of operations beyond the scope and nature described in this Site Plan Review shall be permitted except upon application for, and approval of, modification of this application according to all procedures and requirements thereof.
- ☒ That no business, service, or processes that is not part of the main use of the site shall be conducted outside a completely enclosed (or screened) permanently fixed structure.
- ☒ That mechanical equipment shall be located a minimum of five feet from a rear or side lot line that abuts a R-L, R-M, R-H, OR, O, PF, AP, or CO zone district

- ☒ That use of the site shall comply with the uses listed as permitted, permitted with an administrative approval, conditionally permitted, or temporarily permitted in the land use table presented in chapter 17.08.
- ☒ That the Mixed Use Downtown zone district shall be designed to provide and encourage walking within the commercial uses between the commercial uses and the residential uses within the MX-D zone and other nearby residential uses. At a minimum, this shall be accomplished with a minimum six-foot wide pedestrian path of travel between site entrances and the public sidewalk.

Cultural Resources:

- ☒ That if cultural resources are discovered during construction or related activities, all work shall be halted and a qualified archeologist and the City of Hanford shall be notified. The find shall be properly investigated and appropriate measures are to be taken before construction may continue.

Building Setback Areas: (17.28.060)

- ☒ That no structure shall be placed within a building setback area.
- ☒ That there is no front building setback area.
- ☒ That the rear building setback may be zero feet from the rear lot line.
- ☒ That the side building setback area shall be zero feet.

Distance between Structures: (Section 17.28.070)

- ☒ That all distances allowed by the building code are allowed.

Height of Structures: (Section 17.28.080)

- ☒ That the maximum structure height shall be 100 feet.

Driveways: (Section 17.28.090)

- ☒ That wherever possible developments shall share driveways to minimize the number of driveways on public streets.
- ☒ That new driveways near street corners shall be located a minimum 100 feet from the radius curve of the curb, unless otherwise specifically approved by the City Engineer.
- ☒ That sites with alleys should utilize alley access to minimize driveways on streets to the greatest extent possible.

Off Street Parking: (Section 17.54)

- ☒ That all existing parking on site shall remain. No additional parking is required based on the following calculation:

Calculation:

**CALCULATING PARKING REQUIREMENT AND PARKING IN LIEU FEES IN THE
DOWNTOWN PARKING IMPROVEMENT DISTRICT**

Proposed Use	Vocational school
Total # of Classrooms and Employees	1 classroom, 3 employees
Parking Requirement Per Municipal Code	10 per classroom, 1 per employee
Total Parking Required	(A) 13

Previous Use	Retail
Total Square Feet	7,244 sq. ft.
Parking Requirement of Previous Use	1 space per 300 square feet
Total Parking Credit	(B) 24

Parking Requirement

Total Parking Required (A) Less Total Parking Credit (B) equals New Parking Demand (C)

(A) 13 - (B) 24 = (C) -9; No Parking Spaces Required

- ☒ That the standard parking space shall not be less than 18.5 feet in length and nine feet in width, exclusive of aisles and access drives (Section 17.54.110 A).
- ☒ That the maximum number of compact-car parking spaces is limited to 30 percent of the total parking spaces required. A compact parking space shall not be less than 16 feet in length and 8 feet in width, and marked for compact cars (Section 17.54.110 B. and C).
- ☒ There shall be no more than four compact spaces adjacent to each other.
- ☒ That parking for bicycles and low-emission vehicles shall be provided in accordance with the latest adopted version of the California Building Code (Section 17.54.190).
- ☒ In all mixed use zone districts, not less than five percent of the interior square footage of a parking area shall be landscaped with trees and other plant materials suitable for ornamentation. Parking areas are to have one tree placed at every four lineal parking stalls. Landscaped areas shall be distributed throughout the parking area and peripheral areas to the extent practical in consideration of the size and design of the parking area. Parking lots developed next to a street shall provide a landscape buffer between the street and the parking lot of at least ten feet.
- ☒ That all parking areas shall have ingress and egress to and from a street or alley as required by the City's standard specifications.
- ☒ That sufficient room for turning and maneuvering vehicles shall be provided on the site.
- ☒ That developed parking areas are to be utilized by all vehicles associated with or visiting the site.

- ☒ That the parking of vehicles on lawn, landscaped areas, or other areas not designed for parking are prohibited.
- ☒ That entrances and exits to parking lots and other parking facilities shall be provided only at locations approved by the Site Plan Review Committee.
- ☒ That parking lot lighting shall be deflected away from adjoining sites so as not to cause glare to such sites.
- ☒ That no commercial repair work, washing or servicing of vehicles shall be conducted in a parking area.
- ☒ That parking areas, aisles, and access drives shall be paved with a solid material so as to provide a durable, dustless surface and shall be so graded and drained as to dispose of surface water, except that long-term storage areas for vehicles in the C-S, I-L and I-H zone districts may be surfaced with rock, gravel, granite or solid paving.

Usable Open Space: (Section 17.28.110)

- ☒ That there is no standard requirement for minimum usable open space. However, conditional uses may be required to provide usable open space as a condition of approval.

Landscaping: (Section 17.28.120 and 17.52)

- ☒ That landscaping shall be provided and permanently maintained in a setback area not less than fifteen (15) feet from a lot line adjoining a street.
- ☒ General Design Standards: the following features shall be incorporated into the design of the proposed landscape and shown on the required landscape plans:
 - ☒ Publicly maintained landscape areas shall be separated from privately maintained landscape areas with, at a minimum, a four (4) inch wide concrete mow strip.
 - ☒ Pedestrian access to sidewalks and structures shall be integrated with the design of landscaped areas.
 - ☒ Landscape adjacent to driveways and parking areas shall be protected from vehicle damage through the provision of a minimum six (6) inch high and six (6) inch wide concrete curb.
 - ☒ Concrete mow strips, when used, shall be a minimum of four (4) inches in width.
 - ☒ Trees and shrubs shall be planted so that at maturity they do not interfere with utility lines and traffic safety sight areas.
 - ☒ Trees and shrubs shall be planted and maintained in a manner that protects the basic rights of adjacent property owners, particularly the right to solar access.
 - ☒ Trees planted within five (5) feet of sidewalks or curbs shall have an eighteen (18) inch by ten (10) foot long linear root barrier placed at each edge of the sidewalk or face of curb, centered on the tree.

- ☒ Plant materials. Plant materials shall be selected and installed in accordance with the following requirements:
 - ☒ The size of ten (10) percent of the trees to be planted shall be twenty-four (24) inch box or larger. The remaining trees shall be sized fifteen (15) gallons or larger.
 - ☒ The size of seventy (70) percent of plants and shrubs shall be at five (5) gallon or larger. The remaining plants and shrubs shall be sized one (1) gallon or larger.
 - ☒ The size of groundcover at planting shall be one (1) gallon or larger.
 - ☒ Groundcover shall be designed to have one hundred (100) percent coverage within two (2) years.
 - ☒ Drought tolerant plant material and climate appropriate species shall be emphasized in the design.
- ☒ That the landscaped area shall be planted with live and healthy plant materials suitable for screening/or ornamenting the site. Landscaped areas shall be watered by automatic systems and designed and developed in accordance with Chapter 12.08 and the most recent State Model Water Efficient Landscaped Ordinance.
- ☒ That no fence, hedge, or shrub shall be installed, planted, or maintained along a street frontage, which creates a traffic or pedestrian hazard.

Trash Collection Areas: (Section 17.50.090)

- ☒ That suitable area shall be provided on-site for collection of trash and recyclable materials for all multifamily residential, mixed-use, commercial, office, and industrial uses. Refuse storage areas shall be adequately screened from view. The refuse area enclosure shall be designed to meet the minimum recommended dimensional standards as determined by the City Engineer.
- ☒ That all uses shall be in compliance with the provisions of Chapter 13.12 of the Municipal Code.

Fences and Walls: (Sections 17.28.130 and 17.50.110)

- ☒ That a block wall with a minimum height of seven (7) feet shall be provided along any side or rear lot line that abuts an R-L, R-M, R-H, OR, PF, AP, or CO zone district.
- ☒ That no fence or wall shall be placed in front of or within any landscaped area located next to a street.
- ☒ That the open storage of materials and equipment attendant to a use shall be permitted only within an area surrounded or screened by a solid wall or fence seven (7) feet minimum in height, except as may be modified under site plan review. Such storage shall not be visible above the fence or wall.
- ☒ That any proposed fencing on the site be maintained in good repair.

- ☒ That no fence or wall shall be placed within the public right-of-way.
- ☒ That a masonry fence exceeding three (3) feet in height shall require engineered footings and a building permit. All other fencing exceeding seven (7) feet in height shall require engineered post footings and a building permit.
- ☒ That no hedge, shrub, fence, or wall exceeding the three (3) feet in height, or four (4) feet in height if the upper one (1) foot is fifty (50) percent or more open shall be planted, placed, or maintained within the twenty-five (25) feet corner sight triangle of a corner lot, or along a front or street side property line where the hedge, shrub, fence, or wall creates a traffic or pedestrian hazard as determined by the Community Development Director.

Signage: (Section 17.56)

- ☒ That any/all signs proposed for this development shall be subject to the requirements and prescribed in Chapter 17.56 of the Hanford Municipal Code. **A separate application is required.**

Outdoor Lighting Standards: (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 the 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 the height of freestanding light fixtures, including freestanding parking lot fixtures, shall be measured from the top of a light fixture to the adjacent grade at the base of the support for that light fixture and shall not exceed 30 feet.
- ☒ That the following additional requirements shall apply to outdoor lighting fixtures in the O, PF, and all commercial and mixed use zone districts:
 - ☒ All outdoor fixture lighting shall be a fully shielded fixture and focused to minimize light trespass and glare.
 - ☒ Outdoor lighting fixtures shall be turned off after close-of-business unless needed for safety or security, in which case the lighting shall be activated by motion sensor devices. Illuminated signs and parking lot lighting are excluded from this requirement.
 - ☒ Lighting for signs, recreational facilities and decorative effects for building and landscape shall be fully shielded fixtures equipped with automatic timing devices and focused to minimize light glare and light trespass.

Dust Control:

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

BUILDING DIVISION
SPR 2021-028 (502-1173) Mercantile to Business
9-8-21
308 E Sixth Street

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

1. That building permits must be obtained from the City Building Division for each structure to include but not limited to: buildings, pools, fences, trash enclosures, signs and carports for any structural, plumbing, electrical or mechanical **work being done**.
2. That no building or structure shall be used or occupied, and no change in the existing occupancy classification of building or structure or portion thereof shall be made until the building official has approved the change and issued a Certificate of Occupancy.
3. That detailed dimensioned plans be provided to the Building Division for each structure prior to obtaining construction permits. Each structure will require a separate submittal and permit.
4. That each structure will require plans and calculations signed by an architect or engineer licensed to practice in the State of California. Submittal shall consist of as applicable:
 - 4.1 1 copy of the City of Hanford Permit Application form
 - 4.2 One electronic set or 6 complete sets of Drawings, unless noted, including:
 - 4.2.1 Reserved
 - 4.2.2 Site Plan
 - 4.2.3 Architectural Drawings
 - 4.2.4 Structural Drawings
 - 4.2.5 Electrical Drawings
 - 4.2.6 Mechanical Drawings
 - 4.2.7 Plumbing Drawings
 - 4.2.8 Reserved
 - 4.2.9 Planning Dept. "Conditions of Approval" or "Resolution"
printed on the drawings and part of the drawing submittal
 - 4.2.10 A minimum of 2 sets shall be stamped and wet signed by an Architect or Engineer licensed in the State of California.

****** Each structure will be considered a separate submittal. Grading, Landscaping, Signage and all Fire permits are separate submittals as well and require separate applications and submittals as applicable. ******

- 4.3 One electronic set or 2 complete sets of documentation, unless noted, including:
 - 4.3.1 Architectural Specifications
 - 4.3.2 Structural Calculations
 - 4.3.3 Electrical Calculations, if not included on the drawings
 - 4.3.4 Mechanical Calculations, if not included on the drawings
 - 4.3.5 Plumbing Calculations, if not included on the drawings
 - 4.3.6 Energy Calculations, if not included on the drawings
 - 4.3.7 CalGreen Compliance **including C & D Recycle plan**
 - 4.3.8 **Compliance with the City of Hanford Landscape Ordinance**
 - 4.3.9 A minimum of 2 sets shall be stamped and wet signed by an Architect or Engineer licensed in the State of California.
5. That **the site**, as well as the buildings, shall be made accessible and usable by the disabled in accordance with the California Building Code, Chapter 11B.

6. That all special inspection reports be submitted to the Building Division prior to final inspection.
7. That all construction shall conform to **the Most Current Edition** (2019) of the California Building Code, California Electrical Code, California Mechanical Code, California Plumbing Code, California Fire Code, California Energy Code and CalGreen.
8. That the tenant, lessee, and/or owner are responsible for compliance with the Americans with Disabilities Act. By federal law your facility must be made accessible to the highest degree possible.
9. That the applicant provides a complete set of AS-BUILT drawings on CD, in "tif" format, to the Building Division prior to Final Inspection.
10. That each of these drawings apply to any/all work done to the structure at this time.
11. **This project is a Change of Occupancy only. A site plan and existing floor plan/revised floor plan will be required to show all changes/remodel. A building permit is required.**

Hanford Fire Department

Contact Fire Marshal Christy Whittington @ 559-585-2594 or cwhittington@cityofhanfordca.com

concerning questions that you may have on the following conditions.

Site Plan Review: SPR 2021-28

Date: August 12, 2021

Project #: 502-1173 (Lawrence & Co. College)

General Instructions

1. Approval of this project does not exempt compliance with all applicable sections of the City adopted fire codes and local fire ordinances.
2. All fire protection systems must be installed and operational prior to occupying the building.
3. All permits shall be issued and fees paid prior to scheduling inspections with the Fire Department. To schedule appointments for inspections, please call **559-585-2545**.
4. Scope of work shall be clearly stated on all plans submitted for permit.
5. All deferred submittals shall be listed on the building plan title page. All deferred submittals are required to be submitted within 30-days of building permit issuance.

The following comments are applicable if checked:

1. ☐ No comments.
2. ☐ This project must comply with latest applicable codes.
3. ☐ Project must meet minimum fire flow requirements per the table in Appendix B & C of the 2019 California Fire Code. Provide most current fire flow information for this location.
4. ☐ If a new fire hydrant flow test is required, contact the fire department for submittal requirements.
5. ☐ Based on the occupancy classification, an automatic sprinkler system is required for this project. **A separate fire department permit is required.** Please contact the Building department for submittal process.
6. ☐ For automatic sprinkler systems, **a separate permit must be submitted.** Please contact the Building department for submittal information.
7. ☐ Fire Riser Room: All new buildings that require an automatic fire sprinkler system shall contain a separate room to house the fire riser inside of it and shall have the following building elements:
 - At least one man door shall be provided- only exterior door(s) are allowed
 - The fire riser room and the door shall be large enough to accommodate repairs and/or maintenance needed by the use of tools and the removal and/or replacement of parts/pipe to the fire riser or FDC; suggested size 4' X 4' room.

Attachment: Resolution No. 2021-28 (CUP 2021-08)

- One-hour rated construction
- Fire Sprinkler head coverage required
- Normal and emergency back-up lighting shall be installed inside the fire riser room.
- The exterior of the fire riser door shall have permanent signage stating **FIRE RISER ROOM** in a contrasting color to background.
- For existing buildings: please contact the Fire Department.

8. ☐ When a sprinkler system is required with 21 or more sprinkler heads, the system shall be monitored by a Central Station Service. Fire alarm and detection systems required by Chapter 9 of the currently adopted edition of the California Building Code (CBC) and CFC shall be installed per NFPA 72. **A separate fire department permit is required** for fire sprinkler monitoring and/or fire alarm systems required by the latest edition of the CBC. Contact the Building Department for submittal process.
9. ☐ A hydrant will be required within 50 feet of the Fire Department connection. **Knox FDC Locking Caps** are required on all FDC's. The ordering of 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.
10. ☐ When any portion of the facility or building to be protected is more than 400 feet from a hydrant on a fire apparatus access road (as measured by an approved route around the exterior of the building) on-site fire hydrants and mains shall be provided where required by the fire code official.
11. ☐ Depending on the location of the existing fire hydrant(s), additional fire hydrants may be required. All hydrants must be in place and accepted by the fire department prior to any combustibles being brought onto the site.
12. ☐ No additional hydrants are necessary for this project.
13. ☐ Number of additional hydrants necessary for this project: _____
14. ☐ Fire hydrant spacing shall be as follows:
- Section 507 or as required by appendix C of the 2019 CFC.
15. ☐ Fire hydrant protection posts shall be installed at all fire hydrants that are subject to vehicle damage.
16. ☐ Approved fire apparatus access roads shall be provided for every facility, building, or portion of a building constructed or moved onto or with the City of Hanford. It shall extend to within 150 feet of all portions of the facility and all portions on the exterior walls of the first story of the buildings (as measured by an approved route around the exterior of the building or facility).
17. ☐ All dead-end access roads in excess of 150 feet must be provided with an approved turn-around or hammer head complying with City standards. See attached

detail.

18. ☐ All access road shall not be less than 20 feet wide and 13 feet 6 inches in height.
19. ☐ Access road turning radius for fire apparatus is as follows:
 - 20 feet, 1 inch inside turning radius
 - 44 feet, 6 inch outside radius
20. ☐ Additional access roads may be required per CFC 2019 Section 503.1.2. The fire code official is authorized to require more than one fire apparatus access road based on the potential for impairment of a single road by vehicle congestion, condition of terrain, climatic conditions or other factors that could limit access.
21. ☐ Traffic calming devices shall not be installed onto fire department emergency access roads unless prior approval is obtained from the Hanford Fire Department.
22. ☐ Areas identified as "Fire Lanes" must be identified as such per requirements set forth in the California Vehicle Code Section 22500.1.
 - **Access roads 20-26 feet in width:** Fire lanes shall be on both sides of the fire apparatus access roads.
 - **Access roads 26 to less than 32 feet in width:** Fire lanes shall be on one side of the fire apparatus access roads.
 - **Access roads 32 feet in width or more:** No fire lanes required.
23. ☐ Where required by the fire code official, approved signs or other approved notices or markings that include the words NO PARKING - FIRE LANE shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. The means by which fire lanes are designated shall be maintained in a clean and legible condition at all times and be replaced or repaired when necessary to provide adequate visibility.
24. ☐ 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.
25. ☒ Locked gates installed across fire department access roads:
 - **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)
 - **Electric Gates** shall be equipped with an electric **Knox Key Switch**, at the gate location.

- In case of a loss of power, electrically operated gates shall have a means of back-up power or shall default in the open position for immediate fire department access.
- 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 departments' emergency access roads due to protruding objects from gate supports, frames, signs, access booths, curbs, etc.

26. ☒ A Knox Box will be required. Keys that open all locked areas will also be required and placed in the Knox Box. The ordering of Knox Box products can be done directly at www.knoxbox.com. If there is an existing Know Box installed, contact the Fire Department to determine if it will suffice.

27. ☒ 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:

- Downtown area (existing buildings): 4 inch numbers
- Buildings 20-ft. or less from the street: 6 inch numbers
- Buildings 21- to 40-ft. from the street: 8 inch numbers
- Buildings more than 40-ft. from street: 12 inch numbers

28. ☐ Commercial cooking equipment that produce grease laden vapors shall be provided with a Type I hood. **A separate permit is required for the Type I hood.** Contact the **Building** department for submittal information.

29. ☐ All commercial cooking appliances creating grease laden vapors shall have a K-Class fire extinguisher within 30-feet of cooking appliances in accordance with the most currently adopted edition of the CFC.

30. ☐ **A separate permit is required** for all hazardous material and/or flammable and combustible liquids, gases, solids, etc., over the exempt amounts set forth in the latest adopted edition of the California Fire Code.

31. ☐ **A fuel tank permit is required** for underground and aboveground gasoline/LPG/Diesel.

32. ☐ Combustible high-piled storage over 12 feet **requires a separate fire department review and permit.** Contact the fire department for further information.

33. ☐ Provide a Knox Box for all structures and gates. In accordance to the 2019 CFC 506.1. Location shall be approved by Hanford Fire Department.

34. ☐ Provide premises identification for all structures. Shall be visible from the street. A minimum of four (4) inch numbering on contrasting background. In accordance to the 2019 CFC 505.1

35. ☐ Commercial cooking equipment that produce grease laden vapors shall be provided with a Type I Hood. In accordance with the California Mechanical Code, and an automatic fire extinguishing system that is listed and labeled for its intended use.
36. ☐ Insulated liquid carbon dioxide systems used in beverage dispensing applications with more than 100 pounds (45.4kg) of carbon dioxide shall comply with 2019 CFC 5307.3.1
37. ☒ Facility to provide minimum 2A10BC type fire extinguishers. Provide location and number of fire extinguishers to be installed in accordance to CFC 906.
38. ☐ All exiting shall comply with California Fire and Building Code requirements. Requirements shall comply with section 10 of the 2019 CFC 1004.9
39. ☒ Posting of Occupant Load sign shall be provided if room or spaces used for Assembly, Classroom, Dining, or similar purposes having an occupant load of fifty (50) or more persons. Sign shall be placed in conspicuous location and near the main exit in accordance to CFC 1004.9
40. ☒ All exiting shall comply with California Fire and Building Code requirements. Requirements shall comply with section 10 of the 2019 CFC 1004.9



City of Hanford

Department of Public Works

900 South 10th Ave. • Hanford, CA 93230-5234 • (559) 585-2550

Utilities Division Comments

PROJECT: SPR 2021-28 (502-1173) – Lawrence Company – 308 E Sixth Street

General:

1. That all work within the public street right-of-way shall be under the control of a General Engineering Contractor, licensed for that purpose. Contractor shall verify all conditions in the field prior to commencing construction.
2. That locations of existing water, sanitary sewer and storm drain mains in the vicinity of the project site will be marked by Utilities and Engineering Department staff based upon the city's best available records. Contractor shall provide city with a minimum of 48 hours prior notice when requesting location of existing utilities at (559) 585-2564. The City of Hanford is not a member of Underground Service Alert (U.S.A.).
3. That all sewer and water utility work and materials shall conform to City of Hanford Standards and Specifications, latest edition. All Utility connections located within Greenfield Street shall be bored.

Water:

1. That the developer shall provide an accurate fixture unit count and size water services in accordance with the requirements of the Uniform Plumbing Code, latest edition.
2. That the developer shall furnish and install any new water service assemblies required for the project including water meters and meter boxes for both domestic and landscape uses. If existing services are utilized, fixture counts to ensure adequate size of service is required. All new services are to come off of Sixth Street.
3. That the developer shall furnish and install appropriate cross connection / backflow prevention assemblies for all required water services, including fire service lines.
4. That all backflow prevention assemblies required for the development shall be tested and approved by a certified technician prior to occupancy. Copies of all backflow test results shall be provided to the City of Hanford Utilities Division.
5. It is recommended that developer install a separate irrigation service to reduce the sewage usage bill. Sewage bills are calculated off of domestic water flows.

Attachment: Resolution No. 2021-28 (CUP 2021-08)

Bob Williams
UTILITIES SUPERVISOR (559) 585-2560

11/18/2021
DATE



City of Hanford

Department of Public Works

900 South 10th Ave. • Hanford, CA 93230-5234 • (559) 585-2550

Sewer:

1. If an existing sanitary sewer lateral is not serviceable, the developer shall furnish and install a minimum four-inch diameter sanitary sewer lateral to serve the project site. New sewer lateral shall be connected to the sanitary sewer main located within Sixth Street.
2. That the developer shall furnish, install and maintain a grease trap assembly on all sewer laterals receiving process water from commercial food preparation facilities, if applicable. Grease trap assemblies shall conform to the requirements of the Uniform Plumbing Code, latest edition, and shall be approved by the City Building Official prior to installation.
3. That the developer shall submit an Industrial Wastewater Discharge Permit application to determine what, if any, sewer treatment requirements will be imposed on the project in compliance with the City of Hanford Municipal Code.

Attachment: Resolution No. 2021-28 (CUP 2021-08)

Bob Williams
UTILITIES SUPERVISOR (559) 585-2560

11/18/2021
DATE



City of Hanford

Department of Public Works

900 South 10th Ave. • Hanford, CA 93230-5234 • (559) 585-2550

Engineering Division Comments

PROJECT: SPR 2021-28 (502-1173) – Lawrence Company – 308 E Sixth Street

General Requirements:

1. That the development shall comply with all applicable City of Hanford Standard and Specification requirements. Any deviation from said Standards and Specifications must be approved by the City Engineer prior to construction.
2. That an Encroachment Permit for all work located within the public street right-of-way shall be obtained from the Public Works Department prior to start of work. For additional information regarding Encroachment Permit requirements, contact the City Engineering Division at (559) 585-2558.
3. That the development is subject to a **NO** Grading Plan Review fee in accordance with City Resolution No. 10-31 R, or any revisions thereof.
4. That the development is subject to Engineering Plan Review and Inspection fee based on the cost of improvements required to be constructed within the public street right of way, in accordance with City Resolution No. 92-58-R, or any revisions thereof. Subject fees shall be payable prior to approval of improvement plans.
5. That all financial and other arrangements for planning, engineering, scheduling, installation of and/or relocation/ undergrounding of electric, gas, telecommunications, or other privately owned utilities are the sole responsibility of the developer. The developer is advised that significant project delays may result if utility issues are not resolved prior to start of construction.

Drainage Requirements:

1. That the developer shall comply with all applicable State of California requirements pursuant to the National Pollutant Discharge Elimination System (NPDES). If applicable to the project, a Notice of Intent for the development shall be electronically filed by the developer and accepted by the State Water Resource Control Board (SWRCB) prior to any disturbance of soils onsite. Documentation of SWRCB approval of the development shall be required by the City of Hanford prior to start of construction, and the developer shall comply with all SWRCB General Construction Permit requirements during construction. Contact the SWRCB at www.swrcb.ca.gov for further information.
2. That track-out of soil, gravel, or other construction-related materials on to public streets is prohibited.

Luis Verdugo
Assistant Engineer (559) 585-2582

05/21/2020
DATE

Attachment: Resolution No. 2021-28 (CUP 2021-08)



City of Hanford

Department of Public Works

900 South 10th Ave. • Hanford, CA 93230-5234 • (559) 585-2550

Improvement Requirements:

1. That the drive approach located on Sixth Street as shown on the approved Site Plan shall be constructed in conformance with City Std. CO-41.

DEVELOPMENT IMPACT FEES:

1. That development is subject to the following impact fees in accordance with city ordinances no. 90-09, 90-10 and 98-14, or any revisions thereof. Impact fee calculations are based upon square footage of structures as shown on site plan. If changes are made to structure thereby increasing or decreasing structure floor areas, then impact fees will likewise change to reflect actual field conditions. Fees listed below reflect rates effective January 6, 2020. All fees are payable prior to issuance of building permits. **(Building area: 7244 sf – Educational – Site Area: 0.34 Acres)**
 - A. That the development is **NOT** subject to a **Transportation Impact Mitigation Fee** in accordance with City Resolution No. 98-56-R, or any revisions thereof.
 - B. That the development is **NOT** subject to a **Water System Impact Fee** in accordance with City Resolution No. 98-54-R or any revisions thereof.
 - C. That the development is **NOT** subject to a **Wastewater System Impact Fee** in accordance with City Resolution No. 98-55-R or any revisions thereof.
 - D. That the development is **NOT** subject to a **Storm Water System Impact Fee** in accordance with City Resolution No. 98-57-R, or any revisions thereof.
 - E. That the development is **NOT** subject to a **Fire Protection Impact Fee** in accordance with City Resolution No. 98-52-R or any revisions thereof.
 - F. That the development is **NOT** subject to a **Police Protection Impact Fee** in accordance with City Resolution No. 98-53-R or any revisions thereof.

Attachment: Resolution No. 2021-28 (CUP 2021-08)

Luis Verdugo
Assistant Engineer (559) 585-2582

05/21/2020
DATE

Exhibit C
Operational Statement

Attachment: Resolution No. 2021-28 (CUP 2021-08)

CITY OF HANFORD: OPERATIONAL STATEMENT FORM



DATE SUBMITTED TO CITY PLANNING: 7-27-2021

BUILDING INFORMATION:

Address: 308 E 6th street Hanford CA 93230

Previous Building Use (if known): Furniture Store

Hours of Operation: 8:30 a.m - 4:30 pm

Days of Operation: Tuesday-Sat Closed Sun+Monday

Number of Employees of the Maximum Working Shift: 3

Any Permit/License Required from Different Agency? Stateboard of Barbering+Cosmetology
BPE.

Description of Proposed Use (be as descriptive as possible; use additional paper if necessary):

Vocational School: Teaching Cosmetology + Barbering
Students. Haircutting, Hair Styling, Skin Care and Nails.
Onsite and online Classes.

STAFF COMMENTS (reserved for Office Use only):

CITY OF HANFORD: OPERATIONAL STATEMENT FORM



DATE SUBMITTED TO CITY PLANNING: 7-27-2021

BUILDING INFORMATION:

Address: 308 E 6th street Hanford CA 93230

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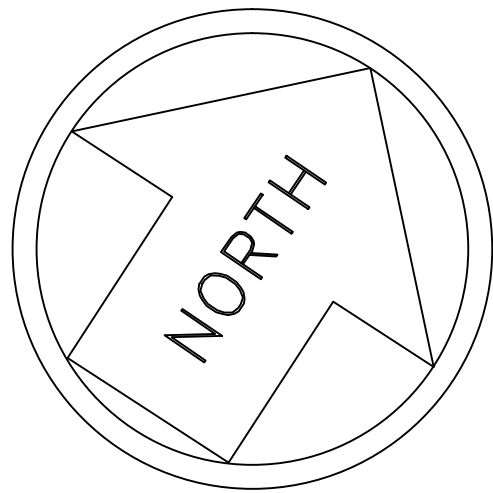
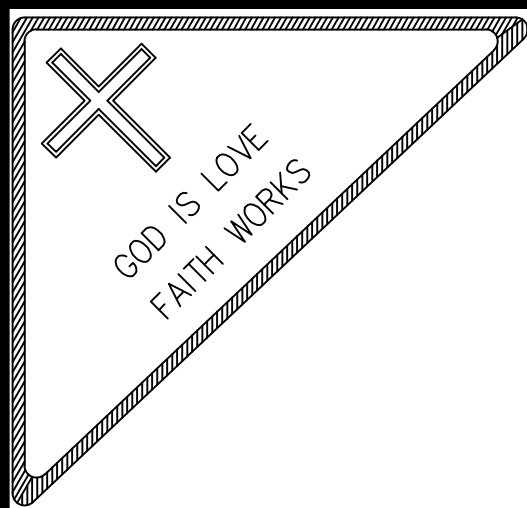
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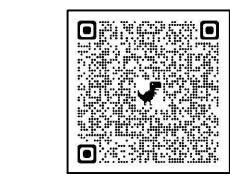
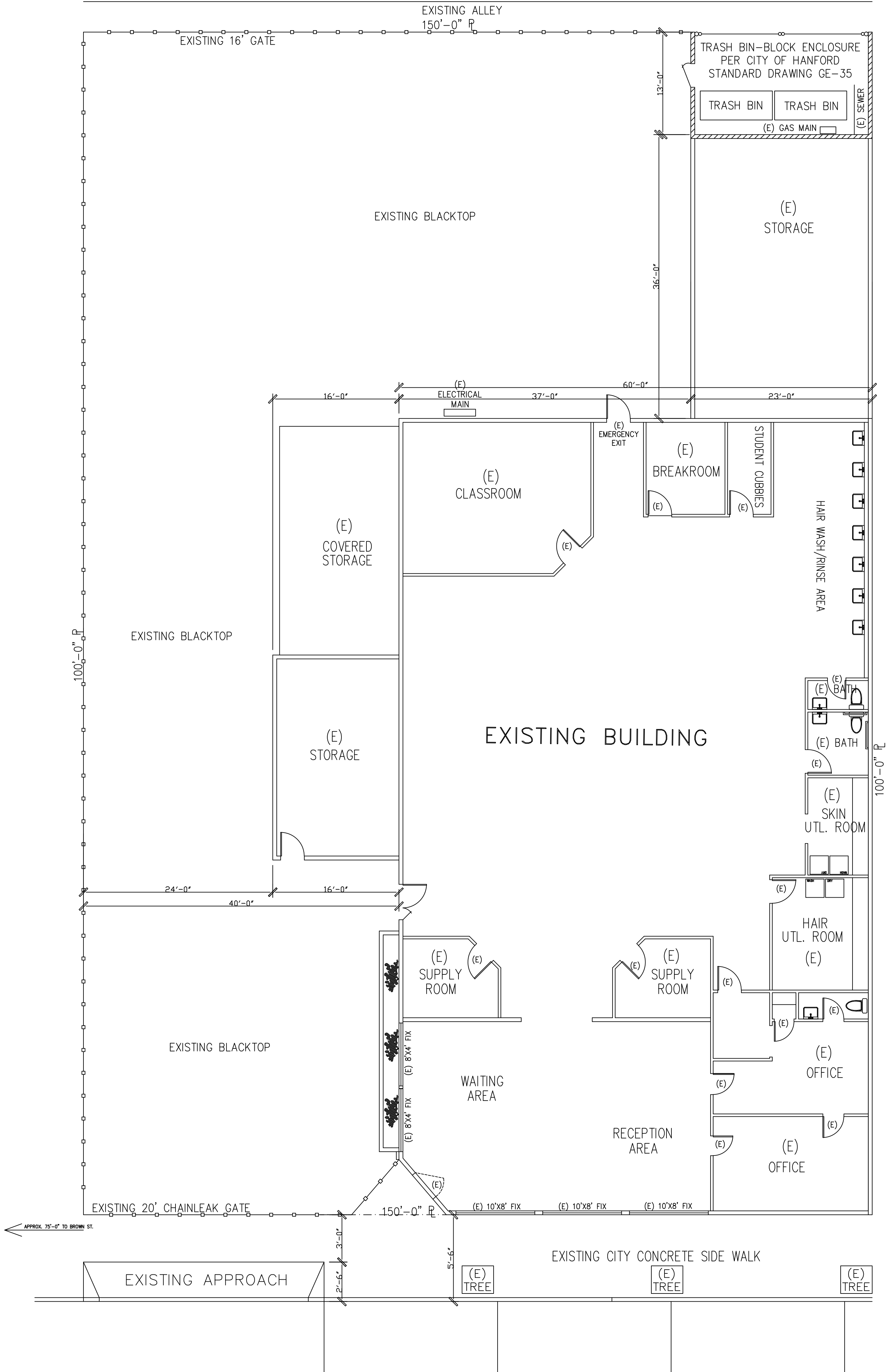
STAFF COMMENTS (reserved for Office Use only):

Attachment: Attachment 1: operational statement (CUP 2021-08)



APPLICABLE
CODES 2019
CBC, CPC, CMC, CFC,
CEC, CAL GREEN AND
CALIF. ENERGY CODE 2019

NOTE
ALL THE WORK TO BE DONE
IN ACCORDANCE W/PRESENT
CODES AND REGULATIONS.



SCAN OR CODE FOR
CITY OF HANFORD
STANDARD DRAWINGS

SITE DATA

OWNER: DIANA RODRIGUEZ
2048 GRANT STREET
SELMA, CA 93662
559-743-5800

SITE ADDRESS: LAWRENCE & COMPANY COLLEGE
308 E. 6TH STREET
HANFORD, CA 93230

OWNER BUILDER: DIANA RODRIGUEZ
2048 GRANT STREET
SELMA, CA 93662
559-743-5800

A. P. N. # 012-044-009-000

EXISTING BUILDING AREA 7,244 +/- S. F.

NOTE
NO ON SITE PARKING WAS
PROVIDED BY PRIOR TENANT AND
NO ON SITE PARKING IS BEING
PROVIDED BY NEW TENANT.

NOTE
PROJECT ADDRESS TO BE POSTED
AT JOB SITE W/4" HIGH NUMERALS
ON CONSTRUCTION BACK GROUND
WITH 1/2" MIN. STROKE.

PLANNING DEPT APPROVAL

BUILDING DEPT APPROVAL

SHEET INDEX	
SHEET	DESCRIPTION
1	SITE PLAN

JALSALDESIGN

1671 Ave. 400 Kingsburg, CA 93631
Ph. (559) 897-4507 - Email: jaimedesign@gmail.com

Jaimé Salinas

JAIMÉ SALINAS
WE MAKE YOUR
VISION A REALITY

DESIGNER
SIGNATURE

JALSALDESIGN
RESIDENTIAL
PLAN DESIGN

RESPONSIBLE BUILDER:

OWNER BUILDER
DIANA RODRIGUEZ
2048 GRANT STREET
SELMA, CA 93662
PH: (559) 743-5800
EMAIL: dlawrenceandco@sbcglobal.net

PROJECT TITLE:

LAWRENCE & COMPANY COLLEGE
DIANA RODRIGUEZ
308 E. 6TH STREET
HANFORD, CA 93230
PH: (559) 743-5800

REV. 08/2021

REV. 10/2021

JOB NO.: L&C COLLEGE

DRAWN BY: JALSAL

SHEET NO.: 1

OF 1 SHEETS

DATE: 07/2021

City of HANFORD

CALIFORNIA 93230
CITY OFFICES 317 NORTH DOUTY STREET



MAYOR
FRANCISCO RAMIREZ
VICE MAYOR
DIANE SHARP
COUNCIL MEMBERS
AMANDA SALTRAY
KALISH MORROW
ART BRIENO
CITY MANAGER
MARIO CIFUENTEZ

DATE: November 18, 2021

PROJECT: Site Plan Review 2021-28 (502-1173) Revision 2

APPLICANT: Diana Rodriguez

LOCATION: 308 E. Sixth St. (APN 012-044-009)

PROPOSAL: Vocational school

ZONING: MX-D Downtown Mixed Use

SITE PLAN REVIEW COMMITTEE REVIEW DATE: August 4, 2021

Enclosed for your review are the comments and decisions of the Site Plan Review Committee. Please review all comments, since they may impact your project:

- ☐ **RESUBMIT:** Major changes to your plans are required prior to accepting construction drawings for a building permit. A meeting with the Site Plan Review Committee is not required.
- ☐ **MEETING REQUIRED:** During site plan review, concerns were identified, schedule a meeting with the following prior to resubmittal:
- | | |
|--------------------------------------|---|
| ☐ Planning | ☐ Building |
| ☐ Fire | ☐ Engineering |
| ☐ Solid Waste | ☐ Police |
| ☐ Wastewater | ☐ Parks and Recreation |

☒ **REVISE AND PROCEED**

- ☒ Approved subject to the following and the attached conditions of approval.
- ☒ Submit plans for a building permit between the hours of 8:00 a.m. and 4:00 p.m.
- ☒ Your Plans must be reviewed by:
- | | |
|---|--|
| ☐ City Council | ☒ Planning Commission CUP |
| ☐ Parking and Traffic Commission | ☐ Parks and Recreation Commission |
| ☐ Other: _____ | |

Signed,

Mark Manha

Mark Manha, Assistant Planner
Community Development Department

November 18, 2021
DATE

Attachment: Attachment 3: SPR 2021-28 Approval Letter (CUP 2021-08)

EXPIRATION

A site plan approval shall expire one (1) year from its approval date, unless a building permit application has been submitted or the use has commenced. Prior to expiration, the Community Development Director may extend the permit expiration date by one (1) year if there is substantial evidence that the applicant is diligently pursuing building permit approval or commencement of the use (Hanford Municipal Code Section 17.72.070).

CALIFORNIA ENVIRONMENTAL QUALITY ACT

Site Plan Review is a ministerial action, therefore not subject to the California Environmental Quality Act (CEQA) (CEQA Guidelines 15268 and MC 17.70.070). **Exemption No. 2021-75**

COMMENTS AND CONDITIONS OF APPROVAL

THE FOLLOWING DEPARTMENT COMMENTS AND CONDITIONS ARE ATTACHED:

- ☒ PLANNING
- ☒ BUILDING
- ☒ ENGINEERING
- ☐ SOLID WASTE
- ☐ WASTEWATER
- ☐ POLICE
- ☒ FIRE
- ☐ PARKS AND RECREATION

DEFENSE AND INDEMNIFICATION PROVISION

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.

APPLICANT'S STATEMENT (Must be signed prior to issuance of a building permit)

I have reviewed a copy of the Site Plan Review Approval No. 2021-28 Revision 2 and I understand that the proposed construction and/or land use is dependent upon the fulfillment of the conditions of approval and construction of all required public improvements prior to use, inauguration, or occupancy, unless other arrangements are approved.

Applicant or Authorized Representative

PLANNING DIVISION
SITE PLAN REVIEW COMMENTS

MEETING DATE: August 4, 2021

SITE PLAN NUMBER: 2021-28 (FILE 502-1173) REVISION 2

CONTACT: Mark Manha, Assistant Planner: (559) 585-2583

General Plan Designation: Downtown Mixed Use

Zoning: MX-D Downtown Mixed Use

Other Special Districts: N/A

Planning Division Recommendation: ☒ Revise and Proceed ☐ Resubmit

The project does meet the requirements of the Hanford Municipal Code, development standards and other codes and policies.

Correction(s):

- None.

Required Entitlements:

- Conditional Use Permit; already applied

MX-D Downtown Mixed Use - all checked comments shall apply

General:

- ☒ That approval of this project does not exempt compliance with all applicable sections of the Zoning Ordinance, Public Works Improvement Standards, fees, or other City Ordinances.
- ☒ That all approved proposals of the applicant be conditions of development, if not mentioned herein.
- ☒ That the site be developed according to the approved site plan, titled Site Plan Review No. 2021-28 Revision 2 with minor modifications to be approved by the Community Development Department.
- ☒ That no expansion of the use which would tend to increase the projected scale of operations beyond the scope and nature described in this Site Plan Review shall be permitted except upon application for, and approval of, modification of this application according to all procedures and requirements thereof.
- ☒ That no business, service, or processes that is not part of the main use of the site shall be conducted outside a completely enclosed (or screened) permanently fixed structure.
- ☒ That mechanical equipment shall be located a minimum of five feet from a rear or side lot line that abuts a R-L, R-M, R-H, OR, O, PF, AP, or CO zone district

- ☒ That use of the site shall comply with the uses listed as permitted, permitted with an administrative approval, conditionally permitted, or temporarily permitted in the land use table presented in chapter 17.08.
- ☒ That the Mixed Use Downtown zone district shall be designed to provide and encourage walking within the commercial uses between the commercial uses and the residential uses within the MX-D zone and other nearby residential uses. At a minimum, this shall be accomplished with a minimum six-foot wide pedestrian path of travel between site entrances and the public sidewalk.

Cultural Resources:

- ☒ That if cultural resources are discovered during construction or related activities, all work shall be halted and a qualified archeologist and the City of Hanford shall be notified. The find shall be properly investigated and appropriate measures are to be taken before construction may continue.

Building Setback Areas: (17.28.060)

- ☒ That no structure shall be placed within a building setback area.
- ☒ That there is no front building setback area.
- ☒ That the rear building setback may be zero feet from the rear lot line.
- ☒ That the side building setback area shall be zero feet.

Distance between Structures: (Section 17.28.070)

- ☒ That all distances allowed by the building code are allowed.

Height of Structures: (Section 17.28.080)

- ☒ That the maximum structure height shall be 100 feet.

Driveways: (Section 17.28.090)

- ☒ That wherever possible developments shall share driveways to minimize the number of driveways on public streets.
- ☒ That new driveways near street corners shall be located a minimum 100 feet from the radius curve of the curb, unless otherwise specifically approved by the City Engineer.
- ☒ That sites with alleys should utilize alley access to minimize driveways on streets to the greatest extent possible.

Off Street Parking: (Section 17.54)

- ☒ That all existing parking on site shall remain. No additional parking is required based on the following calculation:

Calculation:

**CALCULATING PARKING REQUIREMENT AND PARKING IN LIEU FEES IN THE
DOWNTOWN PARKING IMPROVEMENT DISTRICT**

Proposed Use	Vocational school
Total # of Classrooms and Employees	1 classroom, 3 employees
Parking Requirement Per Municipal Code	10 per classroom, 1 per employee
Total Parking Required	(A) 13

Previous Use	Retail
Total Square Feet	7,244 sq. ft.
Parking Requirement of Previous Use	1 space per 300 square feet
Total Parking Credit	(B) 24

Parking Requirement

Total Parking Required (A) Less Total Parking Credit (B) equals New Parking Demand (C)

(A) 13 - (B) 24 = (C) -9; No Parking Spaces Required

- ☒ That the standard parking space shall not be less than 18.5 feet in length and nine feet in width, exclusive of aisles and access drives (Section 17.54.110 A).
- ☒ That the maximum number of compact-car parking spaces is limited to 30 percent of the total parking spaces required. A compact parking space shall not be less than 16 feet in length and 8 feet in width, and marked for compact cars (Section 17.54.110 B. and C).
- ☒ There shall be no more than four compact spaces adjacent to each other.
- ☒ That parking for bicycles and low-emission vehicles shall be provided in accordance with the latest adopted version of the California Building Code (Section 17.54.190).
- ☒ In all mixed use zone districts, not less than five percent of the interior square footage of a parking area shall be landscaped with trees and other plant materials suitable for ornamentation. Parking areas are to have one tree placed at every four lineal parking stalls. Landscaped areas shall be distributed throughout the parking area and peripheral areas to the extent practical in consideration of the size and design of the parking area. Parking lots developed next to a street shall provide a landscape buffer between the street and the parking lot of at least ten feet.
- ☒ That all parking areas shall have ingress and egress to and from a street or alley as required by the City's standard specifications.
- ☒ That sufficient room for turning and maneuvering vehicles shall be provided on the site.
- ☒ That developed parking areas are to be utilized by all vehicles associated with or visiting the site.

- ☒ That the parking of vehicles on lawn, landscaped areas, or other areas not designed for parking are prohibited.
- ☒ That entrances and exits to parking lots and other parking facilities shall be provided only at locations approved by the Site Plan Review Committee.
- ☒ That parking lot lighting shall be deflected away from adjoining sites so as not to cause glare to such sites.
- ☒ That no commercial repair work, washing or servicing of vehicles shall be conducted in a parking area.
- ☒ That parking areas, aisles, and access drives shall be paved with a solid material so as to provide a durable, dustless surface and shall be so graded and drained as to dispose of surface water, except that long-term storage areas for vehicles in the C-S, I-L and I-H zone districts may be surfaced with rock, gravel, granite or solid paving.

Usable Open Space: (Section 17.28.110)

- ☒ That there is no standard requirement for minimum usable open space. However, conditional uses may be required to provide usable open space as a condition of approval.

Landscaping: (Section 17.28.120 and 17.52)

- ☒ That landscaping shall be provided and permanently maintained in a setback area not less than fifteen (15) feet from a lot line adjoining a street.
- ☒ General Design Standards: the following features shall be incorporated into the design of the proposed landscape and shown on the required landscape plans:
 - ☒ Publicly maintained landscape areas shall be separated from privately maintained landscape areas with, at a minimum, a four (4) inch wide concrete mow strip.
 - ☒ Pedestrian access to sidewalks and structures shall be integrated with the design of landscaped areas.
 - ☒ Landscape adjacent to driveways and parking areas shall be protected from vehicle damage through the provision of a minimum six (6) inch high and six (6) inch wide concrete curb.
 - ☒ Concrete mow strips, when used, shall be a minimum of four (4) inches in width.
 - ☒ Trees and shrubs shall be planted so that at maturity they do not interfere with utility lines and traffic safety sight areas.
 - ☒ Trees and shrubs shall be planted and maintained in a manner that protects the basic rights of adjacent property owners, particularly the right to solar access.
 - ☒ Trees planted within five (5) feet of sidewalks or curbs shall have an eighteen (18) inch by ten (10) foot long linear root barrier placed at each edge of the sidewalk or face of curb, centered on the tree.

- ☒ Plant materials. Plant materials shall be selected and installed in accordance with the following requirements:
 - ☒ The size of ten (10) percent of the trees to be planted shall be twenty-four (24) inch box or larger. The remaining trees shall be sized fifteen (15) gallons or larger.
 - ☒ The size of seventy (70) percent of plants and shrubs shall be at five (5) gallon or larger. The remaining plants and shrubs shall be sized one (1) gallon or larger.
 - ☒ The size of groundcover at planting shall be one (1) gallon or larger.
 - ☒ Groundcover shall be designed to have one hundred (100) percent coverage within two (2) years.
 - ☒ Drought tolerant plant material and climate appropriate species shall be emphasized in the design.
- ☒ That the landscaped area shall be planted with live and healthy plant materials suitable for screening/or ornamenting the site. Landscaped areas shall be watered by automatic systems and designed and developed in accordance with Chapter 12.08 and the most recent State Model Water Efficient Landscaped Ordinance.
- ☒ That no fence, hedge, or shrub shall be installed, planted, or maintained along a street frontage, which creates a traffic or pedestrian hazard.

Trash Collection Areas: (Section 17.50.090)

- ☒ That suitable area shall be provided on-site for collection of trash and recyclable materials for all multifamily residential, mixed-use, commercial, office, and industrial uses. Refuse storage areas shall be adequately screened from view. The refuse area enclosure shall be designed to meet the minimum recommended dimensional standards as determined by the City Engineer.
- ☒ That all uses shall be in compliance with the provisions of Chapter 13.12 of the Municipal Code.

Fences and Walls: (Sections 17.28.130 and 17.50.110)

- ☒ That a block wall with a minimum height of seven (7) feet shall be provided along any side or rear lot line that abuts an R-L, R-M, R-H, OR, PF, AP, or CO zone district.
- ☒ That no fence or wall shall be placed in front of or within any landscaped area located next to a street.
- ☒ That the open storage of materials and equipment attendant to a use shall be permitted only within an area surrounded or screened by a solid wall or fence seven (7) feet minimum in height, except as may be modified under site plan review. Such storage shall not be visible above the fence or wall.
- ☒ That any proposed fencing on the site be maintained in good repair.

- ☒ That no fence or wall shall be placed within the public right-of-way.
- ☒ That a masonry fence exceeding three (3) feet in height shall require engineered footings and a building permit. All other fencing exceeding seven (7) feet in height shall require engineered post footings and a building permit.
- ☒ That no hedge, shrub, fence, or wall exceeding the three (3) feet in height, or four (4) feet in height if the upper one (1) foot is fifty (50) percent or more open shall be planted, placed, or maintained within the twenty-five (25) feet corner sight triangle of a corner lot, or along a front or street side property line where the hedge, shrub, fence, or wall creates a traffic or pedestrian hazard as determined by the Community Development Director.

Signage: (Section 17.56)

- ☒ That any/all signs proposed for this development shall be subject to the requirements and prescribed in Chapter 17.56 of the Hanford Municipal Code. **A separate application is required.**

Outdoor Lighting Standards: (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 the 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 the height of freestanding light fixtures, including freestanding parking lot fixtures, shall be measured from the top of a light fixture to the adjacent grade at the base of the support for that light fixture and shall not exceed 30 feet.
- ☒ That the following additional requirements shall apply to outdoor lighting fixtures in the O, PF, and all commercial and mixed use zone districts:
 - ☒ All outdoor fixture lighting shall be a fully shielded fixture and focused to minimize light trespass and glare.
 - ☒ Outdoor lighting fixtures shall be turned off after close-of-business unless needed for safety or security, in which case the lighting shall be activated by motion sensor devices. Illuminated signs and parking lot lighting are excluded from this requirement.
 - ☒ Lighting for signs, recreational facilities and decorative effects for building and landscape shall be fully shielded fixtures equipped with automatic timing devices and focused to minimize light glare and light trespass.

Dust Control:

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

BUILDING DIVISION
SPR 2021-028 (502-1173) Mercantile to Business
9-8-21
308 E Sixth Street

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

1. That building permits must be obtained from the City Building Division for each structure to include but not limited to: buildings, pools, fences, trash enclosures, signs and carports for any structural, plumbing, electrical or mechanical **work being done**.
2. That no building or structure shall be used or occupied, and no change in the existing occupancy classification of building or structure or portion thereof shall be made until the building official has approved the change and issued a Certificate of Occupancy.
3. That detailed dimensioned plans be provided to the Building Division for each structure prior to obtaining construction permits. Each structure will require a separate submittal and permit.
4. That each structure will require plans and calculations signed by an architect or engineer licensed to practice in the State of California. Submittal shall consist of as applicable:
 - 4.1 1 copy of the City of Hanford Permit Application form
 - 4.2 One electronic set or 6 complete sets of Drawings, unless noted, including:
 - 4.2.1 Reserved
 - 4.2.2 Site Plan
 - 4.2.3 Architectural Drawings
 - 4.2.4 Structural Drawings
 - 4.2.5 Electrical Drawings
 - 4.2.6 Mechanical Drawings
 - 4.2.7 Plumbing Drawings
 - 4.2.8 Reserved
 - 4.2.9 Planning Dept. "Conditions of Approval" or "Resolution"
printed on the drawings and part of the drawing submittal
 - 4.2.10 A minimum of 2 sets shall be stamped and wet signed by an Architect or Engineer licensed in the State of California.

****** Each structure will be considered a separate submittal. Grading, Landscaping, Signage and all Fire permits are separate submittals as well and require separate applications and submittals as applicable. ******

- 4.3 One electronic set or 2 complete sets of documentation, unless noted, including:
 - 4.3.1 Architectural Specifications
 - 4.3.2 Structural Calculations
 - 4.3.3 Electrical Calculations, if not included on the drawings
 - 4.3.4 Mechanical Calculations, if not included on the drawings
 - 4.3.5 Plumbing Calculations, if not included on the drawings
 - 4.3.6 Energy Calculations, if not included on the drawings
 - 4.3.7 CalGreen Compliance **including C & D Recycle plan**
 - 4.3.8 **Compliance with the City of Hanford Landscape Ordinance**
 - 4.3.9 A minimum of 2 sets shall be stamped and wet signed by an Architect or Engineer licensed in the State of California.
5. That **the site**, as well as the buildings, shall be made accessible and usable by the disabled in accordance with the California Building Code, Chapter 11B.

6. That all special inspection reports be submitted to the Building Division prior to final inspection.
7. That all construction shall conform to **the Most Current Edition** (2019) of the California Building Code, California Electrical Code, California Mechanical Code, California Plumbing Code, California Fire Code, California Energy Code and CalGreen.
8. That the tenant, lessee, and/or owner are responsible for compliance with the Americans with Disabilities Act. By federal law your facility must be made accessible to the highest degree possible.
9. That the applicant provides a complete set of AS-BUILT drawings on CD, in "tif" format, to the Building Division prior to Final Inspection.
10. That each of these drawings apply to any/all work done to the structure at this time.
11. **This project is a Change of Occupancy only. A site plan and existing floor plan/revised floor plan will be required to show all changes/remodel. A building permit is required.**

Hanford Fire Department

Contact Fire Marshal Christy Whittington @ 559-585-2594 or cwhittington@cityofhanfordca.com

concerning questions that you may have on the following conditions.

Site Plan Review: SPR 2021-28

Date: August 12, 2021

Project #: 502-1173 (Lawrence & Co. College)

General Instructions

1. Approval of this project does not exempt compliance with all applicable sections of the City adopted fire codes and local fire ordinances.
2. All fire protection systems must be installed and operational prior to occupying the building.
3. All permits shall be issued and fees paid prior to scheduling inspections with the Fire Department. To schedule appointments for inspections, please call **559-585-2545**.
4. Scope of work shall be clearly stated on all plans submitted for permit.
5. All deferred submittals shall be listed on the building plan title page. All deferred submittals are required to be submitted within 30-days of building permit issuance.

The following comments are applicable if checked:

1. ☐ No comments.
2. ☐ This project must comply with latest applicable codes.
3. ☐ Project must meet minimum fire flow requirements per the table in Appendix B & C of the 2019 California Fire Code. Provide most current fire flow information for this location.
4. ☐ If a new fire hydrant flow test is required, contact the fire department for submittal requirements.
5. ☐ Based on the occupancy classification, an automatic sprinkler system is required for this project. **A separate fire department permit is required.** Please contact the Building department for submittal process.
6. ☐ For automatic sprinkler systems, **a separate permit must be submitted.** Please contact the Building department for submittal information.
7. ☐ Fire Riser Room: All new buildings that require an automatic fire sprinkler system shall contain a separate room to house the fire riser inside of it and shall have the following building elements:
 - At least one man door shall be provided- only exterior door(s) are allowed
 - The fire riser room and the door shall be large enough to accommodate repairs and/or maintenance needed by the use of tools and the removal and/or replacement of parts/pipe to the fire riser or FDC; suggested size 4' X 4' room.

Attachment: Attachment 3: SPR 2021-28 Approval Letter (CUP 2021-08)

- One-hour rated construction
- Fire Sprinkler head coverage required
- Normal and emergency back-up lighting shall be installed inside the fire riser room.
- The exterior of the fire riser door shall have permanent signage stating **FIRE RISER ROOM** in a contrasting color to background.
- For existing buildings: please contact the Fire Department.

8. ☐ When a sprinkler system is required with 21 or more sprinkler heads, the system shall be monitored by a Central Station Service. Fire alarm and detection systems required by Chapter 9 of the currently adopted edition of the California Building Code (CBC) and CFC shall be installed per NFPA 72. **A separate fire department permit is required** for fire sprinkler monitoring and/or fire alarm systems required by the latest edition of the CBC. Contact the Building Department for submittal process.
9. ☐ A hydrant will be required within 50 feet of the Fire Department connection. **Knox FDC Locking Caps** are required on all FDC's. The ordering of 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.
10. ☐ When any portion of the facility or building to be protected is more than 400 feet from a hydrant on a fire apparatus access road (as measured by an approved route around the exterior of the building) on-site fire hydrants and mains shall be provided where required by the fire code official.
11. ☐ Depending on the location of the existing fire hydrant(s), additional fire hydrants may be required. All hydrants must be in place and accepted by the fire department prior to any combustibles being brought onto the site.
12. ☐ No additional hydrants are necessary for this project.
13. ☐ Number of additional hydrants necessary for this project: _____
14. ☐ Fire hydrant spacing shall be as follows:
- Section 507 or as required by appendix C of the 2019 CFC.
15. ☐ Fire hydrant protection posts shall be installed at all fire hydrants that are subject to vehicle damage.
16. ☐ Approved fire apparatus access roads shall be provided for every facility, building, or portion of a building constructed or moved onto or with the City of Hanford. It shall extend to within 150 feet of all portions of the facility and all portions on the exterior walls of the first story of the buildings (as measured by an approved route around the exterior of the building or facility).
17. ☐ All dead-end access roads in excess of 150 feet must be provided with an approved turn-around or hammer head complying with City standards. See attached

detail.

18. ☐ All access road shall not be less than 20 feet wide and 13 feet 6 inches in height.
19. ☐ Access road turning radius for fire apparatus is as follows:
 - 20 feet, 1 inch inside turning radius
 - 44 feet, 6 inch outside radius
20. ☐ Additional access roads may be required per CFC 2019 Section 503.1.2. The fire code official is authorized to require more than one fire apparatus access road based on the potential for impairment of a single road by vehicle congestion, condition of terrain, climatic conditions or other factors that could limit access.
21. ☐ Traffic calming devices shall not be installed onto fire department emergency access roads unless prior approval is obtained from the Hanford Fire Department.
22. ☐ Areas identified as "Fire Lanes" must be identified as such per requirements set forth in the California Vehicle Code Section 22500.1.
 - **Access roads 20-26 feet in width:** Fire lanes shall be on both sides of the fire apparatus access roads.
 - **Access roads 26 to less than 32 feet in width:** Fire lanes shall be on one side of the fire apparatus access roads.
 - **Access roads 32 feet in width or more:** No fire lanes required.
23. ☐ Where required by the fire code official, approved signs or other approved notices or markings that include the words NO PARKING - FIRE LANE shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. The means by which fire lanes are designated shall be maintained in a clean and legible condition at all times and be replaced or repaired when necessary to provide adequate visibility.
24. ☐ 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.
25. ☒ Locked gates installed across fire department access roads:
 - **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)
 - **Electric Gates** shall be equipped with an electric **Knox Key Switch**, at the gate location.

- In case of a loss of power, electrically operated gates shall have a means of back-up power or shall default in the open position for immediate fire department access.
- 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 departments' emergency access roads due to protruding objects from gate supports, frames, signs, access booths, curbs, etc.

26. ☒ A Knox Box will be required. Keys that open all locked areas will also be required and placed in the Knox Box. The ordering of Knox Box products can be done directly at www.knoxbox.com. If there is an existing Know Box installed, contact the Fire Department to determine if it will suffice.

27. ☒ 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:

- | | |
|---|-----------------|
| • Downtown area (existing buildings): | 4 inch numbers |
| • Buildings 20-ft. or less from the street: | 6 inch numbers |
| • Buildings 21- to 40-ft. from the street: | 8 inch numbers |
| • Buildings more than 40-ft. from street: | 12 inch numbers |

28. ☐ Commercial cooking equipment that produce grease laden vapors shall be provided with a Type I hood. ***A separate permit is required for the Type I hood.*** Contact the **Building** department for submittal information.

29. ☐ All commercial cooking appliances creating grease laden vapors shall have a K-Class fire extinguisher within 30-feet of cooking appliances in accordance with the most currently adopted edition of the CFC.

30. ☐ ***A separate permit is required*** for all hazardous material and/or flammable and combustible liquids, gases, solids, etc., over the exempt amounts set forth in the latest adopted edition of the California Fire Code.

31. ☐ ***A fuel tank permit is required*** for underground and aboveground gasoline/LPG/Diesel.

32. ☐ Combustible high-piled storage over 12 feet ***requires a separate fire department review and permit.*** Contact the fire department for further information.

33. ☐ Provide a Knox Box for all structures and gates. In accordance to the 2019 CFC 506.1. Location shall be approved by Hanford Fire Department.

34. ☐ Provide premises identification for all structures. Shall be visible from the street. A minimum of four (4) inch numbering on contrasting background. In accordance to the 2019 CFC 505.1

35. ☐ Commercial cooking equipment that produce grease laden vapors shall be provided with a Type I Hood. In accordance with the California Mechanical Code, and an automatic fire extinguishing system that is listed and labeled for its intended use.
36. ☐ Insulated liquid carbon dioxide systems used in beverage dispensing applications with more than 100 pounds (45.4kg) of carbon dioxide shall comply with 2019 CFC 5307.3.1
37. ☒ Facility to provide minimum 2A10BC type fire extinguishers. Provide location and number of fire extinguishers to be installed in accordance to CFC 906.
38. ☐ All exiting shall comply with California Fire and Building Code requirements. Requirements shall comply with section 10 of the 2019 CFC 1004.9
39. ☒ Posting of Occupant Load sign shall be provided if room or spaces used for Assembly, Classroom, Dining, or similar purposes having an occupant load of fifty (50) or more persons. Sign shall be placed in conspicuous location and near the main exit in accordance to CFC 1004.9
40. ☒ All exiting shall comply with California Fire and Building Code requirements. Requirements shall comply with section 10 of the 2019 CFC 1004.9



City of Hanford

Department of Public Works

1.e

900 South 10th Ave. • Hanford, CA 93230-5234 • (559) 585-2550

Utilities Division Comments

PROJECT: SPR 2021-28 (502-1173) – Lawrence Company – 308 E Sixth Street

General:

1. That all work within the public street right-of-way shall be under the control of a General Engineering Contractor, licensed for that purpose. Contractor shall verify all conditions in the field prior to commencing construction.
2. That locations of existing water, sanitary sewer and storm drain mains in the vicinity of the project site will be marked by Utilities and Engineering Department staff based upon the city's best available records. Contractor shall provide city with a minimum of 48 hours prior notice when requesting location of existing utilities at (559) 585-2564. The City of Hanford is not a member of Underground Service Alert (U.S.A.).
3. That all sewer and water utility work and materials shall conform to City of Hanford Standards and Specifications, latest edition. All Utility connections located within Greenfield Street shall be bored.

Water:

1. That the developer shall provide an accurate fixture unit count and size water services in accordance with the requirements of the Uniform Plumbing Code, latest edition.
2. That the developer shall furnish and install any new water service assemblies required for the project including water meters and meter boxes for both domestic and landscape uses. If existing services are utilized, fixture counts to ensure adequate size of service is required. All new services are to come off of Sixth Street.
3. That the developer shall furnish and install appropriate cross connection / backflow prevention assemblies for all required water services, including fire service lines.
4. That all backflow prevention assemblies required for the development shall be tested and approved by a certified technician prior to occupancy. Copies of all backflow test results shall be provided to the City of Hanford Utilities Division.
5. It is recommended that developer install a separate irrigation service to reduce the sewage usage bill. Sewage bills are calculated off of domestic water flows.

Attachment: Attachment 3: SPR 2021-28 Approval Letter (CUP 2021-08)

Bob Williams
UTILITIES SUPERVISOR (559) 585-2560

11/18/2021
DATE



City of Hanford

Department of Public Works

1.e

900 South 10th Ave. • Hanford, CA 93230-5234 • (559) 585-2550

Sewer:

1. If an existing sanitary sewer lateral is not serviceable, the developer shall furnish and install a minimum four-inch diameter sanitary sewer lateral to serve the project site. New sewer lateral shall be connected to the sanitary sewer main located within Sixth Street.
2. That the developer shall furnish, install and maintain a grease trap assembly on all sewer laterals receiving process water from commercial food preparation facilities, if applicable. Grease trap assemblies shall conform to the requirements of the Uniform Plumbing Code, latest edition, and shall be approved by the City Building Official prior to installation.
3. That the developer shall submit an Industrial Wastewater Discharge Permit application to determine what, if any, sewer treatment requirements will be imposed on the project in compliance with the City of Hanford Municipal Code.

Attachment: Attachment 3: SPR 2021-28 Approval Letter (CUP 2021-08)

Bob Williams
UTILITIES SUPERVISOR (559) 585-2560

11/18/2021
DATE



City of Hanford

Department of Public Works

900 South 10th Ave. • Hanford, CA 93230-5234 • (559) 585-2550

Engineering Division Comments

PROJECT: SPR 2021-28 (502-1173) – Lawrence Company – 308 E Sixth Street

General Requirements:

1. That the development shall comply with all applicable City of Hanford Standard and Specification requirements. Any deviation from said Standards and Specifications must be approved by the City Engineer prior to construction.
2. That an Encroachment Permit for all work located within the public street right-of-way shall be obtained from the Public Works Department prior to start of work. For additional information regarding Encroachment Permit requirements, contact the City Engineering Division at (559) 585-2558.
3. That the development is subject to a **NO** Grading Plan Review fee in accordance with City Resolution No. 10-31 R, or any revisions thereof.
4. That the development is subject to Engineering Plan Review and Inspection fee based on the cost of improvements required to be constructed within the public street right of way, in accordance with City Resolution No. 92-58-R, or any revisions thereof. Subject fees shall be payable prior to approval of improvement plans.
5. That all financial and other arrangements for planning, engineering, scheduling, installation of and/or relocation/ undergrounding of electric, gas, telecommunications, or other privately owned utilities are the sole responsibility of the developer. The developer is advised that significant project delays may result if utility issues are not resolved prior to start of construction.

Drainage Requirements:

1. That the developer shall comply with all applicable State of California requirements pursuant to the National Pollutant Discharge Elimination System (NPDES). If applicable to the project, a Notice of Intent for the development shall be electronically filed by the developer and accepted by the State Water Resource Control Board (SWRCB) prior to any disturbance of soils onsite. Documentation of SWRCB approval of the development shall be required by the City of Hanford prior to start of construction, and the developer shall comply with all SWRCB General Construction Permit requirements during construction. Contact the SWRCB at www.swrcb.ca.gov for further information.
2. That track-out of soil, gravel, or other construction-related materials on to public streets is prohibited.

Luis Verdugo
Assistant Engineer (559) 585-2582

05/21/2020
DATE

Attachment: Attachment 3: SPR 2021-28 Approval Letter (CUP 2021-08)



City of Hanford

Department of Public Works

900 South 10th Ave. • Hanford, CA 93230-5234 • (559) 585-2550

Improvement Requirements:

1. That the drive approach located on Sixth Street as shown on the approved Site Plan shall be constructed in conformance with City Std. CO-41.

DEVELOPMENT IMPACT FEES:

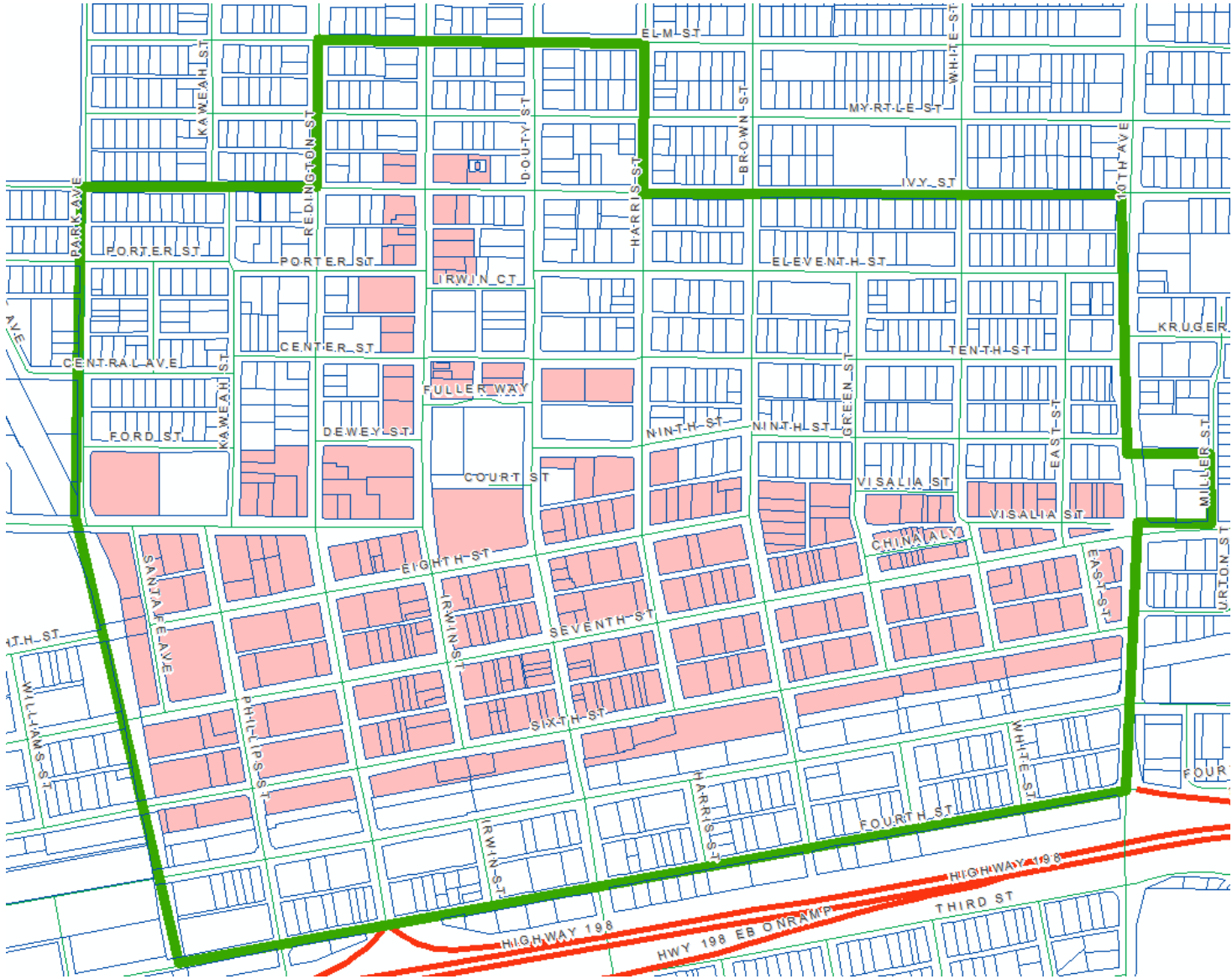
1. That development is subject to the following impact fees in accordance with city ordinances no. 90-09, 90-10 and 98-14, or any revisions thereof. Impact fee calculations are based upon square footage of structures as shown on site plan. If changes are made to structure thereby increasing or decreasing structure floor areas, then impact fees will likewise change to reflect actual field conditions. Fees listed below reflect rates effective January 6, 2020. All fees are payable prior to issuance of building permits. **(Building area: 7244 sf – Educational – Site Area: 0.34 Acres)**
 - A. That the development is **NOT** subject to a **Transportation Impact Mitigation Fee** in accordance with City Resolution No. 98-56-R, or any revisions thereof.
 - B. That the development is **NOT** subject to a **Water System Impact Fee** in accordance with City Resolution No. 98-54-R or any revisions thereof.
 - C. That the development is **NOT** subject to a **Wastewater System Impact Fee** in accordance with City Resolution No. 98-55-R or any revisions thereof.
 - D. That the development is **NOT** subject to a **Storm Water System Impact Fee** in accordance with City Resolution No. 98-57-R, or any revisions thereof.
 - E. That the development is **NOT** subject to a **Fire Protection Impact Fee** in accordance with City Resolution No. 98-52-R or any revisions thereof.
 - F. That the development is **NOT** subject to a **Police Protection Impact Fee** in accordance with City Resolution No. 98-53-R or any revisions thereof.

Attachment: Attachment 3: SPR 2021-28 Approval Letter (CUP 2021-08)

Luis Verdugo
Assistant Engineer (559) 585-2582

05/21/2020
DATE

Central Parking Improvement District Boundary



Legend:

- Central Parking Improvement District Boundary
- Downtown Commercial Zone District

Notice of Exemption 2021-75

To: ☐ Office of Planning and Research
P.O. Box 3044, Room 212
Sacramento, CA 95812-3044

☒ County Clerk
County of Kings
Kings County Government Center
Hanford, CA 93230

From: City of Hanford
317 North Douty Street
Hanford, CA 93230

Project Title: Conditional Use Permit 2021-08

Project Location – 308 E. Sixth St. (APN 012-044-009)

Project Location – City: Hanford

Project Location – County: Kings County

Description of Nature, Purpose and Beneficiaries of Project: Conditional Use Permit No. 2021-08, a request to convert a former retail store into a vocational school in the MX-D Downtown Mixed Use zone district.

Name of Public Agency Approving Project: City of Hanford, Planning Division

Name of Person or Agency Carrying Out Project: Diana Rodriguez

Exempt Status: **(check one)**

- ☐ Ministerial (Sec. 21080(b)(1); 152698);
☐ Declared Emergency (Sec. 21080(b)(3); 15269 (a));
☐ Emergency Project (Sec. 21080(b)(4); 15269(b)(c));
☒ Categorical Exemption: State type and section number: 15301 Existing Facilities
☐ Statutory Exemption. State code number:

Reasons why project is exempt:

The City of Hanford determined the project to be exempt from environmental review pursuant to Section 15301 of the California Environmental Quality Act (CEQA) Guidelines. Section 15301 states that Class 1 exemptions consist of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of existing or former use. This project involves the permitting of an existing private structure, involving negligible or no expansion.

Lead Agency

Contact Person: Mark Manha Area Code/ Telephone: (559) 585-2583

Signature: _____ Date: December 28, 2021 Title: Assistant Planner

☒ Signed by Lead Agency Date received for filing at OPR: _____
☐ Signed by Applicant

Attachment: Attachment 5: Notice of Exemption No. 2021-75 (CUP 2021-08)



AGENDA STAFF REPORT

MEETING DATE: 12/28/2021	AGENDA SECTION: 2
---------------------------------	--------------------------

SUBJECT:

Vesting Tentative Tract 934: A request by Precision Civil Engineering, Inc. to subdivide 36.48 acres into 161 and a 66,216 sq. ft. storm-drainage basin single-family residential lots in the R-L-5 Low-Density Residential zone district. Mitigated Negative Declaration No. 2021-100: An initial study was prepared and it was determined that the project will not result in significant impacts to the environment with the incorporation of mitigation measures; therefore, Mitigated Negative Declaration 2021-100 has been prepared. The project is located at the southeast corner of 13th Avenue and Grangeville Boulevard (APN 009-050-001 through -005).

See staff report, attached.

ATTACHMENTS:

Planning Commission Staff Report - TT 934
 Resolution 2021-29 (TT 934)
 Attachment 1 - Vesting Tentative Tract 934
 Attachment 2 - Environmental (Initial Study, MMRP, Consultation)
 Attachment 3 - Public Comment Received (Enloe)

FISCAL IMPACT:

ATTACHMENTS:

Planning Commission Staff Report - TT 934
 Resolution No. 2021-29 (TT 934)
 Tentative Map No.934
 Attachment 2 - Environmental (Initial Study, MMRP, Consultation)
 Letter-Enloe

**CITY OF HANFORD PLANNING COMMISSION
STAFF REPORT
Tuesday, December 28, 2021**

PROJECT: **Vesting Tentative Tract 934:** A request by Precision Civil Engineering, Inc. to subdivide 36.48 acres into 161 and a 66,216 sq. ft. storm drainage basin single-family residential lots in the R-L-5 Low-Density Residential zone district.

Mitigated Negative Declaration No. 2021-100: An initial study was prepared and it was determined that the project will not result in significant impacts to the environment with the incorporation of mitigation measures; therefore, Mitigated Negative Declaration 2021-100 has been prepared.

LOCATION: The project is located at the southeast corner of 13th Avenue and Grangeville Boulevard (APN 009-050-001 through -005).

PLANNER: Gabrielle Myers, Senior Planner

STAFF RECOMMENDATION

Staff recommends that the Planning Commission:

1. Certify Mitigated Negative Declaration No. 2021-100 for the project.
2. Adopt Resolution No. 2021-29, approving Vesting Tentative Tract 934.

RECOMMENDED MOTION

1. I move to certify Mitigated Negative Declaration No. 2021-100 for the project.
2. I move to adopt Resolution No. 2021-29, approving Vesting Tentative Tract 934.

PROJECT DESCRIPTION

Vesting Tentative Tract 934

The project is a request by Precision Civil Engineering, Inc. to subdivide 36.48 acres into 161 single-family residential lots and a 66,216 sq. ft. storm drainage basin in the R-L-5 Low-Density Residential zone district. The project surrounds two large-lot single-family residences, which are labeled as “not a part.”

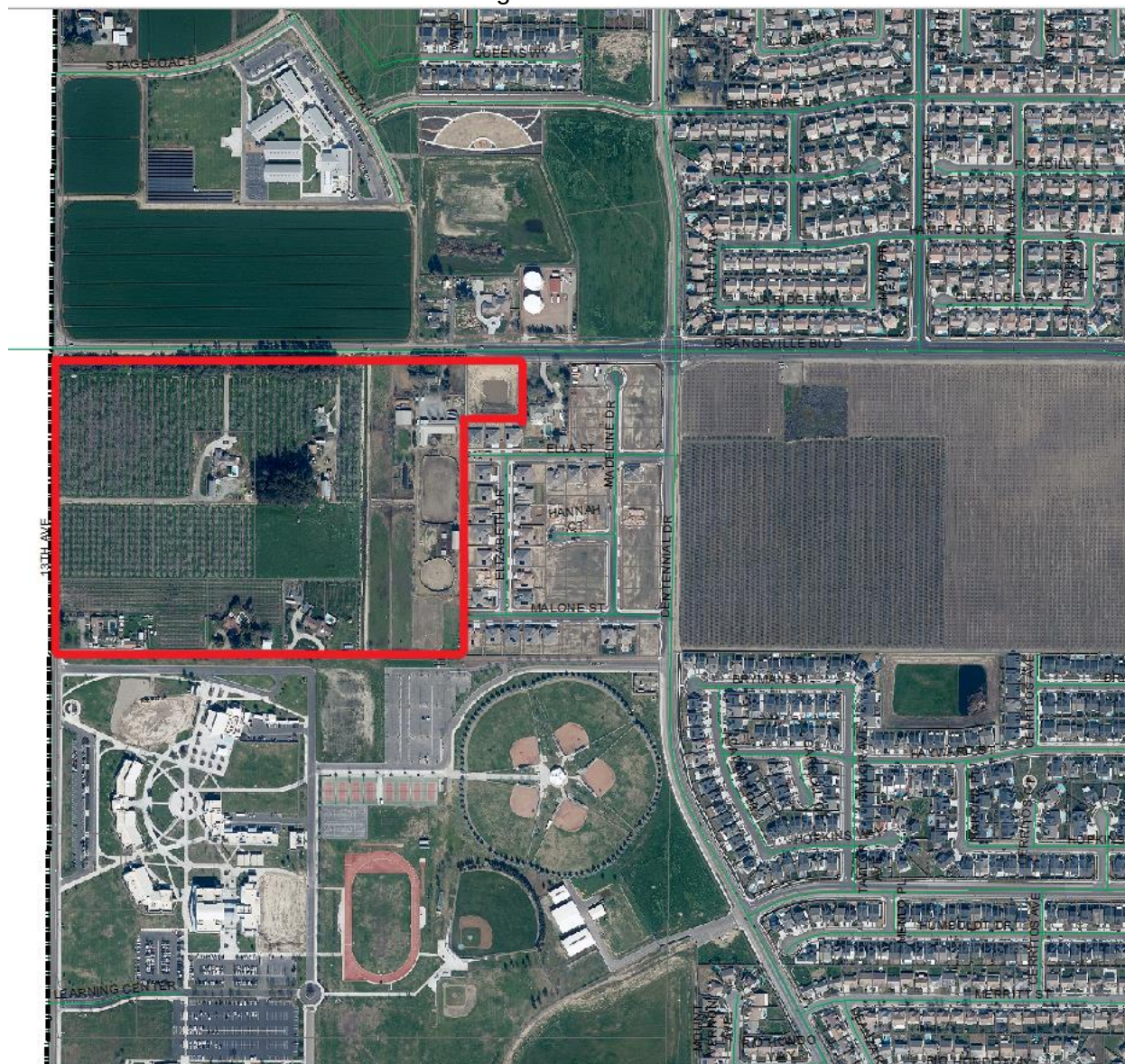
See proposed subdivision – **Attachment 1.**

BACKGROUND INFORMATION

Project Location

The project is located at the southeast corner of 13th Avenue and Grangeville Boulevard (APN 009-050-001 through -005).

Figure 1 – Aerial



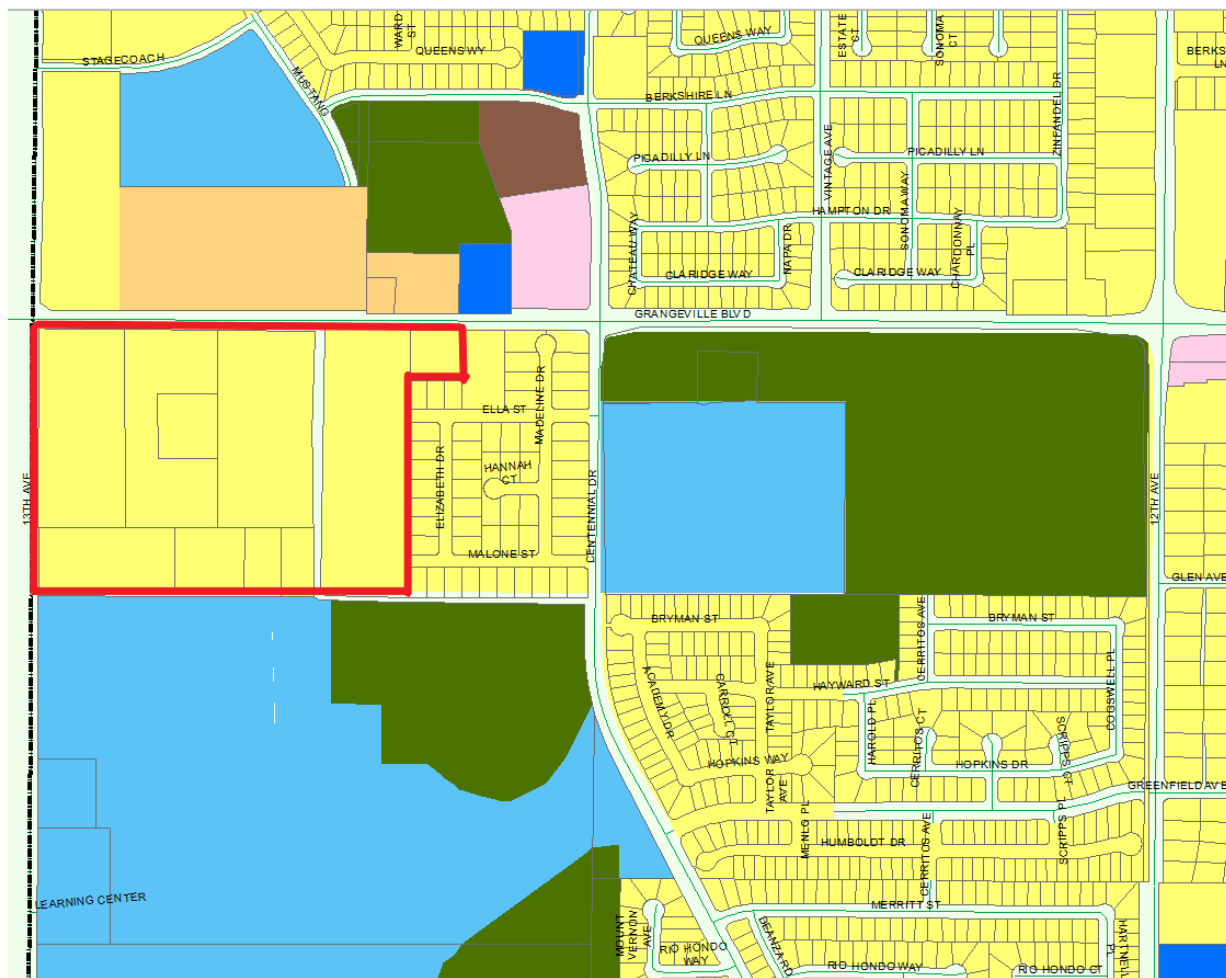
Existing Land Use

The property is comprised of agricultural land and large-lot single-family residences.

General Plan and Zoning Designation

The site is designated by the General Plan as Low-Density Residential and is zoned R-L-5 Low-Density Residential, in accordance with the General Plan.

Figure 2: General Plan Designation
Low-Density Residential



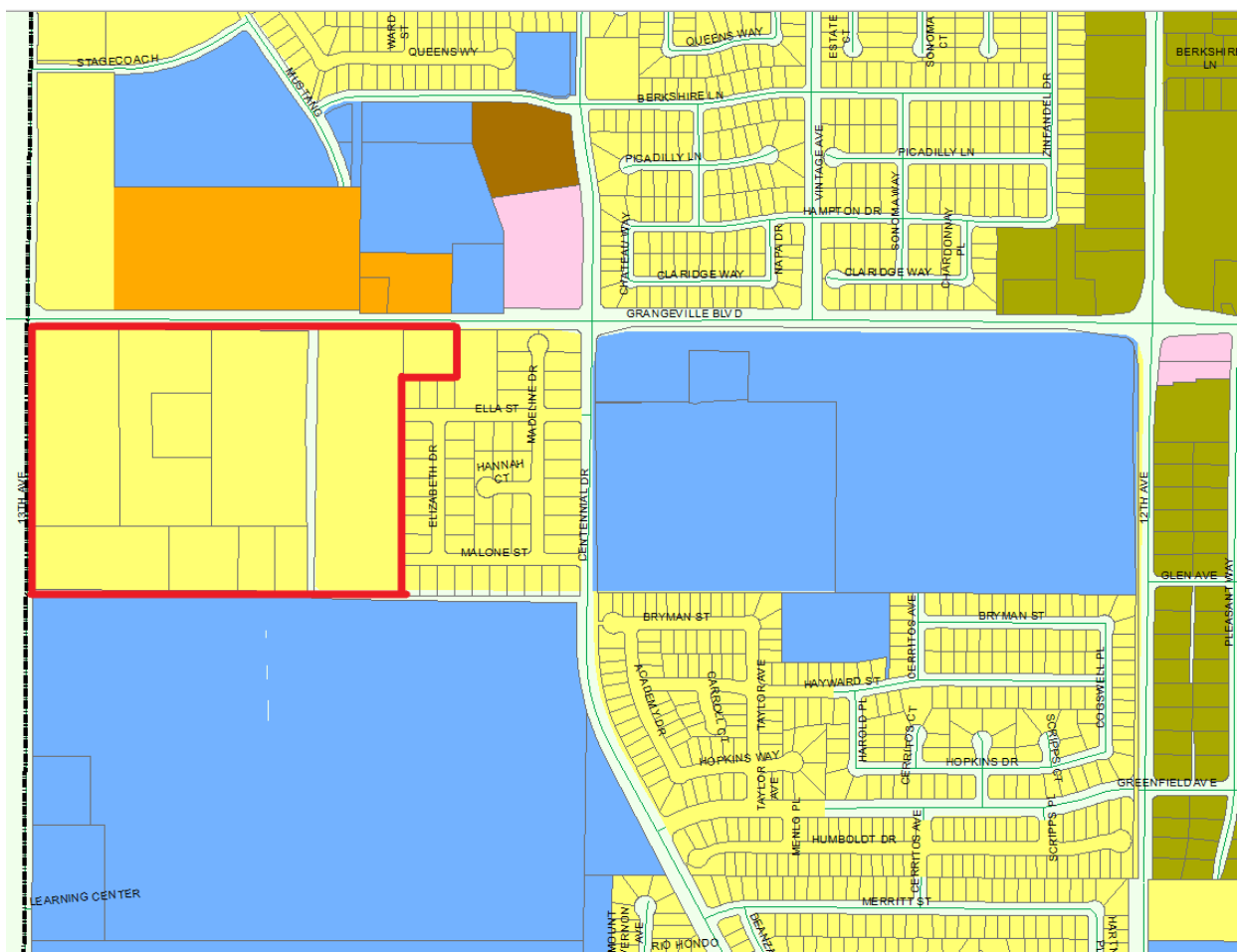
Low-Density Residential

In accordance with the General Plan, the expected density range for Low-Density Residential is two to 10 units per gross acre, with an expected average of four units per gross acre. According to Land Use Policy L31, the purpose of the Low-Density Residential land use designation is to provide mainly single-family development on lot sizes typically found in urban settings. Typical uses in the Low-Density Residential land use designation include residential uses in a variety of single-family lot types. Duplexes, second dwelling units, and home occupations can also be allowed when made compatible with the residential nature of the neighborhood, according to Policy L32.

R-L-5 Low-Density Residential

The property is zoned R-L-5 Low-Density Residential, 5,000 square-foot minimum lot size.

Figure 3: Zoning Designation
R-L-5 Low-Density Residential



PROJECT EVALUATION

Vesting Tentative Tract 934

Vesting Tentative Tract 934 is a request by Precision Civil Engineering, Inc. to subdivide 36.48 acres into 161 single-family residential lots and a 66,216 sq. ft. storm drainage basin in the R-L-5 Low-Density Residential zone district. The project surrounds two large-lot single-family residences, which are labeled as “not a part.”

See proposed subdivision, attached as **Exhibit A**.

APN(s): 009-050-001, 009-050-002, 009-050-003, 009-050-004, and 009-040-005

Total Area: 36.48 gross acres

Number of Lots: 161 residential lots; a shared 66,216 sq. ft. basin (shown as Out lot A)

Number of Dwelling Units: 161 single-family residential dwelling units

Units per acre: 4.375 units per gross acre

Potential population increase: 2.98 persons per household x 161 households = 480 persons

Conformance with the R-L Low-Density Residential Zoning

Lot Area

Smallest	Largest	Average	Required in R-L-5
5,069 sq. ft. (Lot 73)	14,671 sq. ft. (Lot 126)	6,403 sq. ft.	5,000 sq. ft.

In the R-L-5 Low-Density Residential zone district, the minimum lot size shall be 5,000 square feet, except as prescribed in Section 17.10.100, which allows lot area less than 5,000 square feet with the application of various standards.

Analysis: The minimum lot size provided in Vesting Tentative Tract 934 is 5,069 square feet, which satisfies the minimum lot size requirement for the R-L-5 Low-Density Residential zone district.

Lot Dimensions

Lot Frontage

In the R-L-5 Low-Density Residential zone district, the minimum lot frontage shall be 40 feet.

Analysis: There is a minimum of 40 feet of lot frontage provided for all lots within the subdivision.

Lot Width

In the R-L-5 Low-Density Residential zone district, there shall be a minimum lot width of 50 feet for interior lots and 60 feet for corner lots.

Analysis: The majority of the lots within the subdivision are 50 feet for interior lots and upwards of 60 feet on corner lots, which satisfies the required lot width on interior and corner lots for the R-L-5 Low-Density Residential zone district.

Lot Depth

In the R-L-5 Low-Density Residential zone district, the lot depth shall be a minimum of 90 feet.

Analysis: The majority of the residential lots provided in Vesting Tentative Tract 934 are upward of 100 feet, which meets and exceeds the lot depth requirement for the R-L-5 Low-Density Residential zone district.

Density

In accordance with the General Plan, the expected density range for Low-Density Residential is two to 10 units per gross acre, with an expected average of four units per gross acre.

Analysis: The density provided for Vesting Tentative Tract 934 is 4.375 units per gross acre, which is within the allowable density range for the Low-Density Residential designation.

Dwelling Units per Lot

In the R-L-5 Low-Density Residential zone district, not more than one dwelling unit shall be allowed on each lot, unless approved as an accessory dwelling unit in accordance with Section 17.60.030 (accessory dwelling unit standards) and State law.

Analysis: The lots are planned for single-family residential use. Accessory dwelling units would be permissible with an administrative approval, subject to the conditions set forth in 17.60.030 of the Hanford Municipal Code and State law.

Subdivisions Improvements

Street Improvements

Street improvements will include the following:

- Construction of residential streets within the subdivision to City Street Standard ST-32;
- Development of Grangeville Boulevard as an arterial street along the development frontage of the subdivision and the "Not a Part" portion, in conformance with City Standards ST-17 and ST-20, and as follows:
 1. Traffic index used for the design of street structural section shall be a minimum of 10.0.
 2. A geotechnical report shall be submitted to the City Engineer identifying the existing structural section thickness of Grangeville Boulevard, along the entire development frontage, concurrent with the submittal of development improvement plans. Reconstruction of Grangeville Boulevard, along the entire development frontage will be required if the existing street structural section does not conform to City Standards and Specifications.
 3. Street improvements shall include, but not be limited to, the installation of concrete curb and gutter, sidewalk, landscaping, decorative masonry block wall, street lights, half width street construction on the south side of Grangeville Boulevard, including pavement reconstruction of existing roadway, including pavement reconstruction of roadway if applicable, and all street signing, striping and transition paving as required.
 4. Developer shall attempt to acquire additional street right-of-way along the "Not a Part" frontage of Grangeville Boulevard in accordance with Section 66462.5 of the Subdivision Map Act. The additional street right-of-way is necessary to facilitate street widening improvements along the entire development frontage of Grangeville Boulevard. If Developer is unsuccessful, City will attempt to acquire the right-of-way.

Backup Parkway Improvements

The developer will design and construct a minimum six-foot high decorative masonry block wall and landscaping/irrigation system improvements along the development frontages of 13th Avenue, Grangeville Boulevard, "K" Street, and "E" Street for lots backing onto said streets.

- a. Masonry walls shall be treated with anti-graffiti repellent. The minimum height of the wall shall be measured from the highest elevation grade of the property located adjacent to either side of the wall. Wall heights shall be maintained at a uniform grade / slope whenever possible. If elevation changes are required, steps shall be introduced at pilaster locations and / or changes in wall direction. Wall improvement plans shall be designed to incorporate architectural, civil and structural components into one set of drawings. Wall plans shall be reviewed and approved by both the City Public Utilities and Engineer and Community Development Departments.

A 4 1/2-foot-wide meandering detached sidewalk along the development frontages of 13th Avenue and Grangeville Boulevard and a 4 ½ attached adjacent sidewalk along the K and E Street frontages.

Landscaping and irrigation system improvements along the development frontages of 13th Avenue and Grangeville Boulevard shall be prepared by a licensed landscape architect. Plans shall be reviewed and approved by the City Public Works, Parks & Community Services, and Community Development Departments.

1. All species of trees and plants shall be selected from a list approved by the City's Parks and Recreation Commission.
2. All new and existing electrical boxes, control boxes and other equipment boxes (excluding traffic control) cabinets along the street frontage shall be painted hunter green or be of a color compatible with the landscaping. Prior to painting, all metal surfaces shall be treated with an etching primer (zinc chromate) or equivalent. All new irrigation electrical and control cabinets shall be mounted into the masonry wall per City Standards.
3. A covenant including each residential lot within the subdivision and requiring care and maintenance of local street park strip landscape improvements along the individual lot frontage(s) by the homeowners thereof shall be recorded concurrent with the final map.

Sewer Improvements

The developer's engineer will provide a sanitary sewer master plan, complete with calculations for the entire subdivision prior to recording a subdivision final map for the development.

Storm Drainage Improvements

The developer's engineer will provide a storm drainage master plan, complete with calculations for the entire subdivision prior to recording a subdivision final map for the development. All drainage from the subdivision will be retained in the retention basin, shown on the subdivision map. The development is required to comply with State of California Water Resources Control Board requirements, specifically related to the National Pollution Elimination System Permit process.

Water System

The developer's engineer will provide a Water System Master Plan, complete with calculations for the entire subdivision, prior to recording a subdivision final map for the development.

A minimum 12-inch diameter water main and appurtenances shall be extended within Grangeville Boulevard, from the eastern limits of subdivision to 13th Avenue. Improvements shall conform to the City's Water Master Plan.

All existing water wells located within the proposed development shall be abandoned in conformance with State of California Department of Health Standards.

Easements and Dedications

All easements will be designated on the final subdivision map, as required by the utility companies and where needed for providing service to street lights and landscape improvements as designated by the City Public Utilities and Engineering Division. A 10-foot utility and landscape easement will be provided along 13th Avenue and Grangeville Boulevard. A six-foot utility easement will be provided along all residential streets. The Blower's Ditch Easement will be maintained along E and K Street, as shown on the Tentative Map.

All proposed streets and street extensions, as shown on the tentative subdivision map, shall be dedicated to the City as public right-of-way, and any alteration of existing utilities shall be the responsibility of the developer. All proposed landscape public utility easements.

All proposed landscape public utility easements, located as shown on the tentative subdivision map, shall be dedicated to the City for landscape and public utility purposes concurrent with the recording of a subdivision final map, unless modified herein.

Assessment District

The developer will enter into an agreement with the City for the formation of a tax assessment district for the maintenance of interior subdivision street lighting, decorative block fencing, and landscaping located along 13th Avenue and Grangeville Boulevard, "K" Street, and "E" Street, located as shown on the tentative subdivision map.

FINDINGS FOR APPROVAL

Pursuant to Section 16.04.010 of the Hanford Subdivision Ordinance, Section 66474 of the Subdivision Map Act, and Hanford's Zoning Ordinance, the following findings can be made by the Planning Commission:

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 934. 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 4.375 dwelling units per gross acre.

5. Environmental Finding:

ANALYSIS: That an initial study was conducted. On the basis of the initial study, the Community Development Department has determined that the project described above would not have significant adverse impacts on the environment, with the incorporation of mitigation measures. Mitigated Negative Declaration No. 2021-100 has been prepared for the project. The initial study, Mitigated Negative Declaration No. 2021-100 and mitigation measures required of development are attached **(Attachment 2)**.

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 934 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.

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.

ENVIRONMENTAL ASSESSMENT

That an initial study/environmental assessment was conducted; and, on the basis on the initial study, the Community Development Department has determined that the project described above would not have significant adverse impacts on the environment, with the incorporation of mitigation measures. Mitigated Negative Declaration No. 2021-100 has been prepared for the project. The initial study, Mitigated Negative Declaration No. 2021-100, and mitigation measures required of development are attached as **Attachment 2**.

PRE-CONSULTATION

In accordance with Section 15603(g) of the California Environmental Quality Act (CEQA) Guidelines, the project proposal was forwarded to the responsible and interested agencies for early consultation. Comments were received from the following agencies:

1. Consultation from Michael Wilson with AT&T (Received July 23, 2021).
2. Consultation from Renee Creech with the Hanford Joint Union High School District (Received July 26, 2021).
3. Consultation from Samantha McCarthy, Cultural Specialist II with the Santa Rosa Rancheria Tachi-Yokut Tribe (Received July 27, 2021).
4. Consultation from Chad Curran with Pacific Gas and Electric Company (Received July 27, 2021).
5. Consultation from Oscar Gonzalez with Kings Area Rural Transit (Received July 29, 2021).
6. Consultation from Brian Clements, Director of Permit Services with the San Joaquin Valley Air Pollution Control District (Received August 11, 2021).

Responses to comments are addressed within the initial study and are as follows:

AT&T:

Consultation was received from Michael Wilson with AT&T on July 22, 2019, stating, "New subdivision to feed fiber in joint trench. AT&T will provide redlines to developer. Any relocation conditions should be relayed to me by developer or city (Grangeville aerial-to-aerial, I expect)."

Staff Analysis: The comment was forwarded to the Engineering Division to be incorporated in the Project's conditions of approval.

Renee Creech:

Consultation was received from Renee Creech with the Hanford Joint Union High School District on July 26, 2021, stating, “This project is another housing development in our school boundary that is already impacted. This causes issues for traffic, transportation, and classroom housing of students and staff.”

Staff Analysis: The City’s role in development and managing school sites and programs is limited. The various school districts truly govern where a new school site would be located and when it would be necessary to construct or expand facilities, in order to adequately accommodate population growth. Elected governing school boards are responsible for budgeting and decision-making and the State Department of Education establishes school site and construction standards. The General Plan provides policy which focuses on collaboration with school districts in determining new school locations and utilizing school facilities for general public needs. School districts would be able to utilize the General Plan, along with other plans, standards, and codes, to establish new school sites and to make decisions on school amenities and cohesiveness with the surrounding area. The development will be subject to School Impact fees, in order to mitigate the effect of the project on schools.

Santa Rosa Rancheria Tachi-Yokut Tribe

Consultation was received from Samantha McCarty with the Santa Rosa Rancheria Tachi-Yokut Tribe on July 27, 2021 providing the following, “The Tribe’s concerns are that cultural materials and or human remains could be disturbed during this project. Therefore, the Tribe is requesting to add mitigation measures to the Conditional Use Permit regarding this project. The Tribe is also requesting that an archaeological survey be done, as well as an archaeological record search through the CHRS center and a SLF search with the NAHC.”

Staff Analysis: An archaeological survey and archaeological record search was conducted – the contents of the study are considered confidential and are not attached to the initial study

After discussion with the Tribe, mitigation measures were identified, as follows:

- That if cultural resources are discovered during construction or related activities, all work shall be halted and a qualified archeologist and the City of Hanford shall be notified. The find shall be properly investigated and appropriate measures are to be taken before construction may continue.
- Prior to ground disturbing activities, construction staff shall receive a cultural presentation by the Santa Rosa Rancheria regarding cultural resources and laws and regulations for the discovery of cultural resources and human remains.
- A Native American shall be present on ground disturbing activities.
- That a Burial Treatment Plan be entered in to by the applicant/property owner prior to any earth disturbing activities.
- A curation agreement shall be signed with the Santa Rosa Rancheria.

CHRIS Record Search

The Southern San Joaquin Information Center (SSJIC) conducted a California Historical Resources Information System (CHRIS) Record Search for the Project site and surrounding area (0.5-mile radius, "Project Area") on September 13, 2021 (Confidential). The results indicate that the Project Area had been partly surveyed previously and that one (1) cultural resource, the historic Last Chance Ditch (CA-KIN-191H) crossed through it. Based on the map provided, the cultural resource is not located on the Project site.

SLF NAHC Record Search

A NAHSC Sacred Lands Files search was conducted on October 4, 2021. The search results were negative and did not indicate any known sacred sites or tribal cultural resources within the Project Area.

Phase I Survey

A Phase I cultural resources survey for the Project area was conducted by ASM Affiliates on September 14, 2021. No historical or archaeological resources of any kind were discovered within the Project Area. In addition, the previously recorded historical Last Chance Ditch was found to be abandoned and filled-in. Based on the proximity of the Project site to the Last Chance Ditch, the survey considers the site to be archaeologically sensitive. Following the suggestions of the Santa Rosa Rancheria Tachi Yokut Tribe, the survey recommends the aforementioned mitigation measures.

PG&E

Consultation was received from Chad Curran with PG&E, providing the following:

Thank you for submitting the 20-133 Tentative Map No.934 plans for our review. PG&E will review the submitted plans in relationship to any existing Gas and Electric facilities within the project area. If the proposed project is adjacent/or within PG&E owned property and/or easements, we will be working with you to ensure compatible uses and activities near our facilities.

Attached you will find information and requirements as it relates to Gas facilities (Attachment 1) and Electric facilities (Attachment 2). Please review these in detail, as it is critical to ensure your safety and to protect PG&E's facilities and its existing rights.

Below is additional information for your review:

1. This plan review process does not replace the application process for PG&E gas or electric service your project may require. For these requests, please continue to work with PG&E Service Planning:
https://www.pge.com/en_US/business/services/buildingandrenovation/overview/overview.page.
2. If the project being submitted is part of a larger project, please include the entire scope of your project, and not just a portion of it. PG&E's facilities are to be incorporated within any CEQA document. PG&E needs to verify that the CEQA document will identify any required future PG&E services.

3. An engineering deposit may be required to review plans for a project depending on the size, scope, and location of the project and as it relates to any rearrangement or new installation of PG&E facilities.

Any proposed uses within the PG&E fee strip and/or easement, may include a California Public Utility Commission (CPUC) Section 851 filing. This requires the CPUC to render approval for a conveyance of rights for specific uses on PG&E's fee strip or easement. PG&E will advise if the necessity to incorporate a CPUC Section 851 filing is required.

This letter does not constitute PG&E's consent to use any portion of its easement for any purpose not previously conveyed. PG&E will provide a project specific response as required.

Sincerely,

Plan Review Team
Land Management

Staff Analysis: Such requirements shall be incorporated in the Project's Conditions of Approval.

Kings Area Rural Transit (KART)

Consultation was received from Oscar Gonzalez with KART, providing the following, "KART would like consideration for a bus stop 12' x 7' – sidewalk 7' wide from curb to sidewalk slab. At 12' x 7', we can fit a sign, bench, and trash can.

Staff Analysis: Such requirement has been included as a Condition of Approval of the project.

San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD)

Consultation was received from Brian Clemens with the SJVUAPCD, providing the following:

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the project referenced above from the City of Hanford (City). The project consists of a 161 single-family residential development (Project). The Project is located at Southeast Corner of 13th Avenue and West Grangeville Boulevard, in Hanford, CA (APN 009-050-001 through -005).

Project Scope

The Project consists of subdividing 36.48 acres into 161 single-family residential lots in the R-L-5 Low-Density Residential zone district.

Based on information provided to the District, Project specific annual emissions from construction and operation emissions of criteria pollutants would exceed any of the following District significance thresholds: 100 tons per year of carbon monoxide (CO), 10 tons per year of oxides of nitrogen (NOx), 10 tons per year of reactive organic gases (ROG), 27 tons per year of oxides of sulfur (SOx), 15 tons per year of particulate matter of 10 microns or less in size (PM10), or 15 tons per year of particulate matter of 2.5 microns or less in size (PM2.5).

Other potential significant air quality impacts related to Toxic Air Contaminants (see information below under Health Risk Assessment), Ambient Air Quality Standards, Hazards and Odors, may

require assessments and mitigation. More information can be found in the District's Guidance for Assessing and Mitigating Air Quality Impacts at:
<https://www.valleyair.org/transportation/GAMAQI.pdf>

The District offers the following comments:

1) Project Related Criteria Pollutant Emissions

The District recommends that a more detailed preliminary review of the Project be conducted for the Project's construction and operational emissions. The additional environmental review of the Project's potential impact on air quality should consider the following items:

1a) Construction Emissions:

The District recommends that the City consider the use of the cleanest reasonably available off-road construction practices (i.e. eliminating unnecessary idling) and fleets, as set forth in §2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 Code of Federal Regulations as a mitigation measure to reduce Project related impacts from construction related exhaust emissions.

