BAKERSFIELD
THE SOUND OF *Something Better*

PLANNING COMMISSION AGENDA
MEETING OF SEPTEMBER 21, 2023
Council Chambers, City Hall South, 1501 Truxtun Ave
Regular Meeting 5:30 P.M.

www.bakersfieldcity.us

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1. **ROLL CALL**

   ZACHARY BASHIRTASH, CHAIR
   DANIEL CATER, VICE-CHAIR
   CASSIE BITTLE
   GURTARPREET KAUR
   LARRY KOMAN
   CANDACE NEAL

2. **PLEDGE OF ALLEGIANCE**

3. **PUBLIC STATEMENTS**

   a. Agenda Item Public Statements

   b. Non-Agenda Item Public Statements

4. **CONSENT CALENDAR ITEMS**

   a. Approval of Planning Commission minutes of September 7, 2023.

   Staff recommends approval.

5. **CONSENT PUBLIC HEARINGS**

Ward 1

a. **Vesting Tentative Parcel Map 12498 (Phased):** Kier & Wright is proposing to subdivide 141.46 acres into four industrial parcels and one designated remainder located at the southwest corner of East Belle Terrace and South Mt Vernon Avenue in southeast Bakersfield. Notice of Exemption on file.

Staff recommends approval.

Ward 3

b. **Vesting Tentative Tract Map 7431 (Phased):** McIntosh and Associates is proposing to subdivide 95.21 gross acres into 299 single family residential lots located at the northeast corner of Paladino Drive and Masterson Street. Proposed Mitigated Negative Declaration on file.

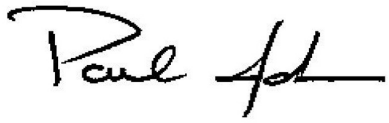
Staff recommends approval.

6. **NON-CONSENT PUBLIC HEARINGS**

7. **COMMUNICATIONS**

8. **COMMISSION COMMENTS**

9. **ADJOURNMENT**



Paul Johnson
Planning Director

COVER SHEET

PLANNING DEPARTMENT
STAFF REPORT

MEETING DATE: September 21, 2023 **ITEM NUMBER:** 1.()

TO:

FROM:

PLANNER:

DATE:

WARD:

SUBJECT:
ZACHARY BASHIRTASH, CHAIR
DANIEL CATER, VICE-CHAIR
CASSIE BITTLE
GURTARPREET KAUR
LARRY KOMAN
CANDACE NEAL

APPLICANT:

OWNER:

LOCATION:

STAFF RECOMMENDATION:

COVER SHEET

PLANNING DEPARTMENT
STAFF REPORT

MEETING DATE: September 21, 2023 **ITEM NUMBER:** 3.(a.)

TO:

FROM:

PLANNER:

DATE:

WARD:

SUBJECT: Agenda Item Public Statements

APPLICANT:

OWNER:

LOCATION:

STAFF RECOMMENDATION:

COVER SHEET

PLANNING DEPARTMENT
STAFF REPORT

MEETING DATE: September 21, 2023 **ITEM NUMBER:** 3.(b.)

TO:

FROM:

PLANNER:

DATE:

WARD:

SUBJECT:
Non-Agenda Item Public Statements

APPLICANT:

OWNER:

LOCATION:

STAFF RECOMMENDATION:

COVER SHEET
PLANNING DEPARTMENT
STAFF REPORT

MEETING DATE: September 21, 2023 **ITEM NUMBER:** Consent Calendar Items4.(a.)

TO: Chair and Members of the Planning Commission

FROM: Paul Johnson, Planning Director

PLANNER:

DATE:

WARD:

SUBJECT: Approval of Planning Commission minutes of September 7, 2023.

APPLICANT:

OWNER:

LOCATION:

STAFF RECOMMENDATION:
Staff recommends approval.

ATTACHMENTS:

	Description	Type
🗋	09/07/2023 PC Minutes	Cover Memo

PLANNING COMMISSION MINUTES

Regular Meeting of September 7, 2023 – 5:30 p.m.
Council Chambers, City Hall, 1501 Truxtun Avenue

ACTION TAKEN

1. ROLL CALL

Present: Chair Bashirtash, Vice-Chair Cater, Commissioners Bittle, Kaur, Koman, Neal

Staff Present: Paul Johnson, DS Planning Director; Viridiana Gallardo-King, Deputy City Attorney II; Susanna Kormendi, PW Civil Engineer III; Adrian Castro, PW Civil Engineer II; Martin Ledezma, DS Civil Engineer III; Kassandra Gale, Assistant Planning Director, Tony Jaquez, DS Principal Planner; Louis Ramirez, DS Associate Planner II; Pete Armagost, Fire Prevention/Environmental Officer; Macy Iacopetti, DS Secretary I; Ana Solis, DS Secretary II

2. PLEDGE OF ALLEGIANCE

3. PUBLIC STATEMENTS

a. Agenda Item Public Statements

None.

b. Non-Agenda Item Public Statements

Jose Ruben Rangel Lopez spoke.

4. CONSENT ITEMS

a. Approval of Minutes: Regular scheduled Planning Commission meeting of August 17, 2023.

Motion by Commissioner Koman, seconded by Commissioner Kaur, to approve Consent Calendar Item 4.a. Motion approved. **APPROVED**

		ACTION TAKEN
5.	**CONSENT PUBLIC HEARINGS**	
	a. Conditional Use Permit No. 23-0187: Elevate Architecture is requesting a Conditional Use Permit to allow veterinary services (B.M.C. 17.20.040) in a C-O (Professional and Administrative Office) zone, located at 1414 Valhalla Dr. Notice of Exemption on file. Staff recommends approval.	**RES 70-23**
	Public hearing opened and closed.	
	Motion by Vice Chair Cater, seconded by Commissioner Bittle, to approve Consent Public Hearing Items 5.a. Motion approved.	**APPROVED**
6.	**NON-CONSENT PUBLIC HEARINGS**	
	Environmental Impact Report for Site Plan Review No. 21-0399: SASD Development Group, LLC is requesting adoption of California Environmental Quality Act (CEQA) Section 15091 Findings, CEQA Section 15093 Statement of Overriding Considerations, Mitigation Monitoring and Reporting Program, and certification of a Final Environmental Impact Report to facilitate construction of an approximate 39,650 square foot Department of Veterans Affairs Community-Based Outpatient Medical Clinic on approximately 10 acres located at 5512 Knudsen Dr.	**RES 71-23**
	Staff report given by Paul Johnson, Planning Director. Public hearing opened. Eleven people spoke in favor. No speakers in opposition. No one spoke in rebuttal. Public hearing closed. Planning Commission deliberated. Motion by Commissioner Neal, seconded by Commissioner Kaur, to approve Non-Consent Public Hearing Item 6.a. incorporating all staff memoranda and recommendations. Motion approved.	**APPROVED**
7.	**COMMUNICATIONS**	
	a. Planning Director Johnson announced the next Planning Commission meeting will be September 21, 2023.	
8.	**COMMISSION COMMENTS**	
	a. Commissioner Bittle thanked all the Veterans in attendance.	

ACTION TAKEN

9. ADJOURNMENT

There being no further business, Chair Bashirtash adjourned the meeting at 6:39 p.m.

Ana Solis
Recording Secretary

Paul Johnson
Planning Director

S:\01_Planning Commission\PC\Minutes\2023\09.07_draft.docx

COVER SHEET
PLANNING DEPARTMENT
STAFF REPORT

MEETING DATE: September 21, 2023 **ITEM NUMBER:** Consent Calendar Public Hearings5.(a.)

TO: Chair and Members of the Planning Commission

FROM: Paul Johnson, Planning Director

PLANNER: Noeli Topete, Associate Planner I

DATE:

WARD: Ward 1

SUBJECT:
Vesting Tentative Parcel Map 12498 (Phased): Kier & Wright is proposing to subdivide 141.46 acres into four industrial parcels and one designated remainder located at the southwest corner of East Belle Terrace and South Mt Vernon Avenue in southeast Bakersfield. Notice of Exemption on file.

APPLICANT: Kier & Wright

OWNER: GL Bakersfield Owners, LLC

LOCATION: Located at the southwest corner of East Belle Terrace and South Mt Vernon Avenue in southeast Bakersfield.

STAFF RECOMMENDATION:
Staff recommends approval.