1b) Project Related Operational Emissions:

Emissions from stationary sources and mobile sources should be analyzed separately. For reference, the District's annual criteria thresholds of significance for operational emissions are listed above.

1c) Recommended Model:

Project related criteria pollutant emissions from construction and operational sources should be identified and quantified. Emissions analysis should be performed using CalEEMod (**California Emission Estimator Model**), which uses the most recent approved version of relevant Air Resources Board (ARB) emissions models and emission factors. CalEEMod is available to the public and can be downloaded from the CalEEMod website at: www.caleemod.com.

2) Voluntary Emission Reduction Agreement

If the Project is expected to have a significant impact, the District recommends the environmental document/assessment also include a discussion on the feasibility of implementing a Voluntary Emission Reduction Agreement (VERA) for this Project. A VERA is a mitigation measure by which the project proponent provides pound-for pound mitigation of emissions increases through a process that develops, funds, and implements emission reduction projects, with the District serving a role of administrator of the emissions reduction projects and verifier of the successful mitigation effort. To implement a VERA, the project proponent and the District enter into a contractual agreement in which the project proponent agrees to mitigate Project specific emissions by providing funds for the District's incentives programs. The funds are disbursed by the District in the form of grants for projects that achieve emission reductions. Thus, project-specific regional impacts on air quality can be fully mitigated. Types of emission reduction projects that have been funded in the past include electrification of stationary internal combustion engines (such as agricultural irrigation pumps), replacing old heavy-duty trucks with new, cleaner, more efficient heavy-duty trucks, and replacement of old farm tractors.

In implementing a VERA, the District verifies the actual emission reductions that have been achieved as a result of completed grant contracts, monitors the emission reduction projects, and ensures the enforceability of achieved reductions. After the project is mitigated, the District certifies to the Lead Agency that the mitigation is completed, providing the Lead Agency with an enforceable mitigation measure demonstrating that project-specific regional emissions have been mitigated to less than significant. To assist the Lead Agency and project proponent in ensuring that the environmental document is compliant with CEQA, the District recommends the Draft EIR includes an assessment of the feasibility of implementing a VERA.

3) Health Risk Screening/Assessment

Located southeast of the Project, there is a sensitive receptors (i.e. Sierra Pacific High School). The Health Risk Assessment should evaluate the risk associated with sensitive receptors in the area and mitigate any potentially significant risk to help limit emission exposure to sensitive receptors.

A Health Risk Screening/Assessment identifies potential Toxic Air Contaminants (TACs) impact on surrounding sensitive receptors such as hospitals, daycare centers, schools, work-sites, and residences. TACs are air pollutants identified by the Office of Environmental Health Hazard Assessment/California Air Resources Board (OEHHA/CARB) that pose a present or potential hazard to human health. A common source of TACs can be attributed to diesel exhaust emitted from both mobile and stationary sources. List of TACs identified by OEHHA/CARB can be found at: <https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants>

The District recommends the development project(s) be evaluated for potential health impacts to surrounding receptors (on-site and off-site) resulting from operational and multi-year construction TAC emissions.

- i) The District recommends conducting a screening analysis that includes all sources of emissions. A screening analysis is used to identify projects which may have a significant health impact. A prioritization, using the latest approved California Air Pollution Control Officer's Association (CAPCOA) methodology, is the recommended screening method. A prioritization score of 10 or greater is considered to be significant and a refined Health Risk Assessment (HRA) should be performed.

For your convenience, the District's prioritization calculator can be found at: http://www.valleyair.org/busind/pto/emission_factors/Criteria/Toxics/Utilities/PRIORITIZATION%20RMR%202016.XLS.

- ii) The District recommends a refined HRA for development projects that result in a prioritization score of 10 or greater. Prior to performing an HRA, it is recommended that development project applicants contact the District to review the proposed modeling protocol. A development project would be considered to have a significant health risk if the HRA demonstrates that the project related health impacts would exceed the District's significance threshold of 20 in a million for carcinogenic risk and 1.0 for the Acute and Chronic Hazard Indices, and would trigger all feasible mitigation measures. The District recommends that development projects which result in a significant health risk not be approved.

For HRA submittals, please provide the following information electronically to the District for review:

- HRA AERMOD model files
- HARP2 files
- Summary of emissions source locations, emissions rates, and emission factor calculations and methodology.

More information on toxic emission factors, prioritizations and HRAs can be obtained by:

- E-Mailing inquiries to: hramodeler@valleyair.org; or
- Contacting the District by phone for assistance at (559) 230-6000; or
- Visiting the District's website (Modeling Guidance) at:
http://www.valleyair.org/busind/pto/Tox_Resources/AirQualityMonitoring.htm.

4) Ambient Air Quality Analysis

An ambient air quality analysis (AAQA) uses air dispersion modeling to determine if emissions increases from a project will cause or contribute to a violation of the ambient air quality standards. For development projects the District recommends that an AAQA be performed for the project if emissions exceed 100 pounds per day of any pollutant.

If an AAQA is performed, the analysis should include emissions from both project specific permitted and non-permitted equipment and activities. The District recommends consultation with District staff to determine the appropriate model and input data to use in the analysis.

Specific information for assessing significance, including screening tools and modeling guidance is available online at the District's website www.valleyair.org/ceqa.

5) Vegetative Barriers and Urban Greening

The Project is located in a primarily rural area. However, there is a church approximately 1,700 feet west of the Project and the nearest school (Sierra Pacific High School) is located approximately 1,500 feet southeast of the Project. The District suggests the City of Hanford consider the feasibility of incorporating vegetative barriers and urban greening as a measure to further reduce air pollution exposure on sensitive receptors (i.e. school).

While various emission control techniques and programs exist to reduce air quality emissions from mobile and stationary sources, vegetative barriers have been shown to be an additional measure to potentially reduce a population's exposure to air pollution through the interception of airborne particles and the uptake of gaseous pollutants. Examples of vegetative barriers include, but not limited to the following: trees, bushes, shrubs, or a mix of these. Generally, a higher and thicker vegetative barrier with full coverage will result in greater reductions in downwind pollutant concentrations. In the same manner, urban greening is also a way to help improve air quality and public health in addition to enhancing the overall beautification of a community with drought resistant low maintenance greenery.

6) Solar Deployment in the Community

It is the policy of the State of California that renewable energy resources and zero-carbon resources supply 100% of retail sales of electricity to California end-use customers by December

31, 2045. While various emission control techniques and programs exist to reduce air quality emissions from mobile and stationary sources, the production of solar energy is contributing to improving air quality and public health. The District suggests that the City of Hanford consider the feasibility of incorporating solar power systems, as an emission reduction strategy for this Project.

7) Clean Lawn and Garden Equipment in the Community

Since the Project consists of residential development, gas-powered residential lawn and garden equipment have the potential to result in an increase of NO_x and PM_{2.5} emissions. Utilizing electric lawn care equipment can provide residents with immediate economic, environmental, and health benefits. The District recommends the Project proponent consider the District's Clean Green Yard Machines (CGYM) program which provides incentive funding for replacement of existing gas powered lawn and garden equipment. More information on the District CGYM program and funding can be found at: <http://www.valleyair.org/grants/cgym.htm> and <http://valleyair.org/grants/cgym-commercial.htm>

8) Charge Up! Electric Vehicle Charger

To support further installation of electric vehicle charging equipment and development of such infrastructure, the District offers incentives to public agencies, businesses, and property owners of multi-unit dwellings to install electric charging infrastructure (Level 2 and 3 chargers). The purpose of this incentive program is to promote clean air alternative-fuel technologies and the use of low or zero-emission vehicles. The District suggests that the City and Project proponent consider the feasibility of installing electric vehicle chargers for this Project.

Please visit www.valleyair.org/grants/chargeup.htm for more information.

9) District Rules and Regulation

The District issues permits for many types of air pollution sources and regulates some activities not requiring permits. A project subject to District rules and regulation would reduce its impacts on air quality through compliance with regulatory requirements. In general, a regulation is a collection of rules, each of which deals with a specific topic. For example, *Regulation II – Permits* encompasses multiple rules associated with the permitting of emission sources such as Rule 2010 (Permits Required), Rule 2201 (New and Modified Stationary Source Review), and others.

9a) District Rule 9510 (Indirect Source Review)

The purpose of District Rule 9510 (Indirect Source Review) is to reduce the growth in both NO_x and PM₁₀ emissions associated with development and transportation projects from mobile and area sources associated with construction and operation of development projects. The rule encourages clean air design elements to be incorporated into the development project. In case the proposed project clean air design elements are insufficient to meet the targeted emission reductions, the rule requires developers to pay a fee used to fund projects to achieve off-site emissions reductions.

The proposed Project is subject to District Rule 9510 because it will receive a project-level discretionary approval from a public agency and will equal or exceed 50 residential units. When subject to the rule, an Air Impact Assessment (AIA) application is required no later than applying for project-level approval from a public agency. In this case, if not already

done, please inform the project proponent to immediately submit an AIA application to the District to comply with District Rule 9510.

An AIA application is required and the District recommends that demonstration of compliance with District Rule 9510, before issuance of the first building permit, be made a condition of Project approval.

Information about how to comply with District Rule 9510 can be found online at:
<http://www.valleyair.org/ISR/ISRHome.htm>.

The AIA application form can be found online at:
<http://www.valleyair.org/ISR/ISRFormsAndApplications.htm>

9b) District Regulation VIII (Fugitive PM10 Prohibitions)

The project proponent may be required to submit a Construction Notification Form or submit and receive approval of a Dust Control Plan prior to commencing any earthmoving activities as described in Regulation VIII, specifically Rule 8021 – *Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities*.

The application for both the Construction Notification and Dust Control Plan can be found online at: <https://www.valleyair.org/busind/comply/PM10/forms/DCP-Form.docx>

Information about District Regulation VIII can be found online at:
http://www.valleyair.org/busind/comply/pm10/compliance_pm10.htm

10) Other District Rules and Regulations

The Project may also be subject to the following District rules: Regulation VIII, (Fugitive PM10 Prohibitions), Rule 4102 (Nuisance), Rule 4601 (Architectural Coatings), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). In the event an existing building will be renovated, partially demolished or removed, the project may be subject to District Rule 4002 (National Emission Standards for Hazardous Air Pollutants).

The list of rules above is neither exhaustive nor exclusive. Current District rules can be found online at: www.valleyair.org/rules/1ruleslist.htm. To identify other District rules or regulations that apply to this Project or to obtain information about District permit requirements, the applicant is strongly encouraged to contact the District's Small Business Assistance (SBA) Office at (559) 230-5888.

11) District Comment Letter

The District recommends that a copy of the District's comments be provided to the Project proponent.

Staff Analysis: The District's comments are addressed in the initial study, and as follows:

The impact assessment for air quality focuses on potential effects the Project might have on air quality within the Hanford region. The SJVAPCD has established thresholds of significance for determining environmental significance. These thresholds separate a project's short-term emissions from its long-term emissions. The short-term emissions are mainly related to the

construction phase of a project, which are recognized to be short in duration. The long-term emissions are primarily related to the activities that will occur indefinitely as a result of Project operations. Impacts will be evaluated both on the basis of CEQA Appendix G criteria and SJVAPCD significance criteria. The impacts to be evaluated will be those involving construction and operational emissions of criteria pollutants. The SJVAPCD has established thresholds for certain pollutants shown in Table 6.

Table 6
SJVAPCD Air Quality Thresholds of Significance

Project Type	Ozone Precursor Emissions (tons/year)					
	CO	NO _x	ROG	SO _x	PM ₁₀	PM _{2.5}
Construction Emissions	100	10	10	27	15	15
Operational Emissions (Permitted Equipment and Activities)	100	10	10	27	15	15
Operational Emissions (Non-Permitted Equipment and Activities)	100	10	10	27	15	15

Source: SJVAPCD 2020

CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects. The model quantifies direct emissions from construction and operations (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use.

The model is an accurate and comprehensive tool for quantifying air quality impacts from land use projects throughout California. The model can be used for a variety of situations where an air quality analysis is necessary or desirable such as CEQA and NEPA documents, pre-project planning, compliance with local air quality rules and regulations, etc.

Short-Term Impacts

Short-term impacts are mainly related to the construction phase of a project and are recognized to be short in duration. Construction air quality impacts are generally attributable to dust and exhaust pollutants generated by equipment and vehicles. Fugitive dust is emitted both during construction activity and as a result of wind erosion over exposed earth surfaces. Clearing and earth moving activities do comprise major sources of construction dust emissions, but traffic and general disturbances of soil surfaces also generate significant dust emissions. Further, dust generation is dependent on soil type and soil moisture. Exhaust pollutants are the non-useable gaseous waste products produced during the combustion process. Engine exhaust contains CO, HC, and NO_x pollutants which are harmful to the environment.

Adverse effects of construction activities cause increased dust-fall and locally elevated levels of total suspended particulate. Dust-fall can be a nuisance to neighboring properties or previously completed developments surrounding or within the Project area and may require frequent washing during the construction period.

PM₁₀ emissions can result from construction activities of the Project. The SJVAPCD has determined that compliance with Regulation VIII and other control measures will constitute sufficient mitigation to reduce PM₁₀ impacts to a level considered less-than significant for most

development projects. Even with implementation of District Regulation VIII and District Rule 9510, large development projects may not be able to reduce project specific construction impacts below District thresholds of significance.

Ozone precursor emissions are also an impact of construction activities and can be quantified through calculations. Numerous variables factored into estimating total construction emission include: level of activity, length of construction period, number of pieces and types of equipment in use, site characteristics, weather conditions, number of construction personnel, and amount of materials to be transported onsite or offsite. Additional exhaust emissions would be associated with the transport of workers and materials. Because the specific mix of construction equipment is not presently known for this Project, construction emissions were estimated using CalEEMod Model defaults for construction equipment.

Table 7 shows the CalEEMod estimated construction emissions that would be generated from construction of the Project. Results of the analysis show that emissions generated from construction of the Project will not exceed the SJVAPCD emission thresholds.

Table 7
Project Construction Emissions (tons/year)

Summary Report	CO	NO _x	ROG	SO _x	PM ₁₀	PM _{2.5}	CO ₂ e
Project Construction Emissions (tons)	2.81	3.09	2.79	0.01	0.66	0.34	497.88
SJVAPCD Level of Significance	100	10	10	27	15	15	None
Does the Project Exceed Standard?	No	No	No	No	No	No	No

Source: CalEEMod, VRPA 2021

Long-Term Emissions

Long-Term emissions from the Project would be generated primarily by mobile source (vehicle) emissions from the Project site and area sources such as lawn maintenance equipment.

Localized Operational Emissions – Ozone/Particulate Matter

Significance criteria have been established for criteria pollutant emissions as documented in Section 3.1. Operational emissions have been estimated for the Project using the CalEEMod Model and detailed results are included in **Appendix A** of the Initial Study.

Results of the CalEEMod analysis are shown in Table 8. Results indicate that the annual operational emissions from the Project will be less than the SJVAPCD emission thresholds for criteria pollutants.

Table 8
Project Operational Emissions (tons/year)

Summary Report	CO	NO _x	ROG	SO _x	PM ₁₀	PM _{2.5}	CO _{2e}
Project Operational Emissions	7.89	1.63	2.17	0.02	1.66	0.47	2063.63
SJVAPCD Level of Significance	100	10	10	27	15	15	None
Does the Project Exceed Standard?	No	No	No	No	No	No	No

Source: CalEEMod, VRPA 2021

As noted previously, the Project will be subject to the SJVAPCD's Regulation VIII-Fugitive PM10 Prohibitions. Regulation VIII is comprised of District Rules 8011 through 8081, which are designed to reduce PM10 emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and track out, landfill operations, etc.

Localized Operational Emissions – Carbon Monoxide

The SJVAPCD is currently in unclassified/attainment for Federal standards and attainment for State standards for CO. An analysis of localized CO concentrations is typically warranted to ensure that standards are maintained. Segment counts in the immediate vicinity of the Project site along 13th Avenue and Grangeville Boulevard were obtained from the City of Hanford traffic counts which are typically updated every three years. Daily traffic counts along 13th Avenue and Grangeville Boulevard (see appendices) were adjusted to reflect 2021 and 2042 traffic and conditions. Adjusted counts were then compared to the Modified HCM-Based Level of Service (LOS) Tables (Florida Tables). Results of this analysis demonstrates that adjacent roadway segment will operate at LOS 'D' or better through the Year 2042. As a result, the overall CO concentrations at roadways and intersections in the study area would be less than significant.

Localized Operational Emissions – Toxic Air Contaminants (TAC)

The SJVAPCD's Guidance Document, Guidance for Assessing and Mitigating Air Quality Impacts – 2015, identifies the need for projects to analyze the potential for adverse air quality impacts to sensitive receptors. Sensitive receptors refer to those segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems affected by air quality). Land uses that have the greatest potential to attract these types of sensitive receptors include schools, parks, playgrounds, daycare centers, nursing homes, hospitals, and residential communities. From a health risk perspective, the proposed Project is a Type B project in that it may potentially place sensitive receptors in the vicinity of existing sources. Type A projects would potentially place new toxic sources in the vicinity of existing receptors. Considering the components of the Project and the Source Categories provided in Table 4, the proposed Project is not a Type A project and would not place new toxic sources in the vicinity of existing sources.

TABLE 4
Recommendations on Siting New Sensitive Land Uses Such As Residences, Schools, Daycare Centers, Playgrounds, or Medical Facilities*

SOURCE CATEGORY	ADVISORY RECOMMENDATIONS
Freeways and High-Traffic Roads ¹	- Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
Distribution Centers	- Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). - Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	- Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. - Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	- Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the ARB on the status of pending analyses of health risks.
Refineries	- Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	- Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloroethylene	- Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. - Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations.
Gasoline Dispensing Facilities	- Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50 foot separation is recommended for typical gas dispensing facilities.

1: The recommendation to avoid siting new sensitive land uses within 500 feet of a freeway was identified in CARB's Air Quality and Land Use Handbook published in 2005. CARB recently published a technical advisory to the Air Quality and Land Use Handbook indicating that new research has demonstrated promising strategies to reduce pollution exposure along transportation corridors.

The first step in evaluating the potential for impacts to sensitive receptors for TAC's from the Project is to perform a screening level analysis. For Type B Projects, one type of screening tool is found in the CARB Handbook: Air Quality and Land Use Handbook: A Community Perspective. This handbook includes a table (depicted in Table 4) with recommended buffer distances associated with various types of common sources. The screening level analysis for the Project shows that TAC's are not a concern based upon the recommendations provided in Table 4. An evaluation of nearby land uses shows that the Project will not place sensitive receptors in the vicinity of existing toxic sources. Since the Project is not located within the recommended buffer distances associated with the sources found in Table 4, a health risk assessment is not needed at this time. As noted above, the proposed Project is not a Type A project and would not place new toxic sources in the vicinity of existing sources.

Localized Operational Emissions – Odors

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor.

For example, a person may use the word “strong” to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air.

When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

While offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and the SJVAPCD. Any project with the potential to frequently expose members of the public to objectionable odors should be deemed to have a significant impact.

The SJVAPCD requires that an analysis of potential odor impacts be conducted for the following two situations:

- Generators – projects that would potentially generate odorous emissions proposed to be located near existing sensitive receptors or other land uses where people may congregate, and
- Receivers – residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources.

The Project will not generate odorous emissions given the nature or characteristics of the Project. The intensity of an odor source’s operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The SJVAPCD has identified some common types of facilities that have been known to produce odors in the SJV Air Basin. The types of facilities that are known to produce odors are shown in Table 5 above along with a reasonable distance from the source within which, the degree of odors could possibly be significant.

Localized Operational Emissions – Naturally Occurring Abestos (NOA)

Asbestos is a term used for several types of naturally occurring fibrous minerals found in many parts of California. The most common type of asbestos is chrysotile, but other types are also found in California. Construction of the Project may cause asbestos to become airborne due to the construction activities that will occur on site. The Project would be required to submit a Dust Control Plan under the SJVAPCD’s Rule 8021. Compliance with Rule 8021 would limit fugitive dust emissions from construction, demolition, excavation, extraction, and other earthmoving activities associated with the Project.

Indirect Source Review

The Project is subject to the SJVAPCD’s ISR program, which is also known as Rule 9510. Rule 9510 and the Administrative ISR Fee Rule (Rule 3180) are the result of state requirements outlined in the California Health and Safety Code, Section 40604 and the State Implementation Plan (SIP). The purpose of the SJVAPCD’s ISR program is to reduce emissions of NOx and PM10 from new projects. In general, new development contributes to the air-pollution problem in the Valley by increasing the number of vehicles and vehicle miles traveled.

Utilizing the ISR Fee Estimator calculator available on the SJVAPCD website, it was determined that the Project’s total cost for emission reductions is \$126,272.64 without implementation of

emission reduction measures. The ISR Fee Estimator worksheets are included in the appendices. The fee noted above may be reduced dependent upon the formal ISR review process.

- a) *Would the project conflict with or obstruct implementation of the applicable air quality plan (e.g., by having potential emissions of regulated criterion pollutants which exceed the San Joaquin Valley Air Pollution Control Districts (SJVAPCD) adopted thresholds for these pollutants)?*

Less than Significant Impact. The primary way of determining consistency with the air quality plan's (AQP's) assumptions is determining consistency with the applicable General Plan to ensure that the Project's population density and land use are consistent with the growth assumptions used in the AQPs for the air basin.

As required by California law, city and county General Plans contain a Land Use Element that details the types and quantities of land uses that the city or county estimates will be needed for future growth, and that designate locations for land uses to regulate growth. KCAG uses the growth projections and land use information in adopted general plans to estimate future average daily trips and then VMT, which are then provided to SJVAPCD to estimate future emissions in the AQPs. Existing and future pollutant emissions computed in the AQP are based on land uses from area general plans. AQPs detail the control measures and emission reductions required for reaching attainment of the air standards.

The applicable General Plan for the project is the City of Hanford 2035 General Plan. The Project is consistent with the currently adopted General Plan for the City of Hanford and is therefore consistent with the population growth and VMT applied in the plan. Therefore, the Project is consistent with the growth assumptions used in the applicable AQPs. As a result, the Project will not conflict with or obstruct implementation of any air quality plans. Therefore, no mitigation is needed.

- b) *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?*

Less than Significant Impact. The Kings County area is nonattainment for Federal and State air quality standards for ozone, in attainment of Federal standards and nonattainment for State standards for PM₁₀, and nonattainment for Federal and State standards for PM_{2.5}. The SJVAPCD has prepared the 2016 and 2013 Ozone Plans, 2007 PM₁₀ Maintenance Plan, and 2012 PM_{2.5} Plan to achieve Federal and State standards for improved air quality in the SJVAB regarding ozone and PM. Inconsistency with any of the plans would be considered a cumulatively adverse air quality impact. As discussed in Section 4.1.1, the Project is consistent with the currently adopted General Plan for the City of Hanford and is therefore consistent with the population growth and VMT applied in the plan. Therefore, the Project is consistent with the growth assumptions used in the 2016 and 2013 Ozone Plan, 2007 PM₁₀ Maintenance Plan, and 2012 PM_{2.5} Plan.

Project specific emissions that exceed the thresholds of significance for criteria pollutants would be expected to result in a cumulatively considerable net increase of any criteria pollutant for which the County is in non-attainment under applicable federal or state ambient air quality standards. It should be noted that a project is not characterized as cumulatively insignificant when project emissions fall below thresholds of significance. As discussed in Section 3.1, the SJVAPCD has

established thresholds of significance for determining environmental significance which are provided in Table 6.

As discussed above, results of the analysis show that emissions generated from construction and operation of the Project will be less than the applicable SJVAPCD emission thresholds for criteria pollutants. Therefore, no mitigation is needed.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact. Sensitive receptors refer to those segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems affected by air quality). Land uses that have the greatest potential to attract these types of sensitive receptors include schools, parks, playgrounds, daycare centers, nursing homes, hospitals, and residential communities. From a health risk perspective, the Project is a Type B Project in that it may potentially place sensitive receptors in the vicinity of existing sources. The first step in evaluating the potential for impacts to sensitive receptors for TAC's from the Project is to perform a screening level analysis. For Type B Projects, one type of screening tool is found in the CARB Handbook: Air Quality and Land Use Handbook: A Community Perspective. This handbook includes a table (depicted in Table 4) with recommended buffer distances associated with various types of common sources. The screening level analysis for the Project shows that TAC's are not a concern based upon the recommendations provided in Table 4. An evaluation of nearby land uses shows that the Project will not place sensitive receptors in the vicinity of existing toxic sources. As noted above, the proposed Project is not a Type A project and would not place new toxic sources in the vicinity of existing sources. Therefore, the Project will not expose sensitive receptors to substantial pollutant concentrations and any impacts would be less than significant.

Short-Term Impacts

The annual emissions from the construction phase of the Project will be less than the applicable SJVAPCD emission thresholds for criteria pollutants as shown in Table 7. Therefore, construction emissions associated with the Project are considered less than significant.

Long-Term Impacts

Long-Term emissions from the Project are generated primarily by mobile source (vehicle) emissions from the Project site and area sources such as maintenance equipment. Emissions from long-term operations generally represent a project's most substantial air quality impact. Table 8 summarizes the Project's operational impacts by pollutant. Results indicate that the annual operational emissions from the Project will be less than the SJVAPCD emission thresholds for criteria pollutants. Therefore, operational emissions associated with the Project are considered less than significant.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less than Significant Impact. The SJVAPCD requires that an analysis of potential odor impacts be conducted for the following two situations:

- Generators – projects that would potentially generate odorous emissions proposed to be located near existing sensitive receptors or other land uses where people may congregate, and

- Receivers – residential or other sensitive receptor projects or other projects built for the intent of attracting people located near existing odor sources.

The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The SJVAPCD has identified some common types of facilities that have been known to produce odors in the SJV Air Basin. The types of facilities that are known to produce odors are shown in Table 5 above along with a reasonable distance from the source within which, the degree of odors could possibly be significant. The Project will not generate odorous emissions given the nature or characteristics of the Project.

Based on the assessment above, the Project will not generate potential odorous emissions or attract receivers and other sensitive receptors near existing odor sources. Therefore, no mitigation is needed.

1.1.1 Mitigation Measures

The proposed Project shall implement and incorporate, as applicable, the Air Quality related mitigation measures as identified in the Mitigation Monitoring and Reporting Program dated October 18, 2021.

PUBLIC COMMENTS

Noticing of the project was published in the newspaper on November 19, 2021 and mailed to property owners within 300 feet of the project site on November 18, 2021. The initial study and notice of intent to adopt a mitigated negative declaration was made available to the public for a 20-day comment period, from November 19 through December 9, 2021.

One public comment has been received by Thomas and Kathryn Enloe – **Attachment 3**.

RECOMMENDATION

Staff recommends that the Planning Commission:

1. Certify Mitigated Negative Declaration No. 2021-100 for the project.
2. Adopt Resolution No. 2021-29, approving Vesting Tentative Tract 934.

Applicant:
Precision Engineering
1234 "O" Street
Fresno, CA 93711

Owner:
Lennar Homes of California, Inc.
8080 N Palm, Suite #110
Fresno, CA 93711

RESOLUTION 2021-29

**A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF HANFORD
APPROVING VESTING TENTATIVE TRACT 934, A REQUEST BY LENNAR HOMES OF
CALIFORNIA TO SUBDIVIDE 36.48 ACRES INTO 161 SINGLE-FAMILY RESIDENTIAL
LOTS AND A SHARED 66,216 SQ. FT. BASIN IN THE R-L-5 LOW-DENSITY RESIDENTIAL
ZONE DISTRICT. THE PROJECT IS LOCATED AT THE SOUTHEAST CORNER OF 13TH
AVENUE AND GRANGEVILLE BOULEVARD (APN 009-050-001 THROUGH -005).**

At a regular meeting of the Planning Commission of the City of Hanford duly called and held on December 28, 2021, by motion of Commissioner _____, and seconded by Commissioner _____, and duly carried, the following resolution was adopted:

WHEREAS, Tentative Subdivision Map No. 934, filed by Precision Engineering on behalf of Lennar Homes of California, a request to subdivide 36.48 acres into 161 single-family residential lots and a 66,216-sq.-ft.-basin in the R-L-5 Low-Density Residential zone district, as shown in **Exhibit A**, has been reviewed by the Planning Commission of the City of Hanford, in accordance with Title 16 of the Hanford Municipal Code; and

WHEREAS, the project is located at the southeast corner of 13th Avenue and Grangeville Boulevard (APN 009-050-001 through -005); and

WHEREAS, the Planning Commission has carefully considered recommendations and testimony presented at the public hearing on December 28, 2021; and

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

WHEREAS, the Initial Study, Mitigated Negative Declaration No. 2021-100, 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

NOW, THEREFORE, BE IT RESOLVED, that the Planning Commission hereby finds that no significant environmental impacts would result from the proposed project with the incorporation of mitigation measures, adopt a Mitigation Monitoring and Reporting Program, attached as **Exhibit B**, and certify that Mitigated Negative Declaration No. 2021-100 was prepared consistent with CEQA and City of Hanford Environmental Guidelines.

BE IT FURTHER RESOLVED, that the Planning Commission 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 934. 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 4.375 dwelling units per gross acre.

5. Environmental Finding:

ANALYSIS: That an initial study was conducted. On the basis of the initial study, the Community Development Department has determined that the project described above would not have significant adverse impacts on the environment, with the incorporation of mitigation measures. Mitigated Negative Declaration No. 2021-100 has been prepared for the project.

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 934 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.

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.

THEREFORE, BE IT RESOLVED that the Planning Commission of the City of Hanford hereby approves Vesting Tentative Tract 934, subject to the conditions of approval, attached as **Exhibit C**, and the following:

1. 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 Commission 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 Planning Commission of the City of Hanford by the following vote:

AYES: Commissioners
 NOES: Commissioners
 ABSTAIN: Commissioners
 ABSENT: Commissioners

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

I, **MARY E. BEATIE**, Interim Secretary of the Planning Commission of the City of Hanford, do hereby certify the foregoing Resolution was duly passed and adopted by the Planning Commission of the City of Hanford at a regular meeting thereof held on the **28th** day of **December, 2021**.

 Mary E. Beatie, Interim Community Development Director
 Interim Secretary of the Planning Commission

Exhibit A:
Vesting Tentative Tract 934

Attachment: Resolution No. 2021-29 (TT 934) (TT 934)

Exhibit B:
Mitigation Monitoring and Reporting Program

Attachment: Resolution No. 2021-29 (TT 934) (TT 934)



5 MITIGATION MONITORING AND REPORTING PROGRAM

This mitigation measure monitoring and reporting checklist was prepared pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15097 and Section 21081.6 of the Public Resources Code (PRC). The Mitigation Monitoring and Reporting Program includes project-specific mitigation measures in the 2035 Hanford General Plan Update EIR ("EIR" noted before each mitigation measure) and mitigation measures identified in the Initial Study.

The timing of implementing each mitigation measure is identified in in the checklist, as well as identifies the entity responsible for verifying that the mitigation measures applied to a project are performed. Project applicants are responsible for providing evidence that mitigation measures are implemented. As lead agency, the City of Hanford is responsible for verifying that mitigation is performed/completed.

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initials
Agriculture					
MM AG-1. The Project shall comply with HMC Section 16.40.110 Right to Farm, sub-section (E) Disclosure and Recordation Requirements, "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	Verify compliance	During site plan review process	Developer to provide (or comply), City of Hanford to verify.		



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." The Hanford Community Development Department is responsible for carrying out the notice, disclosure, and recordation required by the HMC.					
Air Quality					
EIR MM 4.3-1: Appropriate Siting of Sensitive Receptors The City of Hanford shall require residential development projects and projects categorized as sensitive receptors to be located an adequate distance from existing and potential sources of toxic emissions such as freeways, major arterials, industrial sites, and hazardous material locations. In addition, the City of Hanford should require new air pollution point sources such as, but not limited to, industrial, manufacturing, and processing facilities to be located an adequate distance from residential areas and other sensitive receptors (see table below). Recommendations on Siting New Sensitive Land Uses Such As Residences, Schools, Daycare Centers, Playgrounds, or Medical Facilities	Verify compliance	During site plan review process	Developer to provide (or comply), City of Hanford to verify.		
Source Category		Advisory Recommendations			
Freeways and High-Traffic Roads		- Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with			



	100,000 vehicles/day, or rural roads with 50,000 vehicles/day				
Distribution Centers	- Avoid siting new sensitive land uses within 1,000 feet of a distribution center that accommodates more than 100 truck/day, more than 40 trucks with operating transport refrigeration units (TRU)/day, or where TRU operations exceed 300 hours/week. - Take into account the configuration of existing distribution centers and avoid located residences and other sensitive land uses near entry and exit points.				
Rail Yards	- Avoid siting sensitive land uses within 1,000 feet of a major service and maintenance rail yard. - Within 1 mile of a rail yard, consider possible siting limitations and mitigation approaches				



Ports	- Avoid siting new sensitive land uses immediately downwind of ports in the most heavily affected zones. Consult local air districts or California Air Resources Board on the status of pending analyses of health risks.				
Refineries	- Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult local air districts or other agencies to determine appropriate separation.				
Chrome Platers	- Avoid siting new sensitive land uses within 1,000 feet of chrome platers.				
Dry Cleaners Using Perchloroethylene	- Avoid siting new land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with three or more machines, consult local air district.				



	- Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations. - Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons/year or greater). A 50-foot separation is recommended for typical gas dispensing facilities.					
Gasoline Dispensing Facilities						
EIR MM 4.3-2: Appropriate Siting of Sensitive Receptors The table in Mitigation Measure MM 4.3-1 depicts the California Air Resources Board recommended buffer distances associated with various types of toxic air contaminants (TACs). Future development and infrastructure projects that are similar in nature to freeways and high-traffic roads, distribution centers, rail yards, refineries, chrome platers, dry cleaners, and gasoline dispensing facilities shall require assessment to determine whether sensitive receptors would be exposed to TACs. The City of Hanford shall require or perform air toxic risk assessments to determine air toxic impacts on an as-needed basis.						
		Verify Compliance	Prior approval	Developer to provide (or comply), City of Hanford to verify.		



EIR MM 4.3-3: Odors Assessment The City of Hanford shall require an assessment of new and existing odor sources for future land use development projects to determine whether sensitive receptors would be exposed to objectionable odors and apply recommended applicable mitigation measures as defined by the San Joaquin Valley Air Pollution Control District and best practices. Additionally, the City shall require conditions related to Conditional Use Permit approval associated with odors when necessary and on a case-by-case basis.	Verify Compliance	Prior approval	Developer to provide (or comply), City of Hanford to verify.	
Biological Resources EIR MM 4.4-1: Mitigation Recommendations to Reduce Impacts to Special-status Species and Habitat(s) New development shall implement all reasonable and feasible mitigation imposed by the City of Hanford in order to reduce impacts to special-status species and their habitat(s). The following is a list of possible mitigation that the City of Hanford could impose on new development on a case-by-case basis, as needed: • Prepare biological assessment(s) that include recommendations to reduce impacts to special status species and habitat(s), including avoidance, minimization, and/or mitigation measures.	Identify necessary measures and verify compliance	Prior approval	Developer to provide (or comply), City of Hanford to verify.	



• Perform preconstruction survey(s) for special status species to identify the potential for construction-related impacts and need for avoidance, minimization, and/or mitigation measures. • If, after all avoidance, minimization, and/or mitigation measures have been exhausted or are determined to not be feasible, then new development would have to consult with the applicable wildlife agencies in order to determine how to compensate for direct impacts to special status species, including, but not necessarily limited to, the possibility of acquiring incidental take permits, developing conservation plans, agree upon phasing of new development to avoid certain sensitive breeding seasons, and/or compensating for the loss of habitat at an agreed upon ratio with the applicable wildlife agency.					
EIR MM 4.4-2: Mitigation Recommendations to Reduce Impacts to Riparian Habitat, Sensitive Natural Communities and/or Wetlands New development shall implement all reasonable and feasible mitigation imposed by the City of Hanford in order to reduce impacts to riparian habitat, sensitive natural communities, and/or wetlands. The following is a list of possible mitigation that the City of Hanford could	Identify necessary measures and verify compliance	Prior to approval	Developer to provide (or comply), City of Hanford to verify.		



impose on new development on a case-by-case basis, as needed: • As part of the biological assessment(s) preparation, include analysis of, and recommendations to reduce impacts to, riparian habitat, sensitive natural communities, and/or wetlands, including avoidance, minimization, and/or mitigation measures. • Perform wetland delineation(s) in compliance with current wildlife agency standards. • If, after all avoidance, minimization, and/or mitigation measures have been exhausted or are determined to not be feasible, then new development would have to consult with the applicable wildlife agencies in order to determine how to compensate for direct impacts to riparian habitat, sensitive natural communities, and/or wetlands including, but not necessarily limited to, obtaining Clean Water Act 401 and 404 permits, acquiring Lake and Streambed Alteration Agreement(s), and compensating for the loss of riparian habitat, sensitive natural communities, and/or wetlands at an agreed upon ratio with the applicable wildlife agency.				
Cultural Resources				



MM CR-1. If cultural resources are discovered during construction or related activities, all work shall be halted, and a qualified archeologist and the City of Hanford shall be notified. The find shall be properly investigated, and appropriate measures shall be taken before construction may continue.	Submittal of Documentation and/or Onsite Verification	During Project Construction	Developer to provide (or comply), City of Hanford to verify.	
MM CR-2. Prior to ground disturbing activities, construction staff shall receive a cultural presentation by the Santa Rosa Rancheria regarding cultural resources and laws and regulations for the discovery of cultural resources and human remains.	Presentation	Prior to Project Construction	Developer to provide (or comply), City of Hanford to verify.	
MM CR-3. A Native American monitor shall be present for ground disturbing activities.	Onsite Verification	During Project Construction	Developer to provide (or comply), City of Hanford to verify.	
MM CR-4. A Burial Treatment Plan shall be signed by the applicant/property owner prior to any earth disturbing activities.	Submittal of Documentation	Prior to Project Construction	Developer to provide (or comply), City of Hanford to verify.	
MM CR-5. A curation agreement shall be signed with the Santa Rosa Rancheria.	Submittal of Documentation	Prior to Project Construction	Developer to provide (or comply), City of Hanford to verify.	
Greenhouse Gas Emissions				



MM 4.7-1: Quantifying Individual Project Emissions The City of Hanford shall quantify greenhouse gas emissions as needed on a project-by-project basis as part of the environmental review process. At that time, appropriate mitigation measures shall be identified and applied to each prior to construction in adherence to San Joaquin Valley Air Pollution Control District and California Air Resources Board guidelines in order to reduce emissions.	Submittal of Documentation	Prior to Project Construction	Developer to provide (or comply), City of Hanford to verify.		
Public Services					
MM PUB-1. The Developer shall pay the Fire Protection Department Impact Fees.	Submittal of Documentation	Prior to Project Construction	Developer to provide (or comply), City of Hanford to verify.		
MM PUB-2. The Developer shall pay the Police Protection Development Impact Fees.	Submittal of Documentation	Prior to Project Construction	Developer to provide (or comply), City of Hanford to verify.		
MM PUB-3. The Developer shall pay the School Impact Fees.	Submittal of Documentation	Prior to Project Construction	Developer to provide (or comply), City of Hanford to verify.		



MM PUB-4. The Developer shall pay the Park Facilities Impact Fees and comply with the Quimby Act Requirements.	Submittal of Documentation	Prior to Project Construction	Developer to provide (or comply), City of Hanford to verify.	
Transportation				
MM Transportation-1. The Project shall construct bike lanes and sidewalks on Grangeville Boulevard and 13 th Avenue that would improve connectivity to Sierra Pacific High School and Frontier Elementary School.	Submittal of Documentation	Prior to Project Construction	Developer to provide (or comply), City of Hanford to verify.	

Exhibit C:
Conditions of Approval

Attachment: Resolution No. 2021-29 (TT 934) (TT 934)

PLANNING DIVISION
SITE PLAN REVIEW COMMENTS

TENTATIVE TRACT NO. 934 (REVISION 1)

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

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 934 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 (to be developed as part of the environmental review of the project)**.

Special Condition:

- ☒ That following consultation received from Oscar Gonzalez with Kings Area Rural Transit (KART) on July 29, 2021, which stated, "KART would like consideration for a bus stop 12'x7'-sidewalk 7' wide from curb to sidewalk at 12'x7'. We can fit a Bench and Transit Can."

The applicant shall be required to consult with KART to establish a location for a proposed bus stop for the Project.

- ☒ The proposed shed structure located east of H Street on the parcel shown as "Not a Part", shall either 1) be removed; or 2) the proposed parcel line to the west of the structure be adjusted so that it meets the minimum 15-foot rear yard setback. One of the two options must be completed prior to the recording of the final map.

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 front 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 929 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 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.

Environmental Requirements:

- ☒ That if fireplaces are proposed in the residential units, natural gas fireplaces or EPA-certified wood-burning fireplaces/stoves are to be installed in every unit that has a fireplace. Conventional open-hearth fireplaces are not allowed.
- ☒ That natural gas lines and electrical outlets be installed in backyards or patios to encourage use of gas and/or electric barbecues.
- ☒ That electrical outlets be installed around the exterior of the residential units to encourage use of electric lawn mowers, edgers, etc.

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 934 (504-0541)**

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.

Hanford Fire Department

Contact Fire Marshal Christy Whittington @ 559-585-2594 or cwhittington@cityofhanfordca.com

concerning questions that you may have on the following conditions.

Site Plan Review: Tract Map N0.934 -Rev 1

Date: 10/04/2021

Project #: 504-0541

General Instructions

1. Approval of this project does not exempt compliance with all applicable sections of the City adopted fire codes and local fire ordinances.
2. All fire protection systems must be installed and operational prior to occupying the building.
3. All permits shall be issued and fees paid prior to scheduling inspections with the Fire Department. To schedule appointments for inspections, please call **559-585-2545**.
4. Scope of work shall be clearly stated on all plans submitted for permit.
5. All deferred submittals shall be listed on the building plan title page. All deferred submittals are required to be submitted within 30-days of building permit issuance.

The following comments are applicable if checked:

1. ☐ No comments.
2. ☒ This project must comply with latest applicable codes.
3. ☒ Project must meet minimum fire flow requirements per the table in Appendix B & C of the 2019 Ca.Fire Code. Provide most current fire flow information for this location.
4. ☒ If a new fire hydrant flow test is required, contact the fire department for submittal requirements.
5. ☒ Based on the occupancy classification, an automatic sprinkler system is required for this project. ***A separate fire department permit is required.*** Please contact the Building department for submittal process.
6. ☒ For automatic sprinkler systems, ***a separate permit must be submitted.*** Please contact the Building department for submittal information.
7. ☐ Fire Riser Room: All new buildings that require an automatic fire sprinkler system shall contain a separate room to house the fire riser inside of it and shall have the following building elements:
 - At least one man door shall be provided- only exterior door(s) are allowed
 - The fire riser room and the door shall be large enough to accommodate repairs and/or maintenance needed by the use of tools and the removal and/or replacement of parts/pipe to the fire riser or FDC; suggested size 4' X 4' room.
 - One-hour rated construction
 - Fire Sprinkler head coverage required

Attachment: Resolution No. 2021-29 (TT 934) (TT 934)

- Normal and emergency back-up lighting shall be installed inside the fire riser room.
 - The exterior of the fire riser door shall have permanent signage stating **FIRE RISER ROOM** in a contrasting color to background.
 - For existing buildings: please contact the Fire Department.
8. ☐ When a sprinkler system is required with 21 or more sprinkler heads, the system shall be monitored by a Central Station Service. Fire alarm and detection systems required by Chapter 9 of the currently adopted edition of the California Building Code (CBC) and CFC shall be installed per NFPA 72. ***A separate fire department permit is required*** for fire sprinkler monitoring and/or fire alarm systems required by the latest edition of the CBC. Contact the Building Department for submittal process.
9. ☐ A hydrant will be required within 50 feet of the Fire Department connection. **Knox FDC Locking Caps** are required on all FDC's. The ordering of 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.
10. ☐ When any portion of the facility or building to be protected is more than 400 feet from a hydrant on a fire apparatus access road (as measured by an approved route around the exterior of the building) on-site fire hydrants and mains shall be provided where required by the fire code official.
11. ☒ Depending on the location of the existing fire hydrant(s), additional fire hydrants may be required. All hydrants must be in place and accepted by the fire department prior to any combustibles being brought onto the site.
12. ☐ No additional hydrants are necessary for this project.
13. ☐ Number of additional hydrants necessary for this project: _____
14. ☒ Fire hydrant spacing shall be as follows:
- Section 507 or as required by appendix C of the 2019 CFC.
15. ☐ Fire hydrant protection posts shall be installed at all fire hydrants that are subject to vehicle damage.
16. ☒ Approved fire apparatus access roads shall be provided for every facility, building, or portion of a building constructed or moved onto or with the City of Hanford. It shall extend to within 150 feet of all portions of the facility and all portions on the exterior walls of the first story of the buildings (as measured by an approved route around the exterior of the building or facility).
17. ☒ All dead-end access roads in excess of 150 feet must be provided with an approved turn-around or hammer head complying with City standards.
18. ☒ All access road shall not be less than 20 feet wide and 13 feet 6 inches in height.

19. ☒ Access road turning radius for fire apparatus is as follows:
- 20 feet, 1 inch inside turning radius
 - 44 feet, 6 inch outside radius
20. ☒ Additional access roads may be required per CFC 2019 Section 503.1.2. The fire code official is authorized to require more than one fire apparatus access road based on the potential for impairment of a single road by vehicle congestion, condition of terrain, climatic conditions or other factors that could limit access.
21. ☒ Traffic calming devices shall not be installed onto fire department emergency access roads unless prior approval is obtained from the Hanford Fire Department.
22. ☒ Areas identified as "Fire Lanes" must be identified as such per requirements set forth in the California Vehicle Code Section 22500.1.
- **Access roads 20-26 feet in width:** Fire lanes shall be on both sides of the fire apparatus access roads.
 - **Access roads 26 to less than 32 feet in width:** Fire lanes shall be on one side of the fire apparatus access roads.
 - **Access roads 32 feet in width or more:** No fire lanes required.
23. ☐ Where required by the fire code official, approved signs or other approved notices or markings that include the words NO PARKING - FIRE LANE shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. The means by which fire lanes are designated shall be maintained in a clean and legible condition at all times and be replaced or repaired when necessary to provide adequate visibility.
24. ☒ 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.
25. ☐ Locked gates installed across fire department access roads:
- **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)
 - **Electric Gates** shall be equipped with an electric **Knox Key Switch**, at the gate location.
 - In case of a loss of power, electrically operated gates shall have a means of back-up power or shall default in the open position for immediate fire department access.

- 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 departments' emergency access roads due to protruding objects from gate supports, frames, signs, access booths, curbs, etc.

26. ☐ A Knox Box will be required. Keys that open all locked areas will also be required and placed in the Knox Box. The ordering of Knox Box products can be done directly at www.knoxbox.com. If there is an existing Know Box installed, contact the Fire Department to determine if it will suffice.
27. ☒ 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:

- Downtown area (existing buildings): 4 inch numbers
 - Buildings 20-ft. or less from the street: 6 inch numbers
 - Buildings 21- to 40-ft. from the street: 8 inch numbers
 - Buildings more than 40-ft. from street: 12 inch numbers
28. ☐ Commercial cooking equipment that produce grease laden vapors shall be provided with a Type I hood. ***A separate permit is required for the Type I hood.*** Contact the Building department for submittal information.
29. ☐ All commercial cooking appliances creating grease laden vapors shall have a K-Class fire extinguisher within 30-feet of cooking appliances in accordance with the most currently adopted edition of the CFC.
30. ☐ ***A separate permit is required*** for all hazardous material and/or flammable and combustible liquids, gases, solids, etc., over the exempt amounts set forth in the latest adopted edition of the California Fire Code.
31. ☐ ***A fuel tank permit is required*** for underground and aboveground gasoline/LPG/Diesel.
32. ☐ Combustible high-piled storage over 12 feet ***requires a separate fire department review and permit.*** Contact the fire department for further information.
33. ☐ Provide a Knox Box for all structures and gates. In accordance to the 2019 CFC 506.1. Location shall be approved by Hanford Fire Department.
34. ☒ Provide premises identification for all structures. Shall be visible from the street. A minimum of four (4) inch numbering on contrasting background. In accordance to the 2019 CFC 505.1
35. ☐ Commercial cooking equipment that produce grease laden vapors shall be provided with a Type I Hood. In accordance with the California Mechanical Code, and an automatic fire extinguishing system that is listed and labeled for its intended use.

36. ☐ Insulated liquid carbon dioxide systems used in beverage dispensing applications with more than 100 pounds (45.4kg) of carbon dioxide shall comply with 2019 CFC 5307.3.1
37. ☐ Facility to provide minimum 2A10BC type fire extinguishers. Provide location and number of fire extinguishers to be installed in accordance to CFC 906.
38. ☐ All exiting shall comply with California Fire and Building Code requirements. Requirements shall comply with section 10 of the 2019 CFC 1004.9
39. ☐ Posting of Occupant Load sign shall be provided if room or spaces used for Assembly, Classroom, Dining, or similar purposes having an occupant load of fifty (50) or more persons. Sign shall be placed in conspicuous location and near the main exit in accordance to CFC 1004.9



City of Hanford

Department of Public Works

2.b

900 South 10th Ave. • Hanford, CA 93230-5234 • (559) 585-2550

PROJECT: Tract 934 Lennar Homes – SE Grangeville Boulevard and 13th Avenue

Maps and Plans:

1. That the developer shall 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 walls, street lights, street improvements, culverts and landscape improvements and all other infrastructure required to complete development. All plans shall be approved by the City Engineer and all other involved agencies before the release of the building permits.
2. That prior to beginning any construction or within ten (10) calendar days after the approved plans are released by the City, the developer shall submit to the City of Hanford Engineering Division one (1) reproducible and four (4) blue line copies of the approved set of construction plans and four (4) bound sets of the approved construction specifications, if any.
3. That within twenty (20) calendar days after all improvements have been constructed and accepted by the City, the developer shall submit to the City of Hanford Engineering Division one (1) reproducible and one (1) blue line copy of the approved set of construction plans revised to reflect all field revisions and marked "RECORD DRAWING."

Easements:

1. That all easements shall be designated on the subdivision final map as required by the utility companies and where needed for providing service to street lights and landscape improvements as designated by the City Public Utilities and Engineer Department.
2. That all easements for irrigation ditches and / or irrigation pipelines shall be legally abandoned or relocated to the satisfaction of the City Engineer prior to the recording of a subdivision final map.
3. That all proposed landscape/public utility easements, located as shown on the tentative subdivision map, shall be dedicated to the City and be delineated on the final subdivision map. Landscape/public utility easement shall meet or exceed the following minimum widths:
 - a.) 13th Ave– Ten feet-Landscape and PUE
 - b.) Grangeville Boulevard – Ten feet – Landscape and PUE
 - c.) K Street – as noted on Tentative Map
 - d.) E Street – as noted on Tentative Map
 - e.) All residential streets – Six feet-PUE

Dedications:

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

John Doyel

PUBLIC WORKS DIRECTOR (559) 585-2571

11/18/21

DATE

Attachment: Resolution No. 2021-29 (TT 934) (TT 934)



City of Hanford

Department of Public Works

2.b

900 South 10th Ave. • Hanford, CA 93230-5234 • (559) 585-2550

2. That all proposed landscape public utility easements, located as shown on the tentative subdivision map shall be dedicated to the City for landscape and public utility purposes concurrent with the recording of a subdivision final map, unless modified herein.

Restricted Access:

1. That a one-foot reservation strip shall be established at the end or sides of all streets abutting undeveloped property and be indicated on the subdivision final map.
2. That all access shall be restricted from lots at the property lines backing onto 13th Ave, Grangeville Boulevard, Lots 11-21 from H Street, the Not a Part from H Street, and the Not a Part from I Street and shall be indicated on the subdivision final map.

Street Improvements:

1. That all improvements consisting of sanitary sewers, storm sewers, water mains, concrete curbs, gutters, sidewalks, street lights, landscaping, street sub-grading, surfacing and striping and all other improvements shall 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 subdivision map.
2. That all streets within the subdivision shall be developed to residential street standard ST-32, except the following:
 - a. Grangeville Boulevard shall be developed as an arterial street, along the development frontage of the subdivision and the "Not a Part" portion. All improvements shall be constructed in conformance with City Standards ST-17 and ST-20, and as follows:
 1. Traffic index used for the design of street structural section shall be a minimum of 10.0.
 2. A geotechnical report shall be submitted to the City Engineer identifying the existing structural section thickness of Grangeville Boulevard, along the entire development frontage, concurrent with the submittal of development improvement plans. Reconstruction of Grangeville Boulevard, along the entire development frontage will be required if the existing street structural section does not conform to City Standards and Specifications.
 3. Street improvements shall include, but not be limited to, the installation of concrete curb and gutter, sidewalk, landscaping, decorative masonry block wall, street lights, half width street construction on the south side of Grangeville Boulevard, including pavement reconstruction of existing roadway, including pavement reconstruction of roadway if applicable, and all street signing, striping and transition paving as required.
 4. Developer shall attempt to acquire additional street right-of-way along the "Not a Part" frontage of Grangeville Boulevard in accordance with Section 66462.5 of the Subdivision Map Act. The additional street right-of-way is necessary to facilitate street widening improvements along the entire development frontage of Grangeville Boulevard. If Developer is unsuccessful, City will attempt to acquire the right-of-way.

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John Doyel

11/18/21

PUBLIC WORKS DIRECTOR (559) 585-2571

DATE



City of Hanford

Department of Public Works

2.b

900 South 10th Ave. • Hanford, CA 93230-5234 • (559) 585-2550

3. That street lights shall be installed throughout the subdivision in conformance with City Standard GE-56 and Southern California Edison requirements. Street lights shall be located as designated by City Engineer.
4. That development is subject to a transportation mitigation impact fee as required by City Municipal Code section 15.48 and any revisions thereof. Developer shall be entitled to a credit towards their development impact fee for permanent street improvements constructed by developer within Grangeville Boulevard. Transitional paving improvements beyond the development limits, that are not considered to be a permanent improvement and the reconstruction of the existing Grangeville Boulevard street section, if required, will not be subject to a credit. Developer shall submit competitive bid proposals to substantiate the cost of reimbursable items for City Public Works Department review and approval prior to beginning construction. All documentation materials submitted for reimbursement consideration shall be well organized and tabulated for convenient reference by Public Works' staff. Improvement quantities and costs proposed for reimbursement must be clearly identified in the documentation provided, and not combined or aggregated with non-reimbursable subdivision improvement costs. Appropriate graphic exhibits referenced to the subdivision improvement plans shall also be provided as needed to facilitate the reimbursement review process.

Backup Parkway Improvements:

1. That the developer shall design and construct the following improvements along the development frontages of 13th Avenue, Grangeville Boulevard, "K" Street and "E" Street for lots backing onto said streets:
 - a. A minimum six foot high decorative masonry block wall with continuous reinforced concrete footings. Masonry walls shall be treated with anti-graffiti repellent. The minimum height of the wall shall be measured from the highest elevation grade of the property located adjacent to either side of the wall. Wall heights shall be maintained at a uniform grade / slope whenever possible. If elevation changes are required, steps shall be introduced at pilaster locations and / or changes in wall direction. Wall improvement plans shall be designed to incorporate architectural, civil and structural components into one set of drawings. Wall plans shall be reviewed and approved by both the City Public Utilities and Engineer and Community Development Departments.
 - b. A 4 1/2-foot-wide meandering detached sidewalk along the development frontages of 13th Avenue and Grangeville Boulevard and a 4 ½ attached adjacent sidewalk along the K and E Street frontages.
 - c. Landscaping and irrigation system improvements along the development frontages of 13th Avenue and Grangeville Boulevard shall be prepared by a licensed landscape architect. Plans shall be reviewed and approved by the City Public Works, Parks & Community Services, and Community Development Departments.
2. That all species of trees and plants shall be selected from a list approved by the City's Parks and Recreation Commission.

John Doyel

PUBLIC WORKS DIRECTOR (559) 585-2571

11/18/21

DATE

Attachment: Resolution No. 2021-29 (TT 934) (TT 934)



City of Hanford

Department of Public Works

2.b

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3. That all new and existing electrical boxes, control boxes and other equipment boxes (excluding traffic control) cabinets along the street frontage shall be painted hunter green or be of a color compatible with the landscaping. Prior to painting, all metal surfaces shall be treated with an etching primer (zinc chromate) or equivalent. All new irrigation electrical and control cabinets shall be mounted into the masonry wall per City Standards.
4. That a covenant including each residential lot within the subdivision and requiring care and maintenance of local street park strip landscape improvements along the individual lot frontage(s) by the homeowners thereof shall be recorded concurrent with the final map.

Sewer Improvements:

1. That the developer's engineer shall provide a sanitary sewer master plan complete with calculations for the entire subdivision for Public Works Department review and approval prior to recording a subdivision final map for the development. Provisions shall be made to provide service for future areas of development located adjacent to the subdivision.

Storm Drainage Improvements:

1. That the developer's engineer shall provide a storm drainage master plan complete with calculations for the entire subdivision for City Public Works Department review and approval prior to recording a subdivision final map for the development. Provisions shall be made to provide service for future areas of development located adjacent to the subdivision.
2. That all drainage from proposed development shall be retained in retention drainage basin located as shown on the tentative subdivision map. The basin expansion shall be constructed in conformance with City Standards.
3. That developer shall be required to comply with 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 shall 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 development. Provisions shall be made to provide service for future areas of development located adjacent to the subdivision.
2. That a minimum 12-inch diameter water main and appurtenances shall be extended within Grangeville Boulevard, from the eastern limits of subdivision to 13th Avenue. Improvements shall conform to the City's water master plan.
3. That the developer may be entitled to a refund for water main over-sizing in accordance with City Municipal Code Section 13.04. Developer's engineer shall be required to submit calculations to substantiate request for an over-sizing refund to the City Public Utilities and Engineer Department for review and approval. The developer shall submit competitive bid proposals to substantiate costs for water main over-sizing for City Public Utilities and Engineer Department review and approval prior to beginning construction.

John Doyel
PUBLIC WORKS DIRECTOR (559) 585-2571

11/18/21
DATE

Attachment: Resolution No. 2021-29 (TT 934) (TT 934)



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4. That the developer may be entitled to enter into a reimbursement agreement in accordance with City Municipal Code section 13.04 for water system improvements which also provide a benefit to others. Developer shall submit competitive bid proposals to substantiate costs for said water system improvements for Public Utilities and Engineer Department review and approval prior to beginning construction.
5. That all existing water wells located within the proposed development shall be abandoned in conformance with State of California Department of Health Standards.
6. That the development may be subject to a reimbursement agreement for the installation of the 12-inch water line within Grangeville Boulevard from an adjacent development.

Assessment District:

1. That the developer shall enter into an agreement with the City for the formation of a tax assessment district for the maintenance of interior subdivision street lighting, decorative block fencing, and landscaping located along the property frontages of 13th Avenue and Grangeville Boulevard, "K" Street and "E" Street located as shown on the tentative subdivision map.
2. That prior to funds from the tax assessment district being obtained, the developer shall be responsible for the maintenance of all landscaping, subdivision interior street lighting and decorative fencing.

City Development 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 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.
7. That development is subject to a Refuse and Recycling Development Impact Fee as required by City Ordinance No. 05-16 or any revisions thereof. Fee payable with each building permit.

Attachment: Resolution No. 2021-29 (TT 934) (TT 934)

John Doyel

11/18/21

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8. That development is **NOT** subject to a Storm Drainage Development Impact Fee as required by City Ordinance No. 98-14, and any revisions thereof. Fee payable prior to recording of subdivision final map.
9. That development is subject to a 12th Avenue Sanitary Sewer area of benefit district assessment fee as required by City Ordinance No. 92-03 or any revisions thereof, if applicable. Fee shall be payable prior to recording to recording of final subdivision map.

Attachment: Resolution No. 2021-29 (TT 934) (TT 934)

John Doyel

PUBLIC WORKS DIRECTOR (559) 585-2571

11/18/21

DATE

**NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION
NOTICE OF PUBLIC HEARING**

NOTICE IS HEREBY GIVEN that on Tuesday, December 14, 2021 at 5:30 p.m., a public hearing will be conducted by the Hanford Planning Commission in the Council Chamber of the City of Hanford Civic Auditorium, 400 N. Douty Street, Hanford, California, pertaining to the following:

PROJECT DESCRIPTION AND LOCATION:

Vesting Tentative Tract 934: A request by Percision Civil Engineering, Inc. to subdivide 36.48 acres into 161 single-family residential lots in the R-L-5 Low-Density Residential zone district.

Location: The project is located at the southeast corner of 13th Avenue and Grangeville Boulevard (APN 009-050-001 through -005).

Based on an Initial Study, the Community Development Department has determined that the project described above would not have significant adverse impacts on the environment with the incorporation of mitigation measures. A Mitigated Negative Declaration has been prepared for the project. You may review the Mitigated Negative Declaration, Initial Study, proposed mitigation measures, reference material, and any comments received on the Mitigated Negative Declaration at the City of Hanford, 317 N. Douty Street, Hanford, CA 93230.

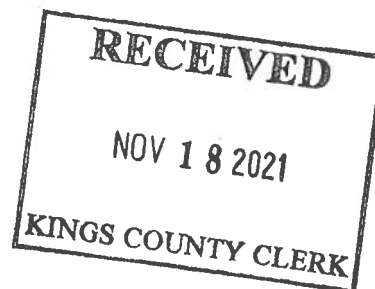
COMMENT PERIOD: November 19 to December 9, 2021 [20-day comment period]

PUBLIC COMMENT INVITED: All interested parties are invited to submit written comment on the Mitigated Negative Declaration by December 9, 2021, and/or to appear at the hearing described above to present testimony, in regard to the above-listed request. All comments should be submitted to the City of Hanford, Attention: Gabrielle Myers at the above listed address.

If you challenge any action or decision regarding the project described in this notice in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence delivered to the City prior to, or at, the public hearing.

For further information, contact the Hanford Community Development Department at (559) 585-2580 or 317 N. Douty Street, Hanford, California, 93230.

HANFORD COMMUNITY DEVELOPMENT DEPARTMENT



LENNAR RESIDENTIAL SUBDIVISION

INITIAL STUDY / MITIGATED NEGATIVE DECLARATION

Lot Line Adjustment

Vesting Tentative Tract No. 934

*Initial Study prepared in accordance with Section 15164 of the
California Environmental Quality Act (CEQA) Guidelines*

Prepared for

City of Hanford

Community Development Department

317 N. Douty Street

Hanford, CA 93230

Prepared by

Precision Civil Engineering, Inc.

1234 O Street

Fresno, CA 93721

November 2021





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1 INTRODUCTION

Precision Civil Engineering, Inc. (PCE) has prepared this Initial Study/Mitigated Negative Declaration (IS/MND) on behalf of City of Hanford (City) to address the environmental effects of the proposed Lennar Residential Subdivision (Vesting Tentative Tract Map No. 934; Lot Line Adjustment No. 2021-05) (Project). This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et. seq. The City of Hanford is the Lead Agency for this proposed Project. The site and the proposed Project are described in detail in Section 2 PROJECT DESCRIPTION.

1.1 Regulatory Information

An Initial Study (IS) is a document prepared by a lead agency to determine whether a project may have a significant effect on the environment. In accordance with California Code of Regulations Title 14 (Chapter 3, Section 15000, et seq.), also known as the CEQA Guidelines, Section 15064 (a)(1) states that an environmental impact report (EIR) must be prepared if there is substantial evidence in light of the whole record that the proposed Project under review may have a significant effect on the environment and should be further analyzed to determine mitigation measures or project alternatives that might avoid or reduce project impacts to less than significant levels. A negative declaration (ND) may be prepared instead if the lead agency finds that there is no substantial evidence in light of the whole record that the project may have a significant effect on the environment. An ND is a written statement describing the reasons why a proposed Project, not otherwise exempt from CEQA, would not have a significant effect on the environment and, therefore, why it would not require the preparation of an EIR (CEQA Guidelines Section 15371). According to CEQA Guidelines Section 15070, a ND or mitigated ND shall be prepared for a project subject to CEQA when either:

- a. The IS shows there is no substantial evidence, in light of the whole record before the agency, that the proposed Project may have a significant effect on the environment, or*
- b. The IS identified potentially significant effects, but:*
 - 1. Revisions in the project plans or proposals made by or agreed to by the applicant before the proposed MND and IS is released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur is prepared, and*
 - 2. There is no substantial evidence, in light of the whole record before the agency, that the proposed Project as revised may have a significant effect on the environment.*



1.2 Document Format

This IS/MND contains five chapters plus appendices. SECTION 1 INTRODUCTION provides bases of the IS/MND's regulatory information and an overview of the proposed Project. SECTION 2 PROJECT DESCRIPTION provides a detailed description of proposed Project components. SECTION 3 DETERMINATION concludes that the Initial Study is a mitigated negative declaration, identifies the environmental factors potentially affected based on the analyses contained in this IS, and includes with the Lead Agency's determination based upon those analyses. SECTION 4 EVALUATION OF ENVIRONMENTAL IMPACTS presents the CEQA checklist and environmental analyses for all impact areas and the mandatory findings of significance. A brief discussion of the reasons why the Project impact is anticipated to be potentially significant, less than significant with mitigation incorporated, less than significant, or why no impacts are expected is included. SECTION 0



MITIGATION MONITORING AND REPORTING PROGRAM presents the mitigation measures recommended in the IS/MND for the Project. The Air Quality/Greenhouse Gas Impact Assessment, Cultural Resources Survey, Traffic Study and VMT Analysis, and Pre-Consultation Letters are provided as Appendix A, Appendix B, Appendix C, and Appendix D respectively, at the end of this document.

1.3 Pre-consultation Letters Received

- Consultation from Renee Creech with the Hanford Joint Union High School District on July 26, 2021
- Consultation from Chad Curran with Pacific Gas and Electric Company on July 27, 2021
- Consultation from Michael Wilson with AT&T on July 23, 2021
- Consultation from Oscar Gonzalez with Kings Area Rural Transit (KART) on July 29, 2021
- Consultation from the SJVAPCD on August 11, 2021
- Consultation from the Hanford Fire Department on October 14, 2021
- Consultation from the Santa Rosa Rancheria Tachi Yokut Tribe on July 27, 2021

Pre-consultation letters are provided in Appendix D.



2 PROJECT DESCRIPTION

This section describes the components of the proposed Project in more detail, including project location, project objectives, and required project approvals.

2.1 Project Title

Lennar Residential Subdivision (Vesting Tentative Tract Map No. 934; Lot Line Adjustment No. 2021-05)

2.2 Lead Agency Name and Address

City of Hanford
317 N. Douty Street
Hanford, CA 93230

2.3 Contact Person and Phone Number

Lead Agency

Gabrielle de Silva Myers
Senior Planner
(559) 585-2578

Applicant

Lennar Homes of California, Inc.
8080 N Palm, Suite #110
Fresno, CA 93711

2.4 Study Prepared By

Precision Civil Engineering
1234 O Street
Fresno, CA 93721

2.5 Project Location

The proposed Project is located in the southeastern area of the city of Hanford, California on the southeast corner of 13th Avenue and Grangeville Boulevard approximately 1.7 miles north of State Route-198 (SR-198) (see [Error! Reference source not found](#)). The site consists of four (4) parcels that total approximately 36.48-acres (gross). The site is identified as APNs 009-050-01, 009-050-02, 009-050-03, and 009-050-04 of Kings County and is a portion of Section 27, Township 18 South, Range 21 East, Mount Diablo Base and Meridian.

CITY OF HANFORD - LENNAR CENTRAL VALLEY PROJECT
INITIAL STUDY

CITY OF HANFORD – Lennar Residential Subdivision



2.6 Latitude and Longitude

The centroid of the Project area is 36.34129960049618, -119.68891697174561.

2.7 General Plan Designation

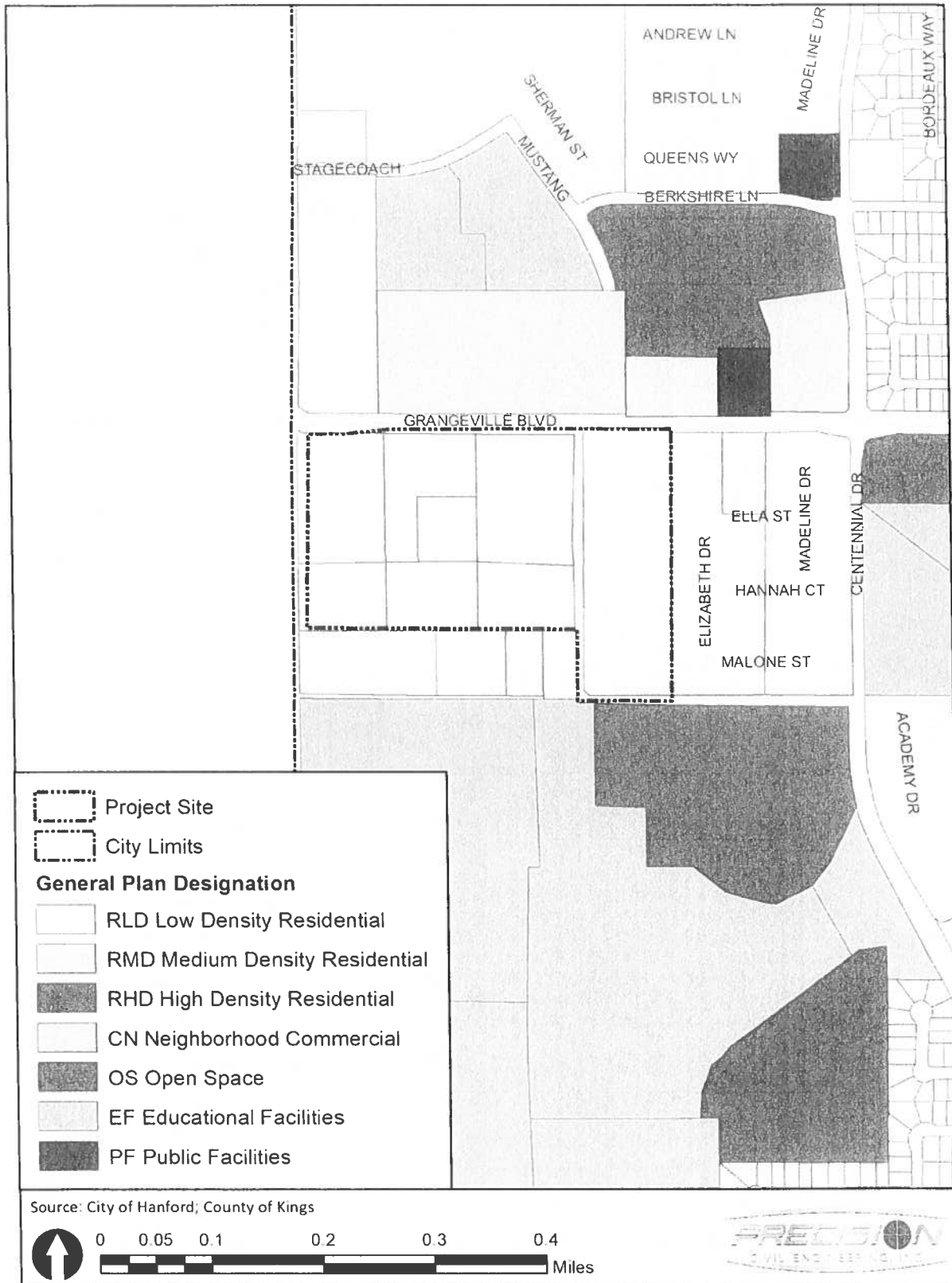
The Project site has a General Plan land use designation of Low Density Residential (Error! Reference source not found. Error! Reference source not found.). In accordance with the General Plan, the expected density range for Low Density Residential is two (2) to 10 dwelling units per acre (du/ac), with an expected average of four (4) du/ac. According to the General Plan Land Use **Policy L31**, the purpose of the Low-Density Residential land use designation is to “provide mainly single-family development on lot sizes typically found in urban settings.” **Policy L32** states that permitted use include “Duplexes, second dwelling units, and home occupations can also be allowed when made compatible with the residential nature of the neighborhood.” **Policy L33** regulates that the sizes of new individual lots shall range from 5,000 to 10,000 square feet (sf.). The Project would allow for the construction of 161 single-family lots with the density of 4.52 du/ac and a minimum lot size of 5,000 sf., which is consistent with the General Plan.

2.8 Zoning

The Project site is in the R-L-5 Low-Density Residential Zone District (Error! Reference source not found.). The City of Hanford Municipal Code (HMC) allows residential uses, such as single-family dwellings, supportive housing, transitional housing, and residential care facilities, in the R-L-5 zone. Other permitted uses are day cares, park or playgrounds, public schools, and storm drainage basins. The development standards for the R-L-5 Zone District and the dimensions for the proposed Project are outlined in Table 2-1.

Table 2-1 R-L-5 Development Standards

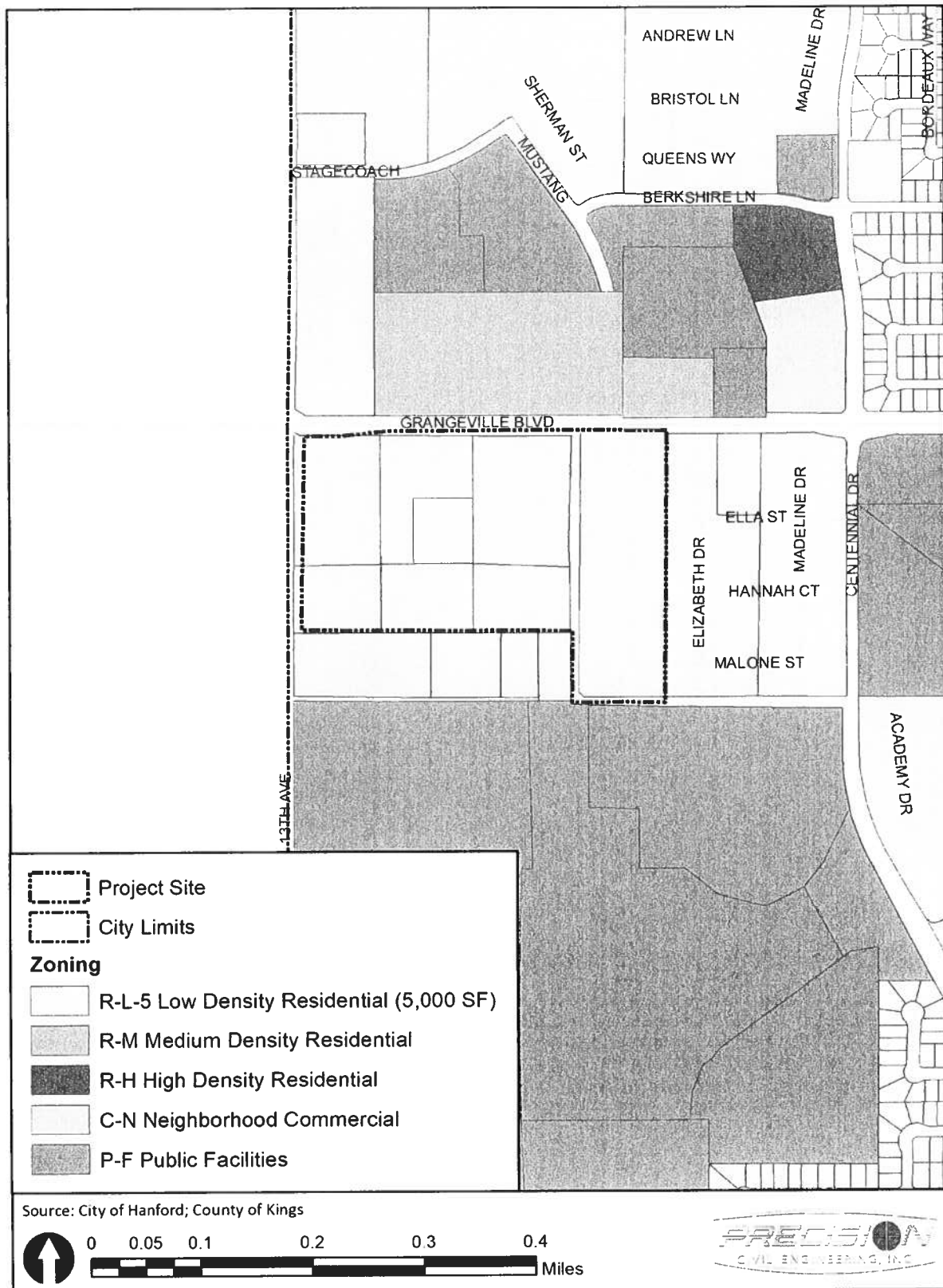
R-L-5 Development Standards			Proposed Project
Lot Area (minimum)		5,000 sf.	5,000 sf. (average: 6,403 sf.)
Lot Dimensions (minimum)			
Lot Frontage		40 feet (ft.)	43 ft.
Lot Width	Interior	50 ft.	50 ft.
	Corner	60 ft.	60 ft.
Lot Depth		90 ft.	99 ft.
Setbacks	front	15 ft.	15 ft.
	rear	15 ft.	15 ft.
	side	5 ft. (interior), 10 ft. (property line)	5 ft. (interior) and 10 ft. (property line)
Distance between structures (minimum)		10 ft.	10 ft.
Maximum Height		35 ft.	35 ft.



CITY OF HANFORD - LENNAR CENTRAL VALLEY PROJECT
INITIAL STUDY

Created: 9/29/2021

Figure 2-2 General Plan Designated Land Use



CITY OF HANFORD - LENNAR CENTRAL VALLEY PROJECT
INITIAL STUDY

Created: 9/29/2021

Figure 2-3 Current Zoning



2.9 Description of Project

The proposed Project includes a tentative tract map (Vesting Tentative Tract No. 934) and lot line adjustment (Lot Line Adjustment No. 2021-05) to facilitate the development of a residential development in the city of Hanford. The Project would allow for the construction of a residential subdivision that consists of 161 single-family lots (4.52 du/ac) to occupy approximately 36.48-acres located on the southeast corner of 13th Avenue and Grangeville Boulevard in Hanford, CA (APNs 009-050-01, 009-050-02, 009-050-03, and 009-050-04). The minimum proposed lot is 5,000 sf. and the average lot area is 6,403 sf. The Project also proposes a 1.53-acre outlot (Outlot A) for an onsite stormwater drainage basin.

2.10 Site and Surrounding Land Uses and Setting

The existing site contains two (2) single-family residential sites located at 12819 Grangeville Boulevard, Hanford, CA 93230 and 12779 Grangeville Boulevard, Hanford CA 93230. The existing residential sites are to remain and will be excluded from the Project boundary by a lot line adjustment prior to final map approval. Vehicular access to Grangeville Boulevard will be provided for both sites. The Project site also contains buildings and structures associated with the Northstar Veterinary Services Clinic located at 12701 Grangeville Boulevard, Hanford, CA 93230. These structures will be removed as a part of the Project in order to expand the basin (i.e., Outlot A). No street frontage improvements are present (i.e., no curb, gutter, sidewalk, storm drains, or streetlights).

The site is relatively flat with a Nord Complex soil type that is well drained, has medium runoff, with more than 80-inch water table depth. The existing biotic site conditions and resources of the Project site can be defined primarily as agricultural. There are trees, shrubs, and herbaceous vegetation surround and are fully contained within the existing residential sites. There are also several trees along the site's northerly perimeter adjacent to Grangeville Boulevard. These trees are not protected and will be removed.

Historically, the Project site and vicinity have been designated and operated as agricultural land. Grangeville Boulevard, a two (2)-lane east-west arterial forms the northerly Project site boundary and 13th Avenue forms the westerly Project site boundary. As referenced in Table 2-2, the Project site is surrounded by agricultural and/or single-family residential land to the south, east, and west, and vacant land to the north. The properties to the north, south, and east are zoned and planned for residential uses.



Table 2-2 Existing Uses, General Plan Designations, and Zone Districts of Surrounding Properties

Direction from the Project site	Existing Land Use	Planned Land Use	Zone District
North	Vacant	Low Density Residential, Medium Density Residential	R-L-5: Low Density Residential (5,000 sf.), R-M: Medium Density Residential
South	Agriculture and single-family residential	Low Density Residential, Open Space	R-L-5: Low Density Residential (5,000 sf.), P-F: Public Facilities
East	Agriculture and single-family residential	Low Density Residential	R-L-5: Low Density Residential (5,000 sf.)
West	Agriculture	County - Agriculture	County - Agriculture

2.11 Project Entitlements

The Project requires approval of Vesting Tentative Tract Map No. 934 and Lot Line Adjustment No. 2021-05. The Vesting Tentative Tract Map will allow for the subdivision of the site and the lot line adjustment will adjust the property lines of affected parcels (APNs 009-050-01, 02, 03, and 04).

2.12 Site Preparation

Site preparation would include demolition and removal of existing structures related to Northstar Veterinary Services Clinic in addition to trees and crops to accommodate the Project. Site preparation would include typical grading activities to ensure an adequately graded site for drainage purposes. Site preparation would also include minor excavation for the installation of utility infrastructure, for conveyance of water, sewer, stormwater, and irrigation. Site preparation would not affect the two (2) existing residential sites, as those sites will be excluded per the lot line adjustment.

2.13 Project Components

This section describes the overall components of the Project, such as the proposed buildings, landscape, vehicle and pedestrian circulation, and utilities.

Demolition

Existing structures related to Northstar Veterinary Services Clinic in addition to trees and crops would be subject to demolition to accommodate the Project.

Site Layout and Elevations

As shown in [Error! Reference source not found.](#), the Project proposes the construction of 161 single-family lots (4.52 units per acre) to occupy approximately 36.48-acres. The minimum proposed lot is 50-ft.

INITIAL STUDY - INITIATED NEGATIVE DECLARATION
PUBLIC HEARING
NOVEMBER 2021



by 100-ft., or 5,000 sf., and the average lot area is 6,403 sf. The Project also proposes one (1) outlot for a stormwater drainage basin.

VESTING TENTATIVE TRACT MAP NO. 934

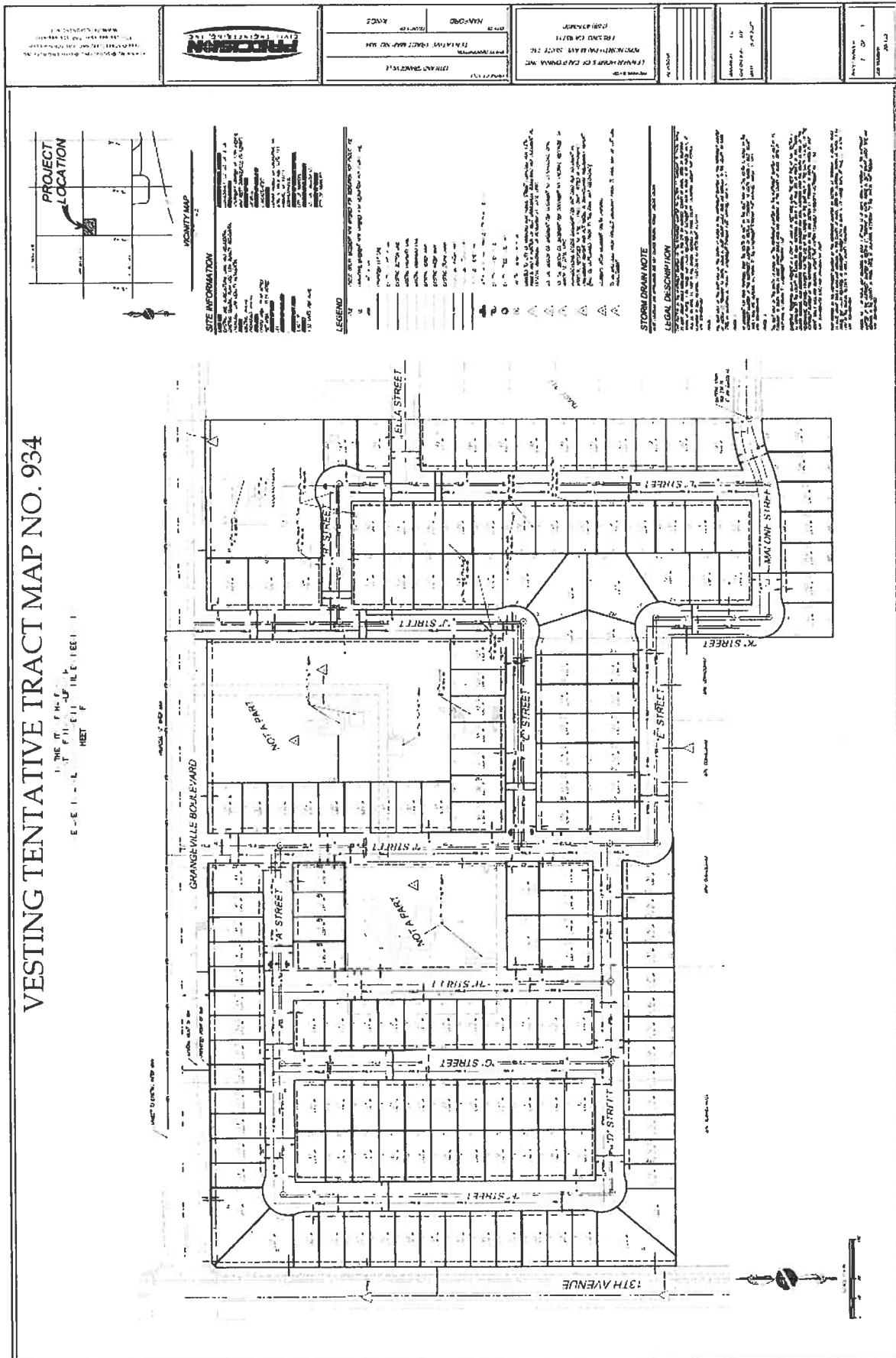


Figure 2-4 Project Site Plan



Site Circulation and Parking

Grangeville Boulevard, a two (2)-lane east-west arterial forms the northerly Project site boundary and 13th Avenue, a two (2)-lane north-south major arterial forms the westerly Project site boundary. The primary access points to the subdivision are proposed on Grangeville Boulevard at “I Street” (future local) and “J Street” (future local). No access is proposed from 13th Avenue. The portions of Grangeville Boulevard and 13th Avenue will be improved with curb, gutter, sidewalk, landscaping, and streetlights. The Project would also be connected to the existing, adjacent residential subdivision to the east by “Ella Street” and “Malone Street” (existing and future locals). Local streets (60-ft. width) contained within the subdivision will include sidewalk, curb, gutter, landscaping, and parking lanes.

Utilities

The Project is subject to provision of utilities and service systems. Utilities for the site would consist of water, sewer, electric, cable, gas, and stormwater infrastructure. The Project would include installation of a 12-inch water main along Grangeville Boulevard to connect to the existing water main in addition to eight (8)-inch water mains and eight (8)-inch sewer mains throughout the subdivision. The Project also proposes a 1.53-acre outlot (Outlot A) for an onsite stormwater drainage basin.

2.14 Required Project Approvals

The City of Hanford requires the following review, permits, and/or approvals for the proposed Project. Other approvals not listed below may be required as identified through the entitlement process. In addition, other agencies may have the authority to issue permits prior to implementation of the Project as listed below.

- Grading Permit
- Encroachment Permit
- Building Permit
- Sign Permit
- San Joaquin Valley Air Pollution Control District
- California Regional Water Quality Control Board



2.15 Technical Studies

The analysis of the Project throughout this Initial Study relied in part on the technical studies listed below prepared for the Project, as well as other sources, including, but not limited to, Draft Environmental Impact Report (EIR) SCH No. 2015041024 prepared for the City of Hanford 2035 General Plan Update.

- **Appendix A:** Air Quality & Greenhouse Gas Impact Assessment prepared by VRPA Technologies, Inc. on September 30, 2021.
- **Appendix B:** Cultural Resources Survey prepared by ASM Affiliates, Inc. on October 6, 2021.
- **Appendix C:** Traffic Study and VMT Analysis prepared by Peters Engineering Group on October 5, 2021.
- **Appendix D:** Pre-Consultation Letters received by the City of Hanford.

2.16 Consultation with California Native American Tribes

The State requires lead agencies to consider the potential effects of proposed projects and consult with California Native American tribes during the local planning process for the purpose of protecting Traditional Tribal Cultural Resources through the California Environmental Quality Act (CEQA) Guidelines. Pursuant to PRC Section 21080.3.1, the lead agency shall begin consultation with the California Native American tribe that is traditionally and culturally affiliated with the geographical area of the proposed project. Such significant cultural resources are either sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a tribe which is either on or eligible for inclusion in the California Historic Register or local historic register, or, the lead agency, at its discretion, and support by substantial evidence, choose to treat the resources as a Tribal Cultural Resources (PRC Section 21074(a)(1-2)). According to the most recent census data, California is home to 109 currently recognized Indian tribes. Tribes in California currently have nearly 100 separate reservations or Rancherias

Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See PRC Section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per PRC Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that PRC Section 21082.3(c) contains provisions specific to confidentiality.



The City of Hanford conducted tribal consultation pursuant to AB 52 and SB 18. In response, the City received pre-consultation from the Santa Rosa Rancheria Tachi Yokut Tribe. The Tribe requested that an archeological survey be conducted in addition to a California Historical Resources Information System (CHRIS) search and Sacred Lands File (SLF) search with the Native American Heritage Commission (NAHC). In addition, the Tribe has requested the following Mitigation Measures (MM) to be incorporated with the proposed Project:

MM CR-1. *If cultural resources are discovered during construction or related activities, all work shall be halted and a qualified archeologist and the City of Hanford shall be notified. The find shall be properly investigated and appropriate measures shall be taken before construction may continue.*

MM CR-2. *Prior to ground disturbing activities, construction staff shall receive a cultural presentation by the Santa Rosa Rancheria regarding cultural resources and laws and regulations for the discovery of cultural resources and human remains.*

MM CR-3. *A Native American monitor shall be present for ground disturbing activities.*

MM CR-4. *A Burial Treatment Plan shall be signed by the applicant/property owner prior to any earth disturbing activities.*

MM CR-5. *A curation agreement shall be signed with the Santa Rosa Rancheria.*



3 DETERMINATION

3.1 Environmental Factors Potentially Affected

As indicated by the discussions of existing and baseline conditions, and impact analyses that follow in this Chapter, environmental factors not checked below would have no impacts or less than significant impacts resulting from the project. Environmental factors that are checked below would have potentially significant impacts resulting from the project. Mitigation measures are recommended for each of the potentially significant impacts that would reduce the impact to less than significant.

- | | |
|---|--|
| ☐ Aesthetics | ☐ Land Use Planning |
| ☐ Agriculture and Forestry Resources | ☐ Mineral Resources |
| ☐ Air Quality | ☐ Noise |
| ☐ Biological Resources | ☐ Population and Housing |
| ☐ Cultural Resources | ☐ Public Services |
| ☐ Energy | ☐ Recreation |
| ☐ Geology and Soils | ☐ Transportation |
| ☐ Greenhouse Gas Emissions | ☐ Tribal and Cultural Resources |
| ☐ Hazards and Hazardous Materials | ☐ Utilities and Service Systems |
| ☐ Hydrology and Water Quality | ☐ Wildfire |

The analyses of environmental impacts in SECTION 4 EVALUATION OF ENVIRONMENTAL IMPACTS result in an impact statement, which shall have the following meanings.

Potentially Significant Impact. This category is applicable if there is substantial evidence that an effect may be significant, and no feasible mitigation measures can be identified to reduce impacts to a less than significant level. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.

Less than Significant with Mitigation Incorporated. This category applies where the incorporation of mitigation measures would reduce an effect from a “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measure(s), and briefly explain how they would reduce the effect to a less than significant level (mitigation measures from earlier analyses may be cross-referenced).

Less Than Significant Impact. This category is identified when the proposed Project would result in impacts below the threshold of significance, and no mitigation measures are required.



No Impact. This category applies when a project would not create an impact in the specific environmental issue area. “No Impact” answers do not require a detailed explanation if they are adequately supported by the information sources cited by the lead agency, which show that the impact does not apply to the specific project (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

3.2 Determination

The environmental analysis contained in the Initial Study and Mitigated Negative Declaration was prepared for the Lennar Residential Subdivision (Vesting Tentative Tract Map No. 934; Lot Line Adjustment No. 2021-05), in accordance with the California Environmental Quality Act (CEQA), CEQA Guidelines, and the City of Hanford Municipal Code. The IS/MND is tiered from the 2035 General Plan Update Program Level Environmental Impact Report (EIR) (SCH No. 2015041024), certified by the City Council on April 18, 2017, for which Statement of Overriding Considerations was adopted for Agriculture and Forestry Resources (program and cumulative), Air Quality (cumulative), Biological Resources (program and cumulative), Cultural Resources (program and cumulative), Greenhouse Gases (cumulative), and Population and Housing (program and cumulative) for the EIR.

Pursuant to Public Resources Code Section 21157.1 and California Environmental Quality Act (CEQA) Guidelines Section 15177, this Project has been evaluated with respect to each item on the attached environmental checklist to determine whether this project may cause any additional significant effect on the environment which was not previously examined in the 2035 General Plan Update EIR. After conducting a review of the adequacy of the 2035 General Plan Update EIR pursuant to Public Resources Code, Section 21157.6(b)(1), the City of Hanford Community Development Department, as Lead Agency, finds that no substantial changes have occurred with respect to the circumstances under which the EIR was certified and that no new information, which was not known and could not have been known at the time that the EIR was certified as complete, has become available.

This completed environmental impact checklist form and its associated narrative reflect applicable comments of responsible and trustee agencies and research and analysis conducted to examine the interrelationship between the proposed project and the physical environment. The information contained in the Project application and its related environmental assessment application, responses to requests for comment, checklist, initial study narrative, and any attachments thereto, combine to form a record indicating that an initial study has been completed in compliance with the State CEQA Guidelines and the CEQA.



All new development activity and many non-physical projects contribute directly or indirectly toward cumulative impacts on the physical environment. It has been determined that the incremental effect contributed by this Project toward cumulative impacts is not considered substantial or significant in itself, and/or that cumulative impacts accruing from this project may be mitigated to less than significant with application of feasible mitigation measures.

Based upon the evaluation guided by the environmental checklist form, it was determined that there are no foreseeable impacts from the Project that are additional to those identified in the 2035 General Plan Update EIR, and/or impacts which require mitigation measures not included in the EIR Mitigation Monitoring and Reporting Program. The completed environmental checklist form indicates whether an impact is potentially significant, less than significant with mitigation, or less than significant.

For some categories of potential impacts, the checklist may indicate that a specific adverse environmental effect has been identified which is of sufficient magnitude to be of concern. Such an effect may be inherent in the nature and magnitude of the Project or may be related to the design and characteristics of the individual project. Effects so rated are not sufficient in themselves to require the preparation of an EIR and have been mitigated to the extent feasible. With the Project-specific mitigation imposed, there is no substantial evidence in the record that this Project may have additional significant, direct, indirect or cumulative effects on the environment that are significant and that were not identified and analyzed in the 2035 General Plan Update EIR. Both the EIR Mitigation Monitoring and Reporting Program and the Project-specific Mitigation Monitoring and Reporting Program will be imposed on this Project.

The Initial Study has concluded that the Project will not result in any adverse effects which fall within the "Mandatory Findings of Significance" contained in Section 15065 of the CEQA Guidelines. The finding is, therefore, made that the Project will not have a significant adverse effect on the environment.

On the basis of this initial evaluation (to be completed by the Lead Agency):

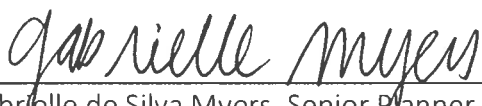
- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT (EIR) is required.

INITIAL STUDY / MITIGATED NEGATIVE DECLARATION
PUBLIC PLAN
NOVEMBER 2021



- ☐ I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An EIR is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Approved By:



Gabrielle de Silva Myers, Senior Planner
City of Hanford, Community Development Department

Nov. 18, 2021

Date



4 EVALUATION OF ENVIRONMENTAL IMPACTS

4.1 AESTHETICS

Except as provided in Public Resources Code Section 21099, would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Have a substantial adverse effect on a scenic vista?				X
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c)	In non-urbanized areas, substantially degrade the existing visual character or quality 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?			X	
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	



4.1.1 Environmental Setting

The city of Hanford is located within Kings County in the San Joaquin Valley in central California in an area that can be characterized as urban agricultural. The city is predominately flat with minimal natural watercourses; no scenic vistas are identified by the Hanford General Plan. The Project site is in the northwestern area of the city of Hanford, situated on the southeast corner of Grangeville Boulevard and 13th Avenue approximately 1.7 miles north of SR-198. According to the California Scenic Highway Mapping System, there are no adopted or eligible state scenic highways within the city of Hanford. The nearest eligible state scenic highway is a portion of SR-198, which is approximately 15.5-miles southeast of the Project site.¹

In general, the Project site is within an area of the city that is predominately characterized by residential, educational, and recreational development. The property to the east of the Project site is developed with an existing single-family residential subdivision that would be connected to the proposed Project by two (2) local streets. In addition, the property to the north of the Project site across Grangeville Boulevard is currently undergoing construction to develop a single-family residential subdivision. Regarding educational development, Sierra Pacific High School and the College of the Sequoias are located to the south of the Project site and Frontier Elementary is located to the north. Silver Oaks Park and Hanford Sports Complex and are located less than a quarter mile to the north and south of the site, respectively. As a result, the area is characterized by a mix of development types and uses, as well as typical infrastructure, such as roadways, streetlights, parking lot lights, and ambient light sources typical of residential development.

4.1.2 Impact Assessment

a) *Have a substantial adverse effect on a scenic vista?*

No Impact. The Hanford General Plan does not identify or designate scenic vistas within the City or Sphere of Influence. In addition, the Project site does not contain any visual features or historic resources as identified in the General Plan. As a result, the Project would not adversely affect scenic vistas and no impact would occur as a result of the Project.

¹ Caltrans. California State Scenic Highway System Map. Accessed on October 1, 2021, <https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aaca>



- b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

No Impact. According to the California State Scenic Highway Program, there are no officially designated State Scenic Highways in the city of Hanford. The closest eligible scenic highway is a portion of SR-198 that is approximately 15.5 miles from the Project site. As such, the proposed Project would not damage scenic resources, including trees, rock outcroppings, and historic buildings within a state scenic highway and no impact would occur as a result of the Project.

- c) In non-urbanized areas, 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?*

Less than Significant Impact. The Project site is within an area of the city that can be considered urbanized. The area generally comprises residential, educational, and recreational development with infrastructure, such as roadways, streetlights, parking lot lights, and ambient light sources typical of such development. The Project proposes a single-family residential development within the R-L-5 Zone District and would thereby be required to comply with the design requirements contained in *Chapter 17.10 Low Density Residential Zones* of the HMC. Through compliance with the applicable zoning and other regulations governing scenic quality, the Project would result in a less than significant impact.

- d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

Less than Significant Impact. Generally, lighting impacts are associated with artificial lighting in evening hours either through interior lighting from windows or exterior lighting (e.g., street lighting, parking lot lighting, landscape lighting, cars, and trucks). Development of the Project site would incrementally increase the amount of light from streetlights, exterior lighting, and vehicular headlights in addition to light and glare from construction activities. Such sources could create adverse effects on day or nighttime views in the area. As such, the Project would be required to comply with *Section 17.50.140 – Outdoor Lighting Standards* of the HMC, which contain specific, enforceable requirements and/or restrictions intended to prevent light and glare impacts:

Hanford Municipal Code – Section 17.50.140 Outdoor Lighting Standards

D. General Outdoor Lighting Standards. The following requirements and standards shall apply in all zone districts for the installation and use of outdoor lighting fixtures.

- 1. 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.*



2. 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.

3. 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.

4. 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.

5. The height of freestanding light fixtures including freestanding parking lot fixtures shall be measured from the top of a light fixture to the adjacent grade at the base of the support for that light fixture and shall not exceed the following:

- a. Eighteen (18) feet in height, when located within fifty (50) feet of any residential zone district; and
- b. Twenty-five (25) feet in height when located within fifty-one (51) to one hundred fifty (150) feet of any residential zone district; and
- c. Thirty (30) feet in height when located more than one hundred fifty (150) feet from any residential zone district; and
- d. Fifty (50) feet in height when located in the RC regional commercial zone or freestanding light fixtures for public outdoor recreational facilities.

E. *Specific Outdoor Lighting Standards.* In addition to the general outdoor lighting standards stated in subsection D, the following additional requirements shall apply to outdoor lighting fixtures in the R-L, R-M, R-H, and OR zone districts:

- 1. Mercury vapor lamps shall be a fully shielded fixture with all light directed on-site.
- 2. Freestanding light fixtures, including freestanding parking lot 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.

In addition, the Project would be subject to compliance with Title 24 – Residential Lighting Design Guide which would reduce impacts related to nighttime light. The lighting design guide covers outdoor spaces including regulations for mounted luminaires (i.e., high efficacy, motion sensor controlled, time clocks, energy management control systems, etc.). As such, conditions imposed on the Project by the City of Hanford pursuant to the HMC and Title 24 would reduce light and glare impacts to a less than significant impact.

4.1.3 Mitigation Measures

None required.



4.2 AGRICULTURE AND FORESTRY RESOURCES

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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?		X		
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) 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?			X	



4.2.1 Environmental Setting

The Project site is located within the city limits of Hanford. The existing land use of the subject site is agriculture; however, the site is planned for low-density residential uses and is within the R-L-5 Low Density Residential Zone District. The site does not contain forestry resources such as forest land or timberland.

Farmland Monitoring and Mapping Program

The California Department of Conservation manages the Farmland Mapping and Monitoring Program (FMMP) that provides maps and data for analyzing land use impacts to farmland. The FMMP produces the Important Farmland Finder as a resource map that shows quality (soils) and land use information. Agricultural land is rated according to soil quality and irrigation status, in addition to many other physical and chemical characteristics. The highest quality land is called "Prime Farmland" which is defined by the FMMP as *"farmland with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date."* According to the FMMP, California Important Farmland Finder, the Project site is categorized as Prime Farmland, Semi-Agricultural and Rural Commercial Land, and Rural Residential Land.²

Hanford General Plan

The Hanford 2035 General Plan EIR, adopted April 15, 2017, contemplated the conversion of farmland within the Hanford Planning Area, inclusive of the Project site, to non-agricultural uses and determined the impact to be significant and unavoidable, with no feasible mitigation measures available. A Statement of Overriding Considerations was adopted for the significant and unavoidable impact to Agriculture, demonstrating that the environmental impacts are "acceptable" due to the project benefits and considerations.³

² California Department of Conservation. (2018). California Important Farmland Finder. Accessed on October 1, 2021, <https://maps.conservation.ca.gov/DLRP/CIFF/>

³ Council of the City of Hanford. (2017). Resolution of the certifying environmental impact report SCH no. SCH No. 2015041024. Statement of Overriding Considerations.



California Land Conservation Act

The California Land Conservation Act of 1965 (i.e., the Williamson Act) allows local governments to enter contracts with private landowners to restrict parcels of land agricultural or open space uses. In return, property tax assessments of the restricted parcels are lower than full market value. The Project site is not subject to the Williamson Act Contract.

4.2.2 Impact Assessment

- a) 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?*

Less than Significant Impact with Mitigation Incorporated. The Project site is currently used for agricultural operations and is partially designated as “Prime Farmland” according to the FMMP. Thus, the Project would result in the conversion of prime farmlands to non-agricultural use. However, the General Plan EIR analyzed impacts of urban growth on agricultural land, including the conversion of the Project site to low-density residential uses, and found impacts to be significant and unavoidable. Based on this finding, the City issued and adopted a Statement of Overriding Considerations. However, because the Project would result in the conversion of farmland and is within one (1)-mile of the city limits, the Project shall be subject to comply with *Mitigation Measure (MM) AG-1* to offset any potential impacts. With mitigation incorporated, the Project’s impacts would be reduced to less than significant.

MM AG-1. *The Project shall comply with HMC Section 16.40.110 Right to Farm, sub-section (E) Disclosure and Recordation Requirements, “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.” The Hanford Community Development Department is responsible for carrying out the notice, disclosure, and recordation required by the HMC.*



- b) In accordance with the General Plan EIR, the Project is subject to compliance with Conflict with existing zoning for agricultural use or a Williamson Act contract?*

No Impact. The Project site is not zoned for or located within an area zoned for agricultural uses and is not under Williamson Act contract. Thus, the Project would result in no impact.

- c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?*

No Impact. The Project site is not zoned for forestry or timberland uses and does not contain forestry or timberland uses. As a result, the Project would have no impact.

- d) Result in the loss of forest land or conversion of forest land to non-forest use?*

No Impact. The Project site does not contain forest land or timberland. As a result, the Project would have no impact.

- e) 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?*

Less than Significant impact. The Project site is within the city limits of Hanford and is within an area planned and zoned for residential uses. There is no forest land within the Project site or area. The conversion of the Project site and surrounding properties from farmland to non-agricultural was anticipated by and previously analyzed through the General Plan EIR. As discussed under criterion a) above, the City issued a Statement of Overriding Considerations and incorporated MM Agriculture 1 for impacts to agricultural lands. Compliance with MM Agriculture 1 would reduce the Project's impact to less than significant.

4.2.3 Mitigation Measures

The proposed Project shall implement and incorporate, as applicable, the Agricultural Resources related mitigation measures as identified in the Mitigation Monitoring and Reporting Program dated October 18, 2021, including the mitigation measure identified above.



4.3 AIR QUALITY

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan (e.g., by having potential emissions of regulated criterion pollutants which exceed the San Joaquin Valley Air Pollution Control Districts (SJVAPCD) adopted thresholds for these pollutants)?			X	
b) 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?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

4.3.1 Environmental Setting

An Air Quality and Greenhouse Gas Impact Assessment was prepared for the Project by VRPA Technologies, Inc. on September 30, 2021. The report and supporting tables are provided in Appendix A. The environmental setting, methodology, and assessment are incorporated herein.

This section describes existing air quality within the San Joaquin Valley Air Basin and in Kings County, including the identification of air pollutant standards, meteorological and topological conditions affecting air quality, and current air quality conditions. Air quality is described in relation to ambient air quality standards for criteria pollutants such as, ozone, carbon monoxide, and particulate matter. Air quality can be directly affected by the type and density of land use change and population growth in urban and rural areas.



Geographical Location

The SJVAB is comprised of eight counties: Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare. Encompassing 24,840 square miles, the San Joaquin Valley is the second largest air basin in California. Cumulatively, counties within the Air Basin represent approximately 16 percent of the State's geographic area. The Air Basin is bordered by the Sierra Nevada Mountains on the east (8,000 to 14,492 feet in elevation), the Coastal Range on the west (4,500 feet in elevation), and the Tehachapi Mountains on the south (9,000 feet elevation). The San Joaquin Valley is open to the north extending to the Sacramento Valley Air Basin.

Topographic Conditions

Kings County is located within the San Joaquin Valley Air Basin [as determined by the California Air Resources Board (CARB)]. Air basins are geographic areas sharing a common "air shed." A description of the Air Basin in the County, as designated by CARB, is provided in the paragraph below. Air pollution is directly related to the region's topographic features, which impact air movement within the Basin.

Wind patterns within the SJVAB result from marine air that generally flows into the Basin from the San Joaquin River Delta. The Coastal Range hinders wind access into the Valley from the west, the Tehachapi's prevent southerly passage of airflow, and the high Sierra Nevada Mountain Range provides a significant barrier to the east. These topographic features result in weak airflow that becomes restricted vertically by high barometric pressure over the Valley. As a result, the SJVAB is highly susceptible to pollutant accumulation over time. Most of the surrounding mountains are above the normal height of summer inversion layers (1,500-3,000 feet).