ATTACHMENTS:

	Description	Type
🗋	Staff Report	Staff Report
🗋	Map Set	Backup Material
🗋	Notice of Exemption	Backup Material
🗋	Resolution	Resolution

CITY OF BAKERSFIELD
PLANNING COMMISSION

MEETING DATE: September 21, 2023 **AGENDA:** 5.a.

TO: Chair Bashirtash and Members of the Planning Commission

FROM: Paul Johnson, Planning Director PJ

DATE: September 15, 2023

FILE: Vesting Tentative Parcel Map 12498

WARD: 1

STAFF PLANNER: Noeli Topete, Associate Planner I

REQUEST: A proposed vesting tentative parcel map (VTPM) to subdivide 141.46 acres into four industrial parcels and one designated remainder in the M-2 (General Manufacturing) zone.

APPLICANT:
Kier & Wright
250 Cherry Lane, Suite 208
Manteca, CA 95337

OWNER:
GL Bakersfield Owners, LLC
18301 Von Karman Ave, Suite 250
Irvine, CA 92612

PROJECT LOCATION: Southwest corner of East Belle Terrace and South Mt Vernon Avenue in southeast Bakersfield**.**

APN: 167-070-03

PROJECT SIZE: 141.46 acres **CEQA:** Section 15315 (Minor Land Divisions)

EXISTING GENERAL PLAN DESIGNATION: SI (Service Industrial)

EXISTING ZONE CLASSIFICATION: M-2 (General Manufacturing)

STAFF RECOMMENDATION: Adopt Resolution and suggested findings **APPROVING** Vesting Tentative Parcel Map 12498 with conditions.

SITE CHARACTERISTICS: The project site is vacant land. Surrounding properties are primarily developed as: *north* – industrial buildings; *east* - Kern County of Kern Offices, Kern High School District storage, and vacant land; *south* – wastewater treatment; *west* - vacant land.

BACKGROUND AND TIMELINE:

- **August 6, 1986 -** City Council approved the proposed amendment to the Land Use and Circulation Element of the General Plan and adopted the Casa Loma Specific Plan (Ordinance No. 3063).

- **August 25, 1986** - Kern County Board of Supervisors adopted the Casa Loma Specific Plan (CLSP) and certified the related Environmental Impact Report. The CLSP consisted of residential, commercial, recreational, public, institutional, and industrial uses to be developed on 3,461 acres. The CLSP designated the project site as 7.2 Service Industrial (Resolution No. 86-502 and Ordinance No. G-4268).

- **October 2, 1991** - The project site was annexed into the City as part of the Mt Vernon No. 5 annexation (Annexation No. 348).

- **November 17, 1999** - City Council approved Zone Change No. P99-0450 and adopted a Negative Declaration to change 3,461 acres from CLSP designations to similar city zone districts including RS-2.5, RS, E, R-2, R—3, C-2, M-1, M-2, M-3, and OS zones. The zone classification for the project site changed from 7.2 Service Industrial to M-2 (General Manufacturing) (Ordinance No. 3935).

- **March 9, 2022** - Site Plan Review No. 21-0450 approved for the construction of three warehouse buildings and ancillary trailer storage yard.

- **August 9, 2023** - The application for Vesting Tentative Parcel Map 12498 was deemed complete.

PROJECT ANALYSIS:

The applicant is requesting a parcel map to subdivide 141.46 gross acres into four industrial parcels and one designated remainder in the M-2 (General Manufacturing) zone. Parcel sizes range from 2.22 acres to 58.67 acres and is proposed to be developed for purposes of warehousing and distribution.

Circulation. Access to this subdivision would be from East Belle Terrace (collector) on the subdivision's north boundary and from South Mount Vernon (arterial) on the east. As part of future development, Casa Loma Drive (arterial) on the south and South Washington Street (collector) on the west will be constructed.

Mineral Rights. In accordance with the California Government Code or Subdivision Map Act Section 66445(e), mineral rights owners' signatures are not required on final parcel maps with four or fewer parcels. This parcel map contains four parcels and one designated remainder. Section 66424.6(a)(1) goes on to state "The designated remainder shall not be counted as a parcel for the purpose of determining whether a parcel or final map is required."

The applicant submitted a letter from the California Department of Conservation's Division of Geologic Energy Management (CalGEM) stating the project site is beyond their administrative boundaries of oil or gas fields. However, there is one known well on the property but no known active operators of record. If a well is uncovered, staff is recommending a condition of approval requiring the subdivider to consult with CalGEM regarding proper abandonment of the well (Condition 33).

ENVIRONMENTAL REVIEW AND DETERMINATION:

Based upon an initial environmental assessment, staff determined the proposed project is categorically exempt from the California Environmental Quality Act in accordance with Section 15315, Minor Land Division. Class 15 categorical exemptions consist of the division of property in urbanized areas zoned for residential, commercial, or industrial use into four or fewer parcels when the division is in conformance with the General Plan and zoning, no variances or exceptions are required, all services and access to the proposed parcels to local standards are available, the parcel was not involved in a division of a larger parcel within the previous 2 years, and the parcel does not have an average slope greater than 20 percent. The project meets the criteria for this categorical exemption.

PUBLIC NOTIFICATION:

Public notice for the proposed project and environmental determination was advertised in *The Bakersfield Californian* and posted on the bulletin board in the City of Bakersfield Development Services Building, 1715 Chester Avenue, Bakersfield, California. All property owners within 300 feet of the project site were notified by United States Postal Service mail regarding this public hearing in accordance with city ordinance and state law. Signs are required as part of the public notification process and must be posted between 20 to 60 days before the public hearing date. Photographs of the posted signage and the Declaration of Posting Public Hearing Notice signed by the applicant are on file at the Planning Division.

Comments Received. As of this writing, no written public comments have been received.

CONCLUSIONS:

Consistency with General Plan and Zoning Ordinance. The applicant has requested approval of VTPM 12498 to subdivide 141.46 acres into 4 parcels and one designated remainder for warehousing and distribution purposes. The proposed subdivision is consistent with the SI (Service Industrial) designation of the project site for industrial type uses.

The proposed development has been processed separately through Site Plan Review (SPR 21-0450). This process provides City Departments (Building, Planning, Fire, Water Resources, Engineering, Traffic, Solid Waste, and as necessary Recreation & Parks and Police Department) to review the project and ensure development plans adhere to all applicable City development standards, policies, and ordinances.

Recommendation. Staff finds that the applicable provisions of CEQA have been complied with, and the proposal is compatible with the existing land use designation and land uses in the surrounding area. Staff finds the proposed subdivision is reasonable and the request to waive mineral rights is consistent with the Subdivision Map Act. Based on information in the record, Staff recommends your Commission adopt the Resolution and findings **APPROVING** Vesting Tentative Parcel Map 12498 as outlined in this staff report subject to the recommended conditions.

ATTACHMENTS:

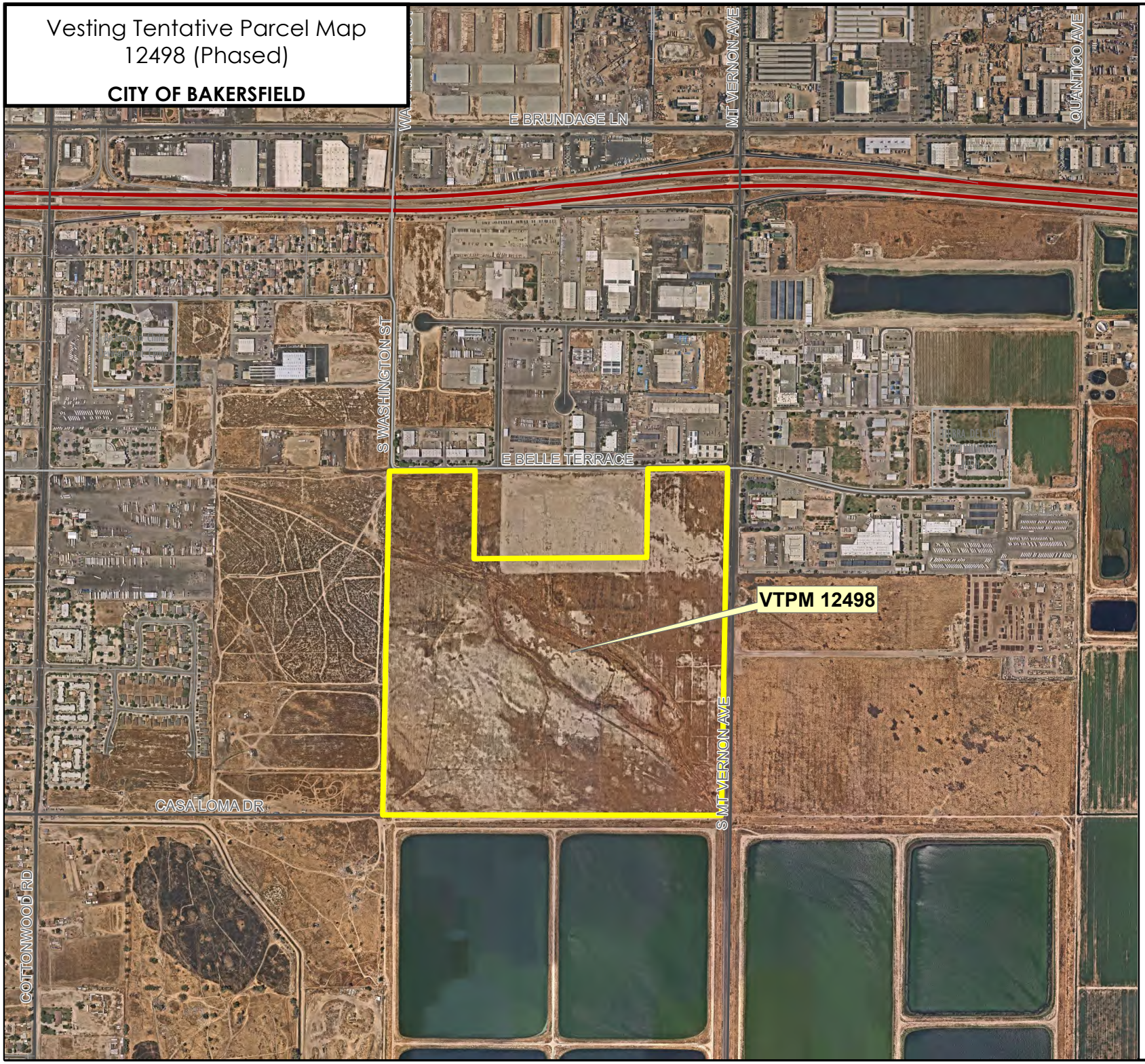
Map Set
- Aerial
- Zone Classification
- General Plan Designation
- Vesting Tentative Parcel Map 12498

Notice of Exemption
Planning Commission Draft Resolution

MAP SET

Vesting Tentative Parcel Map 12498 (Phased)