Climate Conditions

Hanford is located in one of the most polluted air basins in the country. Temperature inversions can trap air within the Valley, thereby preventing the vertical dispersal of air pollutants. In addition to topographic conditions, the local climate can also contribute to air quality problems. Climate in Hanford is characterized by warm, dry summers and cool winters with significant Tule fog.

Ozone, classified as a "regional" pollutant, often afflicts areas downwind of the original source of precursor emissions. Ozone can be easily transported by winds from a source area. Peak ozone levels tend to be higher in the southern portion of the Valley, as the prevailing summer winds sweep precursors downwind of northern source areas before concentrations peak. The separate designations reflect the fact that ozone precursor transport depends on daily meteorological conditions.



Other primary pollutants, carbon monoxide (CO), for example, may form high concentrations when wind speed is low. During the winter, Hanford experiences cold temperatures and calm conditions that increase the likelihood of a climate conducive to high CO concentrations.

Precipitation and fog tend to reduce or limit some pollutant concentrations. Ozone needs sunlight for its formation, and clouds and fog block the required radiation. CO is slightly water-soluble, so precipitation and fog tends to “reduce” CO concentrations in the atmosphere. PM10 is somewhat “washed” from the atmosphere with precipitation. Precipitation in the San Joaquin Valley is strongly influenced by the position of the semi-permanent subtropical high-pressure belt located off the Pacific coast. In the winter, this high- pressure system moves southward, allowing Pacific storms to move through the San Joaquin Valley. These storms bring in moist, maritime air that produces considerable precipitation on the western, upslope side of the Coast Ranges. Significant precipitation also occurs on the western side of the Sierra Nevada. On the valley floor, however, there is some down slope flow from the Coast Ranges and the resultant evaporation of moisture from associated warming results in a minimum of precipitation. Nevertheless, the majority of the precipitation falling in the San Joaquin Valley is produced by those storms during the winter. Precipitation during the summer months is in the form of convective rain showers and is rare. It is usually associated with an influx of moisture into the San Joaquin Valley through the San Francisco area during an anomalous flow pattern in the lower layers of the atmosphere. Although the hourly rates of precipitation from these storms may be high, their rarity keeps monthly totals low.

Precipitation on the San Joaquin Valley floor and in the Sierra Nevada decreases from north to south. Stockton in the north receives about 20 inches of precipitation per year, Fresno in the center, receives about 10 inches per year, and Bakersfield at the southern end of the valley receives less than 6 inches per year. This is primarily because the Pacific storm track often passes through the northern part of the state while the southern part of the state remains protected by the Pacific High. Precipitation in the San Joaquin Valley Air Basin (SJVAB) is confined primarily to the winter months with some also occurring in late summer and fall. Average annual rainfall for the entire San Joaquin Valley is approximately 5 to 16 inches. Snowstorms, hailstorms, and ice storms occur infrequently in the San Joaquin Valley and severe occurrences of any of these are very rare.

The winds and unstable air conditions experienced during the passage of storms result in periods of low pollutant concentrations and excellent visibility. Between winter storms, high pressure and light winds allow cold moist air to pool on the San Joaquin Valley floor. This creates strong low-level temperature inversions and very stable air conditions. This situation leads to the San Joaquin Valley’s famous Tule Fogs. The formation of natural fog is caused by local cooling of the atmosphere until it is saturated (dew point temperature). This type of fog, known as radiation fog is more likely to occur inland. Cooling may also be accomplished by heat radiation losses or by



horizontal movement of a mass of air over a colder surface. This second type of fog, known as advection fog, generally occurs along the coast.

Conditions favorable to fog formation are also conditions favorable to high concentrations of CO and PM10. Ozone levels are low during these periods because of the lack of sunlight to drive the photochemical reaction. Maximum CO concentrations tend to occur on clear, cold nights when a strong surface inversion is present and large numbers of fireplaces are in use. A secondary peak in CO concentrations occurs during morning commute hours when a large number of motorists are on the road and the surface inversion has not yet broken.

The water droplets in fog, however, can act as a sink for CO and nitrogen oxides (NOx), lowering pollutant concentrations. At the same time, fog could help in the formation of secondary particulates such as ammonium sulfate. These secondary particulates are believed to be a significant contributor of winter season violations of the PM10 and PM2.5 standards.

Anthropogenic (Man-Made) Sources

In addition to climatic conditions (wind, lack of rain, etc.), air pollution can be caused by anthropogenic or man-made sources. Air pollution in the SJVAB can be directly attributed to human activities, which cause air pollutant emissions. Human causes of air pollution in the Valley consist of population growth, urbanization (gas-fired appliances, residential wood heaters, etc.), mobile sources (i.e., cars, trucks, airplanes, trains, etc.), oil production, agriculture, and other socioeconomic activities. The most significant factors, which are accelerating the decline of air quality in the SJVAB, are the Valley's rapid population growth and its associated increases in traffic, urbanization, and industrial activity.

Carbon monoxide emissions overwhelmingly come from mobile sources in the San Joaquin Valley; on-road vehicles contributed 34 percent, while other mobile vehicles, such as trains, planes, and off-road vehicles, contribute another 20 percent in 2012 according to emission projections from the CARB. Motor vehicles account for significant portions of regional gaseous and particulate emissions. Local large employers such as industrial plants can also generate substantial regional gaseous and particulate emissions. In addition, construction and agricultural activities can generate significant temporary gaseous and particulate emissions (dust, ash, smoke, etc.).

Ozone is the result of a photochemical reaction between Oxides of nitrogen (NOx) and Reactive Organic Gases (ROG). Mobile sources contribute 84 percent of all NOx emitted from anthropogenic sources based on data provided in Appendix B of the Air District's 2016 Ozone Plan. In addition, mobile sources contribute 26 percent of all the ROG emitted from sources within the San Joaquin Valley.



The principal factors that affect air quality in and around Hanford are:

1. The sink effect, climatic subsidence and temperature inversions and low wind speeds
2. Automobile and truck travel
3. Increases in mobile and stationary pollutants generated by local urban growth

Automobiles, trucks, buses and other vehicles using hydrocarbon (HC) fuels release exhaust products into the air. Each vehicle by itself does not release large quantities; however, when considered as a group, the cumulative effect is significant.

Other sources may not seem to fit into any one of the major categories or they may seem to fit in a number of them. These could include agricultural uses, dirt roads, animal shelters; animal feed lots, chemical plants and industrial waste disposal, which may be a source of dust, odors, or other pollutants. For Kings County, this category includes several agriculturally related activities, such as plowing, harvesting, dusting with herbicides and pesticides and other related activities. Finally, industrial contaminants and their potential to produce various effects depend on the size and type of industry, pollution controls, local topography, and meteorological conditions. Major sources of industrial emissions in Kings County consist of agricultural production and processing operations.

The primary contributors of PM10 emissions in the San Joaquin Valley are farming activities (22%) and road dust, both paved and unpaved (35%) in 2020 according to emission projections from the CARB. Fugitive windblown dust from “open” fields contributed 14 percent of the PM10.

The four major sources of air pollutant emissions in the SJVAB include industrial plants, motor vehicles, construction activities, and agricultural activities. Industrial plants account for significant portions of regional gaseous and particulate emissions. Motor vehicles, including those from large employers, generate substantial regional gaseous and particulate emissions. Finally, construction and agricultural activities can generate significant temporary gaseous and particulate emissions (dust, ash, smoke, etc.). In addition to these primary sources of air pollution, urban areas upwind from Kings County including areas north and west of the San Joaquin Valley, can cause or generate emissions that are transported into Kings County. All four of the major pollutant sources affect ambient air quality throughout the Air Basin.

Consultation Received: Consultation was received from the SJVAPCD on August 11, 2021. The District offers comments regarding

- 1) *Project Related Criteria Pollutant Emissions*
- 2) *Voluntary Emission Reduction Agreement*
- 3) *Health Risk Screening/Assessment*
- 4) *Ambient Air Quality Analysis*



- 5) Vegetation Barriers and Urban Greening
- 6) Solar Deployment in the Community
- 7) Clean Lawn and Garden Equipment in the Community
- 8) Electric Vehicle Charger
- 9) District Rules and Regulations

Project related criteria pollutant emissions are addressed in the following assessment.

4.3.2 Impact Assessment

Thresholds of Significance

The impact assessment for air quality focuses on potential effects the Project might have on air quality within the Hanford region. The SJVAPCD has established thresholds of significance for determining environmental significance. These thresholds separate a project's short-term emissions from its long-term emissions. The short-term emissions are mainly related to the construction phase of a project, which are recognized to be short in duration. The long-term emissions are primarily related to the activities that will occur indefinitely as a result of Project operations. Impacts will be evaluated both on the basis of CEQA Appendix G criteria and SJVAPCD significance criteria. The impacts to be evaluated will be those involving construction and operational emissions of criteria pollutants. The SJVAPCD has established thresholds for certain pollutants shown in Table 6.

Table 6
SJVAPCD Air Quality Thresholds of Significance

Project Type	Ozone Precursor Emissions (tons/year)					
	CO	NO _x	ROG	SO _x	PM ₁₀	PM _{2.5}
Construction Emissions	100	10	10	27	15	15
Operational Emissions (Permitted Equipment and Activities)	100	10	10	27	15	15
Operational Emissions (Non-Permitted Equipment and Activities)	100	10	10	27	15	15

Source: SJVAPCD 2020

CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects. The model quantifies direct emissions from construction and operations (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use.



The model is an accurate and comprehensive tool for quantifying air quality impacts from land use projects throughout California. The model can be used for a variety of situations where an air quality analysis is necessary or desirable such as CEQA and NEPA documents, pre-project planning, compliance with local air quality rules and regulations, etc.

Short-Term Impacts

Short-term impacts are mainly related to the construction phase of a project and are recognized to be short in duration. Construction air quality impacts are generally attributable to dust and exhaust pollutants generated by equipment and vehicles. Fugitive dust is emitted both during construction activity and as a result of wind erosion over exposed earth surfaces. Clearing and earth moving activities do comprise major sources of construction dust emissions, but traffic and general disturbances of soil surfaces also generate significant dust emissions. Further, dust generation is dependent on soil type and soil moisture. Exhaust pollutants are the non-useable gaseous waste products produced during the combustion process. Engine exhaust contains CO, HC, and NOx pollutants which are harmful to the environment.

Adverse effects of construction activities cause increased dust-fall and locally elevated levels of total suspended particulate. Dust-fall can be a nuisance to neighboring properties or previously completed developments surrounding or within the Project area and may require frequent washing during the construction period.

PM10 emissions can result from construction activities of the Project. The SJVAPCD has determined that compliance with Regulation VIII and other control measures will constitute sufficient mitigation to reduce PM10 impacts to a level considered less-than significant for most development projects. Even with implementation of District Regulation VIII and District Rule 9510, large development projects may not be able to reduce project specific construction impacts below District thresholds of significance.

Ozone precursor emissions are also an impact of construction activities and can be quantified through calculations. Numerous variables factored into estimating total construction emission include: level of activity, length of construction period, number of pieces and types of equipment in use, site characteristics, weather conditions, number of construction personnel, and amount of materials to be transported onsite or offsite. Additional exhaust emissions would be associated with the transport of workers and materials. Because the specific mix of construction equipment is not presently known for this Project, construction emissions were estimated using CalEEMod Model defaults for construction equipment.

INITIAL STUDY - INITIAL/PROPOSED DEVELOPMENT
 PROJECT: [REDACTED]
 PREPARED BY: [REDACTED]



Table 7 shows the CalEEMod estimated construction emissions that would be generated from construction of the Project. Results of the analysis show that emissions generated from construction of the Project will not exceed the SJVAPCD emission thresholds.

Table 7
 Project Construction Emissions (tons/year)

Summary Report	CO	NO _x	ROG	SO _x	PM ₁₀	PM _{2.5}	CO ₂ e
Project Construction Emissions (tons)	2.81	3.09	2.79	0.01	0.66	0.34	497.88
SJVAPCD Level of Significance	100	10	10	27	15	15	None
Does the Project Exceed Standard?	No	No	No	No	No	No	No

Source: CalEEMod, VRPA 2021

Long-Term Emissions

Long-Term emissions from the Project would be generated primarily by mobile source (vehicle) emissions from the Project site and area sources such as lawn maintenance equipment.

Localized Operational Emissions – Ozone/Particulate Matter

Significance criteria have been established for criteria pollutant emissions as documented in Section 3.1. Operational emissions have been estimated for the Project using the CalEEMod Model and detailed results are included in Appendix A.

Results of the CalEEMod analysis are shown in Table 8. Results indicate that the annual operational emissions from the Project will be less than the SJVAPCD emission thresholds for criteria pollutants.

Table 8
 Project Operational Emissions (tons/year)

Summary Report	CO	NO _x	ROG	SO _x	PM ₁₀	PM _{2.5}	CO ₂ e
Project Operational Emissions	7.89	1.63	2.17	0.02	1.66	0.47	2063.63
SJVAPCD Level of Significance	100	10	10	27	15	15	None
Does the Project Exceed Standard?	No	No	No	No	No	No	No

Source: CalEEMod, VRPA 2021

As noted previously, the Project will be subject to the SJVAPCD's Regulation VIII-Fugitive PM10 Prohibitions. Regulation VIII is comprised of District Rules 8011 through 8081, which are designed



to reduce PM10 emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and track out, landfill operations, etc.

Localized Operational Emissions – Carbon Monoxide

The SJVAPCD is currently in unclassified/attainment for Federal standards and attainment for State standards for CO. An analysis of localized CO concentrations is typically warranted to ensure that standards are maintained. Segment counts in the immediate vicinity of the Project site along 13th Avenue and Grangeville Boulevard were obtained from the City of Hanford traffic counts which are typically updated every three years. Daily traffic counts along 13th Avenue and Grangeville Boulevard (see appendices) were adjusted to reflect 2021 and 2042 traffic and conditions. Adjusted counts were then compared to the Modified HCM-Based Level of Service (LOS) Tables (Florida Tables). Results of this analysis demonstrates that adjacent roadway segment will operate at LOS 'D' or better through the Year 2042. As a result, the overall CO concentrations at roadways and intersections in the study area would be less than significant.

Localized Operational Emissions – Toxic Air Contaminants (TAC)

The SJVAPCD's Guidance Document, Guidance for Assessing and Mitigating Air Quality Impacts – 2015, identifies the need for projects to analyze the potential for adverse air quality impacts to sensitive receptors. Sensitive receptors refer to those segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems affected by air quality). Land uses that have the greatest potential to attract these types of sensitive receptors include schools, parks, playgrounds, daycare centers, nursing homes, hospitals, and residential communities. From a health risk perspective, the proposed Project is a Type B project in that it may potentially place sensitive receptors in the vicinity of existing sources. Type A projects would potentially place new toxic sources in the vicinity of existing receptors. Considering the components of the Project and the Source Categories provided in Table 4, the proposed Project is not a Type A project and would not place new toxic sources in the vicinity of existing sources.



TABLE 4
 Recommendations on Siting New Sensitive Land Uses Such As Residences, Schools, Daycare
 Centers, Playgrounds, or Medical Facilities*

SOURCE CATEGORY	ADVISORY RECOMMENDATIONS
Freeways and High-Traffic Roads ¹	- Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
Distribution Centers	- Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). - Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	- Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. - Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	- Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the ARB on the status of pending analyses of health risks.
Refineries	- Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	- Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloroethylene	- Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. - Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations.
Gasoline Dispensing Facilities	- Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50 foot separation is recommended for typical gas dispensing facilities.

1: The recommendation to avoid siting new sensitive land uses within 500 feet of a freeway was identified in CARB's Air Quality and Land Use Handbook published in 2005. CARB recently published a technical advisory to the Air Quality and Land Use Handbook indicating that new research has demonstrated promising strategies to reduce pollution exposure along transportation corridors.

The first step in evaluating the potential for impacts to sensitive receptors for TAC's from the Project is to perform a screening level analysis. For Type B Projects, one type of screening tool is found in the CARB Handbook: Air Quality and Land Use Handbook: A Community Perspective. This handbook includes a table (depicted in Table 4) with recommended buffer distances associated with various types of common sources. The screening level analysis for the Project shows that TAC's are not a concern based upon the recommendations provided in Table 4. An evaluation of nearby land uses shows that the Project will not place sensitive receptors in the vicinity of existing toxic sources. Since the Project is not located within the recommended buffer distances associated with the sources found in Table 4, a health risk assessment is not needed at this time. As noted above, the proposed Project is not a Type A project and would not place new toxic sources in the vicinity of existing sources.

Localized Operational Emissions – Odors

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation,



anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word “strong” to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air.

When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

While offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and the SJVAPCD. Any project with the potential to frequently expose members of the public to objectionable odors should be deemed to have a significant impact.

The SJVAPCD requires that an analysis of potential odor impacts be conducted for the following two situations:

- Generators – projects that would potentially generate odorous emissions proposed to be located near existing sensitive receptors or other land uses where people may congregate, and
- Receivers – residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources.

The Project will not generate odorous emissions given the nature or characteristics of the Project. The intensity of an odor source’s operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The SJVAPCD has identified some common types of facilities that have been known to produce odors in the SJV Air Basin. The types of facilities that are known to produce odors are shown in Table 5 above along with a reasonable distance from the source within which, the degree of odors could possibly be significant.

Localized Operational Emissions – Naturally Occurring Abestos (NOA)

Asbestos is a term used for several types of naturally occurring fibrous minerals found in many parts of California. The most common type of asbestos is chrysotile, but other types are also found in California. Construction of the Project may cause asbestos to become airborne due to the construction activities that will occur on site. The Project would be required to submit a Dust



Control Plan under the SJVAPCD's Rule 8021. Compliance with Rule 8021 would limit fugitive dust emissions from construction, demolition, excavation, extraction, and other earthmoving activities associated with the Project.

Indirect Source Review

The Project is subject to the SJVAPCD's ISR program, which is also known as Rule 9510. Rule 9510 and the Administrative ISR Fee Rule (Rule 3180) are the result of state requirements outlined in the California Health and Safety Code, Section 40604 and the State Implementation Plan (SIP). The purpose of the SJVAPCD's ISR program is to reduce emissions of NOx and PM10 from new projects. In general, new development contributes to the air-pollution problem in the Valley by increasing the number of vehicles and vehicle miles traveled.

Utilizing the ISR Fee Estimator calculator available on the SJVAPCD website, it was determined that the Project's total cost for emission reductions is \$126,272.64 without implementation of emission reduction measures. The ISR Fee Estimator worksheets are included in the appendices. The fee noted above may be reduced dependent upon the formal ISR review process.

- a) Would the project conflict with or obstruct implementation of the applicable air quality plan (e.g., by having potential emissions of regulated criterion pollutants which exceed the San Joaquin Valley Air Pollution Control Districts (SJVAPCD) adopted thresholds for these pollutants)?*

Less than Significant Impact. The primary way of determining consistency with the air quality plan's (AQP's) assumptions is determining consistency with the applicable General Plan to ensure that the Project's population density and land use are consistent with the growth assumptions used in the AQPs for the air basin.

As required by California law, city and county General Plans contain a Land Use Element that details the types and quantities of land uses that the city or county estimates will be needed for future growth, and that designate locations for land uses to regulate growth. KCAG uses the growth projections and land use information in adopted general plans to estimate future average daily trips and then VMT, which are then provided to SJVAPCD to estimate future emissions in the AQPs. Existing and future pollutant emissions computed in the AQP are based on land uses from area general plans. AQPs detail the control measures and emission reductions required for reaching attainment of the air standards.

The applicable General Plan for the project is the City of Hanford 2035 General Plan. The Project is consistent with the currently adopted General Plan for the City of Hanford and is therefore consistent with the population growth and VMT applied in the plan. Therefore, the Project is



consistent with the growth assumptions used in the applicable AQPs. As a result, the Project will not conflict with or obstruct implementation of any air quality plans. Therefore, no mitigation is needed.

b) 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?

Less than Significant Impact. The Kings County area is nonattainment for Federal and State air quality standards for ozone, in attainment of Federal standards and nonattainment for State standards for PM₁₀, and nonattainment for Federal and State standards for PM_{2.5}. The SJVAPCD has prepared the 2016 and 2013 Ozone Plans, 2007 PM₁₀ Maintenance Plan, and 2012 PM_{2.5} Plan to achieve Federal and State standards for improved air quality in the SJVAB regarding ozone and PM. Inconsistency with any of the plans would be considered a cumulatively adverse air quality impact. As discussed in Section 4.1.1, the Project is consistent with the currently adopted General Plan for the City of Hanford and is therefore consistent with the population growth and VMT applied in the plan. Therefore, the Project is consistent with the growth assumptions used in the 2016 and 2013 Ozone Plan, 2007 PM₁₀ Maintenance Plan, and 2012 PM_{2.5} Plan.

Project specific emissions that exceed the thresholds of significance for criteria pollutants would be expected to result in a cumulatively considerable net increase of any criteria pollutant for which the County is in non-attainment under applicable federal or state ambient air quality standards. It should be noted that a project is not characterized as cumulatively insignificant when project emissions fall below thresholds of significance. As discussed in Section 3.1, the SJVAPCD has established thresholds of significance for determining environmental significance which are provided in Table 6.

As discussed above, results of the analysis show that emissions generated from construction and operation of the Project will be less than the applicable SJVAPCD emission thresholds for criteria pollutants. Therefore, no mitigation is needed.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact. Sensitive receptors refer to those segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems affected by air quality). Land uses that have the greatest potential to attract these types of sensitive receptors include schools, parks, playgrounds, daycare centers, nursing homes, hospitals, and residential communities. From a health risk perspective, the Project is a Type B Project in that it may potentially place sensitive receptors in the vicinity of existing sources.



The first step in evaluating the potential for impacts to sensitive receptors for TAC's from the Project is to perform a screening level analysis. For Type B Projects, one type of screening tool is found in the CARB Handbook: Air Quality and Land Use Handbook: A Community Perspective. This handbook includes a table (depicted in Table 4) with recommended buffer distances associated with various types of common sources. The screening level analysis for the Project shows that TAC's are not a concern based upon the recommendations provided in Table 4. An evaluation of nearby land uses shows that the Project will not place sensitive receptors in the vicinity of existing toxic sources. As noted above, the proposed Project is not a Type A project and would not place new toxic sources in the vicinity of existing sources. Therefore, the Project will not expose sensitive receptors to substantial pollutant concentrations and any impacts would be less than significant.

Short-Term Impacts

The annual emissions from the construction phase of the Project will be less than the applicable SJVAPCD emission thresholds for criteria pollutants as shown in Table 7. Therefore, construction emissions associated with the Project are considered less than significant.

Long-Term Impacts

Long-Term emissions from the Project are generated primarily by mobile source (vehicle) emissions from the Project site and area sources such as maintenance equipment. Emissions from long-term operations generally represent a project's most substantial air quality impact. Table 8 summarizes the Project's operational impacts by pollutant. Results indicate that the annual operational emissions from the Project will be less than the SJVAPCD emission thresholds for criteria pollutants. Therefore, operational emissions associated with the Project are considered less than significant.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less than Significant Impact. The SJVAPCD requires that an analysis of potential odor impacts be conducted for the following two situations:

- Generators – projects that would potentially generate odorous emissions proposed to be located near existing sensitive receptors or other land uses where people may congregate, and
- Receivers – residential or other sensitive receptor projects or other projects built for the intent of attracting people located near existing odor sources.

The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The SJVAPCD has identified some common types of



facilities that have been known to produce odors in the SJV Air Basin. The types of facilities that are known to produce odors are shown in Table 5 above along with a reasonable distance from the source within which, the degree of odors could possibly be significant. The Project will not generate odorous emissions given the nature or characteristics of the Project.

Based on the assessment above, the Project will not generate potential odorous emissions or attract receivers and other sensitive receptors near existing odor sources. Therefore, no mitigation is needed.

4.3.3 Mitigation Measures

The proposed Project shall implement and incorporate, as applicable, the Air Quality related mitigation measures as identified in the Mitigation Monitoring and Reporting Program dated October 18, 2021.

INITIAL STUDY - UNDEVELOPED WETLAND DEGRADATION
 INITIAL STUDY
 INITIAL STUDY



4.4 BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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 Game or U.S. Fish and Wildlife Service?			X	
b) 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 Game or US Fish and Wildlife Service?				X
c) 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?				X
d) 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?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X



f) Conflict with provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.				X
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4.4.1 Environmental Setting

Historically, the Project site and vicinity have been designated and operated as agricultural land. In addition, the site contains existing residential and commercial structures. Therefore, the site has been highly disturbed as a result of periodic grading, disking, and residential, commercial, and agricultural activity. The existing biotic site conditions and resources of the Project site can be defined primarily as agricultural. There are trees, shrubs, and herbaceous vegetation surround and are fully contained within the existing residential sites. There are also several eucalyptus trees along the site's northerly perimeter adjacent to Grangeville Boulevard. These trees are not protected and will be removed. There are no water features on site. Lastly, the site is relatively flat with a Nord Complex soil type that is well drained, has medium runoff, with more than 80-inch water table depth.

U.S. Fish and Wildlife – Special-Status Species Database

The Project site is located in Kings County. The U.S. Fish and Wildlife's Information for Planning and Consultation (IPaC) database indicates 19 endangered species and four (4) critical habitats that are potentially affected in the County.⁴

California Department of Fish and Wildlife – Natural Diversity Database

The Project site is located in the Hanford Quad. The California Department of Fish and Wildlife's Natural Diversity Database (CNDDB) indicates one (1) federally listed, state listed, or special-status wildlife and plant species that have been observed in or near the Hanford Quad: San Joaquin kit fox.⁵ There are three (3) occurrences of the San Joaquin kit fox in the five (5)-mile radius from the Project site:

- #1101: Jun 12, 2006, 1.36 miles northeast;

⁴ U.S. fish and Wildlife Service. Information and Planning Consultation Online System. Accessed on October 12, 2021, <https://ecos.fws.gov/ipac/>

⁵ California Department of Fish and Wildlife. Biogeographic Information and Observation System. Accessed on October 4, 2021, <https://apps.wildlife.ca.gov/bios/?tool=cnddbQuick>

INITIAL STUDY: ENVIRONMENTAL IMPACT STATEMENT
 PROJECT: HANFORD AIRPORT
 DATE: FEBRUARY 2021



- # 214: Aug 15, 2000, 3.54 miles southeast;
- # 922: 1971, 3.69 miles southeast.

The general habitat for the San Joaquin kit fox is annual grasslands or grassy open states with scattered shrubby vegetation, and their micro habitat is loose-textured sandy soils for burrowing and a suitable prey base.

U.S. Fish & Wildlife -- National Wetlands Inventory

A search of the National Wetlands Inventory (NWI) shows no federally protected wetlands (including but not limited to marsh, vernal pool, coastal, etc.) on the Project site or within the immediate vicinity of the Project area.⁶ The NWI does identify a man-made "R5UBFx habitat" that runs across Grangeville and turns south through the site's center. The R5UBFx indicates Riverine System (R) with an unknown perennial sub-system (5), of an unconsolidated bottom (UB), that is semipermanently flooded (F), and has been excavated by humans (X) (i.e., an irrigation canal). Based on the historically use of the site and surrounding properties for agricultural purposes, it can be assumed that the man-made irrigation canal is and has been used for agriculture and thereby does not provide essential habitat for any species.

Hanford General Plan

The General Plan identified endangered or threatened species potentially within the city include the hoary bat, Swainson's hawk, Western pond turtle, and San Joaquin kit fox. The Hanford General Plan outlines policies related to the conservation of biological resources:

Goal 04 Protection of natural habitat and other biological resources.

Policy 034 Recreation and Sensitive Habitat. Avoid the potential negative impacts of increased human activity on sensitive habitat areas when establishing new recreational facilities or programs.

Policy 035 Impacts from Development. Ensure that potential impacts to biological resources and sensitive habitat are carefully evaluated when considering development projects.

⁶ U.S. Fish & Wildlife Service. National Wetlands Inventory. Accessed October 4, 2021, <https://www.fws.gov/wetlands/data/Mapper.html>



Policy O37 Mature Trees. *Promote the preservation of existing mature trees and encourage the planting of appropriate shade trees in new developments.*

Policy O38 Native Tree Species and Drought Tolerant Vegetation. *Encourage the planting of native tree species and drought-tolerant vegetation.*

4.4.2 Impact Assessment

- a) *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 the U.S. Fish and Wildlife Service?*

Less than Significant Impact. The Project site and surrounding properties have historically been designated and operated as agricultural land. The site currently contains existing residential and commercial structures. Therefore, the site has been highly disturbed as a result of periodic grading, disking, and residential, commercial, and agricultural activity. The existing biotic site conditions and resources of the Project site can be defined primarily as agricultural. There are trees, shrubs, and herbaceous vegetation surround and are fully contained within the existing residential sites. There are also several eucalyptus trees along the site's northerly perimeter adjacent to Grangeville Boulevard. These trees are not protected and will be removed. There are no water features on site. Additionally, the site is relatively flat with a Nord Complex soil type that is well drained, has medium runoff, with more than 80-inch water table depth. Lastly, the site is within city limits and is planned for residential uses. Consequently, the site does not provide essential habitat for any candidate, sensitive, or special status species. As a result, a less than significant impact would occur as a result of the Project.

- b) *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?*

No Impact. According to the General Plan, California Department of Fish and Wildlife, and U.S. Fish and Wildlife Service, there are no known riparian habitats or other sensitive natural communities identified on the Project site or within the immediate vicinity of the Project. In addition, the site does not contain any water features that would provide habitat for such species. In addition, the site is heavily impacted with very little vegetation which would not provide essential habitat. For these reasons, it can be determined that the Project site does not provide any riparian habitat and thus, no impact would occur because of the Project.



- c) *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?*

No Impact. Based on the search of the NWI, the Project site does not contain any federally protected wetlands. Typically, the primary wetland indicators include hydrophytic vegetation, hydric soils, and surface hydrology. The on-site topography consists of leveled agricultural land containing single-family residences and commercial uses. In addition, there does not appear to be ponds or standing water on the Project site. Further, the soils at the site are 100% of Nord complex.⁷ The characteristics of Nord complex are fine sandy loam or stratified sandy loam to loam, 0 to 2 percent slopes, well drained, and very low runoff. The depth to water table is more than 80 inches. The runoff class is low to medium. This soil type is not subject to annual flooding or ponding. Lastly, based on the historically use of the site and surrounding properties for agricultural purposes, it can be assumed that the man-made irrigation canal is and has been used for agriculture and thereby does not provide essential habitat for any species. For these reasons, it can be determined that the Project site would not result in any impact on state or federally protected wetlands.

- d) *Would the project 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?*

No Impact. Wildlife movement corridors are linear habitats that function to connect two (2) or more areas of significant wildlife habitat. These corridors may function on a local level as links between small habitat patches (e.g., streams in urban settings) or may provide critical connections between regionally significant habitats (e.g., deer movement corridors).

Wildlife corridors typically include vegetation and topography that facilitate the movements of wild animals from one area of suitable habitat to another, in order to fulfill foraging, breeding, and territorial needs. These corridors often provide cover and protection from predators that may be lacking in surrounding habitats. Wildlife corridors generally include riparian zones and similar linear expanses of contiguous habitat.

As previously mentioned, the Project site does not contain habitat that could support wildlife species in nesting, foraging, or escaping from predators. This is based on the existing conditions of

⁷ United States Department of Agriculture Natural Resources Conservation Service. Web Soil Survey. Accessed on October 4, 2021, <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>



the site including the site's heavy alteration and lack of cover, vegetation, or water features. Due to these conditions, it can be determined that the Project would not interfere with wildlife movement and no impact would occur as a result of the Project.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact. The General Plan outlines policies related to the conservation of biological resources and the HMC outlines regulations related to "heritage trees" – specifically, *Section 12.12.310* of the HMC requires tree protection plans for "heritage trees" (i.e., native Oak Trees). Due to the lack of identified special-species or natural habitat on the Project site, in addition to lack of trees that meet the City's definition of heritage trees, the Project would not conflict with any local policies or ordinances protecting biological resources. Thus, the Project would have no impact.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. The Project site is within the PG&E San Joaquin Valley Operation and Maintenance Habitat Conservation Plan (HCP). The HCP covers PG&E's routine operations and maintenance activities and minor new construction, on any PG&E gas and electrical transmission and distribution facilities, easements, private access routes, or lands owned by PG&E. The Project would not conflict or interfere with HCP. The Project is also located in the planning area of the Recovery Plan for Upland Species of the San Joaquin Valley, which addresses recovery goals for several species. The Project would not conflict with the plan since the site does not provide appropriate habitat for the species mentioned and would comply to applicable General Plan policies regarding habitat conservation. The City, County, and Regional Planning Agency do not have any other adopted or approved plans for habitat or natural community conservation. For these reasons, the Project would have no impact.

4.4.3 Mitigation Measures

The proposed Project shall implement and incorporate, as applicable, the Biological Resources related mitigation measures as identified in the Mitigation Monitoring and Reporting Program dated October 18, 2021.



4.5 CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?		X		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?		X		
c) Disturb any human remains, including those interred outside of formal cemeteries?		X		

4.5.1 Environmental Setting

Generally, the term 'cultural resources' describes property types such as prehistoric and historical archaeological sites, buildings, bridges, roadways, and tribal cultural resources. As defined by CEQA, historical resources include sites, structures, objects, or districts that may have historical, prehistoric, architectural, archaeological, cultural, or scientific importance. Such resources are eligible for listing in the California Register of Historic Resources by the State Historical Resources Commission. The city of Hanford has three (3) buildings listed on the National Register of Historic Places: Hanford Carnegie Library, Kings County Courthouse, and Taoist Temple.

Hanford General Plan

The General Plan identifies policies on historic and cultural resources related to new development including:

Policy O46 Archaeological Site Consultation. Consult with appropriate Native American associations about potential archaeological sites in the beginning stages of the development review process.

Policy O47 Archaeological Site Study. Require archaeological studies by a certified archeologist in areas of archeological potential significance prior to approval of development projects.



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.

Policy O49 Cultural Site Discovery. Halt construction at a development site if cultural resources are encountered unexpectedly during construction.

Tribal Consultation

The City of Hanford conducted tribal consultation pursuant to AB 52 and SB 18. In response, the City received pre-consultation from the Santa Rosa Rancheria Tachi Yokut Tribe. The Tribe requested that an archeological survey be conducted in addition to a California Historical Resources Information System (CHRIS) search and Sacred Lands File (SLF) search with the Native American Heritage Commission (NAHC). In addition, the Tribe has requested the following Mitigation Measures (MM) to be incorporated with the proposed Project:

MM CR-1. If cultural resources are discovered during construction or related activities, all work shall be halted and a qualified archeologist and the City of Hanford shall be notified. The find shall be properly investigated and appropriate measures shall be taken before construction may continue.

MM CR-2. Prior to ground disturbing activities, construction staff shall receive a cultural presentation by the Santa Rosa Rancheria regarding cultural resources and laws and regulations for the discovery of cultural resources and human remains.

MM CR-3. A Native American monitor shall be present for ground disturbing activities.

MM CR-4. A Burial Treatment Plan shall be signed by the applicant/property owner prior to any earth disturbing activities.

MM CR-5. A curation agreement shall be signed with the Santa Rosa Rancheria.

CHRIS Record Search

The Southern San Joaquin Information Center (SSJIC) conducted a California Historical Resources Information System (CHRIS) Record Search for the Project site and surrounding area (0.5-mile radius, "Project Area") on September 13, 2021 (Confidential). The results indicate that the Project Area had been partly surveyed previously and that one (1) cultural resource, the historic Last Chance Ditch (CA-KIN-191H) crossed through it. Based on the map provided, the cultural resource is not located on the Project site.



SLF NAHC Record Search

A NAHSC Sacred Lands Files search was conducted on October 4, 2021. The search results were negative and did not indicate any known sacred sites or tribal cultural resources within the Project Area.

Phase I Survey

A Phase I cultural resources survey for the Project area was conducted by ASM Affiliates on September 14, 2021. The report with full results is presented in [Appendix C](#). No historical or archaeological resources of any kind were discovered within the Project Area. In addition, the previously recorded historical Last Chance Ditch was found to be abandoned and filled-in. Based on the proximity of the Project site to the Last Chance Ditch, the survey considers the site to be archaeologically sensitive. Following the suggestions of the Santa Rosa Rancheria Tachi Yokut Tribe, the survey recommends the aforementioned mitigation measures.

4.5.2 Impact Assessment

a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

Less than Significant Impact with Mitigation Incorporated. Based on the records searches and field survey conducted, there are no local, state, or federal designated historical resources on the Project site or within the Project area. While there is no evidence that historical resources exist on the Project site, there is some possibility that hidden and buried resources may exist in the area with no surface evidence. As such, the Project would not cause a change to a historical resource pursuant to Section 15064.5. In the event of the accidental discovery and recognition of previously unknown resources before or during grading activities, the proposed Project shall incorporate General Plan *Policy O49* and to reduce any potentially significant impacts to less than significant. In addition, mitigation measures *MM CR-1* to *MM CR-5* are requested by Santa Rosa Rancheria and are incorporated herein to mitigate for potential subsurface cultural resources. As a result, the Project will have a less than significant impact with mitigation measures incorporated.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Less than Significant Impact with Mitigation Incorporated. Based on the records searches and field survey conducted, there is no evidence that archaeological resource of any type exists on the Project site. Nevertheless, there is some possibility that a non-visible, buried site may exist and may be uncovered during ground disturbing construction activities which would constitute a significant impact. Hanford General Plan *Policy O49* mitigates for cultural resources that are



encountered unexpectedly during construction. In addition, mitigation measures *MM CR-1* to *MM CR-5* are requested by Santa Rosa Rancheria and are incorporated herein to mitigate for potential subsurface cultural resources. Thus, if such resources were discovered, implementation of the required condition would reduce the impact to less than significant. As a result, the Project will have a less than significant impact with mitigation measures incorporated.

c) Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact with Mitigation Incorporated. There is no evidence that human remains exist on the Project site. Nevertheless, there is some possibility that a non-visible buried site may exist and may be uncovered during ground disturbing construction activities which would constitute a significant impact. If any human remains are discovered during construction, California Code of Regulations Section 15064.5(e), Public Resources Code Section 5097.98, and California Health and Safety Code Section 7050.5 will mitigate for the impacts. In addition, mitigation measures *MM CR-1* to *MM CR-5* requested by Santa Rosa Rancheria are incorporated herein to mitigate for potential subsurface cultural resources and human remains. Therefore, if any human remains were discovered, implementation of related regulations and mitigation measures would reduce the Project's impact to less than significant.

4.5.3 Mitigation Measures

The proposed Project shall implement and incorporate, as applicable, the Cultural Resources related mitigation measures as identified in the Mitigation Monitoring and Reporting Program dated October 18, 2021, including the mitigation measure identified above.



4.6 ENERGY

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X	

4.6.1 Environmental Setting

Appendix F – Energy Conservation of the CEQA Guidelines requires consideration of energy implications in project decisions, including a discussion of the potential energy impacts with emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy resources (Public Resources Code Section 21100(b)(3)). Per Appendix F, a project would be considered inefficient, wasteful and unnecessary if it violated existing energy standards, had a negative effect on local and regional energy supplies and requirements for additional capacity, had a negative effect on peak and base period demands for electricity and other energy forms, and effected energy resources.

The California Energy Commission updates the *Building Energy Efficiency Standards* (Title 24, Parts 6 and 11) every three years as part of the California Code of Regulations. The standards were established in 1978 in effort to reduce the state's energy consumption. They apply for new construction of, and additions and alterations to, residential and nonresidential buildings and relate to various energy efficiencies including but not limited to ventilation, air conditioning, and



lighting.⁸ The California Green Building Standards Code (CALGreen), Part 11, Title 24, California Code of Regulations, was developed in 2007 to meet the state goals for reducing Greenhouse Gas emissions pursuant to AB32. CALGreen covers five (5) categories: planning and design, energy efficiency, water efficiency and conservation, material and resource efficiency, and indoor environmental quality.⁹ The 2019 Building Energy Efficiency Standards went into effect on January 1, 2020. Additionally, the California Air Resources Board (CARB) oversees air pollution control efforts, regulations, and programs that contribute to reduction of energy consumption. Compliance with these energy efficiency regulations and programs ensure that development will not result in wasteful, inefficient, or unnecessary consumption of energy sources.

California Energy Action Plan. The Energy Action Plan (EAP) for California was approved in 2003 and updated in 2008. The California Public Utilities Commission (PUC) approved the Energy Action Plan (EAP) for California in 2003, with an updated in 2008. The 2008 EAP established goals and next steps to integrate and coordinate energy efficiency demand and response programs and actions.¹⁰

Hanford General Plan. Energy resources and conservation are discussed in the Mineral and Energy Resources Element of the Hanford General Plan. The following objectives policies of the Hanford General Plan relate to energy resources and conservation of new development in order to reduce community-wide energy consumption in Hanford:

Policy O13 Solar Power Generation. Support and encourage solar generation facilities that support residential, commercial, and industrial uses.

Policy O14 Alternative Fuels and Renewable Energy. Promote and encourage the use of alternative fuels and renewable energy.

⁸ California Energy Commission. 2019 Building Energy Efficiency Standards. Accessed on September 17, 2021, <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency>

⁹ California Department of General Services. (2020). 2019 California Green Building Standards Code. Accessed on October 4, 2021, <https://codes.iccsafe.org/content/CGBC2019P3>

¹⁰ State of California. (2008). Energy Action Plan 2008 Update. Accessed on October 4, 2021, https://docs.cpuc.ca.gov/word_pdf/REPORT/28715.pdf

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Policy O15 Energy-efficient Design Features. *Require that new development incorporate energy-efficient design features for HVAC, lighting systems, and insulation that 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 O19 Recycling. *Support recycling activities throughout the City.*

4.6.2 Impact Assessment

- a) *Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

Less than Significant Impact. The Project proposes the development of a 161-lot single-family residential development with an anticipated population of 460. Energy would be consumed through Project construction and operations, further analyzed below.

Construction

Construction is anticipated to be completed over a 1.5-year timeframe and will be short-term and temporary. There are no unusual project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities. Construction would include demolition, site preparation, building construction, paving, and architectural coatings – all of which require the transportation of building materials and equipment. Therefore, the primary source of energy for construction activities would be diesel and gasoline (i.e., petroleum fuels).

All construction equipment shall conform to current emissions standards and related fuel efficiencies including applicable CARB regulations (Airborne Toxic Control Measure), California Code of Regulations (Title 13, Motor Vehicles), and Title 24 standards. Compliance with such regulations would ensure that the short-term, temporary construction activities do not result in wasteful, inefficient, or unnecessary consumption of energy resources. Compliance with such regulations would ensure that the short-term, temporary construction activities do not result in wasteful, inefficient, or unnecessary consumption of energy resources.

Operations

Operations would involve heating, cooling, equipment, and vehicle trips. Energy consumption related to operations would be associated with natural gas, electricity, and fuel. Energy and natural



gas consumption were estimated using CalEEMod ([Appendix A](#)) and vehicle trips were estimated through a Vehicle Miles Traveled (VMT) analysis ([Appendix C](#)). Results are outlined below.

- **Electricity:** total electricity consumption (residential and non-residential) for Kings County in 2019 was 1,583,071,346 kWh and the estimated population was 152,940.^{11 12} Thus, the 2019 per capita electricity usage for Kings County was approximately 10,350 kWh. In comparison, the estimated electricity demand for the Project at buildout is 1,283,810 kWh/yr and the estimated population is 460. Thus, the estimated per capita electricity usage for the Project is 2,790 kWh per year. Based on these estimates, the per capita electricity consumption for Kings County *with the project* can be expected to decrease to 10,328 kWh/yr.¹³ Overall, when compared to energy outputs for Kings County, the Project would not result in wasteful, inefficient, or unnecessary consumption of electricity.
- **Natural Gas:** total natural gas consumption (residential and non-residential) for Kings County in 2019 was 69,152,009 kBTU and the estimated population was 152,940.¹⁴ Thus, the 2019 per capita natural gas consumption for Kings County was approximately 452 kBTU. In comparison, the estimated natural gas consumption for the Project at buildout is 3,870,050 kBTU/yr and the estimated population is 460. Thus, the estimated per capita natural gas consumption is 8,413 kBTU per year. Based on these estimates, the per capita natural gas consumption for Kings County *with the project* can be expected to increase by five (5) percent to 476 kBTU/yr.¹⁵ Despite the anticipated increase in energy outputs, it can be assumed that the Project would not result in a substantial increase based on required compliance with CALGreen, Title 24, and General Plan policies. Such standards and policies are intended to increase energy efficiency and reduce energy demand. Therefore, while the Project would increase energy demand, such energy would be consumed more efficiently as required by

¹¹ California Energy Commission. Electricity Consumption by County. Accessed October 12, 2021, <https://ecdms.energy.ca.gov/elecbycounty.aspx>

¹² U.S. Census Bureau. Quick Facts for Kings County, California. Accessed October 12, 2021, <https://www.census.gov/quickfacts/kingscountycalifornia>

¹³ To get this number, add the 2019 total electricity usage for Kings County to the estimated usage generated by the Project (1,583,071,346 kWh plus 1,283,810 kWh equals 1,584,355,156 kWh), then divide by the estimated population with the Project (152,940 plus 460 equals 153,400) to get 10,328 kWh per capita.

¹⁴ California Energy Commission. Gas Consumption by County. Accessed October 12, 2021, <https://ecdms.energy.ca.gov/gasbycounty.aspx>

¹⁵ To get this number, add the 2019 total natural gas consumption for Kings County to the estimated usage generated by the Project (69,152,009 kBTU plus 3,870,050 equals 73,022,059), then divide by the estimated population with the Project (152,940 plus 460 equals 153,400) to get 476 kBTU per capita.

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state regulations. Documentation demonstrating compliance with such standards will be required to be submitted with the building permit application; and compliance will be enforced by the Building Department.

- **Fuel Consumption:** vehicle miles traveled (VMT) associated with the Project were estimated and analyzed under Section 4.17 based on a VMT analysis conducted by Peters Engineering on October 5, 2021. The results indicate that the Countywide average VMT per capita is 9.6 and the Project VMT per capita is 8.5, which exceeds the significance threshold of 8.2 VMT per capita. Mitigation measures to reduce VMT are outlined in Section 4.17. Incorporation of the identified mitigation measures would reduce the impacts to less than significant.

Overall, the results of the analyses do not rise to a level of significance given the Project's required compliance with various energy efficiency regulations and policies including CALGreen, Title 24, the General Plan, and CARB in addition to mitigation measures to reduce VMT (See Section 4.17). Thus, through compliance, the Project is not expected to result in wasteful, inefficient, or unnecessary consumption of energy resources and a less than significant impact would occur as a result of the Project.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less than Significant Impact. As discussed under criterion a), the construction and operations of the Project would be subject to compliance with applicable energy efficiency regulations including CALGreen, Title 24, General Plan, and CARB in addition to mitigation measures to reduce VMT. Thus, applicable state and local regulations and programs would be implemented to reduce energy waste from construction and operations. Therefore, through compliance, the Project would not conflict with or obstruct any state or local plan for energy efficiency and a less than significant impact would occur as a result of the Project.

4.6.3 Mitigation Measures

None Required.



4.7 GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Directly or Indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. 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.				X
ii. Strong seismic ground shaking?				X
iii. Seismic-related ground failure, including liquefaction?				X
iv. Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) 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 off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				X

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d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				X
e)	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 waste water?				X
f)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X

4.7.1 Environmental Setting

The Project site is in the San Joaquin Valley which is one of the two (2) large valleys comprising the Great Valley Geomorphic Province. The San Joaquin Valley is surrounded by Sierra Nevada (east), Coast Ranges (west), Tehachapi (south), and the Sacramento Valley (north). The topography of the city of Hanford is relatively flat with a gradual slope from east to west.

A brief discussion of the likelihood of seismic activities to occur in or affect Hanford is provided below. However, CEQA requires an analysis of the Project's impacts on the environment, not the environment's potential impacts on the Project; therefore, shaking, liquefaction, and other seismic activities are less than significant.

Faulting

There are no active faults mapped in the city of Hanford or Kings County, nor are the city or region located in any Alquist-Priolo Special Studies Zones.¹⁶ Further, the Project site is not located in an Alquist-Priolo Earthquake Fault Zone as established by the Alquist-Priolo Fault Zoning Act (Section 2622 of Chapter 7.5, Division 2 of the California Public Resources Code). According to the Kings County Multi-Jurisdictional Local Hazard Mitigation Plan, there is no history of earthquakes in the

¹⁶ California Department of Conservation. (2010). 2010 Fault Activity Map of California. Accessed on October 8, 2021, https://www.conservation.ca.gov/cgs/Pages/Program-RGMP/2010_faultmap.aspx



city of Hanford and the peak ground acceleration is low.¹⁷ The nearest active faults are San Andreas (46.5 miles southwest) and the White Wolf Fault (100+ miles southeast).

Subsurface Soils

A search of the Web Soil Survey by the USDA Natural Resources Conservation Service indicates that the Project site is comprised 100% of Nord complex.¹⁸ The characteristics of Nord complex are fine sandy loam or stratified sandy loam to loam, 0 to 2 percent slopes, well drained, and very low runoff. The depth to water table is more than 80 inches. The runoff class is low to medium. This soil type is not subject to annual flooding or ponding.

Liquefaction

Liquefaction is a seismic phenomenon in which loose, saturated, fine-grained granular soils behave similarly to a fluid when subjected to high-intensity ground shaking. Per the General Plan, the city of Hanford does not have a significant liquefaction potential since it is in a stable geologic formation. Further, liquefaction potential and risk in the Kings County is considered minimal due to the nature of the underlying soils, relatively deep-water table, and history of low ground shaking potential. This is evidenced by the Seismic Safety Map in the Kings County 2035 General Plan Health and Safety Element which shows that the city of Hanford is not in a zone where landslides, subsidence, or liquefaction could possibly occur.¹⁹

Erosion

Wind and flowing water are the primary agents of erosion in the San Joaquin Valley. The Kings County Multi-Jurisdictional Local Hazard Mitigation Plan does not identify areas susceptible to erosion within Kings County or the city of Hanford.

¹⁷ Kings County Office of Emergency Management. (2012). Kings County Multi-Jurisdictional Local Hazard Mitigation Plan. Accessed on October 8, 2021, <https://www.countyofkings.com/home/showpublisheddocument/23875/637298992208470000>

¹⁸ United States Department of Agriculture Natural Resources Conservation Service. Web Soil Survey. Accessed on October 4, 2021, <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>

¹⁹ County of Kings. (2010). 2035 Kings County General Plan. Accessed on October 8, 2021, <https://www.countyofkings.com/home/showpublisheddocument/3106/635274892972100000>



Ground Subsidence

Ground subsidence is the settling or sinking of surface soil deposits with little or no horizontal motion. Soils with high silt or clay content are subject to subsidence. According to the Kings County Multi-Jurisdictional Hazard Mitigation Plan, land subsidence in the region rarely occurs and its impacts are not significant.

Hanford General Plan

The General Plan includes objectives and policies relevant to earthquakes in its Health, Safety, and Noise Element:

Policy H15 Building Codes and Standards for Earthquakes. Maintain and enforce current buildings codes and standards to reduce the potential for structural failure caused by ground shaking and other geologic hazards.

Policy H16 Hazardous Buildings Upgrade. Develop policies to assist in the upgrading of seismically hazardous (unreinforced masonry) buildings within the City.

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.

Hanford Municipal Code

Chapter 15.52 Flood Damage Prevention Regulations of the HMC contains the City's floodplain management regulations. Methods and provisions contained in the chapter are applicable to all areas of special flood hazards within the city of Hanford. The Project site is designated as Zone X on the most recent Flood Insurance Rate Map (FIRM) No. 06031C0180C and No. 06031C0185C dated June 16, 2009. Zone X is an area of minimal flood hazards with a 0.2 percent-annual-chance of flood (i.e., 500-year flood). Therefore, HMC Chapter 15.52 is not applicable to the Project.

4.7.2 Impact Assessment

- a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - i. 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.



No Impact. There are no known active earthquake faults in Hanford, nor is Hanford within an Alquist-Priolo earthquake fault zone as established by the Alquist-Priolo Fault Zoning Act. As such, development of the Project in an area void of earthquake faults would not cause rupture of a known earthquake fault. Therefore, no impact would occur as a result of the Project.

ii. Strong seismic ground shaking?

No Impact. The Project site is in an area that is traditionally characterized by relatively low seismic activity. Further, the site is relatively flat with stable soils and is not in close proximity to any fault lines. In addition, the Project would be required to conform to current seismic protection standards in the California Building Code (CBC) and General Plan, which are intended to minimize potential risks. Therefore, because of the Project's stable soils and distance from active fault lines, and because of the Project's conformance to CBC seismic safety standards, the Project does not have any aspect that could result in strong seismic ground shaking. Therefore, no impact would occur as a result of the Project.

iii. Seismic-related ground failure, including liquefaction?

No Impact. The Project site is relatively flat with stable soils and no apparent unique or significant landforms. Further, the city of Hanford does not have a significant liquefaction potential since it is in a stable geologic formation. For these reasons, liquefaction or seismically induced settlement or bearing loss is considered unlikely, even if there should be a substantial increase in ground water level. Further, development of the site would require compliance with the City's grading and drainage standards. Therefore, because of the Project's relatively flat topography, stability of soils, infrequency of seismic activity, and required compliance with City standards, the Project does not have any aspect that could result in seismic-related ground failure, including liquefaction. Therefore, no impact would occur as a result of the Project.

iv. Landslides?

No Impact. Landslides are not expected to affect the Project site as the city of Hanford is not located in a zone where landslides, subsidence, or liquefaction could possibly occur. Furthermore, the topography of the Project site is flat with stable, native soils. As such, development of the Project on a stable site in an area that is not susceptible to seismic activities or geologic instability would not cause landslides. Therefore, no impact would occur as a result of the Project.

b) Result in substantial soil erosion or the loss of topsoil?

Less than Significant Impact. Development of the Project site would require typical site preparation activities such as grading and trenching which may result in the potential for short-term soil disturbance or erosion impacts. Construction would also involve the use of water which may cause further soil disturbance. Such impacts would be addressed through compliance with



General Plan *Policy 012*, which requires new development to implement measures to minimize soil erosion related to construction, and regulations set by the State Water Resources Control Board (SWRCB).

The SWRCB requires sites larger than one (1) acre to comply with the General Permit for Discharges of Storm Water Associated with Construction Activity (i.e., General Permit Order No. 2012-0006-DWQ). The General Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer (QSD). The SWPPP estimates the sediment risk associated with construction activities and includes best management practices (BMP) to control erosion. BMPs specific to erosion control cover erosion, sediment, tracking, and waste management controls.

Implementation of the SWPPP in addition to compliance with General Plan *Policy 012* minimizes the potential for the Project to result in substantial soil erosion or loss of topsoil. With these provisions in place, impacts to soil and topsoil by the Project would be considered less than significant.

- c) 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 off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?*

No Impact. The Project site is not located in a zone where landslides, subsidence, or liquefaction could occur. Further, the site is relatively flat with stable soils and no apparent unique or significant landforms. Therefore, development of the Project on a stable site would not cause landslides, lateral spreading, subsidence, liquefaction, or collapse. Therefore, no impact would occur as a result of the Project.

- d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?*

No Impact. The Project site comprises stable, native soils that are not classified as expansive soils as defined in Table 18-1-B of the Uniform Building Code (1994) that would create substantial direct or indirect risks to life or property. Therefore, no impact would occur as a result of the Project.

- e) 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?*

No Impact. The Project will not involve the installation of a septic tank or alternative wastewater disposal system. The Project would be connected to the City's sewer system. Therefore, the Project would have no impact.



f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than Significant Impact. As discussed in Cultural Resources ([Section 4.5](#)), there are no known paleontological resources or unique geological features known to the City within this area or on this site. Nevertheless, there is some possibility that a non-visible, buried site may exist and may be uncovered during ground disturbing construction activities which would constitute a significant impact. Hanford General Plan *Policy 049* mitigates for cultural resources that are encountered unexpectedly during construction. In addition, mitigation measures *MM CR-1* to *MM CR-5* are requested by Santa Rosa Rancheria and incorporated to the Initial Study to mitigate for potential subsurface cultural resources. Thus, in if such resources were discovered, implementation of the required condition would reduce the impact to less than significant.

4.7.3 Mitigation Measures

None required.



4.8 GREENHOUSE GAS EMISSIONS

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

4.8.1 Environmental Setting

An Air Quality and Greenhouse Gas Impact Assessment was prepared for the Project by VRPA Technologies, Inc. on September 30, 2021. The report and supporting tables are provided in Appendix A. The environmental setting, methodology, and assessment are incorporated herein.

4.8.2 Impact Assessment

Thresholds of Significance

CARB, in consultation with MPOs, has provided each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. For the Kings County Association of Governments (KCAG) region, CARB set targets at five (5) percent per capita decrease in 2020 and a ten (10) percent per capita decrease in 2035 from a base year of 2005. KCAG's 2018 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which was adopted in August 2018, projects that the Kings County region would achieve the prescribed emissions targets.

In 2009, the SJVAPCD adopted the following guidance documents applicable to projects within the San Joaquin Valley:

- Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA (SJVAPCD 2009), and
- District Policy: Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency (SJVAPCD 2009).



This guidance and policy are the reference documents referenced in the SJVAPCD's Guidance for Assessing and Mitigating Air Quality Impacts adopted in March 2015 (SJVAPCD 2015). Consistent with the District Guidance and District Policy above, SJVAPCD (2015) acknowledges the current absence of numerical thresholds, and recommends a tiered approach to establish the significance of the GHG impacts on the environment:

- If a project complies with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located, then the project would be determined to have a less than significant individual and cumulative impact for GHG emissions;
- If a project does not comply with an approved GHG emission reduction plan or mitigation program, then it would be required to implement Best Performance Standards (BPS); and
- If a project is not implementing BPS, then it should demonstrate that its GHG emissions would be reduced or mitigated by at least 29 percent compared to Business as Usual (BAU).

In the event that a local air district's guidance for addressing GHG impacts does not use numerical GHG emissions thresholds, at the lead agency's discretion, a neighboring air district's GHG threshold may be used to determine impacts. In December 2008, the South Coast Air Quality Management District (SCAQMD) Governing Board adopted the staff proposal for an interim GHG significance threshold for projects where the SCAQMD is lead agency. The SCAQMD guidance identifies a threshold of 10,000 MTCO₂eq./year for GHG for construction emissions amortized over a 30-year project lifetime, plus annual operation emissions. This threshold is often used by agencies, such as the California Public Utilities Commission, to evaluate GHG impacts in areas that do not have specific thresholds (CPUC 2015). Though the Project is under SJVAPCD jurisdiction, the SCAQMD GHG threshold provides some perspective on the GHG emissions generated by the Project. Table 9 shows the yearly GHG emissions generated by the Project as determined by the CalEEMod model, which is approximately 79% less than the threshold identified by the SCAQMD.

Table 9
Project Operational Greenhouse Gas Emissions

Summary Report	CO ₂ e
Project Operational Emissions Per Year	2,080 MT/yr

Source: CalEEMod, VRPA 2021

Project Name: [REDACTED]
 Project Number: [REDACTED]
 Project Location: [REDACTED]



a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less than Significant Impact. The SJVAPCD acknowledges the current absence of numerical thresholds and recommends a tiered approach to establish the significance of the GHG impacts on the environment:

- If a project complies with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located, then the project would be determined to have a less than significant individual and cumulative impact for GHG emissions;
- If a project does not comply with an approved GHG emission reduction plan or mitigation program, then it would be required to implement Best Performance Standards (BPS); and
- If a project is not implementing BPS, then it should demonstrate that its GHG emissions would be reduced or mitigated by at least 29 percent compared to Business as Usual (BAU).

In the event that a local air district's guidance for addressing GHG impacts does not use numerical GHG emissions thresholds, at the lead agency's discretion, a neighboring air district's GHG threshold may be used to determine impacts. In December 2008, the South Coast Air Quality Management District (SCAQMD) Governing Board adopted the staff proposal for an interim GHG significance threshold for projects where the SCAQMD is lead agency. The SCAQMD guidance identifies a threshold of 10,000 MTCO₂eq./year for GHG for construction emissions amortized over a 30-year project lifetime, plus annual operation emissions. Though the Project is under SJVAPCD jurisdiction, the SCAQMD GHG threshold provides some perspective on the GHG emissions generated by the Project. Table 9 shows the yearly GHG emissions generated by the Project as determined by the CalEEMod model, which is approximately 79% less than the threshold identified by the SCAQMD.

The KCAG Regional Climate Action Plan identifies a baseline (2005) GHG emissions inventory for all countywide sectors (transportation, waste management, etc.). Kings County's baseline GHG emissions is approximately 1,046,804 MTCO₂eq./year. The proposed Project's GHG emissions represents 0.2% of the total GHG emissions for Kings County's baseline GHG emissions.

Based on the assessment above, the Project will not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. Therefore, any impacts would be less than significant.



b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less than Significant Impact. California passed the California Global Warming Solutions Act of 2006. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. Under AB 32, CARB must adopt regulations by January 1, 2011 to achieve reductions in GHGs to meet the 1990 emission cap by 2020. On December 11, 2008, CARB adopted its initial Scoping Plan, which functions as a roadmap of CARB's plans to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations. CARB's 2017 Climate Change Scoping Plan builds on the efforts and plans encompassed in the initial Scoping Plan.

SB 375 requires MPOs to adopt a SCS or APS that will prescribe land use allocation in that MPO's regional transportation plan. CARB, in consultation with MPOs, has provided each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. For the KCAG region, CARB set targets at five (5) percent per capita decrease in 2020 and a ten (10) percent per capita decrease in 2035 from a base year of 2005. KCAG's 2018 RTP/SCS, which was adopted in August 2018, projects that the Kings County region would achieve the prescribed emissions targets.

Executive Order B-30-15 establishes a California greenhouse gas reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050. Executive Order B-30-15 requires MPO's to implement measures that will achieve reductions of greenhouse gas emissions to meet the 2030 and 2050 greenhouse gas emissions reductions targets.

As required by California law, city and county General Plans contain a Land Use Element that details the types and quantities of land uses that the city or county estimates will be needed for future growth, and that designate locations for land uses to regulate growth. KCAG uses the growth projections and land use information in adopted general plans to estimate future average daily trips and then VMT, which are then provided to SJVAPCD to estimate future emissions in the AQPs. The applicable General Plan for the project is City of Hanford 2035 General Plan Update, which was adopted in 2018.

The Project is consistent with the currently adopted General Plan for the City of Hanford and the adopted KCAG 2018 RTP/SCS and is therefore consistent with the population growth and VMT applied in those plan documents. Therefore, the Project is consistent with the growth assumptions used in the applicable AQP. It should also be noted that yearly GHG emissions generated by the Project (Table 9) are approximately 79% less than the threshold identified by the SCAQMD (see the discussion for Impact 4.2.1 above).



CARB's 2017 Climate Change Scoping Plan builds on the efforts and plans encompassed in the initial Scoping Plan. The current plan has identified new policies and actions to accomplish the State's 2030 GHG limit. Below is a list of applicable strategies in the Scoping Plan and the Project's consistency with those strategies.

- California Light-Duty Vehicle GHG Standards – Implement adopted standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs for long-term climate change goals. *The Project is consistent with this reduction measure. This measure cannot be implemented by a particular project or lead agency since it is a statewide measure. When this measure is implemented, standards would be applicable to light-duty vehicles that would access the Project. The Project would not conflict or obstruct this reduction measure.*
- Energy Efficiency – Pursuit of comparable investment in energy efficiency from all retail providers of electricity in California. Maximize energy efficiency building and appliance standards. *The Project is consistent with this reduction measure. Though this measure applies to the State to increase its energy standards, the Project would comply with this measure through existing regulation. The Project would not conflict or obstruct this reduction measure.*
- Low Carbon Fuel – Development and adoption of the low carbon fuel standard. The Project is consistent with this reduction measure. This measure cannot be implemented by a particular project or lead agency since it is a statewide measure. When this measure is implemented, standards would be applicable to the fuel used by vehicles that would access the Project. The Project would not conflict or obstruct this reduction measure.

Based on the assessment above, the Project will not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Therefore, any impacts would be less than significant.

4.8.3 Mitigation Measures

The proposed Project shall implement and incorporate, as applicable, the Greenhouse Gas Emissions related mitigation measures as identified in the Mitigation Monitoring and Reporting Program dated October 18, 2021.



4.9 HAZARDOUS AND HAZARDOUS MATERIAL

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) 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?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d) Be located on a site which 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?				X
e) 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 for people residing or working in the project area?				X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	



g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?			X	
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4.9.1 Environmental Setting

For the purposes of this section, the term “hazardous materials” refers to “injurious substances,” which include flammable liquids and gases, poisons, corrosives, explosives, oxidizers, radioactive materials, and medical supplies and waste. These materials are either generated or used by various commercial and industrial activities. Hazardous wastes are injurious substances that have been or will be disposed. Potential hazards arise from the transport of hazardous materials, including leakage and accidents involving transporting vehicles. There also are hazards associated with the use and storage of these materials and wastes. Hazardous materials are grouped into the following four categories based on their properties:

- Toxic: causes human health effect
- Ignitable: has the ability to burn
- Corrosive: causes severe burns or damage to materials
- Reactive: causes explosions or generates toxic gases

“Hazardous wastes” are defined in California Health and Safety Code Section 25141(b) as wastes that: “...because of their quantity, concentration, or physical, chemical, or infectious characteristics, [may either] cause or significantly contribute to an increase in mortality or an increase in serious illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.” A hazardous waste is any hazardous material that is discarded, abandoned, or slated to be recycled. If improperly handled, hazardous materials and hazardous waste can result in public health hazards if released into the soil or groundwater or through airborne releases in vapors, fumes, or dust. Soil and groundwater having concentrations of hazardous constituents higher than specific regulatory levels must be handled and disposed of as hazardous waste when excavated or pumped from an aquifer. The California Code of Regulations, Title 22, Sections 66261.20-24 contains technical descriptions of toxic characteristics that could cause soil or groundwater to be classified as hazardous waste.

Hazardous waste generators may include industries, businesses, public and private institutions, and households. Federal, state, and local agencies maintain comprehensive databases that identify the location of facilities using large quantities of hazardous materials, as well as facilities generating hazardous waste. Some of these facilities use certain classes of hazardous materials that require risk management plans to protect surrounding land uses. The release of hazardous



materials would be subject to existing federal, State, and local regulations and is similar to the transport, use, and disposal of hazard materials.

Record Search

The California Department of Toxic Substance Control's EnviroStor database²⁰ and the State Water Resources Control Board's GeoTracker database²¹ include hazardous release and contamination sites. A search of each database was conducted on October 4, 2021. The searches revealed no hazardous material release sites on the Project site. The closest hazardous site in the Project vicinity identified was a voluntary cleanup site 350 feet southwest of the Project site, located at 9431 13th Avenue, Hanford, CA 93230.

Hanford General Plan

The General Plan include objectives and policies relevant to hazards and hazardous materials in its Health, Safety, and Noise Element:

Goal H6: *Avoidance of properties contaminated by toxic or hazardous materials.*

Policy H29 Household Hazardous Materials. *Coordinate with other public agencies to educate consumers about the proper household use and disposal of hazardous materials.*

Policy H30 Industrial Hazardous Materials. *Require industrial uses that rely extensively on the use of hazardous materials to adopt an acceptable use, storage, disposal, and emergency response program that has been approved by appropriate agencies.*

Policy H31 Adequate Separation from Sensitive Uses. *Require adequate separation between industrial areas where hazardous materials are present and sensitive uses such as schools, residential areas, parks, and public facilities.*

Policy H32 Project Review Evaluation. *Evaluate the risks involving the disposal, transport, manufacture, storage and handling of hazardous material in Hanford in the project review process.*

²⁰California Department of Toxic Substances Control. Envirostor. Accessed October 14, 2021, <https://www.envirostor.dtsc.ca.gov/public/>

²¹ California State Water Resources Control Board. GeoTracker. Accessed October 14, 2021, <https://geotracker.waterboards.ca.gov/>



Policy H33 Educational Opportunities. *Coordinate with Kings County to provide educational opportunities to the public regarding the generation of small quantity, household and agricultural waste products regarding their responsibilities for source reduction and proper and safe hazardous waste management.*

Policy H34 Sensitive Receptors. *Avoid siting uses with new sensitive receptors near existing industrial facilities that use or produce hazardous material or may emit toxic air contaminants.*

Policy H35 Kings County Health Department. *Coordinate with the Kings County Health Department for the implementation of the Hazardous Materials Disclosure Law.*

4.9.2 Impact Assessment

- a) *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

Less than Significant Impact. The Project consists of a residential development. The type of hazardous materials that would be associated with the Project are those typical of residential developments: household cleaners, landscape maintenance, soaps, pesticides for pest control, etc. Because of the use, it is not expected that the Project would routinely transport, use, or dispose of hazardous materials other than those typical of residential uses and such materials would not be of the type or quantity that would pose a significant hazard to the public. Potential impacts during construction of the Project could result from the use of fuels and lubricants for construction equipment. However, these impacts would be short-term and temporary, and would be reduced to less than significant levels through compliance with local, state, and federal regulations in addition to standard equipment operating practices. For these reasons, the Project would have a less than significant impact.

- b) *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?*

Less than Significant Impact. As described under criterion a) above, it is not anticipated that the Project itself will involve any operations that would require routine transport, use, or disposal of hazardous materials and therefore is not anticipated to create a significant hazard to the public or the environment through release of hazardous materials. While potential impacts would occur through construction-related transport and disposal of hazardous materials, such impacts would be short-term and temporary, and would be reduced to less than significant levels through



compliance with local, state, and federal regulations in addition to standard equipment operating practices. Therefore, the Project would have a less than significant impact.

- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

Less than Significant Impact. The nearest schools within one-quarter miles of the Project site include Sierra Pacific High School and Frontier Elementary School. As described under criteria a) and b) above, the Project is not anticipated to emit hazard emissions or handle hazardous materials, substances, or water that would pose a risk or threat to the school or surrounding area. Therefore, a less than significant impact would occur.

- d) Be located on a site which 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?*

No Impact. According to Envirostor and Geotracker, the Project is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, the Project would not create a significant hazard to the public of the environment. For these reasons, there would be no impact.

- e) 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 for people residing or working in the project area?*

No Impact. The nearest public use airport is the Hanford Municipal Airport located more than three (3) miles southeast of the Project site. According to the Kings County Airport Land Use Compatibility Plan (1994), the site is not within the Hanford Municipal Airport Influence Area and is therefore not subject to land use compatibility policies.²² Thus, the Project would not result in a safety hazard for people residing or working in the Project area and no impact would occur as a result of the Project.

- f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

Less than Significant Impact. The Project would not involve any new or altered infrastructure associated with evacuation, emergency response, and emergency access routes within the City or

²² County of Kings. (1994). Kings County Airport Land Use Compatibility Plan. Accessed October 14, 2021, <https://www.countyofkings.com/home/showpublisheddocument/3094/635274871108830000>



County. Construction of frontage improvements may require lane closure; however, these activities would be short term and access through Grangeville Boulevard and 13th Avenue would be maintained through standard traffic control. Following construction, Grangeville Boulevard and 13th Avenue would continue to provide access to the site. Furthermore, the Project would be subject to compliance with applicable standards for on-site emergency access including turn radii and fire access. Therefore, the Project would have a less than significant impact.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

Less than Significant Impact. According to the California Department of Forestry and Fire Protection (Cal Fire), the city of Hanford, inclusive of the Project site, is not identified as a Very High Fire Hazard Severity Zone (VHFHSZ); rather, the site is within an area of local responsibility and is considered an area of low fire risk.²³ Additionally, the Project would be required to be developed and operate in compliance with all regulations of the current California Fire Code. Therefore, the Project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. For these reasons, the Project would have a less than significant impact.

4.9.3 Mitigation Measures

None required.

²³ California Department of Forestry and Fire Protection. FHSZ Viewer. Accessed on October 5, 2021, <https://egis.fire.ca.gov/FHSZ/>.



4.10 HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
c) 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:			X	
i. Result in a substantial erosion or siltation on- or off-site;			X	
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site:			X	
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			X	

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iv.	Impede or redirect flood flows?			X	
d)	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			X	
e)	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

4.10.1 Environmental Setting

The Project site is within city limits and thus, will be required to connect to water and stormwater services. The City and responsible agencies have reviewed the Project to determine adequate capacity in these systems and ensure compliance with applicable connection and discharge requirements. Overall, the review of the Project by the City and responsible agencies indicates that the Project would not require or result in the relocation or construction of new or expanded facilities and as such, would not cause significant environmental effects.

Water

The City of Hanford's water supply system is a groundwater system. The city is located within the Tulare Lake Hydrologic Region and is within the Tulare Lake Groundwater Subbasin which transmits, filters, and stores water from the main San Joaquin Valley Groundwater Basin. The system consists of 14 groundwater wells, three (3) storage reservoirs, distribution mains, and fire hydrants. The system does not use surface water. Groundwater is recharged by rain and snowfall in addition to percolation from storm water basins, local waterways, and agricultural irrigation. The Project would include installation of a 12-inch water main along Grangeville Boulevard to connect to the existing water main in addition to eight (8)-inch water mains throughout the subdivision. Each unit will connect to the City's water system through installation of meters.

Stormwater

The existing drainage infrastructure within the City of Hanford's Stormwater Management Program include natural drainage channels, retention basins, natural vegetation, piping, and pump stations. There are some areas where storm drainage is controlled by drainage inlets and underground structures. The system consists of 30 pump stations, 57 miles of pipeline, and 220 acres of drainage basins and drainage ditches. The proposed Project includes a 1.53-acre, on-site retention basin to capture stormwater from the subject site. The stormwater will percolate and allow for groundwater recharge.



4.10.2 Impact Assessment

- a) *Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?*

Less than Significant Impact. Because the Project site is greater than one (1) acre in size, the developer is required to prepare a SWPPP (Section 4.7) in compliance with the General Permit for Discharges of Storm Water Associated with Construction Activity (i.e., General Permit Order No. 2012-0006-DWQ). The SWPPP estimates the sediment risk associated with construction activities and includes best management practices (BMP) to control erosion. BMPs specific to erosion control cover erosion, sediment, tracking, and waste management controls. Implementation of the SWPPP minimizes the potential for the Project to result in substantial soil erosion or loss of topsoil. These provisions minimize the potential for the Project to violate any waste discharge requirements or otherwise substantially degrade surface or ground water quality. Further, runoff resulting from the Project would be managed by the City in compliance with the Storm Drainage Master Plan in addition to approved grading and drainage plans. Thus, compliance with existing regulations including the General Construction Permit, BMPs, and Storm Drainage Master Plan would reduce potential impacts related to water quality and waste discharge to less than significant levels.

- b) *Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?*

Less than Significant Impact. The City's long-term water resource planning for existing and future demand is addressed in the City's 2015 Urban Water Management Plan (UWMP) and 2017 Water System Master Plan (WSMP).²⁴ ²⁵ These plans are intended to serve as a tool for planning and phasing the construction of future domestic water supply infrastructure for the projected buildout of the city of Hanford, in accordance with the General Plan.

According to these plans, the City uses groundwater wells as the sole source of supply. As such, groundwater should be viewed as a sustainable resource. As of 2017, there are 14 active

²⁴ City of Hanford (2016). 2015 Urban Water Management Plan. Accessed October 13, 2021, https://cms6.revize.com/revize/hanfordca/document_center/Public%20Works/Water%20Management/2015%20UWMP%20Chapter%201.pdf

²⁵ City of Hanford (2017). 2017 Water System Master Plan. Accessed October 14, 2021, https://cms6.revize.com/revize/hanfordca/document_center/Public%20Works/2017_Water%20System%20Master%20Plan%20-%20FINAL%20-%20Reduced.pdf



groundwater wells with a rated supply of approximately 34.9 million gallons per day (mgd) that may increase or decrease in efficiency ratings as groundwater levels fluctuate and/or recover. To account for these fluctuations, the plans recommend that the City monitor well efficiencies on a frequent basis to adequately manage the groundwater supply. In the case of persistent droughts, it may therefore be necessary for the City to construct additional wells to maintain adequate supply capacity. Based on the buildout water supply requirements, the plans recommend the construction of 11 new groundwater wells including Main-W2 to be located at Centennial Drive approximately 2,600 ft. north of Grangeville Boulevard, west of the Project site.

Because the Project has been previously accounted for and analyzed within the General Plan, it can be presumed that the existing and planned water distribution system and supplies should be adequate to serve the Project, and the Project would thereby not interfere substantially with groundwater recharge or impede sustainable groundwater management of the basin. In addition, adherence to connection requirements and recommendations pursuant to the City's water supply planning efforts (i.e., compliance with California Plumbing Code, efficient appliances, efficient landscaping, etc.) should not negatively impact the City's water provision. For these reasons, a less than significant impact would occur as a result of the Project.

- c) *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:*
 - i. *Result in substantial erosion or siltation on- or off-site?*

Less than Significant Impact. Erosion is a natural process in which soil is moved from place to place by wind or from flowing water. The effects of erosion within the Project Area can be accelerated by ground-disturbing activities associated with development. Siltation is the settling of sediment to the bed of a stream or lake which increases the turbidity of water. Turbid water can have harmful effects to aquatic life by clogging fish gills, reducing spawning habitat, and suppress aquatic vegetation growth.

Implementation of the proposed Project would result in the development of agricultural lands. Bare soils, common within farmlands, are more susceptible to erosion than an already developed urban land, thus it is expected erosion would occur on-site. During construction activities, and in compliance with the Project's SWPPP, construction-related erosion controls and BMPs would be implemented to reduce potential impacts related to erosion and siltation. These BMPs would include, but are not limited to, covering and/or binding soil surfaces to prevent soil from being detached and transported by water or wind, and the use of barriers such as straw bales and sandbags to control sediment. Together, the controls and BMPs are intended to limit soil transportation and erosion.



In addition, the Project would increase impervious surfaces by installing paving, concrete pads, and sidewalks. In order to adequately discharge and capture stormwater runoff, the Project has been conditioned by the City to construct [list facilities]. In addition, the proposed drainage pattern is required to be constructed per regulations of the Storm Drainage Master Plan and will be reviewed by the City to ensure proper drainage. Consequently, this review and approval by the City and compliance with standard requirements would mean that the Project would result in a less than significant impact.

ii. Substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?

Less than Significant Impact. The Project includes the construction of a 1.53-acre stormwater basin, which will be required to comply with the Storm Drainage Master Plan and will be reviewed by the City. Compliance with regulations and approval by the City would ensure that surface runoff is controlled in a manner which would not result in flooding on- or off-site. For this reason, the Project would have a less than significant impact.

iii. Create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Less than Significant Impact. As previously mentioned, the Project includes the construction of a 1.53-acre stormwater basin, which will be reviewed by the City. Such facilities are required to comply with the Storm Drainage Master Plan and Project-specific grading and drainage plans are subject to review by the City prior to the final development approval. Therefore, provision of facilities as approved by the City would ensure that surface runoff is controlled in a manner which would not result in the creation or contribution of runoff water that would exceed the capacity of existing or planned stormwater drainage services or provide substantial additional sources of polluted runoff. For this reason, a less than significant impact would occur because of the Project.

iv. Impede or redirect flood flows?

Less than Significant Impact. Although the construction of the proposed Project would increase impervious surfaces, the Project would not alter drainage patterns because Project-specific grading and drainage plans are required to be reviewed by the City before development approval. Further, the Project is subject to construction of master plan facilities in addition to temporary facilities in order to adequately serve the Project. As a result, the Project would not impede or redirect flood flows and a less than significant impact would occur as a result.



d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Less than Significant Impact. The Project site is not in a flood hazard, tsunami, or seiche zone (i.e., standing waves on river, reservoirs, ponds, and lakes); the Project site is approximately 93 miles from the Pacific Ocean and there are no rivers, reservoirs, ponds, or lakes within the site, and the Project site is designated as Zone X on the most recent Flood Insurance Rate Map (FIRM) No. 06031C0180C and No. 06031C0185C dated June 16, 2009. Zone X is an area of minimal flood hazards with a 0.2 percent-annual-chance of flood (i.e., 500-year flood). In addition, the Project area as well as the city as a whole has historically been subject to low to moderate ground shaking and has a relatively low probability of shaking. Seiches are unlikely to form due to the low seismic energy produced the area. Therefore, as a low-risk area, the Project would have a less than significant impact as it relates to the risk release of pollutants due to project inundations.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less than Significant Impact. A groundwater sustainability plan was adopted for the Tulare Lake Sub-basin in January 2020 by the Mid-Kings River Groundwater Sustainability Agency of which the City of Hanford is a member.²⁶ The proposed Project is required to comply with the adopted plan (Mid-Kings Groundwater) to meet the 2040 sustainability deadline for the basin. As mentioned above, groundwater is and will continue to be the source supply in wet and dry hydrologic periods. Based on the UWMP and WSMP, the City will continue to monitor groundwater supplies as a sustainable resource in order to remain compliant with groundwater sustainability goals. In turn, the Project is subject to compliance with the General Plan, all water quality control plans, and other hydrological requirements established by the City. Therefore, based on compliance with such plans, it can be determined that the Project would not conflict with or obstruct implementation of water quality control plans or sustainable groundwater management plans. For these reasons, a less than significant impact would occur because of the Project.

4.10.3 Mitigation Measures

None Required.

²⁶ Mid-Kings River Groundwater Sustainability Agency (2020). Tulare Lake Subbasin Groundwater Sustainability Plan. Accessed October 13, 2021, <http://www.midkingsrivergsa.org/assets/tulare-lake-subbasin-groundwater-sustainability-plan%2c-january-2020.pdf>



4.11 LAND USE PLANNING

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Physically divide an established community?			X	
b) 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?			X	

4.11.1 Environmental Setting

In general, the Project site is within an area of the city that is predominately characterized by residential, educational, and recreational development. The property to the east of the Project site is developed with an existing single-family residential subdivision that would be connected to the proposed Project by two (2) local streets. In addition, the property to the north of the Project site across Grangeville Boulevard is currently undergoing construction to develop a single-family residential subdivision. Regarding educational development, Sierra Pacific High School and the College of the Sequoias are located to the south of the Project site and Frontier Elementary is located to the north. Silver Oaks Park and Hanford Sports Complex are located less than a quarter mile to the north and south of the site, respectively. As a result, the area is characterized by a mix of development types and uses, as well as typical infrastructure, such as roadways, streetlights, parking lot lights, and ambient light sources typical of residential development.

4.11.2 Impact Assessment

a) Physically divide an established community?

Less than Significant Impact. Typically, physical division of an established community is associated with new, intersecting roadways, or new incompatible uses inconsistent with the planned or existing land uses. The Project site is currently used for agricultural operations but has a planned land use designation for residential uses and is consistent with the surrounding properties in that the area is planned for residential, educational, and recreational development.



While the Project will introduce new roadways, the proposed roadways are local streets that are internal to the residential subdivision. The local streets are necessary to provide for internal circulation. The proposed local streets will be constructed per City Standards and will provide for safe access to Grangeville Boulevard. Therefore, the new roadways are necessary for internal circulation and would not physically divide an established community since they are internal to the subdivision.

As such, the Project does not represent a significant change in the surrounding area as it will develop a site planned for residential uses with a residential development. This development is compatible with the planned land uses within the area. In addition, the new roadways will be internal to the development and are necessary to provide for safe internal circulation and access to Grangeville Boulevard. For these reasons, the Project would have a less than significant impact.

- b) 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 Impact. Policy conflicts do not, in and of themselves, constitute a significant environmental impact. Policy conflicts are considered to be environmental impacts only when they would result in direct physical impacts or where those conflicts relate to avoiding or mitigating environmental impacts. As such, associated physical environmental impacts are discussed in this document under specific topical sections, such as Biological Resources, Cultural Resources, and Tribal Cultural Resources. However, a discussion of certain land use plans, policies, and regulations that are applicable to the proposed Project are included in Table 4-1. As discussed below, the Project is generally consistent with the General Plan.

Table 4-1 Discussion on Land Use Policies in the General Plan

General Plan Policy	Project Consistency
Policy L18 Compatibility with Surrounding Neighborhoods. Ensure that new development is compatible with existing and surrounding neighborhoods.	Consistent. The Project proposes a use that is consistent with the use type and intensity allowed within the site's planned land use designation and zone district. As such, through compliance with applicable policies and regulations, the Project would be compatible with existing and surrounding neighborhoods.
Policy L19 Minimum and Maximum Residential Densities. Establish minimum and maximum density ranges for each residential zone in the Zoning Ordinance that are consistent with the planned densities of each residential land use designation.	Consistent. The Project has a General Plan land use designation of Low-Density Residential which has a density range of two (2) to 10 du/ac and allows for lots to range from 5,000 to 10,000 sf. The Project would allow for the construction of a residential subdivision that consists of 161 single-family lots to occupy approximately 36.48 acres, for a residential density of 4.52 du/ac. The minimum lot size proposed is 5,000 sf. Therefore, the Project is



	consistent with the planned densities and is within the range of permitted lot sizes. The Project is also within the R-L-5 zone district, which is consistent with the Low-Density Residential land use designation.
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. There is existing urban infrastructure, including roadways, water, sewer, and storm drainage facilities, to serve the Project. In particular, the Project proposes a network of local streets that will connect to Grangeville Boulevard. Additionally, the Project will provide street improvements for safer access and connectivity. The Project also proposes installation of water and sewer mains to connect to existing facilities, in addition to an onsite basin to accommodate storm water drainage. Therefore, the Project will have sufficient urban infrastructure and public facilities to accommodate the number and type of development being proposed.
Policy L25 Maintenance Districts. Require new residential subdivisions to form maintenance districts to maintain shared public improvements, such as landscaping, lighting, walls, streets, and other improvements as determined by the City Council.	Consistent. The Project is subject to review and approval by the City, which includes conditioning specific requirements such as maintenance districts.
Policy L26 Residential Parking. Residential developments shall provide adequate on-site parking for the specific use.	Consistent. According to HMC Section 17.54.040, single-family dwellings require two (2) spaces per dwelling unit with at least one (1) covered space (garage or car port). The Project proposes single-family lots with garages and driveways that will accommodate parking needs for future residents. In addition, the local street network will include a parking lane. Therefore, the Project would provide adequate parking for the proposed use that is consistent with the allowances of the HMC.
Policy L28 Street Trees and Landscaping. Encourage all new residential developments to include shade trees along the street and install landscaping and irrigation systems that meet State requirements for low water use.	Consistent. Street trees and landscaping are proposed as part of the Project and will be subject to review and approval by the City.
Policy L31 Purpose of the Low-Density Residential Land Use Designation. Establish the Low-Density Residential land use designation to provide mainly single family development on lot sizes typically found in urban settings.	Consistent. The Project site has a planned land use designation of Low Density Residential and proposes the development of a single-family residential subdivision at a size and density permitted by the General Plan and HMC.



Policy L32 Typical Uses in the Low-Density Residential Land Use Designation. Define the uses allowed in the Low Density Residential land use designation to include residential uses in a variety of single-family lot types. Duplexes, second dwelling units, and home occupations can also be allowed when made compatible with the residential nature of the neighborhood.	Consistent. The Project site has a planned land use designation of Low Density Residential and proposes the development of a single-family residential subdivision at a size and density permitted by the General Plan and HMC.
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.	Consistent. The Project site has a planned land use designation of Low Density Residential and proposes the development of a single-family residential subdivision at a size and density permitted by the General Plan and HMC.

Further, through the entitlement process, the Project is reviewed for compliance with applicable regulations inclusive of those adopted for the purpose of avoiding or mitigating environmental effects. Overall, the entitlement process would ensure that the Project complies with the General Plan, HMC, and any other applicable policies. As such, the Project would have a less than significant impact.

4.11.3 Mitigation Measures

None required.



4.12 MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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?				X
b) 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?				X

4.12.1 Environmental Setting

The California Geological Survey (CGS) classifies and designates areas within California that contain or potentially contain significant mineral resources. Lands are classified into Aggregate and Mineral Resource Zones (MRZs), which identify known or inferred significant mineral resources. According to the California Department of Conservation, CGS's Surface Mining and Reclamation Act (SMARA) Mineral Lands Classification (MLC) data portal, the city of Hanford is not within a mineral resource study area.²⁷ In addition, according to the General Plan, the city of Hanford is not within a Division of Oil, Gas, and Geothermal Resources recognized oil field. Rather, the General Plan identifies sand and gravel for road and building construction as the only likely mineral resources in the area. Lastly, according to the Kings County General Plan, there are no oil fields or areas designated for mineral recovery in the city of Hanford.

4.12.2 Impact Assessment

- a) *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?*

²⁷ California Department of Conservation. SMARA Mineral Land Classification. Accessed on October 14, 2021, <https://www.conservation.ca.gov/cgs/minerals/mineral-land-classification-smara>

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No Impact. The Project site is not located in an area designated for mineral resource preservation or recovery. Therefore, the Project would not 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. Therefore, no impact would occur as a result of the Project.

b) 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?

No Impact. As described above, the Project site is not located in an area designated for mineral resource preservation or recovery and as a result, the Project would not 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. Further, the site is not delineated on the General Plan, a Specific Plan, or other land use plan as a locally important mineral resource recovery site, thus it would not result in the loss of availability of a locally important mineral resource. Therefore, no impact would occur as a result of the Project.

4.12.3 Mitigation Measures

None required.



4.13 NOISE

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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?			X	
b) Generation of excessive groundborne vibration or groundborne noise levels?			X	
c) 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?				X

4.13.1 Environmental Setting

In general, there are two (2) types of noise sources: 1) mobile source and 2) stationary sounds. Mobile source noises are typically associated with transportation including automobiles, trains, and aircraft. Stationary sounds are sources that do not move such as machinery or construction sites. Two (2) noise generating activities of the Project would include construction (short-term, temporary) and operational (long-term) noise.

The Hanford General Plan Noise Element and HMC outline policies and regulations to mitigate health effects of noise in the community and prevent exposures to excessive noise levels. In particular, policies in the General Plan regarding new development include:

Policy H41 Interior Noise Exposure. Adopt State Noise Insulation Standards (California Code of Regulations, Title 24) and Chapter 35 of the Uniform Building Code (UBC) 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 H43 Non-Transportation Noise. Mitigate noise created by non-transportation noise sources so as not to exceed the maximum allowable interior and exterior noise level standards.

Policy H48 Noise Mitigation for Construction Activities. Require all development projects to mitigate noise impacts associated with construction activities.

Policy H50 Sound Walls. Utilize sound walls at the perimeter of new residential developments to protect from noise generated by transportation corridors.

Sensitive land uses include residential, schools, churches, nursing homes, hospitals, and open space/recreation areas. Commercial, farmland, and industrial areas are not considered noise sensitive and generally have higher tolerances for exterior and interior noise levels. The nearest sensitive receptors to the Project site are the two (2) existing single-family residences located on a portion of the Project site (to be excluded through a lot line adjustment), in addition to single-family residences located immediately south of the site.

4.13.2 Impact Assessment

- a) *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 in other applicable local, state, or federal standards?*

Less than Significant Impact. Noise generating activities of the Project would include traffic noise and stationery-source noise, such as operations and construction as described below. Overall, the Project would result in a less than significant impact in regard to noise.

Stationary-Source Noise

Operations: The primary source of on-going noise from the future residential project will be from vehicles traveling to and from the site. The Project will generate an increase in traffic on some roadways in the Project area. However, the relatively low number of new trips associated with the Project is not likely to increase the ambient noise levels by a significant amount as the area is active



with vehicles and the proposed Project will not introduce a new significant source of noise that isn't already occurring in the area.

Construction: Stationary-source noise would result from construction activities through the use of construction equipment for grading the site and building the proposed structures. The Project is anticipated to begin construction in February 2024 with full buildout by July 2024. Construction phases would include standard construction activities such as demolition, site preparation, grading/excavation, draining/utilities/trenching, foundations/concrete pour, building construction, and paving.

The nearest sensitive land uses are single-family residential located approximately $\pm$ 70-feet from proposed lots and are located within the Project site (to be excluded through the lot line adjustment). According to the Federal Highway Administration Roadway Construction Noise Model (RCNM), all possible construction equipment at 70-feet from the nearest noise sensitive land use (i.e., single-family residence) would generate a maximum noise level of 98.3 A-weighted decibels (dBA), which is 13.3 dBA over the default noise limit (85 dBA). Although the nearby residential uses would experience elevated noise levels from construction, these activities would be temporary and would generally take place Monday through Friday between 7:00 am and 8:00 pm, as permitted by HMC Section 9.10.060:

HMC Section 9.10.060 Noises Prohibited. Construction or Repair of Buildings, Excavation of Streets and Highways. The construction, demolition, alteration or repair of any building or the excavation of streets and highways other than between the hours of 7:00 a.m. and 8:00 p.m. In cases of emergency, construction or repair noises are exempt from this provision. In non-emergency situations, the city manager, or designee, may issue a permit, upon application, if the city manager, or designee, determines that the public health and safety, is affected by loud and raucous noise caused by construction or repair of buildings or excavation of streets and highways between the hours of 8:00 p.m. and 7:00 a.m. will not be impaired, and if the city manager, or designee, further determines that loss or inconvenience would otherwise result. The permit shall grant permission in non-emergency cases for a period of not more than three (3) days. The permit may be renewed once for a period of three (3) days or less.

Overall, Project construction is not expected to result in a significant impact because the noise would be regulated by the HMC. Noise would thereby be generated during daylight hours and not during evening or more noise-sensitive time periods; and the increase in noise would cease upon completion of the Project. For these reasons, a less than significant impact would occur.

Although the Project would result in increased ambient noise level at the Project site, compliance with the General Plan policies and *Chapter 9.10 Loud or Annoying Noises* of the HMC requirements



would result in the Project's compliance with applicable standards. Overall, the Project would result in a less than significant impact in regard to noise.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less than Significant Impact. Ground borne vibration may result from construction, depending on the use of equipment (e.g., pile drivers, bulldozers, jackhammers, etc.), distance to affected structures, and soil type. Depending on the method, equipment-generated vibrations could spread through the ground and effect nearby buildings. It is not anticipated that the Project would generate excessive ground borne vibration or ground borne noise levels, given the type of improvements associated with the development. Further, construction or operation of the Project would not involve equipment that would generate substantial groundborne vibration or ground borne noise levels. As discussed under criteria a), project-generated stationary noise sources would be regulated by the HMC. Through compliance with the HMC, the Project would result in a less than significant impact.

c) 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 expose people residing or working in the project area to excessive noise levels?

No Impact. The nearest public use airport is the Hanford Municipal Airport located more than three (3) miles southeast of the Project site. According to the Kings County Airport Land Use Compatibility Plan (1994), the site is not within the Hanford Municipal Airport Influence Area and is therefore not subject to land use compatibility policies.²⁸ Thus, the Project would not result in a expose people residing or working in the Project area and no impact would occur as a result of the Project.

4.13.3 Mitigation Measures

None required.

²⁸ County of Kings. (1994). Kings County Airport Land Use Compatibility Plan. Accessed October 14, 2021, <https://www.countyofkings.com/home/showpublisheddocument/3094/635274871108830000>



4.14 POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

4.14.1 Environmental Setting

CEQA Guidelines Section 15126.2(d) requires that a CEQA document discuss the ways in which the proposed Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. The CEQA Guidelines provide the example of a major expansion of a wastewater treatment plant that may allow for more construction within the service area. The CEQA Guidelines also note that the evaluation of growth inducement should consider the characteristics of a project that may encourage or facilitate other activities that could significantly affect the environment. Direct and Indirect Growth Inducement consists of activities that directly facilitate population growth, such as construction of new dwelling units.

4.14.2 Impact Assessment

- a) *Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*

Less than Significant Impact. A key consideration in evaluating growth inducement is whether the activity in question constitutes “planned growth.” A residential project that is consistent with the



underlying General Plan would generally be considered planned growth because it was previously contemplated by these long-range documents, and, thus, would not be deemed to have a significant growth-inducing effect. The Project does not represent a significant change in the surrounding area as it will facilitate the development of a use that is compatible with the existing and planned land uses within the area. In addition, the Project is consistent with the planned land use designation. In addition, the extension of urban infrastructure to serve the proposed Project may be considered “growth accommodating” because it is intended to facilitate planned growth. However, the anticipated population of 460 will not affect any regional population, housing or employment projections anticipated by City policy documents. Thus, since the proposed Project is considered planned growth, the impact is less than significant.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The Project site is currently used for agricultural and commercial uses and will not result in the displacement of people or housing. Therefore, the Project would have no impact.

4.14.3 Mitigation Measures

None required.



4.15 PUBLIC SERVICES

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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 any of the public services:				
i. Fire protection?		X		
ii. Police protection?		X		
iii. Schools?		X		
iv. Parks?		X		
v. Other public facilities?			X	

4.15.1 Environmental Setting

The Project is located within Hanford city limits and thus, would be subject to fees to for the construction, acquisition, and improvements for such services:

Fire Protection Services

Fire Protection Services in the city are provided by the Hanford Fire Department (HFD). The HFD operates a total of three (3) fire stations that serve the city: Fire Station 1 located at 350 W. Grangeville Boulevard, Fire Station 2 located at 10553 Houston Avenue, and Fire Station 3 located at 1070 S. 12th Street. The Project site is in the service area of Fire Station 1, which is 2.1 miles from the site. To address impacts to fire protection services, the City of Hanford has implemented the Fire Protection Development Impact Fee pursuant to *Chapter 15.45* of the HMC, which requires developers to pay the “fair share” of capital improvements related to fire protection



services and facilities. A Fire Protection Development Impact Fee has been assessed for the proposed Project based on the Facility size. Lastly, the Project was reviewed by the HFD and is subject to regulations and standards such as the California Uniform Fire Code (UFC), which includes regulations on construction, maintenance and building use. The UFC addresses fire department access, fire hydrants, sprinklers, fire alarm system, etc., for new buildings.

Consultation Received: Consultation was received from the Hanford Fire Department on October 14, 2021. Comments include the Project's compliance to applicable codes and requirements, permit submittal, installation of fire hydrants and automatic sprinkler systems, access road requirements, etc. Such requirements shall be incorporated in the Project's Conditions of Approval.

Police Protection Services

Police Protection Services in the city are provided by the Hanford Police Department (FPD). The HPD is located at 425 North Irwin Street, which is approximately 2.4-miles from the Project site. According to the Fiscal Year (FY) 2021-2022/2022-2023 City of Hanford Budget, the HPD handled over 60,478 incidents in FY 2019-2020. To address impacts to police protection services, the City of Hanford has implemented the Police Protection Development Impact Fee pursuant to *Chapter 15.46* of the HMC, which requires developers to pay the "fair share" of capital improvements related to police protection services and facilities. A Police Protection Development Impact Fee has been assessed for the proposed Project based on the Facility size.

Schools

Educational services within the Project area are primarily served by Hanford Elementary School District (HESD) and Hanford Joint Union High School District (HJUUSD). Schools within a one (1)-miles radius of the Project site include Frontier Elementary School, Pioneer Union Elementary School, Simas Elementary School, and Sierra Pacific High School. Funding for schools and school facilities impacts is outlined in Education Code Section 17620 and Government Code Section 65995 et. seq., which governs the amount of fees that can be levied against new development. These fees are used to construct new or expanded school facilities. Payment of fees authorized by the statute is deemed "full and complete mitigation."

Consultation Received: Consultation was received from Renee Creech with the Hanford Joint Union High School District on July 22, 2021 stating the following, *"This project is another housing development in our school boundary that is already impacted. This causes issues for traffic, transportation, and classroom learning of students and staff."* Traffic and transportation impacts are addressed in [Section 4.17](#).



Parks and Recreation

Park and Recreation Facilities are overseen by the Hanford Parks and Community Services Department. According to the 2020 Parks and Recreation Master Plan, the City currently offers 299.70 acres of park land which equates to a total Level of Service (LOS) of 5.06 acres of park land per 1,000 residents based on the City's 2018 population.²⁹ The 2035 General Plan includes a LOS standard goal of 3.5 acres per 1,000 residents for future growth. Similar to other public services, the City had established the Park Facilities Impact Fee pursuant to *Chapter 15.44* of the HMC, which requires developers to pay for parks and recreational facilities improvements. The Project may also be subject to requirements of the Quimby Act, including park land dedication and/or payment of fees in-lieu thereof (or a combination of both). The nearest parks to the Project site include the Silver Oaks Park and the Hanford Sports Complex.

4.15.2 Impact Assessment

a) *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 any of the public services:*

i. Fire protection?

Less than Significant Impact with Mitigation Incorporated. The Project site is within the city limits and therefore would be served by the HFD. The Project site is in the service area of Fire Station 1, which is 2.1 miles from the site. The Project's proximity to existing stations would support adequate service ratios, response times, and other performance objectives for fire protection services. In addition, the HFD reviewed the Project for requirements related to water supply, fire hydrants, and fire apparatus access to the building(s) on site. Based on HFD's review, it can be determined that the Project can be served by existing facilities and would not result in the need for new or altered facilities. However, to further reduce potential Project impacts, the Project shall be subject to Fire Protection Department Impact Fees pursuant to *MM PUB-1*. With mitigation incorporated, the Project's impacts would be reduced to less than significant.

MM PUB-1. The Developer shall pay the Fire Protection Department Impact Fees

²⁹ City of Hanford. (2020) Parks and Recreation Master Plan 2020. Accessed October 13, 2021, <https://cms6.revize.com/revize/hanfordca/2020%20Hanford%20Parks%20Master%20Plan.pdf>



ii. *Police protection?*

Less than Significant Impact with Mitigation Incorporated. The Project site is within the city limits and therefore would be served by the HPD. The nearest police station to the proposed Project is located approximately 2.4-miles from the site. Since the Project site is located immediately adjacent to a residential area that is currently served by the Police Department, it can be presumed that the addition of the subdivision within a growing residential area would not cause the Department to significantly expand its existing service area or construct a new facility to serve the Project. However, to further reduce potential Project impacts, the Project shall be subject to Police Protection Development Impact Fees pursuant to *MM PUB-2*. With mitigation incorporated, the Project's impacts would be reduced to less than significant.

MM PUB-2. The Developer shall pay the Police Protection Development Impact Fees

iii. *Schools?*

Less than Significant Impact with Mitigation Incorporated. Educational services for the proposed Project will be provided by the Hanford Elementary School District (HESD) and Hanford Joint Union High School District (HJUHSD). The development and managing of school sites are the responsibility of school districts and elected governing school boards. The General Plan provides policy which focuses on collaboration with school districts to determine new school locations and utilization of school facilities for general public needs. The development is consistent with the General Plan and will be subject to School Impact Fees in order to mitigate the effect of the project on schools. In particular, funding for schools and school facilities impacts is outlined in Education Code Section 17620 and Government Code Section 65995 et. seq., which governs the amount of fees that can be levied against new development. These fees are used to construct new or expanded school facilities. Payment of fees authorized by the statute is deemed "full and complete mitigation." Thus, to offset any potential impacts, the Project shall be subject to School Impact Fees pursuant to *MM PUB-3*. With mitigation incorporated, the Project's impacts would be reduced to less than significant.

MM PUB-3. The Developer shall pay the School Impact Fees

iv. *Parks?*

Less than Significant Impact with Mitigation Incorporated. The Project proposes a residential use and thus, would result in a net increase in the area population. As a new subdivision, the Project is subject to the Park Facilities Impact Fee in addition to the Quimby Act. Thus, to offset any potential impacts, the Project shall be subject to Park Facilities Impact Fees and the Quimby Act pursuant to *MM PUB-4*. With mitigation incorporated, the Project's impacts would be reduced to less than significant.



MM PUB-4. *The Developer shall pay the Park Facilities Impact Fees and comply with the Quimby Act Requirements.*

v. Other public facilities?

Less than Significant Impact. Development of the Project will increase the demand for other public services, such as libraries. However, the City does not have a requirement or standard for the number or size of a library based on the City's population. Therefore, a significant impact or the need for new or altered facilities to provide other public services is not anticipated and thus the project will result in a less than significant impact.

4.15.3 Mitigation Measures

The proposed Project shall implement and incorporate, as applicable, the Public Services related mitigation measures as identified in the Mitigation Monitoring and Reporting Program dated October 18, 2021, including the mitigation measure identified above.



4.16 RECREATION

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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?			X	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X	

4.16.1 Environmental Setting

Park and Recreation Facilities are overseen by the Hanford Parks and Community Services Department. According to the 2020 Parks and Recreation Master Plan, the City currently offers 299.70 acres of park land which equates to a total Level of Service (LOS) of 5.06 acres of park land per 1,000 residents based on the City's 2018 population.³⁰ The 2035 General Plan includes a LOS standard goal of 3.5 acres per 1,000 residents for future growth. Similar to other public services, the City had established the Park Facilities Impact Fee pursuant to *Chapter 15.44* of the HMC, which requires developers to pay for parks and recreational facilities improvements. The Project may also be subject to requirements of the Quimby Act, including park land dedication and/or payment of fees in-lieu thereof (or a combination of both). The nearest parks to the Project site include the Silver Oaks Park and the Hanford Sports Complex.

³⁰ City of Hanford. (2020) Parks and Recreation Master Plan 2020. Accessed October 13, 2021, <https://cms6.revize.com/revize/hanfordca/2020%20Hanford%20Parks%20Master%20Plan.pdf>



4.16.2 Impact Assessment

- a) 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?*

Less than Significant Impact. The Project proposes a residential use and thus, would result in a net increase in the area population. As a new subdivision, the Project is subject to the Park Facilities Impact Fee in addition to the Quimby Act. Compliance with these requirements through *MM PUB-4* (See [Section 4.15](#)) would offset any impacts that would result in the need for new or physically altered parks. For these reasons, the Project would have a less than significant impact.

- b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?*

Less than Significant Impact. The Project does not propose recreational facilities. As stated under criterion a) above, the Project is subject to the Park Facilities Impact Fee in addition to the Quimby Act. Through compliance with these requirements, the Project is paying its “fair share” for the future construction of facilities and/or to reimburse the City for such facilities. For these reasons, a less than significant impact would occur as a result of the Project.

4.16.3 Mitigation Measures

None required.



4.17 TRANSPORTATION

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			X	
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?		X		
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d) Result in inadequate emergency access?			X	

4.17.1 Environmental Setting

The Project site is bound to the north by Grangeville Boulevard, a two (2)-lane east-west arterial and to the west by 13th Avenue, a two (2)-lane north-south major arterial. The primary access points to the subdivision are proposed on Grangeville Boulevard at “I Street” (future local) and “J Street” (future local). No access is proposed from 13th Avenue.

The portions of Grangeville Boulevard and 13th Avenue will be improved with curb, gutter, sidewalk, landscaping, and streetlights. The Project would also be connected to the existing, adjacent residential subdivision to the east by “Ella Street” and “Malone Street” (existing and future locals). Local streets (60-ft. width) contained within the subdivision will include sidewalk, curb, gutter, landscaping, and parking lanes. At present, no fixed-route transit service, bicycle facilities, or pedestrian facilities serve the Project site.

Consultation Received: Consultation was received from Oscar Gonzalez with Kings Area Rural Transit (KART) on July 29, 2021, which stated, “KART would like consideration for a bus stop 12’x7’-



sidewalk 7' wide from curb to sidewalk at 12'x7'. We can fit a Bench and Transit Can." Such requirements shall be incorporated in the Project's Conditions of Approval.

Traffic Study and VMT Analysis

A Traffic Study and VMT Analysis for the Project were conducted by Peters Engineering Group on October 5, 2021. Results of the study and analysis are incorporated herein. The Study is provided in Appendix C.

4.17.2 Impact Assessment

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

Less Than Significant Impact. The Project would be required to comply with all project level requirements implemented by a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Based on Engineering comments prepared for the project, standard frontage improvements are required, which will address the circulation system. The Project is also required to submit improvement plans, including roadway improvements, for review and approval by the City Engineer to ensure improvements will be consistent with City standards. Therefore, through compliance with the programs, plans, ordinances, and policies addressing the circulation system (inclusive of transit, roadway, bicycle, and pedestrian facilities), a less than significant impact would occur because of the Project.

In addition, the State of California does not recognize traffic congestion and delay as an environmental impact per CEQA. However, *Policy T29* of the Hanford General Plan states: "Maintain a peak hour Level of Service (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 Level of Service (LOS) D on all other streets and intersections with the Planned Growth Boundary." The results of the Traffic Study conducted by Peters Engineering Group indicate that the intersections analyzed near the Project site are currently operating at acceptable LOS and are expected to continue to operate at acceptable LOS with buildout of the Project. Thus, the Project is expected to have a less than significant impact.

Based on the above assessment, it can be determined that the Project will not conflict with the General Plan, policies, or ordinance and the impact is less than significant.

- b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?*



Less than Significant with Mitigation Incorporated. Under Senate Bill 743 (SB743), traffic impacts are related to Vehicle Miles Traveled (VMT). The VMT metric became mandatory on July 1, 2020. Senate Bill (SB) 743 requires that relevant CEQA analysis of transportation impacts be conducted using a metric known as vehicle miles traveled (VMT) instead of Level of Service (LOS). VMT measures how much actual automobile travel (additional miles driven) a proposed Project would create on California roads. If the project adds excessive automobile travel onto roads, then the project may cause a significant transportation impact.

The State CEQA Guidelines were amended to implement SB 743 by adding Section 15064.3. Among its provisions, Section 15064.3 confirms that, except with respect to transportation projects, a project's effect on automobile delay shall not constitute a significant environmental impact. Therefore, LOS measures of impacts on traffic facilities are no longer a relevant CEQA criteria for transportation impacts.

According to the Governor's Office of Planning and Research's (OPR) Technical Advisory on Evaluating Transportation Impacts in CEQA, land use projects, residential, office, and retail projects tend to have the greatest influence on VMT. For that reason, OPR recommends the quantified thresholds described above for purposes of analysis and mitigation. In regard to recommended thresholds for residential projects, the OPR advises: *"a proposed Project exceeding a level of 15 percent below existing VMT per capita may indicate a significant transportation impact. Existing VMT per capita may be measured as regional VMT per capita or as city VMT per capita."* Thus, residential development that would generate vehicle travel that is 15 or more percent below the existing residential VMT per capita, measured against the region or city, may indicate a less-than significant transportation impact.

According to the Traffic Study and VMT Analysis conducted by the Peters Engineering Group, the Countywide average VMT per capita is 9.6 and the Project VMT per capita is 8.5, which exceeds the significance threshold of 8.2 VMT per capita. Based on these results, the analysis suggests the construction of bike lanes and sidewalks, particularly with connectivity to nearby schools, to mitigate the difference between the Project VMT of 8.5 per capita and the threshold VMT of 8.2 per capita. Therefore, in order to reduce the Project's impact to less than significant, the following mitigation measure shall be incorporated:

MM Transportation-1. The Project shall construct bike lanes and sidewalks on Grangeville Boulevard and 13th Avenue along the project's frontage that would improve connectivity to Sierra Pacific High School and Frontier Elementary School.

With the incorporation of *MM Transportation-1*, the impacts of the Project would be reduced to less than significant.



- c) *Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

Less than Significant Impact. The Project design does not contain any geometric design features that would create hazards. Implementation of the Project would require the improvement and expansion of the roadway network serving the Project site. As discussed under criterion a) above, the Project is subject to standard frontage improvements including:

1. That all streets within the subdivision shall be developed to residential street standard ST-32, except the following:
 - a. Grangeville Boulevard shall be developed as an arterial street, along the development frontage of the subdivision and the "Not a Part" portion. All improvements shall be constructed in conformance with City Standards ST-17 and ST-20, and as follows:
 1. *Traffic index used for the design of street structural section shall be a minimum of 10.0.*
 2. *A geotechnical report shall be submitted to the City Engineer identifying the existing structural section thickness of Grangeville Boulevard, along the entire development frontage, concurrent with the submittal of development improvement plans. Reconstruction of Grangeville Boulevard, along the entire development frontage will be required if the existing street structural section does not conform to City Standards and Specifications.*
 3. *Street improvements shall include, but not be limited to, the installation of concrete curb and gutter, sidewalk, landscaping, decorative masonry block wall, street lights, half width street construction on the south side of Grangeville Boulevard, including pavement reconstruction of existing roadway, including pavement reconstruction of roadway if applicable, and all street signing, striping and transition paving as required.*
 4. *Developer shall attempt to acquire additional street right-of-way along the "Not a Part" frontage of Grangeville Boulevard in accordance with Section 66462.5 of the Subdivision Map Act. The additional street right-of-way is necessary to facilitate street widening improvements along the entire development frontage of Grangeville Boulevard. If Developer is unsuccessful, City will attempt to acquire the right-of-way.*
2. *That street lights shall be installed throughout the subdivision in conformance with City Standard GE-56 and Southern California Edison requirements. Street lights shall be located as designated by City Engineer.*
3. *That development is subject to a transportation mitigation impact fee as required by City Municipal Code section 15.48 and any revisions thereof. Developer shall be entitled to a credit towards their development impact fee for permanent street improvements constructed by*



developer within Grangeville Boulevard. Transitional paving improvements beyond the development limits, that are not considered to be a permanent improvement and the reconstruction of the existing Grangeville Boulevard street section, if required, will not be subject to a credit. Developer shall submit competitive bid proposals to substantiate the cost of reimbursable items for City Public Works Department review and approval prior to beginning construction. All documentation materials submitted for reimbursement consideration shall be well organized and tabulated for convenient reference by Public Works' staff. Improvement quantities and costs proposed for reimbursement must be clearly identified in the documentation provided, and not combined or aggregated with non-reimbursable subdivision improvement costs. Appropriate graphic exhibits referenced to the subdivision improvement plans shall also be provided as needed to facilitate the reimbursement review process.

which would be designed pursuant to applicable federal, state, and local design standards. Compliance with such standards would ensure that any traffic hazards are minimized. Further, the Project proposes the development of a residential site that is in an area generally characterized by existing and planned residential, educational, and recreational uses. Therefore, the Project does not propose an incompatible use as it is consistent with the existing development in the area and is similar in nature to the surrounding uses. As a result, implementation of the Project would result in a less than significant impact related to hazards due to roadway design features or incompatible uses

d) Result in inadequate emergency access?

Less than Significant Impact. The Project does not involve a change to any emergency response plan. In addition, the City's Engineering Department and Fire Department have reviewed the Project and imposed standard conditions to ensure adequate site access including emergency access. In the case that Project construction requires lane closures, access through Grangeville Boulevard and 13th Avenue would be maintained through standard traffic control and therefore, potential lane closures would not affect emergency evacuation plans. Thus, a less than significant impact would occur because of the Project.

4.17.3 Mitigation Measures

The proposed Project shall implement and incorporate, as applicable, the Transportation related mitigation measures as identified in the Mitigation Monitoring and Reporting Program dated October 18, 2021, including the mitigation measure identified above.



4.18 TRIBAL CULTURAL RESOURCES

Would the project: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC 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:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC section 5020.1(k), or,			X	
b) 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 PRC section 5024.1. In applying the criteria set forth in subdivision (c) of PRC section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.			X	

4.18.1 Environmental Setting

Assembly Bill 52 (AB 52) requires consultation with California Native American tribes during the CEQA process to determine potential effects of proposed projects on a tribal cultural resource. Pursuant to Public Resources Code (PRC) Section 21080.3.1, the lead agency shall begin consultation with the California Native American tribe that is traditionally and culturally affiliated with the geographical area of the proposed project. Such significant cultural resources are either sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a tribe which is either on or eligible for inclusion in the California Historic Register or local historic register,



or, the lead agency, at its discretion, and support by substantial evidence, choose to treat the resources as a Tribal Cultural Resources (PRC Section 21074(a)(1-2)). According to the most recent census data, California is home to 109 currently recognized Indian tribes. Tribes in California currently have nearly 100 separate reservations or Rancherias.

Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See PRC Section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per PRC Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that PRC Section 21082.3(c) contains provisions specific to confidentiality.

Generally, the term 'cultural resources' describes property types such as prehistoric and historical archaeological sites, buildings, bridges, roadways, and tribal cultural resources. As defined by CEQA, historical resources include sites, structures, objects, or districts that may have historical, prehistoric, architectural, archaeological, cultural, or scientific importance. Such resources are eligible for listing in the California Register of Historic Resources by the State Historical Resources Commission. The city of Hanford has three (3) buildings listed on the National Register of Historic Places: Hanford Carnegie Library, Kings County Courthouse, and Taoist Temple.

The City of Hanford conducted tribal consultation pursuant to AB 52 and SB 18. In response, the City received pre-consultation from the Santa Rosa Rancheria Tachi Yokut Tribe. The Tribe requested that an archeological survey be conducted in addition to a California Historical Resources Information System (CHRIS) search and Sacred Lands File (SLF) search with the Native American Heritage Commission (NAHC). In addition, the Tribe has requested the following Mitigation Measures (MM) to be incorporated with the proposed Project:

MM CR-1. *If cultural resources are discovered during construction or related activities, all work shall be halted and a qualified archeologist and the City of Hanford shall be notified. The find shall be properly investigated and appropriate measures shall be taken before construction may continue.*

MM CR-2. *Prior to ground disturbing activities, construction staff shall receive a cultural presentation by the Santa Rosa Rancheria regarding cultural resources and laws and regulations for the discovery of cultural resources and human remains.*

MM CR-3. *A Native American monitor shall be present for ground disturbing activities.*



MM CR-4. *A Burial Treatment Plan shall be signed by the applicant/property owner prior to any earth disturbing activities.*

MM CR-5. *A curation agreement shall be signed with the Santa Rosa Rancheria.*

CHRIS Record Search

The Southern San Joaquin Information Center (SSJIC) conducted a California Historical Resources Information System (CHRIS) Record Search for the Project site and surrounding area (0.5-mile radius, "Project Area") on September 13, 2021 (Confidential). The results indicate that the Project Area had been partly surveyed previously and that one (1) cultural resource, the historic Last Chance Ditch (CA-KIN-191H) crossed through it. Based on the map provided, the cultural resource is not located on the Project site.

SLF NAHC Record Search

A NAHSC Sacred Lands Files search was conducted on October 4, 2021. The search results were negative and did not indicate any known sacred sites or tribal cultural resources within the Project Area.

Phase I Survey

A Phase I cultural resources survey for the Project area was conducted by ASM Affiliates on September 14, 2021 (Appendix E). No historical or archaeological resources of any kind were discovered within the Project Area. In addition, the previously recorded historical Last Chance Ditch was found to be abandoned and filled-in. Based on the proximity of the Project site to the Last Chance Ditch, the survey considers the site to be archaeologically sensitive. Following the suggestions of the Santa Rosa Rancheria Tachi Yokut Tribe, the survey recommends the aforementioned mitigation measures.

4.18.2 Impact Assessment

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) 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), or*



Less than Significant Impact. As discussed in [Section 4.5](#), the Project site does not contain any property or site features that are eligible for listing in the California Register of Historical Sources, or in a local register of historical resources as defined in PRC Section 5020.1(k). Nevertheless, there is some possibility that a non-visible, buried site may exist and may be uncovered during ground disturbing construction activities which would constitute a significant impact. Hanford General Plan *Policy O49* imposes measures to mitigate when resources are uncovered during construction. In addition, mitigation measures *MM CR-1* to *MM CR-5* requested by Santa Rosa Rancheria are incorporated herein to mitigate for potential subsurface cultural resources and human remains. Therefore, if any human remains were discovered, implementation of related regulations and mitigation measures would reduce the Project's impact to less than significant. Thus, if such resources were discovered, implementation of the required condition would reduce the impact to less than significant with mitigation incorporated.

- b) 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.*

Less than Significant Impact. The Project site has not been determined by the City to be a significant resource pursuant to Public Resources Code Section 5024.1 and to-date, no substantial information has been provided to the city to indicate otherwise. According to the NAHC records, no sacred sites or tribal cultural resources are known in or near the study area. Further, the Project site, inclusive of site features, is not listed in the California Register of Historical Sources. However, there is some possibility that a non-visible, buried site may exist and may be uncovered during ground disturbing construction activities which would constitute a significant impact. Hanford General Plan *Policy O49* imposes measures to mitigate when resources are uncovered during construction. In addition, mitigation measures *MM CR-1* to *MM CR-5* requested by Santa Rosa Rancheria are incorporated herein to mitigate for potential subsurface cultural resources and human remains. Therefore, if any human remains were discovered, implementation of related regulations and mitigation measures would reduce the Project's impact to less than significant. Thus, if such resources were discovered, implementation of the required condition would reduce the impact to less than significant with mitigation incorporated.

4.18.3 Mitigation Measures

None required.



4.19 UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effect?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
c) 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?			X	
d) 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?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	



4.19.1 Environmental Setting

The Project site is within city limits and thus, will be required to connect to water, sewer, stormwater, and wastewater services. Natural gas, electricity, and telecommunications are provided by private companies. Each utility system is described below. Overall, the review of the Project by the City and responsible agencies indicates that the Project would not require or result in the relocation or construction of new or expanded facilities and as such, would not cause significant environmental effects.

Water

The City of Hanford's water supply system is a groundwater system. The city is located within the Tulare Lake Hydrologic Region and is within the Tulare Lake Groundwater Subbasin which transmits, filters, and stores water from the main San Joaquin Valley Groundwater Basin. The system consists of 14 groundwater wells, three (3) storage reservoirs, distribution mains, and fire hydrants. The system does not use surface water. Groundwater is recharged by rain and snowfall in addition to percolation from storm water basins, local waterways, and agricultural irrigation. The Project would include installation of a 12-inch water main along Grangeville Boulevard to connect to the existing water main in addition to eight (8)-inch water mains throughout the subdivision. Each unit will connect to the City's water system through installation of meters.

Wastewater

The City of Hanford wastewater system provides for treatment, disposal, and reuse of effluent, which meets all of the state's discharge requirements for the city. The wastewater system consists of a treatment plant and 21 sanitary sewer lift stations located throughout the city. The treatment facility has a capacity of 8.0 million gallons per day and is located south of Houston Avenue and east of 11th Avenue. The City's wastewater system also pursues water conservation strategies to ensure long-term reuse of treated disinfected wastewater to reduce the need for groundwater.

Solid Waste

Solid waste in the city is collected by a private contractor, Kings Waste Recycling Authority (KWRA). Refuse is sorted at the KWRA facility to recover recyclable materials before being hauled to the landfills in Kettleman Hills. For single-family residential customers, the City has instituted a greenwaste collection mixed recycle collection program.

Stormwater

The existing drainage infrastructure within the City of Hanford's Stormwater Management Program include natural drainage channels, retention basins, natural vegetation, piping, and pump



stations. There are some areas where storm drainage is controlled by drainage inlets and underground structures. The system consists of 30 pump stations, 57 miles of pipeline, and 220 acres of drainage basins and drainage ditches.

Natural Gas and Electricity

PG&E and Southern California Edison Company are the natural gas and electric service providers for the area, incrementally expands and updates its service system as needed to serve its users.

Consultation Received: Consultation was received from PG&E on July 27, 2021 with information and requirements as it related to Gas facilities and Electric facilities. Such requirements shall be incorporated in the Project's Conditions of Approval.

Telecommunications

Accordingly, telecommunications providers in the area (AT&T and Comcast) incrementally expand and update their service systems in response to usage and demand.

Consultation Received: Consultation was received from Michael Wilson with AT&T on July 23, 2021, which stated, "new subdivision to feed fiber in joint trench. AT&T will provide redlines to developer. Any relocation conditions should be relayed to me by developer or city (Grangeville aerial-to-aerial, I expect)." Such requirements shall be incorporated in the Project's Conditions of Approval.

4.19.2 Impact Assessment

- a) *Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?*

Less than Significant Impact. The Project site is within city limits and thus, will be required to connect to water, stormwater, solid waste, and wastewater services. Natural gas, electricity, and telecommunications are provided by private companies. The City and responsible agencies have reviewed the Project to determine adequate capacity in these systems and ensure compliance with applicable connection requirements. In addition to connections to water, stormwater, solid waste, and wastewater services, the Project will be served by the appropriate natural gas, electricity, and telecommunications providers for the Project area. Overall, the review of the Project by the City and responsible agencies indicates that the Project would not require or result in the relocation or construction of new or expanded facilities and as such, would not cause



significant environmental effects. Through compliance with the applicable connection requirements, a less than significant impact would occur as a result of the Project.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less than Significant Impact. As discussed in detail in [Section 4.10](#), the City's long-term water resource planning is addressed in the City's 2015 UWMP and the 2017 WSMP. According to these plans, the City's per capita consumption has generally remained unchanged in recent history (2000 to 2015), with a slight decrease from 2012-2015 due to the drought and water shortage measures. The City predicts that the water shortage contingency measures and continued installation of water service meters will result in a continued downward trend in water use.

In addition, the plans indicate the City uses groundwater wells as the sole source of supply. As such, groundwater should be viewed as a sustainable resource. As of 2017, there are 14 active groundwater wells with a rated supply of approximately 34.9 million gallons per day (mgd) that may increase or decrease in efficiency ratings as groundwater levels fluctuate and/or recover. To account for these fluctuations, the plans recommend that the City monitor well efficiencies on a frequent basis to adequately manage the groundwater supply. In the case of persistent droughts, it may therefore be necessary for the City to construct additional wells to maintain adequate supply capacity. Based on the buildout water supply requirements, the plans recommend the construction of 11 new groundwater wells including Main-W2 to be located at Centennial Drive approximately 2,600 ft. north of Grangeville Boulevard, west of the Project site.

Because the Project has been previously accounted for and analyzed within the General Plan, it can be presumed that the existing and planned water distribution system and supplies should be adequate to serve the Project during normal, dry, and multiple dry years. In addition, adherence to connection requirements and recommendations pursuant to the City's water supply planning efforts (i.e., compliance with California Plumbing Code, efficient appliances, efficient landscaping, etc.) should not negatively impact the City's water provision. For these reasons, a less than significant impact would occur as a result of the Project.

c) 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?

Less than Significant Impact. The City of Hanford Wastewater Treatment Plant (WWTP) is the city's facility for treatment, disposal, and reuse of wastewater for residential, commercial, and industrial accounts. As previously mentioned, the Project is consistent with the planned land use designation previously accounted for in the General Plan. The wastewater impacts for the Project were evaluated by the City Engineer to ensure compliance with the City's wastewater treatment



requirements and capacity. Based on the City's review, the Project has adequate capacity based on the estimated sewage collection and treatment demand. In particular, the Project will install eight (8)-inch sewer main along "A Street" to "L Street" and Malone Street. For these reasons, the Project would not exceed wastewater treatment requirements such that a new facility would be required, nor would the existing WWTP Facility need to be expanded. As such, the Project would have a less than significant impact.

d) 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?

Less than Significant Impact. Project construction as well as future residences will be served by the City's contracted waste hauler and would be required to comply with HMC *Chapter 13.12 Solid Waste Collection and Disposal*, which outlines requirements and specifications for solid waste collection. In addition, the General Plan outlines goals and policies for source reduction and recycling:

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

Goal P6: Continued waste stream reduction through education, recycling and other means.

Policy P27 Recycling Programs. Participate in and encourage waste diversion and recycling programs and efforts.

Policy P28 Kings Waster Recycling Authority. Participate as a member and support the Kings Waste Recycling Authority.

Compliance with these measures and policies would serve to reduce impacts of solid waste by promoting regular collection and encouraging the recycling of materials. For this reason, the Project would have a less than significant impact.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less than Significant Impact. As described under criterion d) above, Project activities that generate solid waste would be handled, transported, and disposed of in accordance with all applicable statutes and regulations related to solid waste. Therefore, a less than significant impact would occur as a result of the Project.

4.19.3 Mitigation Measures

None required.



4.20 WILDFIRE

If located in or near state responsibility or lands classified as very high fire hazard severity zones, Would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Substantially impair an adopted emergency response plan or emergency evacuation plan?				X
b)	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?				X
c)	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?				X
d)	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?				X

4.20.1 Environmental Setting

The Hanford Fire Department provides emergency and fire protection services within the city limits of Hanford. Emergency services provided by the Fire Department include technical rescue, hazardous materials response, emergency medical services, and emergency disaster management. Station 1, located at 350 W. Grangeville Boulevard provides service north of SR 198, while Station 2 at 10553 Houston Avenue provides south of SR 198. The Project site is located north of SR 198 and therefore would be served by Station 1.



The Project site is located on a relatively flat property within the city limits planned for residential use. Further, the Project site is not identified by the California Department of Forestry and Fire Protection (Cal Fire) or the City of Madera as a Very High Fire Hazard Severity Zone (VHFHSZ); rather, the site is within a Local Responsibility Area (LRA) as defined by Cal Fire and is considered an area of low fire risk.³¹ Lastly, the Project has been reviewed by the City and the Hanford Fire Department and is required to be developed and operate in compliance with all regulations of the current California Fire Code.

4.20.2 Impact Assessment

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

No Impact. The Project would not substantially impair access to the existing roadway network. Safe and convenient vehicular and pedestrian circulation would be provided in addition to adequate access for emergency vehicles. Circulation and emergency vehicle access have been reviewed by the City and it has been determined that the Project would be suitable for such circulation and access. Therefore, the Project would not substantially impair any emergency response plan and no impact would occur as a result of the Project.

b) 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?

No Impact. The Project site is located on a relatively flat property with minimal slope and is not in an area that is subject to strong prevailing winds or other factors that would exacerbate wildfire risks. Further, the site is not identified by Cal Fire or the City as a VHFHSZ. Therefore, no impact would occur because of the Project.

c) 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?

No Impact. The Project is located within city limits in an area with existing and planned development, including residential, educational, and recreational uses. As a result of ongoing development, infrastructure such as roads and utilities has been installed and maintained

³¹ Cal Fire, "FHSZ Viewer." Accessed on October 12, 2021, <https://egis.fire.ca.gov/FHSZ/>



accordingly. The Project itself will result in further installation and maintenance of new infrastructure that has been reviewed and/or conditioned by the City. Through compliance with City standards and regulations for public health, safety, and welfare, such infrastructure would not exacerbate fire risk or result in temporary or ongoing impacts to the environment and no impact would occur as a result of the Project.

- d) 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?*

No Impact. The Project site is located on a relatively flat property with minimal slope and is not subject to downslope, downstream flooding, or landslides. Therefore, the Project would not expose people or structures to significant risks and no impact would occur as a result of the Project.

4.20.3 Mitigation Measures

None required.



4.21 MANDATORY FINDINGS OF SIGNIFICANCE

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	



4.21.1 Impact Assessment

- a) *Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?*

Less than Significant Impact with Mitigation Incorporated. The analyses of environmental issues contained in this Initial Study indicate that the Project is not expected to have substantial impact on the environment or on any resources identified in the Initial Study. Standard requirements that will be implemented through the tentative subdivision map and lot line adjustment review process and the various mitigation measures have been incorporated herein reduce all potentially significant impacts to less than significant. Therefore, the Project would have a less than significant impact.

- b) *Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)*

Less than Significant Impact. CEQA Guidelines Section 15064(i) states that a Lead Agency shall consider whether the cumulative impact of a project is significant and whether the effects of the project are cumulatively considerable. The assessment of the significance of the cumulative effects of a project must, therefore, be conducted in connection with the effects of past projects, other current projects, and probable future projects. Due to the nature of the project and consistency with environmental policies, incremental contributions to impacts are considered less than cumulatively considerable. All project-related impacts were determined to be less than significant. The Project would not contribute substantially to adverse cumulative conditions, or create any substantial indirect impacts (i.e., increase in population could lead to an increased need for housing, increase in traffic, air pollutants, etc.). As such, Project impacts are not considered to be cumulatively considerable given the insignificance of project-induced impacts. The impact is therefore less than significant.

- c) *Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?*

Less than Significant Impact. The analyses of environmental issues contained in this Initial Study indicate that the project is not expected to have substantial impact on human beings, either directly or indirectly. Standard requirements and conditions have been incorporated in the project



to reduce all potentially significant impacts to less than significant. Therefore, the Project would have a less than significant impact.



5 MITIGATION MONITORING AND REPORTING PROGRAM

This mitigation measure monitoring and reporting checklist was prepared pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15097 and Section 21081.6 of the Public Resources Code (PRC). The Mitigation Monitoring and Reporting Program includes project-specific mitigation measures in the 2035 Hanford General Plan Update EIR ("EIR" noted before each mitigation measure) and mitigation measures identified in the Initial Study.

The timing of implementing each mitigation measure is identified in in the checklist, as well as identifies the entity responsible for verifying that the mitigation measures applied to a project are performed. Project applicants are responsible for providing evidence that mitigation measures are implemented. As lead agency, the City of Hanford is responsible for verifying that mitigation is performed/completed.

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initials
Agriculture					
MM AG-1. The Project shall comply with HMC Section 16.40.110 Right to Farm, sub-section (E) Disclosure and Recordation Requirements, "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	Verify compliance	During site plan review process	Developer to provide (or comply), City of Hanford to verify.		



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." The Hanford Community Development Department is responsible for carrying out the notice, disclosure, and recordation required by the HMC.					
Air Quality					
EIR MM 4.3-1: Appropriate Siting of Sensitive Receptors The City of Hanford shall require residential development projects and projects categorized as sensitive receptors to be located an adequate distance from existing and potential sources of toxic emissions such as freeways, major arterials, industrial sites, and hazardous material locations. In addition, the City of Hanford should require new air pollution point sources such as, but not limited to, industrial, manufacturing, and processing facilities to be located an adequate distance from residential areas and other sensitive receptors (see table below).		Verify compliance	During site plan review process	Developer to provide (or comply), City of Hanford to verify.	
Recommendations on Siting New Sensitive Land Uses Such As Residences, Schools, Daycare Centers, Playgrounds, or Medical Facilities					
Source Category	Advisory Recommendations				
Freeways and High-Traffic Roads	Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with				



	100,000 vehicles/day, or rural roads with 50,000 vehicles/day				
Distribution Centers	- Avoid siting new sensitive land uses within 1,000 feet of a distribution center that accommodates more than 100 truck/day, more than 40 trucks with operating transport refrigeration units (TRU)/day, or where TRU operations exceed 300 hours/week. - Take into account the configuration of existing distribution centers and avoid located residences and other sensitive land uses near entry and exit points.				
Rail Yards	- Avoid siting sensitive land uses within 1,000 feet of a major service and maintenance rail yard. - Within 1 mile of a rail yard, consider possible siting limitations and mitigation approaches				



Ports	- Avoid siting new sensitive land uses immediately downwind of ports in the most heavily affected zones. Consult local air districts or California Air Resources Board on the status of pending analyses of health risks.				
Refineries	- Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult local air districts or other agencies to determine appropriate separation.				
Chrome Platers	- Avoid siting new sensitive land uses within 1,000 feet of chrome platers.				
Dry Cleaners Using Perchloroethylene	- Avoid siting new land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with three or more machines, consult local air district.				



	- Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations. - Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons/year or greater). A 50-foot separation is recommended for typical gas dispensing facilities.					
Gasoline Dispensing Facilities						
EIR MM 4.3-2: Appropriate Siting of Sensitive Receptors The table in Mitigation Measure MM 4.3-1 depicts the California Air Resources Board recommended buffer distances associated with various types of toxic air contaminants (TACs). Future development and infrastructure projects that are similar in nature to freeways and high-traffic roads, distribution centers, rail yards, refineries, chrome platers, dry cleaners, and gasoline dispensing facilities shall require assessment to determine whether sensitive receptors would be exposed to TACs. The City of Hanford shall require or perform air toxic risk assessments to determine air toxic impacts on an as-needed basis.		Verify Compliance	Prior approval	Developer to provide (or comply), City of Hanford to verify.		



EIR MM 4.3-3: Odors Assessment The City of Hanford shall require an assessment of new and existing odor sources for future land use development projects to determine whether sensitive receptors would be exposed to objectionable odors and apply recommended applicable mitigation measures as defined by the San Joaquin Valley Air Pollution Control District and best practices. Additionally, the City shall require conditions related to Conditional Use Permit approval associated with odors when necessary and on a case-by-case basis.	Verify Compliance	Prior to approval	Developer to provide (or comply), City of Hanford to verify.	
Biological Resources EIR MM 4.4-1: Mitigation Recommendations to Reduce Impacts to Special-status Species and Habitat(s) New development shall implement all reasonable and feasible mitigation imposed by the City of Hanford in order to reduce impacts to special-status species and their habitat(s). The following is a list of possible mitigation that the City of Hanford could impose on new development on a case-by-case basis, as needed: • Prepare biological assessment(s) that include recommendations to reduce impacts to special status species and habitat(s), including avoidance, minimization, and/or mitigation measures.	Identify necessary measures and verify compliance	Prior to approval	Developer to provide (or comply), City of Hanford to verify.	



• Perform preconstruction survey(s) for special status species to identify the potential for construction-related impacts and need for avoidance, minimization, and/or mitigation measures. • If, after all avoidance, minimization, and/or mitigation measures have been exhausted or are determined to not be feasible, then new development would have to consult with the applicable wildlife agencies in order to determine how to compensate for direct impacts to special status species, including, but not necessarily limited to, the possibility of acquiring incidental take permits, developing conservation plans, agree upon phasing of new development to avoid certain sensitive breeding seasons, and/or compensating for the loss of habitat at an agreed upon ratio with the applicable wildlife agency.				
EIR MM 4.4-2: Mitigation Recommendations to Reduce Impacts to Riparian Habitat, Sensitive Natural Communities and/or Wetlands New development shall implement all reasonable and feasible mitigation imposed by the City of Hanford in order to reduce impacts to riparian habitat, sensitive natural communities, and/or wetlands. The following is a list of possible mitigation that the City of Hanford could	Identify necessary measures and verify compliance	Prior to approval	Developer to provide (or comply), City of Hanford to verify.	



impose on new development on a case-by-case basis, as needed: • As part of the biological assessment(s) preparation, include analysis of, and recommendations to reduce impacts to, riparian habitat, sensitive natural communities, and/or wetlands, including avoidance, minimization, and/or mitigation measures. • Perform wetland delineation(s) in compliance with current wildlife agency standards. • If, after all avoidance, minimization, and/or mitigation measures have been exhausted or are determined to not be feasible, then new development would have to consult with the applicable wildlife agencies in order to determine how to compensate for direct impacts to riparian habitat, sensitive natural communities, and/or wetlands including, but not necessarily limited to, obtaining Clean Water Act 401 and 404 permits, acquiring Lake and Streambed Alteration Agreement(s), and compensating for the loss of riparian habitat, sensitive natural communities, and/or wetlands at an agreed upon ratio with the applicable wildlife agency.					
Cultural Resources					



MM CR-1. If cultural resources are discovered during construction or related activities, all work shall be halted, and a qualified archeologist and the City of Hanford shall be notified. The find shall be properly investigated, and appropriate measures shall be taken before construction may continue.	Submittal of Documentation and/or Onsite Verification	During Project Construction	Developer to provide (or comply), City of Hanford to verify.	
MM CR-2. Prior to ground disturbing activities, construction staff shall receive a cultural presentation by the Santa Rosa Rancheria regarding cultural resources and laws and regulations for the discovery of cultural resources and human remains.	Presentation	Prior to Project Construction	Developer to provide (or comply), City of Hanford to verify.	
MM CR-3. A Native American monitor shall be present for ground disturbing activities.	Onsite Verification	During Project Construction	Developer to provide (or comply), City of Hanford to verify.	
MM CR-4. A Burial Treatment Plan shall be signed by the applicant/property owner prior to any earth disturbing activities.	Submittal of Documentation	Prior to Project Construction	Developer to provide (or comply), City of Hanford to verify.	
MM CR-5. A curation agreement shall be signed with the Santa Rosa Rancheria.	Submittal of Documentation	Prior to Project Construction	Developer to provide (or comply), City of Hanford to verify.	
Greenhouse Gas Emissions				



MM 4.7-1: Quantifying Individual Project Emissions The City of Hanford shall quantify greenhouse gas emissions as needed on a project-by-project basis as part of the environmental review process. At that time, appropriate mitigation measures shall be identified and applied to each prior to construction in adherence to San Joaquin Valley Air Pollution Control District and California Air Resources Board guidelines in order to reduce emissions.	Submittal of Documentation	Prior to Project Construction	Developer to provide (or comply), City of Hanford to verify.	
Public Services				
MM PUB-1. The Developer shall pay the Fire Protection Department Impact Fees.	Submittal of Documentation	Prior to Project Construction	Developer to provide (or comply), City of Hanford to verify.	
MM PUB-2. The Developer shall pay the Police Protection Development Impact Fees.	Submittal of Documentation	Prior to Project Construction	Developer to provide (or comply), City of Hanford to verify.	
MM PUB-3. The Developer shall pay the School Impact Fees.	Submittal of Documentation	Prior to Project Construction	Developer to provide (or comply), City of Hanford to verify.	



MM PUB-4. The Developer shall pay the Park Facilities Impact Fees and comply with the Quimby Act Requirements.	Submittal of Documentation	Prior to Project Construction	Developer to provide (or comply), City of Hanford to verify.	
Transportation				
MM Transportation-1. The Project shall construct bike lanes and sidewalks on Grangeville Boulevard and 13 th Avenue that would improve connectivity to Sierra Pacific High School and Frontier Elementary School.	Submittal of Documentation	Prior to Project Construction	Developer to provide (or comply), City of Hanford to verify.	



6 REPORT PREPARATION

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INITIAL STUDY CERTIFICATE INDUSTRIAL DEVELOPMENT
WINDMILL STREET
WINDMILL STREET



7 APPENDICES



Appendix A: Air Quality & Greenhouse Gas Impact Assessment

Prepared by VRPA Technologies, Inc. dated September 30, 2021.

Hanford Residential Project – Tract 934

Air Quality & Greenhouse Gas Impact Assessment

September 30, 2021

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Executive Summary

This Air Quality & Greenhouse Gas Impact Assessment has been prepared for the purpose of identifying potential air quality impacts that may result from the proposed 161-unit single-family residential tract (Tract 934) via tentative tract map (Project). The Project is located at the southeast corner of 13th Avenue and West Grangeville Boulevard on APNs 009-050-001 through -005 in the City of Hanford, CA. The parcels are zoned R-L-5 Low-Density Residential with a General Plan Designation of Low Density Residential.

CEQA IMPACTS

1. Air Quality

The following thresholds of significance are based on Appendix G of the CEQA Guidelines. The significance criteria established by the SJVAPCD is relied upon to make the following determinations. Would the project:

- Conflict with or obstruct implementation of the applicable air quality plan?

The primary way of determining consistency with the air quality plan's (AQP's) assumptions is determining consistency with the applicable General Plan to ensure that the Project's population density and land use are consistent with the growth assumptions used in the AQPs for the air basin.

As required by California law, city and county General Plans contain a Land Use Element that details the types and quantities of land uses that the city or county estimates will be needed for future growth, and that designate locations for land uses to regulate growth. KCAG uses the growth projections and land use information in adopted general plans to estimate future average daily trips and then VMT, which are then provided to SJVAPCD to estimate future emissions in the AQPs. Existing and future pollutant emissions computed in the AQP are based on land uses from area general plans. AQPs detail the control measures and emission reductions required for reaching attainment of the air standards.

The applicable General Plan for the project is the City of Hanford 2035 General Plan. The Project is consistent with the currently adopted General Plan for the City of Hanford and is therefore consistent with the population growth and VMT applied in the plan. Therefore, the Project is consistent with the growth assumptions used in the applicable AQPs. As a result, the Project will not conflict with or obstruct implementation of any air quality plans. Therefore, no mitigation is needed.

- 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?

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Air Quality & Greenhouse Gas Impact Assessment

The Kings County area is nonattainment for Federal and State air quality standards for ozone, in attainment of Federal standards and nonattainment for State standards for PM₁₀, and nonattainment for Federal and State standards for PM_{2.5}. The SJVAPCD has prepared the 2016 and 2013 Ozone Plans, 2007 PM₁₀ Maintenance Plan, and 2012 PM_{2.5} Plan to achieve Federal and State standards for improved air quality in the SJVAB regarding ozone and PM. Inconsistency with any of the plans would be considered a cumulatively adverse air quality impact. As discussed above, the Project is consistent with the currently adopted General Plan for the City of Hanford and is therefore consistent with the population growth and VMT applied in the plan. Therefore, the Project is consistent with the growth assumptions used in the 2016 and 2013 Ozone Plan, 2007 PM₁₀ Maintenance Plan, and 2012 PM_{2.5} Plan.

Project specific emissions that exceed the thresholds of significance for criteria pollutants would be expected to result in a cumulatively considerable net increase of any criteria pollutant for which the County is in non-attainment under applicable federal or state ambient air quality standards. It should be noted that a project is not characterized as cumulatively insignificant when project emissions fall below thresholds of significance. As discussed in Section 3.1, the SJVAPCD has established thresholds of significance for determining environmental significance which are provided in Table 6.

As discussed above in Section 3.2 and 3.3, results of the analysis show that emissions generated from construction and operation of the Project will be less than the applicable SJVAPCD emission thresholds for criteria pollutants. Therefore, no mitigation is needed.

■ Expose sensitive receptors to substantial pollutant concentrations?

Sensitive receptors refer to those segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems affected by air quality). Land uses that have the greatest potential to attract these types of sensitive receptors include schools, parks, playgrounds, daycare centers, nursing homes, hospitals, and residential communities. From a health risk perspective, the Project is a Type B Project in that it may potentially place sensitive receptors in the vicinity of existing sources.

The first step in evaluating the potential for impacts to sensitive receptors for TAC's from the Project is to perform a screening level analysis. For Type B Projects, one type of screening tool is found in the CARB Handbook: Air Quality and Land Use Handbook: A Community Perspective. This handbook includes a table (depicted in Table 4) with recommended buffer distances associated with various types of common sources. The screening level analysis for the Project shows that TAC's are not a concern based upon the recommendations provided in Table 4. An evaluation of nearby land uses shows that the Project will not place sensitive receptors in the vicinity of existing toxic sources. As noted above, the proposed Project is not a Type A project and would not place new toxic sources in the vicinity of existing sources. Therefore, the Project will not expose sensitive receptors to substantial pollutant concentrations and any impacts would



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be less than significant.

Short-Term Impacts

The annual emissions from the construction phase of the Project will be less than the applicable SJVAPCD emission thresholds for criteria pollutants as shown in Table 7. Therefore, construction emissions associated with the Project are considered less than significant.

Long-Term Impacts

Long-Term emissions from the Project are generated primarily by mobile source (vehicle) emissions from the Project site and area sources such as maintenance equipment. Emissions from long-term operations generally represent a project's most substantial air quality impact. Table 8 summarizes the Project's operational impacts by pollutant. Results indicate that the annual operational emissions from the Project will be less than the SJVAPCD emission thresholds for criteria pollutants. Therefore, operational emissions associated with the Project are considered less than significant.

- Result in other emissions such as those leading to odors adversely affecting a substantial number of people?

The SJVAPCD requires that an analysis of potential odor impacts be conducted for the following two situations:

- ✓ Generators – projects that would potentially generate odorous emissions proposed to be located near existing sensitive receptors or other land uses where people may congregate, and
- ✓ Receivers – residential or other sensitive receptor projects or other projects built for the intent of attracting people located near existing odor sources.

The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The SJVAPCD has identified some common types of facilities that have been known to produce odors in the SJV Air Basin. The types of facilities that are known to produce odors are shown in Table 5 above along with a reasonable distance from the source within which, the degree of odors could possibly be significant. The Project will not generate odorous emissions given the nature or characteristics of the Project.

Based on the assessment above, the Project will not generate potential odorous emissions or attract receivers and other sensitive receptors near existing odor sources. Therefore, no mitigation is needed.

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2. Greenhouse Gas Emissions

The following thresholds of significance are based on Appendix G of the CEQA Guidelines. The significance criteria established by the SJVAPCD is relied upon to make the following determinations. Would the project:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The SJVAPCD acknowledges the current absence of numerical thresholds and recommends a tiered approach to establish the significance of the GHG impacts on the environment:

- i. If a project complies with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located, then the project would be determined to have a less than significant individual and cumulative impact for GHG emissions;
- ii. If a project does not comply with an approved GHG emission reduction plan or mitigation program, then it would be required to implement Best Performance Standards (BPS); and
- iii. If a project is not implementing BPS, then it should demonstrate that its GHG emissions would be reduced or mitigated by at least 29 percent compared to Business as Usual (BAU).

In the event that a local air district's guidance for addressing GHG impacts does not use numerical GHG emissions thresholds, at the lead agency's discretion, a neighboring air district's GHG threshold may be used to determine impacts. In December 2008, the South Coast Air Quality Management District (SCAQMD) Governing Board adopted the staff proposal for an interim GHG significance threshold for projects where the SCAQMD is lead agency. The SCAQMD guidance identifies a threshold of 10,000 MTCO₂eq./year for GHG for construction emissions amortized over a 30-year project lifetime, plus annual operation emissions. Though the Project is under SJVAPCD jurisdiction, the SCAQMD GHG threshold provides some perspective on the GHG emissions generated by the Project. Table 9 shows the yearly GHG emissions generated by the Project as determined by the CalEEMod model, which is approximately 79% less than the threshold identified by the SCAQMD.

The KCAG Regional Climate Action Plan identifies a baseline (2005) GHG emissions inventory for all countywide sectors (transportation, waste management, etc.). Kings County's baseline GHG emissions is approximately 1,046,804 MTCO₂eq./year. The proposed Project's GHG emissions represents 0.2% of the total GHG emissions for Kings County's baseline GHG emissions.

Based on the assessment above, the Project will not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. Therefore, any impacts would be less than significant.



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- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

California passed the California Global Warming Solutions Act of 2006. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. Under AB 32, CARB must adopt regulations by January 1, 2011 to achieve reductions in GHGs to meet the 1990 emission cap by 2020. On December 11, 2008, CARB adopted its initial Scoping Plan, which functions as a roadmap of CARB's plans to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations. CARB's 2017 Climate Change Scoping Plan builds on the efforts and plans encompassed in the initial Scoping Plan.

SB 375 requires MPOs to adopt a SCS or APS that will prescribe land use allocation in that MPO's regional transportation plan. CARB, in consultation with MPOs, has provided each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. For the KCAG region, CARB set targets at five (5) percent per capita decrease in 2020 and a ten (10) percent per capita decrease in 2035 from a base year of 2005. KCAG's 2018 RTP/SCS, which was adopted in August 2018, projects that the Kings County region would achieve the prescribed emissions targets.

Executive Order B-30-15 establishes a California greenhouse gas reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050. Executive Order B-30-15 requires MPO's to implement measures that will achieve reductions of greenhouse gas emissions to meet the 2030 and 2050 greenhouse gas emissions reductions targets.

As required by California law, city and county General Plans contain a Land Use Element that details the types and quantities of land uses that the city or county estimates will be needed for future growth, and that designate locations for land uses to regulate growth. KCAG uses the growth projections and land use information in adopted general plans to estimate future average daily trips and then VMT, which are then provided to SJVAPCD to estimate future emissions in the AQPs. The applicable General Plan for the project is City of Hanford 2035 General Plan Update, which was adopted in 2018.

The Project is consistent with the currently adopted General Plan for the City of Hanford and the adopted KCAG 2018 RTP/SCS and is therefore consistent with the population growth and VMT applied in those plan documents. Therefore, the Project is consistent with the growth assumptions used in the applicable AQP. It should also be noted that yearly GHG emissions generated by the Project (Table 9) are approximately 79% less than the threshold identified by the SCAQMD.

CARB's 2017 Climate Change Scoping Plan builds on the efforts and plans encompassed in the initial Scoping Plan. The current plan has identified new policies and actions to accomplish the State's 2030 GHG limit. Below is a list of applicable strategies in the Scoping Plan and the Project's consistency with those strategies.

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- ✓ California Light-Duty Vehicle GHG Standards – Implement adopted standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs for long-term climate change goals.
 - The Project is consistent with this reduction measure. This measure cannot be implemented by a particular project or lead agency since it is a statewide measure. When this measure is implemented, standards would be applicable to light-duty vehicles that would access the Project. The Project would not conflict or obstruct this reduction measure.
- ✓ Energy Efficiency – Pursuit of comparable investment in energy efficiency from all retail providers of electricity in California. Maximize energy efficiency building and appliance standards.
 - The Project is consistent with this reduction measure. Though this measure applies to the State to increase its energy standards, the Project would comply with this measure through existing regulation. The Project would not conflict or obstruct this reduction measure.
- ✓ Low Carbon Fuel – Development and adoption of the low carbon fuel standard.
 - The Project is consistent with this reduction measure. This measure cannot be implemented by a particular project or lead agency since it is a statewide measure. When this measure is implemented, standards would be applicable to the fuel used by vehicles that would access the Project. The Project would not conflict or obstruct this reduction measure.

Based on the assessment above, the Project will not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Therefore, any impacts would be less than significant.



Hanford Residential Project – Tract 934

Air Quality & Greenhouse Gas Impact Assessment

1.0 Introduction

This Air Quality & Greenhouse Gas Impact Assessment has been prepared for the purpose of identifying potential air quality impacts that may result from the proposed 161-unit single-family residential tract (Tract 934) via tentative tract map (Project). The Project is located at the southeast corner of 13th Avenue and West Grangeville Boulevard on APNs 009-050-001 through -005 in the City of Hanford, CA. The parcels are zoned R-L-5 Low-Density Residential with a General Plan Designation of Low Density Residential.

1.1 Description of the Region/Project

The Project Applicant proposes to subdivide the 35.64 acres that comprise the APNs noted above into 161 single-family residential lots in the City's R-L-5 Low-Density Residential zoning district via Tentative Tract Map 934. Figures 1 and 2 show the location of the Project along with major roadways and highways.

The City of Hanford is located in one of the most polluted air basins in the country – the San Joaquin Valley Air Basin (SJVAB). The surrounding topography includes foothills and mountains to the east and west. These mountain ranges direct air circulation and dispersion patterns. Temperature inversions can trap air within the Valley, thereby preventing the vertical dispersal of air pollutants. In addition to topographic conditions, the local climate can also contribute to air quality problems. Climate in Hanford is characterized by hot, dry summers and cool winters with the notable presence of Tule fog.

1.2 Regulatory

Air quality within the Project area is addressed through the efforts of various federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policymaking, education, and a variety of programs. The agencies primarily responsible for improving the air quality within the City of Hanford and Kings County are discussed below along with their individual responsibilities.

1.2.1 Federal Agencies

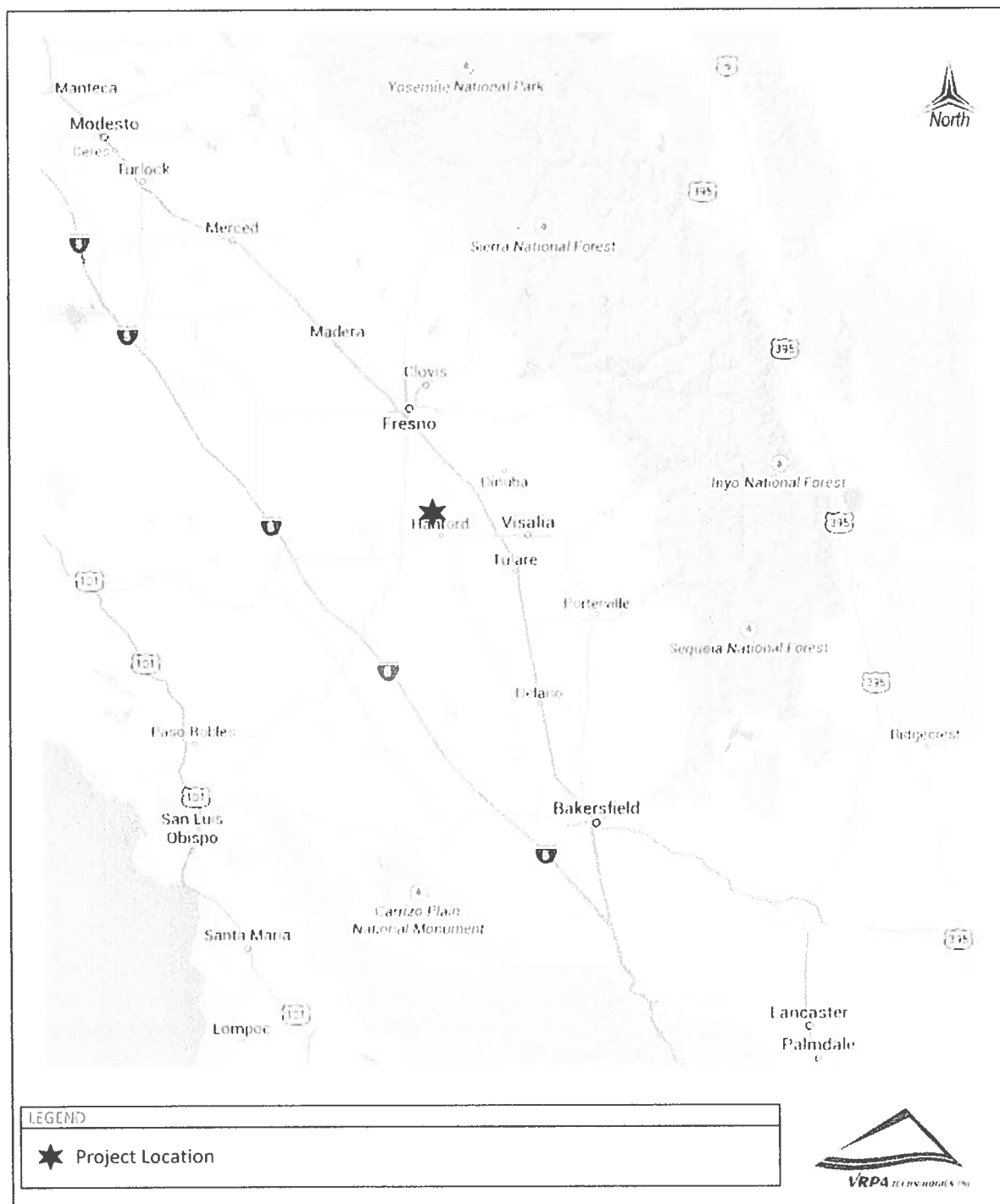
✓ U.S. Environmental Protection Agency (EPA)

The Federal Clean Air Bill first adopted in 1967 and periodically amended since then, established federal ambient air quality standards. A 1987 amendment to the Bill set a deadline for the attainment of these standards. That deadline has since passed. The other Clean Air Act (CAA) Bill Amendments, passed in 1990, share responsibility with the State in reducing emissions from mobile sources. The U.S. Environmental Protection Agency (EPA) is responsible for enforcing the 1990 amendments.

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Air Quality & Greenhouse Gas Impact Assessment

Hanford Residential Project – Tract 934
Regional Location

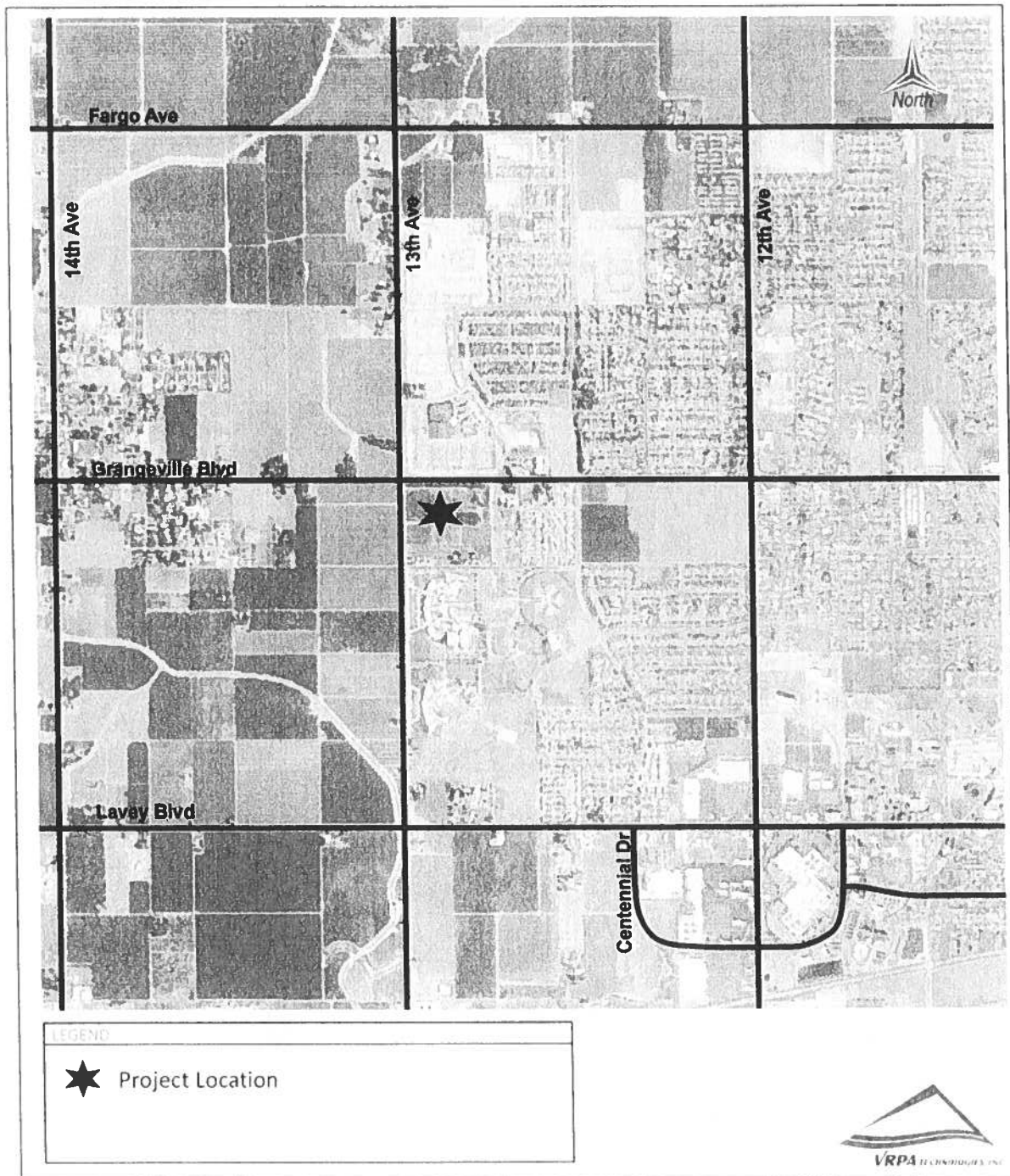
Figure
1



Hanford Residential Project – Tract 934
Air Quality & Greenhouse Gas Impact Assessment

Hanford Residential Project – Tract 934
Project Location

Figure
2



4 | Hanford Residential Project – Tract 934 Air Quality & Greenhouse Gas Impact Assessment

The CAA and the national ambient air quality standards identify levels of air quality for six “criteria” pollutants, which are considered the maximum levels of ambient air pollutants considered safe, with an adequate margin of safety, to protect public health and welfare. The six criteria pollutants include ozone, carbon monoxide (CO), nitrogen dioxide, sulfur dioxide, particulate matter, and lead.

CAA Section 176(c) (42 U.S.C. 7506(c)) and EPA transportation conformity regulations (40 CFR 93 Subpart A) require that each new RTP and Transportation Improvement Program (TIP) be demonstrated to conform to the State Implementation Plan (SIP) before the RTP and TIP are approved by the Metropolitan planning organization (MPO) or accepted by the U.S. Department of Transportation (DOT). The conformity analysis is a federal requirement designed to demonstrate compliance with the National Ambient Air Quality Standards (NAAQS). However, because the State Implementation Plan (SIP) for particulate matter 10 microns or less in diameter (PM₁₀), particulate matter 2.5 microns or less in diameter (PM_{2.5}), and Ozone address attainment of both the State and federal standards, for these pollutants, demonstrating conformity to the federal standards is also an indication of progress toward attainment of the State standards. Compliance with the State air quality standards is provided on the pages following this federal conformity discussion.

The EPA approved San Joaquin Valley reclassification of the ozone (8-hour) designation to extreme nonattainment in the Federal Register on May 5, 2010, even though the San Joaquin Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard. In accordance with the CAA, EPA uses the design value at the time of standard promulgation to assign nonattainment areas to one of several classes that reflect the severity of the nonattainment problem; classifications range from marginal nonattainment to extreme nonattainment. In the Federal Register on October 26, 2015, the EPA revised the primary and secondary standard to 0.070 parts per million (ppm) to provide increased public health protection against health effects associated with long- and short-term exposures. The previous ozone standard was set in 2010 at 0.075 ppm.

Kings County is located in a nonattainment area for the 8-hour ozone standard, PM_{2.5} standard, and PM₁₀ standard.

1.2.2 Federal Regulations

✓ **State Implementation Plan (SIP)/ Air Quality Management Plans (AQMPs)**

To ensure compliance with the NAAQS, EPA requires states to adopt SIP aimed at improving air quality in areas of nonattainment or a Maintenance Plan aimed at maintaining air quality in areas that have attained a given standard. New and previously submitted plans, programs, district rules, state regulations, and federal controls are included in the SIPs. Amendments made in 1990 to the federal CAA established deadlines for attainment based on an area’s current air pollution levels. States must enact additional regulatory programs for nonattainment’s areas in order to adhere with the CAA Section 172. In California, the SIPs



must adhere to both the NAAQS and the California Ambient Air Quality Standards (CAAQS).

To ensure that State and federal air quality regulations are being met, Air Quality Management Plans (AQMPs) are required. AQMPs present scientific information and use analytical tools to identify a pathway towards attainment of NAAQS and CAAQS. The San Joaquin Valley Air Pollution Control District (SJVAPCD) develops the AQMPs for the region where the Kings County Association of Governments (KCAG) operates. The regional air districts begin the SIP process by submitting their AQMPs to the California Air Resources Board (CARB). CARB is responsible for revising the SIP and submitting it to EPA for approval. EPA then acts on the SIP in the Federal Register. The items included in the California SIP are listed in the Code of Federal Regulations Title 40, Chapter 1, Part 52, Subpart 7, Section 52.220.

✓ **Transportation Control Measures**

One particular aspect of the SIP development process is the assessment of available transportation control measures (TCMs) as a part of making progress towards clean air goals. TCMs are defined in Section 108(f)(1) of the CAA and are strategies designed to reduce vehicle miles traveled, vehicle idling, and associated air pollution. These goals are generally achieved by developing attractive and convenient alternatives to single-occupant vehicle use. Examples of TCMs include ridesharing programs, transportation infrastructure improvements such as adding bicycle and carpool lanes, and expansion of public transit.

✓ **Energy Policy Act of 1992 (EPAc)**

The Energy Policy Act of 1992 (EPAc) was passed to reduce the country's dependence on foreign petroleum and improve air quality. EPAc includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. EPAc requires certain federal, state, and local government and private fleets to purchase a percentage of light duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are included in EPAc. Federal tax deductions will be allowed for businesses and individuals to cover the incremental cost of alternative fueled vehicles (AFVs). States are also required by the act to consider a variety of incentive programs to help promote AFVs.

1.2.3 State Agencies

✓ **California Air Resources Board (CARB)**

CARB is the agency responsible for coordination and oversight of State and local air pollution control programs in California and for implementing its own air quality legislation called the California Clean Air Act (CCAA), adopted in 1988. CARB was created in 1967 from the merging of the California Motor Vehicle Pollution Control Board and the Bureau of Air Sanitation and its Laboratory.

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CARB has primary responsibility in California to develop and implement air pollution control plans designed to achieve and maintain the NAAQS established by the EPA. Whereas CARB has primary responsibility and produces a major part of the SIP for pollution sources that are statewide in scope, it relies on the local air districts to provide additional strategies for sources under their jurisdiction. CARB combines its data with all local district data and submits the completed SIP to the EPA. The SIP consists of the emissions standards for vehicular sources and consumer products set by CARB, and attainment plans adopted by the Air Pollution Control Districts (APCDs) and Air Quality Management District's (AQMDs) and approved by CARB.

States may establish their own standards, provided the State standards are at least as stringent as the NAAQS. California has established California Ambient Air Quality Standards (CAAQS) pursuant to California Health and Safety Code (CH&SC) [§39606(b)] and its predecessor statutes.

The CH&SC [§39608] requires CARB to “identify” and “classify” each air basin in the State on a pollutant-by-pollutant basis. Subsequently, CARB designated areas in California as nonattainment based on violations of the CAAQSs. Designations and classifications specific to the SJVAB can be found in the next section of this document. Areas in the State were also classified based on severity of air pollution problems. For each nonattainment class, the CCAA specifies air quality management strategies that must be adopted. For all nonattainment categories, attainment plans are required to demonstrate a five percent-per-year reduction in nonattainment air pollutants or their precursors, averaged every consecutive three-year period, unless an approved alternative measure of progress is developed. In addition, air districts in violation of CAAQS are required to prepare an Air Quality Attainment Plan (AQAP) that lays out a program to attain and maintain the CCAA mandates.

CARB, in consultation with MPOs, has provided each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. For the Kings County Association of Governments (KCAG) region, CARB set targets at five (5) percent per capita decrease in 2020 and a ten (10) percent per capita decrease in 2035 from a base year of 2005. KCAG's 2018 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which was adopted in August 2018, projects that the Kings County region would achieve the prescribed emissions targets.

Other CARB duties include monitoring air quality. CARB has established and maintains, in conjunction with local APCDs and AQMDs, a network of sampling stations (called the State and Local Air Monitoring [SLAMS] network), which monitor the present pollutant levels in the ambient air.

Kings County is in the CARB-designated, SJVAB. A map of the SJVAB is provided in Figure 3. In addition to Kings County, the SJVAB includes Fresno, Kern, Madera, Merced, San Joaquin, Stanislaus, and Tulare Counties. Federal and State standards for criteria pollutants are provided in Table 1.

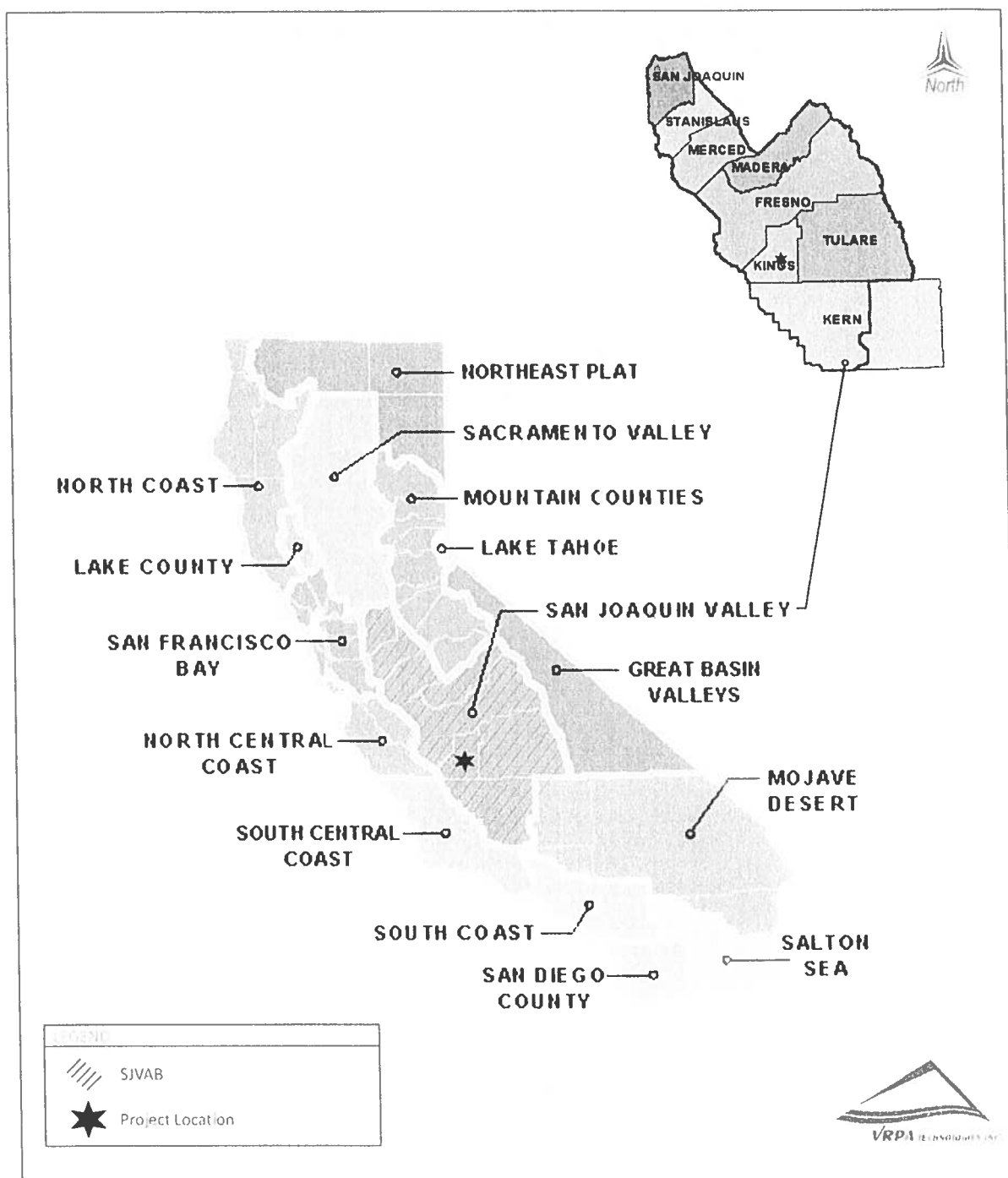


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Air Quality & Greenhouse Gas Impact Assessment

Hanford Residential Project – Tract 934
San Joaquin Valley Air Basin

Figure
3



Hanford Residential Project – Tract 934

Air Quality & Greenhouse Gas Impact Assessment

Table 1
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards ²		National Standards ²			
		Concentration ³	Method ⁴	Primary ⁵	Secondary ^{3,6}	Method ⁷	
Ozone (O ₃) ⁸	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry	
	8 Hour	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)			
Respirable Particulate Matter (PM10) ⁹	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis	
	Annual Arithmetic Mean	20 µg/m ³		–			
Fine Particulate Matter (PM2.5) ⁹	24 Hour	–	–	35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis	
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12.0 µg/m ³	15 µg/m ³		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m ³)	–	Non-Dispersive Infrared Photometry (NDIR)	
	8 Hour	9.0 ppm (10 mg/m ³)		9 ppm (10 mg/m ³)	–		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		–	–		
Nitrogen Dioxide (NO ₂) ¹⁰	1 Hour	0.18 ppm (339 µg/m ³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m ³)	–	Gas Phase Chemiluminescence	
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)		0.053 ppm (100 µg/m ³)	Same as Primary Standard		
Sulfur Dioxide (SO ₂) ¹¹	1 Hour	0.25 ppm (655 µg/m ³)	Ultraviolet Fluorescence	75 ppb (196 µg/m ³)	–	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)	
	3 Hour	–		–	0.5 ppm (1300 µg/m ³)		
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ¹¹	–		
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas) ¹¹	–		
Lead ^{12,13}	30 Day Average	1.5 µg/m ³	Atomic Absorption	–	–	High Volume Sampler and Atomic Absorption	
	Calendar Quarter	–		1.5 µg/m ³ (for certain areas) ¹¹	Same as Primary Standard		
	Rolling 3-Month Average	–		0.15 µg/m ³			
Visibility Reducing Particles ¹⁴	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards			
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography				
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence				
Vinyl Chloride ¹²	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography				

See footnotes on next page ...



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Footnotes:

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM₁₀, PM_{2.5}, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
 2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24 hour standard is attained when the expected number of days per calendar year with a 24 hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
 3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
 4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
 5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
 6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
 7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
 8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
 9. On December 14, 2012, the national annual PM_{2.5} primary standard was lowered from 15 µg/m³ to 12.0 µg/m³. The existing national 24-hour PM_{2.5} standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM₁₀ standards (primary and secondary) of 150 µg/m³ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
 10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
 11. On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
- Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
 13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
 14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Source: CARB, 2021

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1.2.4 State Regulations

✓ **CARB Mobile-Source Regulation**

The State of California is responsible for controlling emissions from the operation of motor vehicles in the State. Rather than mandating the use of specific technology or the reliance on a specific fuel, CARB's motor vehicle standards specify the allowable grams of pollutant per mile driven. In other words, the regulations focus on the reductions needed rather than on the manner in which they are achieved.

✓ **California Clean Air Act**

The CCAA was first signed into law in 1988. The CCAA provides a comprehensive framework for air quality planning and regulation, and spells out, in statute, the state's air quality goals, planning and regulatory strategies, and performance. The CCAA establishes more stringent ambient air quality standards than those included in the Federal CAA. CARB is the agency responsible for administering the CCAA. CARB established ambient air quality standards pursuant to the CH&SC (§39606(b)), which are similar to the federal standards. The SJVAPCD is one of 35 AQMDs that have prepared air quality management plans to accomplish a five percent (5%) annual reduction in emissions documenting progress toward the State ambient air quality standards.

✓ **Tanner Air Toxics Act**

California regulates Toxic Air Contaminants (TACs) primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB can designate a substance as a TAC. To date, CARB has identified more than 21 TACs and has adopted EPA's list of Hazardous Air Pollutants (HAPs) as TACs. Once a TAC is identified, CARB then adopts an Airborne Toxics Control Measure (ATCM) for sources that emit that particular TAC. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate Best Available Control Technology (BACT) to minimize emissions.

AB 2588 requires that existing facilities that emit toxic substances above a specified level prepare a toxic-emission inventory, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures. CARB has adopted diesel exhaust control measures and more stringent emission standards for various on-road mobile sources of emissions, including transit buses and off-road diesel equipment (e.g., tractors, generators).



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These rules and standards provide for:

- More stringent emission standards for some new urban bus engines, beginning with 2002 model year engines.
- Zero-emission bus demonstration and purchase requirements applicable to transit agencies
- Reporting requirements under which transit agencies must demonstrate compliance with the urban transit bus fleet rule.

✓ **AB 1493 (Pavley)**

AB 1493 (Pavley) enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce greenhouse gases emitted by passenger vehicles and light duty trucks. Regulations adopted by CARB would apply to 2009 and later model year vehicles. CARB estimated that the regulation would reduce climate change emissions from light duty passenger vehicles by an estimated 18 percent in 2020 and by 27 percent in 2030 [Association of Environmental Professionals (AEP) 2007]]. In 2005, the CARB requested a waiver from U.S. EPA to enforce the regulation, as required under the CAA. Despite the fact that no waiver had ever been denied over a 40-year period, the then Administrator of the EPA sent Governor Schwarzenegger a letter in December 2007, indicating he had denied the waiver. On March 6, 2008, the waiver denial was formally issued in the Federal Register. Governor Schwarzenegger and several other states immediately filed suit against the federal government to reverse that decision. On January 21, 2009, CARB requested that EPA reconsider denial of the waiver. EPA scheduled a re-hearing on March 5, 2009. On June 30, 2009, EPA granted a waiver of CAA preemption to California for its greenhouse gas emission standards for motor vehicles beginning with the 2009 model year.

✓ **Assembly Bill 32 (California Global Warming Solutions Act of 2006)**

California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500 - 38599). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 required that statewide GHG emissions be reduced to 1990 levels by 2020. December 31, 2020 is the deadline for achieving the 2020 GHG emissions cap. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires CARB to adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrived at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that

the state reduces GHG emissions enough to meet the cap. AB 32 also includes guidance on instituting emissions reductions in an economically efficient manner, along with conditions to ensure that businesses and consumers are not unfairly affected by the reductions. Using these criteria to reduce statewide GHG emissions to 1990 levels by 2020 would represent an approximate 25 to 30 percent reduction in current emissions levels. However, CARB has discretionary authority to seek greater reductions in more significant and growing GHG sectors, such as transportation, as compared to other sectors that are not anticipated to significantly increase emissions.

CARB's 2017 Climate Change Scoping Plan builds on the efforts and plans encompassed in the initial Scoping Plan adopted in December of 2008. The current plan has identified new policies and actions to accomplish the State's 2030 GHG limit.

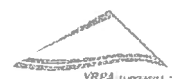
✓ **Senate Bill 375**

SB 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) that will prescribe land use allocation in that MPO's regional transportation plan. CARB, in consultation with MPOs, has provided each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. For the Kings County Association of Government (KCAG), CARB set targets at five (5) percent per capita decrease in 2020 and a ten (10) percent per capita decrease in 2035 from a base year of 2005. KCAG 2018 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which was adopted in August 2018, projects that the Kings County region would achieve the prescribed emissions targets.

This law also extends the minimum time period for the regional housing needs allocation cycle from five years to eight years for local governments located within an MPO that meets certain requirements. City or county land use policies (including general plans) are not required to be consistent with the regional transportation plan (and associated SCS or APS). However, new provisions of CEQA incentivize (through streamlining and other provisions) qualified projects that are consistent with an approved SCS or APS, categorized as "transit priority projects."

✓ **Executive Order B-30-15**

Executive Order B-30-15, which was signed by Governor Brown in 2016, establishes a California greenhouse gas reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050. Executive Order B-30-15 requires MPO's to implement measures that will achieve reductions of greenhouse gas emissions to meet the 2030 and 2050 greenhouse gas emissions reductions targets.



✓ **California Global Warming Solutions Act of 2006: emissions limit, or SB 32**

SB 32 is a California Senate bill expanding upon AB 32 to reduce greenhouse gas (GHG) emissions. The lead author is Senator Fran Pavley and the principal co-author is Assembly member Eduardo Garcia. SB 32 was signed into law on September 8, 2016, by Governor Brown. SB 32 sets into law the mandated reduction target in GHG emissions as written into Executive Order B-30-15. SB 32 requires that there be a reduction in GHG emissions to 40% below the 1990 levels by 2030. Greenhouse gas emissions include carbon dioxide, methane, nitrous oxide, sulfur hexafluoride, hydrofluorocarbons, and perfluorocarbons. The California Air Resources Board (CARB) is responsible for ensuring that California meets this goal. The provisions of SB 32 were added to Section 38566 of the Health and Safety Code subsequent to the bill's approval. The bill went into effect January 1, 2017. SB 32 builds onto Assembly Bill (AB) 32 written by Senator Fran Pavley and Assembly Speaker Fabian Nunez passed into law on September 27, 2006. AB 32 required California to reduce greenhouse gas emissions to 1990 levels by 2020 and SB 32 continues that timeline to reach the targets set in Executive Order B-30-15. SB 32 provides another intermediate target between the 2020 and 2050 targets set in Executive Order S-3-05.

1.2.5 *Regional Agencies*

✓ **San Joaquin Valley Air Pollution Control District**

The SJVAPCD is the agency responsible for monitoring and regulating air pollutant emissions from stationary, area, and indirect sources within Kings County and throughout the SJVAB. The District also has responsibility for monitoring air quality and setting and enforcing limits for source emissions. CARB is the agency with the legal responsibility for regulating mobile source emissions. The District is precluded from such activities under State law.

The District was formed in mid-1991 and prepared and adopted the San Joaquin Valley Air Quality Attainment Plan (AQAP), dated January 30, 1992, in response to the requirements of the State CCAA. The CCAA requires each non-attainment district to reduce pertinent air contaminants by at least five percent (5%) per year until new, more stringent, 1988 State air quality standards are met.

Activities of the SJVAPCD include the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations concerning sources of air pollution, issuance of permits for stationary sources of air pollution, inspection of stationary sources of air pollution and response to citizen complaints, monitoring of ambient air quality and meteorological conditions, and implementation of programs and regulations required by the FCAA and CCAA.

The SJVAPCD has prepared the following State Implementation Plans to address ozone, PM-10 and PM2.5 that currently apply to non-attainment areas:

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- The 2016 Ozone Plan (2008 standard) was adopted by SJVAPCD on June 16, 2016 and subsequently adopted by ARB on July 21, 2016.
- The 2013 1-Hour Ozone Plan (revoked 1997 standard) was adopted by the SJVAPCD on September 19, 2013. EPA withdrew its approval of the plan due to litigation. The District plans to submit a “redesignation substitute” to EPA to maintain its attainment status for this revoked ozone standard.
- The 2007 PM-10 Maintenance Plan (as revised in 2015) was approved by EPA on July 8, 2016 (effective September 30, 2016).
- The 2012 PM_{2.5} Plan (as revised in 2015) was approved by EPA on August 16, 2016 (effective September 30, 2016).

The SJVAPCD Plans identified above represent SJVAPCD’s plan to achieve both state and federal air quality standards. The regulations and incentives contained in these documents must be legally enforceable and permanent. These plans break emissions reductions and compliance into different emissions source categories.

The SJVAPCD also prepared the *Guide for Assessing and Mitigation Air Quality Impacts* (GAMAQI), dated March 19, 2015. The GAMAQI is an advisory document that provides Lead Agencies, consultants, and project applicants with analysis guidance and uniform procedures for addressing air quality impacts in environmental documents. Local jurisdictions are not required to utilize the methodology outlined therein. This document describes the criteria that SJVAPCD uses when reviewing and commenting on the adequacy of environmental documents. It recommends thresholds for determining whether or not projects would have significant adverse environmental impacts, identifies methodologies for predicting project emissions and impacts, and identifies measures that can be used to avoid or reduce air quality impacts.

1.2.6 Regional Regulations

The SJVAPCD has adopted numerous rules and regulations to implement its air quality plans. Following, are significant rules that will apply to the Project.

✓ Regulation VIII – Fugitive PM₁₀ Prohibitions

Regulation VIII is comprised of District Rules 8011 through 8081, which are designed to reduce PM₁₀ emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and track out, landfill operations, etc. The proposed Project will be required to comply with this regulation. Regulation VIII control measures are provided below:

1. *All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative*



ground cover.

2. *All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.*
3. *All land clearing, grubbing, scraping, excavation, land leveling, grading, cut & fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.*
4. *When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.*
5. *All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.*
6. *Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.*
7. *Within urban areas, track out shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday.*

✓ **Rule 8021 – Construction, Demolition, Excavation, and Other Earthmoving Activities**

District Rule 8021 requires owners or operators of construction projects to submit a Dust Control Plan to the District if at any time the project involves non-residential developments of five or more acres of disturbed surface area or moving, depositing, or relocating of more than 2,500 cubic yards per day of bulk materials on at least three days of the project. The proposed Project will meet these criteria and will be required to submit a Dust Control Plan to the District in order to comply with this rule.

✓ **Rule 4641 – Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations**

If asphalt paving will be used, then paving operations of the proposed Project will be subject to Rule 4641. This rule applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations.

✓ **Rule 9510 – Indirect Source Review (ISR)**

The purpose of this rule is to fulfill the District's emission reduction commitments in the PM10 and Ozone Attainment Plans, achieve emission reductions from construction activities, and to provide a mechanism for reducing emissions from the construction of and use of development projects through off-site measures. The rule is expected to reduce nitrogen oxides and particulates throughout the San Joaquin Valley by more than 10 tons per day.

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1.2.7 *Local Plans*

✓ **City of Hanford General Plan**

California State Law requires every city and county to adopt a comprehensive General Plan to guide its future development. The General Plan essentially serves as a “constitution for development”— the document that serves as the foundation for all land use decisions. The City of Hanford 2035 General Plan includes various elements, including air quality and greenhouse gases, that address local concerns and provides goals and policies to achieve its development goals.



2.0 Environmental Setting

This section describes existing air quality within the San Joaquin Valley Air Basin and in Kings County, including the identification of air pollutant standards, meteorological and topological conditions affecting air quality, and current air quality conditions. Air quality is described in relation to ambient air quality standards for criteria pollutants such as, ozone, carbon monoxide, and particulate matter. Air quality can be directly affected by the type and density of land use change and population growth in urban and rural areas.

2.1 Geographical Location

The SJVAB is comprised of eight counties: Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare. Encompassing 24,840 square miles, the San Joaquin Valley is the second largest air basin in California. Cumulatively, counties within the Air Basin represent approximately 16 percent of the State's geographic area. The Air Basin is bordered by the Sierra Nevada Mountains on the east (8,000 to 14,492 feet in elevation), the Coastal Range on the west (4,500 feet in elevation), and the Tehachapi Mountains on the south (9,000 feet elevation). The San Joaquin Valley is open to the north extending to the Sacramento Valley Air Basin.

2.2 Topographic Conditions

Kings County is located within the San Joaquin Valley Air Basin [as determined by the California Air Resources Board (CARB)]. Air basins are geographic areas sharing a common "air shed." A description of the Air Basin in the County, as designated by CARB, is provided in the paragraph below. Air pollution is directly related to the region's topographic features, which impact air movement within the Basin.

Wind patterns within the SJVAB result from marine air that generally flows into the Basin from the San Joaquin River Delta. The Coastal Range hinders wind access into the Valley from the west, the Tehachapi's prevent southerly passage of airflow, and the high Sierra Nevada Mountain Range provides a significant barrier to the east. These topographic features result in weak airflow that becomes restricted vertically by high barometric pressure over the Valley. As a result, the SJVAB is highly susceptible to pollutant accumulation over time. Most of the surrounding mountains are above the normal height of summer inversion layers (1,500-3,000 feet).

2.3 Climate Conditions

Hanford is located in one of the most polluted air basins in the country. Temperature inversions can trap air within the Valley, thereby preventing the vertical dispersal of air pollutants. In addition to topographic conditions, the local climate can also contribute to air quality problems. Climate in Hanford is characterized by warm, dry summers and cool winters with significant Tule fog.

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Ozone, classified as a “regional” pollutant, often afflicts areas downwind of the original source of precursor emissions. Ozone can be easily transported by winds from a source area. Peak ozone levels tend to be higher in the southern portion of the Valley, as the prevailing summer winds sweep precursors downwind of northern source areas before concentrations peak. The separate designations reflect the fact that ozone precursor transport depends on daily meteorological conditions.

Other primary pollutants, carbon monoxide (CO), for example, may form high concentrations when wind speed is low. During the winter, Hanford experiences cold temperatures and calm conditions that increase the likelihood of a climate conducive to high CO concentrations.

Precipitation and fog tend to reduce or limit some pollutant concentrations. Ozone needs sunlight for its formation, and clouds and fog block the required radiation. CO is slightly water-soluble, so precipitation and fog tends to “reduce” CO concentrations in the atmosphere. PM10 is somewhat “washed” from the atmosphere with precipitation. Precipitation in the San Joaquin Valley is strongly influenced by the position of the semi-permanent subtropical high-pressure belt located off the Pacific coast. In the winter, this high- pressure system moves southward, allowing Pacific storms to move through the San Joaquin Valley. These storms bring in moist, maritime air that produces considerable precipitation on the western, upslope side of the Coast Ranges. Significant precipitation also occurs on the western side of the Sierra Nevada. On the valley floor, however, there is some down slope flow from the Coast Ranges and the resultant evaporation of moisture from associated warming results in a minimum of precipitation. Nevertheless, the majority of the precipitation falling in the San Joaquin Valley is produced by those storms during the winter. Precipitation during the summer months is in the form of convective rain showers and is rare. It is usually associated with an influx of moisture into the San Joaquin Valley through the San Francisco area during an anomalous flow pattern in the lower layers of the atmosphere. Although the hourly rates of precipitation from these storms may be high, their rarity keeps monthly totals low.

Precipitation on the San Joaquin Valley floor and in the Sierra Nevada decreases from north to south. Stockton in the north receives about 20 inches of precipitation per year, Fresno in the center, receives about 10 inches per year, and Bakersfield at the southern end of the valley receives less than 6 inches per year. This is primarily because the Pacific storm track often passes through the northern part of the state while the southern part of the state remains protected by the Pacific High. Precipitation in the San Joaquin Valley Air Basin (SJVAB) is confined primarily to the winter months with some also occurring in late summer and fall. Average annual rainfall for the entire San Joaquin Valley is approximately 5 to 16 inches. Snowstorms, hailstorms, and ice storms occur infrequently in the San Joaquin Valley and severe occurrences of any of these are very rare.

The winds and unstable air conditions experienced during the passage of storms result in periods of low pollutant concentrations and excellent visibility. Between winter storms, high pressure and light winds allow cold moist air to pool on the San Joaquin Valley floor. This creates strong



low-level temperature inversions and very stable air conditions. This situation leads to the San Joaquin Valley's famous Tule Fogs. The formation of natural fog is caused by local cooling of the atmosphere until it is saturated (dew point temperature). This type of fog, known as radiation fog is more likely to occur inland. Cooling may also be accomplished by heat radiation losses or by horizontal movement of a mass of air over a colder surface. This second type of fog, known as advection fog, generally occurs along the coast.

Conditions favorable to fog formation are also conditions favorable to high concentrations of CO and PM10. Ozone levels are low during these periods because of the lack of sunlight to drive the photochemical reaction. Maximum CO concentrations tend to occur on clear, cold nights when a strong surface inversion is present and large numbers of fireplaces are in use. A secondary peak in CO concentrations occurs during morning commute hours when a large number of motorists are on the road and the surface inversion has not yet broken.

The water droplets in fog, however, can act as a sink for CO and nitrogen oxides (NO_x), lowering pollutant concentrations. At the same time, fog could help in the formation of secondary particulates such as ammonium sulfate. These secondary particulates are believed to be a significant contributor of winter season violations of the PM10 and PM2.5 standards.

2.4 Anthropogenic (Man-made) Sources

In addition to climatic conditions (wind, lack of rain, etc.), air pollution can be caused by anthropogenic or man-made sources. Air pollution in the SJVAB can be directly attributed to human activities, which cause air pollutant emissions. Human causes of air pollution in the Valley consist of population growth, urbanization (gas-fired appliances, residential wood heaters, etc.), mobile sources (i.e., cars, trucks, airplanes, trains, etc.), oil production, agriculture, and other socioeconomic activities. The most significant factors, which are accelerating the decline of air quality in the SJVAB, are the Valley's rapid population growth and its associated increases in traffic, urbanization, and industrial activity.

Carbon monoxide emissions overwhelmingly come from mobile sources in the San Joaquin Valley; on-road vehicles contributed 34 percent, while other mobile vehicles, such as trains, planes, and off-road vehicles, contribute another 20 percent in 2012 according to emission projections from the CARB. Motor vehicles account for significant portions of regional gaseous and particulate emissions. Local large employers such as industrial plants can also generate substantial regional gaseous and particulate emissions. In addition, construction and agricultural activities can generate significant temporary gaseous and particulate emissions (dust, ash, smoke, etc.).

Ozone is the result of a photochemical reaction between Oxides of nitrogen (NO_x) and Reactive Organic Gases (ROG). Mobile sources contribute 84 percent of all NO_x emitted from anthropogenic sources based on data provided in Appendix B of the Air District's 2016 Ozone

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Plan. In addition, mobile sources contribute 26 percent of all the ROG emitted from sources within the San Joaquin Valley.

The principal factors that affect air quality in and around Hanford are:

1. The sink effect, climatic subsidence and temperature inversions and low wind speeds
2. Automobile and truck travel
3. Increases in mobile and stationary pollutants generated by local urban growth

Automobiles, trucks, buses and other vehicles using hydrocarbon (HC) fuels release exhaust products into the air. Each vehicle by itself does not release large quantities; however, when considered as a group, the cumulative effect is significant.

Other sources may not seem to fit into any one of the major categories or they may seem to fit in a number of them. These could include agricultural uses, dirt roads, animal shelters; animal feed lots, chemical plants and industrial waste disposal, which may be a source of dust, odors, or other pollutants. For Kings County, this category includes several agriculturally related activities, such as plowing, harvesting, dusting with herbicides and pesticides and other related activities. Finally, industrial contaminants and their potential to produce various effects depend on the size and type of industry, pollution controls, local topography, and meteorological conditions. Major sources of industrial emissions in Kings County consist of agricultural production and processing operations.

The primary contributors of PM₁₀ emissions in the San Joaquin Valley are farming activities (22%) and road dust, both paved and unpaved (35%) in 2020 according to emission projections from the CARB. Fugitive windblown dust from “open” fields contributed 14 percent of the PM₁₀.

The four major sources of air pollutant emissions in the SJVAB include industrial plants, motor vehicles, construction activities, and agricultural activities. Industrial plants account for significant portions of regional gaseous and particulate emissions. Motor vehicles, including those from large employers, generate substantial regional gaseous and particulate emissions. Finally, construction and agricultural activities can generate significant temporary gaseous and particulate emissions (dust, ash, smoke, etc.). In addition to these primary sources of air pollution, urban areas upwind from Kings County including areas north and west of the San Joaquin Valley, can cause or generate emissions that are transported into Kings County. All four of the major pollutant sources affect ambient air quality throughout the Air Basin.

2.4.1 Motor Vehicles

Automobiles, trucks, buses and other vehicles using hydrocarbon fuels release exhaust products into the air. Each vehicle by itself does not release large quantities; however, when considered as a group, the cumulative effect is significant.



2.4.2 Agricultural and Other Miscellaneous Activities

Other sources may not seem to fit into any one of the major categories or they may seem to fit in a number of them. These could include agricultural uses, dirt roads, animal shelters, animal feed lots, chemical plants and industrial waste disposal, which may be a source of dust, odors, or other pollutants. For Hanford, this category includes several agriculturally related activities, such as plowing, harvesting, dusting with herbicides and pesticides and other related activities.

2.4.3 Industrial Plants

Industrial contaminants and their potential to produce various effects depend on the size and type of industry, pollution controls, local topography, and meteorological conditions. Major sources of industrial emissions in Kings County consist of agricultural production and processing operations.

2.5 San Joaquin Valley Air Basin Monitoring

SJVAPCD and the CARB maintain numerous air quality monitoring sites throughout each County in the Air Basin to measure ozone, PM_{2.5}, and PM₁₀. It is important to note that the federal ozone 1-hour standard was revoked by the EPA and is no longer applicable for federal standards. The closest monitoring station to the Project is located at the Hanford's S Irwin Street Monitoring Station. The station monitors particulates, ozone, carbon monoxide, and nitrogen dioxide. Monitoring data for the past three years is summarized in Table 2.

Table 3 identifies the Kings County's attainment status. As indicated, the SJVAB is nonattainment for Ozone (1 hour and 8 hour) and PM. In accordance with the FCAA, EPA uses the design value at the time of standard promulgation to assign nonattainment areas to one of several classes that reflect the severity of the nonattainment problem; classifications range from marginal nonattainment to extreme nonattainment. The FCAA contains provisions for changing the classifications using factors such as clean air progress rates and requests from States to move areas to a higher classification.

On April 16, 2004 EPA issued a final rule classifying the SJVAB as extreme nonattainment for Ozone, effective May 17, 2004 (69 FR 20550). The (federal) 1-hour ozone standard was revoked on June 6, 2005. However, many of the requirements in the 1-hour attainment plan (SIP) continue to apply to the SJVAB. The current ozone plan is the (federal) 8-hour ozone plan adopted in 2007. The SJVAB was reclassified from a "serious" nonattainment area for the 8-hour ozone standard to "extreme" effective June 4, 2010.

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Table 2.
Maximum Pollutant Levels at the Hanford-Irwin Monitoring Station

Pollutant	Time Averaging	2018	2019	2020	Standards	
		Maximums	Maximums	Maximums	National	State
Ozone (O ₃)	1 hour	0.108 ppm	0.093 ppm	0.103 ppm	-	0.09 ppm
Ozone (O ₃)	8 hour	0.082 ppm	0.076 ppm	0.088 ppm	0.070 ppm	0.070 ppm
Nitrogen Dioxide (NO ₂)	1 hour	56.3 ppb	62.9 ppb	51.9 ppb	100 ppb	0.18 ppm
Nitrogen Dioxide (NO ₂)	Annual Average	8.0 ppb	8.0 ppb	8.0 ppb	0.053 ppm	0.030 ppm
Particulates (PM ₁₀)	24 hour	181.1 µg/m ³	220.5 µg/m ³	180.9 µg/m ³	150 µg/m ³	50 µg/m ³
Particulates (PM ₁₀)	Federal Annual Arithmetic Mean	47.3 µg/m ³	44.8 µg/m ³	51.5 µg/m ³	-	20 µg/m ³
Particulates (PM _{2.5})	24 hour	107.8 µg/m ³	48.2 µg/m ³	147.0 µg/m ³	35 µg/m ³	-
Particulates (PM _{2.5})	Federal Annual Arithmetic Mean	17.7 µg/m ³	12.1 µg/m ³	19.8 µg/m ³	12 µg/m ³	12 µg/m ³

Source: California Air Resources Board (ADAM) Air Pollution Summaries, 2021



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Table 3
Kings County Attainment Status

Pollutant	Designation/Classification	
	Federal Standards	State Standards
Ozone - 1 Hour	Revoked in 2005	Nonattainment/Severe
Ozone - 8 Hour	Nonattainment/Extreme ^a	No State Standard
PM10	Attainment	Nonattainment
PM2.5	Nonattainment	Nonattainment
Carbon Monoxide	Unclassified/Attainment	Unclassified
Nitrogen Dioxide	Unclassified/Attainment	Attainment
Sulfur Dioxide	Unclassified/Attainment	Attainment
Lead (Particulate)	Unclassified/Attainment	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified

Source: CARB Website, 2021

a. Though the Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).

Notes:

National Designation Categories

Non-Attainment Area: Any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.

Unclassified/Attainment Area: Any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant or meets the national primary or secondary ambient air quality standard for the pollutant.

State Designation Categories

Unclassified: A pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or non-attainment.

Attainment: A pollutant is designated attainment if the State standard for that pollutant was not violated at any site in the area during a three-year period.

Non-attainment: A pollutant is designated non attainment if there was at least one violation of a State standard for that pollutant in the area.

Non-Attainment/Transitional: A subcategory of the non-attainment designation. An area is designated non-attainment/transitional to signify that the area is close to attaining the standard for the pollutant.

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2.6 Air Quality Standards

The FCAA, first adopted in 1963, and periodically amended since then, established National Ambient Air Quality Standards (NAAQS). A set of 1977 amendments determined a deadline for the attainment of these standards. That deadline has since passed. Other CAA amendments, passed in 1990, share responsibility with the State in reducing emissions from mobile sources.

In 1988, the State of California passed the CCAA (State 1988 Statutes, Chapter 568), which set forth a program for achieving more stringent California Ambient Air Quality Standards. The CARB implements State ambient air quality standards, as required in the CCAA, and cooperates with the federal government in implementing pertinent sections of the FCAA Amendments (FCAAA). Further, CARB regulates vehicular emissions throughout the State. The SJVAPCD regulates stationary sources, as well as some mobile sources. Attainment of the more stringent State PM10 Air Quality Standards is not currently required.

The EPA uses six "criteria pollutants" as indicators of air quality and has established for each of them a maximum concentration above which adverse effects on human health may occur. These threshold concentrations are called the NAAQS.

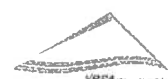
The SJVAPCD operates regional air quality monitoring networks that provide information on average concentrations of pollutants for which State or federal agencies have established ambient air quality standards. Descriptions of nine pollutants of importance in Kings County follow.

2.6.1 Ozone (1-hour and 8-hour)

The most severe air quality problem in the Air Basin is the high level of ozone. Ozone occurs in two layers of the atmosphere. The layer surrounding the earth's surface is the troposphere. Here, ground level, or "bad" ozone, is an air pollutant that damages human health, vegetation, and many common materials. It is a key ingredient of urban smog. The troposphere extends to a level about 10 miles up, where it meets the second layer, the stratosphere. The stratospheric, or "good" ozone layer, extends upward from about 10 to 30 miles and protects life on earth from the sun's harmful ultraviolet rays.

"Bad" ozone is what is known as a photochemical pollutant. It needs reactive organic gases (ROG), NO_x, and sunlight. ROG and NO_x are emitted from various sources throughout Kings County. In order to reduce ozone concentrations, it is necessary to control the emissions of these ozone precursors.

Significant ozone formation generally requires an adequate amount of precursors in the atmosphere and several hours in a stable atmosphere with strong sunlight. High ozone concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins.



Ozone is a regional air pollutant. It is generated over a large area and is transported and spread by wind. Ozone, the primary constituent of smog, is the most complex, difficult to control, and pervasive of the criteria pollutants. Unlike other pollutants, ozone is not emitted directly into the air by specific sources. Ozone is created by sunlight acting on other air pollutants (called precursors), specifically NO_x and ROG. Sources of precursor gases to the photochemical reaction that form ozone number in the thousands. Common sources include consumer products, gasoline vapors, chemical solvents, and combustion products of various fuels. Originating from gas stations, motor vehicles, large industrial facilities, and small businesses such as bakeries and dry cleaners, the ozone-forming chemical reactions often take place in another location, catalyzed by sunlight and heat. High ozone concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins. Approximately 50 million people lived in counties with air quality levels above the EPA's health-based national air quality standard in 1994. The highest levels of ozone were recorded in Los Angeles, closely followed by the San Joaquin Valley. High levels also persist in other heavily populated areas, including the Texas Gulf Coast and much of the Northeast.

While the ozone in the upper atmosphere absorbs harmful ultraviolet light, ground-level ozone is damaging to the tissues of plants, animals, and humans, as well as to a wide variety of inanimate materials such as plastics, metals, fabrics, rubber, and paints. Societal costs from ozone damage include increased medical costs, the loss of human and animal life, accelerated replacement of industrial equipment, and reduced crop yields.

✓ **Health Effects**

While ozone in the upper atmosphere protects the earth from harmful ultraviolet radiation, high concentrations of ground-level ozone can adversely affect the human respiratory system. Many respiratory ailments, as well as cardiovascular disease, are aggravated by exposure to high ozone levels. Ozone also damages natural ecosystems, such as: forests and foothill communities; agricultural crops; and some man-made materials, such as rubber, paint, and plastic. High levels of ozone may negatively affect immune systems, making people more susceptible to respiratory illnesses, including bronchitis and pneumonia. Ozone accelerates aging and exacerbates pre-existing asthma and bronchitis and, in cases with high concentrations, can lead to the development of asthma in active children. Active people, both children and adults, appear to be more at risk from ozone exposure than those with a low level of activity. Additionally, the elderly and those with respiratory disease are also considered sensitive populations for ozone.

People who work or play outdoors are at a greater risk for harmful health effects from ozone. Children and adolescents are also at greater risk because they are more likely than adults to spend time engaged in vigorous activities. Research indicates that children under 12 years of age spend nearly twice as much time outdoors daily than adults. Teenagers spend at least twice as much time as adults in active sports and outdoor activities. In addition, children

inhale more air per pound of body weight than adults, and they breathe more rapidly than adults. Children are less likely than adults to notice their own symptoms and avoid harmful exposures.

Ozone is a powerful oxidant—it can be compared to household bleach, which can kill living cells (such as germs or human skin cells) upon contact. Ozone can damage the respiratory tract, causing inflammation and irritation, and it can induce symptoms such as coughing, chest tightness, shortness of breath, and worsening of asthmatic symptoms. Ozone in sufficient doses increases the permeability of lung cells, rendering them more susceptible to toxins and microorganisms. Exposure to levels of ozone above the current ambient air quality standard leads to lung inflammation and lung tissue damage and a reduction in the amount of air inhaled into the lungs.

The CARB found ozone standards in Kings County nonattainment of Federal and State standards.

2.6.2 Suspended PM (PM10 and PM2.5)

Particulate matter pollution consists of very small liquid and solid particles that remain suspended in the air for long periods. Some particles are large or concentrated enough to be seen as soot or smoke. Others are so small they can be detected only with an electron microscope. Particulate matter is a mixture of materials that can include smoke, soot, dust, salt, acids, and metals. Particulate matter is emitted from stationary and mobile sources, including diesel trucks and other motor vehicles; power plants; industrial processes; wood-burning stoves and fireplaces; wildfires; dust from roads, construction, landfills, and agriculture; and fugitive windblown dust. PM10 refers to particles less than or equal to 10 microns in aerodynamic diameter. PM2.5 refers to particles less than or equal to 2.5 microns in aerodynamic diameter and are a subset of PM10. Particulates of concern are those that are 10 microns or less in diameter. These are small enough to be inhaled, pass through the respiratory system and lodge in the lungs, possibly leading to adverse health effects.

In the western United States, there are sources of PM10 in both urban and rural areas. Because particles originate from a variety of sources, their chemical and physical compositions vary widely. The composition of PM10 and PM2.5 can also vary greatly with time, location, the sources of the material and meteorological conditions. Dust, sand, salt spray, metallic and mineral particles, pollen, smoke, mist, and acid fumes are the main components of PM10 and PM2.5. In addition to those listed previously, secondary particles can also be formed as precipitates from chemical and photochemical reactions of gaseous sulfur dioxide (SO₂) and NO_x in the atmosphere to create sulfates (SO₄) and nitrates (NO₃). Secondary particles are of greatest concern during the winter months where low inversion layers tend to trap the precursors of secondary particulates.

The District's 2008 PM2.5 Plan built upon the aggressive emission reduction strategy adopted in



the 2007 Ozone Plan and strives to bring the valley into attainment status for the 1997 NAAQS for PM_{2.5}. The District's 2012 PM_{2.5} Plan provides multiple control strategies to reduce emissions of PM_{2.5} and other pollutants that form PM_{2.5}. The plan's comprehensive control strategy includes regulatory actions, incentive programs, technology advancement, policy and legislative positions, public outreach, participation and communication, and additional strategies.

✓ **Health Effects**

PM₁₀ and PM_{2.5} particles are small enough—about one-seventh the thickness of a human hair, or smaller—to be inhaled and lodged in the deepest parts of the lung where they evade the respiratory system's natural defenses. Health problems begin as the body reacts to these foreign particles. Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases, heart and lung disease, and coughing, bronchitis, and respiratory illnesses in children. Recent mortality studies have shown a statistically significant direct association between mortality and daily concentrations of particulate matter in the air. Non-health-related effects include reduced visibility and soiling of buildings. PM₁₀ can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. PM₁₀ and PM_{2.5} can aggravate respiratory disease and cause lung damage, cancer, and premature death.

Although particulate matter can cause health problems for everyone, certain people are especially vulnerable to adverse health effects of PM₁₀. These "sensitive populations" include children, the elderly, exercising adults, and those suffering from chronic lung disease such as asthma or bronchitis. Of greatest concern are recent studies that link PM₁₀ exposure to the premature death of people who already have heart and lung disease, especially the elderly. Acidic PM₁₀ can also damage manmade materials and is a major cause of reduced visibility in many parts of the United States.

The CARB found PM₁₀ standards in Kings County in attainment of Federal standards and nonattainment for State standards. The CARB found PM_{2.5} standards in Kings County nonattainment of Federal and State standards.

2.6.3 *Carbon Monoxide (CO)*

Carbon monoxide (CO) is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. CO is an odorless, colorless, poisonous gas that is highly reactive. CO is a byproduct of motor vehicle exhaust, contributes more than two thirds of all CO emissions nationwide. In cities, automobile exhaust can cause as much as 95 percent of all CO emissions. These emissions can result in high concentrations of CO, particularly in local areas with heavy traffic congestion. Other sources of CO emissions include industrial processes and fuel combustion in sources such as boilers and incinerators. Despite an overall

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downward trend in concentrations and emissions of CO, some metropolitan areas still experience high levels of CO.

✓ **Health Effects**

CO enters the bloodstream and binds more readily to hemoglobin than oxygen, reducing the oxygen-carrying capacity of blood and thus reducing oxygen delivery to organs and tissues. The health threat from CO is most serious for those who suffer from cardiovascular disease. Healthy individuals are also affected but only at higher levels of exposure. At high concentrations, CO can cause heart difficulties in people with chronic diseases and can impair mental abilities. Exposure to elevated CO levels is associated with visual impairment, reduced work capacity, reduced manual dexterity, poor learning ability, difficulty performing complex tasks, and in prolonged, enclosed exposure, death.

The adverse health effects associated with exposure to ambient and indoor concentrations of CO are related to the concentration of carboxyhemoglobin (COHb) in the blood. Health effects observed may include an early onset of cardiovascular disease; behavioral impairment; decreased exercise performance of young, healthy men; reduced birth weight; sudden infant death syndrome (SIDS); and increased daily mortality rate.

Most of the studies evaluating adverse health effects of CO on the central nervous system examine high-level poisoning. Such poisoning results in symptoms ranging from common flu and cold symptoms (shortness of breath on mild exertion, mild headaches, and nausea) to unconsciousness and death.

The CARB found CO standards in Kings County as unclassified/attainment of Federal standards and unclassified for State standards.

2.6.4 Nitrogen Dioxide (NO₂)

Nitrogen oxides (NO_x) is a family of highly reactive gases that are primary precursors to the formation of ground-level ozone and react in the atmosphere to form acid rain. NO_x is emitted from combustion processes in which fuel is burned at high temperatures, principally from motor vehicle exhaust and stationary sources such as electric utilities and industrial boilers. A brownish gas, NO_x is a strong oxidizing agent that reacts in the air to form corrosive nitric acid, as well as toxic organic nitrates. EPA regulates only nitrogen dioxide (NO₂) as a surrogate for this family of compounds because it is the most prevalent form of NO_x in the atmosphere that is generated by anthropogenic (human) activities.¹

✓ **Health Effects**

NO_x is an ozone precursor that combines with Reactive Organic Gases (ROG) to form ozone.

¹ United States Environmental Protection Agency (EPA), Nitrogen Oxides (NO_x). Why and How They Are Controlled, 456/F-99-006R, November 2019



See the ozone section above for a discussion of the health effects of ozone.

Direct inhalation of NO_x can also cause a wide range of health effects. NO_x can irritate the lungs, cause lung damage, and lower resistance to respiratory infections such as influenza. Short-term exposures (e.g., less than 3 hours) to low levels of nitrogen dioxide (NO₂) may lead to changes in airway responsiveness and lung function in individuals with preexisting respiratory illnesses. These exposures may also increase respiratory illnesses in children. Long-term exposures to NO₂ may lead to increased susceptibility to respiratory infection and may cause irreversible alterations in lung structure. Other health effects associated with NO_x are an increase in the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO₂ may lead to eye and mucus membrane aggravation, along with pulmonary dysfunction. NO_x can cause fading of textile dyes and additives, deterioration of cotton and nylon, and corrosion of metals due to production of particulate nitrates. Airborne NO_x can also impair visibility. NO_x is a major component of acid deposition in California. NO_x may affect both terrestrial and aquatic ecosystems. NO_x in the air is a potentially significant contributor to a number of environmental effects such as acid rain and eutrophication in coastal waters. Eutrophication occurs when a body of water suffers an increase in nutrients that reduce the amount of oxygen in the water, producing an environment that is destructive to fish and other animal life.

NO₂ is toxic to various animals as well as to humans. Its toxicity relates to its ability to combine with water to form nitric acid in the eye, lung, mucus membranes, and skin. Studies of the health impacts of NO₂ include experimental studies on animals, controlled laboratory studies on humans, and observational studies.

In animals, long-term exposure to NO_x increases susceptibility to respiratory infections, lowering their resistance to such diseases as pneumonia and influenza. Laboratory studies show susceptible humans, such as asthmatics, exposed to high concentrations of NO₂, can suffer lung irritation and, potentially, lung damage. Epidemiological studies have also shown associations between NO₂ concentrations and daily mortality from respiratory and cardiovascular causes as well as hospital admissions for respiratory conditions.

NO_x contributes to a wide range of environmental effects both directly and when combined with other precursors in acid rain and ozone. Increased nitrogen inputs to terrestrial and wetland systems can lead to changes in plant species composition and diversity. Similarly, direct nitrogen inputs to aquatic ecosystems such as those found in estuarine and coastal waters can lead to eutrophication as discussed above. Nitrogen, alone or in acid rain, also can acidify soils and surface waters. Acidification of soils causes the loss of essential plant nutrients and increased levels of soluble aluminum, which is toxic to plants. Acidification of surface waters creates conditions of low pH and levels of aluminum that are toxic to fish and other aquatic organisms.

The CARB found NO₂ standards in Kings County as unclassified/attainment of Federal standards and attainment for State standards.