CITY OF BAKERSFIELD



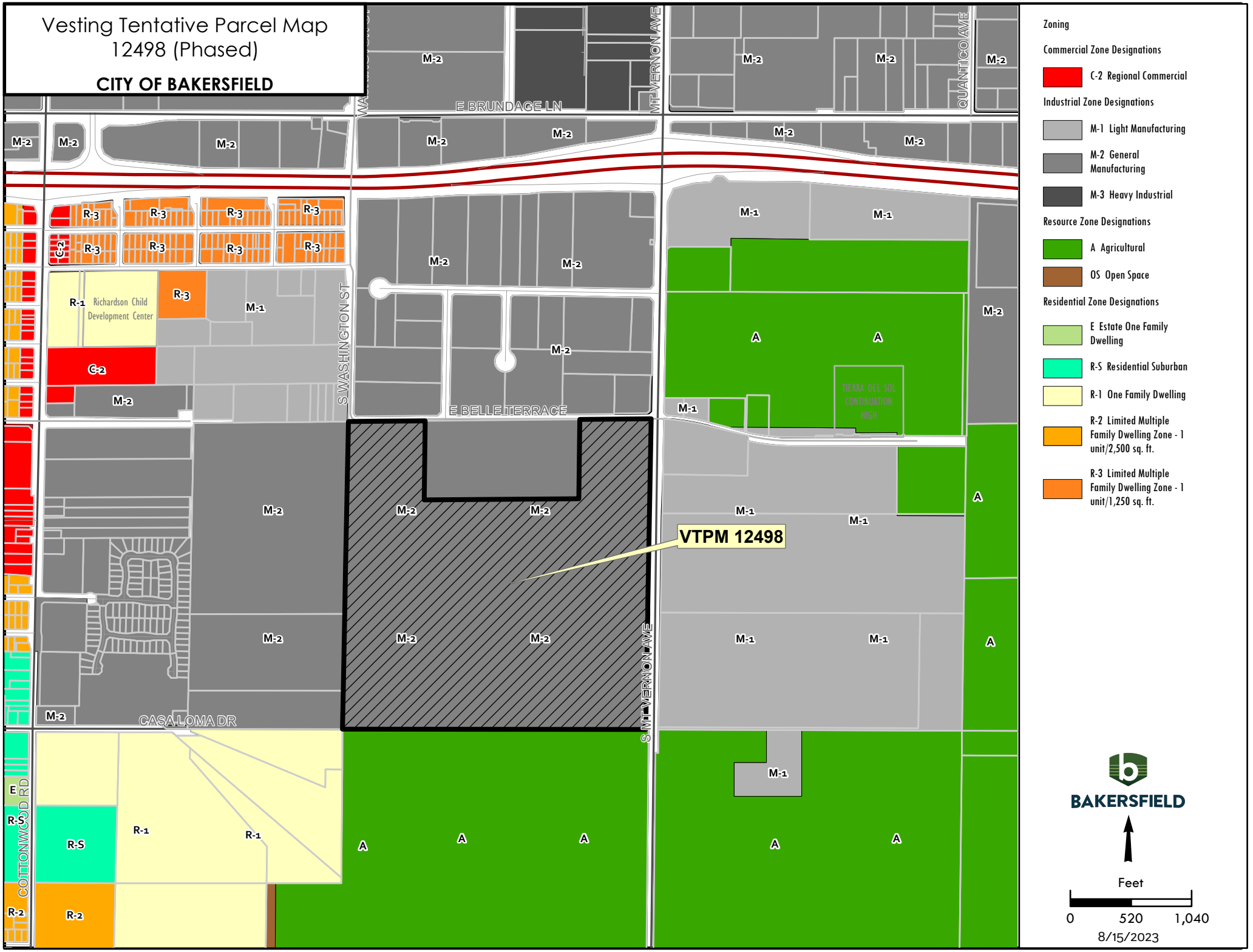
AERIAL

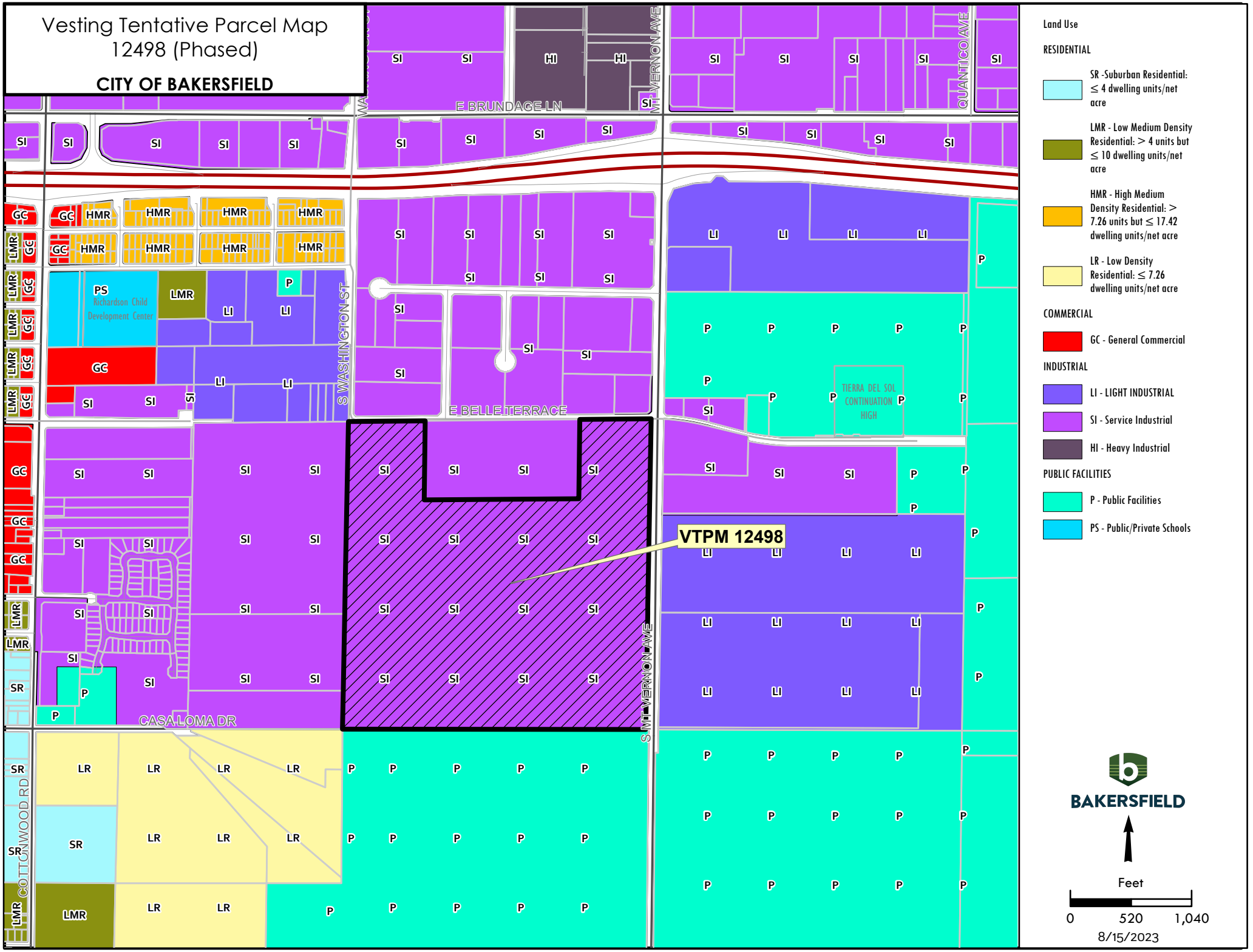
BAKERSFIELD

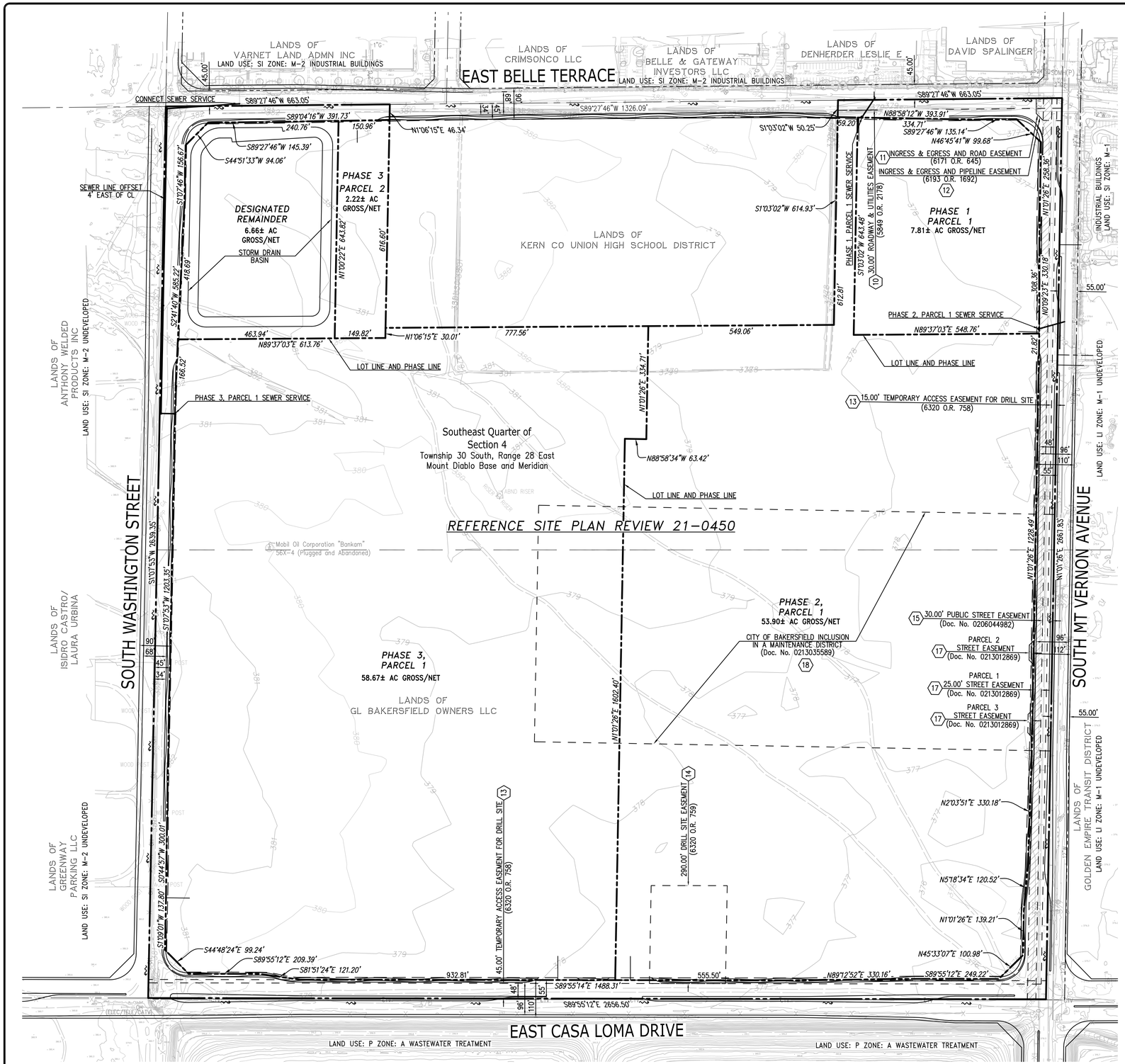
Feet

0 520 1,040

8/15/2023


Vesting Tentative Parcel Map
12498 (Phased)
CITY OF BAKERSFIELD
E BRUNDAGE LN
MT VERNON AVE
QUANTICO AVE
S WASHINGTON ST
E BELLE TERRACE
S MT VERNON AVE
CASA LOMA DR
COTTONWOOD RD
Richardson Child Development Center
TIERRA DEL SOL CONTINUATION HIGH
VTPM 12498
Zoning
Commercial Zone Designations
C-2 Regional Commercial
Industrial Zone Designations
M-1 Light Manufacturing
M-2 General Manufacturing
M-3 Heavy Industrial
Resource Zone Designations
A Agricultural
OS Open Space
Residential Zone Designations
E Estate One Family Dwelling
R-S Residential Suburban
R-1 One Family Dwelling
R-2 Limited Multiple Family Dwelling Zone - 1 unit/2,500 sq. ft.
R-3 Limited Multiple Family Dwelling Zone - 1 unit/1,250 sq. ft.
BAKERSFIELD
Feet
0
520
1,040
8/15/2023

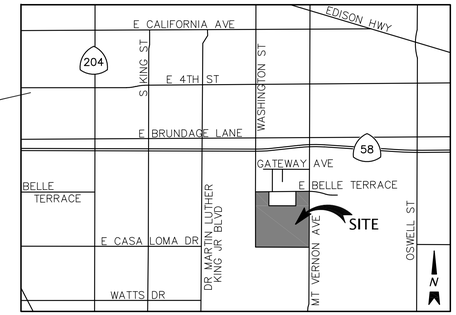

Vesting Tentative Parcel Map
12498 (Phased)
CITY OF BAKERSFIELD
E BRUNDAGE LN
MT VERNON AVE
QUANTICO AVE
S WASHINGTON ST
E BELLE TERRACE
CASA LOMA DR
COTTONWOOD RD
S MT VERNON AVE
TIERRA DEL SOL CONTINUATION HIGH
PS
Richardson Child Development Center
VTPM 12498
Land Use
RESIDENTIAL
SR -Suburban Residential: ≤ 4 dwelling units/net acre
LMR - Low Medium Density Residential: > 4 units but ≤ 10 dwelling units/net acre
HMR - High Medium Density Residential: > 7.26 units but ≤ 17.42 dwelling units/net acre
LR - Low Density Residential: ≤ 7.26 dwelling units/net acre
COMMERCIAL
GC - General Commercial
INDUSTRIAL
LI - LIGHT INDUSTRIAL
SI - Service Industrial
HI - Heavy Industrial
PUBLIC FACILITIES
P - Public Facilities
PS - Public/Private Schools
BAKERSFIELD
Feet
0
520
1,040
8/15/2023



EXISTING & PROPOSED CONDITIONS/PARCELS

NOTE:
PHASING SHOWN IS CONCEPTUAL, AND SUBJECT TO CHANGE. SHOULD PHASING SEQUENCING DIFFER FROM WHAT IS SHOWN ON THESE PLANS, ADDITIONAL COORDINATION WITH THE CITY SHALL BE REQUIRED.