2.6.5 Sulfur Dioxide (SO₂)

The major source of sulfur dioxide (SO₂) is the combustion of high-sulfur fuels for electricity generation, petroleum refining and shipping. High concentrations of SO₂ can result in temporary breathing impairment for asthmatic children and adults who are active outdoors. Short-term exposures of asthmatic individuals to elevated SO₂ levels during moderate activity may result in breathing difficulties that can be accompanied by symptoms such as wheezing, chest tightness, or shortness of breath. Other effects that have been associated with longer-term exposures to high concentrations of SO₂, in conjunction with high levels of PM, include aggravation of existing cardiovascular disease, respiratory illness, and alterations in the lungs' defenses. SO₂ also is a major precursor to PM_{2.5}, which is a significant health concern and a main contributor to poor visibility. In humid atmospheres, sulfur oxides can react with vapor to produce sulfuric acid, a component of acid rain.

The CARB found SO₂ standards in the Kings County as unclassified/attainment for Federal standards and attainment for State standards.

2.6.6 Lead (Pb)

Lead, a naturally occurring metal, can be a constituent of air, water, and the biosphere. Lead is neither created nor destroyed in the environment, so it essentially persists forever. Lead was used until recently to increase the octane rating in automobile fuel. Since the 1980s, lead has been phased out in gasoline, reduced in drinking water, reduced in industrial air pollution, and banned or limited in consumer products. Gasoline-powered automobile engines were a major source of airborne lead through the use of leaded fuels; however, the use of leaded fuel has been mostly phased out. Since this has occurred the ambient concentrations of lead have dropped dramatically.

Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food, water, soil, or dust. It accumulates in the blood, bones, and soft tissues and can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to lead may cause neurological impairments such as seizures, mental retardation, and behavioral disorders. Even at low doses, lead exposure is associated with damage to the nervous systems of fetuses and young children. Effects on the nervous systems of children are one of the primary health risk concerns from lead. In high concentrations, children can even suffer irreversible brain damage and death. Children 6 years old and under are most at risk, because their bodies are growing quickly.

The CARB found Lead standards in Kings County as unclassified/attainment of Federal standards and attainment for State standards.

2.6.7 Toxic Air Contaminants (TAC)

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TAC) are another



group of pollutants of concern. TAC are injurious in small quantities and are regulated despite the absence of criteria documents. The identification, regulation and monitoring of TAC is relatively recent compared to that for criteria pollutants. Unlike criteria pollutants, TAC are regulated on the basis of risk rather than specification of safe levels of contamination. The ten TAC are acetaldehyde, benzene, 1,3-butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter (diesel PM). Caltrans' guidance for transportation studies references the Federal Highway Administration (FHWA) memorandum titled "Interim Guidance on Air Toxic Analysis in NEPA Documents" which discusses emissions quantification of six "priority" compounds of 21 Mobile Source Air Toxics (MSAT) identified by the United States Environmental Protection Agency (USEPA). The six "priority" compounds are diesel exhaust (particulate matter and organic gases), benzene, 1,3-butadiene, acetaldehyde, formaldehyde, and acrolein.

Some studies indicate that diesel PM poses the greatest health risk among the TAC listed above. A 10-year research program (California Air Resources Board 1998) demonstrated that diesel PM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to diesel PM poses a chronic health risk. In addition to increasing the risk of lung cancer, exposure to diesel exhaust can have other health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. Diesel exhaust is a major source of fine particulate pollution as well, and studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems.

Diesel PM differs from other TAC in that it is not a single substance but a complex mixture of hundreds of substances. Although diesel PM is emitted by diesel-fueled, internal combustion engines, the composition of the emissions varies, depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present. Unlike the other TAC, however, no ambient monitoring data are available for diesel PM because no routine measurement method currently exists. The CARB has made preliminary concentration estimates based on a diesel PM exposure method. This method uses the CARB emissions inventory's PM10 database, ambient PM10 monitoring data, and the results from several studies to estimate concentrations of diesel PM. Table 4 depicts the CARB Handbook's recommended buffer distances associated with various types of common sources.

Existing air quality concerns within Hanford and the entire SJVAB are related to increases of regional criteria air pollutants (e.g., ozone and particulate matter), exposure to toxic air contaminants, odors, and increases in greenhouse gas emissions contributing to climate change. The primary source of ozone (smog) pollution is motor vehicles. Particulate matter is caused by dust, primarily dust generated from construction and grading activities, and smoke which is emitted from fireplaces, wood-burning stoves, and agricultural burning.

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TABLE 4

Recommendations on Siting New Sensitive Land Uses Such As Residences, Schools, Daycare Centers, Playgrounds, or Medical Facilities*

SOURCE CATEGORY	ADVISORY RECOMMENDATIONS
Freeways and High-Traffic Roads ¹	- Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
Distribution Centers	- Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). - Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	- Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. - Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	- Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the ARB on the status of pending analyses of health risks.
Refineries	- Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	- Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloroethylene	- Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. - Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations.
Gasoline Dispensing Facilities	- Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50 foot separation is recommended for typical gas dispensing facilities.

1: The recommendation to avoid siting new sensitive land uses within 500 feet of a freeway was identified in CARB's Air Quality and Land Use Handbook published in 2005. CARB recently published a technical advisory to the Air Quality and Land Use Handbook indicating that new research has demonstrated promising strategies to reduce pollution exposure along transportation corridors.

*Notes:

- These recommendations are advisory. Land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.
- Recommendations are based primarily on data showing that the air pollution exposures addressed here (i.e., localized) can be reduced as much as 80% with the recommended separation.
- The relative risk for these categories varies greatly (see Table 1-2). To determine the actual risk near a particular facility, a site-specific analysis would be required. Risk from diesel PM will decrease over time as cleaner technology phases in.
- These recommendations are designed to fill a gap where information about existing facilities may not be readily available and are not designed to substitute for more specific information if it exists. The recommended distances take into account other factors in addition to available health risk data (see individual category descriptions).
- Site-specific project design improvements may help reduce air pollution exposures and should also be considered when siting new sensitive land uses.
- This table does not imply that mixed residential and commercial development in general is incompatible. Rather it focuses on known problems like dry cleaners using perchloroethylene that can be addressed with reasonable preventative actions.
- A summary of the basis for the distance recommendations can be found in the ARB Handbook: Air Quality and Land Use Handbook: A Community Health Perspective.

Source: SJVAPCD 2021



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These rules and standards provide for:

- More stringent emission standards for some new urban bus engines, beginning with 2002 model year engines.
- Zero-emission bus demonstration and purchase requirements applicable to transit agencies
- Reporting requirements under which transit agencies must demonstrate compliance with the urban transit bus fleet rule.

AB 1493 (Pavley)

AB 1493 (Pavley) enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce greenhouse gases emitted by passenger vehicles and light duty trucks. Regulations adopted by CARB would apply to 2009 and later model year vehicles. CARB estimated that the regulation would reduce climate change emissions from light duty passenger vehicles by an estimated 18 percent in 2020 and by 27 percent in 2030 [Association of Environmental Professionals (AEP) 2007]]. In 2005, the CARB requested a waiver from U.S. EPA to enforce the regulation, as required under the CAA. Despite the fact that no waiver had ever been denied over a 40-year period, the then Administrator of the EPA sent Governor Schwarzenegger a letter in December 2007, indicating he had denied the waiver. On March 6, 2008, the waiver denial was formally issued in the Federal Register. Governor Schwarzenegger and several other states immediately filed suit against the federal government to reverse that decision. On January 21, 2009, CARB requested that EPA reconsider denial of the waiver. EPA scheduled a re-hearing on March 5, 2009. On June 30, 2009, EPA granted a waiver of CAA preemption to California for its greenhouse gas emission standards for motor vehicles beginning with the 2009 model year.

Assembly Bill 32 (California Global Warming Solutions Act of 2006)

California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500 - 38599). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 required that statewide GHG emissions be reduced to 1990 levels by 2020. December 31, 2020 is the deadline for achieving the 2020 GHG emissions cap. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires CARB to adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrived at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that

California Global Warming Solutions Act of 2006: emissions limit, or SB 32

SB 32 is a California Senate bill expanding upon AB 32 to reduce greenhouse gas (GHG) emissions. The lead author is Senator Fran Pavley and the principal co-author is Assembly member Eduardo Garcia. SB 32 was signed into law on September 8, 2016, by Governor Brown. SB 32 sets into law the mandated reduction target in GHG emissions as written into Executive Order B-30-15. SB 32 requires that there be a reduction in GHG emissions to 40% below the 1990 levels by 2030. Greenhouse gas emissions include carbon dioxide, methane, nitrous oxide, sulfur hexafluoride, hydrofluorocarbons, and perfluorocarbons. The California Air Resources Board (CARB) is responsible for ensuring that California meets this goal. The provisions of SB 32 were added to Section 38566 of the Health and Safety Code subsequent to the bill's approval. The bill went into effect January 1, 2017. SB 32 builds onto Assembly Bill (AB) 32 written by Senator Fran Pavley and Assembly Speaker Fabian Nunez passed into law on September 27, 2006. AB 32 required California to reduce greenhouse gas emissions to 1990 levels by 2020 and SB 32 continues that timeline to reach the targets set in Executive Order B-30-15. SB 32 provides another intermediate target between the 2020 and 2050 targets set in Executive Order S-3-05.

1.2.5 Regional Agencies

✓ San Joaquin Valley Air Pollution Control District

The SJVAPCD is the agency responsible for monitoring and regulating air pollutant emissions from stationary, area, and indirect sources within Kings County and throughout the SJVAB. The District also has responsibility for monitoring air quality and setting and enforcing limits for source emissions. CARB is the agency with the legal responsibility for regulating mobile source emissions. The District is precluded from such activities under State law.

The District was formed in mid-1991 and prepared and adopted the San Joaquin Valley Air Quality Attainment Plan (AQAP), dated January 30, 1992, in response to the requirements of the State CCAA. The CCAA requires each non-attainment district to reduce pertinent air contaminants by at least five percent (5%) per year until new, more stringent, 1988 State air quality standards are met.

Activities of the SJVAPCD include the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations concerning sources of air pollution, issuance of permits for stationary sources of air pollution, inspection of stationary sources of air pollution and response to citizen complaints, monitoring of ambient air quality and meteorological conditions, and implementation of programs and regulations required by the FCAA and CCAA.

The SJVAPCD has prepared the following State Implementation Plans to address ozone, PM-10 and PM2.5 that currently apply to non-attainment areas:



ground cover.

2. All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
3. All land clearing, grubbing, scraping, excavation, land leveling, grading, cut & fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.
4. When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.
5. All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.
6. Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.
7. Within urban areas, track out shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday.

Rule 8021 – Construction, Demolition, Excavation, and Other Earthmoving Activities

District Rule 8021 requires owners or operators of construction projects to submit a Dust Control Plan to the District if at any time the project involves non-residential developments of five or more acres of disturbed surface area or moving, depositing, or relocating of more than 2,500 cubic yards per day of bulk materials on at least three days of the project. The proposed Project will meet these criteria and will be required to submit a Dust Control Plan to the District in order to comply with this rule.

Rule 4641 – Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations

If asphalt paving will be used, then paving operations of the proposed Project will be subject to Rule 4641. This rule applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations.

Rule 9510 – Indirect Source Review (ISR)

The purpose of this rule is to fulfill the District's emission reduction commitments in the PM10 and Ozone Attainment Plans, achieve emission reductions from construction activities, and to provide a mechanism for reducing emissions from the construction of and use of development projects through off-site measures. The rule is expected to reduce nitrogen oxides and particulates throughout the San Joaquin Valley by more than 10 tons per day.

2.0 Environmental Setting

This section describes existing air quality within the San Joaquin Valley Air Basin and in Kings County, including the identification of air pollutant standards, meteorological and topological conditions affecting air quality, and current air quality conditions. Air quality is described in relation to ambient air quality standards for criteria pollutants such as, ozone, carbon monoxide, and particulate matter. Air quality can be directly affected by the type and density of land use change and population growth in urban and rural areas.

2.1 Geographical Location

The SJVAB is comprised of eight counties: Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare. Encompassing 24,840 square miles, the San Joaquin Valley is the second largest air basin in California. Cumulatively, counties within the Air Basin represent approximately 16 percent of the State's geographic area. The Air Basin is bordered by the Sierra Nevada Mountains on the east (8,000 to 14,492 feet in elevation), the Coastal Range on the west (4,500 feet in elevation), and the Tehachapi Mountains on the south (9,000 feet elevation). The San Joaquin Valley is open to the north extending to the Sacramento Valley Air Basin.

2.2 Topographic Conditions

Kings County is located within the San Joaquin Valley Air Basin [as determined by the California Air Resources Board (CARB)]. Air basins are geographic areas sharing a common "air shed." A description of the Air Basin in the County, as designated by CARB, is provided in the paragraph below. Air pollution is directly related to the region's topographic features, which impact air movement within the Basin.

Wind patterns within the SJVAB result from marine air that generally flows into the Basin from the San Joaquin River Delta. The Coastal Range hinders wind access into the Valley from the west, the Tehachapi's prevent southerly passage of airflow, and the high Sierra Nevada Mountain Range provides a significant barrier to the east. These topographic features result in weak airflow that becomes restricted vertically by high barometric pressure over the Valley. As a result, the SJVAB is highly susceptible to pollutant accumulation over time. Most of the surrounding mountains are above the normal height of summer inversion layers (1,500-3,000 feet).

2.3 Climate Conditions

Hanford is located in one of the most polluted air basins in the country. Temperature inversions can trap air within the Valley, thereby preventing the vertical dispersal of air pollutants. In addition to topographic conditions, the local climate can also contribute to air quality problems. Climate in Hanford is characterized by warm, dry summers and cool winters with significant Tule fog.

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low-level temperature inversions and very stable air conditions. This situation leads to the San Joaquin Valley's famous Tule Fogs. The formation of natural fog is caused by local cooling of the atmosphere until it is saturated (dew point temperature). This type of fog, known as radiation fog is more likely to occur inland. Cooling may also be accomplished by heat radiation losses or by horizontal movement of a mass of air over a colder surface. This second type of fog, known as advection fog, generally occurs along the coast.

Conditions favorable to fog formation are also conditions favorable to high concentrations of CO and PM10. Ozone levels are low during these periods because of the lack of sunlight to drive the photochemical reaction. Maximum CO concentrations tend to occur on clear, cold nights when a strong surface inversion is present and large numbers of fireplaces are in use. A secondary peak in CO concentrations occurs during morning commute hours when a large number of motorists are on the road and the surface inversion has not yet broken.

The water droplets in fog, however, can act as a sink for CO and nitrogen oxides (NO_x), lowering pollutant concentrations. At the same time, fog could help in the formation of secondary particulates such as ammonium sulfate. These secondary particulates are believed to be a significant contributor of winter season violations of the PM10 and PM2.5 standards.

2.4 Anthropogenic (Man-made) Sources

In addition to climatic conditions (wind, lack of rain, etc.), air pollution can be caused by anthropogenic or man-made sources. Air pollution in the SJVAB can be directly attributed to human activities, which cause air pollutant emissions. Human causes of air pollution in the Valley consist of population growth, urbanization (gas-fired appliances, residential wood heaters, etc.), mobile sources (i.e., cars, trucks, airplanes, trains, etc.), oil production, agriculture, and other socioeconomic activities. The most significant factors, which are accelerating the decline of air quality in the SJVAB, are the Valley's rapid population growth and its associated increases in traffic, urbanization, and industrial activity.

Carbon monoxide emissions overwhelmingly come from mobile sources in the San Joaquin Valley; on-road vehicles contributed 34 percent, while other mobile vehicles, such as trains, planes, and off-road vehicles, contribute another 20 percent in 2012 according to emission projections from the CARB. Motor vehicles account for significant portions of regional gaseous and particulate emissions. Local large employers such as industrial plants can also generate substantial regional gaseous and particulate emissions. In addition, construction and agricultural activities can generate significant temporary gaseous and particulate emissions (dust, ash, smoke, etc.).

Ozone is the result of a photochemical reaction between Oxides of nitrogen (NO_x) and Reactive Organic Gases (ROG). Mobile sources contribute 84 percent of all NO_x emitted from anthropogenic sources based on data provided in Appendix B of the Air District's 2016 Ozone

2.4.2 Other Sources of Air Pollution

Other sources may not seem to fit into any one of the major categories or they may seem to fit in a number of them. These could include agricultural uses, dirt roads, animal shelters, animal feed lots, chemical plants and industrial waste disposal, which may be a source of dust, odors, or other pollutants. For Hanford, this category includes several agriculturally related activities, such as plowing, harvesting, dusting with herbicides and pesticides and other related activities.

2.4.3 Industrial Plants

Industrial contaminants and their potential to produce various effects depend on the size and type of industry, pollution controls, local topography, and meteorological conditions. Major sources of industrial emissions in Kings County consist of agricultural production and processing operations.

2.5 San Joaquin Valley Air Basin Monitoring

SJVAPCD and the CARB maintain numerous air quality monitoring sites throughout each County in the Air Basin to measure ozone, PM_{2.5}, and PM₁₀. It is important to note that the federal ozone 1-hour standard was revoked by the EPA and is no longer applicable for federal standards. The closest monitoring station to the Project is located at the Hanford's S Irwin Street Monitoring Station. The station monitors particulates, ozone, carbon monoxide, and nitrogen dioxide. Monitoring data for the past three years is summarized in Table 2.

Table 3 identifies the Kings County's attainment status. As indicated, the SJVAB is nonattainment for Ozone (1 hour and 8 hour) and PM. In accordance with the FCAA, EPA uses the design value at the time of standard promulgation to assign nonattainment areas to one of several classes that reflect the severity of the nonattainment problem; classifications range from marginal nonattainment to extreme nonattainment. The FCAA contains provisions for changing the classifications using factors such as clean air progress rates and requests from States to move areas to a higher classification.

On April 16, 2004 EPA issued a final rule classifying the SJVAB as extreme nonattainment for Ozone, effective May 17, 2004 (69 FR 20550). The (federal) 1-hour ozone standard was revoked on June 6, 2005. However, many of the requirements in the 1-hour attainment plan (SIP) continue to apply to the SJVAB. The current ozone plan is the (federal) 8-hour ozone plan adopted in 2007. The SJVAB was reclassified from a "serious" nonattainment area for the 8-hour ozone standard to "extreme" effective June 4, 2010.

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Table 3
Air Quality Attainment Status

Pollutant	Federal Standard	State Standard
Ozone - 1 Hour	Revoked in 2005	Nonattainment/Severe
Ozone - 8 Hour	Nonattainment/Extreme	No State Standard
PM10	Attainment	Nonattainment
PM2.5	Nonattainment	Nonattainment
Carbon Monoxide	Unclassified/Attainment	Unclassified
Nitrogen Dioxide	Unclassified/Attainment	Attainment
Sulfur Dioxide	Unclassified/Attainment	Attainment
Lead (Particulate)	Unclassified/Attainment	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified

Source: CARB Website, 2021

a Though the Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).

Notes:

National Designation Categories

Non-Attainment Area: Any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.

Unclassified/Attainment Area: Any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant or meets the national primary or secondary ambient air quality standard for the pollutant.

State Designation Categories

Unclassified: A pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or non attainment.

Attainment: A pollutant is designated attainment if the State standard for that pollutant was not violated at any site in the area during a three year period.

Non attainment: A pollutant is designated non attainment if there was at least one violation of a State standard for that pollutant in the area.

Non Attainment/Transitional: A subcategory of the non attainment designation. An area is designated non attainment/transitional to signify that the area is close to attaining the standard for the pollutant.

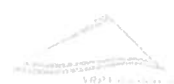
Ozone is a regional air pollutant. It is generated over a large area and is transported and spread by wind. Ozone, the primary constituent of smog, is the most complex, difficult to control, and pervasive of the criteria pollutants. Unlike other pollutants, ozone is not emitted directly into the air by specific sources. Ozone is created by sunlight acting on other air pollutants (called precursors), specifically NO_x and ROG. Sources of precursor gases to the photochemical reaction that form ozone number in the thousands. Common sources include consumer products, gasoline vapors, chemical solvents, and combustion products of various fuels. Originating from gas stations, motor vehicles, large industrial facilities, and small businesses such as bakeries and dry cleaners, the ozone-forming chemical reactions often take place in another location, catalyzed by sunlight and heat. High ozone concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins. Approximately 50 million people lived in counties with air quality levels above the EPA's health-based national air quality standard in 1994. The highest levels of ozone were recorded in Los Angeles, closely followed by the San Joaquin Valley. High levels also persist in other heavily populated areas, including the Texas Gulf Coast and much of the Northeast.

While the ozone in the upper atmosphere absorbs harmful ultraviolet light, ground-level ozone is damaging to the tissues of plants, animals, and humans, as well as to a wide variety of inanimate materials such as plastics, metals, fabrics, rubber, and paints. Societal costs from ozone damage include increased medical costs, the loss of human and animal life, accelerated replacement of industrial equipment, and reduced crop yields.

Health Effects

While ozone in the upper atmosphere protects the earth from harmful ultraviolet radiation, high concentrations of ground-level ozone can adversely affect the human respiratory system. Many respiratory ailments, as well as cardiovascular disease, are aggravated by exposure to high ozone levels. Ozone also damages natural ecosystems, such as: forests and foothill communities; agricultural crops; and some man-made materials, such as rubber, paint, and plastic. High levels of ozone may negatively affect immune systems, making people more susceptible to respiratory illnesses, including bronchitis and pneumonia. Ozone accelerates aging and exacerbates pre-existing asthma and bronchitis and, in cases with high concentrations, can lead to the development of asthma in active children. Active people, both children and adults, appear to be more at risk from ozone exposure than those with a low level of activity. Additionally, the elderly and those with respiratory disease are also considered sensitive populations for ozone.

People who work or play outdoors are at a greater risk for harmful health effects from ozone. Children and adolescents are also at greater risk because they are more likely than adults to spend time engaged in vigorous activities. Research indicates that children under 12 years of age spend nearly twice as much time outdoors daily than adults. Teenagers spend at least twice as much time as adults in active sports and outdoor activities. In addition, children



the 2007 Ozone Plan and strives to bring the valley into attainment status for the 1997 NAAQS for PM_{2.5}. The District's 2012 PM_{2.5} Plan provides multiple control strategies to reduce emissions of PM_{2.5} and other pollutants that form PM_{2.5}. The plan's comprehensive control strategy includes regulatory actions, incentive programs, technology advancement, policy and legislative positions, public outreach, participation and communication, and additional strategies.

Health Effects

PM₁₀ and PM_{2.5} particles are small enough—about one-seventh the thickness of a human hair, or smaller—to be inhaled and lodged in the deepest parts of the lung where they evade the respiratory system's natural defenses. Health problems begin as the body reacts to these foreign particles. Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases, heart and lung disease, and coughing, bronchitis, and respiratory illnesses in children. Recent mortality studies have shown a statistically significant direct association between mortality and daily concentrations of particulate matter in the air. Non-health-related effects include reduced visibility and soiling of buildings. PM₁₀ can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. PM₁₀ and PM_{2.5} can aggravate respiratory disease and cause lung damage, cancer, and premature death.

Although particulate matter can cause health problems for everyone, certain people are especially vulnerable to adverse health effects of PM₁₀. These "sensitive populations" include children, the elderly, exercising adults, and those suffering from chronic lung disease such as asthma or bronchitis. Of greatest concern are recent studies that link PM₁₀ exposure to the premature death of people who already have heart and lung disease, especially the elderly. Acidic PM₁₀ can also damage manmade materials and is a major cause of reduced visibility in many parts of the United States.

The CARB found PM₁₀ standards in Kings County in attainment of Federal standards and nonattainment for State standards. The CARB found PM_{2.5} standards in Kings County nonattainment of Federal and State standards.

2.5.3 Carbon Monoxide (CO)

Carbon monoxide (CO) is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. CO is an odorless, colorless, poisonous gas that is highly reactive. CO is a byproduct of motor vehicle exhaust, contributes more than two thirds of all CO emissions nationwide. In cities, automobile exhaust can cause as much as 95 percent of all CO emissions. These emissions can result in high concentrations of CO, particularly in local areas with heavy traffic congestion. Other sources of CO emissions include industrial processes and fuel combustion in sources such as boilers and incinerators. Despite an overall

See the ozone section above for a discussion of the health effects of ozone.

Direct inhalation of NO_x can also cause a wide range of health effects. NO_x can irritate the lungs, cause lung damage, and lower resistance to respiratory infections such as influenza. Short-term exposures (e.g., less than 3 hours) to low levels of nitrogen dioxide (NO₂) may lead to changes in airway responsiveness and lung function in individuals with preexisting respiratory illnesses. These exposures may also increase respiratory illnesses in children. Long-term exposures to NO₂ may lead to increased susceptibility to respiratory infection and may cause irreversible alterations in lung structure. Other health effects associated with NO_x are an increase in the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO₂ may lead to eye and mucus membrane aggravation, along with pulmonary dysfunction. NO_x can cause fading of textile dyes and additives, deterioration of cotton and nylon, and corrosion of metals due to production of particulate nitrates. Airborne NO_x can also impair visibility. NO_x is a major component of acid deposition in California. NO_x may affect both terrestrial and aquatic ecosystems. NO_x in the air is a potentially significant contributor to a number of environmental effects such as acid rain and eutrophication in coastal waters. Eutrophication occurs when a body of water suffers an increase in nutrients that reduce the amount of oxygen in the water, producing an environment that is destructive to fish and other animal life.

NO₂ is toxic to various animals as well as to humans. Its toxicity relates to its ability to combine with water to form nitric acid in the eye, lung, mucus membranes, and skin. Studies of the health impacts of NO₂ include experimental studies on animals, controlled laboratory studies on humans, and observational studies.

In animals, long-term exposure to NO_x increases susceptibility to respiratory infections, lowering their resistance to such diseases as pneumonia and influenza. Laboratory studies show susceptible humans, such as asthmatics, exposed to high concentrations of NO₂, can suffer lung irritation and, potentially, lung damage. Epidemiological studies have also shown associations between NO₂ concentrations and daily mortality from respiratory and cardiovascular causes as well as hospital admissions for respiratory conditions.

NO_x contributes to a wide range of environmental effects both directly and when combined with other precursors in acid rain and ozone. Increased nitrogen inputs to terrestrial and wetland systems can lead to changes in plant species composition and diversity. Similarly, direct nitrogen inputs to aquatic ecosystems such as those found in estuarine and coastal waters can lead to eutrophication as discussed above. Nitrogen, alone or in acid rain, also can acidify soils and surface waters. Acidification of soils causes the loss of essential plant nutrients and increased levels of soluble aluminum, which is toxic to plants. Acidification of surface waters creates conditions of low pH and levels of aluminum that are toxic to fish and other aquatic organisms.

The CARB found NO₂ standards in Kings County as unclassified/attainment of Federal standards and attainment for State standards.



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group of pollutants of concern. TAC are injurious in small quantities and are regulated despite the absence of criteria documents. The identification, regulation and monitoring of TAC is relatively recent compared to that for criteria pollutants. Unlike criteria pollutants, TAC are regulated on the basis of risk rather than specification of safe levels of contamination. The ten TAC are acetaldehyde, benzene, 1,3-butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter (diesel PM). Caltrans' guidance for transportation studies references the Federal Highway Administration (FHWA) memorandum titled "Interim Guidance on Air Toxic Analysis in NEPA Documents" which discusses emissions quantification of six "priority" compounds of 21 Mobile Source Air Toxics (MSAT) identified by the United States Environmental Protection Agency (USEPA). The six "priority" compounds are diesel exhaust (particulate matter and organic gases), benzene, 1,3-butadiene, acetaldehyde, formaldehyde, and acrolein.

Some studies indicate that diesel PM poses the greatest health risk among the TAC listed above. A 10-year research program (California Air Resources Board 1998) demonstrated that diesel PM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to diesel PM poses a chronic health risk. In addition to increasing the risk of lung cancer, exposure to diesel exhaust can have other health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. Diesel exhaust is a major source of fine particulate pollution as well, and studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems.

Diesel PM differs from other TAC in that it is not a single substance but a complex mixture of hundreds of substances. Although diesel PM is emitted by diesel-fueled, internal combustion engines, the composition of the emissions varies, depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present. Unlike the other TAC, however, no ambient monitoring data are available for diesel PM because no routine measurement method currently exists. The CARB has made preliminary concentration estimates based on a diesel PM exposure method. This method uses the CARB emissions inventory's PM10 database, ambient PM10 monitoring data, and the results from several studies to estimate concentrations of diesel PM. Table 4 depicts the CARB Handbook's recommended buffer distances associated with various types of common sources.

Existing air quality concerns within Hanford and the entire SJVAB are related to increases of regional criteria air pollutants (e.g., ozone and particulate matter), exposure to toxic air contaminants, odors, and increases in greenhouse gas emissions contributing to climate change. The primary source of ozone (smog) pollution is motor vehicles. Particulate matter is caused by dust, primarily dust generated from construction and grading activities, and smoke which is emitted from fireplaces, wood-burning stoves, and agricultural burning.

2.6.8 Odors

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air.

When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The SJVAPCD has identified some common types of facilities that have been known to produce odors in the SJVAB. The types of facilities that are known to produce odors are shown in Table 5 along with a reasonable distance from the source within which, the degree of odors could possibly be significant. The Project does not propose any uses that would be potential odor sources; however, the information presented in Table 5 will be used as a screening level analysis to determine if the Project would be impacted by existing odor sources in the study area. Such information is presented for informational purposes, but it is noted that the environment's effect on the Project, including exposure to potential odors, would not be an impact for CEQA purposes.

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TABLE 5
Screening Levels for Potential Odor Sources

Type of Facility	Distance
Wastewater Treatment Facilities	2 miles
Sanitary Landfill	1 mile
Transfer Station	1 mile
Compositing Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations (e.g. auto body shops)	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Rendering Plant	1 mile

Source: SJVAPCD 2021

2.6.9 Naturally Occurring Asbestos (NOA)

Asbestos is a term used for several types of naturally occurring fibrous minerals found in many parts of California. The most common type of asbestos is chrysotile, but other types are also found in California. Asbestos is commonly found in ultramafic rock and near fault zones. The amount of asbestos that is typically present in these rocks' ranges from less than 1% up to approximately 25% and sometimes more. It is released from ultramafic rock when it is broken or crushed. This can happen when cars drive over unpaved roads or driveways, which are surfaced with these rocks, when land is graded for building purposes, or at quarrying operations. Asbestos is also released naturally through weathering and erosion. Once released from the rock, asbestos can become airborne and may stay in the air for long periods of time. Asbestos is hazardous and can cause lung disease and cancer dependent upon the level of exposure. The longer a person is exposed to asbestos and the greater the intensity of the exposure, the greater the chances for a health problem.

The proposed Project's construction phase may cause asbestos to become airborne due to the construction activities that will occur on site. The Project would be required to submit a Dust Control Plan under the SJVAPCD's Rule 8021.

2.6.10 Greenhouse Gas Emissions

Gases that trap heat in the atmosphere are often called greenhouse gases. Some greenhouse gases such as carbon dioxide occur naturally and are emitted to the atmosphere through natural processes and human activities. Other greenhouse gases (e.g., fluorinated gases) are created and emitted solely through human activities. The principal greenhouse gases that enter the



atmosphere because of human activities are:

- ✓ **Carbon Dioxide (CO₂):** Carbon dioxide enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and also as a result of other chemical reactions (e.g., manufacture of cement, asphalt paving, truck trips). Carbon dioxide is also removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.
- ✓ **Methane (CH₄):** Methane is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and by the decay of organic waste in municipal solid waste landfills.
- ✓ **Nitrous Oxide (N₂O):** Nitrous oxide is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.
- ✓ **Fluorinated Gases:** Hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride are synthetic, powerful greenhouse gases that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for ozone-depleting substances (i.e., CFCs, HCFCs, and halons). These gases are typically emitted in smaller quantities, but because they are potent greenhouse gases, they are sometimes referred to as High Global Warming Potential gases ("High GWP gases").

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3.0 Air-Quality Impacts

3.1 Methodology

The impact assessment for air quality focuses on potential effects the Project might have on air quality within the Hanford region. The SJVAPCD has established thresholds of significance for determining environmental significance. These thresholds separate a project's short-term emissions from its long-term emissions. The short-term emissions are mainly related to the construction phase of a project, which are recognized to be short in duration. The long-term emissions are primarily related to the activities that will occur indefinitely as a result of Project operations. Impacts will be evaluated both on the basis of CEQA Appendix G criteria and SJVAPCD significance criteria. The impacts to be evaluated will be those involving construction and operational emissions of criteria pollutants. The SJVAPCD has established thresholds for certain pollutants shown in Table 6.

Table 6
SJVAPCD Air Quality Thresholds of Significance

Project Type	Ozone Precursor Emissions (tons/year)					
	CO	NO _x	ROG	SO _x	PM ₁₀	PM _{2.5}
Construction Emissions	100	10	10	27	15	15
Operational Emissions (Permitted Equipment and Activities)	100	10	10	27	15	15
Operational Emissions (Non-Permitted Equipment and Activities)	100	10	10	27	15	15

Source: SJVAPCD 2020

3.1.1 CalEEMod

CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects. The model quantifies direct emissions from construction and operations (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use.

The model is an accurate and comprehensive tool for quantifying air quality impacts from land use projects throughout California. The model can be used for a variety of situations where an air quality analysis is necessary or desirable such as CEQA and NEPA documents, pre-project planning, compliance with local air quality rules and regulations, etc.



3.2 Short-Term Impacts

Short-term impacts are mainly related to the construction phase of a project and are recognized to be short in duration. Construction air quality impacts are generally attributable to dust and exhaust pollutants generated by equipment and vehicles. Fugitive dust is emitted both during construction activity and as a result of wind erosion over exposed earth surfaces. Clearing and earth moving activities do comprise major sources of construction dust emissions, but traffic and general disturbances of soil surfaces also generate significant dust emissions. Further, dust generation is dependent on soil type and soil moisture. Exhaust pollutants are the non-useable gaseous waste products produced during the combustion process. Engine exhaust contains CO, HC, and NOx pollutants which are harmful to the environment.

Adverse effects of construction activities cause increased dust-fall and locally elevated levels of total suspended particulate. Dust-fall can be a nuisance to neighboring properties or previously completed developments surrounding or within the Project area and may require frequent washing during the construction period.

PM10 emissions can result from construction activities of the Project. The SJVAPCD has determined that compliance with Regulation VIII and other control measures will constitute sufficient mitigation to reduce PM10 impacts to a level considered less-than significant for most development projects. Even with implementation of District Regulation VIII and District Rule 9510, large development projects may not be able to reduce project specific construction impacts below District thresholds of significance.

Ozone precursor emissions are also an impact of construction activities and can be quantified through calculations. Numerous variables factored into estimating total construction emission include: level of activity, length of construction period, number of pieces and types of equipment in use, site characteristics, weather conditions, number of construction personnel, and amount of materials to be transported onsite or offsite. Additional exhaust emissions would be associated with the transport of workers and materials. Because the specific mix of construction equipment is not presently known for this Project, construction emissions were estimated using CalEEMod Model defaults for construction equipment.

Table 7 shows the CalEEMod estimated construction emissions that would be generated from construction of the Project. Results of the analysis show that emissions generated from construction of the Project will not exceed the SJVAPCD emission thresholds.

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Table 7
Project Construction Emissions (tons/year)

Summary Report	CO	NO _x	ROG	SO _x	PM ₁₀	PM _{2.5}	CO ₂ e
Project Construction Emissions (tons)	2.81	3.09	2.79	0.01	0.66	0.34	497.88
SJVAPCD Level of Significance	100	10	10	27	15	15	None
Does the Project Exceed Standard?	No	No	No	No	No	No	No

Source: CalEEMod, VRPA 2021

3.3 Long-Term Emissions

Long-Term emissions from the Project would be generated primarily by mobile source (vehicle) emissions from the Project site and area sources such as lawn maintenance equipment.

3.3.1 Localized Operational Emissions – Ozone/Particulate Matter

Significance criteria have been established for criteria pollutant emissions as documented in Section 3.1. Operational emissions have been estimated for the Project using the CalEEMod Model and detailed results are included in Appendix A of this report.

Results of the CalEEMod analysis are shown in Table 8. Results indicate that the annual operational emissions from the Project will be less than the SJVAPCD emission thresholds for criteria pollutants.

Table 8
Project Operational Emissions (tons/year)

Summary Report	CO	NO _x	ROG	SO _x	PM ₁₀	PM _{2.5}	CO ₂ e
Project Operational Emissions	7.89	1.63	2.17	0.02	1.66	0.47	2063.63
SJVAPCD Level of Significance	100	10	10	27	15	15	None
Does the Project Exceed Standard?	No	No	No	No	No	No	No

Source: CalEEMod, VRPA 2021

As noted previously, the Project will be subject to the SJVAPCD's Regulation VIII-Fugitive PM₁₀ Prohibitions. Regulation VIII is comprised of District Rules 8011 through 8081, which are designed to reduce PM₁₀ emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and track out, landfill operations, etc.

3.3.2 Localized Operational Emissions

Carbon Monoxide

The SJVAPCD is currently in unclassified/attainment for Federal standards and attainment for



State standards for CO. An analysis of localized CO concentrations is typically warranted to ensure that standards are maintained. Segment counts in the immediate vicinity of the Project site along 13th Avenue and Grangeville Boulevard were obtained from the City of Hanford traffic counts which are typically updated every three years. Daily traffic counts along 13th Avenue and Grangeville Boulevard (see appendices) were adjusted to reflect 2021 and 2042 traffic and conditions. Adjusted counts were then compared to the Modified HCM-Based Level of Service (LOS) Tables (Florida Tables). Results of this analysis demonstrates that adjacent roadway segment will operate at LOS 'D' or better through the Year 2042. As a result, the overall CO concentrations at roadways and intersections in the study area would be less than significant.

✓ Toxic Air Contaminants (TAC)

The SJVAPCD's Guidance Document, Guidance for Assessing and Mitigating Air Quality Impacts – 2015, identifies the need for projects to analyze the potential for adverse air quality impacts to sensitive receptors. Sensitive receptors refer to those segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems affected by air quality). Land uses that have the greatest potential to attract these types of sensitive receptors include schools, parks, playgrounds, daycare centers, nursing homes, hospitals, and residential communities. From a health risk perspective, the proposed Project is a Type B project in that it may potentially place sensitive receptors in the vicinity of existing sources. Type A projects would potentially place new toxic sources in the vicinity of existing receptors. Considering the components of the Project and the Source Categories provided in Table 4, the proposed Project is not a Type A project and would not place new toxic sources in the vicinity of existing sources.

The first step in evaluating the potential for impacts to sensitive receptors for TAC's from the Project is to perform a screening level analysis. For Type B Projects, one type of screening tool is found in the CARB Handbook: Air Quality and Land Use Handbook: A Community Perspective. This handbook includes a table (depicted in Table 4) with recommended buffer distances associated with various types of common sources. The screening level analysis for the Project shows that TAC's are not a concern based upon the recommendations provided in Table 4. An evaluation of nearby land uses shows that the Project will not place sensitive receptors in the vicinity of existing toxic sources. Since the Project is not located within the recommended buffer distances associated with the sources found in Table 4, a health risk assessment is not needed at this time. As noted above, the proposed Project is not a Type A project and would not place new toxic sources in the vicinity of existing sources.

✓ Odors

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

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Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word “strong” to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air.

When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

While offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and the SJVAPCD. Any project with the potential to frequently expose members of the public to objectionable odors should be deemed to have a significant impact.

The SJVAPCD requires that an analysis of potential odor impacts be conducted for the following two situations:

- Generators – projects that would potentially generate odorous emissions proposed to be located near existing sensitive receptors or other land uses where people may congregate, and
- Receivers – residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources.

The Project will not generate odorous emissions given the nature or characteristics of the Project. The intensity of an odor source’s operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The SJVAPCD has identified some common types of facilities that have been known to produce odors in the SJV Air Basin. The types of facilities that are known to produce odors are shown in Table 5 above along with a reasonable distance from the source within which, the degree of odors could possibly be significant.

✓ Naturally Occurring Asbestos (NOA)

Asbestos is a term used for several types of naturally occurring fibrous minerals found in many parts of California. The most common type of asbestos is chrysotile, but other types are also found in California. Construction of the Project may cause asbestos to become airborne due to the construction activities that will occur on site. The Project would be required to submit a Dust Control Plan under the SJVAPCD’s Rule 8021. Compliance with Rule 8021 would limit fugitive dust emissions from construction, demolition, excavation, extraction, and other earthmoving activities associated with the Project.



✓ Greenhouse Gas Emissions

CARB, in consultation with MPOs, has provided each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. For the Kings County Association of Governments (KCAG) region, CARB set targets at five (5) percent per capita decrease in 2020 and a ten (10) percent per capita decrease in 2035 from a base year of 2005. KCAG's 2018 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which was adopted in August 2018, projects that the Kings County region would achieve the prescribed emissions targets.

In 2009, the SJVAPCD adopted the following guidance documents applicable to projects within the San Joaquin Valley:

- ✓ Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA (SJVAPCD 2009), and
- ✓ District Policy: Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency (SJVAPCD 2009).

This guidance and policy are the reference documents referenced in the SJVAPCD's Guidance for Assessing and Mitigating Air Quality Impacts adopted in March 2015 (SJVAPCD 2015). Consistent with the District Guidance and District Policy above, SJVAPCD (2015) acknowledges the current absence of numerical thresholds, and recommends a tiered approach to establish the significance of the GHG impacts on the environment:

- i. If a project complies with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located, then the project would be determined to have a less than significant individual and cumulative impact for GHG emissions;
- ii. If a project does not comply with an approved GHG emission reduction plan or mitigation program, then it would be required to implement Best Performance Standards (BPS); and
- iii. If a project is not implementing BPS, then it should demonstrate that its GHG emissions would be reduced or mitigated by at least 29 percent compared to Business as Usual (BAU).

In the event that a local air district's guidance for addressing GHG impacts does not use numerical GHG emissions thresholds, at the lead agency's discretion, a neighboring air district's GHG threshold may be used to determine impacts. In December 2008, the South Coast Air Quality Management District (SCAQMD) Governing Board adopted the staff proposal for an interim GHG significance threshold for projects where the SCAQMD is lead agency. The SCAQMD guidance identifies a threshold of 10,000 MTCO₂eq./year for GHG for construction emissions amortized over a 30-year project lifetime, plus annual operation emissions. This threshold is often used by agencies, such as the California Public Utilities Commission, to evaluate GHG impacts in areas that do not have specific thresholds (CPUC

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2015)². Though the Project is under SJVAPCD jurisdiction, the SCAQMD GHG threshold provides some perspective on the GHG emissions generated by the Project. Table 9 shows the yearly GHG emissions generated by the Project as determined by the CalEEMod model, which is approximately 79% less than the threshold identified by the SCAQMD.

Table 9
Project Operational Greenhouse Gas Emissions

Summary Report	CO ₂ e
Project Operational Emissions Per Year	2,080 MT/yr

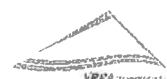
Source: CalEEMod, VRPA 2021

3.3.3 Indirect Source Review

The Project is subject to the SJVAPCD's ISR program, which is also known as Rule 9510. Rule 9510 and the Administrative ISR Fee Rule (Rule 3180) are the result of state requirements outlined in the California Health and Safety Code, Section 40604 and the State Implementation Plan (SIP). The purpose of the SJVAPCD's ISR program is to reduce emissions of NO_x and PM₁₀ from new projects. In general, new development contributes to the air-pollution problem in the Valley by increasing the number of vehicles and vehicle miles traveled.

Utilizing the ISR Fee Estimator calculator available on the SJVAPCD website, it was determined that the Project's total cost for emission reductions is \$126,272.64 without implementation of emission reduction measures. The ISR Fee Estimator worksheets are included in the appendices. The fee noted above may be reduced dependent upon the formal ISR review process.

² California Public Utilities Commission (CPUC). 2015. Section 4.7, "Greenhouse Gases." Final Environmental Impact Report for the Santa Barbara County Reliability Project. May 2015. Accessed January 18, 2018. http://www.cpuc.ca.gov/environment/info/ene/sbcrp/SBCRP_FEIR.html.



4.0 Impact Determinations and Recommended Mitigation

In accordance with CEQA, when a proposed project is consistent with a General Plan for which an EIR has been certified, the effects of that project are evaluated to determine if they will result in project-specific significant adverse impacts on the environment. The criteria used to determine the significance of an air quality or greenhouse gas impact are based on the following thresholds of significance, which come from Appendix G of the CEQA Guidelines and the General Plan EIR. Accordingly, air quality or greenhouse gas impacts resulting from the Project are considered significant if the Project would:

Air Quality

- a) Conflict with or obstruct implementation of the applicable air quality plan?
- b) 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?
- c) Expose sensitive receptors to substantial pollutant concentrations?
- d) Result in other emissions such as those leading to odors adversely affecting a substantial number of people?

Greenhouse Gas Emissions

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

4.1 Air Quality

4.1.1 *Conflict with or obstruct implementation of the applicable air quality plan*

The primary way of determining consistency with the air quality plan's (AQP's) assumptions is determining consistency with the applicable General Plan to ensure that the Project's population density and land use are consistent with the growth assumptions used in the AQPs for the air basin.

As required by California law, city and county General Plans contain a Land Use Element that details the types and quantities of land uses that the city or county estimates will be needed for future growth, and that designate locations for land uses to regulate growth. KCAG uses the growth projections and land use information in adopted general plans to estimate future average daily trips and then VMT, which are then provided to SJVAPCD to estimate future emissions in

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the AQPs. Existing and future pollutant emissions computed in the AQP are based on land uses from area general plans. AQPs detail the control measures and emission reductions required for reaching attainment of the air standards.

The applicable General Plan for the project is the City of Hanford 2035 General Plan. The Project is consistent with the currently adopted General Plan for the City of Hanford and is therefore consistent with the population growth and VMT applied in the plan. Therefore, the Project is consistent with the growth assumptions used in the applicable AQPs. As a result, the Project will not conflict with or obstruct implementation of any air quality plans. Therefore, no mitigation is needed.

4.1.2 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

The Kings County area is nonattainment for Federal and State air quality standards for ozone, in attainment of Federal standards and nonattainment for State standards for PM₁₀, and nonattainment for Federal and State standards for PM_{2.5}. The SJVAPCD has prepared the 2016 and 2013 Ozone Plans, 2007 PM₁₀ Maintenance Plan, and 2012 PM_{2.5} Plan to achieve Federal and State standards for improved air quality in the SJVAB regarding ozone and PM. Inconsistency with any of the plans would be considered a cumulatively adverse air quality impact. As discussed in Section 4.1.1, the Project is consistent with the currently adopted General Plan for the City of Hanford and is therefore consistent with the population growth and VMT applied in the plan. Therefore, the Project is consistent with the growth assumptions used in the 2016 and 2013 Ozone Plan, 2007 PM₁₀ Maintenance Plan, and 2012 PM_{2.5} Plan.

Project specific emissions that exceed the thresholds of significance for criteria pollutants would be expected to result in a cumulatively considerable net increase of any criteria pollutant for which the County is in non-attainment under applicable federal or state ambient air quality standards. It should be noted that a project is not characterized as cumulatively insignificant when project emissions fall below thresholds of significance. As discussed in Section 3.1, the SJVAPCD has established thresholds of significance for determining environmental significance which are provided in Table 6.

As discussed above in Section 3.2 and 3.3, results of the analysis show that emissions generated from construction and operation of the Project will be less than the applicable SJVAPCD emission thresholds for criteria pollutants. Therefore, no mitigation is needed.

4.1.3 Expose sensitive receptors to substantial pollutant concentrations

Sensitive receptors refer to those segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems affected by air quality). Land uses that have the greatest potential to attract these types of sensitive receptors



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include schools, parks, playgrounds, daycare centers, nursing homes, hospitals, and residential communities. From a health risk perspective, the Project is a Type B Project in that it may potentially place sensitive receptors in the vicinity of existing sources.

The first step in evaluating the potential for impacts to sensitive receptors for TAC's from the Project is to perform a screening level analysis. For Type B Projects, one type of screening tool is found in the CARB Handbook: Air Quality and Land Use Handbook: A Community Perspective. This handbook includes a table (depicted in Table 4) with recommended buffer distances associated with various types of common sources. The screening level analysis for the Project shows that TAC's are not a concern based upon the recommendations provided in Table 4. An evaluation of nearby land uses shows that the Project will not place sensitive receptors in the vicinity of existing toxic sources. As noted above, the proposed Project is not a Type A project and would not place new toxic sources in the vicinity of existing sources. Therefore, the Project will not expose sensitive receptors to substantial pollutant concentrations and any impacts would be less than significant.

Short-Term Impacts

The annual emissions from the construction phase of the Project will be less than the applicable SJVAPCD emission thresholds for criteria pollutants as shown in Table 7. Therefore, construction emissions associated with the Project are considered less than significant.

Long-Term Impacts

Long-Term emissions from the Project are generated primarily by mobile source (vehicle) emissions from the Project site and area sources such as maintenance equipment. Emissions from long-term operations generally represent a project's most substantial air quality impact. Table 8 summarizes the Project's operational impacts by pollutant. Results indicate that the annual operational emissions from the Project will be less than the SJVAPCD emission thresholds for criteria pollutants. Therefore, operational emissions associated with the Project are considered less than significant.

4.1.4 Result in other emissions such as those leading to odors adversely affecting a substantial number of people

The SJVAPCD requires that an analysis of potential odor impacts be conducted for the following two situations:

- ✓ Generators – projects that would potentially generate odorous emissions proposed to be located near existing sensitive receptors or other land uses where people may congregate, and
- ✓ Receivers – residential or other sensitive receptor projects or other projects built for the

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intent of attracting people located near existing odor sources.

The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The SJVAPCD has identified some common types of facilities that have been known to produce odors in the SJV Air Basin. The types of facilities that are known to produce odors are shown in Table 5 above along with a reasonable distance from the source within which, the degree of odors could possibly be significant. The Project will not generate odorous emissions given the nature or characteristics of the Project.

Based on the assessment above, the Project will not generate potential odorous emissions or attract receivers and other sensitive receptors near existing odor sources. Therefore, no mitigation is needed.

4.2 Greenhouse Gas Emissions

4.2.1 *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment*

The SJVAPCD acknowledges the current absence of numerical thresholds and recommends a tiered approach to establish the significance of the GHG impacts on the environment:

- i. If a project complies with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located, then the project would be determined to have a less than significant individual and cumulative impact for GHG emissions;
- ii. If a project does not comply with an approved GHG emission reduction plan or mitigation program, then it would be required to implement Best Performance Standards (BPS); and
- iii. If a project is not implementing BPS, then it should demonstrate that its GHG emissions would be reduced or mitigated by at least 29 percent compared to Business as Usual (BAU).

In the event that a local air district's guidance for addressing GHG impacts does not use numerical GHG emissions thresholds, at the lead agency's discretion, a neighboring air district's GHG threshold may be used to determine impacts. In December 2008, the South Coast Air Quality Management District (SCAQMD) Governing Board adopted the staff proposal for an interim GHG significance threshold for projects where the SCAQMD is lead agency. The SCAQMD guidance identifies a threshold of 10,000 MTCO₂eq./year for GHG for construction emissions amortized over a 30-year project lifetime, plus annual operation emissions. Though the Project is under SJVAPCD jurisdiction, the SCAQMD GHG threshold provides some perspective on the GHG emissions generated by the Project. Table 9 shows the yearly GHG emissions generated by the Project as determined by the CalEEMod model, which is approximately 79% less than the threshold identified by the SCAQMD.

The KCAG Regional Climate Action Plan identifies a baseline (2005) GHG emissions inventory for



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all countywide sectors (transportation, waste management, etc.). Kings County's baseline GHG emissions is approximately 1,046,804 MTCO₂eq./year. The proposed Project's GHG emissions represents 0.2% of the total GHG emissions for Kings County's baseline GHG emissions.

Based on the assessment above, the Project will not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. Therefore, any impacts would be less than significant.

4.2.2 Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases

California passed the California Global Warming Solutions Act of 2006. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. Under AB 32, CARB must adopt regulations by January 1, 2011 to achieve reductions in GHGs to meet the 1990 emission cap by 2020. On December 11, 2008, CARB adopted its initial Scoping Plan, which functions as a roadmap of CARB's plans to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations. CARB's 2017 Climate Change Scoping Plan builds on the efforts and plans encompassed in the initial Scoping Plan.

SB 375 requires MPOs to adopt a SCS or APS that will prescribe land use allocation in that MPO's regional transportation plan. CARB, in consultation with MPOs, has provided each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. For the KCAG region, CARB set targets at five (5) percent per capita decrease in 2020 and a ten (10) percent per capita decrease in 2035 from a base year of 2005. KCAG's 2018 RTP/SCS, which was adopted in August 2018, projects that the Kings County region would achieve the prescribed emissions targets.

Executive Order B-30-15 establishes a California greenhouse gas reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050. Executive Order B-30-15 requires MPO's to implement measures that will achieve reductions of greenhouse gas emissions to meet the 2030 and 2050 greenhouse gas emissions reductions targets.

As required by California law, city and county General Plans contain a Land Use Element that details the types and quantities of land uses that the city or county estimates will be needed for future growth, and that designate locations for land uses to regulate growth. KCAG uses the growth projections and land use information in adopted general plans to estimate future average daily trips and then VMT, which are then provided to SJVAPCD to estimate future emissions in the AQPs. The applicable General Plan for the project is City of Hanford 2035 General Plan Update, which was adopted in 2018.

The Project is consistent with the currently adopted General Plan for the City of Hanford and the adopted KCAG 2018 RTP/SCS and is therefore consistent with the population growth and VMT applied in those plan documents. Therefore, the Project is consistent with the growth

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assumptions used in the applicable AQP. It should also be noted that yearly GHG emissions generated by the Project (Table 9) are approximately 79% less than the threshold identified by the SCAQMD (see the discussion for Impact 4.2.1 above).

CARB's 2017 Climate Change Scoping Plan builds on the efforts and plans encompassed in the initial Scoping Plan. The current plan has identified new policies and actions to accomplish the State's 2030 GHG limit. Below is a list of applicable strategies in the Scoping Plan and the Project's consistency with those strategies.

- ✓ California Light-Duty Vehicle GHG Standards – Implement adopted standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs for long-term climate change goals.
 - The Project is consistent with this reduction measure. This measure cannot be implemented by a particular project or lead agency since it is a statewide measure. When this measure is implemented, standards would be applicable to light-duty vehicles that would access the Project. The Project would not conflict or obstruct this reduction measure.
- ✓ Energy Efficiency – Pursuit of comparable investment in energy efficiency from all retail providers of electricity in California. Maximize energy efficiency building and appliance standards.
 - The Project is consistent with this reduction measure. Though this measure applies to the State to increase its energy standards, the Project would comply with this measure through existing regulation. The Project would not conflict or obstruct this reduction measure.
- ✓ Low Carbon Fuel – Development and adoption of the low carbon fuel standard.
 - The Project is consistent with this reduction measure. This measure cannot be implemented by a particular project or lead agency since it is a statewide measure. When this measure is implemented, standards would be applicable to the fuel used by vehicles that would access the Project. The Project would not conflict or obstruct this reduction measure.

Based on the assessment above, the Project will not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Therefore, any impacts would be less than significant.



APPENDIX A

CalEEMod/Road Construction Emissions Worksheets

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Tract 934

Kings County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	161.00	Dwelling Unit	35.64	289,800.00	460

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	37
Climate Zone	3			Operational Year	2025

Utility Company Pacific Gas and Electric Company

CO2 Intensity (lb/MW/hr)	203.98	CH4 Intensity (lb/MW/hr)	0.033	N2O Intensity (lb/MW/hr)	0.004
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1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot acreage adjusted for project characteristics

Construction Phase - Adjustment for Project Characteristics

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	740.00	475.00
tblConstructionPhase	PhaseEndDate	8/1/2025	7/26/2024
tblConstructionPhase	PhaseEndDate	2/28/2025	2/25/2024
tblConstructionPhase	PhaseEndDate	5/16/2025	5/10/2024
tblConstructionPhase	PhaseStartDate	5/17/2025	5/11/2024
tblConstructionPhase	PhaseStartDate	3/1/2025	2/26/2024
tblLandUse	LotAcreage	52.27	35.64

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblWoodstoves	NumberCatalytic	35.64	0.00
tblWoodstoves	NumberNoncatalytic	35.64	0.00

.0 Emissions Summary

.1 Overall Construction
mitigated Construction

Year	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2021	0.1200	1.1925	0.7673	1.3900e-003	0.2090	0.0593	0.2682	0.1031	0.0549	0.1579	0.0000	122.1789	122.1789	0.0349	1.2000e-004	123.0872
2022	0.3241	3.0857	2.8053	5.6200e-003	0.5168	0.1414	0.6581	0.2047	0.1316	0.3363	0.0000	493.1638	493.1638	0.1216	5.6300e-003	497.8826
2023	0.2300	1.9847	2.3308	4.4800e-003	0.0753	0.0919	0.1672	0.0203	0.0865	0.1069	0.0000	392.7946	392.7946	0.0733	7.7300e-003	396.9310
2024	2.7873	0.5830	0.8237	1.4400e-003	0.0176	0.0270	0.0446	4.7100e-003	0.0252	0.0300	0.0000	126.7441	126.7441	0.0295	1.2800e-003	127.8648
Maximum	2.7873	3.0857	2.8053	5.6200e-003	0.5168	0.1414	0.6581	0.2047	0.1316	0.3363	0.0000	493.1638	493.1638	0.1216	7.7300e-003	497.8826

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1200	1.1925	0.7673	1.3900e-003	0.2090	0.0593	0.2682	0.1031	0.0549	0.1579	0.0000	122.1787	122.1787	0.0349	1.2000e-004	123.0871
2022	0.3241	3.0857	2.8053	5.6200e-003	0.5168	0.1414	0.6581	0.2047	0.1316	0.3363	0.0000	493.1633	493.1633	0.1216	5.6300e-003	497.8821
2023	0.2300	1.9847	2.3308	4.4800e-003	0.0753	0.0919	0.1672	0.0203	0.0865	0.1069	0.0000	392.7943	392.7943	0.0733	7.7300e-003	396.9306
2024	2.7873	0.5830	0.8237	1.4400e-003	0.0176	0.0270	0.0446	4.7100e-003	0.0252	0.0300	0.0000	126.7440	126.7440	0.0295	1.2800e-003	127.8647
Maximum	2.7873	3.0857	2.8053	5.6200e-003	0.5168	0.1414	0.6581	0.2047	0.1316	0.3363	0.0000	493.1633	493.1633	0.1216	7.7300e-003	497.8821

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)							Maximum Mitigated ROG + NOX (tons/quarter)						
1	9-27-2021	12-26-2021	1.2084							1.2084						
2	12-27-2021	3-26-2022	1.3412							1.3412						
3	3-27-2022	6-26-2022	0.9029							0.9029						
4	6-27-2022	9-26-2022	0.6119							0.6119						
5	9-27-2022	12-26-2022	0.6071							0.6071						
6	12-27-2022	3-26-2023	0.5516							0.5516						
7	3-27-2023	6-26-2023	0.5594							0.5594						
8	6-27-2023	9-26-2023	0.5593							0.5593						

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

9	9-27-2023	12-26-2023	0.5548	0.5548
10	12-27-2023	3-26-2024	0.4639	0.4639
11	3-27-2024	6-26-2024	1.8549	1.8549
12	6-27-2024	9-26-2024	1.0754	1.0754
		Highest	1.8549	1.8549

2 Overall Operational**mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.4467	0.0740	1.2199	4.5000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	71.6991	71.6991	3.2100e-003	1.2800e-003	72.1603
Energy	0.0209	0.1783	0.0759	1.1400e-003		0.0144	0.0144		0.0144	0.0144	0.0000	325.3031	325.3031	0.0232	6.1200e-003	327.7049
Mobile	0.7059	1.3796	6.5953	0.0165	1.6196	0.0154	1.6350	0.4329	0.0145	0.4474	0.0000	1,529.8093	1,529.8093	0.0754	0.0908	1,558.7383
Waste						0.0000	0.0000		0.0000	0.0000	33.6153	0.0000	33.6153	1.9866	0.0000	83.2805
Water						0.0000	0.0000		0.0000	0.0000	3.3279	7.3932	10.7212	0.3430	8.2200e-003	21.7446
Total	2.1735	1.6319	7.8911	0.0181	1.6196	0.0413	1.6609	0.4329	0.0404	0.4733	36.9432	1,934.2048	1,971.1480	2.4314	0.1064	2,063.6286

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Area	1.4467	0.0740	1.2199	4.5000e-004		0.0115	0.0115	0.0115	0.0115	0.0115	0.0000	71.6991	71.6991	3.2100e-003	1.2800e-003	72.1603
Energy	0.0209	0.1783	0.0759	1.1400e-003		0.0144	0.0144	0.0144	0.0144	0.0144	0.0000	325.3031	325.3031	0.0232	6.1200e-003	327.7049
Mobile	0.7059	1.3796	6.5953	0.0165	1.6196	0.0154	1.6350	0.4329	0.0145	0.4474	0.0000	1,529.8093	1,529.8093	0.0754	0.0908	1,558.7383
Waste						0.0000	0.0000	0.0000	0.0000	0.0000	33.6153	0.0000	33.6153	1.9866	0.0000	83.2805
Water						0.0000	0.0000	0.0000	0.0000	0.0000	3.3279	7.3932	10.7212	0.3430	8.2200e-003	21.7446
Total	2.1735	1.6319	7.8911	0.0181	1.6196	0.0413	1.6609	0.4329	0.0404	0.4733	36.9432	1,934.2048	1,971.1480	2.4314	0.1064	2,063.6286

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/27/2021	12/3/2021	5	50	
2	Site Preparation	Site Preparation	12/4/2021	1/14/2022	5	30	
3	Grading	Grading	1/15/2022	4/29/2022	5	75	

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Building Construction	4/30/2022	2/25/2024	5	475
Paving	2/26/2024	5/10/2024	5	55
Architectural Coating	5/11/2024	7/26/2024	5	55

Hours of Grading (Site Preparation Phase): 45**Hours of Grading (Grading Phase): 225****Hours of Paving: 0**

Residential Indoor: 586,845; Residential Outdoor: 195,615; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

Architectural Coating – sqft)

Off-Road Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Architectural Coating	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Architectural Coating	Excavators	3	8.00	158	0.38
Grading	Excavators	2	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMI

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	58.00	17.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
tons/yr																
Off-Road	0.0791	0.7860	0.5391	9.7000e-004		0.0388	0.0388		0.0360	0.0360	0.0000	85.0020	85.0020	0.0239	0.0000	85.6001
Total	0.0791	0.7860	0.5391	9.7000e-004		0.0388	0.0388		0.0360	0.0360	0.0000	85.0020	85.0020	0.0239	0.0000	85.6001

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2 Demolition - 2021

mitigated Construction Off-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3500e-003	1.0200e-003	0.0112	3.0000e-005	3.0100e-003	2.0000e-005	3.0300e-003	8.0000e-004	2.0000e-005	8.2000e-004	0.0000	2.5278	2.5278	9.0000e-005	8.0000e-005	2.5548
Total	1.3500e-003	1.0200e-003	0.0112	3.0000e-005	3.0100e-003	2.0000e-005	3.0300e-003	8.0000e-004	2.0000e-005	8.2000e-004	0.0000	2.5278	2.5278	9.0000e-005	8.0000e-005	2.5548

mitigated Construction On-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0791	0.7860	0.5391	9.7000e-004		0.0388	0.0388		0.0360	0.0360	0.0000	85.0019	85.0019	0.0239	0.0000	85.6000
Total	0.0791	0.7860	0.5391	9.7000e-004		0.0388	0.0388		0.0360	0.0360	0.0000	85.0019	85.0019	0.0239	0.0000	85.6000

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2021

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3500e-003	1.0200e-003	0.0112	3.0000e-005	3.0100e-003	2.0000e-005	3.0300e-003	8.0000e-004	2.0000e-005	8.2000e-004	0.0000	2.5278	2.5278	9.0000e-005	8.0000e-005	2.5548
Total	1.3500e-003	1.0200e-003	0.0112	3.0000e-005	3.0100e-003	2.0000e-005	3.0300e-003	8.0000e-004	2.0000e-005	8.2000e-004	0.0000	2.5278	2.5278	9.0000e-005	8.0000e-005	2.5548

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Fugitive Dust					0.2045	0.0000	0.2045	0.1019	0.0000	0.1019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4050	0.2115	3.8000e-004		0.0204	0.0204	0.0188	0.0188	0.0188	0.0000	33.4357	33.4357	0.0108	0.0000	33.7061
Total	0.0389	0.4050	0.2115	3.8000e-004	0.2045	0.0204	0.2250	0.1019	0.0188	0.1207	0.0000	33.4357	33.4357	0.0108	0.0000	33.7061

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3 Site Preparation - 2021

mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5000e-004	4.9000e-004	5.3800e-003	1.0000e-005	1.4500e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2134	1.2134	4.0000e-005	4.0000e-005	1.2263
Total	6.5000e-004	4.9000e-004	5.3800e-003	1.0000e-005	1.4500e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2134	1.2134	4.0000e-005	4.0000e-005	1.2263

Mitigated Construction On-Site

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Fugitive Dust					0.2045	0.0000	0.2045	0.1019	0.0000	0.1019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	0.0389	0.4050	0.2115	3.8000e-004		0.0204	0.0204	0.0188	0.0188	0.0188	0.0000	33.4357	33.4357	0.0108	0.0000	33.7060	
Total	0.0389	0.4050	0.2115	3.8000e-004	0.2045	0.0204	0.2250	0.1019	0.0188	0.1207	0.0000	33.4357	33.4357	0.0108	0.0000	33.7060	

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

Category	tons/yr										MT/yr					CO2e
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5000e-004	4.9000e-004	5.3800e-003	1.0000e-005	1.4500e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2134	1.2134	4.0000e-005	4.0000e-005	1.2263
Total	6.5000e-004	4.9000e-004	5.3800e-003	1.0000e-005	1.4500e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2134	1.2134	4.0000e-005	4.0000e-005	1.2263

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

Category	tons/yr										MT/yr					CO2e
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	
Fugitive Dust					0.1142	0.0000	0.1142	0.0522	0.0000	0.0522	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0159	0.1654	0.0985	1.9000e-004		8.0600e-003	8.0600e-003	7.4200e-003	7.4200e-003	7.4200e-003	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	0.0159	0.1654	0.0985	1.9000e-004	0.1142	8.0600e-003	0.1223	0.0522	7.4200e-003	0.0597	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3 Site Preparation - 2022

mitigated Construction Off-Site

Category	tons/yr										MT/yr						CO2e
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Worker	3.0000e-004	2.1000e-004	2.4400e-003	1.0000e-005	7.2000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5877	0.5877	2.0000e-005	2.0000e-005	0.5936	
Total	3.0000e-004	2.1000e-004	2.4400e-003	1.0000e-005	7.2000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5877	0.5877	2.0000e-005	2.0000e-005	0.5936	

mitigated Construction On-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.1142	0.0000	0.1142	0.0522	0.0000	0.0522	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0159	0.1654	0.0985	1.9000e-004		8.0600e-003	8.0600e-003		7.4200e-003	7.4200e-003	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	0.0159	0.1654	0.0985	1.9000e-004	0.1142	8.0600e-003	0.1223	0.0522	7.4200e-003	0.0597	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-004	2.1000e-004	2.4400e-003	1.0000e-005	7.2000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5877	0.5877	2.0000e-005	2.0000e-005	0.5936
Total	3.0000e-004	2.1000e-004	2.4400e-003	1.0000e-005	7.2000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5877	0.5877	2.0000e-005	2.0000e-005	0.5936

3.4 Grading - 2022

Unmitigated Construction On-Site

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Fugitive Dust					0.3451	0.0000	0.3451	0.1370	0.0000	0.1370	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	0.1359	1.4566	1.0891	2.3300e-003		0.0613	0.0613	0.0564	0.0564	0.0564	0.0000	204.5048	204.5048	0.0661	0.0000	206.1583	
Total	0.1359	1.4566	1.0891	2.3300e-003	0.3451	0.0613	0.4064	0.1370	0.0564	0.1934	0.0000	204.5048	204.5048	0.0661	0.0000	206.1583	

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**4 Grading - 2022****Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4700e-003	1.7800e-003	0.0203	5.0000e-005	6.0300e-003	3.0000e-005	6.0600e-003	1.6000e-003	3.0000e-005	1.6300e-003	0.0000	4.8976	4.8976	1.6000e-004	1.5000e-004	4.9468
Total	2.4700e-003	1.7800e-003	0.0203	5.0000e-005	6.0300e-003	3.0000e-005	6.0600e-003	1.6000e-003	3.0000e-005	1.6300e-003	0.0000	4.8976	4.8976	1.6000e-004	1.5000e-004	4.9468

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Fugitive Dust					0.3451	0.0000	0.3451	0.1370	0.0000	0.1370	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1359	1.4566	1.0891	2.3300e-003		0.0613	0.0613		0.0564	0.0564	0.0000	204.5045	204.5045	0.0661	0.0000	206.1580
Total	0.1359	1.4566	1.0891	2.3300e-003	0.3451	0.0613	0.4064	0.1370	0.0564	0.1934	0.0000	204.5045	204.5045	0.0661	0.0000	206.1580

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2022

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4700e-003	1.7800e-003	0.0203	5.0000e-005	6.0300e-003	3.0000e-005	6.0600e-003	1.6000e-003	3.0000e-005	1.6300e-003	0.0000	4.8976	4.8976	1.6000e-004	1.5000e-004	4.9468
Total	2.4700e-003	1.7800e-003	0.0203	5.0000e-005	6.0300e-003	3.0000e-005	6.0600e-003	1.6000e-003	3.0000e-005	1.6300e-003	0.0000	4.8976	4.8976	1.6000e-004	1.5000e-004	4.9468

3.5 Building Construction - 2022

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Off-Road	0.1493	1.3664	1.4318	2.3600e-003		0.0708	0.0708		0.0666	0.0666	0.0000	202.7596	202.7596	0.0486	0.0000	203.9740
Total	0.1493	1.3664	1.4318	2.3600e-003		0.0708	0.0708		0.0666	0.0666	0.0000	202.7596	202.7596	0.0486	0.0000	203.9740

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5 Building Construction - 2022

mitigated Construction Off-Site

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Vendor	3.5100e-003	0.0833	0.0256	3.2000e-004	9.9100e-003	9.4000e-004	0.0108	2.8600e-003	9.0000e-004	3.7600e-003	0.0000	30.5537	30.5537	1.9000e-004	4.4400e-003	31.8820	
Worker	0.0167	0.0120	0.1376	3.6000e-004	0.0408	2.2000e-004	0.0410	0.0108	2.0000e-004	0.0110	0.0000	33.1407	33.1407	1.1000e-003	1.0200e-003	33.4731	
Total	0.0202	0.0953	0.1632	6.8000e-004	0.0507	1.1600e-003	0.0518	0.0137	1.1000e-003	0.0148	0.0000	63.6944	63.6944	1.2900e-003	5.4600e-003	65.3551	

itigated Construction On-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.1493	1.3664	1.4318	2.3600e-003		0.0708	0.0708		0.0666	0.0666	0.0000	202.7594	202.7594	0.0486	0.0000	203.9737
Total	0.1493	1.3664	1.4318	2.3600e-003		0.0708	0.0708		0.0666	0.0666	0.0000	202.7594	202.7594	0.0486	0.0000	203.9737

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.5100e-003	0.0833	0.0256	3.2000e-004	9.9100e-003	9.4000e-004	0.0108	2.8600e-003	9.0000e-004	3.7600e-003	0.0000	30.5537	30.5537	1.9000e-004	4.4400e-003	31.8820
Worker	0.0167	0.0120	0.1376	3.6000e-004	0.0408	2.2000e-004	0.0410	0.0108	2.0000e-004	0.0110	0.0000	33.1407	33.1407	1.1000e-003	1.0200e-003	33.4731
Total	0.0202	0.0953	0.1632	6.8000e-004	0.0507	1.1600e-003	0.0518	0.0137	1.1000e-003	0.0148	0.0000	63.6944	63.6944	1.2900e-003	5.4600e-003	65.3551

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856	0.0000	301.3462	301.3462	0.0717	0.0000	303.1383
Total	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856	0.0000	301.3462	301.3462	0.0717	0.0000	303.1383

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5 Building Construction - 2023

mitigated Construction Off-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.7100e-003	0.0991	0.0327	4.6000e-004	0.0147	6.5000e-004	0.0154	4.2500e-003	6.2000e-004	4.8700e-003	0.0000	43.7946	43.7946	1.7000e-004	6.3300e-003	45.6865
Worker	0.0228	0.0156	0.1864	5.2000e-004	0.0606	3.1000e-004	0.0609	0.0161	2.9000e-004	0.0164	0.0000	47.6538	47.6538	1.4700e-003	1.3900e-003	48.1062
Total	0.0255	0.1147	0.2191	9.8000e-004	0.0753	9.6000e-004	0.0763	0.0203	9.1000e-004	0.0213	0.0000	91.4485	91.4485	1.6400e-003	7.7200e-003	93.7927

mitigated Construction On-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856	0.0000	301.3458	301.3458	0.0717	0.0000	303.1380
Total	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856	0.0000	301.3458	301.3458	0.0717	0.0000	303.1380

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2023

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.7100e-003	0.0991	0.0327	4.6000e-004	0.0147	6.5000e-004	0.0154	4.2500e-003	6.2000e-004	4.8700e-003	0.0000	43.7946	43.7946	1.7000e-004	6.3300e-003	45.6865
Worker	0.0228	0.0156	0.1864	5.2000e-004	0.0606	3.1000e-004	0.0609	0.0161	2.9000e-004	0.0164	0.0000	47.6538	47.6538	1.4700e-003	1.3900e-003	48.1062
Total	0.0255	0.1147	0.2191	9.8000e-004	0.0753	9.6000e-004	0.0763	0.0203	9.1000e-004	0.0213	0.0000	91.4485	91.4485	1.6400e-003	7.7200e-003	93.7927

3.5 Building Construction - 2024

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0294	0.2689	0.3233	5.4000e-004		0.0123	0.0123		0.0115	0.0115	0.0000	46.3698	46.3698	0.0110	0.0000	46.6440
Total	0.0294	0.2689	0.3233	5.4000e-004		0.0123	0.0123		0.0115	0.0115	0.0000	46.3698	46.3698	0.0110	0.0000	46.6440

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5 Building Construction - 2024

mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
tons/yr										MT/yr						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1000e-004	0.0152	4.8900e-003	7.0000e-005	2.2600e-003	1.0000e-004	2.3700e-003	6.5000e-004	1.0000e-004	7.5000e-004	0.0000	6.6391	6.6391	2.0000e-005	9.6000e-004	6.9252
Worker	3.2400e-003	2.1200e-003	0.0265	8.0000e-005	9.3200e-003	5.0000e-005	9.3600e-003	4.0000e-005	4.0000e-005	2.5200e-003	0.0000	7.0977	7.0977	2.0000e-004	2.0000e-004	7.1619
Total	3.6500e-003	0.0174	0.0314	1.5000e-004	0.0116	1.5000e-004	0.0117	3.1300e-003	1.4000e-004	3.2700e-003	0.0000	13.7368	13.7368	2.2000e-004	1.1600e-003	14.0870

mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
tons/yr										MT/yr						
Off-Road	0.0294	0.2689	0.3233	5.4000e-004		0.0123	0.0123		0.0115	0.0115	0.0000	46.3698	46.3698	0.0110	0.0000	46.6439
Total	0.0294	0.2689	0.3233	5.4000e-004		0.0123	0.0123		0.0115	0.0115	0.0000	46.3698	46.3698	0.0110	0.0000	46.6439

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1000e-004	0.0152	4.8900e-003	7.0000e-005	2.2600e-003	1.0000e-004	2.3700e-003	6.5000e-004	1.0000e-004	7.5000e-004	0.0000	6.6391	6.6391	2.0000e-005	9.6000e-004	6.9252
Worker	3.2400e-003	2.1200e-003	0.0265	8.0000e-005	9.3200e-003	5.0000e-005	9.3600e-003	2.4800e-003	4.0000e-005	2.5200e-003	0.0000	7.0977	7.0977	2.0000e-004	2.0000e-004	7.1619
Total	3.6500e-003	0.0174	0.0314	1.5000e-004	0.0116	1.5000e-004	0.0117	3.1300e-003	1.4000e-004	3.2700e-003	0.0000	13.7368	13.7368	2.2000e-004	1.1600e-003	14.0870

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0272	0.2619	0.4022	6.3000e-004		0.0129	0.0129	0.0119	0.0119	0.0119	0.0000	55.0730	55.0730	0.0178	0.0000	55.5183
Paving	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0272	0.2619	0.4022	6.3000e-004		0.0129	0.0129	0.0119	0.0119	0.0119	0.0000	55.0730	55.0730	0.0178	0.0000	55.5183

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6 Paving - 2024

mitigated Construction Off-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1500e-003	7.5000e-004	9.4200e-003	3.0000e-005	3.3100e-003	2.0000e-005	3.3300e-003	8.8000e-004	1.0000e-005	9.0000e-004	0.0000	2.5240	2.5240	7.0000e-005	7.0000e-005	2.5468
Total	1.1500e-003	7.5000e-004	9.4200e-003	3.0000e-005	3.3100e-003	2.0000e-005	3.3300e-003	8.8000e-004	1.0000e-005	9.0000e-004	0.0000	2.5240	2.5240	7.0000e-005	7.0000e-005	2.5468

mitigated Construction On-Site

Category	tons/yr										MT/yr						CO2e
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O		
Off-Road	0.0272	0.2619	0.4022	6.3000e-004		0.0129	0.0129	0.0119	0.0119	0.0119	0.0000	55.0729	55.0729	0.0178	0.0000	55.5182	
Paving	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Total	0.0272	0.2619	0.4022	6.3000e-004		0.0129	0.0129	0.0119	0.0119	0.0119	0.0000	55.0729	55.0729	0.0178	0.0000	55.5182	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2024

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1500e-003	7.5000e-004	9.4200e-003	3.0000e-005	3.3100e-003	2.0000e-005	3.3300e-003	8.8000e-004	1.0000e-005	9.0000e-004	0.0000	2.5240	2.5240	7.0000e-005	7.0000e-005	2.5468
Total	1.1500e-003	7.5000e-004	9.4200e-003	3.0000e-005	3.3100e-003	2.0000e-005	3.3300e-003	8.8000e-004	1.0000e-005	9.0000e-004	0.0000	2.5240	2.5240	7.0000e-005	7.0000e-005	2.5468

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Archit. Coating	2.7200					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.9700e-003	0.0335	0.0498	8.0000e-005		1.6800e-003	1.6800e-003	1.6800e-003	1.6800e-003	1.6800e-003	0.0000	7.0215	7.0215	4.0000e-004	0.0000	7.0313
Total	2.7250	0.0335	0.0498	8.0000e-005		1.6800e-003	1.6800e-003	1.6800e-003	1.6800e-003	1.6800e-003	0.0000	7.0215	7.0215	4.0000e-004	0.0000	7.0313

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7 Architectural Coating - 2024

mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.2000e-004	6.0000e-004	7.5300e-003	2.0000e-005	2.6500e-003	1.0000e-005	2.6600e-003	7.0000e-004	1.0000e-005	7.2000e-004	0.0000	2.0192	2.0192	6.0000e-005	6.0000e-005	2.0374
Total	9.2000e-004	6.0000e-004	7.5300e-003	2.0000e-005	2.6500e-003	1.0000e-005	2.6600e-003	7.0000e-004	1.0000e-005	7.2000e-004	0.0000	2.0192	2.0192	6.0000e-005	6.0000e-005	2.0374

mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Archit. Coating	2.7200					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.9700e-003	0.0335	0.0498	8.0000e-005		1.6800e-003	1.6800e-003		1.6800e-003	1.6800e-003	0.0000	7.0214	7.0214	4.0000e-004	0.0000	7.0313
Total	2.7250	0.0335	0.0498	8.0000e-005		1.6800e-003	1.6800e-003		1.6800e-003	1.6800e-003	0.0000	7.0214	7.0214	4.0000e-004	0.0000	7.0313

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.2000e-004	6.0000e-004	7.5300e-003	2.0000e-005	2.6500e-003	1.0000e-005	2.6600e-003	7.0000e-004	1.0000e-005	7.2000e-004	0.0000	2.0192	2.0192	6.0000e-005	6.0000e-005	2.0374
Total	9.2000e-004	6.0000e-004	7.5300e-003	2.0000e-005	2.6500e-003	1.0000e-005	2.6600e-003	7.0000e-004	1.0000e-005	7.2000e-004	0.0000	2.0192	2.0192	6.0000e-005	6.0000e-005	2.0374

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

0 Operational Detail - Mobile

1 Mitigation Measures Mobile

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated	0.7059	1.3796	6.5953	0.0165	1.6196	0.0154	1.6350	0.4329	0.0145	0.4474	0.0000	1,529.8093	1,529.8093	0.0754	0.0908	1,558.7383
Unmitigated	0.7059	1.3796	6.5953	0.0165	1.6196	0.0154	1.6350	0.4329	0.0145	0.4474	0.0000	1,529.8093	1,529.8093	0.0754	0.0908	1,558.7383

2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
Land Use							
Single Family Housing	1,519.84	1,535.94	1,376.55	4,298,153	4,298,153	4,298,153	4,298,153
Total	1,519.84	1,535.94	1,376.55	4,298,153	4,298,153	4,298,153	4,298,153

3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	42.30	19.60	38.10	86	11	3

Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.000000	0.000000	0.000000	0.149109	0.028747	0.006826	0.008281	0.037038	0.000603	0.000188	0.024404	0.001123	0.003381

Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	118.7827	118.7827	0.0192	2.3300e-003	119.9573
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	118.7827	118.7827	0.0192	2.3300e-003	119.9573
Natural Gas Mitigated	0.0209	0.1783	0.0759	1.1400e-003		0.0144	0.0144		0.0144	0.0144	0.0000	206.5204	206.5204	3.9600e-003	3.7900e-003	207.7476
Natural Gas Unmitigated	0.0209	0.1783	0.0759	1.1400e-003		0.0144	0.0144		0.0144	0.0144	0.0000	206.5204	206.5204	3.9600e-003	3.7900e-003	207.7476

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2 Energy by Land Use - NaturalGas

mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr															
Single Family Housing	3.87005e+006	0.0209	0.1783	0.0759	1.1400e-003		0.0144	0.0144		0.0144	0.0144	0.0000	206.5204	206.5204	3.9600e-003	3.7900e-003	207.7476
Total		0.0209	0.1783	0.0759	1.1400e-003		0.0144	0.0144		0.0144	0.0144	0.0000	206.5204	206.5204	3.9600e-003	3.7900e-003	207.7476

mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr															
Single Family Housing	3.87005e+006	0.0209	0.1783	0.0759	1.1400e-003		0.0144	0.0144		0.0144	0.0144	0.0000	206.5204	206.5204	3.9600e-003	3.7900e-003	207.7476
Total		0.0209	0.1783	0.0759	1.1400e-003		0.0144	0.0144		0.0144	0.0144	0.0000	206.5204	206.5204	3.9600e-003	3.7900e-003	207.7476

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	1.28381e+006	118.7827	0.0192	2.3300e-003	119.9573
Total		118.7827	0.0192	2.3300e-003	119.9573

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	1.28381e+006	118.7827	0.0192	2.3300e-003	119.9573
Total		118.7827	0.0192	2.3300e-003	119.9573

6.0 Area Detail

6.1 Mitigation Measures Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated	1.4467	0.0740	1.2199	4.5000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	71.6991	71.6991	3.2100e-003	1.2800e-003	72.1603
Unmitigated	1.4467	0.0740	1.2199	4.5000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	71.6991	71.6991	3.2100e-003	1.2800e-003	72.1603

2 Area by SubCategory

Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.2720					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1318					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	7.0500e-003	0.0602	0.0256	3.8000e-004		4.8700e-003	4.8700e-003		4.8700e-003	4.8700e-003	0.0000	69.7464	69.7464	1.3400e-003	1.2800e-003	70.1609
Landscaping	0.0359	0.0138	1.1943	6.0000e-005		6.6300e-003	6.6300e-003		6.6300e-003	6.6300e-003	0.0000	1.9527	1.9527	1.8700e-003	0.0000	1.9995
Total	1.4467	0.0740	1.2199	4.4000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	71.6991	71.6991	3.2100e-003	1.2800e-003	72.1604

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2720					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1318					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	7.0500e-003	0.0602	0.0256	3.8000e-004		4.8700e-003	4.8700e-003		4.8700e-003	4.8700e-003	0.0000	69.7464	69.7464	1.3400e-003	1.2800e-003	70.1609
Landscaping	0.0359	0.0138	1.1943	6.0000e-005		6.6300e-003	6.6300e-003		6.6300e-003	6.6300e-003	0.0000	1.9527	1.9527	1.8700e-003	0.0000	1.9995
Total	1.4467	0.0740	1.2199	4.4000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	71.6991	71.6991	3.2100e-003	1.2800e-003	72.1604

7.0 Water Detail

7.1 Mitigation Measures Water

Tract 934 - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	10.7212	0.3430	8.2200e-003	21.7446
Unmitigated	10.7212	0.3430	8.2200e-003	21.7446

.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	10.4898 / 6.61313	10.7212	0.3430	8.2200e-003	21.7446
Total		10.7212	0.3430	8.2200e-003	21.7446

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	10.4898 / 6.61313	10.7212	0.3430	8.2200e-003	21.7446
Total		10.7212	0.3430	8.2200e-003	21.7446

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	33.6153	1.9866	0.0000	83.2805
Unmitigated	33.6153	1.9866	0.0000	83.2805

Tract 934 - Kings County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2 Waste by Land Use

mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	165.6	33.6153	1.9866	0.0000	83.2805
Total		33.6153	1.9866	0.0000	83.2805

mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	165.6	33.6153	1.9866	0.0000	83.2805
Total		33.6153	1.9866	0.0000	83.2805

Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

City of Hanford - Lennar Residential Subdivision
Public Report
November 2021



Appendix B - Cultural Resource Survey

Prepared by ASM Affiliates, Inc. dated October 2021.

Confidential - not included

APPROVAL STUDY: MITIGATED NEIGHBOR DISSENT
VOLUME 1: PREP
10-1-2021 (11)



Appendix C: Traffic Impact Study and VMT Analysis

Prepared by Peters Engineering Group dated October 5, 2021.

Traffic Study

Proposed Tract 934

***Southeast of the Intersection of
Grangeville Boulevard and 13th Avenue
Hanford, California***

Prepared For:

Lennar Homes, Inc.
8080 North Palm Avenue, Suite 110
Fresno, California 93711

Date:

October 5, 2021

Job No.:

21-047.01



PETERS ENGINEERING GROUP
A CALIFORNIA CORPORATION



Mr. Walter Diamond
Lennar Homes, Inc.
8080 North Palm Avenue, Suite 110
Fresno, California 93711

October 5, 2021

Subject: Traffic Study
Proposed Tract 934
Southeast of the Intersection of Grangeville Boulevard and 13th Avenue
Hanford, California

Dear Mr. Diamond:

1.0 INTRODUCTION

This report presents the results of a traffic study for a single-family residential project in Hanford, California. This analysis focuses on the anticipated effect of vehicle traffic resulting from the project and traffic operations in the vicinity of the project site. This report also presents the results of traffic modeling estimating the CEQA transportation impacts of the project based on vehicle miles traveled (VMT).

2.0 PROJECT DESCRIPTION

The proposed project is a 161-lot single-family residential subdivision on approximately 35.64 acres located southeast of the intersection of Grangeville Boulevard and 13th Avenue in Hanford, California. Site access will be via two local streets connecting to Grangeville Boulevard and local streets connecting to Ella Street and Malone Street on the east side of the site.

A vicinity map is presented in the attached Figure 1, Site Vicinity Map, and a site plan is presented Figure 2, Site Plan, following the text of this report.

3.0 STUDY AREA AND TIME PERIOD

The study locations were determined in consultation with City of Hanford staff. This report includes analysis of the following intersections:

1. Grangeville Boulevard / 13th Avenue
2. Grangeville Boulevard / Centennial Avenue
3. Malone Street / Centennial Avenue
4. Devon Street / 13th Avenue

The study time periods are the weekday a.m. and p.m. peak hours determined between 7:00 and 9:00 a.m. and between 4:00 and 6:00 p.m. The peak hours are analyzed for the following conditions:

- Existing Conditions;
- Existing-Plus-Project Conditions;
- Near-Term With-Project Conditions (includes pending projects), and;
- Cumulative Year 2042 Conditions.

4.0 LANE CONFIGURATIONS AND INTERSECTION CONTROL

The existing lane configurations and intersection control at the study intersections are illustrated in Figure 3, Lane Configurations.

Devon Street will be constructed by the previously-approved Tract 922 approximately ¼ mile north of Stagecoach Drive and will create a three-legged intersection with 13th Avenue. Tract 922 will construct a left-turn lane on the southbound approach to the intersection and the westbound approach will consist of a left-turn lane and a right-turn lane. The assumed lane configurations for the intersection of 13th Avenue and Devon Street are also illustrated on Figure 3.

The year 2042 analyses assume that the existing lane configurations and control will be maintained through the year 2042.

5.0 GENERAL PLAN ROADWAY DESIGNATIONS

The City of Hanford 2035 General Plan designates the roadways at the study intersections as follows:

- Grangeville Boulevard: arterial
- 13th Avenue: major arterial
- Centennial Avenue: collector
- Malone Street: not designated (local street)
- Devon Street: collector

6.0 EXISTING TRAFFIC VOLUMES

Existing traffic volumes were determined by performing manual turning movement counts at the study intersections between 7:00 and 9:00 a.m. and between 4:00 and 6:00 p.m. The counts also included determination of truck percentages. The intersection of 13th Avenue and Devon Street does not yet exist, so counts were performed at the intersection of 13th Avenue and Stagecoach Drive to determine the volumes on 13th Avenue.

The traffic count data sheets are presented in Appendix A and include the dates the counts were performed. The existing peak-hour turning movement volumes are presented in Figure 4, Existing Peak Hour Traffic Volumes.

7.0 PROJECT TRIP GENERATION

Data provided in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition*, are typically used to estimate the number of trips anticipated to be generated by proposed projects. Table 1 presents trip generation estimates for the project.

Table 1
Project Trip Generation Estimate

Land Use	Units	Daily		A.M. Peak Hour					P.M. Peak Hour				
		Rate	Total	Rate	In:Out	In	Out	Total	Rate	In:Out	In	Out	Total
Single Family Detached Housing (210)	161	9.44	1,520	0.74	25:75	30	90	120	0.99	63:37	101	59	160

Reference: *Trip Generation Manual, 10th Edition*, Institute of Transportation Engineers 2017
Rates are reported in trips per dwelling unit.

8.0 PROJECT-SPECIFIC TRAFFIC MODELING

The regional distribution of Project trips and the vehicle miles traveled can be estimated by performing a select zone analysis using an available travel model. The relevant Project data were provided to the Kittelson & Associates, Inc. to perform Project-specific traffic modeling using the Kings County travel model maintained by the Kings County Association of Governments (KCAG). The results of the traffic modeling are presented in Appendix B.

9.0 PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

The regional distribution of Project traffic based on the traffic modeling is presented in Figure 5, Project Trip Distribution Percentages. Project traffic volumes at the study intersections are presented in Figure 6, Peak-Hour Project Traffic Volumes.

10.0 EXISTING-PLUS-PROJECT TRAFFIC VOLUMES

Peak-hour existing-plus-Project traffic volumes are presented in Figure 7, Existing-Plus-Project Peak-Hour Traffic Volumes.

11.0 PENDING AND APPROVED PROJECTS

The traffic analyses for the near-term and long-term conditions consider the effects of traffic expected to be generated by pending and approved projects in the study area. The City of Hanford provided a list of projects and the project status that were considered in the near-term and long-term conditions analysis scenarios. The following projects were considered:

1. Tract 927: 133 single-family homes northeast of the intersection of 13th Avenue and Grangeville Boulevard
2. Tract 922: 194 single family homes northeast of the intersection of 13th Avenue and Stagecoach Drive (mostly built out)
3. Tract 929: 158 single-family homes northeast of the intersection of 13th Avenue and Devon Street
4. Tract 918: 142 single-family homes northwest of the intersection of Centennial Avenue and Devon Street (mostly built out)
5. Tract 919: 125 single-family homes southwest of the intersection of Centennial and Fargo Avenues (mostly built out)
6. Tract 928: 283 single-family lots southeast of the intersection of Centennial and Fargo Avenues

12.0 NEAR-TERM WITH-PROJECT TRAFFIC VOLUMES

The near-term with-Project peak-hour turning movement volumes are presented in Figure 8, Near-Term With-Project Peak-Hour Traffic Volumes. The near-term volumes include the existing traffic volumes, trips expected to be generated by the pending and approved projects, and Project trips.

13.0 CUMULATIVE TRAFFIC VOLUMES (YEAR 2042)

Cumulative traffic volumes for the year 2042 were projected based on information obtained from the Kings County travel model maintained by KCAG. The KCAG travel model output is presented in Appendix B. The future traffic volumes were projected utilizing an Increment Method where possible. The Increment Method is applied by taking the difference between the base year and horizon year traffic volumes obtained from the travel model and adding it to the existing traffic volumes. Where the Increment Method projected less than one percent annual growth, a minimum annual growth rate of one percent was maintained to project future traffic volumes. Where an increment method was used, future turning movements were forecast based on the methods presented in Chapter 8 of the Transportation Research Board National Cooperative Highway Research Program Report 255 entitled "*Highway Traffic Data for Urbanized Area Project Planning and Design*."

The year 2042 cumulative traffic volumes are presented in Figure 9, Cumulative (Year 2042) Peak Hour Traffic Volumes.

14.0 SIGNIFICANCE CRITERIA

14.1 Vehicle Miles Traveled - California Environmental Quality Act (CEQA)

The State of California Governor's Office of Planning and Research document entitled *Technical Advisory on Evaluating Transportation Impacts in CEQA* dated December 2018 (Technical Advisory) provides guidance for determining a project's transportation impacts based on VMT.

For residential projects, the Technical Advisory states: *"A proposed project exceeding a level of 15 percent below existing VMT per capita may indicate a significant transportation impact. Existing VMT per capita may be measured as regional VMT per capita or as city VMT per capita."*

The results of the traffic modeling indicate that the Countywide average VMT per capita is 9.6. Therefore, the level of significance is 15 percent below that value, or 8.2 VMT per capita.

14.2 Operational Analyses - City of Hanford

The State of California does not recognize traffic congestion and delay as an environmental impact per CEQA. However, Policy T29 of the City of Hanford 2035 General Plan states: *"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."* In addition, the County of Kings 2035 General Plan Policy C A1.3.1 states: *"Maintain and manage County roadway systems to maintain a minimum Level of Service Standard "D" or better on all major roadways and arterial intersections."*

The Transportation Research Board *Highway Capacity Manual*, 6th Edition, (HCM) defines level of service (LOS) as, "A quantitative stratification of a performance measure or measures that represent quality of service, measured on an A-F scale, with LOS A representing the best operating conditions from the traveler's perspective and LOS F the worst." Automobile mode LOS characteristics for both unsignalized and signalized intersections are presented in Tables 2 and 3.

Table 2
Level of Service Characteristics for Unsignalized Intersections

Level of Service	Average Vehicle Delay (seconds)
A	0-10
B	>10-15
C	>15-25
D	>25-35
E	>35-50
F	>50

Table 3
Level of Service Characteristics for Signalized Intersections

Level of Service	Description	Average Vehicle Delay (seconds)
A	Volume-to-capacity ratio is no greater than 1.0. Progression is exceptionally favorable or the cycle length is very short.	<10
B	Volume-to-capacity ratio is no greater than 1.0. Progression is highly favorable or the cycle length is very short.	>10-20
C	Volume-to-capacity ratio is no greater than 1.0. Progression is favorable or cycle length is moderate.	>20-35
D	Volume-to-capacity ratio is high but no greater than 1.0. Progression is ineffective or cycle length is long. Many vehicles stop and individual cycle failures are noticeable.	>35-55
E	Volume-to-capacity ratio is high but no greater than 1.0. Progression is unfavorable and cycle length is long. Individual cycle failures are frequent.	>55-80
F	Volume-to-capacity ratio is greater than 1.0. Progression is very poor and cycle length is long. Most cycles fail to clear the queue.	>80

Reference for Tables 1 and 2: *Highway Capacity Manual, 6th Edition*. Transportation Research Board, 2016

For purposes of this study, a traffic issue will be recognized if the Project will:

- decrease the LOS below D at an intersection; or
- exacerbate the delay at an intersection already operating at a substandard LOS (i.e., LOS E or LOS F) by increasing the average delay by 5.0 seconds or more.

Queues will be considered in the analysis of signalized intersections, particularly to determine if excessive queues are expected to block adjacent lanes operating on a different traffic signal phase. Blocking typically results in congested conditions that may cause worse conditions at the blocked location than those identified by the LOS analyses alone. Since stop-sign-controlled intersections do not have different phases on adjacent lanes, the LOS analyses provide a good indication of the intersection operations and a separate queuing analysis is not performed.

15.0 VEHICLE MILES TRAVELED (VMT) ANALYSES

The results of the traffic modeling indicate that the Countywide average VMT per capita is 9.6 and the Project VMT per capita is 8.5, which exceeds the significance threshold of 8.2 VMT per capita.

The Technical Advisory indicates that potential measures to reduce VMT include, but are not limited to:

- Improve or increase access to transit.
- Increase access to common goods and services, such as groceries, schools, and daycare.
- Incorporate affordable housing into the project.
- Incorporate neighborhood electric vehicle network.
- Orient the project toward transit, bicycle and pedestrian facilities.

- Improve pedestrian or bicycle networks, or transit service.
- Provide traffic calming.
- Provide bicycle parking.
- Limit or eliminate parking supply.
- Unbundle parking costs.
- Provide parking cash-out programs.
- Implement roadway pricing.
- Implement or provide access to a commute reduction program.
- Provide car-sharing, bike sharing, and ride-sharing programs.
- Provide transit passes.
- Shifting single occupancy vehicle trips to carpooling or vanpooling, for example providing ride-matching services.
- Providing telework options.
- Providing incentives or subsidies that increase the use of modes other than single-occupancy vehicle.
- Providing on-site amenities at places of work, such as priority parking for carpools and vanpools, secure bike parking, and showers and locker rooms.
- Providing employee transportation coordinators at employment sites.
- Providing a guaranteed ride home service to users of non-auto modes.

Other sources commonly referenced for potential mitigation measures include the California Air Pollution Control Officers Association (CAPCOA) report *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA Green Book). The City of Fresno has developed a useful list of potential mitigation measures based on information in the CAPCOA Green Book and other research performed by the California Air Resources Board (CARB) that may be applicable to development projects. The City of Fresno list as well as information from the City of San Jose are included in Appendix C.

The Technical Advisory indicate that, “...because VMT is largely a regional impact, regional VMT-reduction programs may be an appropriate form of mitigation. In lieu fees have been found to be valid mitigation where there is both a commitment to pay fees and evidence that mitigation will actually occur.”

It is suggested that construction of bike lanes and sidewalks, particularly with connectivity to nearby schools, would mitigate the difference between the Project VMT of 8.5 per capita and the threshold VMT of 8.2 per capita. It is recommended that the Applicant work with City staff to determine which mitigation measures are feasible and could be considered as acceptable to the City.

16.0 INTERSECTION OPERATIONAL ANALYSES

The intersection LOS was determined using the computer program Synchro 11, which is based on HCM procedures for calculating levels of service. The intersection analysis sheets are presented in Appendix C.

Tables 4 through 6 present the results of the intersection analyses. For signalized intersections the overall intersection level of service and the average delay per vehicle are presented. For one-way and two-way stop-controlled intersections an overall intersection level of service is not defined by HCM. Therefore, for one-way and two-way stop-controlled intersections the level of service and average delay per vehicle for the approach with the greatest delay is reported.

Table 4
Intersection LOS Summary - Existing and Existing-Plus-Project Conditions

Intersection	Control	Existing				Existing Plus Project			
		A.M.		P.M.		A.M.		P.M.	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Grangeville / 13 th Ave	Signals	18.2	B	14.9	B	18.4	B	15.2	B
Grangeville / Centennial	Signals	22.9	C	17.4	B	24.2	C	18.0	B
Malone / Centennial	OWS	15.0	C	11.1	B	15.2	C	11.6	B
Devon / 13 th Ave	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE

Table 5
Intersection LOS Summary - Existing and Near-Term With-Project Conditions

Intersection	Control	Existing				Near-Term With Project			
		A.M.		P.M.		A.M.		P.M.	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Grangeville / 13 th Ave	Signals	18.2	B	14.9	B	20.7	C	16.6	B
Grangeville / Centennial	Signals	22.9	C	17.4	B	31.6	C	19.4	B
Malone / Centennial	OWS	15.0	C	11.1	B	16.6	C	12.1	B
Devon / 13 th Ave	OWS	DNE	DNE	DNE	DNE	13.3	B	13.7	B

Table 6
Intersection LOS Summary - Existing and Year 2042 Conditions

Intersection	Control	Existing				Year 2042			
		A.M.		P.M.		A.M.		P.M.	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Grangeville / 13 th Ave	Signals	18.2	B	14.9	B	23.3	C	18.5	B
Grangeville / Centennial	Signals	22.9	C	17.4	B	36.7	D	21.8	C
Malone / Centennial	OWS	15.0	C	11.1	B	18.5	C	12.5	B
Devon / 13 th Ave	OWS	DNE	DNE	DNE	DNE	14.1	B	14.4	B

Note for Tables 4 through 6:

DNE: does not exist OWS: one-way stop

The results of the intersection operational analyses include an estimate of the 95th-percentile queue lengths at the study intersections. The calculated 95th-percentile queue lengths are presented in Tables 7 and 8.

Table 8
Intersection Queuing Summary – A.M. Peak Hour

Intersection	Existing Storage Capacity (feet)	95 th -Percentile Queue Length (feet)			
Approach		Existing	Existing Plus Project	Near-Term With Project	2042 With Project
Grangeville / 13 th					
Eastbound L	300	23	25	38	43
Eastbound T	>1,000	100	105	140	188
Eastbound R	270	8	8	10	15
Westbound L	270	70	75	100	135
Westbound T	>1,000	78	80	108	128
Westbound R	225	3	3	8	8
Northbound L	200	40	40	48	70
Northbound T	>1,000	40	40	68	78
Northbound R	290	25	28	38	50
Southbound L	230	13	13	20	23
Southbound T	>1,000	73	75	125	143
Southbound R	190	8	10	18	23
Grangeville / Centennial					
Eastbound L	245	25	28	38	48
Eastbound T	>1,000	170	198	298	355
Eastbound R	100+	40	43	55	75
Westbound L	240	123	135	165	238
Westbound T	>1,000	120	128	193	220
Westbound R	150+	20	20	30	38
Northbound L	150	48	50	75	100
Northbound TR	>1,000	90	103	130	185
Southbound L	150	60	63	98	110
Southbound TR	930	180	193	288	353

+ Additional storage capacity exists beyond the striped turn lane.

Table 9
Intersection Queuing Summary – P.M. Peak Hour

Intersection	Existing Storage Capacity (feet)	95 th -Percentile Queue Length (feet)			
Approach		Existing	Existing Plus Project	Near-Term With Project	2042 With Project
Grangeville / 13 th					
Eastbound L	300	18	20	30	45
Eastbound T	>1,000	73	78	103	138
Eastbound R	270	3	3	5	8
Westbound L	270	23	25	30	38
Westbound T	>1,000	45	48	63	85
Westbound R	225	3	3	5	5
Northbound L	200	18	18	20	28
Northbound T	>1,000	45	48	75	115
Northbound R	290	15	20	25	33
Southbound L	230	10	10	15	20
Southbound T	>1,000	28	28	53	60
Southbound R	190	3	5	8	10
Grangeville / Centennial					
Eastbound L	245	18	18	23	43
Eastbound T	>1,000	73	80	110	130
Eastbound R	100+	18	20	25	40
Westbound L	240	53	63	70	95
Westbound T	>1,000	60	68	90	105
Westbound R	150+	10	10	15	18
Northbound L	150	28	30	40	60
Northbound TR	>1,000	88	95	125	168
Southbound L	150	23	25	33	35
Southbound TR	930	50	55	75	93

÷ Additional storage capacity exists beyond the striped turn lane.

17.0 DISCUSSION OF OPERATIONAL ANALYSES

The results of the intersection operational analyses indicate that the study locations are currently operating at acceptable levels of service and are expected to continue to operate at acceptable levels of service through the year 2042 with construction of the Project. Calculated 95th-percentile queues are contained within the available storage length.

18.0 CONCLUSIONS

Standard traffic engineering principles and methods were employed to establish the existing conditions, to estimate the number of trips expected to be generated by the Project, and to analyze the traffic conditions that may occur in the future. The conclusion of this traffic study is that the Project will not cause traffic issues requiring improvements. The study locations are currently operating at acceptable levels of service and are expected to continue

to operate at acceptable levels of service through the year 2042 with construction of the Project.

It is suggested that construction of bike lanes and sidewalks, particularly with connectivity to nearby schools, would mitigate the difference between the Project VMT of 8.5 per capita and the threshold VMT of 8.2 per capita. It is recommended that the Applicant work with City staff to determine which mitigation measures are feasible and could be considered as acceptable to the City.

Thank you for the opportunity to perform this traffic study. Please feel free to call our office if you have any questions.

PETERS ENGINEERING GROUP

John Rowland, PE, TE

Attachments: Figures

Appendix A - Traffic Count Data Sheets

Appendix B - Kings County Travel Model Output

Appendix C – Sample Lists of Mitigation Measures

Appendix D - Intersection Analyses

TRAFFIC STUDY – TRACT 934

FIGURES



PETERS ENGINEERING GROUP
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TRAFFIC STUDY – TRACT 934

APPENDIX A

TRAFFIC COUNT DATA SHEETS

Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)



PETERS ENGINEERING GROUP
A CALIFORNIA CORPORATION



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310 N Irwin Street - Suite 20
Hanford, CA 93230
800 975 6938 Phone/Fax
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Turning Movement Report

Prepared For

Peters Engineering Group
862 Pollasky Ave
Clovis, CA 93612

LOCATION Grangeville Blvd @ 13th Ave

LATITUDE 36.3426

COUNTY Kings

LONGITUDE -119.6911

COLLECTION DATE Thursday, September 16, 2021

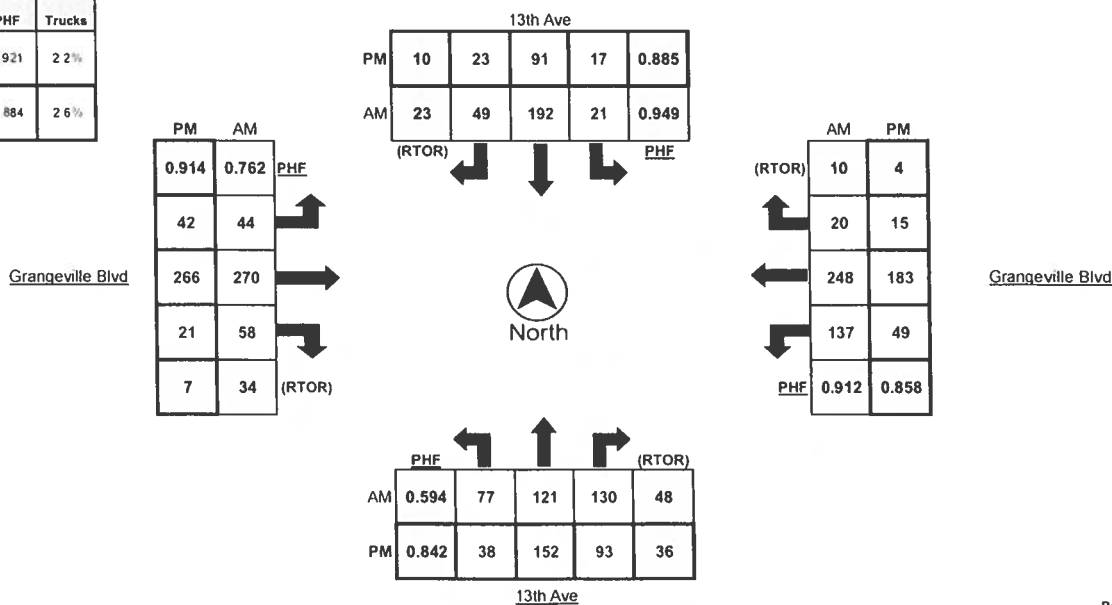
WEATHER Clear

Time	Northbound					Southbound					Eastbound					Westbound				
	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks
7:00 AM - 7:15 AM	0	15	8	6	5	2	32	11	3	6	0	18	2	0	0	20	53	5	1	0
7:15 AM - 7:30 AM	4	18	7	4	1	4	51	12	6	3	7	32	4	3	1	19	52	2	0	0
7:30 AM - 7:45 AM	4	25	13	6	2	3	48	15	6	2	10	61	11	9	2	31	60	6	3	2
7:45 AM - 8:00 AM	19	28	24	5	4	7	44	16	8	1	17	96	9	8	3	34	71	6	3	1
8:00 AM - 8:15 AM	16	29	32	11	2	4	49	7	4	1	11	78	15	7	0	39	63	4	3	3
8:15 AM - 8:30 AM	38	39	61	26	1	7	51	11	5	4	6	35	23	10	0	33	54	4	1	2
8:30 AM - 8:45 AM	4	18	16	12	1	3	20	12	5	3	9	47	6	3	5	15	36	4	0	1
8:45 AM - 9:00 AM	3	10	6	2	1	2	28	5	2	2	7	27	6	2	0	6	37	1	0	1
TOTAL	88	182	167	72	17	32	323	89	39	22	67	394	76	42	11	197	426	32	11	10

Time	Northbound					Southbound					Eastbound					Westbound				
	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks
4:00 PM - 4:15 PM	18	43	23	12	4	6	26	5	4	2	10	71	7	1	3	17	48	6	3	1
4:15 PM - 4:30 PM	4	38	21	11	1	4	24	9	2	3	8	63	6	2	1	11	34	5	1	0
4:30 PM - 4:45 PM	7	40	25	5	1	2	25	4	1	2	12	74	4	3	4	12	39	3	0	1
4:45 PM - 5:00 PM	9	31	24	8	0	5	16	5	3	3	12	58	4	1	0	9	62	1	0	0
5:00 PM - 5:15 PM	6	32	26	12	1	5	19	4	1	1	7	49	6	1	4	9	66	8	0	1
5:15 PM - 5:30 PM	4	43	19	8	0	3	34	3	0	4	3	55	2	2	0	17	37	5	0	0
5:30 PM - 5:45 PM	4	41	18	9	0	5	23	6	2	1	5	45	4	2	2	13	52	2	0	0
5:45 PM - 6:00 PM	3	32	21	7	1	3	27	7	1	0	7	51	7	4	3	17	47	9	1	1
TOTAL	55	300	177	72	8	33	194	43	14	16	64	466	40	16	17	105	385	39	5	4

PEAK HOUR	Northbound					Southbound					Eastbound					Westbound				
	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks
7:30 AM - 8:30 AM	77	121	130	48	9	21	192	49	23	8	44	270	58	34	5	137	248	20	10	8
4:00 PM - 5:00 PM	38	152	93	36	6	17	91	23	10	10	42	266	21	7	8	49	183	15	4	2

	PHF	Trucks
AM	0.921	2.2%
PM	0.884	2.6%





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:

Peters Engineering Group
852 Pollasky Ave
Clovis, CA 93612

LOCATION Grangeville Blvd @ 13th Ave

LATITUDE 36.3426

COUNTY Kings

LONGITUDE -119.6911

COLLECTION DATE Thursday, September 16, 2021

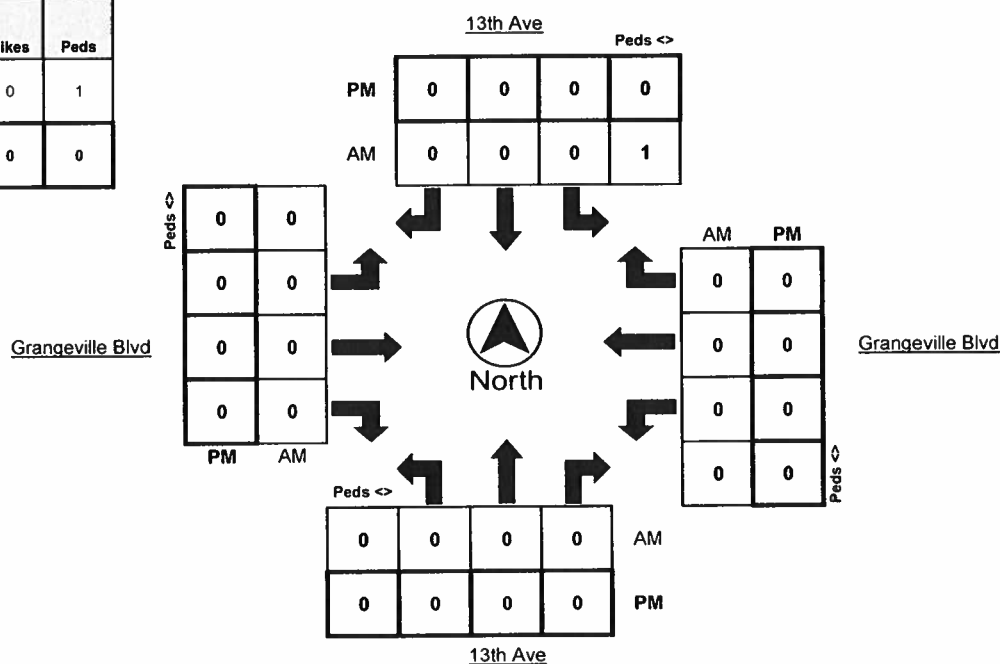
WEATHER Clear

Time	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM - 7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM - 8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM - 8:30 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM - 8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM - 9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0

Time	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
4:00 PM - 4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM - 4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM - 4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM - 5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM - 5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM - 5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM - 5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM - 6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PEAK HOUR	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
7:30 AM - 8:30 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM - 5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Bikes	Peds
AM Peak Total	0	1
PM Peak Total	0	0





Metro Traffic Data Inc.
 310 N. Irwin Street - Suite 20
 Hanford, CA 93230
 800-975-6938 Phone/Fax
 www.metrotrafficdata.com

Turning Movement Report

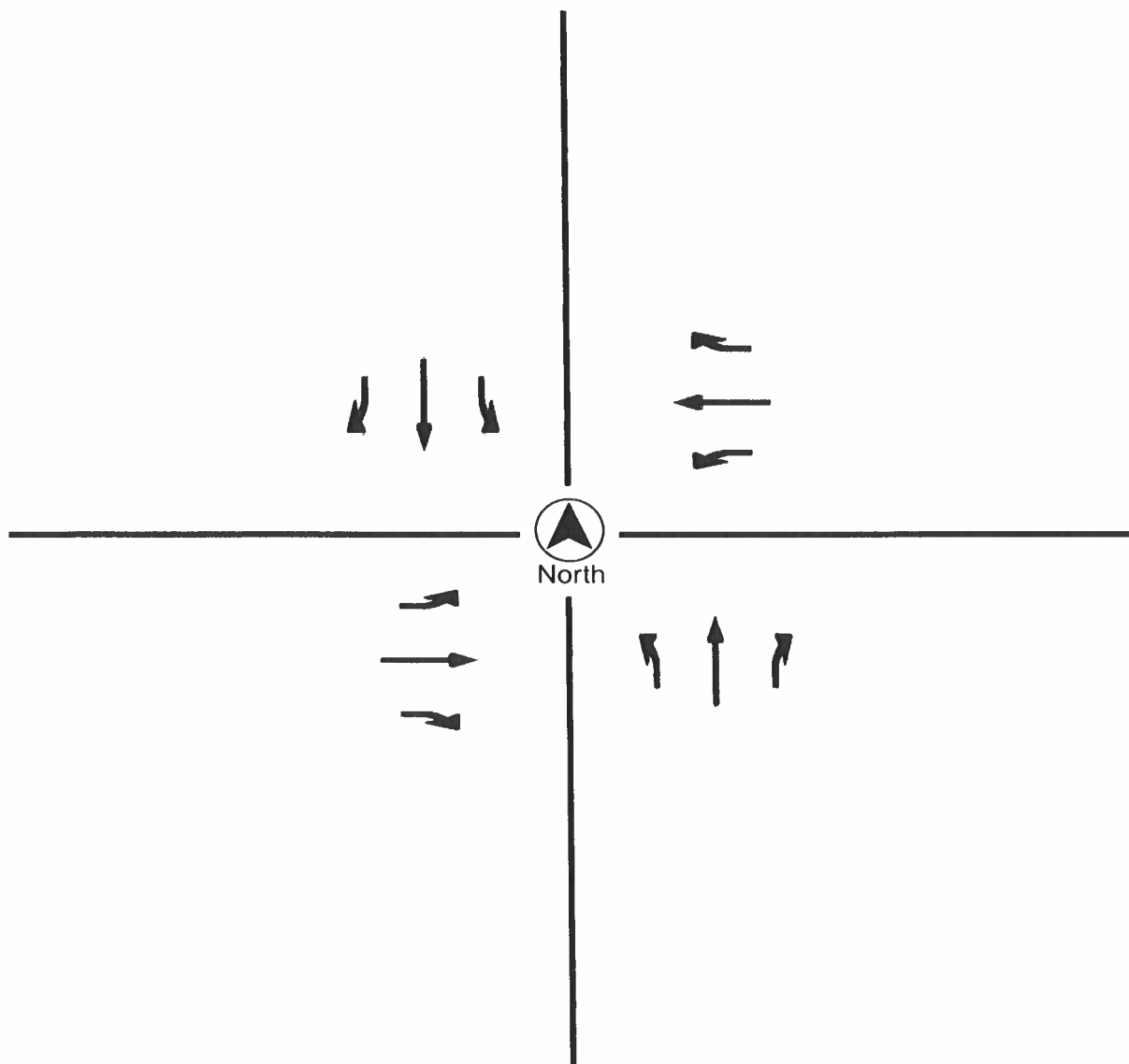
Prepared For:

Peters Engineering Group
 862 Pollasky Ave
 Clovis, CA 93612

LOCATION Grangeville Blvd @ 13th Ave
COUNTY Kings
COLLECTION DATE Thursday, September 16, 2021
CYCLE TIME 58 Seconds

N/S STREET 13th Ave
E/W STREET Grangeville Blvd
WEATHER Clear
CONTROL TYPE Signal

COMMENTS All approaches have protected left turns.





Metro Traffic Data Inc.
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Hanford, CA 93230
800.975-6936 Phone/Fax
www.metrotrafficdata.com

Turning Movement Report

Prepared For: Peters Engineering Group
862 Pollasky Ave
Clovis, CA 93612

LOCATION Grangeville Blvd @ Centennial Dr

COUNTY Kings

COLLECTION DATE Thursday, September 16, 2021

LATITUDE 36.3426

LONGITUDE -119.6819

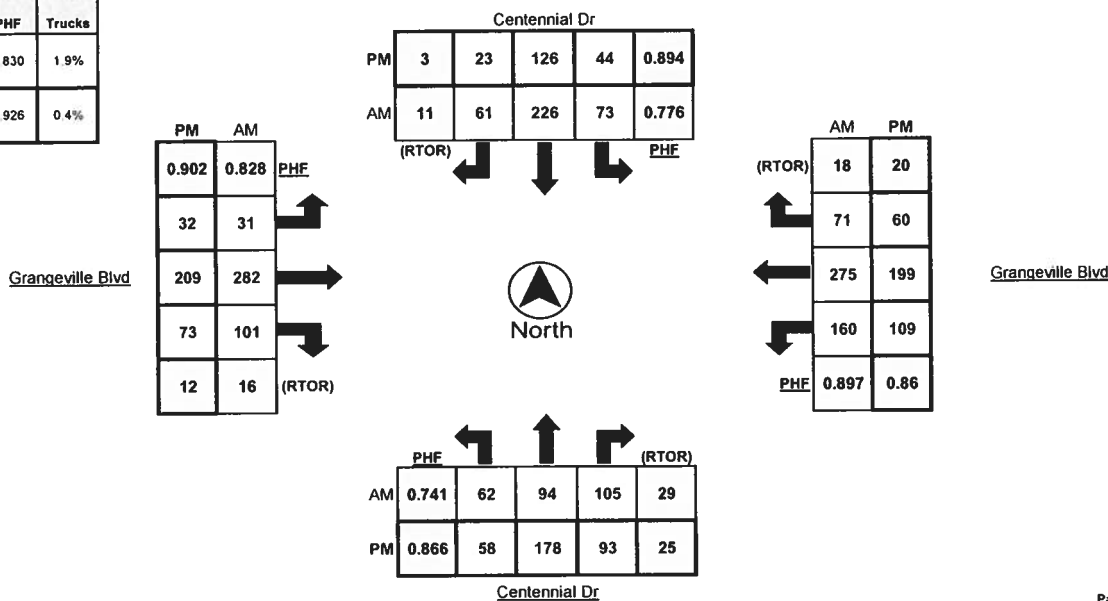
WEATHER Clear

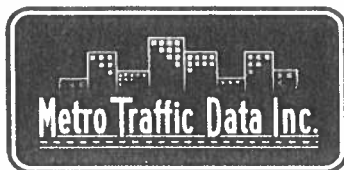
Time	Northbound					Southbound					Eastbound					Westbound				
	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks
7:00 AM - 7:15 AM	15	10	9	1	1	9	32	11	0	0	3	16	9	1	2	8	46	4	0	0
7:15 AM - 7:30 AM	7	12	19	3	0	14	32	16	2	0	3	30	12	2	1	22	53	7	1	2
7:30 AM - 7:45 AM	15	23	29	7	2	18	53	13	3	0	4	53	13	3	2	27	67	32	2	2
7:45 AM - 8:00 AM	24	30	34	9	3	30	70	16	5	1	6	78	41	2	4	46	70	19	6	2
8:00 AM - 8:15 AM	8	19	14	3	0	19	66	18	2	1	8	82	21	8	2	48	78	15	9	4
8:15 AM - 8:30 AM	15	22	28	10	0	6	37	14	1	2	13	69	26	3	0	39	60	5	1	4
8:30 AM - 8:45 AM	11	19	8	1	1	6	22	5	0	0	4	39	29	2	0	13	38	5	2	0
8:45 AM - 9:00 AM	11	15	11	3	1	9	23	2	0	4	2	31	5	2	1	14	33	7	3	2
TOTAL	106	150	152	37	8	111	335	95	13	8	43	398	156	23	12	217	445	94	24	16

Time	Northbound					Southbound					Eastbound					Westbound				
	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks
4:00 PM - 4:15 PM	14	39	24	2	1	6	26	6	2	0	12	74	24	5	3	28	52	12	2	0
4:15 PM - 4:30 PM	14	32	18	1	0	6	34	4	0	1	9	70	17	1	0	17	33	7	0	1
4:30 PM - 4:45 PM	16	40	14	2	1	8	29	3	2	0	15	67	10	4	1	23	36	17	3	0
4:45 PM - 5:00 PM	12	42	26	7	0	10	34	7	1	0	5	60	22	4	0	35	51	21	10	1
5:00 PM - 5:15 PM	16	52	27	9	0	12	21	5	1	0	12	56	13	3	1	24	62	14	3	2
5:15 PM - 5:30 PM	11	45	18	4	0	8	36	6	0	0	7	53	16	1	0	25	41	12	3	1
5:30 PM - 5:45 PM	19	39	22	5	0	14	35	5	1	0	8	40	22	4	0	25	45	13	4	0
5:45 PM - 6:00 PM	6	24	27	7	0	7	44	7	2	0	8	52	18	5	1	22	58	12	2	2
TOTAL	108	313	176	37	2	71	259	43	9	1	76	472	142	27	6	199	378	108	27	7

PEAK HOUR	Northbound					Southbound					Eastbound					Westbound				
	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks
7:30 AM - 8:30 AM	62	94	105	29	5	73	226	61	11	4	31	282	101	16	8	160	275	71	18	12
4:45 PM - 5:45 PM	58	178	93	25	0	44	126	23	3	0	32	209	73	12	1	109	199	60	20	4

	PHF	Trucks
AM	0.830	1.9%
PM	0.926	0.4%





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Turning Movement Report

Prepared For:

Peters Engineering Group
862 Pollasky Ave
Clovis, CA 93612

LOCATION Grangeville Blvd @ Centennial Dr
COUNTY Kings
COLLECTION DATE Thursday, September 16, 2021

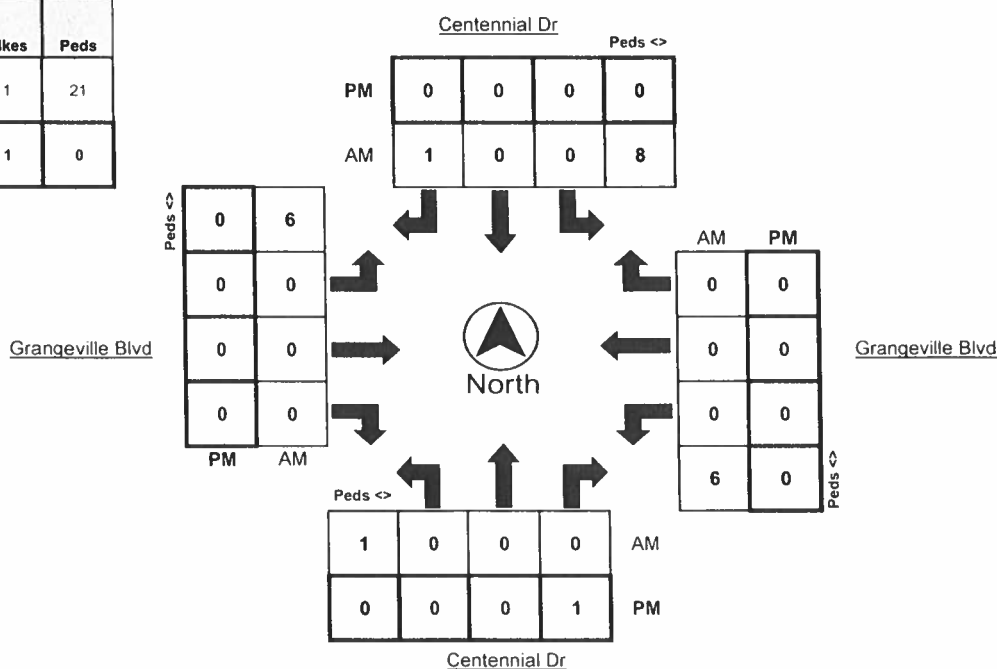
LATITUDE 36.3426
LONGITUDE -119.6819
WEATHER Clear

Time	Northbound Bikes			N.Leg Peds	Southbound Bikes			S.Leg Peds	Eastbound Bikes			E.Leg Peds	Westbound Bikes			W.Leg Peds
	Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Left	Thru	Right	
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM - 7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM - 8:00 AM	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	2
8:00 AM - 8:15 AM	0	0	0	5	0	0	0	0	0	0	0	2	0	0	0	4
8:15 AM - 8:30 AM	0	0	0	2	0	0	1	1	0	0	0	1	0	0	0	0
8:30 AM - 8:45 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
8:45 AM - 9:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
TOTAL	0	0	0	9	0	0	1	1	0	0	0	8	0	0	0	7

Time	Northbound Bikes			N.Leg Peds	Southbound Bikes			S.Leg Peds	Eastbound Bikes			E.Leg Peds	Westbound Bikes			W.Leg Peds
	Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Left	Thru	Right	
4:00 PM - 4:15 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1
4:15 PM - 4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM - 4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM - 5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM - 5:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM - 5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM - 5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM - 6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	1

PEAK HOUR	Northbound Bikes			N.Leg Peds	Southbound Bikes			S.Leg Peds	Eastbound Bikes			E.Leg Peds	Westbound Bikes			W.Leg Peds
	Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Left	Thru	Right	
7:30 AM - 8:30 AM	0	0	0	8	0	0	1	1	0	0	0	6	0	0	0	6
4:45 PM - 5:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0

	Bikes	Peds
AM Peak Total	1	21
PM Peak Total	1	0





Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

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Turning Movement Report

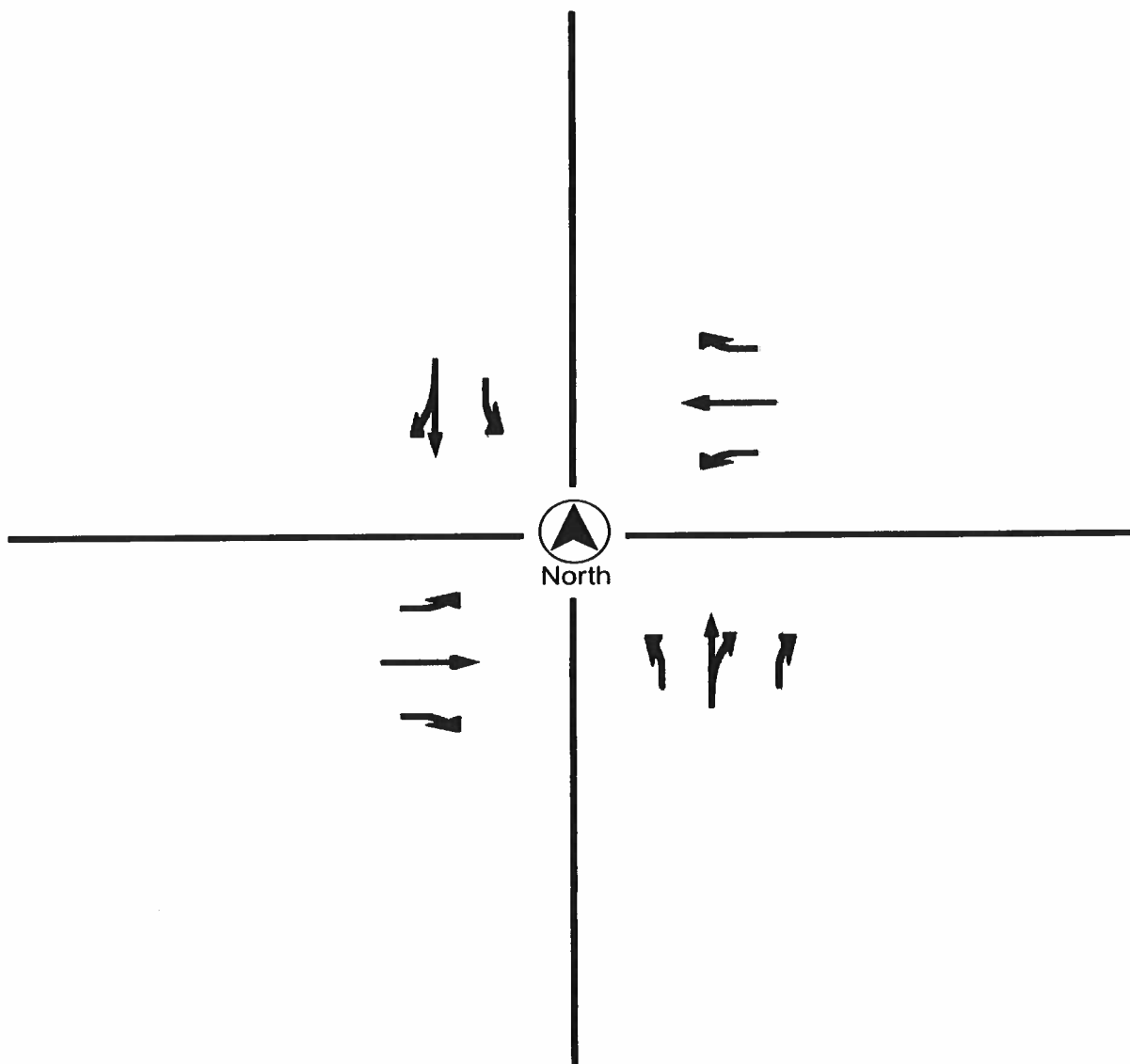
Prepared For:

Peters Engineering Group
862 Pollasky Ave
Clovis, CA 93612

LOCATION Grangeville Blvd @ Centennial Dr
COUNTY Kings
COLLECTION DATE Thursday, September 16, 2021
CYCLE TIME 74 Seconds

N/S STREET Centennial Dr
E/W STREET Grangeville Blvd
WEATHER Clear
CONTROL TYPE Signal

COMMENTS All approaches have protected left turns.



Turning Movement Report



Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230
800-975-6938 Phone/Fax
www.metrotrafficdata.com

Prepared For:

Peters Engineering Group
862 Pollasky Ave
Clovis, CA 93612

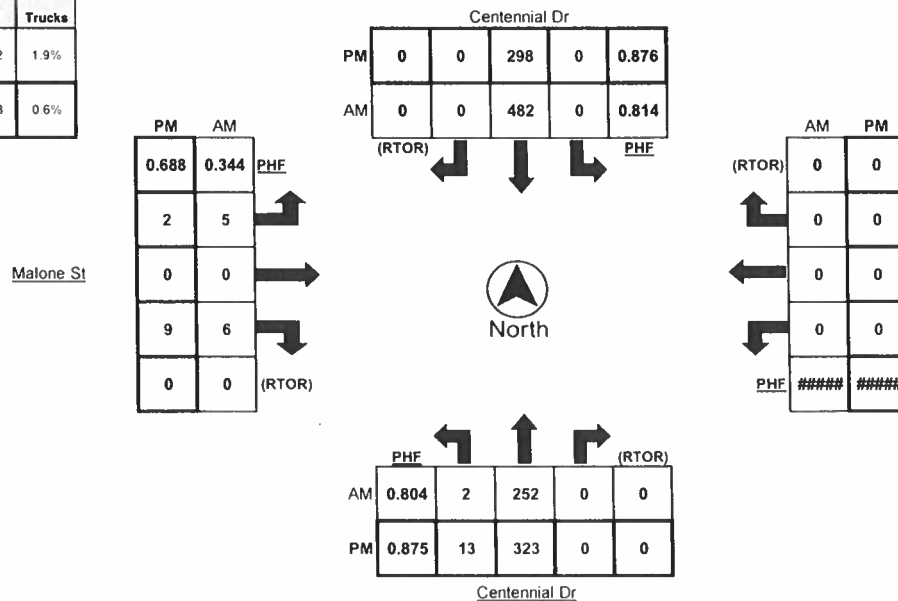
LOCATION Centennial Dr @ Malone StCOUNTY KingsCOLLECTION DATE Thursday, September 16, 2021LATITUDE 36.3394LONGITUDE -119.6820WEATHER Clear

Time	Northbound					Southbound					Eastbound					Westbound				
	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks
7:00 AM - 7:15 AM	1	34	0	0	1	0	51	0	0	1	0	0	0	0	0	0	0	0	0	0
7:15 AM - 7:30 AM	1	41	0	0	0	0	63	0	0	4	0	0	4	0	0	0	0	0	0	0
7:30 AM - 7:45 AM	1	64	0	0	3	0	92	0	0	1	3	0	5	0	0	0	0	0	0	0
7:45 AM - 8:00 AM	0	79	0	0	3	0	148	0	0	2	2	0	1	0	0	0	0	0	0	0
8:00 AM - 8:15 AM	1	42	0	0	0	0	136	0	0	2	0	0	0	0	0	0	0	0	0	0
8:15 AM - 8:30 AM	0	67	0	0	0	0	106	0	0	3	0	0	0	0	0	0	0	0	0	0
8:30 AM - 8:45 AM	3	37	0	0	1	0	61	0	0	1	0	0	0	0	0	0	0	0	0	0
8:45 AM - 9:00 AM	1	38	0	0	1	0	40	0	0	5	1	0	2	0	0	0	0	0	0	0
TOTAL	8	402	0	0	9	0	697	0	0	19	6	0	12	0	0	0	0	0	0	0

Time	Northbound					Southbound					Eastbound					Westbound				
	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks
4:00 PM - 4:15 PM	1	74	0	0	1	0	72	0	0	0	0	0	2	0	0	0	0	0	0	0
4:15 PM - 4:30 PM	1	69	0	0	0	0	69	0	0	3	1	0	0	0	0	0	0	0	0	0
4:30 PM - 4:45 PM	5	67	0	0	1	0	56	0	0	0	0	0	1	0	0	0	0	0	0	0
4:45 PM - 5:00 PM	2	83	0	0	0	0	85	0	0	2	0	0	2	0	0	0	0	0	0	0
5:00 PM - 5:15 PM	4	92	0	0	0	0	61	0	0	1	1	0	2	0	0	0	0	0	0	0
5:15 PM - 5:30 PM	3	74	0	0	0	0	72	0	0	1	0	0	2	0	0	0	0	0	0	0
5:30 PM - 5:45 PM	4	74	0	0	0	0	80	0	0	0	1	0	3	0	0	0	0	0	0	0
5:45 PM - 6:00 PM	2	56	0	0	0	0	86	0	0	2	2	0	3	0	0	0	0	0	0	0
TOTAL	22	589	0	0	2	0	581	0	0	9	5	0	15	0	0	0	0	0	0	0

PEAK HOUR	Northbound					Southbound					Eastbound					Westbound				
	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks
7:30 AM - 8:30 AM	2	252	0	0	6	0	482	0	0	8	5	0	6	0	0	0	0	0	0	0
4:45 PM - 5:45 PM	13	323	0	0	0	0	298	0	0	4	2	0	9	0	0	0	0	0	0	0

	PHF	Trucks
AM	0.812	1.9%
PM	0.938	0.6%





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310 N Irwin Street - Suite 20
Hanford, CA 93230
800-975-6938 Phone/Fax
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Turning Movement Report

Prepared For

Peters Engineering Group
862 Pollasky Ave
Clovis, CA 93612

LOCATION Centennial Dr @ Malone St
COUNTY Kings
COLLECTION DATE Thursday, September 16, 2021

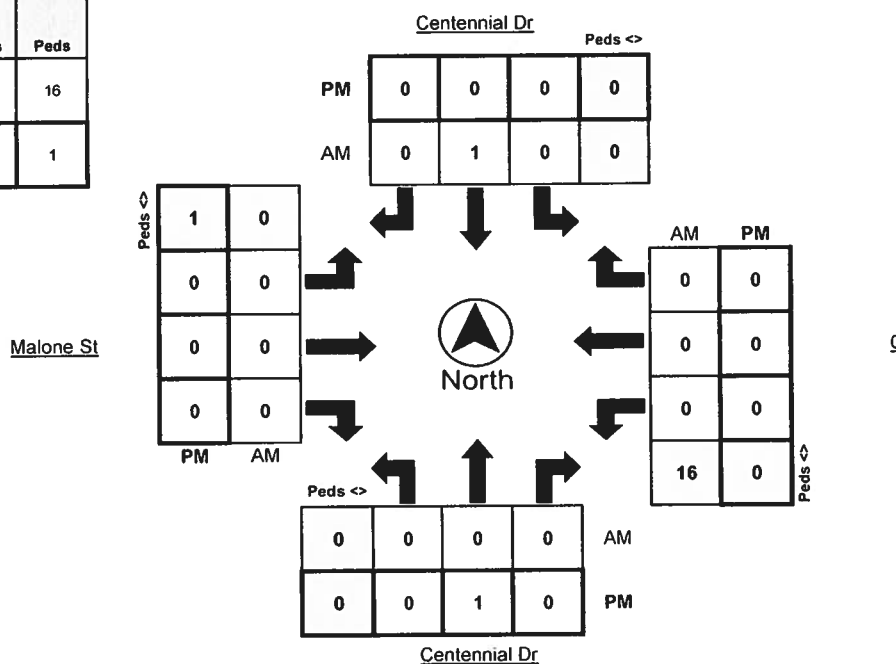
LATITUDE 36.3394
LONGITUDE -119.6820
WEATHER Clear

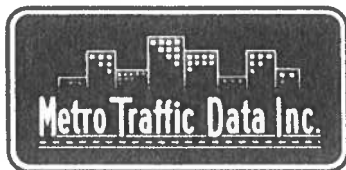
Time	Northbound Bikes			N.Leg Peds	Southbound Bikes			S.Leg Peds	Eastbound Bikes			E.Leg Peds	Westbound Bikes			W.Leg Peds
	Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Left	Thru	Right	
7:00 AM - 7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM - 7:30 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM - 8:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0
8:15 AM - 8:30 AM	0	0	0	0	0	1	0	0	0	0	0	6	0	0	0	0
8:30 AM - 8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM - 9:00 AM	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
TOTAL	0	2	0	0	0	1	0	0	0	0	0	19	0	0	0	0

Time	Northbound Bikes			N.Leg Peds	Southbound Bikes			S.Leg Peds	Eastbound Bikes			E.Leg Peds	Westbound Bikes			W.Leg Peds
	Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Left	Thru	Right	
4:00 PM - 4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM - 4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM - 4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM - 5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM - 5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM - 5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM - 5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM - 6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
TOTAL	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2

PEAK HOUR	Northbound Bikes			N.Leg Peds	Southbound Bikes			S.Leg Peds	Eastbound Bikes			E.Leg Peds	Westbound Bikes			W.Leg Peds
	Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Left	Thru	Right	
7:30 AM - 8:30 AM	0	0	0	0	0	1	0	0	0	0	0	16	0	0	0	0
4:45 PM - 5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1

	Bikes	Peds
AM Peak Total	1	16
PM Peak Total	1	1





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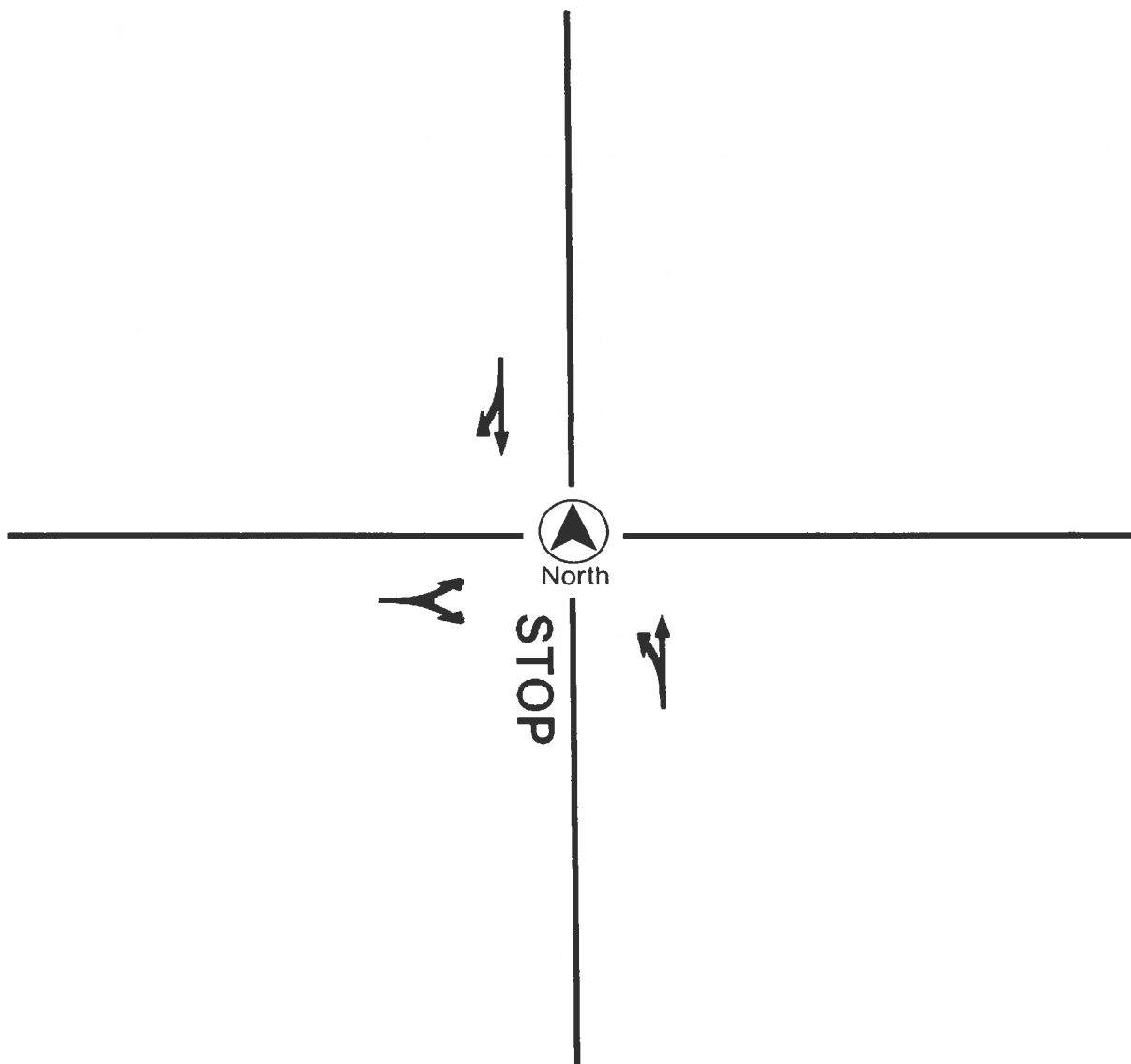
Turning Movement Report

Prepared For

Peters Engineering Group
862 Pollasky Ave
Clovis CA 93612

LOCATION	Centennial Dr @ Malone St	N/S STREET	Centennial Dr
COUNTY	Kings	E/W STREET	Malone St
COLLECTION DATE	Thursday, September 16, 2021	WEATHER	Clear
CYCLE TIME	N/A	CONTROL TYPE	One-Way Stop

COMMENTS





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Turning Movement Report

Prepared For:

Peters Engineering Group
862 Pollasky Ave
Clovis, CA 93612

LOCATION 13th Ave @ Stage Coach Dr

COUNTY Kings

COLLECTION DATE Tuesday, September 28, 2021

LATITUDE 36.345837°

LONGITUDE -119.691082°

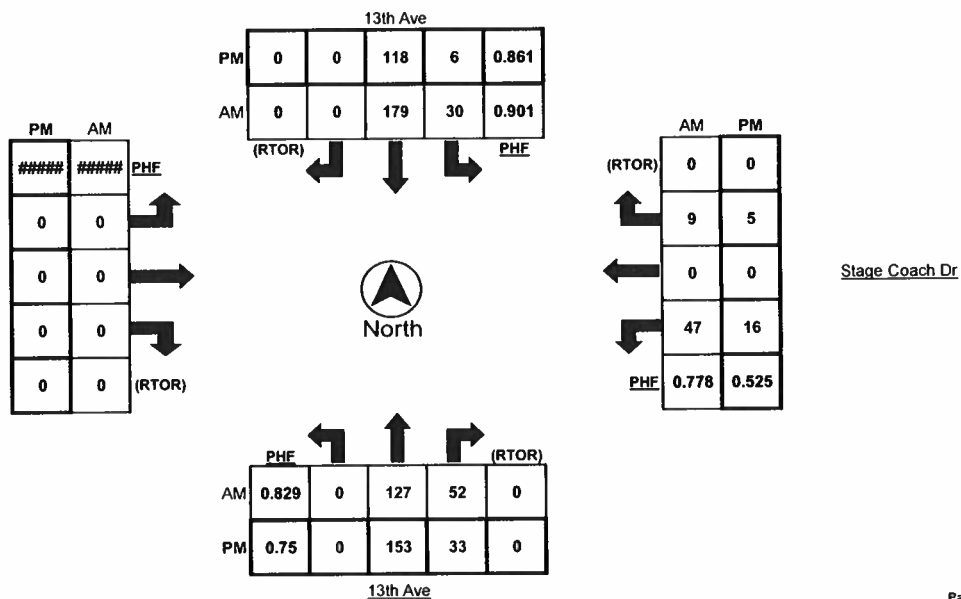
WEATHER Clear

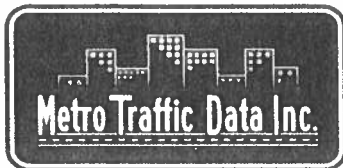
Time	Northbound					Southbound					Eastbound					Westbound				
	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks
7:00 AM - 7:15 AM	0	22	9	0	4	0	42	0	0	0	0	0	0	0	0	7	0	2	0	1
7:15 AM - 7:30 AM	0	17	3	0	2	1	51	0	0	1	0	0	0	0	0	8	0	0	0	2
7:30 AM - 7:45 AM	0	26	21	0	5	10	47	0	0	2	0	0	0	0	0	14	0	3	0	1
7:45 AM - 8:00 AM	0	22	16	0	1	19	39	0	0	0	0	0	0	0	0	17	0	1	0	1
8:00 AM - 8:15 AM	0	45	9	0	1	1	46	0	0	2	0	0	0	0	0	9	0	4	0	0
8:15 AM - 8:30 AM	0	34	6	0	2	0	47	0	0	0	0	0	0	0	0	7	0	1	0	2
8:30 AM - 8:45 AM	0	21	2	0	1	2	23	0	0	2	0	0	0	0	0	2	0	3	0	1
8:45 AM - 9:00 AM	0	20	1	0	0	1	27	0	0	1	0	0	0	0	0	6	0	0	0	3
TOTAL	0	207	67	0	16	34	322	0	0	8	0	0	0	0	0	70	0	14	0	11

Time	Northbound					Southbound					Eastbound					Westbound				
	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks
4:00 PM - 4:15 PM	0	32	6	0	0	2	29	0	0	1	0	0	0	0	0	1	0	0	0	0
4:15 PM - 4:30 PM	0	36	4	0	0	2	25	0	0	2	0	0	0	0	0	4	0	1	0	0
4:30 PM - 4:45 PM	0	44	8	0	0	0	23	0	0	1	0	0	0	0	0	9	0	1	0	0
4:45 PM - 5:00 PM	0	28	10	0	1	2	31	0	0	1	0	0	0	0	0	2	0	0	0	0
5:00 PM - 5:15 PM	0	28	6	0	2	2	30	0	0	0	0	0	0	0	0	3	0	3	0	0
5:15 PM - 5:30 PM	0	53	9	0	2	2	34	0	0	0	0	0	0	0	0	2	0	1	0	0
5:30 PM - 5:45 PM	0	31	7	0	1	0	35	0	0	0	0	0	0	0	0	0	0	1	0	0
5:45 PM - 6:00 PM	0	32	10	0	0	2	33	0	0	0	0	0	0	0	0	1	0	0	0	0
TOTAL	0	284	60	0	6	12	240	0	0	5	0	0	0	0	0	22	0	7	0	0

PEAK HOUR	Northbound					Southbound					Eastbound					Westbound				
	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks	Left	Thru	Right	(RTOR)	Trucks
7:30 AM - 8:30 AM	0	127	52	0	9	30	179	0	0	4	0	0	0	0	0	47	0	9	0	4
4:30 PM - 5:30 PM	0	153	33	0	5	6	118	0	0	2	0	0	0	0	0	16	0	5	0	0

	PHF	Trucks
AM	0.917	3.8%
PM	0.819	2.1%





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Turning Movement Report

Prepared For:

Peters Engineering Group
862 Pollasky Ave
Clovis, CA 93612

LOCATION 13th Ave @ Stage Coach Dr
COUNTY Kings
COLLECTION DATE Tuesday, September 28, 2021

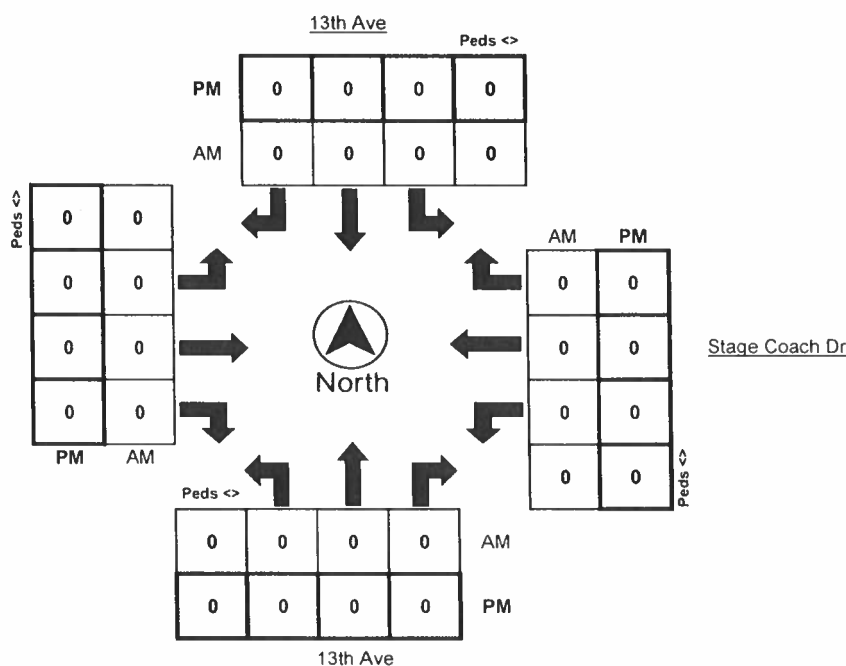
LATITUDE 36.345837°
LONGITUDE -119.691082°
WEATHER Clear

Time	Northbound Bikes			N.Leg Peds	Southbound Bikes			S.Leg Peds	Eastbound Bikes			E.Leg Peds	Westbound Bikes			W.Leg Peds
	Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Left	Thru	Right	
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM - 7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM - 8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM - 8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM - 9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Time	Northbound Bikes			N.Leg Peds	Southbound Bikes			S.Leg Peds	Eastbound Bikes			E.Leg Peds	Westbound Bikes			W.Leg Peds
	Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Left	Thru	Right	
4:00 PM - 4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM - 4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM - 4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM - 5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM - 5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM - 5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM - 5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM - 6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PEAK HOUR	Northbound Bikes			N.Leg Peds	Southbound Bikes			S.Leg Peds	Eastbound Bikes			E.Leg Peds	Westbound Bikes			W.Leg Peds
	Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Left	Thru	Right	
7:30 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM - 5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Bikes	Peds
AM Peak Total	0	0
PM Peak Total	0	0





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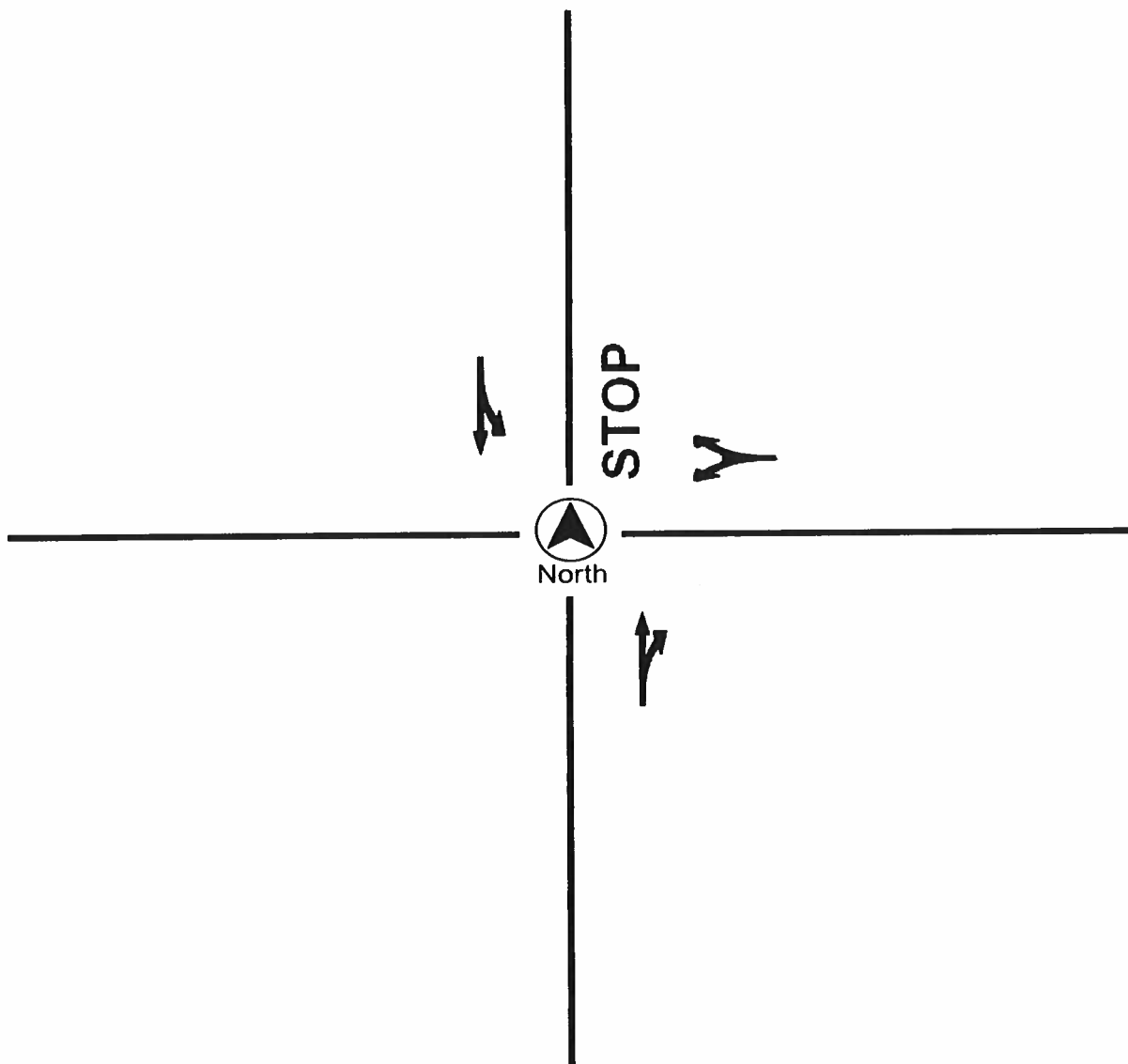
Prepared For:

Peters Engineering Group
 862 Pollasky Ave
 Clovis, CA 93612

LOCATION 13th Ave @ Stage Coach Dr
COUNTY Kings
COLLECTION DATE Tuesday, September 28, 2021
CYCLE TIME N/A

N/S STREET 13th Ave
E/W STREET Stage Coach Dr
WEATHER Clear
CONTROL TYPE One-Way Stop

COMMENTS



TRAFFIC STUDY – TRACT 934

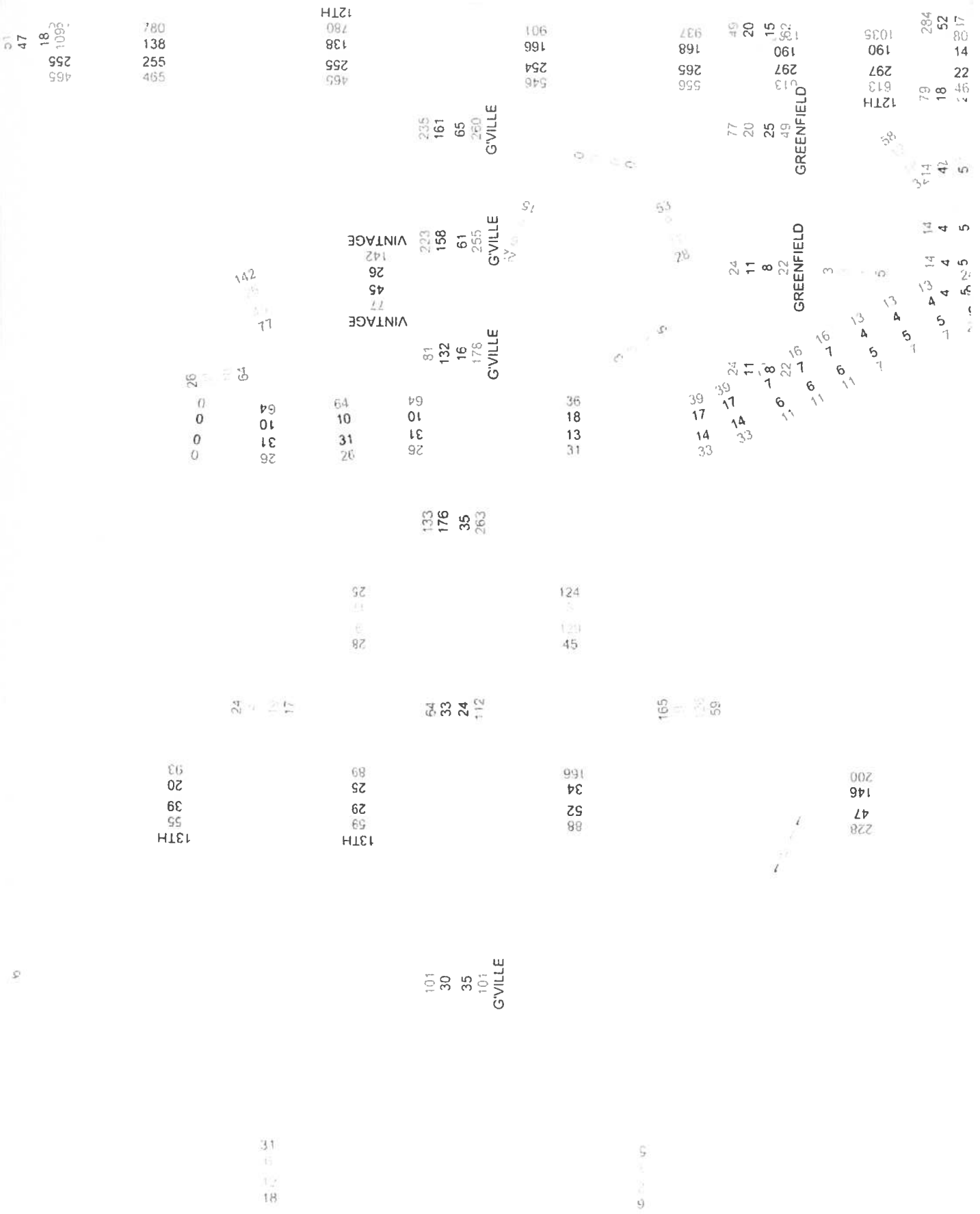
APPENDIX B

KINGS COUNTY TRAVEL MODEL OUTPUT

Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)

2042 Kings County Travel Model Select Zone Analysis AM and PM Peak-Hour Traffic Volumes

Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)



2021 Kings County Travel Model
Map and Data Labels Traffic Volumes
Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)

13TH	103	24	157	29	8	20	26	12063	82	96	10	07	VINTAGE	149	26	48	78	VINTAGE	149	26	48	78	13585	
13TH	103	24	157	29	8	20	26	12063	82	96	10	07	VINTAGE	149	26	48	78	VINTAGE	149	26	48	78	13585	
106	36	38	113	106	36	38	113	106	36	38	113	106	36	38	113	106	36	38	113	106	36	38	113	106
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2042 Kings County Travel Model

Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)

165
155
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351

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44
34
52

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69

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90
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26
145

202
45
472

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25
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101

65
8
25
18
101

**2042 Kings County Travel Model
AM and PM Peak-Hour Traffic Volumes**

0.000

Submitted by: Parsons, Incorporated

2021 with project

2021 winter project

Sum of Home-based VMT								
City	Sum of Population	Sum of Employment	Sum of Home-based VMT		Sum of HBW VMT	Attraction	VMT per Capita	VMT per Employee
			Production					
Armona	4,131	544	36,785		5,927		8.9	10.9
Avenal	6,402	2,574	67,681		57,491		10.6	22.3
Corcoran	11,613	4,470	126,036		81,067		10.9	18.1
Hanford	62,531	22,977	549,687		244,749		8.8	10.7
Home Garden	1,378	44	12,602		387		9.1	8.8
Kettleman	1,704	237	31,488		10,767		18.5	45.4
Kings County Uninc.	18,317	14,286	239,166		339,404		13.1	23.8
Lemoore	27,857	5,585	211,001		149,781		7.6	26.8
Stratford	1,182	180	18,486		3,537		15.6	19.7
Countywide	135,115	50,897	1,292,933		893,110		9.6	17.5

2021 No Project

2021 No Project								
City	Sum of Population	Sum of Employment	Sum of Home-based VMT		Sum of HBW VMT	Attraction	VMT per Capita	VMT per Employee
			Production					
Armona	4,131	544	36,791		5,931		8.9	10.9
Avenal	6,402	2,574	67,944		57,091		10.6	22.2
Corcoran	11,613	4,470	126,583		80,425		10.9	18.0
Hanford	62,047	22,977	543,816		244,163		8.8	10.6
Home Garden	1,378	44	12,589		386		9.1	8.8
Kettleman	1,704	237	31,540		10,720		18.5	45.2
Kings County	18,317	14,286	238,908		338,557		13.0	23.7
Lemoore	27,412	5,585	206,442		150,122		7.5	26.9
Stratford	1,182	180	18,430		3,531		15.6	19.6
Countywide	134,186	50,897	1,283,043		890,927		9.6	17.5

TAZ	City	Population	Employment	Home-based VMT Production	HBW VMT Attraction	VMT per Capita	VMT per Employee
1 External		0	0	0.00	0.00	0.00	0.00
2 External		0	0	0.00	0.00	0.00	0.00
3 External		0	0	0.00	0.00	0.00	0.00
4 External		0	0	0.00	0.00	0.00	0.00
5 External		0	0	0.00	0.00	0.00	0.00
6 External		0	0	0.00	0.00	0.00	0.00
7 External		0	0	0.00	0.00	0.00	0.00
8 External		0	0	0.00	0.00	0.00	0.00
9 External		0	0	0.00	0.00	0.00	0.00
10 External		0	0	0.00	0.00	0.00	0.00
11 External		0	0	0.00	0.00	0.00	0.00
12 External		0	0	0.00	0.00	0.00	0.00
13 External		0	0	0.00	0.00	0.00	0.00
14 External		0	0	0.00	0.00	0.00	0.00
15 External		0	0	0.00	0.00	0.00	0.00
16 External		0	0	0.00	0.00	0.00	0.00
17 External		0	0	0.00	0.00	0.00	0.00
18 External		0	0	0.00	0.00	0.00	0.00
19 External		0	0	0.00	0.00	0.00	0.00
20 External		0	0	0.00	0.00	0.00	0.00
21 External		0	0	0.00	0.00	0.00	0.00
22 External		0	0	0.00	0.00	0.00	0.00
23 External		0	0	0.00	0.00	0.00	0.00
24 External		0	0	0.00	0.00	0.00	0.00
25 External		0	0	0.00	0.00	0.00	0.00
26 External		0	0	0.00	0.00	0.00	0.00
27 External		0	0	0.00	0.00	0.00	0.00
28 External		0	0	0.00	0.00	0.00	0.00
29 External		0	0	0.00	0.00	0.00	0.00
30 External		0	0	0.00	0.00	0.00	0.00
31 External		0	0	0.00	0.00	0.00	0.00
32 External		0	0	0.00	0.00	0.00	0.00
33 External		0	0	0.00	0.00	0.00	0.00
34 External		0	0	0.00	0.00	0.00	0.00
35 External		0	0	0.00	0.00	0.00	0.00
36 External		0	0	0.00	0.00	0.00	0.00
37 External		0	0	0.00	0.00	0.00	0.00
38 External		0	0	0.00	0.00	0.00	0.00
39 External		0	0	0.00	0.00	0.00	0.00
40 External		0	0	0.00	0.00	0.00	0.00
41 External		0	0	0.00	0.00	0.00	0.00
42 External		0	0	0.00	0.00	0.00	0.00
43 External		0	0	0.00	0.00	0.00	0.00
44 External		0	0	0.00	0.00	0.00	0.00
45 External		0	0	0.00	0.00	0.00	0.00
46 External		0	0	0.00	0.00	0.00	0.00
47 External		0	0	0.00	0.00	0.00	0.00
48 External		0	0	0.00	0.00	0.00	0.00
49 External		0	0	0.00	0.00	0.00	0.00
50 External		0	0	0.00	0.00	0.00	0.00
51 External		0	0	0.00	0.00	0.00	0.00
52 External		0	0	0.00	0.00	0.00	0.00
53 External		0	0	0.00	0.00	0.00	0.00
54 External		0	0	0.00	0.00	0.00	0.00
55 External		0	0	0.00	0.00	0.00	0.00
56 External		0	0	0.00	0.00	0.00	0.00
57 External		0	0	0.00	0.00	0.00	0.00
58 External		0	0	0.00	0.00	0.00	0.00
59 External		0	0	0.00	0.00	0.00	0.00
60 External		0	0	0.00	0.00	0.00	0.00
61 External		0	0	26291.44	22037.71	0.00	0.00
62 External		0	0	27035.56	68291.42	0.00	0.00
63 External		0	0	39270.36	83759.34	0.00	0.00
64 External		0	0	1819.66	30388.40	0.00	0.00
65 External		0	0	727.42	11583.49	0.00	0.00
66 External		0	0	65580.37	4404.12	0.00	0.00
67 External		0	0	5787.88	450.37	0.00	0.00
68 External		0	0	9642.72	3650.92	0.00	0.00
69 External		0	0	3894.38	3171.01	0.00	0.00
70 External		0	0	32273.63	2192.08	0.00	0.00
71 External		0	0	3293.96	386.51	0.00	0.00
72 External		0	0	72081.39	2580.03	0.00	0.00
73 External		0	0	5113.60	1114.76	0.00	0.00

74 External	0	0	15573.16	11411.67	0.00	0.00
75 External	0	0	14698.43	39672.00	0.00	0.00
76 External	0	0	855.17	481.41	0.00	0.00
77 External	0	0	525.30	11.74	0.00	0.00
78 External	0	0	22882.79	21451.81	0.00	0.00
79 External	0	0	21473.15	11110.53	0.00	0.00
80 External	0	0	80923.03	127978.22	0.00	0.00
81 External	0	0	22327.01	11292.36	0.00	0.00
82 External	0	0	494.11	403.18	0.00	0.00
83 External	0	0	142.95	833.66	0.00	0.00
84 External	0	0	2684.17	14273.52	0.00	0.00
85 External	0	0	40813.45	12914.07	0.00	0.00
86 External	0	0	19424.17	3166.41	0.00	0.00
87 External	0	0	228.79	6.24	0.00	0.00
88 External	0	0	450.23	7.79	0.00	0.00
89 External	0	0	5418.52	4701.62	0.00	0.00
90 External	0	0	627.59	332.68	0.00	0.00
91 External	0	0	675.76	14.52	0.00	0.00
92 External	0	0	1515.16	841.39	0.00	0.00
93 External	0	0	0.00	0.00	0.00	0.00
94 External	0	0	0.00	0.00	0.00	0.00
95 External	0	0	0.00	0.00	0.00	0.00
96 External	0	0	0.00	0.00	0.00	0.00
97 External	0	0	0.00	0.00	0.00	0.00
98 External	0	0	0.00	0.00	0.00	0.00
99 External	0	0	0.00	0.00	0.00	0.00
100 External	0	0	0.00	0.00	0.00	0.00
101 Armona	133	54	984.85	520.49	7.40	9.64
102 Armona	44	39	330.68	412.92	7.52	10.59
103 Armona	22	9	41.55	96.69	1.89	10.74
104 Armona	231	0	1911.32	0.00	8.27	0.00
105 Armona	217	2	1773.32	14.90	8.17	7.45
106 Armona	712	0	6178.42	0.00	8.68	0.00
107 Armona	225	4	2002.32	27.29	8.90	6.82
108 Armona	202	0	1765.75	0.00	8.74	0.00
109 Armona	326	1	2781.64	0.00	8.53	0.00
110 Armona	328	0	3584.75	0.00	10.93	0.00
111 Armona	127	0	1327.03	0.00	10.45	0.00
112 Armona	402	13	3216.70	115.36	8.00	8.87
113 Armona	129	302	958.28	3417.27	7.43	11.32
114 Armona	327	0	2927.24	0.00	8.95	0.00
115 Armona	0	0	0.00	0.00	0.00	0.00
116 Armona	0	0	0.00	0.00	0.00	0.00
117 Armona	0	0	0.00	0.00	0.00	0.00
118 Armona	0	0	0.00	0.00	0.00	0.00
119 Armona	0	0	0.00	0.00	0.00	0.00
120 Armona	0	0	0.00	0.00	0.00	0.00
121 Armona	0	0	0.00	0.00	0.00	0.00
122 Armona	0	0	0.00	0.00	0.00	0.00
123 Armona	0	0	0.00	0.00	0.00	0.00
124 Armona	0	0	0.00	0.00	0.00	0.00
125 Armona	0	0	0.00	0.00	0.00	0.00
126 Armona	20	0	21.71	0.00	1.09	0.00
127 Armona	136	0	1354.86	0.00	9.96	0.00
128 Armona	146	1	1333.78	0.00	9.14	0.00
129 Armona	71	1	806.37	8.52	11.36	8.52
130 Armona	286	2	3011.47	22.37	10.53	11.19
131 Armona	47	116	473.27	1291.20	10.07	11.13
132 Armona	0	0	0.00	0.00	0.00	0.00
133 Armona	0	0	0.00	0.00	0.00	0.00
134 Armona	0	0	0.00	0.00	0.00	0.00
135 Armona	0	0	0.00	0.00	0.00	0.00
136 Armona	0	0	0.00	0.00	0.00	0.00
137 Armona	0	0	0.00	0.00	0.00	0.00
138 Armona	0	0	0.00	0.00	0.00	0.00
139 Armona	0	0	0.00	0.00	0.00	0.00
140 Armona	0	0	0.00	0.00	0.00	0.00
141 Armona	0	0	0.00	0.00	0.00	0.00
142 Armona	0	0	0.00	0.00	0.00	0.00
143 Armona	0	0	0.00	0.00	0.00	0.00
144 Armona	0	0	0.00	0.00	0.00	0.00
145 Armona	0	0	0.00	0.00	0.00	0.00
146 Armona	0	0	0.00	0.00	0.00	0.00
147 Armona	0	0	0.00	0.00	0.00	0.00

148 Armona	0	0	0.00	0.00	0.00	0.00
149 Armona	0	0	0.00	0.00	0.00	0.00
150 Armona	0	0	0.00	0.00	0.00	0.00
151 Avenal	117	35	1050.57	558.66	8.98	15.96
152 Avenal	186	22	1788.73	422.93	9.62	19.22
153 Avenal	38	18	252.31	291.19	6.64	16.18
154 Avenal	350	27	3508.60	477.03	10.02	17.67
155 Avenal	180	0	1696.76	0.00	9.43	0.00
156 Avenal	273	186	2888.58	5558.82	10.58	29.89
157 Avenal	16	66	23.81	1083.93	1.49	16.42
158 Avenal	131	35	1155.14	531.73	8.82	15.19
159 Avenal	310	0	3239.08	0.00	10.45	0.00
160 Avenal	344	2	4169.34	23.28	12.12	11.64
161 Avenal	352	0	3676.01	0.00	10.44	0.00
162 Avenal	221	7	2092.67	82.12	9.47	11.73
163 Avenal	264	125	2649.37	2108.99	10.04	16.87
164 Avenal	367	19	3888.36	266.49	10.59	14.03
165 Avenal	501	0	5431.41	0.00	10.84	0.00
166 Avenal	346	68	3830.91	1161.75	11.07	17.08
167 Avenal	169	46	2017.59	2534.28	11.94	55.09
168 Avenal	441	2	5079.07	19.78	11.52	9.89
169 Avenal	356	0	3999.67	0.00	11.24	0.00
170 Avenal	75	156	779.13	4747.00	10.39	30.43
171 Avenal	0	6	0.00	30.10	0.00	5.02
172 Avenal	137	6	1648.46	83.24	12.03	13.87
173 Avenal	410	4	4894.61	54.49	11.94	13.62
174 Avenal	50	39	425.41	4389.17	8.51	112.54
175 Avenal	34	55	98.00	950.99	2.88	17.29
176 Avenal	1	0	0.00	0.00	0.00	0.00
177 Avenal	42	0	204.48	0.00	4.87	0.00
178 Avenal	69	0	698.60	0.00	10.12	0.00
179 Avenal	35	0	154.99	0.00	4.43	0.00
180 Avenal	36	0	150.04	0.00	4.17	0.00
181 Avenal	116	0	1541.52	0.00	13.29	0.00
182 Avenal	107	0	1389.77	0.00	12.99	0.00
183 Avenal	225	0	2735.86	0.00	12.16	0.00
184 Avenal	6	8	4.28	99.19	0.71	12.40
185 Avenal	23	0	34.29	0.00	1.49	0.00
186 Avenal	47	0	453.77	0.00	9.65	0.00
187 Avenal	1	2	0.00	32.06	0.00	16.03
188 Avenal	0	1	0.00	15.45	0.00	15.45
189 Avenal	0	2	0.00	31.26	0.00	15.63
190 Avenal	0	1518	0.00	30181.76	0.00	19.88
191 Avenal	0	2	0.00	20.53	0.00	10.27
192 Avenal	0	4	0.00	77.41	0.00	19.35
193 Avenal	3	0	1.42	0.00	0.47	0.00
194 Avenal	3	0	1.97	0.00	0.66	0.00
195 Avenal	0	3	0.00	136.26	0.00	45.42
196 Avenal	3	1	8.48	0.00	2.83	0.00
197 Avenal	0	9	0.00	211.22	0.00	23.47
198 Avenal	0	0	0.00	0.00	0.00	0.00
199 Avenal	0	0	0.00	0.00	0.00	0.00
200 Avenal	0	0	0.00	0.00	0.00	0.00
201 Avenal	0	0	0.00	0.00	0.00	0.00
202 Avenal	0	0	0.00	0.00	0.00	0.00
203 Avenal	0	0	0.00	0.00	0.00	0.00
204 Avenal	0	0	0.00	0.00	0.00	0.00
205 Avenal	0	0	0.00	0.00	0.00	0.00
206 Avenal	0	0	0.00	0.00	0.00	0.00
207 Avenal	0	0	0.00	0.00	0.00	0.00
208 Avenal	0	0	0.00	0.00	0.00	0.00
209 Avenal	0	0	0.00	0.00	0.00	0.00
210 Avenal	0	0	0.00	0.00	0.00	0.00
211 Avenal	0	0	0.00	0.00	0.00	0.00
212 Avenal	0	0	0.00	0.00	0.00	0.00
213 Avenal	0	0	0.00	0.00	0.00	0.00
214 Avenal	0	0	0.00	0.00	0.00	0.00
215 Avenal	0	0	0.00	0.00	0.00	0.00
216 Avenal	0	0	0.00	0.00	0.00	0.00
217 Avenal	0	0	0.00	0.00	0.00	0.00
218 Avenal	0	0	0.00	0.00	0.00	0.00
219 Avenal	0	0	0.00	0.00	0.00	0.00
220 Avenal	0	0	0.00	0.00	0.00	0.00
221 Avenal	0	0	0.00	0.00	0.00	0.00

222 Avenal	0	0	0.00	0.00	0.00	0.00
223 Avenal	0	0	0.00	0.00	0.00	0.00
224 Avenal	0	0	0.00	0.00	0.00	0.00
225 Avenal	0	0	0.00	0.00	0.00	0.00
226 Avenal	0	0	0.00	0.00	0.00	0.00
227 Avenal	0	0	0.00	0.00	0.00	0.00
228 Avenal	0	0	0.00	0.00	0.00	0.00
229 Avenal	0	0	0.00	0.00	0.00	0.00
230 Avenal	0	0	0.00	0.00	0.00	0.00
231 Avenal	0	0	0.00	0.00	0.00	0.00
232 Avenal	0	0	0.00	0.00	0.00	0.00
233 Avenal	0	0	0.00	0.00	0.00	0.00
234 Avenal	0	0	0.00	0.00	0.00	0.00
235 Avenal	0	0	0.00	0.00	0.00	0.00
236 Avenal	0	0	0.00	0.00	0.00	0.00
237 Avenal	0	0	0.00	0.00	0.00	0.00
238 Avenal	0	0	0.00	0.00	0.00	0.00
239 Avenal	0	0	0.00	0.00	0.00	0.00
240 Avenal	0	0	0.00	0.00	0.00	0.00
241 Avenal	0	0	0.00	0.00	0.00	0.00
242 Avenal	0	0	0.00	0.00	0.00	0.00
243 Avenal	0	0	0.00	0.00	0.00	0.00
244 Avenal	0	0	0.00	0.00	0.00	0.00
245 Avenal	0	0	0.00	0.00	0.00	0.00
246 Avenal	0	0	0.00	0.00	0.00	0.00
247 Avenal	0	0	0.00	0.00	0.00	0.00
248 Avenal	0	0	0.00	0.00	0.00	0.00
249 Avenal	0	0	0.00	0.00	0.00	0.00
250 Avenal	0	0	0.00	0.00	0.00	0.00
251 Avenal	17	100	17.73	1309.96	1.04	13.10
252 Corcoran	0	64	0.00	898.73	0.00	14.04
253 Corcoran	117	70	987.63	1068.34	8.44	15.26
254 Corcoran	36	67	281.08	959.60	7.81	14.32
255 Corcoran	73	44	724.57	548.69	9.93	12.47
256 Corcoran	20	68	18.89	1046.02	0.94	15.38
257 Corcoran	72	191	711.18	2317.25	9.88	12.13
258 Corcoran	91	24	787.69	312.85	8.66	13.04
259 Corcoran	167	10	1510.23	118.34	9.04	11.83
260 Corcoran	0	2	0.00	18.41	0.00	9.21
261 Corcoran	14	51	14.92	534.73	1.07	10.48
262 Corcoran	170	1	1488.56	5.55	8.76	5.55
263 Corcoran	150	0	1486.92	0.00	9.91	0.00
264 Corcoran	142	0	1486.45	0.00	10.47	0.00
265 Corcoran	126	0	1249.19	0.00	9.91	0.00
266 Corcoran	60	13	672.88	138.03	11.21	10.62
267 Corcoran	60	16	673.38	201.03	11.22	12.56
268 Corcoran	84	6	845.97	40.92	10.07	6.82
269 Corcoran	246	8	2442.96	91.30	9.93	11.41
270 Corcoran	212	39	2126.42	549.06	10.03	14.08
271 Corcoran	115	27	1122.47	337.18	9.76	12.49
272 Corcoran	40	8	144.28	110.64	3.61	13.83
273 Corcoran	0	37	0.00	529.89	0.00	14.32
274 Corcoran	171	1	1847.96	0.00	10.81	0.00
275 Corcoran	133	0	1448.12	0.00	10.89	0.00
276 Corcoran	275	51	3014.98	2862.28	10.96	56.12
277 Corcoran	350	218	3771.17	2400.77	10.77	11.01
278 Corcoran	0	138	0.00	8813.80	0.00	63.87
279 Corcoran	0	0	0.00	0.00	0.00	0.00
280 Corcoran	768	15	8179.00	141.47	10.65	9.43
281 Corcoran	395	3	4578.99	19.73	11.59	6.58
282 Corcoran	0	0	0.00	0.00	0.00	0.00
283 Corcoran	590	0	6933.31	0.00	11.75	0.00
284 Corcoran	295	55	3391.46	2599.97	11.50	47.27
285 Corcoran	375	62	4450.28	654.16	11.87	10.55
286 Corcoran	151	8	1516.42	100.61	10.04	12.58
287 Corcoran	503	10	5171.12	125.59	10.28	12.56
288 Corcoran	81	123	674.49	2072.27	8.33	16.85
289 Corcoran	301	43	3027.32	474.04	10.06	11.02
290 Corcoran	222	1	2290.10	4.58	10.32	4.58
291 Corcoran	189	58	1969.23	705.41	10.42	12.16
292 Corcoran	383	10	4268.31	109.98	11.14	11.00
293 Corcoran	377	5	4359.41	68.12	11.56	13.62
294 Corcoran	245	0	3243.17	0.00	13.24	0.00
295 Corcoran	410	1	5030.72	6.32	12.27	6.32

296 Corcoran	177	4	1915.23	35.45	10.82	8.86
297 Corcoran	295	0	3358.97	0.00	11.39	0.00
298 Corcoran	621	14	6649.95	166.07	10.71	11.86
299 Corcoran	338	5	3615.65	56.47	10.70	11.29
300 Corcoran	19	0	29.97	0.00	1.58	0.00
301 Corcoran	461	4	5416.94	42.85	11.75	10.71
302 Corcoran	267	4	3205.12	27.96	12.00	6.99
303 Corcoran	0	0	0.00	0.00	0.00	0.00
304 Corcoran	45	103	520.66	1021.05	11.57	9.91
305 Corcoran	89	1	985.61	4.89	11.07	4.89
306 Corcoran	0	0	0.00	0.00	0.00	0.00
307 Corcoran	0	89	0.00	1251.66	0.00	14.06
308 Corcoran	0	15	0.00	201.72	0.00	13.45
309 Corcoran	0	2196	0.00	38042.79	0.00	17.32
310 Corcoran	0	4	0.00	46.33	0.00	11.58
311 Corcoran	192	10	2036.25	115.61	10.61	11.56
312 Corcoran	3	2	0.89	20.19	0.30	10.09
313 Corcoran	68	0	615.29	0.00	9.05	0.00
314 Corcoran	0	1	0.00	0.00	0.00	0.00
315 Corcoran	83	1	1208.62	7.60	14.56	7.60
316 Corcoran	0	7	0.00	74.78	0.00	10.68
317 Corcoran	93	32	1130.87	461.07	12.16	14.41
318 Corcoran	78	0	966.09	0.00	12.39	0.00
319 Corcoran	0	0	0.00	0.00	0.00	0.00
320 Corcoran	0	56	0.00	3625.53	0.00	64.74
321 Corcoran	0	0	0.00	0.00	0.00	0.00
322 Corcoran	0	0	0.00	0.00	0.00	0.00
323 Corcoran	0	0	0.00	0.00	0.00	0.00
324 Corcoran	0	0	0.00	0.00	0.00	0.00
325 Corcoran	0	0	0.00	0.00	0.00	0.00
326 Corcoran	0	0	0.00	0.00	0.00	0.00
327 Corcoran	0	0	0.00	0.00	0.00	0.00
328 Corcoran	0	0	0.00	0.00	0.00	0.00
329 Corcoran	0	0	0.00	0.00	0.00	0.00
330 Corcoran	0	0	0.00	0.00	0.00	0.00
331 Corcoran	25	0	35.72	0.00	1.43	0.00
332 Corcoran	0	0	0.00	0.00	0.00	0.00
333 Corcoran	0	1	0.00	7.14	0.00	7.14
334 Corcoran	0	1	0.00	6.36	0.00	6.36
335 Corcoran	0	3	0.00	29.58	0.00	9.86
336 Corcoran	6	114	9.22	1712.43	1.54	15.02
337 Corcoran	0	0	0.00	0.00	0.00	0.00
338 Corcoran	0	1	0.00	6.49	0.00	6.49
339 Corcoran	0	0	0.00	0.00	0.00	0.00
340 Corcoran	0	141	0.00	1766.08	0.00	12.53
341 Corcoran	72	5	561.28	41.33	7.80	8.27
342 Corcoran	0	0	0.00	0.00	0.00	0.00
343 Corcoran	3	91	0.75	1127.61	0.25	12.39
344 Corcoran	0	0	0.00	0.00	0.00	0.00
345 Corcoran	249	2	3356.44	14.69	13.48	7.34
346 Corcoran	38	12	230.45	145.63	6.06	12.14
347 Corcoran	0	0	0.00	0.00	0.00	0.00
348 Corcoran	0	1	0.00	7.61	0.00	7.61
349 Corcoran	182	1	2244.93	7.35	12.33	7.35
350 Corcoran	0	0	0.00	0.00	0.00	0.00
351 Corcoran	0	1	0.00	6.93	0.00	6.93
352 Corcoran	0	0	0.00	0.00	0.00	0.00
353 Corcoran	0	0	0.00	0.00	0.00	0.00
354 Corcoran	0	0	0.00	0.00	0.00	0.00
355 Corcoran	0	0	0.00	0.00	0.00	0.00
356 Corcoran	0	0	0.00	0.00	0.00	0.00
357 Corcoran	0	0	0.00	0.00	0.00	0.00
358 Corcoran	0	0	0.00	0.00	0.00	0.00
359 Corcoran	0	0	0.00	0.00	0.00	0.00
360 Corcoran	0	0	0.00	0.00	0.00	0.00
361 Corcoran	0	0	0.00	0.00	0.00	0.00
362 Corcoran	0	0	0.00	0.00	0.00	0.00
363 Corcoran	0	0	0.00	0.00	0.00	0.00
364 Corcoran	0	0	0.00	0.00	0.00	0.00
365 Corcoran	0	0	0.00	0.00	0.00	0.00
366 Corcoran	0	0	0.00	0.00	0.00	0.00
367 Corcoran	0	0	0.00	0.00	0.00	0.00
368 Corcoran	0	0	0.00	0.00	0.00	0.00
369 Corcoran	0	0	0.00	0.00	0.00	0.00

370 Corcoran	0	0	0.00	0.00	0.00	0.00
371 Corcoran	0	0	0.00	0.00	0.00	0.00
372 Corcoran	0	0	0.00	0.00	0.00	0.00
373 Corcoran	0	0	0.00	0.00	0.00	0.00
374 Corcoran	0	0	0.00	0.00	0.00	0.00
375 Corcoran	0	0	0.00	0.00	0.00	0.00
376 Corcoran	0	0	0.00	0.00	0.00	0.00
377 Corcoran	0	0	0.00	0.00	0.00	0.00
378 Corcoran	0	0	0.00	0.00	0.00	0.00
379 Corcoran	0	0	0.00	0.00	0.00	0.00
380 Corcoran	0	0	0.00	0.00	0.00	0.00
381 Corcoran	0	0	0.00	0.00	0.00	0.00
382 Corcoran	0	0	0.00	0.00	0.00	0.00
383 Corcoran	0	0	0.00	0.00	0.00	0.00
384 Corcoran	0	0	0.00	0.00	0.00	0.00
385 Corcoran	0	0	0.00	0.00	0.00	0.00
386 Corcoran	0	0	0.00	0.00	0.00	0.00
387 Corcoran	0	0	0.00	0.00	0.00	0.00
388 Corcoran	0	0	0.00	0.00	0.00	0.00
389 Corcoran	0	0	0.00	0.00	0.00	0.00
390 Corcoran	0	0	0.00	0.00	0.00	0.00
391 Corcoran	0	0	0.00	0.00	0.00	0.00
392 Corcoran	0	0	0.00	0.00	0.00	0.00
393 Corcoran	0	0	0.00	0.00	0.00	0.00
394 Corcoran	0	0	0.00	0.00	0.00	0.00
395 Corcoran	0	0	0.00	0.00	0.00	0.00
396 Corcoran	0	0	0.00	0.00	0.00	0.00
397 Corcoran	0	0	0.00	0.00	0.00	0.00
398 Corcoran	0	0	0.00	0.00	0.00	0.00
399 Corcoran	0	0	0.00	0.00	0.00	0.00
400 Corcoran	0	0	0.00	0.00	0.00	0.00
401 Hanford	15	213	61.55	1576.60	4.10	7.40
402 Hanford	23	23	92.06	193.61	4.00	8.42
403 Hanford	0	0	0.00	0.00	0.00	0.00
404 Hanford	15	22	57.68	173.80	3.85	7.90
405 Hanford	10	134	6.90	993.27	0.69	7.41
406 Hanford	11	123	6.96	1012.96	0.63	8.24
407 Hanford	10	64	5.93	525.65	0.59	8.21
408 Hanford	5	27	4.43	196.51	0.89	7.28
409 Hanford	107	84	653.47	715.43	6.11	8.52
410 Hanford	10	89	6.95	711.42	0.70	7.99
411 Hanford	10	32	7.20	242.42	0.72	7.58
412 Hanford	38	7	107.68	54.81	2.83	7.83
413 Hanford	94	36	548.99	339.54	5.84	9.43
414 Hanford	40	31	115.40	243.24	2.88	7.85
415 Hanford	14	16	35.44	184.11	2.53	11.51
416 Hanford	14	31	34.46	385.04	2.46	12.42
417 Hanford	3	6	3.82	45.25	1.27	7.54
418 Hanford	5	41	7.17	335.97	1.43	8.19
419 Hanford	0	70	0.00	715.35	0.00	10.22
420 Hanford	5	109	7.25	913.52	1.45	8.38
421 Hanford	30	16	102.06	138.72	3.40	8.67
422 Hanford	25	43	93.99	339.17	3.76	7.89
423 Hanford	10	22	6.83	205.92	0.68	9.36
424 Hanford	0	43	0.00	336.54	0.00	7.83
425 Hanford	5	4	6.52	22.02	1.30	5.50
426 Hanford	3	12	0.45	79.46	0.15	6.62
427 Hanford	5	5	1.05	35.75	0.21	7.15
428 Hanford	4	2	0.78	6.43	0.19	3.22
429 Hanford	7	5	4.65	35.67	0.66	7.13
430 Hanford	11	24	5.62	157.54	0.51	6.56
431 Hanford	11	110	5.53	720.57	0.50	6.55
432 Hanford	7	13	4.25	75.83	0.61	5.83
433 Hanford	7	8	4.65	65.31	0.66	8.16
434 Hanford	10	177	5.48	1251.33	0.55	7.07
435 Hanford	9	118	4.26	1205.06	0.47	10.21
436 Hanford	7	66	4.36	1479.28	0.62	22.41
437 Hanford	444	148	2689.01	1257.78	6.06	8.50
438 Hanford	62	140	369.08	927.07	5.95	6.62
439 Hanford	37	265	97.67	1939.06	2.64	7.32
440 Hanford	28	172	99.24	1417.60	3.54	8.24
441 Hanford	29	149	41.18	991.69	1.42	6.66
442 Hanford	65	35	235.44	230.28	3.62	6.58
443 Hanford	38	168	115.78	1458.42	3.05	8.68

444 Hanford	33	1	76.24	4.70	2.31	4.70
445 Hanford	118	0	856.87	0.00	7.26	0.00
446 Hanford	225	2	1484.01	9.20	6.60	4.60
447 Hanford	93	2	713.08	9.80	7.67	4.90
448 Hanford	160	19	1080.47	116.49	6.75	6.13
449 Hanford	79	1	451.43	0.00	5.71	0.00
450 Hanford	66	33	264.61	291.60	4.01	8.84
451 Hanford	15	31	35.96	326.12	2.40	10.52
452 Hanford	10	26	13.93	253.26	1.39	9.74
453 Hanford	52	14	340.12	98.36	6.54	7.03
454 Hanford	122	384	884.20	2709.45	7.25	7.06
455 Hanford	73	0	628.05	0.00	8.60	0.00
456 Hanford	79	0	639.16	0.00	8.09	0.00
457 Hanford	34	4	99.30	16.48	2.92	4.12
458 Hanford	289	83	2322.82	1867.80	8.04	22.50
459 Hanford	142	4	976.44	31.40	6.88	7.85
460 Hanford	42	4	173.13	37.46	4.12	9.36
461 Hanford	86	4	634.81	19.22	7.38	4.81
462 Hanford	722	23	5522.61	168.27	7.65	7.32
463 Hanford	120	12	869.37	89.39	7.24	7.45
464 Hanford	380	81	2388.95	679.29	6.29	8.39
465 Hanford	22	57	39.08	502.28	1.78	8.81
466 Hanford	0	20	0.00	153.72	0.00	7.69
467 Hanford	1	10	0.00	56.36	0.00	5.64
468 Hanford	0	350	0.00	2545.92	0.00	7.27
469 Hanford	7	153	4.62	1445.34	0.66	9.45
470 Hanford	10	71	5.28	698.68	0.53	9.84
471 Hanford	29	20	58.78	177.69	2.03	8.88
472 Hanford	41	176	85.55	1752.23	2.09	9.96
473 Hanford	139	57	805.27	534.20	5.79	9.37
474 Hanford	0	62	0.00	1976.53	0.00	31.88
475 Hanford	357	13	2416.06	82.82	6.77	6.37
476 Hanford	104	197	707.67	2854.79	6.80	14.49
477 Hanford	73	162	575.11	1188.01	7.88	7.33
478 Hanford	61	22	223.72	129.70	3.67	5.90
479 Hanford	143	2	970.54	15.42	6.79	7.71
480 Hanford	283	56	1980.73	52.00	7.00	0.93
481 Hanford	227	14	1559.09	113.43	6.87	8.10
482 Hanford	386	21	3383.52	161.15	8.77	7.67
483 Hanford	297	2	2421.69	13.81	8.15	6.90
484 Hanford	170	80	1504.65	812.27	8.85	10.15
485 Hanford	87	47	698.54	417.84	8.03	8.89
486 Hanford	53	90	560.61	774.02	10.58	8.60
487 Hanford	177	69	1565.42	705.71	8.84	10.23
488 Hanford	81	221	738.97	1980.27	9.12	8.96
489 Hanford	6	19	7.28	216.97	1.21	11.42
490 Hanford	73	58	636.37	402.87	8.72	6.95
491 Hanford	913	109	7048.87	1108.96	7.72	10.17
492 Hanford	1708	49	14736.71	214.16	8.63	4.37
493 Hanford	547	0	4072.57	0.00	7.45	0.00
494 Hanford	542	122	4051.06	1040.81	7.47	8.53
495 Hanford	365	179	2531.23	3135.99	6.93	17.52
496 Hanford	0	76	0.00	752.90	0.00	9.91
497 Hanford	216	514	1198.27	4362.17	5.55	8.49
498 Hanford	638	353	3211.46	2856.07	5.03	8.09
499 Hanford	37	245	204.23	2115.43	5.52	8.63
500 Hanford	21	128	26.39	1522.04	1.26	11.89
501 Hanford	74	474	545.24	2505.40	7.37	5.29
502 Hanford	219	298	1504.76	430.70	6.87	1.45
503 Hanford	10	27	7.46	166.52	0.75	6.17
504 Hanford	28	169	95.19	1470.11	3.40	8.70
505 Hanford	18	81	23.61	732.40	1.31	9.04
506 Hanford	1225	24	9111.44	151.19	7.44	6.30
507 Hanford	920	239	7967.62	2204.08	8.66	9.22
508 Hanford	640	104	4789.25	794.12	7.48	7.64
509 Hanford	489	52	3851.43	375.54	7.88	7.22
510 Hanford	129	16	963.18	85.36	7.47	5.33
511 Hanford	154	141	1143.75	1022.81	7.43	7.25
512 Hanford	119	139	847.19	954.63	7.12	6.87
513 Hanford	129	19	973.76	109.34	7.55	5.75
514 Hanford	119	9	895.35	39.21	7.52	4.36
515 Hanford	45	3	389.10	0.00	8.65	0.00
516 Hanford	4	113	3.16	1111.61	0.79	9.84
517 Hanford	64	6	349.14	36.93	5.46	6.16

518 Hanford	85	2	583.37	9.85	6.86	4.92
519 Hanford	118	9	944.60	44.95	8.01	4.99
520 Hanford	570	191	4040.63	1524.79	7.09	7.98
521 Hanford	504	42	3566.76	274.41	7.08	6.53
522 Hanford	293	2	2045.34	3.58	6.98	1.79
523 Hanford	270	10	1881.55	99.93	6.97	9.99
524 Hanford	188	38	1598.29	368.09	8.50	9.69
525 Hanford	302	46	2710.76	434.60	8.98	9.45
526 Hanford	157	411	1379.99	1595.47	8.79	3.88
527 Hanford	1249	10	11394.73	72.88	9.12	7.29
528 Hanford	917	23	8129.95	230.55	8.87	10.02
529 Hanford	169	238	1650.40	2126.33	9.77	8.93
530 Hanford	782	370	8057.09	3888.23	10.30	10.51
531 Hanford	0	200	0.00	2999.39	0.00	15.00
532 Hanford	21	412	57.40	6057.41	2.73	14.70
533 Hanford	0	1577	0.00	21100.91	0.00	13.38
534 Hanford	0	91	0.00	1451.04	0.00	15.95
535 Hanford	316	93	2500.76	896.67	7.91	9.64
536 Hanford	1155	27	10193.38	264.94	8.83	9.81
537 Hanford	144	1	1638.08	8.43	11.38	8.43
538 Hanford	847	17	7053.57	123.59	8.33	7.27
539 Hanford	526	19	4398.88	183.93	8.36	9.68
540 Hanford	843	15	7316.55	158.18	8.68	10.55
541 Hanford	873	95	7243.45	877.90	8.30	9.24
542 Hanford	212	71	1648.81	616.11	7.78	8.68
543 Hanford	187	65	2067.91	835.53	11.06	12.85
544 Hanford	115	35	1076.62	499.84	9.36	14.28
545 Hanford	0	120	0.00	1209.77	0.00	10.08
546 Hanford	0	111	0.00	1678.29	0.00	15.12
547 Hanford	148	282	631.94	2054.05	4.27	7.28
548 Hanford	1	484	0.00	5201.86	0.00	10.75
549 Hanford	98	74	649.91	739.36	6.63	9.99
550 Hanford	2	126	0.45	1286.14	0.23	10.21
551 Hanford	0	482	0.00	5497.13	0.00	11.40
552 Hanford	0	116	0.00	1169.53	0.00	10.08
553 Hanford	0	433	0.00	4545.97	0.00	10.50
554 Hanford	0	131	0.00	1439.59	0.00	10.99
555 Hanford	0	80	0.00	899.42	0.00	11.24
556 Hanford	4	669	2.43	4918.97	0.61	7.35
557 Hanford	0	1753	0.00	15486.04	0.00	8.83
558 Hanford	0	373	0.00	2953.27	0.00	7.92
559 Hanford	0	213	0.00	2194.72	0.00	10.30
560 Hanford	33	98	93.58	1169.74	2.84	11.94
561 Hanford	21	128	22.23	1331.07	1.06	10.40
562 Hanford	38	26	181.01	211.47	4.76	8.13
563 Hanford	148	1	941.62	3.55	6.36	3.55
564 Hanford	724	4	5073.75	34.87	7.01	8.72
565 Hanford	271	103	1969.57	102.58	7.27	1.00
566 Hanford	116	176	943.77	18105.69	8.14	102.87
567 Hanford	503	39	4167.48	86.60	8.29	2.22
568 Hanford	447	9	3180.28	75.89	7.11	8.43
569 Hanford	46	11	322.57	111.79	7.01	10.16
570 Hanford	0	22	0.00	198.58	0.00	9.03
571 Hanford	3	183	0.47	1896.20	0.16	10.36
572 Hanford	59	0	510.70	0.00	8.66	0.00
573 Hanford	19	192	20.99	1695.40	1.10	8.83
574 Hanford	802	32	5790.08	252.20	7.22	7.88
575 Hanford	157	71	1678.94	2322.14	10.69	32.71
576 Hanford	1451	3	13347.91	14.90	9.20	4.97
577 Hanford	554	163	4865.28	2407.39	8.78	14.77
578 Hanford	1343	231	10244.29	1793.73	7.63	7.77
579 Hanford	1374	149	11799.55	4562.66	8.59	30.62
580 Hanford	243	128	1953.76	1019.55	8.04	7.97
581 Hanford	58	175	583.36	0.00	10.06	0.00
582 Hanford	310	0	2568.95	0.00	8.29	0.00
583 Hanford	352	5	2844.82	31.44	8.08	6.29
584 Hanford	377	0	3301.01	0.00	8.76	0.00
585 Hanford	247	126	1978.71	1089.36	8.01	8.65
586 Hanford	938	27	7134.68	210.56	7.61	7.80
587 Hanford	1232	11	9509.59	64.54	7.72	5.87
588 Hanford	917	14	10712.05	130.69	11.68	9.34
589 Hanford	984	81	9323.24	894.86	9.47	11.05
590 Hanford	773	131	6686.51	2246.84	8.65	17.15
591 Hanford	605	8	5174.43	51.69	8.55	6.46

592 Hanford	1194	11	11036.63	83.23	9.24	7.57
593 Hanford	506	7	4948.58	46.60	9.78	6.66
594 Hanford	690	2	7850.53	15.38	11.38	7.69
595 Hanford	1403	4	16536.10	54.87	11.79	13.72
596 Hanford	899	37	10294.49	438.35	11.45	11.85
597 Hanford	702	10	8089.09	98.30	11.52	9.83
598 Hanford	1324	4	13598.11	21.73	10.27	5.43
599 Hanford	1192	18	9285.24	166.31	7.79	9.24
600 Hanford	576	100	4422.95	1008.42	7.68	10.08
601 Hanford	378	21	3733.37	152.04	9.88	7.24
602 Hanford	753	44	7659.76	357.40	10.17	8.12
603 Hanford	1055	3	10945.92	17.05	10.38	5.68
604 Hanford	197	0	2452.77	0.00	12.45	0.00
605 Hanford	907	8	11368.00	74.41	12.53	9.30
606 Hanford	1168	5	12536.16	51.29	10.73	10.26
607 Hanford	310	200	3303.73	2841.94	10.66	14.21
608 Hanford	1448	4	17821.60	30.57	12.31	7.64
609 Hanford	484	0	4118.58	0.00	8.51	0.00
610 Hanford	0	0	0.00	0.00	0.00	0.00
611 Hanford	0	0	0.00	0.00	0.00	0.00
612 Hanford	0	0	0.00	0.00	0.00	0.00
613 Hanford	0	0	0.00	0.00	0.00	0.00
614 Hanford	0	0	0.00	0.00	0.00	0.00
615 Hanford	0	0	0.00	0.00	0.00	0.00
616 Hanford	0	0	0.00	0.00	0.00	0.00
617 Hanford	0	0	0.00	0.00	0.00	0.00
618 Hanford	0	0	0.00	0.00	0.00	0.00
619 Hanford	0	0	0.00	0.00	0.00	0.00
620 Hanford	0	0	0.00	0.00	0.00	0.00
621 Hanford	0	0	0.00	0.00	0.00	0.00
622 Hanford	0	0	0.00	0.00	0.00	0.00
623 Hanford	0	0	0.00	0.00	0.00	0.00
624 Hanford	0	0	0.00	0.00	0.00	0.00
625 Hanford	0	0	0.00	0.00	0.00	0.00
626 Hanford	0	0	0.00	0.00	0.00	0.00
627 Hanford	0	0	0.00	0.00	0.00	0.00
628 Hanford	0	0	0.00	0.00	0.00	0.00
629 Hanford	0	0	0.00	0.00	0.00	0.00
630 Hanford	0	0	0.00	0.00	0.00	0.00
631 Hanford	0	0	0.00	0.00	0.00	0.00
632 Hanford	0	0	0.00	0.00	0.00	0.00
633 Hanford	0	0	0.00	0.00	0.00	0.00
634 Hanford	0	0	0.00	0.00	0.00	0.00
635 Hanford	0	0	0.00	0.00	0.00	0.00
636 Hanford	0	0	0.00	0.00	0.00	0.00
637 Hanford	0	0	0.00	0.00	0.00	0.00
638 Hanford	0	0	0.00	0.00	0.00	0.00
639 Hanford	0	0	0.00	0.00	0.00	0.00
640 Hanford	0	0	0.00	0.00	0.00	0.00
641 Hanford	0	0	0.00	0.00	0.00	0.00
642 Hanford	0	0	0.00	0.00	0.00	0.00
643 Hanford	0	0	0.00	0.00	0.00	0.00
644 Hanford	0	0	0.00	0.00	0.00	0.00
645 Hanford	0	0	0.00	0.00	0.00	0.00
646 Hanford	0	0	0.00	0.00	0.00	0.00
647 Hanford	0	0	0.00	0.00	0.00	0.00
648 Hanford	0	0	0.00	0.00	0.00	0.00
649 Hanford	0	0	0.00	0.00	0.00	0.00
650 Hanford	0	0	0.00	0.00	0.00	0.00
651 Hanford	213	1	2522.96	7.08	11.84	7.08
652 Hanford	117	2	1524.46	7.04	13.03	3.52
653 Hanford	52	7	821.87	91.10	15.81	13.01
654 Hanford	190	7	2213.85	71.82	11.65	10.26
655 Hanford	128	1	1535.33	7.18	11.99	7.18
656 Hanford	204	8	2186.71	100.74	10.72	12.59
657 Hanford	556	53	5734.59	3027.45	10.31	57.12
658 Hanford	108	1	1035.53	5.17	9.59	5.17
659 Hanford	266	2	3263.46	7.19	12.27	3.60
660 Hanford	156	1	2265.68	7.38	14.52	7.38
661 Hanford	187	13	2465.66	142.58	13.19	10.97
662 Hanford	88	22	801.13	167.93	9.10	7.63
663 Hanford	3	8	7.57	108.32	2.52	13.54
664 Hanford	216	59	2449.51	653.45	11.34	11.08
665 Hanford	84	5	966.88	54.73	11.51	10.95

666 Hanford	47	2	561.89	17.98	11.96	8.99
667 Hanford	140	18	1362.04	164.93	9.73	9.16
668 Hanford	662	3	5575.30	9.81	8.42	3.27
669 Hanford	69	12	796.03	160.95	11.54	13.41
670 Hanford	19	54	54.60	809.11	2.87	14.98
671 Hanford	16	6	42.92	69.03	2.68	11.50
672 Hanford	3	26	0.79	439.87	0.26	16.92
673 Hanford	0	10	0.00	135.75	0.00	13.57
674 Hanford	25	9	97.91	119.53	3.92	13.28
675 Hanford	40	17	368.77	186.90	9.22	10.99
676 Hanford	13	47	38.83	529.73	2.99	11.27
677 Hanford	67	150	801.64	1712.17	11.96	11.41
678 Hanford	128	1	1496.91	8.98	11.69	8.98
679 Hanford	208	60	2293.44	645.07	11.03	10.75
680 Hanford	295	1	2918.17	8.55	9.89	8.55
681 Hanford	189	1	2283.75	8.02	12.08	8.02
682 Hanford	174	30	2143.40	353.73	12.32	11.79
683 Hanford	6	3	13.23	24.05	2.20	8.02
684 Hanford	4	566	14.68	9309.93	3.67	16.45
685 Hanford	8	20	30.72	254.47	3.84	12.72
686 Hanford	0	0	0.00	0.00	0.00	0.00
687 Hanford	0	0	0.00	0.00	0.00	0.00
688 Hanford	0	0	0.00	0.00	0.00	0.00
689 Hanford	0	0	0.00	0.00	0.00	0.00
690 Hanford	0	0	0.00	0.00	0.00	0.00
691 Hanford	0	0	0.00	0.00	0.00	0.00
692 Hanford	0	0	0.00	0.00	0.00	0.00
693 Hanford	0	0	0.00	0.00	0.00	0.00
694 Hanford	0	0	0.00	0.00	0.00	0.00
695 Hanford	0	0	0.00	0.00	0.00	0.00
696 Hanford	0	0	0.00	0.00	0.00	0.00
697 Hanford	0	0	0.00	0.00	0.00	0.00
698 Hanford	0	0	0.00	0.00	0.00	0.00
699 Hanford	0	0	0.00	0.00	0.00	0.00
700 Hanford	0	0	0.00	0.00	0.00	0.00
701 Hanford	0	0	0.00	0.00	0.00	0.00
702 Hanford	0	0	0.00	0.00	0.00	0.00
703 Hanford	0	0	0.00	0.00	0.00	0.00
704 Hanford	0	0	0.00	0.00	0.00	0.00
705 Hanford	0	0	0.00	0.00	0.00	0.00
706 Hanford	0	0	0.00	0.00	0.00	0.00
707 Hanford	0	0	0.00	0.00	0.00	0.00
708 Hanford	0	0	0.00	0.00	0.00	0.00
709 Hanford	0	0	0.00	0.00	0.00	0.00
710 Hanford	0	0	0.00	0.00	0.00	0.00
711 Hanford	0	0	0.00	0.00	0.00	0.00
712 Hanford	0	0	0.00	0.00	0.00	0.00
713 Hanford	0	0	0.00	0.00	0.00	0.00
714 Hanford	0	0	0.00	0.00	0.00	0.00
715 Hanford	0	0	0.00	0.00	0.00	0.00
716 Hanford	0	0	0.00	0.00	0.00	0.00
717 Hanford	0	0	0.00	0.00	0.00	0.00
718 Hanford	0	0	0.00	0.00	0.00	0.00
719 Hanford	0	0	0.00	0.00	0.00	0.00
720 Hanford	0	0	0.00	0.00	0.00	0.00
721 Hanford	0	0	0.00	0.00	0.00	0.00
722 Hanford	0	0	0.00	0.00	0.00	0.00
723 Hanford	0	0	0.00	0.00	0.00	0.00
724 Hanford	0	0	0.00	0.00	0.00	0.00
725 Hanford	0	0	0.00	0.00	0.00	0.00
726 Hanford	0	0	0.00	0.00	0.00	0.00
727 Hanford	0	0	0.00	0.00	0.00	0.00
728 Hanford	0	0	0.00	0.00	0.00	0.00
729 Hanford	0	0	0.00	0.00	0.00	0.00
730 Hanford	0	0	0.00	0.00	0.00	0.00
731 Hanford	0	0	0.00	0.00	0.00	0.00
732 Hanford	0	0	0.00	0.00	0.00	0.00
733 Hanford	0	0	0.00	0.00	0.00	0.00
734 Hanford	0	0	0.00	0.00	0.00	0.00
735 Hanford	0	0	0.00	0.00	0.00	0.00
736 Hanford	0	0	0.00	0.00	0.00	0.00
737 Hanford	0	0	0.00	0.00	0.00	0.00
738 Hanford	0	0	0.00	0.00	0.00	0.00
739 Hanford	0	0	0.00	0.00	0.00	0.00