LICENSED LAND SURVEYOR
DEAN A. JUKKOLA
No. 9032
STATE OF CALIFORNIA



VICINITY MAP

NOT TO SCALE

PROJECT DATA

OWNER
1. GL BAKERSFIELD OWNERS, LLC
18301 VON KARMAN AVE. SUITE 250
IRVINE, CA 92612-1009
(949) 331-1300

SUBDIVIDER:
2. KIER & WRIGHT CIVIL ENGINEERS & SURVEYORS, INC.
2850 COLLIER CANYON ROAD
LIVERMORE, CA 94551
(925) 245-8788

GENEAL NOTES:
3. ASSESSOR'S PARCEL NUMBER: 167-070-03-00-6
4. THIS DEVELOPMENT WILL CONFORM TO THE CITY OF BAKERSFIELD SUBDIVISION STANDARDS
5. FIRE PROTECTION IN CONFORMANCE WITH THE CITY OF BAKERSFIELD FIRE DEPARTMENT STANDARDS
6. THIS MAP SHALL FOLLOW THE "COMPLETE STREETS" POLICY PER RESOLUTION 035-13

STATISTICS:
7. APPROXIMATE ACREAGE: 141.4602± ACRES
8. EXISTING NUMBER OF PARCELS: 1
9. PROPOSED NUMBER OF PARCELS: 4 PARCELS AND 1 REMAINDER

UTILITIES:
10. WATER: CALIFORNIA WATER SERVICE COMPANY
11. SEWER: CITY OF BAKERSFIELD
12. STORM: CITY OF BAKERSFIELD
13. GAS: PACIFIC GAS AND ELECTRIC COMPANY
14. ELECTRIC: PACIFIC GAS AND ELECTRIC COMPANY
15. TELEPHONE: AT&T
16. CABLE: SPECTRUM

LAND USE:
17. EXISTING LAND USE: VACANT LAND, GENERAL PLAN DESIGNATION: SI (SERVICE INDUSTRAL)
18. PROPOSED LAND USE: WAREHOUSING AND DISTRIBUTION, GENERAL PLAN DESIGNATION: SI (SERVICE INDUSTRIAL)
19. EXISTING ZONING: M-2, GENERAL MANUFACTURING
20. PROPOSED ZONING: NO CHANGE

FLOOD ZONES:
21. THE SUBJECT PROPERTY IS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) FOR KERN COUNTY, CALIFORNIA, MAP NUMBER 06029C2325E FOR COMMUNITY NUMBER 060077 (CITY OF BAKERSFIELD), WITH AN EFFECTIVE DATE OF SEPTEMBER 26, 2008, AS BEING LOCATED IN FLOOD ZONE "X-UNSHADED": AREA OF MINIMAL FLOOD HAZARD.

LEGAL DESCRIPTION:
22. THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF BAKERSFIELD, COUNTY OF KERN, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

ALL OF THE SOUTHEAST QUARTER OF SECTION 4, TOWNSHIP 30 SOUTH, RANGE 28 EAST, MOUNT DIABLO BASE AND MERIDIAN, IN THE CITY OF BAKERSFIELD, COUNTY OF KERN, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

EXCEPTING THEREFROM THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER AND THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SAID SECTION 4.

ALSO EXCEPT ALL OIL, GAS, HYDROCARBON SUBSTANCES AND MINERALS IN AND UNDER SAID LAND AS PREVIOUSLY RESERVED OF RECORD.

BENCHMARK NOTE:
23. BENCHMARK H 55, FU0333: 1.5 MI E FROM BAKERSFIELD. 1.5 MILES EAST ALONG THE SOUTHERN PACIFIC-SANTA FE RAILROAD FROM THE STATION AT BAKERSFIELD, AT THE INTERSECTION OF MT. VERNON AVENUE AND U.S. HIGHWAY 466 (EDISON HIGHWAY), 44 FEET SOUTHWEST OF THE WEST CONCRETE PIER OF THE THIRD ROW FROM THE SOUTH EDGE OF A CONCRETE OVERPASS, 42 FEET NORTH OF THE CENTER LINE OF THE HIGHWAY, 45 FEET SOUTH OF THE SOUTH RAIL OF THE SOUTH TRACK, 9.3 FEET EAST-NORTHEAST OF A POWER POLE, 0.9 FEET SOUTH OF A WITNESS POST, ABOUT 2 FEET HIGHER THAN THE HIGHWAY, ABOUT 1 1/2 FEET LOWER THAN THE TRACK, AND SET IN THE TOP OF A CONCRETE POST PROJECTING 0.1 FOOT ABOVE THE GROUND.
ELEVATION = 423.37 FEET (NAVD 88)

EASEMENT INFORMATION TABLE:
(10) THE EFFECTS OF AN EASEMENT FOR ROAD, UTILITIES AND INCIDENTAL PURPOSES IN FAVOR OF KERN UNION HIGH SCHOOL DISTRICT PUBLIC FACILITIES FINANCING CORPORATION, RECORDED MARCH 5, 1986 IN BOOK 5849, AT PAGE 2178, OFFICIAL RECORDS OF KERN COUNTY.

(11) THE EFFECTS OF AN OFFER OF DEDICATION FOR INGRESS, EGRESS, ROAD AND INCIDENTAL PURPOSES IN FAVOR OF CITY OF BAKERSFIELD, RECORDED OCTOBER 10, 1988 IN BOOK 6171, AT PAGE 645, OFFICIAL RECORDS OF KERN COUNTY.

(12) THE EFFECTS OF AN EASEMENT FOR PIPELINE, INGRESS, EGRESS AND INCIDENTAL PURPOSES IN FAVOR OF CALIFORNIA WATER SERVICE COMPANY, RECORDED DECEMBER 22, 1988 IN BOOK 6193, AT PAGE 1692, OFFICIAL RECORDS OF KERN COUNTY.

(13)(14) THE EFFECTS OF AN EASEMENT FOR DRILL SITE AND INCIDENTAL PURPOSES IN FAVOR OF FRANCISCO D. SABICHI, SABICHI, OLLIE PRYOR, GERI BLOEMER COOPER, SHIRLEY STANFIELD, ANN FRANCES DILLON, DOROTHY BIMAT, CAROL RODGERS, RICHARD L. WILLETT, JR. AND DEAN SANDERS, RECORDED DECEMBER 01, 1989 IN BOOK 6320, AT PAGE 759, OFFICIAL RECORDS OF KERN COUNTY.

(15) THE EFFECTS OF AN EASEMENT FOR PUBLIC STREET AND INCIDENTAL PURPOSES IN FAVOR OF CITY OF BAKERSFIELD, RECORDED FEBRUARY 23, 2006 AS INSTRUMENT NO. 0206044982, OFFICIAL RECORDS OF KERN COUNTY.

(17) THE EFFECTS OF AN EASEMENT FOR STREET RIGHT OF WAY AND INCIDENTAL PURPOSES IN FAVOR OF CITY OF BAKERSFIELD, RECORDED JANUARY 29, 2013 AS INSTRUMENT NO. 0213012869, OFFICIAL RECORDS OF KERN COUNTY.

(18) THE EFFECTS OF A DOCUMENT ENTITLED "COVENANT DISCLOSING INCLUSION IN A MAINTENANCE DISTRICT", RECORDED MARCH 14, 2013 AS INSTRUMENT NO. 0213035589, OFFICIAL COUNTY OF KERN COUNTY.