740 Hanford	0	0	0.00	0.00	0.00	0.00
741 Hanford	0	0	0.00	0.00	0.00	0.00
742 Hanford	0	0	0.00	0.00	0.00	0.00
743 Hanford	0	0	0.00	0.00	0.00	0.00
744 Hanford	0	0	0.00	0.00	0.00	0.00
745 Hanford	0	0	0.00	0.00	0.00	0.00
746 Hanford	0	0	0.00	0.00	0.00	0.00
747 Hanford	0	0	0.00	0.00	0.00	0.00
748 Hanford	0	0	0.00	0.00	0.00	0.00
749 Hanford	0	0	0.00	0.00	0.00	0.00
750 Hanford	0	0	0.00	0.00	0.00	0.00
751 Home Gar	928	39	8700.55	350.88	9.38	9.00
752 Home Gar	450	5	3901.59	36.45	8.67	7.29
753 Home Gar	0	0	0.00	0.00	0.00	0.00
754 Home Gar	0	0	0.00	0.00	0.00	0.00
755 Home Gar	0	0	0.00	0.00	0.00	0.00
756 Home Gar	0	0	0.00	0.00	0.00	0.00
757 Home Gar	0	0	0.00	0.00	0.00	0.00
758 Home Gar	0	0	0.00	0.00	0.00	0.00
759 Home Gar	0	0	0.00	0.00	0.00	0.00
760 Home Gar	0	0	0.00	0.00	0.00	0.00
761 Kettleman	810	81	15188.16	4145.55	18.75	51.18
762 Kettleman	537	0	9895.75	0.00	18.43	0.00
763 Kettleman	188	3	3244.01	68.97	17.26	22.99
764 Kettleman	166	5	3158.31	143.55	19.03	28.71
765 Kettleman	2	54	1.95	2600.33	0.97	48.15
766 Kettleman	0	28	0.00	760.99	0.00	27.18
767 Kettleman	1	66	0.00	3047.69	0.00	46.18
768 Kettleman	0	0	0.00	0.00	0.00	0.00
769 Kettleman	0	0	0.00	0.00	0.00	0.00
770 Kettleman	0	0	0.00	0.00	0.00	0.00
771 Kettleman	0	0	0.00	0.00	0.00	0.00
772 Kettleman	0	0	0.00	0.00	0.00	0.00
773 Kettleman	0	0	0.00	0.00	0.00	0.00
774 Kettleman	0	0	0.00	0.00	0.00	0.00
775 Kettleman	0	0	0.00	0.00	0.00	0.00
776 Kettleman	0	0	0.00	0.00	0.00	0.00
777 Kettleman	0	0	0.00	0.00	0.00	0.00
778 Kettleman	0	0	0.00	0.00	0.00	0.00
779 Kettleman	0	0	0.00	0.00	0.00	0.00
780 Kettleman	0	0	0.00	0.00	0.00	0.00
781 Kettleman	0	0	0.00	0.00	0.00	0.00
782 Kettleman	0	0	0.00	0.00	0.00	0.00
783 Kettleman	0	0	0.00	0.00	0.00	0.00
784 Kettleman	0	0	0.00	0.00	0.00	0.00
785 Kettleman	0	0	0.00	0.00	0.00	0.00
786 Kettleman	0	0	0.00	0.00	0.00	0.00
787 Kettleman	0	0	0.00	0.00	0.00	0.00
788 Kettleman	0	0	0.00	0.00	0.00	0.00
789 Kettleman	0	0	0.00	0.00	0.00	0.00
790 Kettleman	0	0	0.00	0.00	0.00	0.00
791 Kettleman	0	0	0.00	0.00	0.00	0.00
792 Kettleman	0	0	0.00	0.00	0.00	0.00
793 Kettleman	0	0	0.00	0.00	0.00	0.00
794 Kettleman	0	0	0.00	0.00	0.00	0.00
795 Kettleman	0	0	0.00	0.00	0.00	0.00
796 Kettleman	0	0	0.00	0.00	0.00	0.00
797 Kettleman	0	0	0.00	0.00	0.00	0.00
798 Kettleman	0	0	0.00	0.00	0.00	0.00
799 Kettleman	0	0	0.00	0.00	0.00	0.00
800 Kettleman	0	0	0.00	0.00	0.00	0.00
801 Lemoore	58	49	334.78	335.55	5.77	6.85
802 Lemoore	45	2	111.47	13.43	2.48	6.71
803 Lemoore	76	116	579.81	1376.92	7.63	11.87
804 Lemoore	29	168	29.36	1661.97	1.01	9.89
805 Lemoore	29	74	8.39	817.22	0.29	11.04
806 Lemoore	141	15	797.19	112.87	5.65	7.52
807 Lemoore	376	9	2758.33	104.92	7.34	11.66
808 Lemoore	187	0	1397.24	0.00	7.47	0.00
809 Lemoore	53	99	475.85	1070.60	8.98	10.81
810 Lemoore	216	9	1415.54	85.59	6.55	9.51
811 Lemoore	235	185	1573.07	1710.47	6.69	9.25
812 Lemoore	37	426	50.73	5131.85	1.37	12.05
813 Lemoore	41	47	95.03	499.05	2.32	10.62

814 Lemoore	277	0	1528.33	0.00	5.52	0.00
815 Lemoore	75	15	563.80	109.32	7.52	7.29
816 Lemoore	35	119	88.37	1282.08	2.52	10.77
817 Lemoore	25	73	28.49	779.51	1.14	10.68
818 Lemoore	50	15	199.09	125.24	3.98	8.35
819 Lemoore	88	22	582.81	231.51	6.62	10.52
820 Lemoore	695	25	3997.35	274.38	5.75	10.98
821 Lemoore	298	1	2087.57	3.61	7.01	3.61
822 Lemoore	145	15	1004.10	220.28	6.92	14.69
823 Lemoore	230	30	1504.37	326.20	6.54	10.87
824 Lemoore	367	19	2511.20	22.82	6.84	1.20
825 Lemoore	85	271	573.42	11941.59	6.75	44.06
826 Lemoore	96	32	808.75	505.52	8.42	15.80
827 Lemoore	37	4	282.23	42.09	7.63	10.52
828 Lemoore	389	4	3886.64	40.59	9.99	10.15
829 Lemoore	475	3	4746.18	16.38	9.99	5.46
830 Lemoore	1173	13	8612.55	125.87	7.34	9.68
831 Lemoore	166	52	1135.97	640.35	6.84	12.31
832 Lemoore	658	353	4304.60	5512.02	6.54	15.61
833 Lemoore	159	5	1049.78	51.27	6.60	10.25
834 Lemoore	6	115	1.26	1122.29	0.21	9.76
835 Lemoore	668	8	5216.79	71.07	7.81	8.88
836 Lemoore	316	3	2326.43	19.97	7.36	6.66
837 Lemoore	508	74	3602.79	2400.94	7.09	32.45
838 Lemoore	139	0	967.28	0.00	6.96	0.00
839 Lemoore	194	0	1296.99	0.00	6.69	0.00
840 Lemoore	281	39	1891.81	470.46	6.73	12.06
841 Lemoore	365	393	2372.23	4792.42	6.50	12.19
842 Lemoore	480	121	2914.13	1083.46	6.07	8.95
843 Lemoore	186	27	1119.38	332.00	6.02	12.30
844 Lemoore	374	3	2439.26	16.65	6.52	5.55
845 Lemoore	230	3	1487.43	17.12	6.47	5.71
846 Lemoore	1072	9	7456.13	59.88	6.96	6.65
847 Lemoore	200	72	1772.78	3283.31	8.86	45.60
848 Lemoore	332	16	3000.80	217.44	9.04	13.59
849 Lemoore	298	14	2458.47	21.03	8.25	1.50
850 Lemoore	73	104	598.34	334.50	8.20	3.22
851 Lemoore	132	28	936.72	346.67	7.10	12.38
852 Lemoore	119	1	819.76	5.66	6.89	5.66
853 Lemoore	100	22	719.66	223.14	7.20	10.14
854 Lemoore	254	35	1894.35	569.81	7.46	16.28
855 Lemoore	51	10	596.41	132.94	11.69	13.29
856 Lemoore	126	7	1158.50	71.43	9.19	10.20
857 Lemoore	651	52	6174.75	899.44	9.49	17.30
858 Lemoore	3	70	0.83	1098.22	0.28	15.69
859 Lemoore	237	25	2236.67	407.73	9.44	16.31
860 Lemoore	0	101	0.00	1785.33	0.00	17.68
861 Lemoore	3	200	0.84	3570.02	0.28	17.85
862 Lemoore	295	52	2149.73	3158.59	7.29	60.74
863 Lemoore	351	3	2723.48	27.05	7.76	9.02
864 Lemoore	319	1	2464.07	5.60	7.72	5.60
865 Lemoore	609	2	6121.17	21.12	10.05	10.56
866 Lemoore	193	1	1781.87	11.46	9.23	11.46
867 Lemoore	57	17	646.64	291.56	11.34	17.15
868 Lemoore	120	1	1039.63	0.00	8.66	0.00
869 Lemoore	25	1	62.36	10.27	2.49	10.27
870 Lemoore	0	7	0.00	157.67	0.00	22.52
871 Lemoore	46	277	388.26	66946.99	8.44	241.69
872 Lemoore	142	4	1293.80	68.48	9.11	17.12
873 Lemoore	6	43	0.11	543.33	0.02	12.64
874 Lemoore	55	4	616.27	69.03	11.20	17.26
875 Lemoore	32	31	128.46	369.74	4.01	11.93
876 Lemoore	326	2	3290.52	20.10	10.09	10.05
877 Lemoore	230	93	1742.91	882.72	7.58	9.49
878 Lemoore	340	30	2573.01	311.14	7.57	10.37
879 Lemoore	691	29	4908.17	325.22	7.10	11.21
880 Lemoore	222	46	1129.55	428.79	5.09	9.32
881 Lemoore	1	21	0.00	259.98	0.00	12.38
882 Lemoore	59	7	582.19	107.34	9.87	15.33
883 Lemoore	40	1	254.34	0.00	6.36	0.00
884 Lemoore	22	4	30.49	72.83	1.39	18.21
885 Lemoore	0	101	0.00	1749.92	0.00	17.33
886 Lemoore	0	459	0.00	8812.66	0.00	19.20
887 Lemoore	668	3	4843.59	25.52	7.25	8.51

888 Lemoore	71	44	536.04	1189.70	7.55	27.04
889 Lemoore	258	52	1926.47	106.18	7.47	2.04
890 Lemoore	1315	11	10968.06	72.31	8.34	6.57
891 Lemoore	903	7	6775.91	88.25	7.50	12.61
892 Lemoore	258	10	1980.26	99.69	7.68	9.97
893 Lemoore	316	37	2149.68	451.85	6.80	12.21
894 Lemoore	485	88	3014.86	1167.00	6.22	13.26
895 Lemoore	501	2	3557.86	10.26	7.10	5.13
896 Lemoore	383	67	2794.76	2108.42	7.30	31.47
897 Lemoore	443	74	2824.17	616.04	6.38	8.32
898 Lemoore	380	9	2765.89	71.05	7.28	7.89
899 Lemoore	1036	2	7819.70	10.90	7.55	5.45
900 Lemoore	4	1	2.66	10.21	0.66	10.21
901 Lemoore	0	0	0.00	0.00	0.00	0.00
902 Lemoore	445	0	3875.08	0.00	8.71	0.00
903 Lemoore	0	0	0.00	0.00	0.00	0.00
904 Lemoore	0	0	0.00	0.00	0.00	0.00
905 Lemoore	0	0	0.00	0.00	0.00	0.00
906 Lemoore	0	0	0.00	0.00	0.00	0.00
907 Lemoore	0	0	0.00	0.00	0.00	0.00
908 Lemoore	0	0	0.00	0.00	0.00	0.00
909 Lemoore	0	0	0.00	0.00	0.00	0.00
910 Lemoore	0	0	0.00	0.00	0.00	0.00
911 Lemoore	0	0	0.00	0.00	0.00	0.00
912 Lemoore	0	0	0.00	0.00	0.00	0.00
913 Lemoore	0	0	0.00	0.00	0.00	0.00
914 Lemoore	0	0	0.00	0.00	0.00	0.00
915 Lemoore	0	0	0.00	0.00	0.00	0.00
916 Lemoore	0	0	0.00	0.00	0.00	0.00
917 Lemoore	0	0	0.00	0.00	0.00	0.00
918 Lemoore	0	0	0.00	0.00	0.00	0.00
919 Lemoore	0	0	0.00	0.00	0.00	0.00
920 Lemoore	0	0	0.00	0.00	0.00	0.00
921 Lemoore	0	0	0.00	0.00	0.00	0.00
922 Lemoore	0	0	0.00	0.00	0.00	0.00
923 Lemoore	0	0	0.00	0.00	0.00	0.00
924 Lemoore	0	0	0.00	0.00	0.00	0.00
925 Lemoore	0	0	0.00	0.00	0.00	0.00
926 Lemoore	64	0	619.29	0.00	9.68	0.00
927 Lemoore	217	0	1545.51	0.00	7.12	0.00
928 Lemoore	161	1	1226.77	3.82	7.62	3.82
929 Lemoore	138	1	1466.21	8.34	10.62	8.34
930 Lemoore	49	4	745.31	35.84	15.21	8.96
931 Lemoore	17	1	27.22	13.60	1.60	13.60
932 Lemoore	15	2	7.35	4.92	0.49	2.46
933 Lemoore	42	77	328.22	118.20	7.81	1.54
934 Lemoore	69	0	792.06	0.00	11.48	0.00
935 Lemoore	71	5	775.08	53.96	10.92	10.79
936 Lemoore	252	14	2497.23	179.80	9.91	12.84
937 Lemoore	142	1	1471.99	9.43	10.37	9.43
938 Lemoore	109	0	1127.63	0.00	10.35	0.00
939 Lemoore	231	0	2502.92	0.00	10.84	0.00
940 Lemoore	24	6	44.57	77.16	1.86	12.86
941 Lemoore	47	1	616.82	10.12	13.12	10.12
942 Lemoore	1	0	0.00	0.00	0.00	0.00
943 Lemoore	8	1	4.53	8.24	0.57	8.24
944 Lemoore	0	0	0.00	0.00	0.00	0.00
945 Lemoore	32	2	94.78	21.84	2.96	10.92
946 Lemoore	74	2	761.99	24.21	10.30	12.11
947 Lemoore	0	0	0.00	0.00	0.00	0.00
948 Lemoore	3	1	0.47	8.13	0.16	8.13
949 Lemoore	0	0	0.00	0.00	0.00	0.00
950 Lemoore	0	0	0.00	0.00	0.00	0.00
951 Lemoore	0	0	0.00	0.00	0.00	0.00
952 Lemoore	0	0	0.00	0.00	0.00	0.00
953 Lemoore	0	0	0.00	0.00	0.00	0.00
954 Lemoore	0	0	0.00	0.00	0.00	0.00
955 Lemoore	0	0	0.00	0.00	0.00	0.00
956 Lemoore	0	0	0.00	0.00	0.00	0.00
957 Lemoore	0	0	0.00	0.00	0.00	0.00
958 Lemoore	0	0	0.00	0.00	0.00	0.00
959 Lemoore	0	0	0.00	0.00	0.00	0.00
960 Lemoore	0	0	0.00	0.00	0.00	0.00
961 Lemoore	0	0	0.00	0.00	0.00	0.00

962 Lemoore	0	0	0.00	0.00	0.00	0.00
963 Lemoore	0	0	0.00	0.00	0.00	0.00
964 Lemoore	0	0	0.00	0.00	0.00	0.00
965 Lemoore	0	0	0.00	0.00	0.00	0.00
966 Lemoore	0	0	0.00	0.00	0.00	0.00
967 Lemoore	0	0	0.00	0.00	0.00	0.00
968 Lemoore	0	0	0.00	0.00	0.00	0.00
969 Lemoore	0	0	0.00	0.00	0.00	0.00
970 Lemoore	0	0	0.00	0.00	0.00	0.00
971 Lemoore	0	0	0.00	0.00	0.00	0.00
972 Lemoore	0	0	0.00	0.00	0.00	0.00
973 Lemoore	0	0	0.00	0.00	0.00	0.00
974 Lemoore	0	0	0.00	0.00	0.00	0.00
975 Lemoore	0	0	0.00	0.00	0.00	0.00
976 Lemoore	0	0	0.00	0.00	0.00	0.00
977 Lemoore	0	0	0.00	0.00	0.00	0.00
978 Lemoore	0	0	0.00	0.00	0.00	0.00
979 Lemoore	0	0	0.00	0.00	0.00	0.00
980 Lemoore	0	0	0.00	0.00	0.00	0.00
981 Lemoore	0	0	0.00	0.00	0.00	0.00
982 Lemoore	0	0	0.00	0.00	0.00	0.00
983 Lemoore	0	0	0.00	0.00	0.00	0.00
984 Lemoore	0	0	0.00	0.00	0.00	0.00
985 Lemoore	0	0	0.00	0.00	0.00	0.00
986 Lemoore	0	0	0.00	0.00	0.00	0.00
987 Lemoore	0	0	0.00	0.00	0.00	0.00
988 Lemoore	0	0	0.00	0.00	0.00	0.00
989 Lemoore	0	0	0.00	0.00	0.00	0.00
990 Lemoore	0	0	0.00	0.00	0.00	0.00
991 Lemoore	0	0	0.00	0.00	0.00	0.00
992 Lemoore	0	0	0.00	0.00	0.00	0.00
993 Lemoore	0	0	0.00	0.00	0.00	0.00
994 Lemoore	0	0	0.00	0.00	0.00	0.00
995 Lemoore	0	0	0.00	0.00	0.00	0.00
996 Lemoore	0	0	0.00	0.00	0.00	0.00
997 Lemoore	0	0	0.00	0.00	0.00	0.00
998 Lemoore	0	0	0.00	0.00	0.00	0.00
999 Lemoore	0	0	0.00	0.00	0.00	0.00
1000 Lemoore	0	0	0.00	0.00	0.00	0.00
1001 Stratford	425	176	6637.22	3496.24	15.62	19.86
1002 Stratford	161	0	2316.27	0.00	14.39	0.00
1003 Stratford	499	1	7884.91	0.00	15.80	0.00
1004 Stratford	63	1	1112.02	0.00	17.65	0.00
1005 Stratford	0	0	0.00	0.00	0.00	0.00
1006 Stratford	0	0	0.00	0.00	0.00	0.00
1007 Stratford	0	0	0.00	0.00	0.00	0.00
1008 Stratford	0	0	0.00	0.00	0.00	0.00
1009 Stratford	0	0	0.00	0.00	0.00	0.00
1010 Stratford	0	0	0.00	0.00	0.00	0.00
1011 Stratford	34	2	535.42	40.85	15.75	20.43
1012 Stratford	0	0	0.00	0.00	0.00	0.00
1013 Stratford	0	0	0.00	0.00	0.00	0.00
1014 Stratford	0	0	0.00	0.00	0.00	0.00
1015 Stratford	0	0	0.00	0.00	0.00	0.00
1016 Stratford	0	0	0.00	0.00	0.00	0.00
1017 Stratford	0	0	0.00	0.00	0.00	0.00
1018 Stratford	0	0	0.00	0.00	0.00	0.00
1019 Stratford	0	0	0.00	0.00	0.00	0.00
1020 Stratford	0	0	0.00	0.00	0.00	0.00
1021 Stratford	0	0	0.00	0.00	0.00	0.00
1022 Stratford	0	0	0.00	0.00	0.00	0.00
1023 Stratford	0	0	0.00	0.00	0.00	0.00
1024 Stratford	0	0	0.00	0.00	0.00	0.00
1025 Stratford	0	0	0.00	0.00	0.00	0.00
1026 Kings Cour	403	127	7229.03	2724.36	17.94	21.45
1027 Kings Cour	482	62	7914.02	1077.97	16.42	17.39
1028 Kings Cour	186	74	3157.34	1161.28	16.97	15.69
1029 Kings Cour	195	42	2861.01	778.33	14.67	18.53
1030 Kings Cour	181	28	2784.91	411.24	15.39	14.69
1031 Kings Cour	192	469	2936.22	7209.28	15.29	15.37
1032 Kings Cour	99	15	1364.38	209.94	13.78	14.00
1033 Kings Cour	89	27	1171.25	378.27	13.16	14.01
1034 Kings Cour	89	39	1198.43	520.27	13.47	13.34
1035 Kings Cour	24	11	98.77	126.16	4.12	11.47

1036 Kings Cour	123	133	1515.63	1247.05	12.32	9.38
1037 Kings Cour	131	104	1718.72	4860.32	13.12	46.73
1038 Kings Cour	134	22	2116.69	316.02	15.80	14.36
1039 Kings Cour	54	12	903.38	172.99	16.73	14.42
1040 Kings Cour	69	19	1192.76	289.48	17.29	15.24
1041 Kings Cour	36	21	453.96	317.98	12.61	15.14
1042 Kings Cour	62	105	1067.46	1735.12	17.22	16.52
1043 Kings Cour	37	17	480.14	250.25	12.98	14.72
1044 Kings Cour	96	12	1380.12	150.43	14.38	12.54
1045 Kings Cour	98	15	1258.64	193.68	12.84	12.91
1046 Kings Cour	52	25	863.57	300.69	16.61	12.03
1047 Kings Cour	174	1	2227.60	7.96	12.80	7.96
1048 Kings Cour	250	1	2822.58	7.30	11.29	7.30
1049 Kings Cour	311	3	3956.55	16.74	12.72	5.58
1050 Kings Cour	33	5	238.34	52.17	7.22	10.43
1051 Kings Cour	335	17	3718.13	222.63	11.10	13.10
1052 Kings Cour	205	9	2266.94	112.93	11.06	12.55
1053 Kings Cour	69	9	935.73	103.25	13.56	11.47
1054 Kings Cour	58	20	814.92	298.86	14.05	14.94
1055 Kings Cour	62	10	671.84	113.86	10.84	11.39
1056 Kings Cour	48	5	693.87	54.62	14.46	10.92
1057 Kings Cour	54	2	636.98	12.94	11.80	6.47
1058 Kings Cour	112	207	1086.17	3538.28	9.70	17.09
1059 Kings Cour	150	28	1499.70	300.69	10.00	10.74
1060 Kings Cour	113	1	1166.10	8.76	10.32	8.76
1061 Kings Cour	8	1	11.72	8.62	1.47	8.62
1062 Kings Cour	7	0	12.44	0.00	1.78	0.00
1063 Kings Cour	0	2	0.00	19.56	0.00	9.78
1064 Kings Cour	0	6	0.00	75.07	0.00	12.51
1065 Kings Cour	51	58	830.10	1042.25	16.28	17.97
1066 Kings Cour	86	23	1085.90	279.13	12.63	12.14
1067 Kings Cour	30	61	218.23	2407.39	7.27	39.47
1068 Kings Cour	26	9	119.60	115.96	4.60	12.88
1069 Kings Cour	31	17	222.76	231.31	7.19	13.61
1070 Kings Cour	45	30	511.55	437.89	11.37	14.60
1071 Kings Cour	36	9	336.90	119.70	9.36	13.30
1072 Kings Cour	27	30	86.92	709.09	3.22	23.64
1073 Kings Cour	110	132	1266.55	4322.67	11.51	32.75
1074 Kings Cour	12	311	15.81	4854.52	1.32	15.61
1075 Kings Cour	15	20	27.57	304.38	1.84	15.22
1076 Kings Cour	38	37	272.20	571.14	7.16	15.44
1077 Kings Cour	32	10	229.05	137.48	7.16	13.75
1078 Kings Cour	80	22	1078.44	290.40	13.48	13.20
1079 Kings Cour	65	25	1042.43	318.68	16.04	12.75
1080 Kings Cour	42	9	488.09	121.78	11.62	13.53
1081 Kings Cour	48	5	613.51	64.18	12.78	12.84
1082 Kings Cour	33	10	224.37	120.85	6.80	12.09
1083 Kings Cour	72	32	942.07	405.08	13.08	12.66
1084 Kings Cour	30	22	160.54	305.61	5.35	13.89
1085 Kings Cour	69	20	876.71	269.27	12.71	13.46
1086 Kings Cour	54	14	793.80	177.96	14.70	12.71
1087 Kings Cour	74	2	884.23	19.02	11.95	9.51
1088 Kings Cour	98	11	1057.93	134.76	10.80	12.25
1089 Kings Cour	21	1	49.34	8.84	2.35	8.84
1090 Kings Cour	19	0	43.08	0.00	2.27	0.00
1091 Kings Cour	28	0	153.99	0.00	5.50	0.00
1092 Kings Cour	27	1	79.21	8.81	2.93	8.81
1093 Kings Cour	11	1	24.39	8.78	2.22	8.78
1094 Kings Cour	25	2	76.94	20.56	3.08	10.28
1095 Kings Cour	54	1	732.66	8.67	13.57	8.67
1096 Kings Cour	121	5	971.94	37.44	8.03	7.49
1097 Kings Cour	63	6	792.12	67.44	12.57	11.24
1098 Kings Cour	116	18	1273.19	224.25	10.98	12.46
1099 Kings Cour	113	17	1319.91	217.96	11.68	12.82
1100 Kings Cour	68	16	941.52	228.36	13.85	14.27
1101 Kings Cour	39	9	414.92	135.72	10.64	15.08
1102 Kings Cour	645	113	7319.99	2172.25	11.35	19.22
1103 Kings Cour	0	0	0.00	0.00	0.00	0.00
1104 Kings Cour	30	7	205.67	106.15	6.86	15.16
1105 Kings Cour	15	7	63.56	113.95	4.24	16.28
1106 Kings Cour	3	0	1.56	0.00	0.52	0.00
1107 Kings Cour	15	9	67.38	157.05	4.49	17.45
1108 Kings Cour	9	9	37.81	146.42	4.20	16.27
1109 Kings Cour	6	8	20.50	120.06	3.42	15.01

1110 Kings Cour	21	10	71.21	149.34	3.39	14.93
1111 Kings Cour	68	12	933.23	167.26	13.72	13.94
1112 Kings Cour	0	5	0.00	62.33	0.00	12.47
1113 Kings Cour	0	5	0.00	66.18	0.00	13.24
1114 Kings Cour	22	19	74.80	298.00	3.40	15.68
1115 Kings Cour	36	105	383.65	2269.42	10.66	21.61
1116 Kings Cour	83	26	1294.62	417.69	15.60	16.06
1117 Kings Cour	27	14	133.04	238.54	4.93	17.04
1118 Kings Cour	36	61	300.17	2309.75	8.34	37.86
1119 Kings Cour	42	10	414.80	133.99	9.88	13.40
1120 Kings Cour	33	11	209.07	157.50	6.34	14.32
1121 Kings Cour	66	11	1175.29	167.47	17.81	15.22
1122 Kings Cour	46	20	692.83	335.02	15.06	16.75
1123 Kings Cour	13	40	38.95	634.40	3.00	15.86
1124 Kings Cour	13	66	39.58	1148.27	3.04	17.40
1125 Kings Cour	13	19	42.09	335.16	3.24	17.64
1126 Kings Cour	28	57	140.26	1259.74	5.01	22.10
1127 Kings Cour	68	10	1266.36	164.21	18.62	16.42
1128 Kings Cour	10	17	24.86	299.47	2.49	17.62
1129 Kings Cour	14	2	24.15	17.13	1.72	8.57
1130 Kings Cour	27	2	116.52	19.96	4.32	9.98
1131 Kings Cour	30	2	163.10	19.31	5.44	9.66
1132 Kings Cour	116	5	1525.07	86.10	13.15	17.22
1133 Kings Cour	0	2	0.00	18.25	0.00	9.12
1134 Kings Cour	12	2	34.04	19.68	2.84	9.84
1135 Kings Cour	14	66	80.99	2214.45	5.78	33.55
1136 Kings Cour	57	11	990.54	135.09	17.38	12.28
1137 Kings Cour	9	2	22.75	21.23	2.53	10.61
1138 Kings Cour	14	3	27.36	29.32	1.95	9.77
1139 Kings Cour	11	1	10.95	7.18	1.00	7.18
1140 Kings Cour	0	0	0.00	0.00	0.00	0.00
1141 Kings Cour	104	33	1303.98	541.80	12.54	16.42
1142 Kings Cour	0	0	0.00	0.00	0.00	0.00
1143 Kings Cour	0	0	0.00	0.00	0.00	0.00
1144 Kings Cour	0	0	0.00	0.00	0.00	0.00
1145 Kings Cour	0	0	0.00	0.00	0.00	0.00
1146 Kings Cour	0	0	0.00	0.00	0.00	0.00
1147 Kings Cour	0	0	0.00	0.00	0.00	0.00
1148 Kings Cour	121	5	1634.20	71.98	13.51	14.40
1149 Kings Cour	36	1	225.95	10.48	6.28	10.48
1150 Kings Cour	121	22	1649.80	419.66	13.63	19.08
1151 Kings Cour	186	23	3195.33	455.20	17.18	19.79
1152 Kings Cour	161	16	2787.99	288.82	17.32	18.05
1153 Kings Cour	368	24	5213.03	388.58	14.17	16.19
1154 Kings Cour	148	25	1950.31	385.69	13.18	15.43
1155 Kings Cour	71	22	935.00	298.46	13.17	13.57
1156 Kings Cour	139	19	1541.36	258.33	11.09	13.60
1157 Kings Cour	115	21	1339.23	378.77	11.65	18.04
1158 Kings Cour	157	38	2313.99	2702.70	14.74	17.12
1159 Kings Cour	418	72	6163.31	1245.79	14.74	17.30
1160 Kings Cour	127	25	1623.88	409.81	12.79	16.39
1161 Kings Cour	425	26	5420.79	362.07	12.75	13.93
1162 Kings Cour	84	67	1070.52	975.68	12.74	14.56
1163 Kings Cour	110	16	1367.94	192.33	12.44	12.02
1164 Kings Cour	113	6	922.71	42.65	8.17	7.11
1165 Kings Cour	107	6	1220.67	63.18	11.41	10.53
1166 Kings Cour	55	7	666.00	80.56	12.11	11.51
1167 Kings Cour	117	10	1194.35	135.11	10.21	13.51
1168 Kings Cour	52	1	668.46	9.43	12.85	9.43
1169 Kings Cour	36	2	299.58	19.60	8.32	9.80
1170 Kings Cour	24	1	45.91	9.78	1.91	9.78
1171 Kings Cour	3	17	0.47	264.83	0.16	15.58
1172 Kings Cour	12	131	1940.43	3580.90	161.70	27.34
1173 Kings Cour	914	4852	18814.17	108257.20	20.58	22.31
1174 Kings Cour	3644	1204	47962.36	34445.71	13.16	28.61
1175 Kings Cour	3	7	2.31	115.03	0.77	16.43
1176 Kings Cour	45	4	529.71	77.71	11.77	19.43
1177 Kings Cour	84	8	799.81	158.31	9.52	19.79
1178 Kings Cour	54	18	694.73	258.63	12.87	14.37
1179 Kings Cour	59	4	797.89	55.30	13.52	13.82
1180 Kings Cour	54	51	624.92	54.74	11.57	1.07
1181 Kings Cour	116	52	1163.29	1969.08	10.03	37.87
1182 Kings Cour	12	8	43.70	140.89	3.64	17.61
1183 Kings Cour	0	78	0.00	1705.74	0.00	21.87

1184 Kings Cour	0	26	0.00	529.84	0.00	20.38
1185 Kings Cour	18	33	68.05	636.22	3.78	19.28
1186 Kings Cour	15	1	75.92	13.13	5.06	13.13
1187 Kings Cour	9	4	38.35	71.91	4.26	17.98
1188 Kings Cour	8	0	38.20	0.00	4.77	0.00
1189 Kings Cour	9	7	36.67	133.09	4.07	19.01
1190 Kings Cour	68	12	1041.78	239.60	15.32	19.97
1191 Kings Cour	27	31	114.53	534.96	4.24	17.26
1192 Kings Cour	92	11	965.64	177.37	10.50	16.12
1193 Kings Cour	27	9	111.92	156.11	4.15	17.35
1194 Kings Cour	22	1007	59.72	35864.65	2.71	35.62
1195 Kings Cour	4	1	12.53	11.02	3.13	11.02
1196 Kings Cour	50	11	677.68	205.86	13.55	18.71
1197 Kings Cour	28	2	264.61	32.08	9.45	16.04
1198 Kings Cour	21	3	39.15	35.32	1.86	11.77
1199 Kings Cour	0	3	0.00	37.36	0.00	12.45
1200 Kings Cour	0	0	0.00	0.00	0.00	0.00
1201 Kings Cour	0	1	0.00	10.37	0.00	10.37
1202 Kings Cour	0	1	0.00	10.37	0.00	10.37
1203 Kings Cour	0	1	0.00	10.56	0.00	10.56
1204 Kings Cour	0	1	0.00	10.53	0.00	10.53
1205 Kings Cour	3	4	8.17	61.79	2.72	15.45
1206 Kings Cour	8	1	17.49	10.12	2.19	10.12
1207 Kings Cour	0	3	0.00	40.91	0.00	13.64
1208 Kings Cour	0	1	0.00	10.89	0.00	10.89
1209 Kings Cour	0	0	0.00	0.00	0.00	0.00
1210 Kings Cour	0	0	0.00	0.00	0.00	0.00
1211 Kings Cour	0	0	0.00	0.00	0.00	0.00
1212 Kings Cour	0	0	0.00	0.00	0.00	0.00
1213 Kings Cour	0	0	0.00	0.00	0.00	0.00
1214 Kings Cour	0	0	0.00	0.00	0.00	0.00
1215 Kings Cour	0	0	0.00	0.00	0.00	0.00
1216 Kings Cour	0	0	0.00	0.00	0.00	0.00
1217 Kings Cour	0	0	0.00	0.00	0.00	0.00
1218 Kings Cour	0	0	0.00	0.00	0.00	0.00
1219 Kings Cour	0	0	0.00	0.00	0.00	0.00
1220 Kings Cour	0	0	0.00	0.00	0.00	0.00
1221 Kings Cour	0	0	0.00	0.00	0.00	0.00
1222 Kings Cour	0	0	0.00	0.00	0.00	0.00
1223 Kings Cour	0	0	0.00	0.00	0.00	0.00
1224 Kings Cour	0	0	0.00	0.00	0.00	0.00
1225 Kings Cour	0	0	0.00	0.00	0.00	0.00
1226 Kings Cour	33	98	273.87	1665.59	8.30	17.00
1227 Kings Cour	21	19	68.86	335.11	3.28	17.64
1228 Kings Cour	6	7	13.64	96.26	2.27	13.75
1229 Kings Cour	65	17	1185.42	275.39	18.24	16.20
1230 Kings Cour	12	38	55.07	683.08	4.59	17.98
1231 Kings Cour	6	25	19.16	445.74	3.19	17.83
1232 Kings Cour	6	35	23.26	663.77	3.88	18.96
1233 Kings Cour	3	19	1.59	380.91	0.53	20.05
1234 Kings Cour	31	18	151.85	364.50	4.90	20.25
1235 Kings Cour	37	35	453.72	878.50	12.26	25.10
1236 Kings Cour	0	69	0.00	1536.60	0.00	22.27
1237 Kings Cour	0	9	0.00	173.79	0.00	19.31
1238 Kings Cour	0	43	0.00	861.48	0.00	20.03
1239 Kings Cour	0	24	0.00	413.83	0.00	17.24
1240 Kings Cour	9	14	27.30	239.17	3.03	17.08
1241 Kings Cour	6	7	17.85	102.67	2.98	14.67
1242 Kings Cour	9	5	24.61	68.41	2.73	13.68
1243 Kings Cour	0	12	0.00	179.42	0.00	14.95
1244 Kings Cour	28	3	116.62	32.89	4.16	10.96
1245 Kings Cour	0	4	0.00	45.62	0.00	11.41
1246 Kings Cour	1	5	1.61	62.53	1.61	12.51
1247 Kings Cour	1	5	0.84	67.96	0.84	13.59
1248 Kings Cour	0	5	0.00	64.39	0.00	12.88
1249 Kings Cour	0	5	0.00	56.47	0.00	11.29
1250 Kings Cour	0	2	0.00	20.67	0.00	10.34
1251 Kings Cour	2	2	0.90	8.32	0.45	4.16
1252 Kings Cour	0	0	0.00	0.00	0.00	0.00
1253 Kings Cour	32	1	189.51	8.55	5.92	8.55
1254 Kings Cour	3	2	0.93	20.35	0.31	10.18
1255 Kings Cour	5	1	8.77	8.64	1.75	8.64
1256 Kings Cour	39	3	163.21	29.27	4.18	9.76
1257 Kings Cour	31	1	137.17	7.57	4.42	7.57

1258 Kings Cour	5	1	7.99	7.39	1.60	7.39
1259 Kings Cour	3	2	0.70	17.24	0.23	8.62
1260 Kings Cour	3	5	0.70	48.60	0.23	9.72
1261 Kings Cour	10	1	15.05	6.87	1.50	6.87
1262 Kings Cour	38	2	175.56	16.84	4.62	8.42
1263 Kings Cour	0	216	0.00	6801.02	0.00	31.49
1264 Kings Cour	0	9	0.00	154.48	0.00	17.16
1265 Kings Cour	0	5	0.00	60.43	0.00	12.09
1266 Kings Cour	8	5	14.47	53.33	1.81	10.67
1267 Kings Cour	0	9	0.00	110.73	0.00	12.30
1268 Kings Cour	0	9	0.00	166.33	0.00	18.48
1269 Kings Cour	0	17	0.00	341.43	0.00	20.08
1270 Kings Cour	3	18	5.36	261.68	1.79	14.54
1271 Kings Cour	0	0	0.00	0.00	0.00	0.00
1272 Kings Cour	0	0	0.00	0.00	0.00	0.00
1273 Kings Cour	0	0	0.00	0.00	0.00	0.00
1274 Kings Cour	0	29	0.00	525.50	0.00	18.12
1275 Kings Cour	0	28	0.00	615.12	0.00	21.97
1276 Kings Cour	0	27	0.00	654.90	0.00	24.26
1277 Kings Cour	15	92	45.69	1506.64	3.05	16.38
1278 Kings Cour	6	18	15.36	398.85	2.56	22.16
1279 Kings Cour	0	31	0.00	800.42	0.00	25.82
1280 Kings Cour	0	67	0.00	2531.43	0.00	37.78
1281 Kings Cour	3	119	16.23	3553.67	5.41	29.86
1282 Kings Cour	0	28	0.00	715.11	0.00	25.54
1283 Kings Cour	6	13	22.77	364.65	3.79	28.05
1284 Kings Cour	0	0	0.00	0.00	0.00	0.00
1285 Kings Cour	0	0	0.00	0.00	0.00	0.00
1286 Kings Cour	0	0	0.00	0.00	0.00	0.00
1287 Kings Cour	0	0	0.00	0.00	0.00	0.00
1288 Kings Cour	0	0	0.00	0.00	0.00	0.00
1289 Kings Cour	0	0	0.00	0.00	0.00	0.00
1290 Kings Cour	0	0	0.00	0.00	0.00	0.00
1291 Kings Cour	0	0	0.00	0.00	0.00	0.00
1292 Kings Cour	0	0	0.00	0.00	0.00	0.00
1293 Kings Cour	0	0	0.00	0.00	0.00	0.00
1294 Kings Cour	0	0	0.00	0.00	0.00	0.00
1295 Kings Cour	0	0	0.00	0.00	0.00	0.00
1296 Kings Cour	0	0	0.00	0.00	0.00	0.00
1297 Kings Cour	0	0	0.00	0.00	0.00	0.00
1298 Kings Cour	0	57	0.00	1232.04	0.00	21.61
1299 Kings Cour	6	146	17.14	5685.67	2.86	38.94
1300 Kings Cour	0	54	0.00	0.00	0.00	0.00
1301 Kings Cour	65	65	1220.34	1417.69	18.77	21.81
1302 Kings Cour	80	83	1464.17	2130.96	18.30	25.67
1303 Kings Cour	32	46	235.45	1279.55	7.36	27.82
1304 Kings Cour	44	74	715.44	2084.79	16.26	28.17
1305 Kings Cour	56	131	1185.09	3823.35	21.16	29.19
1306 Kings Cour	15	303	105.12	11041.71	7.01	36.44
1307 Kings Cour	0	179	0.00	7499.71	0.00	41.90
1308 Kings Cour	0	55	0.00	1793.10	0.00	32.60
1309 Kings Cour	99	18	1910.58	515.66	19.30	28.65
1310 Kings Cour	2	5	2.00	182.18	1.00	36.44
1311 Kings Cour	0	14	0.00	508.22	0.00	36.30
1312 Kings Cour	179	0	2429.84	0.00	13.57	0.00
1313 Kings Cour	0	4	0.00	67.99	0.00	17.00
1314 Kings Cour	0	2	0.00	34.45	0.00	17.23
1315 Kings Cour	14	8	53.63	201.34	3.83	25.17
1316 Kings Cour	13	44	30.29	1100.97	2.33	25.02
1317 Kings Cour	0	4	0.00	100.36	0.00	25.09
1318 Kings Cour	3	0	3.92	0.00	1.31	0.00
1319 Kings Cour	3	0	5.15	0.00	1.72	0.00
1320 Kings Cour	14	23	52.87	791.12	3.78	34.40
1321 Kings Cour	0	0	0.00	0.00	0.00	0.00
1322 Kings Cour	20	82	149.70	3109.62	7.48	37.92
1323 Kings Cour	0	38	0.00	1488.41	0.00	39.17

TRAFFIC STUDY – TRACT 934

APPENDIX C

SAMPLE LISTS MITIGATION MEASURES

Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)



PETERS ENGINEERING GROUP
A CALIFORNIA CORPORATION

TRAFFIC STUDY – TRACT 934

City of Fresno



PETERS ENGINEERING GROUP
A CALIFORNIA CORPORATION

#	Key Action/Strategy	VMT Reduction	Local VMT Reduction Calculations (Total Data/Agency CO2 Abat)	CARCOA	QPM	Los Angeles	City of San Jose	City of San Diego	San Diego Region	Notes
1	Provide a Bus Rapid Transit System (Addition of a New Route)	0.02% - 1.70%	0.33% VMT reduction per 100 miles	Y	Y	Y	N	N	Y	Notes: CARCOA TST 1. Applicable in urban and suburban context, negligible in rural context, appropriate for specific or general plans. This can be considered under Technical Advisory Measure. Improve pedestrian or bicycle networks, or transit service.
2	Provide a Bus Rapid Transit System (Substitution of an Existing Bus Route with a BRT Route)	0.07% - 1.70%	0.30% VMT reduction per 100 miles	Y	Y	Y	N	N	Y	Notes: CARCOA TST 1. Applicable in urban and suburban context, negligible in rural context, appropriate for specific or general plans. This can be considered under Technical Advisory Measure. Improve pedestrian or bicycle networks, or transit service.
3	Subsidize vanpool	0.30% - 13.40% commute VMT	0.60% (for vanpool) (for carpool)	Y	Y	Y	N	N	Y	Notes: Similar to CARCOA TST 11 (Provide Employer Sponsored Vanpool/Share). Applicable in urban, suburban, and rural context, appropriate for office, industrial, and mixed use projects. The measure is included under the Technical Advisory Measure "Provide incentives or subsidies that increase the use of modes other than single occupancy vehicle." City of San Jose (Applicable for employer use only).
4	Shifting single occupancy vehicle trips to carpooling or vanpooling, for example providing rate matching or shuttle services	0.30% - 13.40% commute VMT reduction (for CARCOA TST 11. Provide Employer Sponsored Vanpool/Share). 2. 20% - 15.80% school VMT reduction (for CARCOA TST 10. Implement a School Pool Program)	0.60% (for vanpool) (for carpool)	Y	Y	Y	N	N	Y	Notes: Similar to CARCOA TST 11 (Provide Employer Sponsored Vanpool/Share). Applicable in urban, suburban, and rural context, appropriate for office, industrial, and mixed use projects. Similar measure is CARCOA TST 10 (Implement a School Pool Program). Applicable for urban, suburban, and rural context and appropriate for residential and mixed use projects. City of San Jose (School carpool program "residential uses only"). City of LA (School carpool program "level of implementation (low, medium, high) (employer sponsored vanpool or shuttle (degree of implementation (low, medium, high), employees eligible (%), employer use (small, medium, large)).
5	Improve transit network	0.10% - 8.20%	0.07% VMT reduction per 100 miles (for addition of a new transit line)	Y	Y	Y	Y	Y	Y	Notes: CARCOA TST 3. Measure applicable in urban and suburban context, may be applicable in rural context but no literature documentation available. Appropriate for specific or general plans. This can be considered under Technical Advisory Measure. Improve pedestrian or bicycle networks or transit service. City of San Jose (Improve transit service to provide low-carbon travel modes accessible, both applicable for both residential and employment uses). City of LA (Existing transit mode share (as a percent of total daily trips (%), lines within project site improved (<50%, >=50%)).
6	Incorporate bike lane, street design (on site)	1% increase in share of workers commuting by bicycle (for each additional mile of bike lanes per square mile) (Bicycle Commuting and Facilities in Major U.S. Cities "If You Build Them, Commuters Will Use Them - Another Look by Dail and Carr (2003)). 0.07% increase in bicycle commuting with each mile of bikeway per 100,000 residents (If You Build Them, Commuters Will Use Them, Cross Sectional Analysis of Commuters and Bicycle Facilities by Nelson and Allen (1997))	0.30% VMT reduction per 100 miles (for addition of new bike lane)	Y	Y	Y	Y	Y	Y	Notes: CARCOA TST 5 (Grouped strategy, benefits of bike lane Street Design for small and medium projects should be grouped with the TST 3 (Improve Design of Development) strategy to strengthen street network characteristics and enhance multi-modal environments). The measure is applicable in urban and suburban context and is appropriate for residential, retail, office, industrial, and mixed use projects. This can be considered under Technical Advisory Measure "Improve pedestrian or bicycle networks, or transit service." City of San Jose (Expand the reach of bike access with investment in infrastructure - applicable for both residential and employment uses). City of LA (Provide bicycle facility along site (Yes/No)).
7	Improve or increase access to transit	CARCOA TST 2. Not quantified above. Grounds strategy with TST 3 (Expand transit network and TST 4. Increase transit service frequency/speed). CARCOA LUT 5. 0.50% - 74.60%.	N/A	Y	Y	Y	Y	Y	Y	Notes: CARCOA TST 2. Implement Transit Access Improvements (Applicable in urban and suburban context, and appropriate for residential, retail, office, mixed use, and industrial projects). CARCOA LUT 5. Increase Transit Accessibility (May be grouped with CARCOA measures LUT 3 (mixed use development), LUT 2 (localize calmed streets with good connectivity), and PPT 7 (parking management strategies). Measures are applicable in urban and suburban contexts, appropriate in rural context if development sites adjacent to a commuter rail station with convenient car service to a single employment site. City of San Jose (Increase transit accessibility to improve last mile transit connections. Improve network connectivity/design to make destination, and low-carbon travel modes accessible both applicable for both residential and employment uses). City of LA (Existing transit mode share (as a percent of total daily trips (%), lines within project site improved (<50%, >=50%)).
8	Increase access to common goods and services, such as groceries, schools, and daycare	Similar to CARCOA LUT 3. Increase Diversity of Urban and Suburban Development (Transit) 3.00% - 10.00% (for CARCOA LUT 3. Increase Destination Accessibility). 6.70% - 20.00% VMT reduction	N/A	Y	Y	Y	N	N	Y	Notes: Similar to CARCOA LUT 3 (Increase Diversity of Urban and Suburban Development (Mixed Use) - Applicable in urban and suburban context, negligible in rural context (unless the project is a master-planned community, appropriate for mixed use projects). CARCOA LUT 4 (Applicable in urban and suburban context, negligible in rural context. Appropriate for residential, retail, office, and industrial projects). City of San Jose (Increase transit mode share (as a percent of total daily trips (%), lines within project site improved (<50%, >=50%)).
9	Incorporate affordable housing into the project	0.04% - 1.30%	N/A	Y	Y	Y	Y	Y	Y	Notes: Similar measure is CARCOA LUT 4 (Integrate Affordable and Below Market Rate Housing). Applicable in urban and suburban contexts, negligible impact in a rural context (unless transit availability and proximity to jobs/services are existing characteristics). Appropriate for specific or general plans. This can be considered under Technical Advisory Measure. Increase affordable and market rate housing. Measure is applicable for residential uses only.

Table A - Vehicle Miles Traveled Mitigation Measures for Development Projects (CAPCOA)

Mitigation Measure	VMT Reductions	Local VMT Reduction Calculations (Total Data/Fence COG ABM)	CAPCOA	GPB T4	Los Angeles Metro	City of San Diego	San Diego Region	Notes
10. Provide the neighborhood streets with wider sidewalks	0.50% - 1.70%	N/A	Y	Y	Y	Y	Y	Notes: CAPCOA-MT-3 (Neighborhood streets wider sidewalks) would result in a moderate and therefore reduce the traditional vehicle VMT and GFC measures. VMT depends on the available NIV network and support facilities. NIV network level, and the degree of their from traditional measures applicable in urban, suburban, and rural context for small citywide or large multi-use developments, and appropriate for mixed use projects.
11. Quantify project towards transit, bicycle, and pedestrian facilities	1.0, 15%, 0.5% (0.5% reduction is attributed for a project oriented towards a planned corridor and 0.5% reduction is attributed for a project oriented towards an existing corridor) as per the Sacramento Metropolitan Air Quality Management District (SMAQMD) Recommended Guidance for Land Use/Traffic Reductions (1/2015), reduction in VMT per 10% increase in transit frequency and per 10% increase in transit frequency as per the Center for Urban Air Policy (CUAP) Transportation Emission Reductions	N/A	Y	Y	Y	Y	Y	Notes: CAPCOA-MT-7 (Direct project toward transit and bicycle strategy with LUT) (Improve Design of Urban and Suburban Developments (Improved LUT)) There is no sufficient evidence that the measures result in non negligible trip reduction unless combined with other measures, including neighborhood design, density, and diversity of development, transit accessibility and pedestrian and bicycle network improvements, the measures applicable in urban or suburban context may be applicable in rural context. The measures applicable in urban or suburban context may be applicable in rural context. The measures applicable in urban or suburban context may be applicable in rural context. The measures applicable in urban or suburban context may be applicable in rural context.
12. Provide public transit facilities, bicycle, and pedestrian facilities	0.00% - 1.00%	N/A	Y	Y	Y	Y	Y	Notes: CAPCOA-MT-1 (Bicycle in urban, suburban, and rural context) applicable for pedestrian, transit, bicycle, and pedestrian facilities. The measures applicable in urban or suburban context may be applicable in rural context. The measures applicable in urban or suburban context may be applicable in rural context. The measures applicable in urban or suburban context may be applicable in rural context.
13. Provide transit facilities, bicycle, and pedestrian facilities	0.00% - 1.00%	N/A	Y	Y	Y	Y	Y	Notes: CAPCOA-MT-4 (Bicycle in urban, suburban, and rural context) applicable for pedestrian, transit, bicycle, and pedestrian facilities. The measures applicable in urban or suburban context may be applicable in rural context. The measures applicable in urban or suburban context may be applicable in rural context. The measures applicable in urban or suburban context may be applicable in rural context.
14. Provide transit facilities, bicycle, and pedestrian facilities	Not Quantified Grouped Strategy (with RP-2 and RP-3 through 7)	N/A	Y	Y	Y	Y	Y	Notes: CAPCOA-MT-1 (Bicycle in urban, suburban, and rural context) applicable for pedestrian, transit, bicycle, and pedestrian facilities. The measures applicable in urban or suburban context may be applicable in rural context. The measures applicable in urban or suburban context may be applicable in rural context. The measures applicable in urban or suburban context may be applicable in rural context.
15. Provide transit facilities, bicycle, and pedestrian facilities	6.70% - 10.00%	N/A	Y	Y	Y	Y	Y	Notes: CAPCOA-MT-1 (Bicycle in urban, suburban, and rural context) applicable for pedestrian, transit, bicycle, and pedestrian facilities. The measures applicable in urban or suburban context may be applicable in rural context. The measures applicable in urban or suburban context may be applicable in rural context. The measures applicable in urban or suburban context may be applicable in rural context.
16. Provide transit facilities, bicycle, and pedestrian facilities	0.25% - 1.00%	N/A	Y	Y	Y	Y	Y	Notes: CAPCOA-MT-2 (Bicycle in urban, suburban, and rural context) applicable for pedestrian, transit, bicycle, and pedestrian facilities. The measures applicable in urban or suburban context may be applicable in rural context. The measures applicable in urban or suburban context may be applicable in rural context. The measures applicable in urban or suburban context may be applicable in rural context.
17. Provide transit facilities, bicycle, and pedestrian facilities	0.25% (as per the Center for Urban Air Policy (CUAP) Transportation Emission Reductions)	N/A	Y	Y	Y	Y	Y	Notes: CAPCOA-MT-6 (Bicycle in urban, suburban, and rural context) applicable for pedestrian, transit, bicycle, and pedestrian facilities. The measures applicable in urban or suburban context may be applicable in rural context. The measures applicable in urban or suburban context may be applicable in rural context. The measures applicable in urban or suburban context may be applicable in rural context.
18. Provide transit facilities, bicycle, and pedestrian facilities	Not Quantified	N/A	Y	Y	Y	Y	Y	Notes: CAPCOA-MT-7 (Direct project toward transit and bicycle strategy with LUT) (Improve Design of Urban and Suburban Developments (Improved LUT)) There is no sufficient evidence that the measures result in non negligible trip reduction unless combined with other measures, including neighborhood design, density, and diversity of development, transit accessibility and pedestrian and bicycle network improvements, the measures applicable in urban or suburban context may be applicable in rural context. The measures applicable in urban or suburban context may be applicable in rural context. The measures applicable in urban or suburban context may be applicable in rural context.

AST

#	Distinguishing Measure	VMT Reduction	Local VMT Reduction Conditions (Local Data/From COG ABAJ)	CARPOA ⁸	San Jose	Los Angeles	City of San Diego	NBRS
19	Unit or eliminate parking supply	5.00% - 12.50%	N/A	Y	Y	Y	Y	Notes: CARPOA POT-1 Applicable in urban and suburban context, negligible in rural context appropriate for residential, retail, office, industrial, and mixed use projects(1) reduction can be counted only if sidewalk parking is controlled via residential permit and on street market parking), follow multi-lateral strategy including 1) elimination/reduction of minimum parking requirements, 2) creation of maximum parking requirements, and 3) provision of shared parking. City of San Jose (for increase project parking supply at the project site, but decrease overall city parking supply) City of Los Angeles (for decrease project parking supply at the project site, but increase overall city parking supply). Non-spatial Cost. (Applicable for employment units); City of LA (City code parking provision (spatial), actual parking provision (spatial))
20	Unbundle parking costs from property costs	2.60% - 13.00%	N/A	Y	Y	Y	Y	Notes: CARPOA POT-2 Applicable in urban and suburban context, negligible in rural context appropriate for residential, retail, office, industrial and mixed-use projects, complementary strategies include workplace parking program; City of San Jose (unbundle On-Site Parking Costs); Application for Residential Uses Only; City of LA (Monthly cost for parking [5])
21	Provide parking cash-out programs	0.60% - 7.70% commute VMT	N/A	Y	Y	Y	Y	Notes: CARPOA TRT-15 Implement employer parking "cash-out" - the term "cash-out" is used to describe the employer providing employees with a choice of foregoing their current subsidized/free parking for a cash payment equivalent to the cost of the parking, rather than the employer. The measure is applicable for retail, office, industrial, and mixed-use projects. Restrictions are applied only if complementary strategies are in place. 2) Recreational parking permits and market rate public on street parking to prevent spill over parking, 3) Unbundled parking - is not required but provides a market signal to employers to begin paying for parking space and parking infrastructure as part of new development. 4) Employer-provided parking spaces must be provided as a means of establishing "cash-out" prices. City of San Jose (Parking cash-out; Employment uses only); City of LA (Parking cash-out; Employees eligible [N])
22	Implement or provide access to a commuter reduction program - Voluntary	1.00% - 6.20% commute VMT	N/A	Y	Y	Y	Y	Notes: CARPOA TRT-1 Commuter Trip Reduction Program - Voluntary, a multiple strategy program that encompasses a combination of individual measures described CARPOA measures TRT-3 through TRT-9 It is presented as a means of preventing double counting of reductions for individual measures that are included in this strategy. It does so by setting a maximum level of reductions that should be permitted for a combined set of strategies within a voluntary program. The main difference between a voluntary and a required program is: A) Monitoring and reporting is not required B) No established performance standards (i.e., no trip reduction requirements). The measure is applicable in urban and suburban contexts, negligible in rural context. Cities' large employers are encouraged to implement the measure as a means of reducing travel demand. Measures appropriate for retail, office, industrial, and mixed-use projects. City of San Jose (Measures appropriate for employment uses only); City of LA (Employees and residents participating [F])
23	Provide ride-sharing program	1.00% - 15.00% commute VMT	N/A	Y	Y	Y	Y	Notes: CARPOA TRT-3 Provide Ride-Sharing Programs, applicable in urban and suburban context, negligible impact in many rural contexts, but can be effective within a large employer in a rural area draws from a workforce in an urban or suburban area as well as employees who work in rural areas. The measure is applicable for retail, office, industrial, and mixed-use projects. City of San Jose (Ride share for employment uses only); City of LA (Measured in terms of employees eligible [N])
24	Implement car-sharing program	0.40% - 0.70%	N/A	Y	Y	Y	Y	Notes: CARPOA TRT-9 Urban and suburban context, negligible in rural context, and appropriate for residential, retail, office, industrial, and mixed-use projects); City of San Jose (Applicable for both residential and employment uses); City of LA (Car share project serving urban, suburban, all other)
25	Implement bike-sharing program	Taking evidence from the literature, a 13% 100% reduction for each example 7% are shifting from vehicle travel results in a negligible impact (around 0.03% VMT reduction)	N/A	Y	Y	Y	Y	Notes: CARPOA TRT-12 This measure has minimal impacts when implemented alone. The strategy's effectiveness is heavily dependent on the location and context. Bike sharing programs have worked well in densely populated areas (examples in Barcelona, London, Lyon, and Paris) with existing infrastructure for bicycling. Bike sharing programs should be combined with bike lane/street design improvements to encourage more people to use bikes. The measure is applicable in urban and suburban context only, it is negligible in rural context, appropriate for residential, retail, office, industrial, and mixed-use projects. City of San Jose (Bike share for employment and residential uses); City of LA (Bike share within 600 feet of existing bike-share station OR implementing new bike-share station [V/N])
26	Provide transit passes	Similar to CARPOA TRT-4 Implement Subsidized or Discounted Transit Program, City of San Jose (Implement Subsidized or Discounted Transit Program); City of LA (employees and residents eligible [N]); or transit subsidy per daily passenger (daily equivalent) [5])	N/A	Y	Y	Y	Y	Notes: Similar to CARPOA TRT-4 Implement Subsidized or Discounted Transit Program); City of San Jose (Implement Subsidized or Discounted Transit Program); City of LA (employees and residents eligible [N]); or transit subsidy per daily passenger (daily equivalent) [5])

[illegible]

LSA

	Mitigation Measure	VMT Reduction ^a	Local VMT Reduction Calculations [Local Data/Federal CO ₂ Abn] ^b	CARCAQA ^c	QSR TST ^d	Los Angeles County ^e	San Diego County ^f	Notes
39	Improve network connectivity and/or increase intersection density on the project site	Similar measure as CARCAQA LUT-9 [improve design of development] 10%, 21.3% reduction in VMT	N/A	Y	Y	Y	Y	Notes: Similar measure to CARCAQA LUT-9 [improve Design of Development]. City of San Jose [improve street connectivity and/or increase intersection density] provides protection and benefits access to both residential and employment uses.
40	Prioritize workplace parking	0.10%, 19.10% commute VMT	N/A	Y	N	Y	N	Notes: CARCAQA TRT 14 [urban and suburban context, negligible impact in a rural context]. Appropriate for retail, office, industrial, and mixed-use projects. Allocation applied only if complementary strategies are in place. Transit parking permits the highest rate public on-street parking to prevent spill-over parking. Unbundling parking is not required but provides a market signal to employers to transfer over time, now explicit, cost of parking to the employees. In addition, unbundling parking provides a price with which employers can utilize as a means of establishing workplace parking prices. City of San Jose [Price On-Site Workplace Parking (for employment uses only)]. City of LA [Daily parking charge] (5). Employees subject to priced parking (N).
41	Locate project near bike/park lane	0.67%	N/A	Y	N	Y	N	Notes: CARCAQA LUT-8 [Grouped strategy with Increase Destination Accessibility, the encourage use of transit, and encourage use of multiple design elements that encourage this use; strategy should be grouped with Increase Destination Accessibility strategy to increase the opportunities for multi-modal travel; measure is applicable in urban or suburban context, may be applicable in a rural master planned community, appropriate for residential, retail, office, industrial, and mixed-use projects]
42	Implement Commute Trip Reduction Marketing	0.80%, 4.00% commute VMT	N/A	Y	N	Y	N	Notes: CARCAQA TRT-7 [Applicable in urban and suburban context, negligible in rural context]. Appropriate for residential, retail, office, industrial, and mixed-use projects. City of San Jose [Employment uses only]
43	Education and encouragement - Voluntary Travel Behavior Change Program	1.00%, 6.20% commute VMT	N/A	Y	N	Y	N	Notes: Similar to CARCAQA TRT 1 [Implement Commute Reduction Program - Voluntary], City of San Jose [For both residential and employment uses], City of LA [Employees and residents participating (N)]
44	Education and encouragement - Promotions and marketing	0.80%, 4.00% commute VMT	N/A	Y	N	Y	N	Notes: Similar to CARCAQA TRT 2 [Implement Commute Reduction Marketing], City of San Jose [Similar measure might be implement commute trip reduction marketing/educational campaign] (applicable for employment uses); City of LA [Employees and residents participating (N)]
45	Implement neighborhood shuttle	Not Quantified	N/A	Y	N	Y	N	Notes: CARCAQA TST-6 [Provide local shuttles, grouped strategy with TST-5 "Provide Bike Parking Near Transit" and TST-4 "Increase Transit Service Frequency"] encourages use of shared modes of transportation for short-distance travel for commercial, retail, office, and industrial projects, solves the "last mile/half mile" problem. City of San Jose [similar measure "Operate a free direct shuttle service" (applicable for employment uses only)]. City of LA [Degree of implementation low/medium/high], employees and residents eligible (N)]
46	Install park and ride lots	Two sources: 0.10%, 0.50% VMT reduction (as per 2005 Federal Highway Administration (FHWA) study) and 0.50% VMT reduction per day (as per Washington State Department of Transportation (WSDOT))	N/A	Y	N	N	N	Notes: CARCAQA RPT-4 [Applicable in suburban and rural context, inappropriate for residential projects, and medium projects]. Grouped strategy with RPT-1, TST-11, TST-1, and TRT-3 through 6
47	Electrically heating docks and/or requiring reduction systems	26%, 71% reduction in Truck refrigeration units (TRU) Reduction in GHG emissions varies depending on vehicle types, year, and associated fuel economy	N/A	Y	N	N	N	Notes: CARCAQA VT-1 [Measure applicability: Truck refrigeration units (TRU)] Notes: CARCAQA VT-2 [Measure applicability: vehicles] Notes: CARCAQA VT-3 [Measure applicability: vehicles]
48	Utilize alternative fueled vehicles		N/A	Y	N	N	N	Notes: CARCAQA TST-5 [Should be implemented with other two measures as mentioned to encourage multi-modal use in the area and provide ease of access to nearby transit for bicyclists] (measure applicable in urban and suburban context), appropriate for residential, retail, office, mixed use, and industrial projects]; Grouped strategy (with measures TST-1, J-1 and transit network, and TST-4 increase transit service frequency/level)
49	Utilize electric or hybrid vehicles	0.40%, 20.10% reduction in GHG emissions	N/A	Y	N	N	N	Notes: CARCAQA LUT-9 [Include design elements to enhance walkability and connectivity, improved street network characteristics within a neighborhood such as street accessibility, pedestrian crossings, presence of street trees, and a host of other physical variables that differentiate pedestrian-oriented environments from auto-oriented environments], measure is applicable in the urban and suburban contexts, negligible impact in rural context, appropriate for residential, retail, office, industrial, and mixed-use projects.
50	Provide bike parking near transit	Not Quantified	N/A	Y	N	N	N	Notes: CARCAQA LOT-8 [This is a grouped strategy and the benefits of electric vehicle parking near transit and combined with the use of electric vehicles and per LOT-1 Implement a Neighborhood Electric Vehicle (NEV) Network]. This measure is applicable in urban or suburban contexts and is appropriate for residential, retail, office, mixed use, and industrial projects.]
51	Improve design of development	3.00%, 21.30%	N/A	Y	N	N	N	
52	Provide electric vehicle gas kiosk	Not Quantified	N/A	Y	N	N	N	

Table 8 - Vehicle Miles Traveled Mitigation Measures for Development Projects (CARB Papers)¹

Mitigation Measure	VTMT Reduction ²	Local VTMT Reduction Calculations (Local Data/Fresh COG ABM) ¹	Notes
1 Provide Bicycling Network Improvements	No effect on VMT	0.30% VMT reduction per 100 miles (for addition of new bike lane)	Variable: Various factors associated with proximity to transit stop (please refer to <i>How do Local Actions Affect CMT? A Critical Review of the Empirical Evidence</i> (Salon, D., Boarnet, M.G., Handy, S., Spears, S., and Tal, G.))
2 Implement Transit Improvements	No effect on VMT	0.07% VMT reduction per 100 miles (for addition of a new transit line)	
3 Improve or increase access to transit	1.3% - 5.8%	N/A	
4 Land Use Mix	Elasticity: 0.02 - 0.10	N/A	Variable: Entropy - variety and balance of land-use types within a neighborhood (please refer to <i>How do Local Actions Affect CMT? A Critical Review of the Empirical Evidence</i> (Salon, D., Boarnet, M.G., Handy, S., Spears, S., and Tal, G.))
5 Regional Accessibility	Elasticity: 0.05 - 0.25	N/A	Variable: Various factors associated with job accessibility and distance to CBD (please refer to <i>How do Local Actions Affect CMT? A Critical Review of the Empirical Evidence</i> (Salon, D., Boarnet, M.G., Handy, S., Spears, S., and Tal, G.))
6 Job-Housing Balance	Elasticity: 0.06 - 0.31 for commute VMT	N/A	Variable: Various factors associated with job accessibility (please refer to <i>How do Local Actions Affect CMT? A Critical Review of the Empirical Evidence</i> (Salon, D., Boarnet, M.G., Handy, S., Spears, S., and Tal, G.))
7 Provide Pedestrian Network Improvements	Elasticity: 0.00 - 0.02 for sidewalk length, 0.19 for Pedestrian Environment Factor	N/A	Variable: residential density (please refer to <i>How do Local Actions Affect CMT? A Critical Review of the Empirical Evidence</i> (Salon, D., Boarnet, M.G., Handy, S., Spears, S., and Tal, G.))
8 Voluntary Travel Behavior Change (VTBC) Program	5% - 12%	N/A	
9 Implement Employer-Based Trip Reduction (ETRT) Program	1.33% - 6% of commute VMT	N/A	
10 Provide telecommuting options	Home-based telecommuting: 48.1% for household VMT, 66.5% for all personal VMT, and 90.3% for commute VMT only; Center-based telecommuting: 53.7% - 64.8% for all personal VMT and 62.0% - 77.2% for commute VMT only	N/A	Variable: residential density (please refer to <i>How do Local Actions Affect CMT? A Critical Review of the Empirical Evidence</i> (Salon, D., Boarnet, M.G., Handy, S., Spears, S., and Tal, G.))
11 Increase Project/Development Density	Elasticity: <0.07 - 0.19	N/A	
12 Improve network connectivity and/or increase intersection density on the project site	Elasticity: 0.46 - 0.59	N/A	
13 Implement Parking Cash-out Programs or Workplace Parking Pricing	12% of commute VMT (parking cash out), 2.3% - 2.9% for \$3 per day workplace parking price, 2.8% for price increase equivalent to 60% hourly value of commuter travel time cost	N/A	

Notes:

¹ VMT - Vehicle Miles Traveled² All mitigation measures have been obtained from *How do Local Actions Affect CMT? A Critical Review of the Empirical Evidence* (Salon, D., Boarnet, M.G., Handy, S., Spears, S., and Tal, G.)³ All VMT reduction numbers have been obtained from *How do Local Actions Affect CMT? A Critical Review of the Empirical Evidence* (Salon, D., Boarnet, M.G., Handy, S., Spears, S., and Tal, G.)⁴ Fresh COG VMT reduction recommendation for this measure obtained based on analysis conducted by Fresno COG staff and LSA using local data and/or the COG's Activity Based Model

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City of San Jose





physical design strategies that can be incorporated into the project description. **Table 3** shows the list of potential VMT reduction measures under the three physical design strategies.

If Project VMT still exceeds the threshold of significance after a combination of project characteristics, multimodal network improvements, and parking measures are included in the project description, the fourth strategy, TDM, should be considered. TDM includes programmatic measures that aim to reduce VMT by decreasing personal motorized vehicle mode share and by encouraging more walking, biking, and riding transit (referred to as “alternative transportation modes” throughout the document). **Table 4** shows the list of VMT-reducing TDM measures and their general descriptions. TDM measures will be enforced through annual trip monitoring to assess the project’s status in meeting the VMT reduction goals. Refer to **Section 3.8** for further information.

Projects in high-VMT areas are required to propose a list of VMT reduction measures and document the associated percent reduction in VMT. Project VMT is calculated by applying the percent reduction to Existing VMT. Project VMT is then compared to the threshold of significance to evaluate the project’s CEQA transportation impact. These calculations are automated in the sketch tool.

Table 3 Project Characteristics, Multimodal Network Improvements, and Parking Measures (March 2018)

Strategy (Tier)	Measures	Description
Project Characteristics (Tier 1)	Increase Development Density	Where consistent with the <i>Envision San José 2040 General Plan</i> and where in compliance with the <i>San José Municipal Code</i> , design the Project to be denser than existing conditions in the surrounding area. Increased densities affect the distances people travel and provide more options for the mode of travel they choose. Application: Residential and employment uses
	Increase Diversity of Uses	Where consistent with the <i>Envision San José 2040 General Plan</i> and in compliance with the <i>San José Municipal Code</i> , increase the amount of space dedicated to mixed employment and high-density residential uses in the area surrounding the project (defined as a ½-mile buffer from the Project). Different types of uses near one another can reduce VMT because trips between use types are shorter and may be accommodated more easily by non-personal motorized vehicle modes of travel. Application: Residential and employment uses.
	Integrate Affordable and Below Market Rate Housing	Develop on-site deed-restricted affordable, below-market rate (BMR) housing, for low-income households to reside in the project. At the same site, households with incomes at or below 80% of the regional median income generally make fewer trips by personal motorized vehicles than



Multimodal Network Improvements (Tier 2)		households with higher incomes, resulting in reduced VMT. BMR housing provides greater opportunity for families to live closer to transit. Application: Residential uses only.
	Expand the Reach of Bike Access with Investment in Infrastructure ⁽¹⁾	Implement bicycle facilities that close gaps in the bicycle network and/or improve the existing bicycle network (e.g. construct barrier or buffer for an existing bike lane). Improving bike access to the project promotes biking as an alternative to driving, and reduces VMT. VMT reductions are based on a reduction of the distance between the project frontage and a bicycle facility. This measure only applies to bicycle facilities that provide a dedicated lane for bicyclists or a completely separated right-of-way for bicycles and pedestrians. These facilities include Class I, Class II, and Class IV bikeways. This measure would not be applicable if the resulting gap between the project and the external bikeway exceeds 1/3 mile. Application: Residential and employment uses.
	Provide Pedestrian Network Improvements for Active Transportation ⁽¹⁾	Implement pedestrian improvements both on-site and in the surrounding neighborhood. Improving the pedestrian connections encourages people to walk instead of drive and reduces VMT. Pedestrian improvements include but are not limited to: sidewalks; marked or signalized pedestrian crossings at intersections; lighting; and curb ramps. Some proposed pedestrian improvements require additional study and conceptual City approval. Application: Residential and employment uses.
	Provide Traffic Calming Measures ⁽¹⁾	Implement pedestrian/bicycle safety and traffic calming measures both on-site and in the surrounding neighborhood. Providing traffic calming measures promotes walking and biking as an alternative to driving. VMT reductions are based on proposed median refuges, bulb-outs, and/or other pedestrian crossing enhancements beyond the project frontage. Proposed traffic calming features such as speed bumps require further study and conceptual City approval. Application: Residential and employment uses.



	Increase Transit Accessibility to Improve Last-Mile Transit Connections⁽¹⁾	Improve transit accessibility for the project to shorten last-mile connections for pedestrians and bicyclists. Enhancing access to transit will facilitate the use of transit by people traveling to/from the project site, resulting in mode shift. Application: Residential and employment uses.
	Improve Network Connectivity/ Design to Make Destinations and Low-Carbon Travel Modes Accessible⁽¹⁾	Build new street connections and/or connect cul-de-sacs to provide pedestrian and bicycle access. This measure enhances neighborhood walkability, connectivity, and accessibility. VMT reductions are based on the change in intersection density within ½ a mile of the project. Proposed improvements require conceptual approval by the City. Application: Residential and employment uses.
Parking (Tier 3)	Limit Parking Supply⁽¹⁾	Decrease project parking supply at the project site to rates lower than the standard parking minimums where allowable in the <i>San José Municipal Code</i>. Decreasing parking supply encourages employees to choose an alternative transportation mode for their commutes. Application: Employment uses only.
	Provide Bike Parking/ End of Trip Bike Facilities	Provide and maintain facilities for active transportation users on the project. Examples of end-of-trip facilities include bike parking, bicycle lockers, showers, and personal lockers. The extent of VMT reduction is based on the project provision of secure bike parking or secure bike parking and additional facilities. Application: Residential and employment uses.

Notes:

- (1) Coordination with the City is required to implement the measure.



Table 4 Programmatic Transportation Demand Management Measures (March 2018)

TDM (Tier 4)	Description
Implement a School Car Pool Program⁽¹⁾	Establish a program that coordinates carpools amongst parents in the development who transport students to and from schools. The school carpool program should be open to all residents in the development. School carpools reduce the total number of personal motorized vehicle-trips traveling to and from schools. Requires coordination with the City and schools. Application: Residential uses only.
Implement Bike Sharing Program⁽¹⁾	Dedicate land for or provide subsidies to a bike sharing system, such as Ford GoBike. Bike share trips replace some driving trips. Bike share also provides a first/last-mile connection for transit users. Requires coordination with the City and the bike share provider. Application: Residential and employment uses
Implement Car Sharing Program⁽¹⁾	Provide subsidies and promotions, as well as dedicated parking spaces, for car-sharing services such as ZipCar, Car2Go, and GetAround, etc. Supporting a car-sharing program gives people on-demand access to shared fleets of vehicles. Car-sharing reduces personal motorized vehicle dependence, which supports more walking, biking, carpooling, and transit use. Subject to negotiations with the City and possible negotiations with Car Share companies. Application: Residential and employment uses
Implement Commute Trip Reduction Marketing/Educational Campaign	Implement marketing/educational campaigns that promote the use of transit, shared rides, and travel through active modes. Strategies may include incorporation of alternative commute options into new employee orientations, event promotions, and publications. Application: Employment uses only
Implement Commute Trip Reduction Program	Provide a comprehensive program to reduce the number of drive-alone commute trips to and from the project. Such a program should assist employees in using alternative transportation modes. Tools that may be incorporated into the program include flexible/alternative work schedules, ride-share assistance, vanpool assistance, and bicycle end-of-trip facilities. Application: Employment uses only



Implement Employee Parking "Cash-Out"	Require Project employers to offer parking "cash-out." Providing a "cash-out" incentives gives employees the choice to forgo subsidized/free parking for a cash payment equivalent to the cost that the employer would otherwise pay for the parking space. Providing an alternative to subsidized/free parking encourages commuters to travel by walking, biking, carpooling, and transit. Application: Employment uses only
Implement Subsidized or Discounted Transit Program	Provide either partially or fully subsidized/discounted transit passes (i.e. employees, residents, and visitors). Providing subsidies for transit use encourages people to use transit rather than driving. This measure differs from the "Subsidize Public Transit Service Upgrades" below in that subsidies are provided to employees, not the public transit agency. Application: Residential and employment uses
Implement Telecommuting and Alternative Work Schedules	Encourage employees to telecommute, shift work schedules, or commute outside of peak congestion periods. This measure reduces commute vehicle-trips. Application: Employment land uses only
Operate a Free Direct Shuttle Service⁽¹⁾	Provide shuttle service between the project site and areas with high concentrations of employed residents. This measure reduces drive-alone commute trips. Application: Employment uses only
Price On-Site Workplace Parking	Require commuters to pay for parking on-site. This measure provides a disincentive to driving and promotes use of alternative transportation modes. Application: Employment uses only
Access to Neighborhood Schools⁽¹⁾	Contribute to the development of a neighborhood school that would serve families living in the development. Neighborhood schools primarily serve the neighborhoods immediately surrounding the school and allow students to walk or bike to school. Requires coordination with City and school district. Application: Residential uses only
Provide Ride-Sharing Programs	Organize a program to match individuals interested in carpooling who have similar commutes. This measure promotes the use of carpooling and reduces the number of drive-alone trips. Application: Employment uses only



Subsidize Public Transit Service Upgrades⁽¹⁾	Subsidize transit service through contributions to the transit provider to improve transit service to the project (e.g. frequency and number of routes). This measure differs from the "Subsidized or Discounted Transit Program" in that subsidies are provided to the public transit agency, not the employees. Subject to negotiation with the City and transit provider (primarily VTA). Application: Residential and employment uses only
Unbundle On-Site Parking Costs	Provide the cost of parking spaces unbundled from the rental costs of occupied space (in other words, residents must rent parking spaces). Surrounding streets should have parking restrictions, such as metered parking, time limits, restricted overnight parking, and/or residential parking permits (RPP). Application: Residential uses only
Subsidize Vanpool	Subsidize individuals forming new vanpools for their commutes. This encourages the use of vanpools. Application: Employment uses only
Voluntary Travel Behavior Change Program	Provide a program that targets individual attitudes and behaviors towards travel, and provide tools for individuals to analyze and alter their travel behavior. Voluntary Travel Behavior Change programs include mass communication campaigns and travel feedback programs, such as travel diaries or feedback on calories burned from activities and travel. Application: Residential and employment uses
Trip Cap	Establishes a maximum number of daily personal motorized vehicle-trips allowed to be generated by a project. Requires annual monitoring and reporting and requires penalties for nonconformance. Refer to Section 3.8. Application: Residential and employment uses

Notes:

- (1) Coordination with the City is required to implement the measure.

San José Travel Demand Model

For non-residential or non-office projects, very large projects, or projects that can potentially shift travel patterns, the sketch tool would not be appropriate or adequate for the CEQA transportation analysis. In such cases, the *San José Travel Demand Model* may be required based on a preliminary review of the project. For projects requiring model runs, the transportation consultant will coordinate with Public Works in the scoping process to obtain modeling information.

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APPENDIX D

INTERSECTION ANALYSES

Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)



PETERS ENGINEERING GROUP
A CALIFORNIA CORPORATION

1: 13th Ave & Grangeville Blvd
 HCM 6th Signalized Intersection Summary

Existing-AM
 10/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	270	58	137	248	20	77	121	130	21	192	49
Future Volume (veh/h)	44	270	58	137	248	20	77	121	130	21	192	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.96	1.00		0.97	1.00		0.95
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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	48	293	26	149	270	11	84	132	89	23	209	28
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
Cap, veh/h	89	435	351	193	544	441	129	443	364	49	360	288
Arrive On Green	0.05	0.23	0.23	0.11	0.29	0.29	0.07	0.24	0.24	0.03	0.19	0.19
Sat Flow, veh/h	1781	1870	1508	1781	1870	1517	1781	1870	1539	1781	1870	1498
Grp Volume(v), veh/h	48	293	26	149	270	11	84	132	89	23	209	28
Grp Sat Flow(s),veh/h/ln	1781	1870	1508	1781	1870	1517	1781	1870	1539	1781	1870	1498
Q Serve(g_s), s	1.2	6.4	0.6	3.7	5.4	0.2	2.1	2.6	2.1	0.6	4.6	0.7
Cycle Q Clear(g_c), s	1.2	6.4	0.6	3.7	5.4	0.2	2.1	2.6	2.1	0.6	4.6	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	89	435	351	193	544	441	129	443	364	49	360	288
V/C Ratio(X)	0.54	0.67	0.07	0.77	0.50	0.02	0.65	0.30	0.24	0.47	0.58	0.10
Avail Cap(c_a), veh/h	241	750	605	355	871	706	237	796	655	233	792	634
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.9	15.7	13.5	19.6	13.3	11.4	20.4	14.1	13.9	21.6	16.6	15.0
Incr Delay (d2), s/veh	5.0	1.8	0.1	6.5	0.7	0.0	5.5	0.4	0.3	6.7	1.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	4.0	0.3	2.8	3.1	0.1	1.6	1.6	1.0	0.5	2.9	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.9	17.6	13.6	26.0	14.0	11.4	25.9	14.5	14.3	28.3	18.1	15.1
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		367			430			305			260	
Approach Delay, s/veh		18.4			18.1			17.6			18.6	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.3	15.6	8.9	15.4	7.3	13.6	6.3	18.0				
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9				
Max Green Setting (Gmax), s	5.9	19.2	9.0	18.1	6.0	19.1	6.1	21.0				
Max Q Clear Time (g_c+I1), s	2.6	4.6	5.7	8.4	4.1	6.6	3.2	7.4				
Green Ext Time (p_c), s	0.0	0.7	0.1	1.0	0.0	0.8	0.0	1.1				
Intersection Summary												
HCM 6th Ctrl Delay			18.2									
HCM 6th LOS			B									

Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)

2: Centennial Dr & Grangeville Blvd HCM 6th Signalized Intersection Summary

Existing-AM
10/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	282	101	160	275	71	62	94	105	73	226	61
Future Volume (veh/h)	31	282	101	160	275	71	62	94	105	73	226	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	1.00		0.95	1.00		0.95
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		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	37	340	103	193	331	64	75	113	92	88	272	60
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	70	449	370	242	630	512	110	220	179	119	354	78
Arrive On Green	0.04	0.24	0.24	0.14	0.34	0.34	0.06	0.24	0.24	0.07	0.24	0.24
Sat Flow, veh/h	1781	1870	1539	1781	1870	1522	1781	931	758	1781	1469	324
Grp Volume(v), veh/h	37	340	103	193	331	64	75	0	205	88	0	332
Grp Sat Flow(s),veh/h/ln	1781	1870	1539	1781	1870	1522	1781	0	1688	1781	0	1793
Q Serve(g_s), s	1.1	9.4	3.0	5.8	7.9	1.6	2.3	0.0	5.9	2.7	0.0	9.6
Cycle Q Clear(g_c), s	1.1	9.4	3.0	5.8	7.9	1.6	2.3	0.0	5.9	2.7	0.0	9.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.45	1.00		0.18
Lane Grp Cap(c), veh/h	70	449	370	242	630	512	110	0	399	119	0	433
V/C Ratio(X)	0.53	0.76	0.28	0.80	0.53	0.12	0.68	0.00	0.51	0.74	0.00	0.77
Avail Cap(c_a), veh/h	190	607	500	321	745	606	190	0	554	193	0	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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.1	19.6	17.2	23.2	14.8	12.7	25.5	0.0	18.4	25.4	0.0	19.6
Incr Delay (d2), s/veh	6.1	3.7	0.4	10.0	0.7	0.1	7.2	0.0	1.0	8.6	0.0	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	6.8	1.6	4.9	4.8	0.8	1.9	0.0	3.6	2.4	0.0	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.3	23.3	17.6	33.2	15.5	12.8	32.7	0.0	19.4	34.0	0.0	23.7
LnGrp LOS	C	C	B	C	B	B	C	A	B	C	A	C
Approach Vol, veh/h	480			588			280			420		
Approach Delay, s/veh	22.8			21.0			23.0			25.9		
Approach LOS	C			C			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.7	18.0	11.5	18.2	7.4	18.3	6.2	23.6				
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9				
Max Green Setting (Gmax), s	18.2	18.2	10.0	18.0	5.9	18.3	5.9	22.1				
Max Q Clear Time (g_c+I1), s	7.9	7.9	7.8	11.4	4.3	11.6	3.1	9.9				
Green Ext Time (p_c), s	0.0	0.7	0.1	1.2	0.0	1.0	0.0	1.5				
Intersection Summary												
HCM 6th Ctrl Delay	22.9											
HCM 6th LOS	C											

Synchro 11 Report

3: Centennial Dr & Malone St
HCM 6th TWSC

Existing-AM
10/04/2021

Intersection

Int Delay, s/veh 0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖			↗	↑	↘
Traffic Vol, veh/h	5	6	2	252	482	1
Future Vol, veh/h	5	6	2	252	482	1
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	7	2	307	588	1

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	919	608	599
Stage 1	598	-	-
Stage 2	321	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	301	496	978
Stage 1	549	-	-
Stage 2	735	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	294	487	969
Mov Cap-2 Maneuver	294	-	-
Stage 1	542	-	-
Stage 2	728	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	969	-	375	-	-
HCM Lane V/C Ratio	0.003	-	0.036	-	-
HCM Control Delay (s)	8.7	0	15	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)

1: 13th Ave & Grangeville Blvd
 HCM 6th Signalized Intersection Summary

Existing-PM
 10/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	266	21	49	183	15	38	152	93	17	91	23
Future Volume (veh/h)	42	266	21	49	183	15	38	152	93	17	91	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	1.00		0.97	1.00		0.94
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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	48	302	16	56	208	12	43	173	65	19	103	15
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	93	475	384	105	487	394	86	358	294	43	313	249
Arrive On Green	0.05	0.25	0.25	0.06	0.26	0.26	0.05	0.19	0.19	0.02	0.17	0.17
Sat Flow, veh/h	1781	1870	1511	1781	1870	1512	1781	1870	1533	1781	1870	1490
Grp Volume(v), veh/h	48	302	16	56	208	12	43	173	65	19	103	15
Grp Sat Flow(s),veh/h/ln	1781	1870	1511	1781	1870	1512	1781	1870	1533	1781	1870	1490
Q Serve(g_s), s	1.0	5.4	0.3	1.2	3.5	0.2	0.9	3.1	1.4	0.4	1.8	0.3
Cycle Q Clear(g_c), s	1.0	5.4	0.3	1.2	3.5	0.2	0.9	3.1	1.4	0.4	1.8	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	93	475	384	105	487	394	86	358	294	43	313	249
V/C Ratio(X)	0.51	0.64	0.04	0.53	0.43	0.03	0.50	0.48	0.22	0.45	0.33	0.06
Avail Cap(c_a), veh/h	288	996	805	307	1016	822	283	972	796	283	972	774
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.4	12.5	10.6	17.3	11.6	10.4	17.5	13.6	12.9	18.2	13.8	13.2
Incr Delay (d2), s/veh	4.3	1.4	0.0	4.2	0.6	0.0	4.5	1.0	0.4	7.1	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	2.9	0.1	0.9	1.8	0.1	0.7	1.8	0.6	0.4	1.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.7	13.9	10.7	21.4	12.2	10.4	22.0	14.6	13.3	25.3	14.4	13.3
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		366			276			281			137	
Approach Delay, s/veh		14.8			14.0			15.4			15.8	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.9	12.1	6.2	14.5	5.8	11.2	6.0	14.7				
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9				
Max Green Setting (Gmax), s	6.0	19.6	6.5	20.1	6.0	19.6	6.1	20.5				
Max Q Clear Time (g_c+I1), s	2.4	5.1	3.2	7.4	2.9	3.8	3.0	5.5				
Green Ext Time (p_c), s	0.0	0.8	0.0	1.2	0.0	0.4	0.0	0.8				
Intersection Summary												
HCM 6th Ctrl Delay			14.9									
HCM 6th LOS			B									

Synchro 11 Report

2: Centennial Dr & Grangeville Blvd
 HCM 6th Signalized Intersection Summary

Existing-PM
 10/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	209	73	109	199	60	58	178	93	44	126	23
Future Volume (veh/h)	32	209	73	109	199	60	58	178	93	44	126	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.95	1.00		0.95	1.00		0.95
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		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	35	227	66	118	216	43	63	193	74	48	137	22
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
Cap, veh/h	71	387	318	158	478	387	110	296	114	91	347	56
Arrive On Green	0.04	0.21	0.21	0.09	0.26	0.26	0.06	0.23	0.23	0.05	0.22	0.22
Sat Flow, veh/h	1781	1870	1535	1781	1870	1512	1781	1268	486	1781	1559	250
Grp Volume(v), veh/h	35	227	66	118	216	43	63	0	267	48	0	159
Grp Sat Flow(s),veh/h/ln	1781	1870	1535	1781	1870	1512	1781	0	1754	1781	0	1810
Q Serve(g_s), s	0.8	4.6	1.5	2.7	4.1	0.9	1.5	0.0	5.8	1.1	0.0	3.2
Cycle Q Clear(g_c), s	0.8	4.6	1.5	2.7	4.1	0.9	1.5	0.0	5.8	1.1	0.0	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.28	1.00		0.14
Lane Grp Cap(c), veh/h	71	387	318	158	478	387	110	0	410	91	0	403
V/C Ratio(X)	0.49	0.59	0.21	0.75	0.45	0.11	0.57	0.00	0.65	0.53	0.00	0.39
Avail Cap(c_a), veh/h	248	794	652	378	931	752	252	0	794	252	0	820
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.9	15.2	13.9	18.9	13.3	12.1	19.3	0.0	14.7	19.6	0.0	14.0
Incr Delay (d2), s/veh	5.2	1.4	0.3	6.9	0.7	0.1	4.6	0.0	1.8	4.7	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	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	2.9	0.7	2.1	2.4	0.4	1.1	0.0	3.5	0.9	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.1	16.6	14.2	25.8	13.9	12.2	24.0	0.0	16.4	24.3	0.0	14.7
LnGrp LOS	C	B	B	C	B	B	C	A	B	C	A	B
Approach Vol, veh/h	328			377			330			207		
Approach Delay, s/veh	17.0			17.4			17.9			16.9		
Approach LOS	B			B			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.2	14.8	7.8	13.7	6.6	14.3	5.7	15.7				
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9				
Max Green Setting (Gmax), s	6.0	19.2	9.0	18.0	6.0	19.2	5.9	21.1				
Max Q Clear Time (g_c+I), s	13.5	7.8	4.7	6.6	3.5	5.2	2.8	6.1				
Green Ext Time (p_c), s	0.0	1.0	0.1	1.0	0.0	0.6	0.0	1.0				
Intersection Summary												
HCM 6th Ctrl Delay				17.4								
HCM 6th LOS				B								

Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)

3: Centennial Dr & Malone St
HCM 6th TWSC

Existing-PM
10/04/2021

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘			↗	↑	↗
Traffic Vol, veh/h	2	9	13	323	298	1
Future Vol, veh/h	2	9	13	323	298	1
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	10	14	344	317	1
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	709	337	328	0	-	0
Stage 1	327	-	-	-	-	-
Stage 2	382	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	401	705	1232	-	-	-
Stage 1	731	-	-	-	-	-
Stage 2	690	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	387	692	1220	-	-	-
Mov Cap-2 Maneuver	387	-	-	-	-	-
Stage 1	713	-	-	-	-	-
Stage 2	683	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.1	0.3		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1220	-	605	-	-	
HCM Lane V/C Ratio	0.011	-	0.019	-	-	
HCM Control Delay (s)	8	0	11.1	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Synchro 11 Report

1: 13th Ave & Grangeville Blvd
 HCM 6th Signalized Intersection Summary

Existing Plus Project-AM
 10/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	272	58	148	253	23	77	121	133	22	192	49
Future Volume (veh/h)	44	272	58	148	253	23	77	121	133	22	192	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.96	1.00		0.97	1.00		0.94
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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	48	296	26	161	275	14	84	132	93	24	209	28
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
Cap, veh/h	89	435	351	207	560	454	128	438	360	51	357	286
Arrive On Green	0.05	0.23	0.23	0.12	0.30	0.30	0.07	0.23	0.23	0.03	0.19	0.19
Sat Flow, veh/h	1781	1870	1508	1781	1870	1518	1781	1870	1539	1781	1870	1498
Grp Volume(v), veh/h	48	296	26	161	275	14	84	132	93	24	209	28
Grp Sat Flow(s),veh/h/ln	1781	1870	1508	1781	1870	1518	1781	1870	1539	1781	1870	1498
Q Serve(g_s), s	1.2	6.6	0.6	4.0	5.5	0.3	2.1	2.7	2.3	0.6	4.7	0.7
Cycle Q Clear(g_c), s	1.2	6.6	0.6	4.0	5.5	0.3	2.1	2.7	2.3	0.6	4.7	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	89	435	351	207	560	454	128	438	360	51	357	286
V/C Ratio(X)	0.54	0.68	0.07	0.78	0.49	0.03	0.66	0.30	0.26	0.47	0.58	0.10
Avail Cap(c_a), veh/h	237	738	595	349	856	695	233	783	644	229	779	624
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
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.3	16.0	13.7	19.7	13.2	11.4	20.7	14.5	14.3	21.9	16.9	15.3
Incr Delay (d2), s/veh	5.0	1.9	0.1	6.1	0.7	0.0	5.7	0.4	0.4	6.5	1.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	4.2	0.3	3.0	3.2	0.1	1.6	1.6	1.1	0.5	3.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.3	17.9	13.8	25.8	13.9	11.4	26.4	14.9	14.7	28.5	18.4	15.4
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		370			450			309			261	
Approach Delay, s/veh		18.7			18.1			18.0			19.0	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.3	15.6	9.3	15.6	7.3	13.7	6.3	18.6				
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9				
Max Green Setting (Gmax), s	5.9	19.2	9.0	18.1	6.0	19.1	6.1	21.0				
Max Q Clear Time (g_c+l1), s	2.6	4.7	6.0	8.6	4.1	6.7	3.2	7.5				
Green Ext Time (p_c), s	0.0	0.7	0.1	1.1	0.0	0.8	0.0	1.1				
Intersection Summary												
HCM 6th Ctrl Delay			18.4									
HCM 6th LOS			B									

Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)

2: Centennial Dr & Grangeville Blvd HCM 6th Signalized Intersection Summary

Existing Plus Project-AM
10/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	304	101	165	280	71	62	95	114	73	227	62
Future Volume (veh/h)	35	304	101	165	280	71	62	95	114	73	227	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	1.00		0.95	1.00		0.95
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		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	42	366	103	199	337	64	75	114	102	88	273	62
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	76	465	383	247	645	525	108	209	187	117	351	80
Arrive On Green	0.04	0.25	0.25	0.14	0.34	0.34	0.06	0.24	0.24	0.07	0.24	0.24
Sat Flow, veh/h	1781	1870	1540	1781	1870	1522	1781	887	793	1781	1460	331
Grp Volume(v), veh/h	42	366	103	199	337	64	75	0	216	88	0	335
Grp Sat Flow(s),veh/h/ln	1781	1870	1540	1781	1870	1522	1781	0	1680	1781	0	1791
Q Serve(g_s), s	1.3	10.5	3.1	6.2	8.2	1.6	2.4	0.0	6.5	2.8	0.0	10.0
Cycle Q Clear(g_c), s	1.3	10.5	3.1	6.2	8.2	1.6	2.4	0.0	6.5	2.8	0.0	10.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.47	1.00		0.19
Lane Grp Cap(c), veh/h	76	465	383	247	645	525	108	0	395	117	0	430
V/C Ratio(X)	0.55	0.79	0.27	0.81	0.52	0.12	0.69	0.00	0.55	0.75	0.00	0.78
Avail Cap(c_a), veh/h	184	589	485	312	723	588	184	0	535	187	0	573
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.8	20.1	17.3	23.9	15.0	12.8	26.3	0.0	19.2	26.2	0.0	20.3
Incr Delay (d2), s/veh	6.2	5.5	0.4	11.5	0.7	0.1	7.6	0.0	1.2	9.2	0.0	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.1	7.9	1.7	5.4	5.1	0.8	2.0	0.0	4.1	2.5	0.0	7.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.0	25.6	17.7	35.4	15.6	12.9	34.0	0.0	20.4	35.5	0.0	25.2
LnGrp LOS	C	C	B	D	B	B	C	A	C	D	A	C
Approach Vol, veh/h	511			600			291			423		
Approach Delay, s/veh	24.6			21.9			23.9			27.3		
Approach LOS	C			C			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.8	18.4	11.9	19.1	7.5	18.6	6.4	24.6				
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9				
Max Green Setting (Gmax), s	18.2	18.2	10.0	18.0	5.9	18.3	5.9	22.1				
Max Q Clear Time (g_c+I1/4), s	8.5	8.5	8.2	12.5	4.4	12.0	3.3	10.2				
Green Ext Time (p_c), s	0.0	0.7	0.1	1.1	0.0	1.0	0.0	1.5				
Intersection Summary												
HCM 6th Ctrl Delay	24.2											
HCM 6th LOS	C											

Synchro 11 Report

3: Centennial Dr & Malone St
HCM 6th TWSC

Existing Plus Project-AM
10/04/2021

Intersection

Int Delay, s/veh 0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	28	9	257	496	3
Future Vol, veh/h	10	28	9	257	496	3
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	34	11	313	605	4

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	960	625	619
Stage 1	615	-	-
Stage 2	345	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	285	485	961
Stage 1	539	-	-
Stage 2	717	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	275	476	952
Mov Cap-2 Maneuver	275	-	-
Stage 1	526	-	-
Stage 2	710	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.2	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	952	-	399	-	-
HCM Lane V/C Ratio	0.012	-	0.116	-	-
HCM Control Delay (s)	8.8	0	15.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)

1: 13th Ave & Grangeville Blvd
HCM 6th Signalized Intersection Summary

Existing Plus Project-PM
10/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	272	21	56	186	16	38	152	105	20	91	23
Future Volume (veh/h)	42	272	21	56	186	16	38	152	105	20	91	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	1.00		0.97	1.00		0.94
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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	48	309	16	64	211	13	43	173	78	23	103	15
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	93	478	387	115	501	406	85	354	290	50	317	253
Arrive On Green	0.05	0.26	0.26	0.06	0.27	0.27	0.05	0.19	0.19	0.03	0.17	0.17
Sat Flow, veh/h	1781	1870	1512	1781	1870	1514	1781	1870	1532	1781	1870	1491
Grp Volume(v), veh/h	48	309	16	64	211	13	43	173	78	23	103	15
Grp Sat Flow(s),veh/h/ln	1781	1870	1512	1781	1870	1514	1781	1870	1532	1781	1870	1491
Q Serve(g_s), s	1.0	5.7	0.3	1.3	3.6	0.2	0.9	3.2	1.7	0.5	1.9	0.3
Cycle Q Clear(g_c), s	1.0	5.7	0.3	1.3	3.6	0.2	0.9	3.2	1.7	0.5	1.9	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	93	478	387	115	501	406	85	354	290	50	317	253
V/C Ratio(X)	0.52	0.65	0.04	0.56	0.42	0.03	0.50	0.49	0.27	0.46	0.32	0.06
Avail Cap(c_a), veh/h	282	977	789	301	996	806	278	952	780	278	952	759
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.8	12.8	10.8	17.5	11.6	10.4	17.9	13.9	13.3	18.4	14.0	13.4
Incr Delay (d2), s/veh	4.4	1.5	0.0	4.2	0.6	0.0	4.5	1.0	0.5	6.3	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	3.1	0.1	1.0	1.9	0.1	0.7	1.9	0.8	0.4	1.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.2	14.2	10.8	21.7	12.2	10.4	22.4	15.0	13.8	24.7	14.6	13.5
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		373			288			294			141	
Approach Delay, s/veh		15.1			14.2			15.8			16.2	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.1	12.2	6.5	14.7	5.8	11.4	6.0	15.2				
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9				
Max Green Setting (Gmax), s	6.0	19.6	6.5	20.1	6.0	19.6	6.1	20.5				
Max Q Clear Time (g_c+I1), s	2.5	5.2	3.3	7.7	2.9	3.9	3.0	5.6				
Green Ext Time (p_c), s	0.0	0.9	0.0	1.2	0.0	0.4	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay			15.2									
HCM 6th LOS			B									

Synchro 11 Report

2: Centennial Dr & Grangeville Blvd
 HCM 6th Signalized Intersection Summary

Existing Plus Project-PM
 10/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	223	73	126	216	60	58	179	99	44	129	25
Future Volume (veh/h)	34	223	73	126	216	60	58	179	99	44	129	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	1.00		0.95	1.00		0.95
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		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	37	242	66	137	235	43	63	195	81	48	140	24
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
Cap, veh/h	74	395	325	178	505	408	109	291	121	90	347	59
Arrive On Green	0.04	0.21	0.21	0.10	0.27	0.27	0.06	0.24	0.24	0.05	0.22	0.22
Sat Flow, veh/h	1781	1870	1536	1781	1870	1514	1781	1234	513	1781	1542	264
Grp Volume(v), veh/h	37	242	66	137	235	43	63	0	276	48	0	164
Grp Sat Flow(s),veh/h/ln	1781	1870	1536	1781	1870	1514	1781	0	1747	1781	0	1806
Q Serve(g_s), s	0.9	5.2	1.6	3.3	4.6	0.9	1.5	0.0	6.3	1.2	0.0	3.4
Cycle Q Clear(g_c), s	0.9	5.2	1.6	3.3	4.6	0.9	1.5	0.0	6.3	1.2	0.0	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.29	1.00		0.15
Lane Grp Cap(c), veh/h	74	395	325	178	505	408	109	0	411	90	0	406
V/C Ratio(X)	0.50	0.61	0.20	0.77	0.47	0.11	0.58	0.00	0.67	0.53	0.00	0.40
Avail Cap(c_a), veh/h	238	762	626	363	894	723	242	0	760	242	0	785
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
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.7	15.8	14.4	19.4	13.5	12.1	20.2	0.0	15.3	20.5	0.0	14.6
Incr Delay (d2), s/veh	5.2	1.5	0.3	6.9	0.7	0.1	4.8	0.0	1.9	4.9	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	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	3.2	0.8	2.5	2.7	0.4	1.2	0.0	3.8	1.0	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.9	17.3	14.7	26.3	14.1	12.2	25.0	0.0	17.2	25.3	0.0	15.2
LnGrp LOS	C	B	B	C	B	B	C	A	B	C	A	B
Approach Vol, veh/h	345			415			339			212		
Approach Delay, s/veh	17.7			18.0			18.7			17.5		
Approach LOS	B			B			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.2	15.3	8.4	14.2	6.7	14.8	5.8	16.8				
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9				
Max Green Setting (Gmax), s	19.2	19.2	9.0	18.0	6.0	19.2	5.9	21.1				
Max Q Clear Time (g_c+13), s	8.3	8.3	5.3	7.2	3.5	5.4	2.9	6.6				
Green Ext Time (p_c), s	0.0	1.1	0.1	1.0	0.0	0.6	0.0	1.1				
Intersection Summary												
HCM 6th Ctrl Delay	18.0											
HCM 6th LOS	B											

Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)

3: Centennial Dr & Malone St HCM 6th TWSC

Existing Plus Project-PM
10/04/2021

Intersection

Int Delay, s/veh 0.9

Movement

	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↑	↑	↑
Traffic Vol, veh/h	5	23	37	339	308	8
Future Vol, veh/h	5	23	37	339	308	8
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	24	39	361	328	9

Major/Minor

	Minor2	Major1	Major2
Conflicting Flow All	787	348	347
Stage 1	338	-	-
Stage 2	449	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	360	695	1212
Stage 1	722	-	-
Stage 2	643	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	338	682	1200
Mov Cap-2 Maneuver	338	-	-
Stage 1	685	-	-
Stage 2	637	-	-

Approach

	EB	NB	SB
HCM Control Delay, s	11.6	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt

	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1200	-	577	-	-
HCM Lane V/C Ratio	0.033	-	0.052	-	-
HCM Control Delay (s)	8.1	0	11.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Synchro 11 Report

1: 13th Ave & Grangeville Blvd
 HCM 6th Signalized Intersection Summary

Near-Term With Project-AM
 10/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	299	58	162	278	31	77	169	146	30	269	69
Future Volume (veh/h)	62	299	58	162	278	31	77	169	146	30	269	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.96	1.00		0.97	1.00		0.95
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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	67	325	26	176	302	23	84	184	107	33	292	50
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
Cap, veh/h	107	444	358	223	566	460	121	477	393	65	419	337
Arrive On Green	0.06	0.24	0.24	0.13	0.30	0.30	0.07	0.26	0.26	0.04	0.22	0.22
Sat Flow, veh/h	1781	1870	1508	1781	1870	1518	1781	1870	1541	1781	1870	1506
Grp Volume(v), veh/h	67	325	26	176	302	23	84	184	107	33	292	50
Grp Sat Flow(s),veh/h/ln	1781	1870	1508	1781	1870	1518	1781	1870	1541	1781	1870	1506
Q Serve(g_s), s	1.9	8.3	0.7	4.9	6.9	0.6	2.4	4.2	2.9	0.9	7.4	1.4
Cycle Q Clear(g_c), s	1.9	8.3	0.7	4.9	6.9	0.6	2.4	4.2	2.9	0.9	7.4	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	107	444	358	223	566	460	121	477	393	65	419	337
V/C Ratio(X)	0.63	0.73	0.07	0.79	0.53	0.05	0.69	0.39	0.27	0.51	0.70	0.15
Avail Cap(c_a), veh/h	211	657	530	311	763	619	208	697	575	204	694	559
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.6	18.1	15.2	21.9	14.9	12.7	23.5	15.8	15.3	24.4	18.4	16.0
Incr Delay (d2), s/veh	6.0	2.4	0.1	8.7	0.8	0.0	7.0	0.5	0.4	6.0	2.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	5.6	0.4	4.0	4.3	0.3	1.9	2.7	1.5	0.8	5.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.6	20.5	15.3	30.6	15.7	12.8	30.4	16.4	15.7	30.3	20.5	16.2
LnGrp LOS	C	C	B	C	B	B	C	B	B	C	C	B
Approach Vol, veh/h		418			501			375			375	
Approach Delay, s/veh		21.6			20.8			19.3			20.8	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.9	18.0	10.5	17.1	7.5	16.4	7.1	20.5				
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9				
Max Green Setting (Gmax), s	5.9	19.2	9.0	18.1	6.0	19.1	6.1	21.0				
Max Q Clear Time (g_c+I1), s	2.9	6.2	6.9	10.3	4.4	9.4	3.9	8.9				
Green Ext Time (p_c), s	0.0	1.0	0.1	1.0	0.0	1.1	0.0	1.2				
Intersection Summary												
HCM 6th Ctrl Delay			20.7									
HCM 6th LOS			C									

Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)

2: Centennial Dr & Grangeville Blvd HCM 6th Signalized Intersection Summary

Near-Term With Project-AM
10/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	360	111	165	335	85	74	114	114	88	272	74
Future Volume (veh/h)	41	360	111	165	335	85	74	114	114	88	272	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	1.00		0.95	1.00		0.95
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		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	49	434	115	199	404	80	89	137	102	106	328	76
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	81	494	407	243	664	541	114	241	179	136	377	87
Arrive On Green	0.05	0.26	0.26	0.14	0.36	0.36	0.06	0.25	0.25	0.08	0.26	0.26
Sat Flow, veh/h	1781	1870	1542	1781	1870	1523	1781	973	725	1781	1454	337
Grp Volume(v), veh/h	49	434	115	199	404	80	89	0	239	106	0	404
Grp Sat Flow(s),veh/h/ln	1781	1870	1542	1781	1870	1523	1781	0	1698	1781	0	1791
Q Serve(g_s), s	1.7	14.3	3.8	7.0	11.5	2.3	3.2	0.0	8.0	3.8	0.0	13.9
Cycle Q Clear(g_c), s	1.7	14.3	3.8	7.0	11.5	2.3	3.2	0.0	8.0	3.8	0.0	13.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.43	1.00		0.19
Lane Grp Cap(c), veh/h	81	494	407	243	664	541	114	0	420	136	0	465
V/C Ratio(X)	0.61	0.88	0.28	0.82	0.61	0.15	0.78	0.00	0.57	0.78	0.00	0.87
Avail Cap(c_a), veh/h	163	522	430	276	664	541	163	0	479	166	0	508
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.2	22.8	18.9	27.1	17.1	14.2	29.7	0.0	21.3	29.3	0.0	22.8
Incr Delay (d2), s/veh	7.2	15.2	0.4	15.8	1.6	0.1	14.1	0.0	1.2	17.5	0.0	14.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.5	11.9	2.2	6.6	7.7	1.2	3.0	0.0	5.2	3.9	0.0	11.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.4	38.0	19.3	42.8	18.7	14.3	43.8	0.0	22.5	46.8	0.0	37.0
LnGrp LOS	D	D	B	D	B	B	D	A	C	D	A	D
Approach Vol, veh/h	598				683				328		510	
Approach Delay, s/veh	34.3				25.2				28.3		39.0	
Approach LOS	C				C				C		D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.9	20.9	12.8	21.9	8.1	21.6	6.9	27.8				
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9				
Max Green Setting (Gmax), s	18.2	18.2	10.0	18.0	5.9	18.3	5.9	22.1				
Max Q Clear Time (g_c+I), s	10.0	10.0	9.0	16.3	5.2	15.9	3.7	13.5				
Green Ext Time (p_c), s	0.0	0.7	0.1	0.5	0.0	0.6	0.0	1.6				
Intersection Summary												
HCM 6th Ctrl Delay			31.6									
HCM 6th LOS			C									

Synchro 11 Report

3: Centenial Dr & Malone St
HCM 6th TWSC

Near-Term With Project-AM
10/04/2021

Intersection

Int Delay, s/veh 0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔			↕	↑	↗
Traffic Vol, veh/h	10	28	9	288	551	3
Future Vol, veh/h	10	28	9	288	551	3
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	34	11	351	672	4