NO.	REVISION	BY

NO.	REVISION	BY

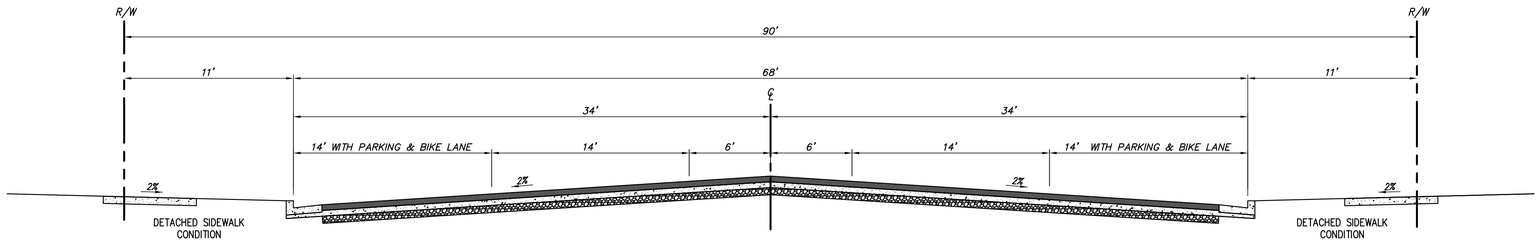
KIER+WRIGHT
250 Cherry Lane, Suite 107, 208
Manteca, CA 95337
Phone: (209) 328-1123
www.kierwright.com

VESTING TENTATIVE PARCEL MAP NO. 12498

BEING A SUBDIVISION OF A PORTION OF THE SOUTHEAST QUARTER OF SECTION 4, TOWNSHIP 30 SOUTH, RANGE 28 EAST, MOUNT DIABLO BASE AND MERIDIAN

BAKERSFIELD, KERN COUNTY RECORDS CALIFORNIA

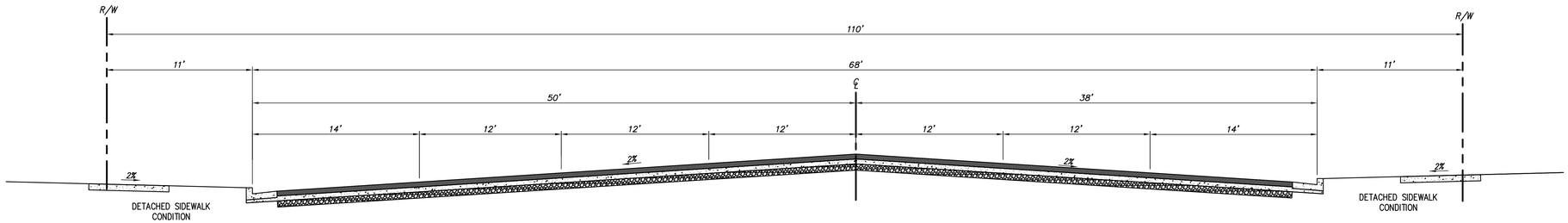
DATE	JUNE, 2023
SCALE	AS SHOWN
SURVEYOR	DAJ
DRAWN BY	JF
JOB NO.	A21602-1
SHEET	TM 1
OF	2 SHEETS



SOUTH WASHINGTON ST AND EAST BELLE TERRACE
TYPICAL SECTION

NOT TO SCALE

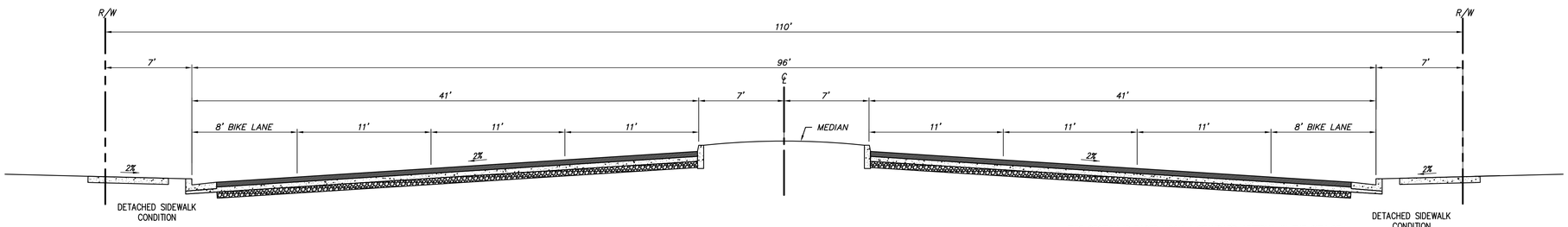
THIS SECTION IS BASED UPON A STANDARD ARTERIAL IN THE CITY OF BAKERSFIELD STANDARDS ST-16A OR AS DIRECTED BY CITY ENGINEER.



SOUTH WASHINGTON ST AND EAST BELLE TERRACE
EXPANDED INTERSECTION TYPICAL SECTION

NOT TO SCALE

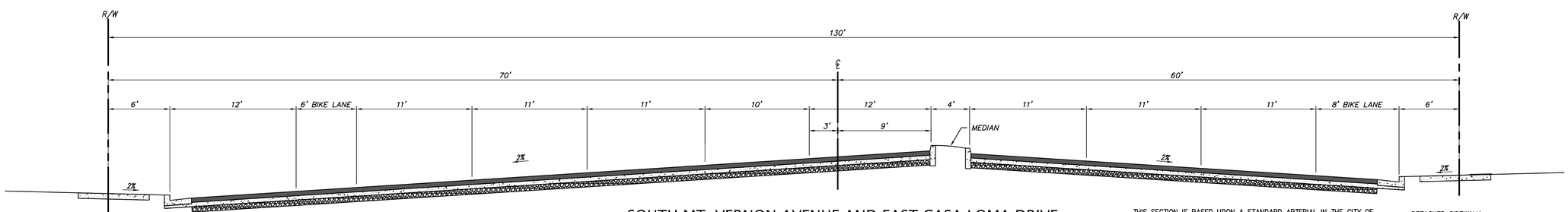
THIS SECTION IS BASED UPON A STANDARD ARTERIAL IN THE CITY OF BAKERSFIELD STANDARDS T6 OR AS DIRECTED BY CITY ENGINEER.



SOUTH MT. VERNON AVENUE AND EAST CASA LOMA DRIVE
TYPICAL SECTION

NOT TO SCALE

THIS SECTION IS BASED UPON A STANDARD ARTERIAL IN THE CITY OF BAKERSFIELD STANDARDS ST-16B OR AS DIRECTED BY CITY ENGINEER.



SOUTH MT. VERNON AVENUE AND EAST CASA LOMA DRIVE
EXPANDED INTERSECTION TYPICAL SECTION

NOT TO SCALE

THIS SECTION IS BASED UPON A STANDARD ARTERIAL IN THE CITY OF BAKERSFIELD STANDARDS T5 OR AS DIRECTED BY CITY ENGINEER.

NO.	REVISION	BY

NO.	REVISION	BY

KIER+WRIGHT
250 Cherry Lane, Suite 107, 208
Manteca, CA 95337
Phone: (209) 328-1123
www.kierwright.com

VESTING TENTATIVE PARCEL MAP NO. 12498

BEING A SUBDIVISION OF A PORTION OF THE SOUTHEAST QUARTER OF SECTION 4, TOWNSHIP 30 SOUTH, RANGE 28 EAST, MOUNT DIABLO BASE AND MERIDIAN

BAKERSFIELD, KERN COUNTY RECORDS CALIFORNIA

DATE	JUNE, 2023
SCALE	AS SHOWN
SURVEYOR	DAJ
DRAWN BY	JF
JOB NO.	A21602-1
SHEET	TM 2
OF	2 SHEETS

NOTICE OF EXEMPTION

TO: □ Office of Planning & Research
1400 Tenth Street, Room 222
Sacramento, CA 95814-3044

■ County Clerk, County of Kern
1115 Truxtun Avenue
Bakersfield, CA 93301

FROM: City of Bakersfield
Community Development
Dept. - Planning
1715 Chester Avenue
Bakersfield, CA 93301

Project Title (No.): Vesting Tentative Parcel Map 12498

General Location: Southeast Bakersfield, County of Kern

Specific Location: Southwest corner of East Belle Terrace and South Mt Vernon Avenue; APN: 167-070-03.

Project Description: Subdividing 141.46 acres into 4 parcels and 1 designated remainder.

Approving Agency: City of Bakersfield

Project Applicant: Kier & Wright
(Address) 250 Cherry Lane, Suite 107, Manteca, CA 95337

Exempt Status: (Check One)

- □ Ministerial (Sec. 21080(b)(1); 15268);
- □ Declared Emergency (Sec. 21080(b)(3); 15269(a));
- □ Emergency Project (Sec. 21080(b)(4); 15269(b));
- ■ Categorical Exemption. Class Minor Land Division, Section No. 15315.
- □ Statutory Exemptions. Code/Section No. _____

Reasons why project is exempt: Class 15 - Minor Land Division

Lead Agency Contact Person: Noeli Topete **Telephone:** (661) 326-3165

If filed by applicant:

1. Attach the certified document of exemption finding.
2. Has a notice of exemption been filed by the public agency approving the project? Yes □ No □

Signature: _____ **Date:** 16 August 2023 **Title:** Associate Planner I

- ■ Signed by Lead Agency
- □ Signed by Applicant

Date received for filing at OPR:

DRAFT

RESOLUTION NO. _____

RESOLUTION OF THE BAKERSFIELD PLANNING COMMISSION TO APPROVE VESTING TENTATIVE PARCEL MAP 12498 (PHASED) LOCATED AT THE SOUTHWEST CORNER OF EAST BELLE TERRACE AND SOUTH MT VERNON AVENUE.

WHEREAS, Kier & Wright representing GL Bakersfield Owners, LLC, filed an application with the City of Bakersfield Planning Department requesting a Vesting Tentative Parcel Map 12498 (the "Project"), consisting of 4 parcels and 1 designated remainder on 141.46 acres, as shown on attached Exhibit "B", located at the southwest corner of East Belle Terrace and South Mt Vernon Avenue as shown on attached Exhibit "C"; and

WHEREAS, the application was deemed complete on August 9, 2023; and

WHEREAS, the Project is Categorically Exempt from the requirements of the California Environmental Quality Act (CEQA)in accordance with State CEQA Guidelines Section 15315, Class 15, Minor Land Division; and

WHEREAS, the Secretary of the Planning Commission, did set, Thursday, September 21, 2023, at 5:30 p.m. in the Council Chambers of City Hall, 1501 Truxtun Avenue, Bakersfield, California, as the time and place for a public hearing before the Planning Commission to consider the Project, and notice of the public hearing was given in the manner provided in Title 16 of the Bakersfield Municipal Code; and

WHEREAS, the laws and regulations relating to CEQA and the City of Bakersfield's CEQA Implementation Procedures have been duly followed by city staff and the Planning Commission; and

WHEREAS, the City of Bakersfield Planning Department (1715 Chester Avenue, Bakersfield, California) is the custodian of all documents and other materials upon which the environmental determination is based; and

WHEREAS, the facts presented in the staff report, environmental review, and special studies (if any), and evidence received both in writing and by verbal testimony at the above referenced public hearing support the following findings:

1. All required public notices have been given. Hearing notices regarding the Project were mailed to property owners within 300 feet of the Project area and published in the *Bakersfield Californian*, a local newspaper of general circulation, 10 days prior to the hearing.

2. The provisions of CEQA, the State CEQA Guidelines, and the City of Bakersfield CEQA Implementation Procedures have been followed. Staff determined that the application is a project under CEQA and the Project is Categorically Exempt from State CEQA Guidelines under Section 15315 and duly noticed for public review.

3. Urban services are available for the proposed development. The Project is within an area to be served by all necessary utilities and waste disposal systems. Improvements proposed as part of the Project will deliver utilities to the individual lots or parcels to be created.

4. The application, together with the provisions for its design and improvement, is consistent with the Metropolitan Bakersfield General Plan. (Subdivision Map Act Section 66473.5) The proposed density and intensity of development are consistent with the SI (Service Industrial) land use classification on the property. Proposed road improvements are consistent with the Circulation Element. The overall design of the project, as conditioned, is consistent with the goals and policies of all elements of the General Plan.

5. Mineral right owners' signatures are not required on the final map pursuant to Bakersfield Municipal Code Section BMC Section 16.22.030.B. In accordance with Subdivision Map Act Section 66445(e), mineral rights owners' signatures are not required on final parcel maps with 4 or fewer parcels (BMC Section 16.22.030.B). This parcel map contains 4 buildable parcels.

6. The conditions of approval are necessary for orderly development and to provide for the public health, welfare, and safety.

NOW, THEREFORE, **BE IT RESOLVED** by the Planning Commission of the City of Bakersfield as follows:

1. The recitals above are true and correct and incorporated herein by this reference.

2. The map is Categorically Exempt from the requirements of State CEQA Guidelines Section 15315.

3. Vesting Tentative Parcel Map 12498 is hereby approved with conditions of approval and mitigation measures shown on Exhibit "A".

I HEREBY CERTIFY that the foregoing Resolution was passed and adopted by the Planning Commission of the City of Bakersfield at a regular meeting thereof held on September 21, 2023, on a motion by Commissioner _____and seconded by Commissioner _____, by the following vote.

AYES:
NOES:
ABSENT:

APPROVED

ZACHARY BASHIRTASH, CHAIR
City of Bakersfield Planning Commission

Exhibits (attached):

Exhibit A: Conditions of Approval
Exhibit B: Location Map with Zoning
Exhibit C: Tentative Map

By NTopete\ s:\05_land division\12498\01_hearing & noticing documents\draft\vtpm 12498_pc-res.docx

EXHIBIT "A"
VESTING TENTATIVE PARCEL MAP 12498
CONDITIONS OF APPROVAL

NOTE to Subdivider/Applicant: It is <u>important</u> that you review and comply with requirements and deadlines listed in the "FOR YOUR INFORMATION" packet that is provided separately. This packet contains existing ordinance requirements, policies, and departmental operating procedures as they may apply to this subdivision.

<u>PUBLIC WORKS</u>

1. There was no letter submitted requesting deviations from standards.
2. Approval of this tentative map does not indicate approval of grading, drainage lines and appurtenant facilities shown, or any variations from ordinance, standard, and policy requirements which have neither been requested nor specifically approved.
3. Prior to grading plan review submit the following for review and approval:
   3.1. A drainage study for the entire subdivision shall be submitted for review and approval by the City Engineer. Drainage from this project site including street frontage shall be kept on site. The proposed sump and all onsite storm drain within this development shall be privately maintained. A flowage and drainage easement shall be recorded prior to approval of the grading plans.
   3.2. A sewer study to include the entire subdivision and showing what surrounding areas may be served by the main line extensions. Submit verification to the City Engineer of the existing sewer capability to accept the additional flows to be generated through the development.
   3.3. If the parcel map is discharging storm water to a canal, a channel, or the Kern River: In order to meet the requirements of the City of Bakersfield's NPDES permit, and to prevent the introduction of sediments from construction or from storm events to the waters of the US, all storm water systems that ultimately convey drainage to the river or a canal shall incorporate the use of both source control BMP's and structural treatment control BMP's.
4. The following conditions must be reflected in the design of the improvement plans:
   4.1. Final plan check fees shall be submitted with the first plan check submission.
   4.2. Per Resolution 108-23 the area within the Parcel Map shall implement and comply with the "complete streets" policy. Complete streets will require pedestrian and bicycle access to the subdivision from existing sidewalks and bike lanes. If there is a gap less than 0.25 mile then construction of asphalt sidewalks and bike lanes to the subdivision will be required.
   4.3. Install traffic signal interconnect conduit and pull rope for the frontage in all arterials and collectors.

4.4. In addition to other paving requirements, on and off-site road improvements may be required from any collector or arterial street to provide left and right turn channelization into each street (or access point) within the subdivision (or development), where warranted and as directed by the City Engineer. Said channelization shall be developed to provide necessary transitions and deceleration lanes to meet the current CalTrans standards for the design speed of the roadway in question.

4.5. Off-site pavement and striping construction will be required to transition from the proposed/ultimate on-site improvements to the existing conditions at the time construction commences. Transitions must be designed in accordance with City Standards and/or the Caltrans Highway Design Manual. If existing conditions change during the period of time between street improvement plan approval and construction commencement, the street improvement plans must be revised and approved by the City Engineer.

5. The subdivider shall either construct the equivalent full width landscaped median island in S Mt Vernon Ave and Casa Loma Dr for the length of the site's frontage, or pay $100 per linear foot (their proportionate share of the cost for the future construction of the median).

   Median islands shall be designed by the first tract to be approved on a side. The medians may be constructed by the first tract on a side, or the median island fees shall be paid. NOTE: MEDIAN CONSTRUCTION AND LANDSCAPING COSTS MAY BE BASED ON ESTIMATES APPROVED BY THE CITY ENGINEER per City standards unless costs (median fees) have been previously identified in previous conditions for the same property. The median estimate shall include line items for curb, stamped concrete, landscaping, irrigation piping and controllers. If the median island is not constructed, the second tract across the street shall construct and landscape the median island. Construction or payment shall be for the full width street frontage of the land being subdivided. The total cost may be apportioned between the phases and paid prior to recordation of each phase if he elects to pay his share of the costs for the future construction.