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1065	692	686
Stage 1	682	-	-
Stage 2	383	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	246	444	908
Stage 1	502	-	-
Stage 2	689	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	237	436	899
Mov Cap-2 Maneuver	237	-	-
Stage 1	489	-	-
Stage 2	682	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.6	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	899	-	357	-	-
HCM Lane V/C Ratio	0.012	-	0.13	-	-
HCM Control Delay (s)	9.1	0	16.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)

4: 13th Ave & Devon St
HCM 6th TWSC

Near-Term With Project-AM
10/04/2021

Intersection

Int Delay, s/veh 2.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰	↰	↰		↰	↰
Traffic Vol, veh/h	76	49	155	34	17	229
Future Vol, veh/h	76	49	155	34	17	229
Conflicting Peds, #/hr	10	10	0	10	10	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	83	53	168	37	18	249

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	492	207	0	0	215
Stage 1	197	-	-	-	-
Stage 2	295	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	536	833	-	-	1355
Stage 1	836	-	-	-	-
Stage 2	755	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	518	817	-	-	1342
Mov Cap-2 Maneuver	518	-	-	-	-
Stage 1	828	-	-	-	-
Stage 2	738	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.9	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	518	817	1342	-
HCM Lane V/C Ratio	-	-	0.159	0.065	0.014	-
HCM Control Delay (s)	-	-	13.3	9.7	7.7	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.6	0.2	0	-

Synchro 11 Report

1: 13th Ave & Grangeville Blvd
HCM 6th Signalized Intersection Summary

Near-Term With Project-PM
10/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	299	21	61	204	22	38	213	114	27	155	32
Future Volume (veh/h)	59	299	21	61	204	22	38	213	114	27	155	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	1.00		0.97	1.00		0.95
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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	67	340	16	69	232	20	43	242	89	31	176	25
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	491	397	117	493	399	83	406	334	64	386	310
Arrive On Green	0.06	0.26	0.26	0.07	0.26	0.26	0.05	0.22	0.22	0.04	0.21	0.21
Sat Flow, veh/h	1781	1870	1513	1781	1870	1513	1781	1870	1537	1781	1870	1502
Grp Volume(v), veh/h	67	340	16	69	232	20	43	242	89	31	176	25
Grp Sat Flow(s),veh/h/ln	1781	1870	1513	1781	1870	1513	1781	1870	1537	1781	1870	1502
Q Serve(g_s), s	1.6	7.0	0.3	1.6	4.4	0.4	1.0	4.9	2.0	0.7	3.5	0.6
Cycle Q Clear(g_c), s	1.6	7.0	0.3	1.6	4.4	0.4	1.0	4.9	2.0	0.7	3.5	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	115	491	397	117	493	399	83	406	334	64	386	310
V/C Ratio(X)	0.58	0.69	0.04	0.59	0.47	0.05	0.52	0.60	0.27	0.48	0.46	0.08
Avail Cap(c_a), veh/h	256	884	715	272	902	730	251	862	708	251	862	692
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.3	14.1	11.7	19.3	13.2	11.7	19.8	15.0	13.8	20.1	14.8	13.6
Incr Delay (d2), s/veh	4.7	1.8	0.0	4.7	0.7	0.1	4.9	1.4	0.4	5.5	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.2	4.1	0.2	1.2	2.5	0.2	0.8	3.0	1.0	0.6	2.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.0	15.9	11.7	24.0	13.8	11.7	24.6	16.4	14.3	25.6	15.6	13.7
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		423			321			374			232	
Approach Delay, s/veh		17.0			15.9			16.8			16.8	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.5	14.1	6.8	16.1	6.0	13.7	6.7	16.1				
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9				
Max Green Setting (Gmax), s	6.0	19.6	6.5	20.1	6.0	19.6	6.1	20.5				
Max Q Clear Time (g_c+I1), s	2.7	6.9	3.6	9.0	3.0	5.5	3.6	6.4				
Green Ext Time (p_c), s	0.0	1.2	0.0	1.3	0.0	0.7	0.0	1.0				
Intersection Summary												
HCM 6th Ctrl Delay			16.6									
HCM 6th LOS			B									

Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)

2: Centennial Dr & Grangeville Blvd HCM 6th Signalized Intersection Summary

Near-Term With Project-PM
10/04/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	265	80	126	256	72	70	215	99	53	154	30
Future Volume (veh/h)	40	265	80	126	256	72	70	215	99	53	154	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	1.00		0.95	1.00		0.95
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		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	288	74	137	278	56	76	234	81	58	167	30
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
Cap, veh/h	81	425	349	177	526	426	118	324	112	100	363	65
Arrive On Green	0.05	0.23	0.23	0.10	0.28	0.28	0.07	0.25	0.25	0.06	0.24	0.24
Sat Flow, veh/h	1781	1870	1538	1781	1870	1515	1781	1309	453	1781	1530	275
Grp Volume(v), veh/h	43	288	74	137	278	56	76	0	315	58	0	197
Grp Sat Flow(s), veh/h/ln	1781	1870	1538	1781	1870	1515	1781	0	1762	1781	0	1804
Q Serve(g_s), s	1.1	6.8	1.9	3.6	6.0	1.3	2.0	0.0	7.9	1.5	0.0	4.5
Cycle Q Clear(g_c), s	1.1	6.8	1.9	3.6	6.0	1.3	2.0	0.0	7.9	1.5	0.0	4.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.26	1.00		0.15
Lane Grp Cap(c), veh/h	81	425	349	177	526	426	118	0	436	100	0	428
V/C Ratio(X)	0.53	0.68	0.21	0.77	0.53	0.13	0.64	0.00	0.72	0.58	0.00	0.46
Avail Cap(c_a), veh/h	218	700	575	333	820	665	222	0	703	222	0	720
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.5	17.0	15.1	21.1	14.6	12.9	21.9	0.0	16.6	22.2	0.0	15.7
Incr Delay (d2), s/veh	5.3	1.9	0.3	7.0	0.8	0.1	5.7	0.0	2.3	5.3	0.0	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	0.9	4.4	1.0	2.8	3.6	0.6	1.6	0.0	5.0	1.3	0.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.8	18.9	15.4	28.1	15.4	13.0	27.7	0.0	18.9	27.4	0.0	16.5
LnGrp LOS	C	B	B	C	B	B	C	A	B	C	A	B
Approach Vol, veh/h	405			471			391			255		
Approach Delay, s/veh	19.2			18.8			20.6			19.0		
Approach LOS	B			B			C			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.7	16.8	8.8	15.8	7.2	16.3	6.2	18.4				
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9				
Max Green Setting (Gmax), s	19.2	19.2	9.0	18.0	6.0	19.2	5.9	21.1				
Max Q Clear Time (g_c+I), s	9.9	9.9	5.6	8.8	4.0	6.5	3.1	8.0				
Green Ext Time (p_c), s	0.0	1.1	0.1	1.1	0.0	0.8	0.0	1.3				
Intersection Summary												
HCM 6th Ctrl Delay	19.4											
HCM 6th LOS	B											

Synchro 11 Report

3: Centennial Dr & Malone St
HCM 6th TWSC

Near-Term With Project-PM
10/04/2021

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			W	W	W
Traffic Vol, veh/h	5	23	37	386	341	8
Future Vol, veh/h	5	23	37	386	341	8
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	24	39	411	363	9
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	872	383	382	0	-	0
Stage 1	373	-	-	-	-	-
Stage 2	499	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	321	664	1176	-	-	-
Stage 1	696	-	-	-	-	-
Stage 2	610	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	301	651	1165	-	-	-
Mov Cap-2 Maneuver	301	-	-	-	-	-
Stage 1	659	-	-	-	-	-
Stage 2	604	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	12.1	0.7		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1165	-	539	-	-	
HCM Lane V/C Ratio	0.034	-	0.055	-	-	
HCM Control Delay (s)	8.2	0	12.1	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-	

Synchro 11 Report

4: 13th Ave & Devon St
HCM 6th TWSC

Near-Term With Project-PM
10/04/2021

Intersection						
Int Delay, s/veh	2.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰	↱	↰		↰	↱
Traffic Vol, veh/h	67	34	183	85	43	149
Future Vol, veh/h	67	34	183	85	43	149
Conflicting Peds, #/hr	10	10	0	10	10	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	73	37	199	92	47	162

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	521	265	0	0	301	0
Stage 1	255	-	-	-	-	-
Stage 2	266	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	516	774	-	-	1260	-
Stage 1	788	-	-	-	-	-
Stage 2	779	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	487	759	-	-	1248	-
Mov Cap-2 Maneuver	487	-	-	-	-	-
Stage 1	780	-	-	-	-	-
Stage 2	742	-	-	-	-	-

Approach	WB	NB	SB			
HCM Control Delay, s	12.5	0	1.8			
HCM LOS	B					

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	487	759	1248	-
HCM Lane V/C Ratio	-	-	0.15	0.049	0.037	-
HCM Control Delay (s)	-	-	13.7	10	8	-
HCM Lane LOS	-	-	B	B	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0.2	0.1	-

Synchro 11 Report

1: 13th Ave & Grangeville Blvd
HCM 6th Signalized Intersection Summary

Cumulative Year 2042 With Project-AM
10/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	335	71	180	311	32	95	179	163	31	273	72
Future Volume (veh/h)	63	335	71	180	311	32	95	179	163	31	273	72
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.96	1.00		0.97	1.00		0.95
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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	68	364	40	196	338	24	103	195	125	34	297	53
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
Cap, veh/h	104	465	376	244	612	497	132	482	397	65	412	332
Arrive On Green	0.06	0.25	0.25	0.14	0.33	0.33	0.07	0.26	0.26	0.04	0.22	0.22
Sat Flow, veh/h	1781	1870	1511	1781	1870	1521	1781	1870	1541	1781	1870	1505
Grp Volume(v), veh/h	68	364	40	196	338	24	103	195	125	34	297	53
Grp Sat Flow(s), veh/h/ln	1781	1870	1511	1781	1870	1521	1781	1870	1541	1781	1870	1505
Q Serve(g_s), s	2.1	10.1	1.1	5.9	8.3	0.6	3.2	4.8	3.6	1.0	8.2	1.6
Cycle Q Clear(g_c), s	2.1	10.1	1.1	5.9	8.3	0.6	3.2	4.8	3.6	1.0	8.2	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	104	465	376	244	612	497	132	482	397	65	412	332
V/C Ratio(X)	0.65	0.78	0.11	0.80	0.55	0.05	0.78	0.40	0.31	0.52	0.72	0.16
Avail Cap(c_a), veh/h	195	609	492	288	706	574	192	646	532	189	642	517
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.6	19.5	16.1	23.3	15.4	12.8	25.3	17.1	16.7	26.3	20.1	17.5
Incr Delay (d2), s/veh	6.7	4.9	0.1	13.2	0.8	0.0	11.8	0.5	0.4	6.2	2.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	7.5	0.6	5.4	5.1	0.3	2.8	3.1	2.0	0.9	5.7	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.4	24.4	16.2	36.5	16.2	12.8	37.1	17.7	17.1	32.6	22.5	17.7
LnGrp LOS	C	C	B	D	B	B	D	B	B	C	C	B
Approach Vol, veh/h		472			558			423			384	
Approach Delay, s/veh		24.8			23.2			22.2			22.7	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.0	19.2	11.6	18.7	8.1	17.2	7.3	23.1				
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9				
Max Green Setting (Gmax), s	5.9	19.2	9.0	18.1	6.0	19.1	6.1	21.0				
Max Q Clear Time (g_c+I1), s	3.0	6.8	7.9	12.1	5.2	10.2	4.1	10.3				
Green Ext Time (p_c), s	0.0	1.0	0.1	1.0	0.0	1.1	0.0	1.3				
Intersection Summary												
HCM 6th Ctrl Delay			23.3									
HCM 6th LOS			C									

Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)

2: Centennial Dr & Grangeville Blvd HCM 6th Signalized Intersection Summary

Cumulative Year 2042 With Project-AM
10/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	370	124	202	344	87	76	117	138	90	280	92
Future Volume (veh/h)	42	370	124	202	344	87	76	117	138	90	280	92
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	1.00		0.95	1.00		0.96
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		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	51	446	130	243	414	83	92	141	131	108	337	98
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	78	495	408	283	710	579	118	228	212	138	376	109
Arrive On Green	0.04	0.26	0.26	0.16	0.38	0.38	0.07	0.26	0.26	0.08	0.27	0.27
Sat Flow, veh/h	1781	1870	1542	1781	1870	1525	1781	870	809	1781	1376	400
Grp Volume(v), veh/h	51	446	130	243	414	83	92	0	272	108	0	435
Grp Sat Flow(s),veh/h/ln	1781	1870	1542	1781	1870	1525	1781	0	1679	1781	0	1776
Q Serve(g_s), s	2.1	17.3	5.1	10.0	13.2	2.7	3.8	0.0	10.7	4.5	0.0	17.7
Cycle Q Clear(g_c), s	2.1	17.3	5.1	10.0	13.2	2.7	3.8	0.0	10.7	4.5	0.0	17.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.48	1.00		0.23
Lane Grp Cap(c), veh/h	78	495	408	283	710	579	118	0	440	138	0	486
V/C Ratio(X)	0.66	0.90	0.32	0.86	0.58	0.14	0.78	0.00	0.62	0.78	0.00	0.90
Avail Cap(c_a), veh/h	142	526	434	287	710	579	142	0	479	180	0	544
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.3	26.7	22.2	30.8	18.5	15.3	34.5	0.0	24.4	34.0	0.0	26.2
Incr Delay (d2), s/veh	9.0	18.0	0.4	22.0	1.2	0.1	20.1	0.0	2.1	15.1	0.0	16.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.9	14.2	3.0	9.5	8.8	1.5	4.0	0.0	7.4	4.4	0.0	14.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.4	44.7	22.6	52.7	19.8	15.4	54.6	0.0	26.5	49.1	0.0	42.4
LnGrp LOS	D	D	C	D	B	B	D	A	C	D	A	D
Approach Vol, veh/h	627			740			364			543		
Approach Delay, s/veh	40.1			30.1			33.6			43.7		
Approach LOS	D			C			C			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.8	24.6	15.9	24.7	9.0	25.4	7.3	33.4				
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9				
Max Green Setting (Gmax), s	7.0	21.4	12.1	21.1	6.0	23.0	6.0	27.2				
Max Q Clear Time (g_c+I), s	13.5	12.7	12.0	19.3	5.8	19.7	4.1	15.2				
Green Ext Time (p_c), s	0.0	0.9	0.0	0.6	0.0	0.8	0.0	2.0				
Intersection Summary												
HCM 6th Ctrl Delay	36.7											
HCM 6th LOS	D											

3: Centennial Dr & Malone St
HCM 6th TWSC

Cumulative Year 2042 With Project-AM
10/04/2021

Intersection

Int Delay, s/veh 0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔			↔	↑	↗
Traffic Vol, veh/h	11	29	9	316	608	3
Future Vol, veh/h	11	29	9	316	608	3
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	35	11	385	741	4

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1168	761	755
Stage 1	751	-	-
Stage 2	417	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	214	405	855
Stage 1	466	-	-
Stage 2	665	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	206	397	847
Mov Cap-2 Maneuver	206	-	-
Stage 1	453	-	-
Stage 2	658	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.5	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	847	-	316	-	-
HCM Lane V/C Ratio	0.013	-	0.154	-	-
HCM Control Delay (s)	9.3	0	18.5	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)

4: 13th Ave & Devon St
HCM 6th TWSC

Cumulative Year 2042 With Project-AM
10/04/2021

Intersection

Int Delay, s/veh 2.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰	↰	↰		↰	↰
Traffic Vol, veh/h	76	49	181	34	17	259
Future Vol, veh/h	76	49	181	34	17	259
Conflicting Peds, #/hr	10	10	0	10	10	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	83	53	197	37	18	282

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	554	236	0
Stage 1	226	-	-
Stage 2	328	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	493	803	-
Stage 1	812	-	-
Stage 2	730	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	476	788	-
Mov Cap-2 Maneuver	476	-	-
Stage 1	804	-	-
Stage 2	713	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.5	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	476	788	1309	-
HCM Lane V/C Ratio	-	-	0.174	0.068	0.014	-
HCM Control Delay (s)	-	-	14.1	9.9	7.8	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.6	0.2	0	-

Synchro 11 Report

1: 13th Ave & Grangeville Blvd
 HCM 6th Signalized Intersection Summary

Cumulative Year 2042 With Project-PM

10/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	334	27	67	229	23	48	274	127	33	158	39
Future Volume (veh/h)	78	334	27	67	229	23	48	274	127	33	158	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95	1.00		0.97	1.00		0.95
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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	89	380	23	76	260	21	55	311	103	38	180	33
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	130	510	413	119	499	403	97	454	374	74	430	346
Arrive On Green	0.07	0.27	0.27	0.07	0.27	0.27	0.05	0.24	0.24	0.04	0.23	0.23
Sat Flow, veh/h	1781	1870	1514	1781	1870	1513	1781	1870	1540	1781	1870	1507
Grp Volume(v), veh/h	89	380	23	76	260	21	55	311	103	38	180	33
Grp Sat Flow(s),veh/h/ln	1781	1870	1514	1781	1870	1513	1781	1870	1540	1781	1870	1507
Q Serve(g_s), s	2.3	8.8	0.5	2.0	5.6	0.5	1.4	7.1	2.6	1.0	3.9	0.8
Cycle Q Clear(g_c), s	2.3	8.8	0.5	2.0	5.6	0.5	1.4	7.1	2.6	1.0	3.9	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	130	510	413	119	499	403	97	454	374	74	430	346
V/C Ratio(X)	0.69	0.75	0.06	0.64	0.52	0.05	0.57	0.69	0.28	0.51	0.42	0.10
Avail Cap(c_a), veh/h	230	795	643	245	811	656	226	775	638	226	775	624
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.4	15.7	12.7	21.5	14.8	12.9	21.8	16.3	14.5	22.2	15.5	14.3
Incr Delay (d2), s/veh	6.3	2.2	0.1	5.6	0.8	0.1	5.1	1.8	0.4	5.4	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	5.5	0.3	1.5	3.4	0.2	1.1	4.6	1.3	0.8	2.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.7	17.9	12.8	27.1	15.6	13.0	27.0	18.1	14.9	27.6	16.2	14.5
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		492			357			469			251	
Approach Delay, s/veh		19.4			17.9			18.4			17.7	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.0	16.4	7.2	17.8	6.6	15.8	7.4	17.5				
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9				
Max Green Setting (Gmax), s	6.0	19.6	6.5	20.1	6.0	19.6	6.1	20.5				
Max Q Clear Time (g_c+I1), s	3.0	9.1	4.0	10.8	3.4	5.9	4.3	7.6				
Green Ext Time (p_c), s	0.0	1.4	0.0	1.4	0.0	0.7	0.0	1.0				
Intersection Summary												
HCM 6th Ctrl Delay			18.5									
HCM 6th LOS			B									

Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)

2: Centennial Dr & Grangeville Blvd HCM 6th Signalized Intersection Summary

Cumulative Year 2042 With Project-PM
10/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	272	110	151	262	74	88	230	121	54	158	43
Future Volume (veh/h)	65	272	110	151	262	74	88	230	121	54	158	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	1.00		0.95	1.00		0.95
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		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	71	296	107	164	285	58	96	250	105	59	172	44
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
Cap, veh/h	110	422	347	209	526	427	128	322	135	98	347	89
Arrive On Green	0.06	0.23	0.23	0.12	0.28	0.28	0.07	0.26	0.26	0.06	0.24	0.24
Sat Flow, veh/h	1781	1870	1538	1781	1870	1516	1781	1231	517	1781	1420	363
Grp Volume(v), veh/h	71	296	107	164	285	58	96	0	355	59	0	216
Grp Sat Flow(s), veh/h/ln	1781	1870	1538	1781	1870	1516	1781	0	1748	1781	0	1784
Q Serve(g_s), s	2.0	7.6	3.0	4.7	6.8	1.5	2.8	0.0	9.8	1.7	0.0	5.4
Cycle Q Clear(g_c), s	2.0	7.6	3.0	4.7	6.8	1.5	2.8	0.0	9.8	1.7	0.0	5.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.30	1.00		0.20
Lane Grp Cap(c), veh/h	110	422	347	209	526	427	128	0	457	98	0	436
V/C Ratio(X)	0.65	0.70	0.31	0.78	0.54	0.14	0.75	0.00	0.78	0.60	0.00	0.50
Avail Cap(c_a), veh/h	201	644	530	307	755	612	204	0	642	204	0	655
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.0	18.6	16.8	22.4	15.9	14.0	23.8	0.0	17.9	24.1	0.0	17.0
Incr Delay (d2), s/veh	6.3	2.1	0.5	7.8	0.9	0.1	8.4	0.0	3.9	5.8	0.0	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	5.2	1.6	3.8	4.2	0.7	2.4	0.0	6.7	1.4	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	30.3	20.8	17.3	30.2	16.8	14.2	32.2	0.0	21.8	29.9	0.0	17.8
LnGrp LOS	C	C	B	C	B	B	C	A	C	C	A	B
Approach Vol, veh/h		474			507			451			275	
Approach Delay, s/veh		21.4			20.8			24.0			20.4	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.9	18.6	10.1	16.7	7.8	17.7	7.2	19.6				
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9				
Max Green Setting (Gmax), s	13.0	19.2	9.0	18.0	6.0	19.2	5.9	21.1				
Max Q Clear Time (g_c+I), s	13.0	11.8	6.7	9.6	4.8	7.4	4.0	8.8				
Green Ext Time (p_c), s	0.0	0.0	1.1	0.1	1.2	0.0	0.9	0.0	1.3			
Intersection Summary												
HCM 6th Ctrl Delay					21.8							
HCM 6th LOS					C							

Synchro 11 Report

3: Centennial Dr & Malone St
HCM 6th TWSC

Cumulative Year 2042 With Project-PM
10/04/2021

Intersection

Int Delay, s/veh 0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	25	40	414	377	8
Future Vol, veh/h	5	25	40	414	377	8
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	27	43	440	401	9

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	947	421	420	0	-	0
Stage 1	411	-	-	-	-	-
Stage 2	536	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	290	632	1139	-	-	-
Stage 1	669	-	-	-	-	-
Stage 2	587	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	270	620	1128	-	-	-
Mov Cap-2 Maneuver	270	-	-	-	-	-
Stage 1	630	-	-	-	-	-
Stage 2	581	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.5	0.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1128	-	510	-	-
HCM Lane V/C Ratio	0.038	-	0.063	-	-
HCM Control Delay (s)	8.3	0	12.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

4: 13th Ave & Devon St
HCM 6th TWSC

Cumulative Year 2042 With Project-PM
10/04/2021

Intersection

Int Delay, s/veh 2.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰	↱	↰	↱	↰	↱
Traffic Vol, veh/h	67	34	216	96	43	156
Future Vol, veh/h	67	34	216	96	43	156
Conflicting Peds, #/hr	10	10	0	10	10	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	73	37	235	104	47	170

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	571	307	0
Stage 1	297	-	-
Stage 2	274	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	482	733	-
Stage 1	754	-	-
Stage 2	772	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	454	719	-
Mov Cap-2 Maneuver	454	-	-
Stage 1	746	-	-
Stage 2	735	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13	0	1.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	454	719	1198	-
HCM Lane V/C Ratio	-	-	0.16	0.051	0.039	-
HCM Control Delay (s)	-	-	14.4	10.3	8.1	-
HCM Lane LOS	-	-	B	B	A	-
HCM 95th %tile Q(veh)	-	-	0.6	0.2	0.1	-

Synchro 11 Report

APPENDIX B

City of Hanford Traffic Counts / Capacity Tables

Traffic Counts

CITY OF HANFORD

(update counts every 3 years)

Street	Location	Station	2011 Traffic Count	2012 Traffic Count	2013 Traffic Count	2014 Traffic Count	2015 Traffic Count	2016 Traffic Count	2017 Traffic Count
9th Ave.	south of Lacey	112			2,179			2,110	
	south of Third	113			1,401			1,512	
	south of Han/Arm	136			1,020			1,186	
9 1/4 Ave.	north of Grangeville	157	2,101		1,996			2,235	
	north of Florinda	56			3,362			3,482	
	south of Myrtle	70			3,591			3,868	
10th Ave.	south of Encore	10	6,320			6,993			7,969
	south of Greenwood	23	11,731			10,777			12,412
	south of Terrace	33		15,802				17,509	
	south of Bass	55		18,683				14,403	
	south of Ivy	69		18,446				16,230	
	south of Fifth	97						19,311	
	north of Han/Arm	119	8,339			8,513			9,997
	south of Garden	140		4,079				4,412	
	south of Houston	138		2,983				2,988	
	south of Iona	142		2,227	2,075			2,293	
11th Ave.	north of Flint	22		2,572				2,644	
	south of Furlong	2		5,696				5,559	
	south of Pepper	1		8,459				8,448	
	south of Magnolia	18		13,158				12,248	
	north of Terrace	29						15,529	

Traffic Counts

CITY OF HANFORD

(update counts every 3 years)

Street	Location	Station	2011 Traffic Count	2012 Traffic Count	2013 Traffic Count	2014 Traffic Count	2015 Traffic Count	2016 Traffic Count	2017 Traffic Count
11th Ave.	south of Neville	50						18,285	
	north of Lacey	73		18,891				19,322	
	south of Seventh	99		18,886				27,636	
	south of Washington	116						15,087	
	north of Thompson	128						9,918	
	north of Buena Vista	132						6,238	
	south of Houston	137	4,122		3,776			4,059	
	south of Industry	141		2,798				2,893	
12th Ave.	north of Fargo	156	4,609		4,225			5,366	
	north of Vineyard	36			8,926			11,845	
	south of Muscat	17			11,770			14,530	
	south of Glenn	54			16,280			17,132	
	south of Liberty	47			16,658			16,622	
	north of Mall	87			14,643			17,874	
	south of Mall	158						32,161	
	north of Han/Arm	114			12,301			16,622	
	south of Oriole	127			6,193			6,647	
	south of Hume	153			3,541			3,721	
13th Ave.	north of Grangeville	154	3,041		3,149			3,461	
	south of Grangeville	95	4,342		4,769			5,064	
	north of Lacey	85			5,925			5,408	
	south of Lacey	101		6,298				7,211	

Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)

Traffic Counts

CITY OF HANFORD

(update counts every 3 years)

Street	Location	Station	2011 Traffic Count	2012 Traffic Count	2013 Traffic Count	2014 Traffic Count	2015 Traffic Count	2016 Traffic Count	2017 Traffic Count
Aspen St.	north of Trinity	7		1,578			1,667		
Campus Dr.	north of Forum	58	5,227		5,263			4,414	
	south of Lacey	88	3,880		4,231			3,867	
Centennial Dr.	south of Berkshire	37	1,198		1,317			1,827	
	south of Grangeville	46	3,363		3,298			4,323	
	north of Charlie Chambers	71		3,318			4,989		
	south of Lacey	161			4,410			6,650	
	west of 12th	90					6,019		
Cortner St.	east of Pine	21	2,208			2,509			2,539
	west of Yosemite	148		1,760			1,455		
Davis St.	east of Kimball	115			3,218			3,448	
Douty St.	south of White Oak	8			2,160			2,444	
	south of Encore	9			3,590			3,885	
	north of Magnolia	19	4,403	4,956			4,783		
	south of Leland	27	5,429	5,993			5,529		
	south of Lorita	32	6,354			6,296			6,756
	north of Malone	53	5,765	5,831			5,702		
	north of Center/Tenth	76	6,316				5,778		
	north of Seventh	94	6,510				5,811		

Traffic Counts

CITY OF HANFORD

(update counts every 3 years)

Street	Location	Station	2011 Traffic Count	2012 Traffic Count	2013 Traffic Count	2014 Traffic Count	2015 Traffic Count	2016 Traffic Count	2017 Traffic Count
Douty St.	south of Lang	109	5,839			2,766			2,828
Elm St.	west of 11th	65							6,831
Fargo Ave.	west of 12th	155	3,222		3,381			3,587	
	east of 12th	35	7,657		7,868			8,977	
	west of Fountain Plaza	12		9,459			10,502		
	east of Aspen	13	9,075			9,314			9,961
	east of Kensington	14			8,216			8,187	
	west of Encore	15			4,732			4,661	
	west of 9 1/4	16	2,602			2,743			3,068
Fifth St.	east of Brown	104		765				977	
Fitzgerald Ln	south of Castoro	163		2,334				1,980	
	south of Bristol	30			3,713			3,204	
Flint Ave	west of 11th	28			1,968			3,138	
	west of Douty	3		3,770				4,568	
	west of Hwy 43	11	3,687		3,889			5,020	
Florinda St.	west of Kaweah	61	5,409			4,922			5,282
	east of Brown	62	4,902			4,768			5,115
	west of Gladys	63		3,199				4,684	

Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)

Traffic Counts

CITY OF HANFORD

(update counts every 3 years)

Street	Location	Station	2011 Traffic Count	2012 Traffic Count	2013 Traffic Count	2014 Traffic Count	2015 Traffic Count	2016 Traffic Count	2017 Traffic Count
Florinda St.	east of Lassen	64	2,397		2,313			2,401	
Fourth St.	west of Phillips	106				4,281			4,705
	east of Brown	107				4,607			4,333
Garner Ave.	south of Goleta	89			2,595			2,531	
Glacier Wy	north of Pebble	20			1,862			2,219	
	south of Fargo	160			1,202			1,338	
Glendale Ave	east of 13th	162	776		885			1,057	
	west of 12th	166			3,842			4,618	
Grangeville Bl.	west of 13th	83	5,835			5,726			6,347
	west of Centennial	38	7,466			6,752			8,150
	west of 12th	39				9,268			11,331
	west of University	40				11,212			13,568
	east of Rodgers	42				14,257			14,992
	west of Kaweah	43		14,476				15,392	
	west of Kensington	44		13,650			11,902		
	west of Harding	45				7,205			8,340
	east of 9 1/4	49	4,343			3,541			3,781
Greenfield Ave.	east of Centennial	167					1,441		

Traffic Counts

CITY OF HANFORD

(update counts every 3 years)

Street	Location	Station	2011 Traffic Count	2012 Traffic Count	2013 Traffic Count	2014 Traffic Count	2015 Traffic Count	2016 Traffic Count	2017 Traffic Count
Greenfield Ave.	west of 12th	168						2,540	
	east of University	169						6,169	
	east of Della	60	2,151		3,051			4,128	
	east of Hansen	59	3,637	3,901				4,870	
	north of Lacey	72	5,996		5,400			5,353	
Han/Arm Rd.	east of 13th	118	5,257		5,470			6,287	
	west of 12th	165	5,850			6,225		7,357	
	east of Greenbrier	120			5,925			9,717	
	west of Bengston	121			9,763			10,624	
	east of Anacapa	122			8,572			9,320	
	east of Williams	123			9,768			9,647	
	east of Harris	124			7,038			7,410	
	west of 9 3/4	125			521		604		
	west of 9 1/8	126			195		184		
Houston Ave.	west of 12th	164		2,106				2,885	
	east of 12th	150			2,895			3,622	
	west of 11th	134			2,998			3,771	
	east of 11th	135	3,356		3,507			4,273	
	west of Elvira	144			3,499			4,090	
	east of Shaw	145			2,466			2,800	
Hume Ave.	east of 12th	130		2,581				3,037	

Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)

Traffic Counts

CITY OF HANFORD

(update counts every 3 years)

Street	Location	Station	2011 Traffic Count	2012 Traffic Count	2013 Traffic Count	2014 Traffic Count	2015 Traffic Count	2016 Traffic Count	2017 Traffic Count
Hume Ave.	west of Dawn	131		2,651				3,083	
	east of Santa Rosa	147		2,270				1,072	
Idaho Ave.	east of 11th	143		512				658	
Iona Ave.	east of 11th	139		723				1,041	
Irwin St.	north of Katherine	52		2,038			1,865		
	north of Myrtle	75		3,789			3,249		
	north of Seventh	93			2,886			2,885	
	south of Han/Arm	129			1,402			949	
Ivy St.	west of Kaweah	67			2,333			2,605	
	east of Brown	68			1,843			1,853	
Kings Co. Dr	south of Forum	82				3,370			3,373
Lacey Blvd.	west of 13th	98				7,221			7,634
	east of Magna Carta	77				12,246			11,535
	west of 12th	78				13,105			11,772
	east of Mall	79				15,829			15,648
	west of Greenfield	80				16,211			17,448
	west of Phillips	81				9,075			11,391
	west of 9 1/2	84		4,753		7,003			6,982

Traffic Counts

CITY OF HANFORD

(update counts every 3 years)

Street	Location	Station	2011 Traffic Count	2012 Traffic Count	2013 Traffic Count	2014 Traffic Count	2015 Traffic Count	2016 Traffic Count	2017 Traffic Count
Lacey Blvd.	west of Hwy 43	86				3,565			6,642
Leland Way	east of Fairmont	25				2,279			2,378
	east of Oakwood	26				2,361			2,579
Liberty St	east of Centennial	66				772			847
Mall Dr.	south of Lacey	146				9,395			8,564
	east of 12th	149	11,704			11,690			11,521
Manor Ave	south of Davis	117		615			653		
	north of State	133		1,160			1,366		
McCreary Ave.	east of Short	34		1,400			1,579		
Pepper Dr.	east of Zion	24		665			617		
	east of 11th	4				1,203			1,591
Redington St.	north of Malone	51	3,285		3,252			3,525	
	north of Center	74	5,290			5,006			6,125
	north of Seventh	92	5,222		4,467				5,881
	north of Fourth	105			2,836			3,583	
Rodgers Rd.	south of Terrace	41			1,613			1,521	

Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)

Traffic Counts

CITY OF HANFORD

(update counts every 3 years)

Street	Location	Station	2011 Traffic Count	2012 Traffic Count	2013 Traffic Count	2014 Traffic Count	2015 Traffic Count	2016 Traffic Count	2017 Traffic Count
Rodgers Rd.	north of Cameron	57	2,371			2,224			2,415
Seventh St.	east of Mall	152		6,496				7,650	
	west of 11th	151			6,905			7,172	
	east of Williams	103			8,736			10,465	
	east of Phillips	91						7,527	
	east of Brown	96		6,302				6,118	
Sixth St.	west of Phillips	100		3,766				3,929	
	east of Brown	102		4,241				4,116	
	west of 11th	6						2,101	
Third St.	west of Phillips	108			3,895			4,348	
	east of Brown	110			3,165			3,372	
	east of 10th	111			4,116			2,807	
University Ave.	south of Berkshire	31			2,713			2,774	
	south of Malone	48			3,290			3,228	
Vintage Ave.	south of Berkshire	159			2,054			2,093	

Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)

STATE HIGHWAYS

Hwy	Location	2011	2012	2013	2014	2015	2016	2017
Hwy 43	south of Houston	7,400	7,400	7,400	7,200	7,000	7,100	

Traffic Counts

CITY OF HANFORD

(update counts every 3 years)

Street	Location	Station	2011 Traffic Count	2012 Traffic Count	2013 Traffic Count	2014 Traffic Count	2015 Traffic Count	2016 Traffic Count	2017 Traffic Count
Hwy 43	north of Houston		8,300	8,300	7,600	6,900	7,300	7,400	
	south of Hwy 198		8,300	8,300	7,600	7,200	7,400	7,500	
	north of Hwy 198		15,200	15,200	15,200	11,000	11,500	11,600	
	south of Lacey		15,200	15,200	15,200	11,000	11,500	11,600	
	north of Lacey		13,300	13,300	13,300	10,500	11,000	11,100	
	south of Grangeville		13,300	13,300	13,300	10,500	11,000	11,100	
	north of Grangeville		11,900	11,900	11,900	8,100	8,200	8,300	
	south of 10th		5,700	5,700	5,700	5,500	5,700	5,800	
	north of 10th		9,800	9,800	9,400	9,400	9,800	10,300	
Hwy 198	west of 12th		30,500	30,500	30,500	32,000	32,000	36,000	
	east of 12th		28,000	28,000	28,000	29,500	29,500	33,500	
	west of 11th		28,000	28,000	28,000	29,500	29,500	33,500	
	east of 11th		22,200	22,200	22,200	23,700	23,700	28,000	
	west of 10th		17,000	17,000	17,000	19,500	19,500	23,500	
	east of 10th		19,500	19,500	19,500	22,500	22,500	26,500	
	west of Hwy 43		19,500	19,500	19,500	22,500	22,500	26,500	
	east of Hwy 43		19,000	19,000	19,000	25,000	25,000	27,000	

Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)

APPENDIX C

ISR Fee Estimator Worksheets

Emissions Estimator Worksheet

Applicant/Business Name:	Tract 934
Project Name:	Tract 934
Project Location:	Hanford, CA
District Project ID No.:	

Project Construction Emissions										
If applicant selected Construction Clean Fleet Mitigation Measure - Please select "Yes" from dropdown menu										
Project Phase Name	ISR Phase	Construction Start Date	NOx					PM10		
			Unmitigated Baseline ⁽¹⁾ (TPY)	Mitigated Baseline ⁽²⁾ (TPY)	Achieved On-site Reductions ⁽³⁾ (tons)	Required Off-site Reductions ⁽⁴⁾ (tons)	Emission Reductions Required by Rule ⁽⁵⁾	Unmitigated Baseline ⁽¹⁾ (TPY)	Mitigated Baseline ⁽²⁾ (TPY)	Achieved On-site Reductions ⁽³⁾ (tons)
1	1	12/1/2021	3.0857	3.0857	0.0000	0.6171	0.6171	0.6581	0.6581	0.0000
	2				0.0000	0.0000	0.0000			0.0000
	3				0.0000	0.0000	0.0000			0.0000
	4				0.0000	0.0000	0.0000			0.0000
	5				0.0000	0.0000	0.0000			0.0000
	6				0.0000	0.0000	0.0000			0.0000
	7				0.0000	0.0000	0.0000			0.0000
	8				0.0000	0.0000	0.0000			0.0000
	9				0.0000	0.0000	0.0000			0.0000
	10				0.0000	0.0000	0.0000			0.0000
Total			3.0857	3.0857	0.0000	0.6171	0.6171	0.6581	0.6581	0.0000
								0.2961		
								0.2961		

Total Achieved On-Site Reductions (tons)			
ISR Phase	NOx	PM10	
1	0.0000	0.0000	
2	0.0000	0.0000	
3	0.0000	0.0000	
4	0.0000	0.0000	
5	0.0000	0.0000	
6	0.0000	0.0000	
7	0.0000	0.0000	
8	0.0000	0.0000	
9	0.0000	0.0000	
10	0.0000	0.0000	
Total	0.0000	0.0000	

Project Operations Emissions (Area + Mobile)										
Project Phase Name	ISR Phase	Operation Start Date	NOx					PM10		
			Unmitigated Baseline ⁽¹⁾ (TPY)	Mitigated Baseline ⁽²⁾ (TPY)	Achieved On-site Reductions ⁽³⁾ (tons)	Required Off-site Reductions ⁽⁴⁾ (tons)	Emission Reductions Required by Rule ⁽⁵⁾	Unmitigated Baseline ⁽¹⁾ (TPY)	Mitigated Baseline ⁽²⁾ (TPY)	Achieved On-site Reductions ⁽³⁾ (tons)
1	1	1/1/2025	1.6319	1.6319	0.0000	4.0798	4.0798	1.6609	1.6609	0.0000
	2				0.0000	0.0000	0.0000			0.0000
	3				0.0000	0.0000	0.0000			0.0000
	4				0.0000	0.0000	0.0000			0.0000
	5				0.0000	0.0000	0.0000			0.0000
	6				0.0000	0.0000	0.0000			0.0000
	7				0.0000	0.0000	0.0000			0.0000
	8				0.0000	0.0000	0.0000			0.0000
	9				0.0000	0.0000	0.0000			0.0000
	10				0.0000	0.0000	0.0000			0.0000
Total			1.6319	1.6319	0.0000	4.0798	4.0798	1.6609	1.6609	0.0000
								8.3045		
								8.3045		

Total Required Off-Site Reductions (tons)			
ISR Phase	NOx	PM10	
1	4.5959	8.6006	
2	0.0000	0.0000	
3	0.0000	0.0000	
4	0.0000	0.0000	
5	0.0000	0.0000	
6	0.0000	0.0000	
7	0.0000	0.0000	
8	0.0000	0.0000	
9	0.0000	0.0000	
10	0.0000	0.0000	
Total	4.5959	8.6006	

Notes:

TPY: Tons Per Year

(1) Unmitigated Baseline: The project's baseline emissions generated with no on-site emission reduction measures.

(2) Mitigated Baseline: The project's baseline emissions generated after on-site emission reduction measures have been applied.

(3) Achieved On-site Reductions: The project's remaining emission reductions achieved after on-site emission reduction measures have been applied.

(4) Required Off-site Reductions: The project's remaining emission reductions required (20% NOx and 45% PM10) for construction from the unmitigated baseline.

(5) Emission Reductions Required by Rule: The project's emission reductions required (33.3% NOx and 50% PM10) for operations from the unmitigated baseline over a 10-year period.

(6) Total Emission Reductions Required by Rule: The project's total emission reduction for operations required by Rule 9510 divided by 10 years.

(7) Average Annual Emission Reductions Required by Rule: The project's total emission reduction for operations required by Rule 9510 divided by 10 years.

Applicant/Business Name:	Tract 934
Project Name:	Tract 934
Project Location:	Hanford, CA
District Project ID No.:	

NOTES:

- (1) The start date for each ISR phase is shown in TABLE 1.
 (2) If you have chosen a ONE-TIME payment for the project, then the total amount due for ALL PHASES is shown under TABLE 2.
 (3) If you have chosen a DEFERRED payment schedule or would like to propose a DEFERRED payment schedule for the project, the total amount due for a specific year is shown in TABLE 3 according to the schedule in TABLE 1.
 - If you have not provided a proposed payment date, the District sets a default invoice date of 60 days prior to start of the ISR phase.

If applicant selected Fee Deferral Schedule - Please select "Yes" from dropdown menu				No	TABLE 3 - APPROVED FEE DEFERRAL SCHEDULE (FDS) BY PAYMENT YEAR									
TABLE 1 - PROJECT INFORMATION														
Project Phase Name	ISR Phase	Start Date per Phase	Scheduled Payment Date*		2021	2022	2023	2024	2025	2026	2027	2028	2029	
1	1	12/1/21	FALSE											
	2													
	3													
	4													
	5													
	6													
	7													
	8													
	9													
	10													
TOTAL (tons)				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
Offsite Fee by Pollutant (\$)				\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Administrative Fee (\$)				\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Onsite Fee (\$)				\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Total Project Offsite Fee (\$)				\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Rule 9510 Fee Schedule (\$/ton)														
Year														
2021 and Beyond														
</														

THE CITY OF HANFORD
1111 N. G STREET
HANFORD, CA 93231



Appendix Q: Preconsultation Letters

From: WILSON, MICHAEL A [<mailto:MW7046@att.com>]
Sent: Friday, July 23, 2021 3:02 PM
To: Diana Black <DBlack@cityofhanfordca.com>
Cc: TATE, KEVIN M <kt5861@att.com>
Subject: RE: Project Review - Pre-consultation Notice (TT 934)

New subdivision to feed fiber in joint trench. AT&T will provide redlines to developer.
 Any relocation conditions should be relayed to me by developer or city (Grangeville aerial-to-aerial, I expect).

Kevin Tate will replace me as engineer starting 08/01/2021.

Thank you.

Michael Wilson
Manager / Engineer
 (559) 739-6423

From: Diana Black <DBlack@cityofhanfordca.com>
Sent: Friday, July 23, 2021 2:54 PM
To: 9-1-1 DISPATCH <kris.zuniga@co.kings.ca.us>; American Ambulance <bwiele@americanambulance.com>; SLICMAILBOX <SLICBOX@att.com>; WILSON, MICHAEL A <MW7046@att.com>; Tom Webb <TWebb@cityofhanfordca.com>; CA DEPT of WATER RESOURCES - (delia.grijalva@water.ca.gov) <delia.grijalva@water.ca.gov>; CALTRANS <dave.padilla@dot.ca.gov>; CHAMBER OF COMMERCE <hanfordchamber@comcast.net>; COMCAST <galenraymond@comcast.net>; DRAINAGE DISTRICT <info5@waterboards.ca.gov>; HESD <adlopez@hanfordesd.org>; HESD-Superintendent <jgabler@hanfordesd.org>; HJUHSO <wfishbough@hjuhsd.org>; HJUHSO-Renee Creech <rcreech@hjuhsd.k12.ca.us>; KINGS CO ASSESSOR'S OFFICE <michelle.maldonado@co.kings.ca.us>; KINGS CO BOARD OF REALTORS <admin@kcbor.com>; KINGS CO HEALTH <troy.hommerding@co.kings.ca.us>; KINGS CO PLANNING <chuck.kinney@co.kings.ca.us>; KINGS CO PUBLIC WORKS <mike.hawkins@co.kings.ca.us>; LiUNA-Hannah Hughes <hannah@lozeaudrury.com>; LiUNA-Maya Vishwanath <maya@lozeaudrury.com>; LiUNA-Michael Lozeau <michael@lozeaudrury.com>; Luis Verdugo <lverdugo@cityofhanfordca.com>; MAIN STREET HANFORD (michelle@mainstreethanford.com) <michelle@mainstreethanford.com>; PEOPLE'S DITCH <ahemans.peoplesditch@yahoo.com>; PG&E <pgeplanreview@pge.com>; John Doyel <JDoyel@cityofhanfordca.com>; SJVAPCD <CEQA@valleyair.org>; SO CAL GAS CO <dkemp@semprautilities.com>; Steve Pendergrass <spendergrass@cityofhanfordca.com>; TABLE MOUNTAIN RANCHERIA <rpennell@tmr.org>; TACHI TRIBE <spowers@tachi-yokut-nsn.gov>; TULE RIVER INDIAN TRIBE <neil.peyron@tulerivertribe-nsn.gov>; WUKSACHE INDIAN TRIBE/ESHON VALEY <kwood8934@aol.com>
Subject: Project Review - Pre-consultation Notice (TT 934)

Good afternoon:

Please see the attached Pre-Consultation notice and reply by Friday, August 13, 2021 at 5:00 p.m.

Thank you!

Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)

Diana Black

Development Services Technician
City of Hanford
317 N. Douty Street
Hanford, CA 93230
P: (559) 585-4768
F: (559) 583-1633
dblack@cityofhanfordca.com

Dear Gabrielle,
I added our comments below.

Sincerely,

Shana Powers

Cultural Director

SPowers@tachi-yokut-nsn.gov

Office: (559)924-1278 Ext: 4093

Cell: (559)423-3900

From: Gabrielle Myers <GdeSilva@cityofhanfordca.com>

Sent: Tuesday, July 27, 2021 9:41 AM

To: Samantha McCarty <SMcCarty@tachi-yokut-nsn.gov>; Shana Powers <SPowers@tachi-yokut-nsn.gov>

Cc: Paige Berggren <pberggren@tachi-yokut-nsn.gov>; Diana Black <DBlack@cityofhanfordca.com>

Subject: RE: Project Review - Pre-consultation Notice (TT 934)

Thank you for your consultation comments, Samantha.

I am reaching out to the applicant to request they conduct the necessary searches and preform and archaeological survey.

Regarding the mitigation measures, here are the mitigation measures in place

- That if cultural resources are discovered during construction or related activities, all work shall be halted and a qualified archeologist and the City of Hanford shall be notified. The find shall be properly investigated and appropriate measures are to be taken before construction may continue.
- Prior to ground disturbing activities, construction staff shall receive a cultural presentation by the Santa Rosa Rancheria regarding cultural resources and laws and regulations for the discovery of cultural resources and human remains.
- A Native American shall be present on ground disturbing activities.
- That a Burial Treatment Plan be entered in to by the applicant/property owner prior to any earth disturbing activities.
- A curation agreement shall be signed with the Santa Rosa Rancheria.

Please let me know if the Tribe has additional measures. I assume additional mitigation measures will be determined by the outcome of the survey/searches, as well. Thank you!

Gabrielle de Silva Myers

Senior Planner

City of Hanford

317 N. Douty Street

Hanford, CA 93230

Direct: (559)585-2578

E-mail: gmyers@cityofhanfordca.com

TDD/TYY, Dial 711

From: Diana Black
Sent: Tuesday, July 27, 2021 8:45 AM
To: Samantha McCarty <SMcCarty@tachi-yokut-nsn.gov>; Shana Powers <SPowers@tachi-yokut-nsn.gov>
Cc: Paige Berggren <pberggren@tachi-yokut-nsn.gov>
Subject: RE: Project Review - Pre-consultation Notice (TT 934)

Thank you, Samantha.

Diana Black
 Development Services Technician
 City of Hanford
 317 N. Douty Street
 Hanford, CA 93230
 P: (559) 585-4768
 F: (559) 583-1633
dblack@cityofhanfordca.com

From: Samantha McCarty [<mailto:SMcCarty@tachi-yokut-nsn.gov>]
Sent: Tuesday, July 27, 2021 8:39 AM
To: Diana Black <DBlack@cityofhanfordca.com>; Shana Powers <SPowers@tachi-yokut-nsn.gov>
Cc: Paige Berggren <pberggren@tachi-yokut-nsn.gov>
Subject: RE: Project Review - Pre-consultation Notice (TT 934)

Hello Diana,

The Tribe's concerns are that cultural materials and or human remains could be disturbed during this project. Therefore, the Tribe is requesting to add mitigation measures to the Conditional Use Permit regarding this project.

The Tribe is also requesting that an archaeological survey be done, as well as an archaeological record search through the CHRS center and a SLF search with the NAHC.

If you have any questions, comments, and or concerns please contact the Santa Rosa Rancheria Cultural Department. Thank you.

Sincerely,

Samantha McCarty
 Santa Rosa Rancheria Tachi-Yokut Tribe
 Cultural Specialist II
SMcCarty@tachi-yokut-nsn.gov
 Office: (559) 924-1278 x 4091
 Cell: (559) 633-6640

*PLEASE KEEP ALL CULTURAL STAFF IN EMAILS UNLESS STATED OTHERWISE

Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)

From: Diana Black <DBlack@cityofhanfordca.com>
Sent: Tuesday, July 27, 2021 8:29 AM
To: Shana Powers <SPowers@tachi-yokut-nsn.gov>
Cc: Samantha McCarty <SMcCarty@tachi-yokut-nsn.gov>; Paige Berggren <pberggren@tachi-yokut-nsn.gov>
Subject: RE: Project Review - Pre-consultation Notice (TT 934)

You indicated that you do have comments; however, no comments were attached. Please send us your comments before 5:00 p.m., Friday, August 13.

Thank you!

Diana Black

Development Services Technician
 City of Hanford
 317 N. Douty Street
 Hanford, CA 93230
 P: (559) 585-4768
 F: (559) 583-1633
dblack@cityofhanfordca.com

From: Shana Powers [<mailto:SPowers@tachi-yokut-nsn.gov>]
Sent: Monday, July 26, 2021 4:47 PM
To: Diana Black <DBlack@cityofhanfordca.com>
Cc: Samantha McCarty <SMcCarty@tachi-yokut-nsn.gov>; Paige Berggren <pberggren@tachi-yokut-nsn.gov>
Subject: RE: Project Review - Pre-consultation Notice (TT 934)

Sincerely,

Shana Powers

Cultural Director
SPowers@tachi-yokut-nsn.gov
 Office: (559)924-1278 Ext: 4093
 Cell: (559)423-3900

From: Diana Black <DBlack@cityofhanfordca.com>
Sent: Friday, July 23, 2021 2:54 PM
To: 9-1-1 DISPATCH <kris.zuniga@co.kings.ca.us>; American Ambulance <bwiele@americanambulance.com>; AT&T <slicbox@att.com>; AT&T - Michael Wilson <MW7046@att.com>; Tom Webb <TWebb@cityofhanfordca.com>; CA DEPT of WATER RESOURCES - (delia.grijalva@water.ca.gov) <delia.grijalva@water.ca.gov>; CALTRANS <dave.padilla@dot.ca.gov>; CHAMBER OF COMMERCE <hanfordchamber@comcast.net>; COMCAST <galenraymond@comcast.net>; DRAINAGE DISTRICT <info5@waterboards.ca.gov>; HESD <adlopez@hanfordesd.org>; HESD-

Superintendent <igabler@hanfordesd.org>; HJUHSO <wfishbough@hjuhsd.org>; HJUHSO-Renee Creech <rcreech@hjuhsd.k12.ca.us>; KINGS CO ASSESSOR'S OFFICE <michelle.maldonado@co.kings.ca.us>; KINGS CO BOARD OF REALTORS <admin@kcbor.com>; KINGS CO HEALTH <troy.hommerding@co.kings.ca.us>; KINGS CO PLANNING <chuck.kinney@co.kings.ca.us>; KINGS CO PUBLIC WORKS <mike.hawkins@co.kings.ca.us>; LiUNA-Hannah Hughes <hannah@lozeaudrury.com>; LiUNA-Maya Vishwanath <maya@lozeaudrury.com>; LiUNA-Michael Lozeau <michael@lozeaudrury.com>; Luis Verdugo <lverdugo@cityofhanfordca.com>; MAIN STREET HANFORD (michelle@mainstreethanford.com) <michelle@mainstreethanford.com>; PEOPLE'S DITCH <ahemans.peoplesditch@yahoo.com>; PG&E <pgeplanreview@pge.com>; John Doyel <JDoyel@cityofhanfordca.com>; SJVAPCD <CEQA@valleyair.org>; SO CAL GAS CO <dkemp@semprautilities.com>; Steve Pendergrass <spendergrass@cityofhanfordca.com>; TABLE MOUNTAIN RANCHERIA <rpennell@tmr.org>; Shana Powers <SPowers@tachi-yokut-nsn.gov>; TULE RIVER INDIAN TRIBE <neil.peyron@tulerivertribe-nsn.gov>; WUKSACHE INDIAN TRIBE/ESHON VALEY <kwood8934@aol.com>

Subject: Project Review - Pre-consultation Notice (TT 934)

Good afternoon:

Please see the attached Pre-Consultation notice and reply by Friday, August 13, 2021 at 5:00 p.m.

Thank you!

Diana Black

Development Services Technician
City of Hanford
317 N. Douty Street
Hanford, CA 93230
P: (559) 585-4768
F: (559) 583-1633
dblack@cityofhanfordca.com



San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT



August 11, 2021

Gabrielle Myers
City of Hanford
Community Development Department
319 North Douty Street
Hanford, CA 93230

Project: Tentative Tract 934, File 504-0541

District CEQA Reference No: 20210779

Dear Ms. Myers:

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the project referenced above from the City of Hanford (City). The project consists of a 161 single-family residential development (Project). The Project is located at Southeast Corner of 13th Avenue and West Grangeville Boulevard, in Hanford, CA (APN 009-050-001 through -005)

Project Scope

The Project consists of subdividing 36.48 acres into 161 single-family residential lots in the R-L-5 Low-Density Residential zone district.

Based on information provided to the District, Project specific annual emissions from construction and operation emissions of criteria pollutants would exceed any of the following District significance thresholds: 100 tons per year of carbon monoxide (CO), 10 tons per year of oxides of nitrogen (NOx), 10 tons per year of reactive organic gases (ROG), 27 tons per year of oxides of sulfur (SOx), 15 tons per year of particulate matter of 10 microns or less in size (PM10), or 15 tons per year of particulate matter of 2.5 microns or less in size (PM2.5).

Other potential significant air quality impacts related to Toxic Air Contaminants (see information below under Health Risk Assessment), Ambient Air Quality Standards, Hazards and Odors, may require assessments and mitigation. More information can be found in the District's Guidance for Assessing and Mitigating Air Quality Impacts at: <https://www.valleyair.org/transportation/GAMAQI.pdf>

Samiir Sheikh
Executive Director (Air Pollution Control Office)

Northern Region
4800 Enterprise Way
Modesto, CA 95358 8713
Tel: (209) 557 6400 FAX: (209) 557 6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726 0744
Tel: (559) 230 8000 FAX: (559) 230 8081

Southern Region
34946 Flower Court
Bakersfield, CA 93308 0725
Tel: (866) 392 5500 FAX: (866) 392 5585

www.valleyair.org

www.healthyliving.com

Attachment: Attachment 2 - Environmental (Initial Study, MMRP, Consultation) (TT 934)

The District offers the following comments:

1) Project Related Criteria Pollutant Emissions

The District recommends that a more detailed preliminary review of the Project be conducted for the Project's construction and operational emissions. The additional environmental review of the Project's potential impact on air quality should consider the following items:

1a) Construction Emissions:

The District recommends that the City consider the use of the cleanest reasonably available off-road construction practices (i.e. eliminating unnecessary idling) and fleets, as set forth in §2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 Code of Federal Regulations as a mitigation measure to reduce Project related impacts from construction related exhaust emissions.

1b) Project Related Operational Emissions

Emissions from stationary sources and mobile sources should be analyzed separately. For reference, the District's annual criteria thresholds of significance for operational emissions are listed above.

1c) Recommended Model

Project related criteria pollutant emissions from construction and operational sources should be identified and quantified. Emissions analysis should be performed using CalEEMod (**C**alifornia **E**mission **E**stimator **M**odel), which uses the most recent approved version of relevant Air Resources Board (ARB) emissions models and emission factors. CalEEMod is available to the public and can be downloaded from the CalEEMod website at: www.caleemod.com.

2) Voluntary Emission Reduction Agreement

If the Project is expected to have a significant impact, the District recommends the environmental document/assessment also include a discussion on the feasibility of implementing a Voluntary Emission Reduction Agreement (VERA) for this Project.

A VERA is a mitigation measure by which the project proponent provides pound-for-pound mitigation of emissions increases through a process that develops, funds, and implements emission reduction projects, with the District serving a role of administrator of the emissions reduction projects and verifier of the successful mitigation effort. To implement a VERA, the project proponent and the District enter into a contractual agreement in which the project proponent agrees to mitigate Project specific emissions by providing funds for the District's incentives programs. The funds are disbursed by the District in the form of grants for projects that achieve emission reductions. Thus, project-specific regional impacts on air quality can be fully mitigated. Types of emission reduction projects that have been funded in the past

include electrification of stationary internal combustion engines (such as agricultural irrigation pumps), replacing old heavy-duty trucks with new, cleaner, more efficient heavy-duty trucks, and replacement of old farm tractors.

In implementing a VERA, the District verifies the actual emission reductions that have been achieved as a result of completed grant contracts, monitors the emission reduction projects, and ensures the enforceability of achieved reductions. After the project is mitigated, the District certifies to the Lead Agency that the mitigation is completed, providing the Lead Agency with an enforceable mitigation measure demonstrating that project-specific regional emissions have been mitigated to less than significant. To assist the Lead Agency and project proponent in ensuring that the environmental document is compliant with CEQA, the District recommends the Draft EIR includes an assessment of the feasibility of implementing a VERA.

3) **Health Risk Screening/Assessment**

Located southeast of the Project, there is a sensitive receptors (i.e. Sierra Pacific High School). The Health Risk Assessment should evaluate the risk associated with sensitive receptors in the area and mitigate any potentially significant risk to help limit emission exposure to sensitive receptors.

A Health Risk Screening/Assessment identifies potential Toxic Air Contaminants (TACs) impact on surrounding sensitive receptors such as hospitals, daycare centers, schools, work-sites, and residences. TACs are air pollutants identified by the Office of Environmental Health Hazard Assessment/California Air Resources Board (OEHHA/CARB) that pose a present or potential hazard to human health. A common source of TACs can be attributed to diesel exhaust emitted from both mobile and stationary sources. List of TACs identified by OEHHA/CARB can be found at: <https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants>

The District recommends the development project(s) be evaluated for potential health impacts to surrounding receptors (on-site and off-site) resulting from operational and multi-year construction TAC emissions.

- i) The District recommends conducting a screening analysis that includes all sources of emissions. A screening analysis is used to identify projects which may have a significant health impact. A prioritization, using the latest approved California Air Pollution Control Officer's Association (CAPCOA) methodology, is the recommended screening method. A prioritization score of 10 or greater is considered to be significant and a refined Health Risk Assessment (HRA) should be performed.

For your convenience, the District's prioritization calculator can be found at: http://www.valleyair.org/busind/pto/emission_factors/Criteria/Toxics/Utilities/PRIORITIZATION%20RMR%202016.XLS.

- ii) The District recommends a refined HRA for development projects that result in a prioritization score of 10 or greater. Prior to performing an HRA, it is

recommended that development project applicants contact the District to review the proposed modeling protocol. A development project would be considered to have a significant health risk if the HRA demonstrates that the project related health impacts would exceed the District's significance threshold of 20 in a million for carcinogenic risk and 1.0 for the Acute and Chronic Hazard Indices, and would trigger all feasible mitigation measures. The District recommends that development projects which result in a significant health risk not be approved.

For HRA submittals, please provide the following information electronically to the District for review:

- HRA AERMOD model files
- HARP2 files
- Summary of emissions source locations, emissions rates, and emission factor calculations and methodology.

More information on toxic emission factors, prioritizations and HRAs can be obtained by:

- E-Mailing inquiries to: hramodeler@valleyair.org; or
- Contacting the District by phone for assistance at (559) 230-6000; or
- Visiting the District's website (Modeling Guidance) at: http://www.valleyair.org/busind/pto/Tox_Resources/AirQualityMonitoring.htm.

4) **Ambient Air Quality Analysis**

An ambient air quality analysis (AAQA) uses air dispersion modeling to determine if emissions increases from a project will cause or contribute to a violation of the ambient air quality standards. For development projects the District recommends that an AAQA be performed for the project if emissions exceed 100 pounds per day of any pollutant.

If an AAQA is performed, the analysis should include emissions from both project specific permitted and non-permitted equipment and activities. The District recommends consultation with District staff to determine the appropriate model and input data to use in the analysis.

Specific information for assessing significance, including screening tools and modeling guidance is available online at the District's website www.valleyair.org/ceqa.

5) **Vegetative Barriers and Urban Greening**

The Project is located in a primarily rural area. However, there is a church approximately 1,700 feet west of the Project and the nearest school (Sierra Pacific High School) is located approximately 1,500 feet southeast of the Project. The District suggests the City of Hanford consider the feasibility of incorporating vegetative

barriers and urban greening as a measure to further reduce air pollution exposure on sensitive receptors (i.e. school).

While various emission control techniques and programs exist to reduce air quality emissions from mobile and stationary sources, vegetative barriers have been shown to be an additional measure to potentially reduce a population's exposure to air pollution through the interception of airborne particles and the uptake of gaseous pollutants. Examples of vegetative barriers include, but not limited to the following: trees, bushes, shrubs, or a mix of these. Generally, a higher and thicker vegetative barrier with full coverage will result in greater reductions in downwind pollutant concentrations. In the same manner, urban greening is also a way to help improve air quality and public health in addition to enhancing the overall beautification of a community with drought resistant low maintenance greenery.

6) Solar Deployment in the Community

It is the policy of the State of California that renewable energy resources and zero-carbon resources supply 100% of retail sales of electricity to California end-use customers by December 31, 2045. While various emission control techniques and programs exist to reduce air quality emissions from mobile and stationary sources, the production of solar energy is contributing to improving air quality and public health. The District suggests that the City of Hanford consider the feasibility of incorporating solar power systems, as an emission reduction strategy for this Project.

7) Clean Lawn and Garden Equipment in the Community

Since the Project consists of residential development, gas-powered residential lawn and garden equipment have the potential to result in an increase of NOx and PM2.5 emissions. Utilizing electric lawn care equipment can provide residents with immediate economic, environmental, and health benefits. The District recommends the Project proponent consider the District's Clean Green Yard Machines (CGYM) program which provides incentive funding for replacement of existing gas powered lawn and garden equipment. More information on the District CGYM program and funding can be found at: <http://www.valleyair.org/grants/cgym.htm> and <http://valleyair.org/grants/cgym-commercial.htm>.

8) Charge Up! Electric Vehicle Charger

To support further installation of electric vehicle charging equipment and development of such infrastructure, the District offers incentives to public agencies, businesses, and property owners of multi-unit dwellings to install electric charging infrastructure (Level 2 and 3 chargers). The purpose of this incentive program is to promote clean air alternative-fuel technologies and the use of low or zero-emission vehicles. The District suggests that the City and Project proponent consider the feasibility of installing electric vehicle chargers for this Project.

Please visit www.valleyair.org/grants/chargeup.htm for more information.

9) District Rules and Regulation

The District issues permits for many types of air pollution sources and regulates some activities not requiring permits. A project subject to District rules and regulation would reduce its impacts on air quality through compliance with regulatory requirements. In general, a regulation is a collection of rules, each of which deals with a specific topic. For example, *Regulation II - Permits* encompasses multiple rules associated with the permitting of emission sources such as Rule 2010 (Permits Required), Rule 2201 (New and Modified Stationary Source Review), and others.

9a) District Rule 9510 (Indirect Source Review)

The purpose of District Rule 9510 (Indirect Source Review) is to reduce the growth in both NOx and PM10 emissions associated with development and transportation projects from mobile and area sources associated with construction and operation of development projects. The rule encourages clean air design elements to be incorporated into the development project. In case the proposed project clean air design elements are insufficient to meet the targeted emission reductions, the rule requires developers to pay a fee used to fund projects to achieve off-site emissions reductions.

The proposed Project is subject to District Rule 9510 because it will receive a project-level discretionary approval from a public agency and will equal or exceed 50 residential units. When subject to the rule, an Air Impact Assessment (AIA) application is required no later than applying for project-level approval from a public agency. In this case, if not already done, please inform the project proponent to immediately submit an AIA application to the District to comply with District Rule 9510.

An AIA application is required and the District recommends that demonstration of compliance with District Rule 9510, before issuance of the first building permit, be made a condition of Project approval.

Information about how to comply with District Rule 9510 can be found online at:
<http://www.valleyair.org/ISR/ISRHome.htm>.

The AIA application form can be found online at:
<http://www.valleyair.org/ISR/ISRFormsAndApplications.htm>

9b) District Regulation VIII (Fugitive PM10 Prohibitions)

The project proponent may be required to submit a Construction Notification Form or submit and receive approval of a Dust Control Plan prior to commencing any earthmoving activities as described in Regulation VIII, specifically Rule 8021 – *Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities*.

The application for both the Construction Notification and Dust Control Plan can be found online at:

<https://www.valleyair.org/busind/comply/PM10/forms/DCP-Form.docx>

Information about District Regulation VIII can be found online at:

http://www.valleyair.org/busind/comply/pm10/compliance_pm10.htm

10) Other District Rules and Regulations

The Project may also be subject to the following District rules: Regulation VIII, (Fugitive PM10 Prohibitions), Rule 4102 (Nuisance), Rule 4601 (Architectural Coatings), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). In the event an existing building will be renovated, partially demolished or removed, the project may be subject to District Rule 4002 (National Emission Standards for Hazardous Air Pollutants).

The list of rules above is neither exhaustive nor exclusive. Current District rules can be found online at: www.valleyair.org/rules/1ruleslist.htm. To identify other District rules or regulations that apply to this Project or to obtain information about District permit requirements, the applicant is strongly encouraged to contact the District's Small Business Assistance (SBA) Office at (559) 230-5888.

11) District Comment Letter

The District recommends that a copy of the District's comments be provided to the Project proponent.

If you have any questions or require further information, please contact Carol Flores by e-mail at carol.flores@valleyair.org or by phone at (559) 230-5935.

Sincerely,

Brian Clements
Director of Permit Services



For Mark Montelongo
Program Manager



Pacific Gas and
Electric Company

Plan Review Team
Land Management

PGEPlanReview@pge.com

6111 Bollinger Canyon Road 3370A
San Ramon, CA 94583

July 27, 2021

Diana Black
City of Hanford
317 N. Douty Street
Hanford, CA 93230

Ref: Gas and Electric Transmission and Distribution

Dear Diana,

Thank you for submitting the 20-133 Tentative Map No.934 plans for our review. PG&E will review the submitted plans in relationship to any existing Gas and Electric facilities within the project area. If the proposed project is adjacent/or within PG&E owned property and/or easements, we will be working with you to ensure compatible uses and activities near our facilities.

Attached you will find information and requirements as it relates to Gas facilities (Attachment 1) and Electric facilities (Attachment 2). Please review these in detail, as it is critical to ensure your safety and to protect PG&E's facilities and its existing rights.

Below is additional information for your review:

1. This plan review process does not replace the application process for PG&E gas or electric service your project may require. For these requests, please continue to work with PG&E Service Planning: https://www.pge.com/en_US/business/services/building-and-renovation/overview/overview.page.
2. If the project being submitted is part of a larger project, please include the entire scope of your project, and not just a portion of it. PG&E's facilities are to be incorporated within any CEQA document. PG&E needs to verify that the CEQA document will identify any required future PG&E services.
3. An engineering deposit may be required to review plans for a project depending on the size, scope, and location of the project and as it relates to any rearrangement or new installation of PG&E facilities.

Any proposed uses within the PG&E fee strip and/or easement, may include a California Public Utility Commission (CPUC) Section 851 filing. This requires the CPUC to render approval for a conveyance of rights for specific uses on PG&E's fee strip or easement. PG&E will advise if the necessity to incorporate a CPUC Section 851 filing is required.

This letter does not constitute PG&E's consent to use any portion of its easement for any purpose not previously conveyed. PG&E will provide a project specific response as required.

Sincerely,

Plan Review Team
Land Management



Attachment 1 – Gas Facilities

There could be gas transmission pipelines in this area which would be considered critical facilities for PG&E and a high priority subsurface installation under California law. Care must be taken to ensure safety and accessibility. So, please ensure that if PG&E approves work near gas transmission pipelines it is done in adherence with the below stipulations. Additionally, the following link provides additional information regarding legal requirements under California excavation laws: <https://www.usanorth811.org/images/pdfs/CA-LAW-2018.pdf>

1. **Standby Inspection:** A PG&E Gas Transmission Standby Inspector must be present during any demolition or construction activity that comes within 10 feet of the gas pipeline. This includes all grading, trenching, substructure depth verifications (potholes), asphalt or concrete demolition/removal, removal of trees, signs, light poles, etc. This inspection can be coordinated through the Underground Service Alert (USA) service at 811. A minimum notice of 48 hours is required. Ensure the USA markings and notifications are maintained throughout the duration of your work.
2. **Access:** At any time, PG&E may need to access, excavate, and perform work on the gas pipeline. Any construction equipment, materials, or spoils may need to be removed upon notice. Any temporary construction fencing installed within PG&E's easement would also need to be capable of being removed at any time upon notice. Any plans to cut temporary slopes exceeding a 1:4 grade within 10 feet of a gas transmission pipeline need to be approved by PG&E Pipeline Services in writing PRIOR to performing the work.
3. **Wheel Loads:** To prevent damage to the buried gas pipeline, there are weight limits that must be enforced whenever any equipment gets within 10 feet of traversing the pipe.

Ensure a list of the axle weights of all equipment being used is available for PG&E's Standby Inspector. To confirm the depth of cover, the pipeline may need to be potholed by hand in a few areas.

Due to the complex variability of tracked equipment, vibratory compaction equipment, and cranes, PG&E must evaluate those items on a case-by-case basis prior to use over the gas pipeline (provide a list of any proposed equipment of this type noting model numbers and specific attachments).

No equipment may be set up over the gas pipeline while operating. Ensure crane outriggers are at least 10 feet from the centerline of the gas pipeline. Transport trucks must not be parked over the gas pipeline while being loaded or unloaded.

4. **Grading:** PG&E requires a minimum of 36 inches of cover over gas pipelines (or existing grade if less) and a maximum of 7 feet of cover at all locations. The graded surface cannot exceed a cross slope of 1:4.
5. **Excavating:** Any digging within 2 feet of a gas pipeline must be dug by hand. Note that while the minimum clearance is only 12 inches, any excavation work within 24 inches of the edge of a pipeline must be done with hand tools. So to avoid having to dig a trench entirely with hand tools, the edge of the trench must be over 24 inches away. (Doing the math for a 24 inch



Pacific Gas and
Electric Company

wide trench being dug along a 36 inch pipeline, the centerline of the trench would need to be at least 54 inches [$24/2 + 24 + 36/2 = 54$] away, or be entirely dug by hand.)

Water jetting to assist vacuum excavating must be limited to 1000 psig and directed at a 40° angle to the pipe. All pile driving must be kept a minimum of 3 feet away.

Any plans to expose and support a PG&E gas transmission pipeline across an open excavation need to be approved by PG&E Pipeline Services in writing PRIOR to performing the work.

6. Boring/Trenchless Installations: PG&E Pipeline Services must review and approve all plans to bore across or parallel to (within 10 feet) a gas transmission pipeline. There are stringent criteria to pothole the gas transmission facility at regular intervals for all parallel bore installations.

For bore paths that cross gas transmission pipelines perpendicularly, the pipeline must be potholed a minimum of 2 feet in the horizontal direction of the bore path and a minimum of 12 inches in the vertical direction from the bottom of the pipe with minimum clearances measured from the edge of the pipe in both directions. Standby personnel must watch the locator trace (and every ream pass) the path of the bore as it approaches the pipeline and visually monitor the pothole (with the exposed transmission pipe) as the bore traverses the pipeline to ensure adequate clearance with the pipeline. The pothole width must account for the inaccuracy of the locating equipment.

7. Substructures: All utility crossings of a gas pipeline should be made as close to perpendicular as feasible ($90^\circ \pm 15^\circ$). All utility lines crossing the gas pipeline must have a minimum of 12 inches of separation from the gas pipeline. Parallel utilities, pole bases, water line 'kicker blocks', storm drain inlets, water meters, valves, back pressure devices or other utility substructures are not allowed in the PG&E gas pipeline easement.

If previously retired PG&E facilities are in conflict with proposed substructures, PG&E must verify they are safe prior to removal. This includes verification testing of the contents of the facilities, as well as environmental testing of the coating and internal surfaces. Timelines for PG&E completion of this verification will vary depending on the type and location of facilities in conflict.

8. Structures: No structures are to be built within the PG&E gas pipeline easement. This includes buildings, retaining walls, fences, decks, patios, carports, septic tanks, storage sheds, tanks, loading ramps, or any structure that could limit PG&E's ability to access its facilities.

9. Fencing: Permanent fencing is not allowed within PG&E easements except for perpendicular crossings which must include a 16 foot wide gate for vehicular access. Gates will be secured with PG&E corporation locks.

10. Landscaping: Landscaping must be designed to allow PG&E to access the pipeline for maintenance and not interfere with pipeline coatings or other cathodic protection systems. No trees, shrubs, brush, vines, and other vegetation may be planted within the easement area. Only those plants, ground covers, grasses, flowers, and low-growing plants that grow unsupported to a maximum of four feet (4') in height at maturity may be planted within the easement area.



*Pacific Gas and
Electric Company*

11. Cathodic Protection: PG&E pipelines are protected from corrosion with an "Impressed Current" cathodic protection system. Any proposed facilities, such as metal conduit, pipes, service lines, ground rods, anodes, wires, etc. that might affect the pipeline cathodic protection system must be reviewed and approved by PG&E Corrosion Engineering.
12. Pipeline Marker Signs: PG&E needs to maintain pipeline marker signs for gas transmission pipelines in order to ensure public awareness of the presence of the pipelines. With prior written approval from PG&E Pipeline Services, an existing PG&E pipeline marker sign that is in direct conflict with proposed developments may be temporarily relocated to accommodate construction work. The pipeline marker must be moved back once construction is complete.
13. PG&E is also the provider of distribution facilities throughout many of the areas within the state of California. Therefore, any plans that impact PG&E's facilities must be reviewed and approved by PG&E to ensure that no impact occurs which may endanger the safe operation of its facilities.



Attachment 2 – Electric Facilities

It is PG&E's policy to permit certain uses on a case by case basis within its electric transmission fee strip(s) and/or easement(s) provided such uses and manner in which they are exercised, will not interfere with PG&E's rights or endanger its facilities. Some examples/restrictions are as follows:

1. Buildings and Other Structures: No buildings or other structures including the foot print and eave of any buildings, swimming pools, wells or similar structures will be permitted within fee strip(s) and/or easement(s) areas. PG&E's transmission easement shall be designated on subdivision/parcel maps as **"RESTRICTED USE AREA – NO BUILDING."**
2. Grading: Cuts, trenches or excavations may not be made within 25 feet of our towers. Developers must submit grading plans and site development plans (including geotechnical reports if applicable), signed and dated, for PG&E's review. PG&E engineers must review grade changes in the vicinity of our towers. No fills will be allowed which would impair ground-to-conductor clearances. Towers shall not be left on mounds without adequate road access to base of tower or structure.
3. Fences: Walls, fences, and other structures must be installed at locations that do not affect the safe operation of PG&E's facilities. Heavy equipment access to our facilities must be maintained at all times. Metal fences are to be grounded to PG&E specifications. No wall, fence or other like structure is to be installed within 10 feet of tower footings and unrestricted access must be maintained from a tower structure to the nearest street. Walls, fences and other structures proposed along or within the fee strip(s) and/or easement(s) will require PG&E review; submit plans to PG&E Centralized Review Team for review and comment.
4. Landscaping: Vegetation may be allowed; subject to review of plans. On overhead electric transmission fee strip(s) and/or easement(s), trees and shrubs are limited to those varieties that do not exceed 15 feet in height at maturity. PG&E must have access to its facilities at all times, including access by heavy equipment. No planting is to occur within the footprint of the tower legs. Greenbelts are encouraged.
5. Reservoirs, Sumps, Drainage Basins, and Ponds: Prohibited within PG&E's fee strip(s) and/or easement(s) for electric transmission lines.
6. Automobile Parking: Short term parking of movable passenger vehicles and light trucks (pickups, vans, etc.) is allowed. The lighting within these parking areas will need to be reviewed by PG&E; approval will be on a case by case basis. Heavy equipment access to PG&E facilities is to be maintained at all times. Parking is to clear PG&E structures by at least 10 feet. Protection of PG&E facilities from vehicular traffic is to be provided at developer's expense AND to PG&E specifications. Blocked-up vehicles are not allowed. Carports, canopies, or awnings are not allowed.
7. Storage of Flammable, Explosive or Corrosive Materials: There shall be no storage of fuel or combustibles and no fueling of vehicles within PG&E's easement. No trash bins or incinerators are allowed.



8. Streets and Roads: Access to facilities must be maintained at all times. Street lights may be allowed in the fee strip(s) and/or easement(s) but in all cases must be reviewed by PG&E for proper clearance. Roads and utilities should cross the transmission easement as nearly at right angles as possible. Road intersections will not be allowed within the transmission easement.

9. Pipelines: Pipelines may be allowed provided crossings are held to a minimum and to be as nearly perpendicular as possible. Pipelines within 25 feet of PG&E structures require review by PG&E. Sprinklers systems may be allowed; subject to review. Leach fields and septic tanks are not allowed. Construction plans must be submitted to PG&E for review and approval prior to the commencement of any construction.

10. Signs: Signs are not allowed except in rare cases subject to individual review by PG&E.

11. Recreation Areas: Playgrounds, parks, tennis courts, basketball courts, barbecue and light trucks (pickups, vans, etc.) may be allowed; subject to review of plans. Heavy equipment access to PG&E facilities is to be maintained at all times. Parking is to clear PG&E structures by at least 10 feet. Protection of PG&E facilities from vehicular traffic is to be provided at developer's expense AND to PG&E specifications.

12. Construction Activity: Since construction activity will take place near PG&E's overhead electric lines, please be advised it is the contractor's responsibility to be aware of, and observe the minimum clearances for both workers and equipment operating near high voltage electric lines set out in the High-Voltage Electrical Safety Orders of the California Division of Industrial Safety (<https://www.dir.ca.gov/Title8/sb5g2.html>), as well as any other safety regulations. Contractors shall comply with California Public Utilities Commission General Order 95 (http://www.cpuc.ca.gov/gos/GO95/go_95_startup_page.html) and all other safety rules. No construction may occur within 25 feet of PG&E's towers. All excavation activities may only commence after 811 protocols has been followed.

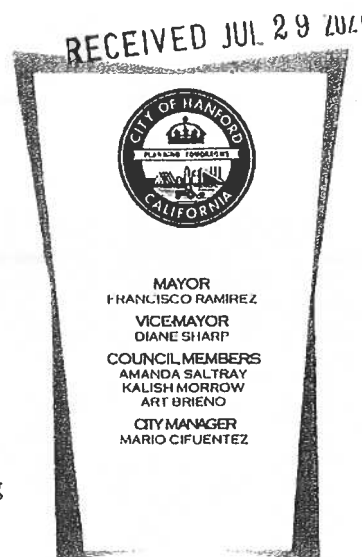
Contractor shall ensure the protection of PG&E's towers and poles from vehicular damage by (installing protective barriers) Plans for protection barriers must be approved by PG&E prior to construction.

13. PG&E is also the owner of distribution facilities throughout many of the areas within the state of California. Therefore, any plans that impact PG&E's facilities must be reviewed and approved by PG&E to ensure that no impact occurs that may endanger the safe and reliable operation of its facilities.

RECEIVED JUL 29 2021



H A N F O R D

CALIFORNIA 93230
CITY OFFICES 319 NORTH DOUTY STREET

July 22, 2021

PROJECT REVIEW – PRE-CONSULTATION NOTICE

The Community Development Department of the City of Hanford is requesting your comments regarding **Tentative Tract 934 (File 504-0541)**

- **Tentative Tract 934:** A request to subdivide 36.48 acres into 161 single-family residential lots in the R-L-5 Low-Density Residential zone district. The average lot area is 6,403 sq. ft. The density of the development is 4.52 units per acre.

Location: The project is located on the southeast corner of 13th Avenue and West Grangeville Boulevard (APN 009-050-001 through -005).

The proposal is being forwarded to the responsible and interested agencies and individuals for early consultation. The City is in the process of preparing an Initial Study to identify what, if any, significant impacts need to be analyzed in conjunction with this project. Any assistance you can give in this effort would be appreciated.

It is requested that your comments, if any, be transmitted to this office by Friday, August 13, 2021 at 5:00 p.m. Comments can be mailed to 317 N. Douty Street, Hanford, CA 93230 or emailed to gmyers@cityofhanfordca.com. If you have any questions or concerns regarding this project, please call Gabrielle Myers at (559)585-2578.

Sincerely,

Gabrielle Myers

Gabrielle Myers, Senior Planner

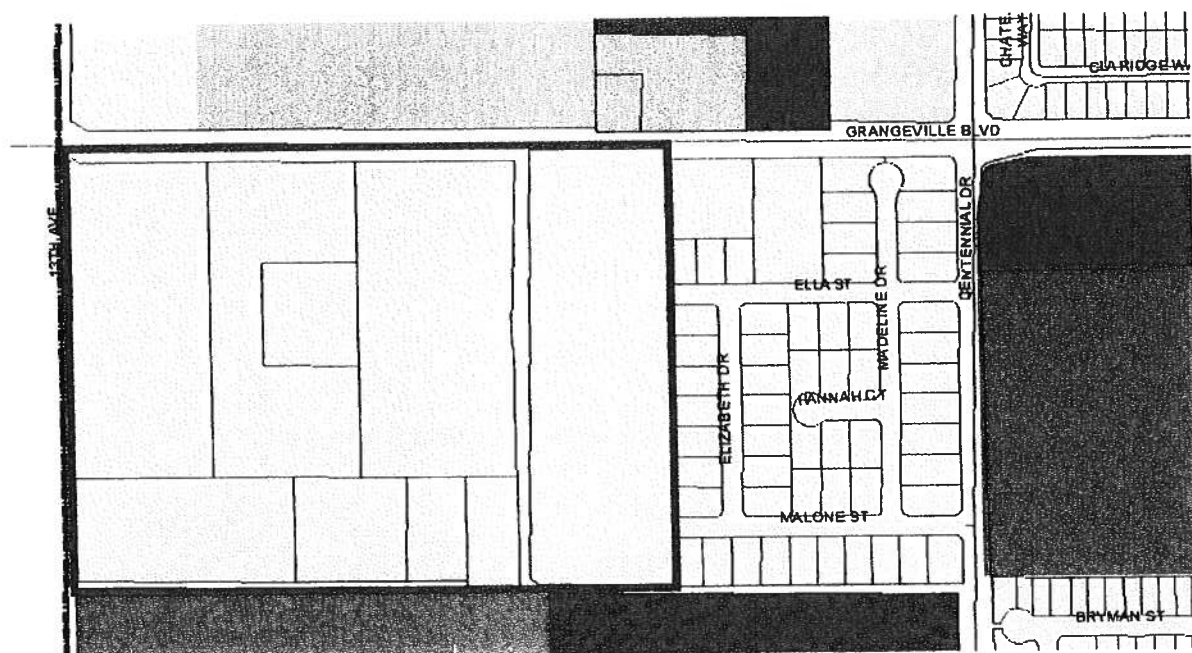
☒ do ☐ do not have comments regarding this Project

Signature *[Signature]* Agency *HART* Date *7/29/2021*

Figure 1: Project Location

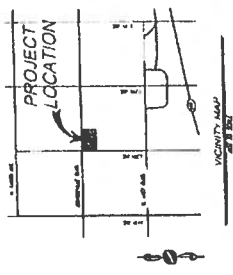


Figure 2: General Plan Designation - Low-Density Residential



VESTING TENTATIVE TRACT MAP NO. 934

IN THE CITY OF HANFORD,
COUNTY OF KINGS, CALIFORNIA
PREPARED IN APRIL 2021 BY PRECISION CIVIL ENGINEERING, INC.
SHEET 1 OF 1



SITE INFORMATION

1. PROJECT LOCATION: The project is located within the city of Hanford, California, bounded by Grangeville Boulevard to the north and 13th Avenue to the south. The project area is approximately 1.5 acres in size.

2. PROJECT DESCRIPTION: The project is a tentative tract map for the purpose of subdividing the land into smaller lots for residential development.

3. PROJECT OWNER: The project is owned by Precision Civil Engineering, Inc.

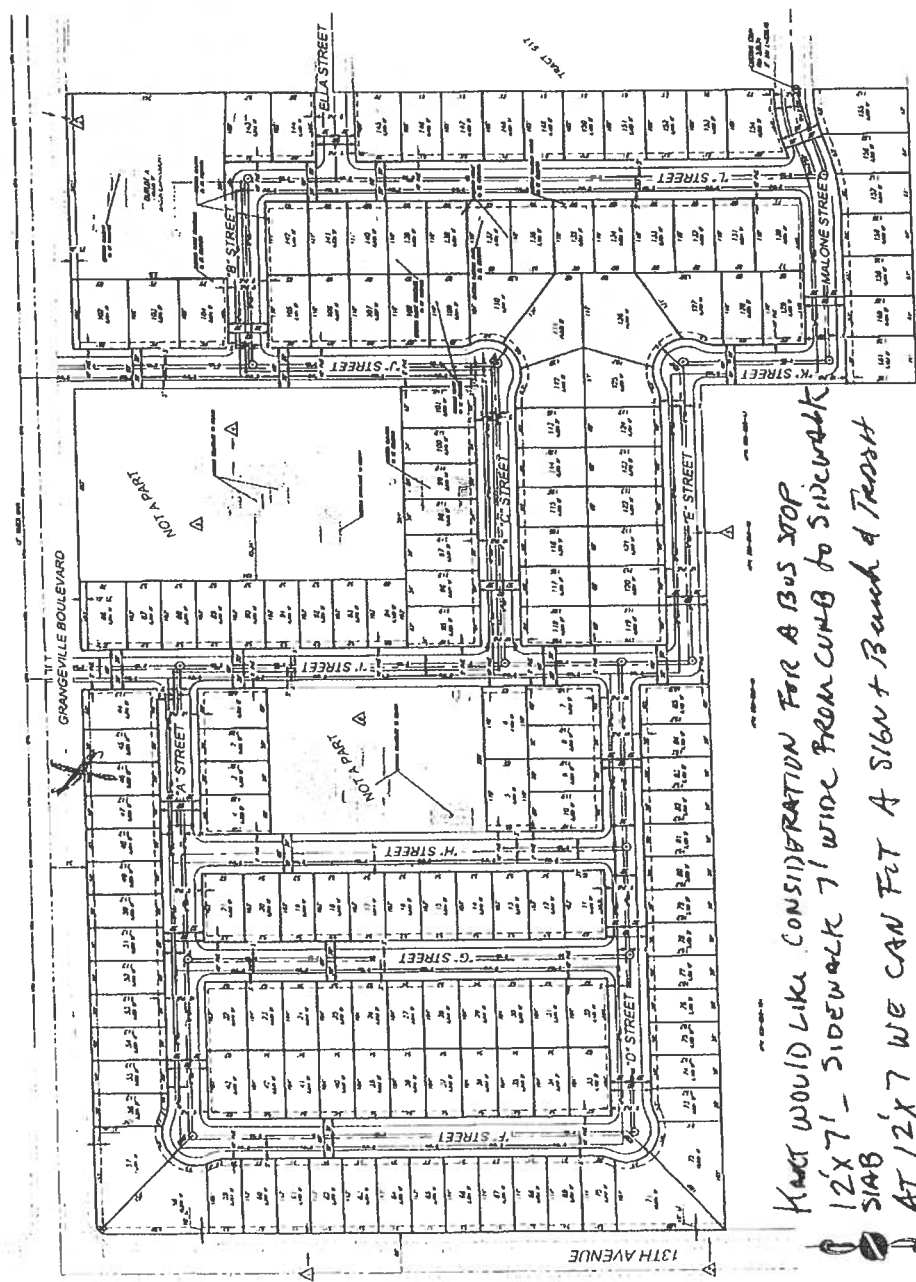
4. PROJECT STATUS: The project is currently in the tentative stage and is subject to review and approval by the City of Hanford.

LEGEND

- 1. LOT LINES: Shown as solid lines with lot numbers.
- 2. STREET LINES: Shown as dashed lines with street names.
- 3. EASEMENTS: Shown as lines with arrows indicating the direction of the easement.
- 4. UTILITIES: Shown as lines with symbols indicating the type of utility (e.g., water, sewer, gas).
- 5. SURVEY POINTS: Shown as small circles with numbers.
- 6. CORNER MARKERS: Shown as small squares with numbers.
- 7. ADJACENT TRACTS: Shown as areas with dashed lines and tract numbers.
- 8. PROJECT AREA: Shown as a shaded area.
- 9. CITY OF HANFORD: Shown as a hatched area.
- 10. COUNTY OF KINGS: Shown as a cross-hatched area.

STORM DRAIN NOTE

The storm drain system shown on this map is a preliminary design and is subject to change. The system is designed to handle the maximum anticipated runoff from the project area. The system consists of a main storm drain line that runs along the south side of the project area, with several smaller lines branching off to serve individual lots. The system is designed to be installed in a trench that is 4 feet deep and 4 feet wide. The trench is to be lined with concrete and the storm drain pipe is to be made of 18-inch diameter concrete pipe. The storm drain system is to be installed in a trench that is 4 feet deep and 4 feet wide. The trench is to be lined with concrete and the storm drain pipe is to be made of 18-inch diameter concrete pipe.



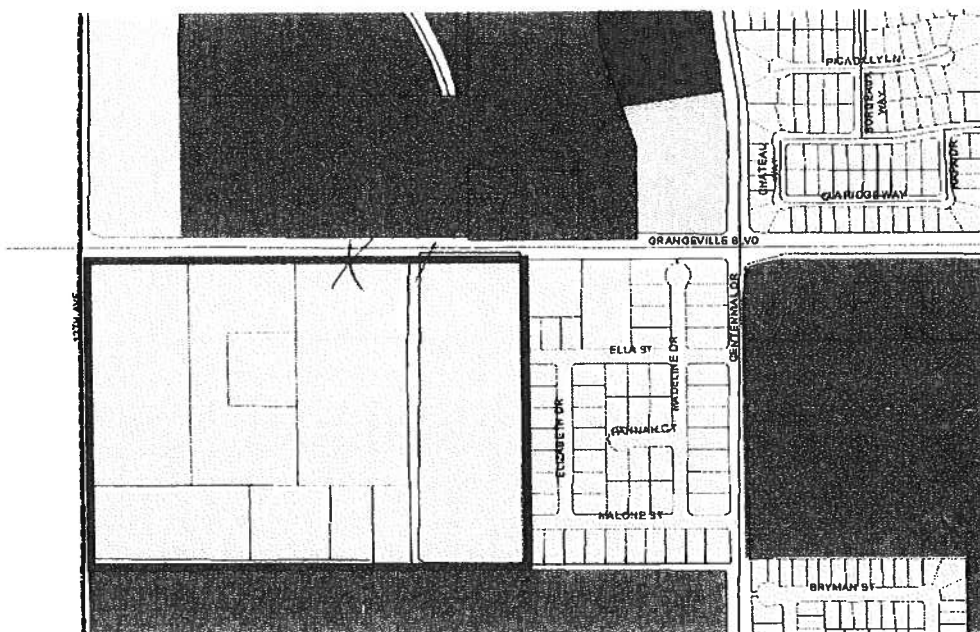
Handwritten notes on the map:

- Handwritten note: "Handwritten note: 12'x7' SIDEWALK 7' WIDE FROM CURB TO SIDEWALK SIAB AT 12'x7' WE CAN FIT A SIGN + Bench & Trash CAN -"
- Handwritten note: "Handwritten note: 12'x7' SIDEWALK 7' WIDE FROM CURB TO SIDEWALK SIAB AT 12'x7' WE CAN FIT A SIGN + Bench & Trash CAN -"

RECEIVED JUL 29 2021

Figure 3: Zoning R-L-5 Low-Density Residential

RECEIVED JUL 29 2021



City of HANFORD

CALIFORNIA 93230
CITY OFFICES 319 NORTH DOUTY STREET



MAYOR
FRANCISCO RAMIREZ
VICEMAYOR
DIANE SHARP
COUNCIL MEMBERS
AMANDA SALTZMAN
KALISH MORROW
ART BRIENO
CITY MANAGER
MARIO CIFUENTEZ

July 22, 2021

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Sincerely,

Gabrielle Myers

Gabrielle Myers, Senior Planner

I ☒ do ☐ do not have comments regarding this Project

Renee Cuello *HJUHSD* *7/26/2021*
Signature Agency Date

This project is another housing development in our school boundary that is already impacted. This causes issues for traffic, transportation and classroom housing of students & staff.

ADMINISTRATION 559-585-2515 • PERSONNEL 559-585-2520 • FACSIMILE: 559-585-2595

Figure 1: Project Location

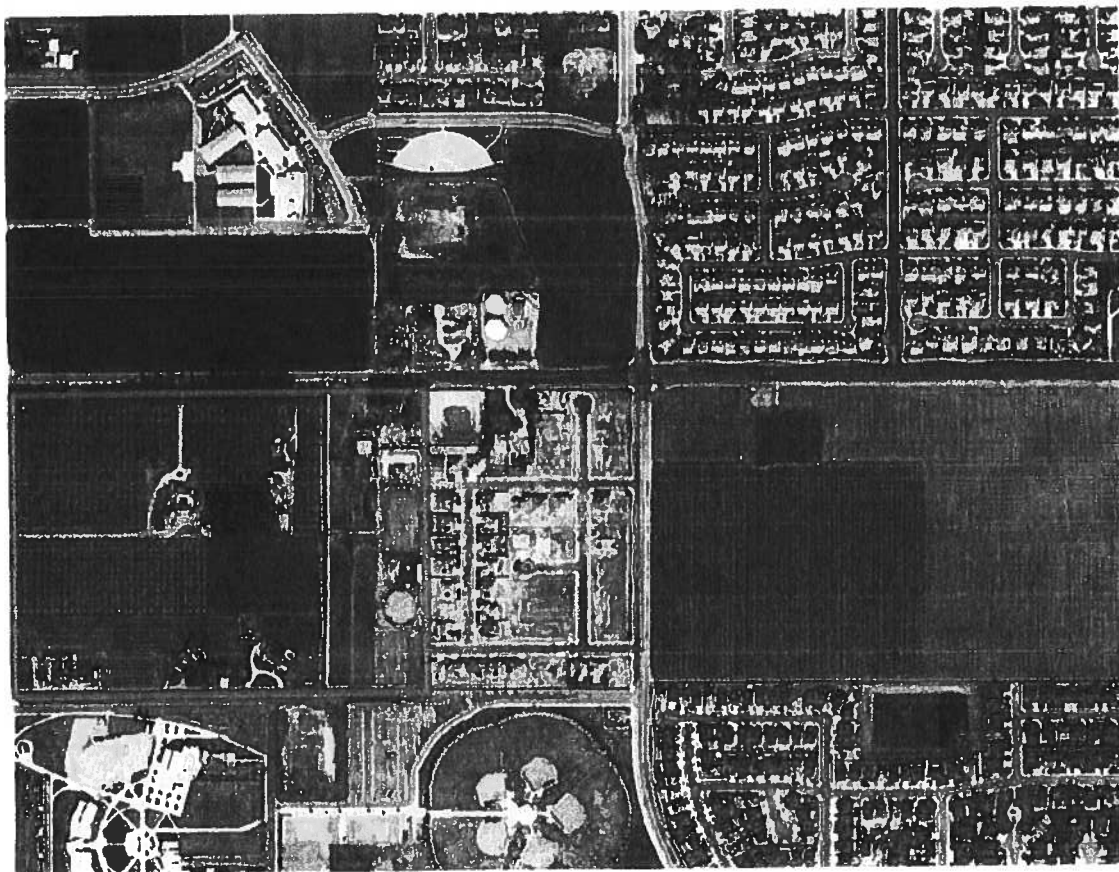


Figure 2: General Plan Designation - Low-Density Residential

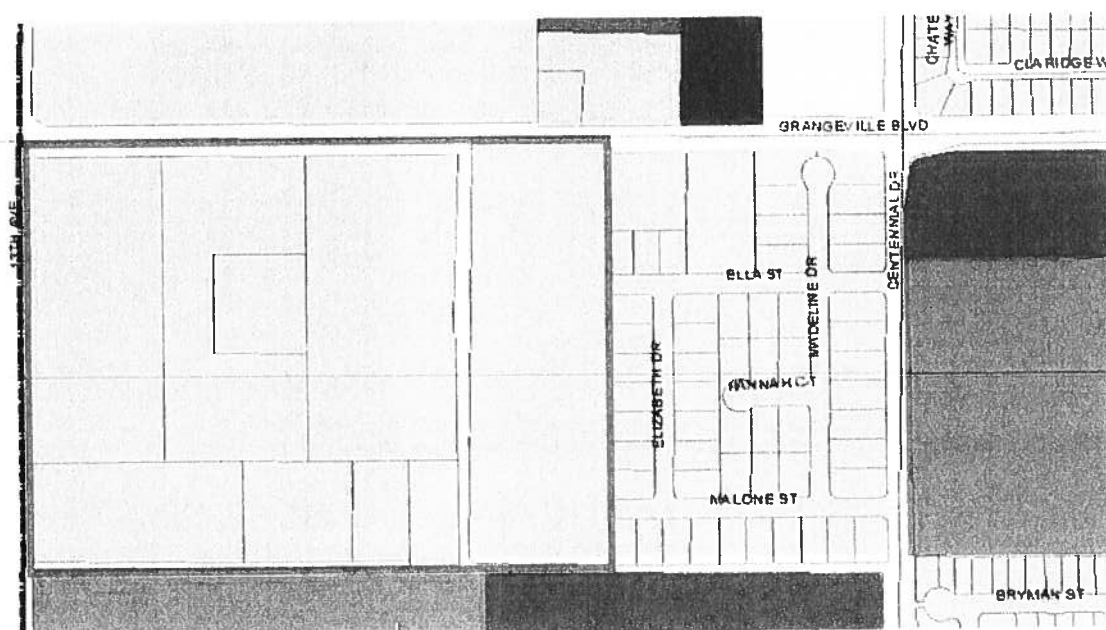
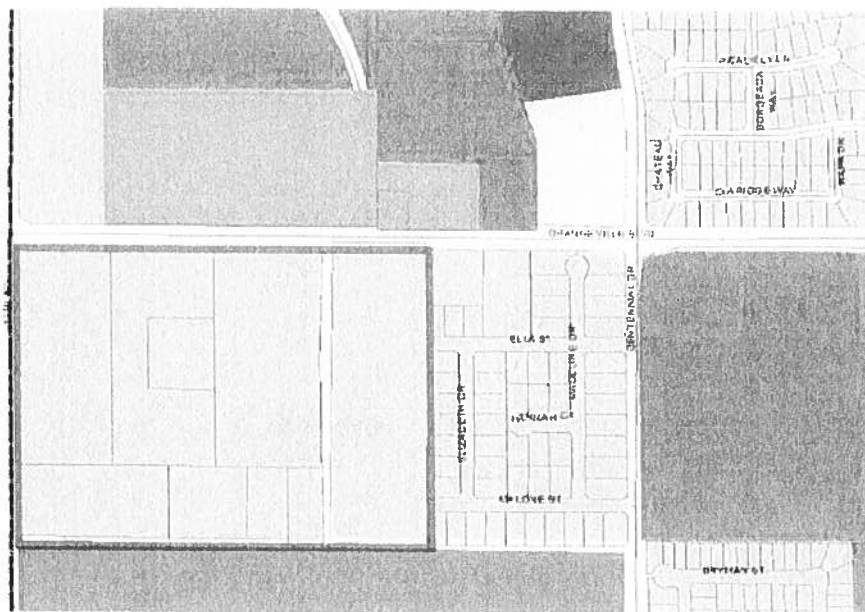
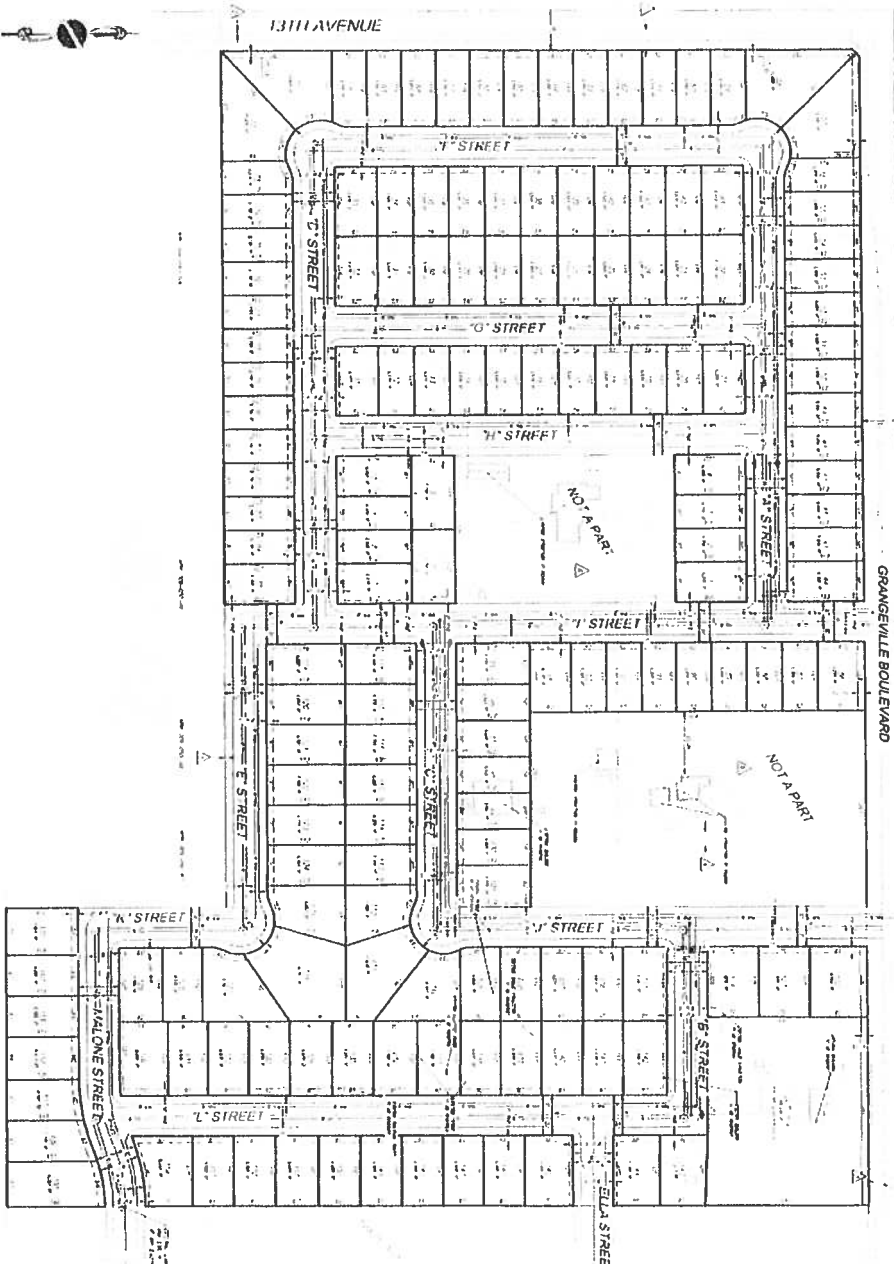


Figure 3: Zoning R-L-5 Low-Density Residential



VESTING TENTATIVE TRACT MAP NO. 934



THIS MAP IS A TENTATIVE TRACT MAP FOR THE PURPOSE OF VESTING. IT IS NOT A GUARANTEE OF THE ACCURACY OF THE INFORMATION CONTAINED HEREIN. THE USER OF THIS MAP SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF THE INFORMATION CONTAINED HEREIN.



SITE INFORMATION

1. The project is located on the east side of the city of [City Name], within the [City Name] area. The project is situated on a [lot size] lot, which is part of a larger [lot size] lot. The project is located on the [lot size] lot, which is part of a larger [lot size] lot. The project is located on the [lot size] lot, which is part of a larger [lot size] lot.

LEGAL DESCRIPTION

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PRECISION CIVIL ENGINEERING, INC.

Thomas & Kathryn Enloe
 9231 13th Avenue
 Hanford, CA 93230

December 6, 2021

Ms. Gabrielle Myers
 Hanford Community Development Department
 City of Hanford Planning Commission
 317 N. Douty Street
 Hanford, CA 93230

Re: Mitigated Negative Declaration
 Lennar Subdivision Project: 13th Avenue and Grangeville
 Hearing: December 14, 2021 at 5:30 p.m.

Dear Ms. Myers:

My wife and I have owned the property at 9231-13th Avenue since 1989. At the time of purchase, our property was in the country with its boundaries outside the city limits. (The city annexed our property years later.) At that time, our property was surrounded by a square mile of agricultural land with a very few houses. Due to the impact of the city growing around us, we are no longer in the country yet we remain agricultural with a 4-acre pistachio orchard.

Sierra Pacific High School was built immediately south adjacent to our property. For our privacy and security, the school included a 9' block wall in their construction plans as it was being built. Not only was the wall built for our privacy and security, but it also helped reduce bus noise and pollution.

When Lennar began planning the subdivision project at the 13th and Grangeville, they expressed interest in purchasing a portion of our property. As part of negotiations and proposed sale, they agreed to place a 9-foot cement wall to maintain our security and privacy from houses that would be buttressed up to our property. They also agreed that these houses bordering our property would be single-story homes. Eventually the negotiations for the purchase of our property ceased and we were relieved as we were not looking forward to the impact of such close neighbors and the destruction of our pistachio orchard.

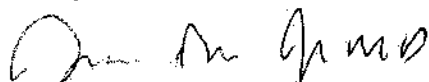
Attachment: Letter-Enloe (TT 934)

Ms. Gabrielle Myers
Hanford Community Development Department
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The proposed subdivision as it is currently designed will have 15 houses with back yards buttressing our property. We are aware that land developers routinely erect block walls around the perimeter of their subdivisions and around existing houses and buildings. These walls can be seen in many subdivisions around Hanford; a few being on Fargo Avenue, 11th Avenue, Centennial Blvd., Grangeville Blvd., and north 13th Avenue.

As is typical with other subdivisions and as Lennar had previously agreed with us, we respectfully request that Lennar provide a 9' wall that would match the subdivision's perimeter wall on the roadways along our property line. This would provide privacy and security for both us and the Lennar homeowners. We would also request Lennar to confirm the houses bordering our property would remain single story.

Sincerely,



Thomas S. Enloe

Attachment: Letter-Enloe (TT 934)