6. The phasing map as submitted may be unbalanced with respect to the required improvements along the Parcel Map frontages. Therefore, in order to promote orderly development, each phase shall be responsible for an equal dollar amount of frontage improvement. Prior to recordation of a final map for any phase that does not construct its share of the improvements, the difference between the cost of the frontage improvements constructed and the phase share shall be placed into an escrow account. The money deposited in this account would be for the use of the developer of any future phase responsible for more than its share of improvements. The final per lot share will be based upon an approved engineer's estimate. In lieu of the use of an escrow account, the developer may choose to construct with each phase its proportionate share of the frontage improvements, with approval of the City Engineer.

7. The following conditions are based upon the premise that filing of Final Maps will occur in the order shown on the map with Phase 1 first, then Phase 2, then Phase 3, etc. If recordation does not occur in that normal progression, then, prior to recordation of a final map, the City Engineer shall determine the extent of improvements to be constructed with that particular phase.

7.1. The following shall occur with Phase 1.

7.1.1. Construct half width improvements along East Belle Terrace, to Collector street standards, from South Washington St to South Mt Vernon Ave

7.1.2. Construct half width improvements along South Mt Vernon Ave, to Arterial street standards, from East Belle Terrace to the Phase 1/2 boundary.

7.1.3. Construct the Traffic Signal at the intersection of East Belle Terrace and Mt Vernon Ave OR provide a Traffic study, for review by the Traffic Engineer, to determine whether this requirement can be deferred to a later phase.

7.2. The following shall occur with Phase 2.

7.2.1. Construct half width improvements along South Mt Vernon Ave, to Arterial street standards, from the Phase 1/2 boundary to East Casa Loma Dr.

7.2.2. Construct half width improvements along Casa Loma Drive, to Arterial street standards, from S Mt Vernon Ave to the Phase 2/3 boundary.

7.3. The following shall occur with Phase 3.

7.3.1. Construct half width improvements along South Washington St, to Collector street standards, from East Belle Terrace to East Casa Loma Dr.

7.3.2. Construct half width improvements along Casa Loma Drive, to Arterial street standards, from the Phase 2/3 boundary to South Washington St.

7.4. The subdivider is responsible for verifying that existing streets within the boundary of the parcel map are constructed to city standards and the developer must reconstruct or repair substandard existing off-site street improvements that front the project site, to the adopted city standards as directed by the City Engineer.

7.5. Where streets do not have curb and gutter, construct a minimum section of 36 feet wide consisting of 2-12' lanes, 2-4' paved shoulders and 2 additional feet per side of either AC or other dust proof surface.

7.6. Turning movements along arterial streets shall be restricted to right turn in and right turn out only.

7.7. Street Name Signs (SNS):

7.7.1. Metro Size SNS shall be installed at the intersection of local streets with Arterial and collector streets.

7.7.2. Standard SNS shall be installed at all other locations.

If the number of phases or the boundaries of the phases are changed, the developer must submit to the City Engineer an exhibit showing the number and configuration of the proposed phases. The City Engineer will review the exhibit and determine the order and extent of improvements to be constructed with each new phase. The improvement plans may require revision to conform to the new conditions.

8. Prior to recordation of the first final map, the applicant shall:

   8.1. Pay their proportionate fair share for the Eastbound to Southbound right turn lane at the intersection of Brundage Lane and Mt Vernon Ave OR provide a Traffic study, for review by the Traffic Engineer, to determine whether this requirement can be deferred to a later phase.

9. Prior to recordation of the Final Map, the applicant shall:

   9.1. Submit an enforceable, recordable document approved by the City Attorney to be recorded concurrently with the Final Map which will prohibit occupancy of any lot until all improvements, of the corresponding phase, have been completed by the subdivider and accepted by the City.

   9.2. The subdivider shall submit an enforceable, recordable document approved by the City Attorney to be recorded concurrently with the Final Map containing information with respect to the addition of this subdivision to the consolidated maintenance district. If the parcel is already within a consolidated maintenance district, the owner shall update the maintenance district documents.

   9.3. If it becomes necessary to obtain any off site right of way and if the subdivider is unable to obtain the required right of way, then he shall pay to the City the up-front costs for eminent domain proceedings and enter into an agreement and post security for the purchase and improvement of said right of way.

   9.4. Submit for the City's Review and approval C.C. & R.'s and Property Owner's Association By-Laws for the use and maintenance of all non-dedicated, shared facilities. Among those non-dedicated, shared facilities will be the on-site sewer main lines and laterals and storm water retention basin(s), shared access, and associated storm drain lines and appurtenant facilities.

10. Prior to Building Occupancy, the applicant shall provide written confirmation, from Caltrans, stating that the Caltrans conditions regarding the traffic signal at the SR 58 westbound ramps and Mt Vernon Avenue have been satisfied. This could be in the form of an agreement between the applicant and Caltrans.

11. Submit a street lighting plan for the frontage streets, if not already approved and installed.

12. Prior to the recordation of the first final map within this project site, subdivider shall make written notification to the City Engineer of any public improvements required to be financed or constructed outside the boundaries of the tentative map(i.e., "offsite improvements"), as defined in BMC § 116.16.080(E), and the cost of such offsite improvements. The notice shall include an engineer's estimate or other documentation as required by the City Engineer that outlines by line item the specific offsite improvements for purposes of verifying extension of time eligibility pursuant to Government Code Section 66452.6(a). The written notification and documentation are subject to approval by the City Engineer or his/her designee.
13. The developer is required to construct an improvement which is on the facilities list for the Metropolitan Bakersfield Transportation Impact Fee, Mt Vernon Avenue. The developer shall receive credit against his traffic impact fees for constructing this project. The developer must submit an appraisal, to be approved by the City Engineer, verifying the cost of the right-of-way to be acquired. This credit is not available until the improvement has been constructed by the developer and accepted for maintenance by the City. Any building permit issued prior to this acceptance shall pay the full impact fee.
14. It is recommended that the on-site sewer system shall be inspected with video equipment designed for this purpose and as approved by the City Engineer. If the developer chooses to video the on-site sewer system, then the following procedure is recommended: The television camera shall have the capability of rotating 360°, in order to view and record the top and sides of the pipe, as required. The video inspection shall be witnessed by the subdivider's engineer, who will also initial and date the "Chain of Custody" form. Any pipe locations revealed to be not in compliance with the plans and specifications shall be corrected. A recorded video cassette completed "Chain of Custody" form, and a written log (which includes the stationing, based on the stationing of the approved plans, of all connected laterals) of the inspection shall be provided for viewing and shall be approved by the subdivider's engineer prior to acceptance. After the subdivider's acceptance of the system, the video cassette, forms, and logs shall be submitted to the City Engineer.
15. The developer shall install streetlights per current City of Bakersfield standards.
16. Prior to the issuance of building permits, the project applicant shall participate in the RTIF program by paying the adopted fees in place for the land use type at time of development.
17. All lots with sumps and water well facilities will have wall and/or slatted chain link fence and landscaping to the appropriate street standards, at the building setback with landscaping as approved by the Public Works and Parks Directors, unless the sump is a private facility. If the sump will be privately maintained, the sump shall be constructed to City standards and shall have a wall or slatted chain link fence separating the sump from the public.
18. Access to the sump shall be determined with the review of the street improvement plans.
19. Drainage basins shall be reviewed and approved by both the Public Works Department and the Water Resources Department.

20. Install blue markers in the street at the fire hydrants per the Fire Department requirements.
21. The use of interim, non-standard drainage retention areas shall be in accordance with the drainage policy adopted by letter dated January 22, 1997, and modification letter dated October 20, 2000.
22. In order to preserve the permeability of the sump and to prevent the introduction of sediments from construction or from storm events, Best Management Practices for complying with the requirements of the Clean Water Act are required.
23. Any application for an Extension of Time per SMA 66452.6a must be submitted to the Public Works Department prior to the expiration of the tentative map.

FIRE SAFETY DIVISION

24. Pipeline Easements.
    - 24.1. Concurrently with recordation of any phase that includes the pipeline easements or portions thereof, subdivider shall show the easements on the final map with a notation that structures including accessory buildings, habitable portion of a structure, garage, deck/patio, swimming pools or unoccupied permanent structure, are prohibited within the setback and record a corresponding covenant.
    - 24.2. Prior to or concurrently with recordation of any phase that includes the pipeline easements or portions thereof, subdivider shall show on the final map that no habitable portion of a structure, garage, deck/patio, swimming pools or unoccupied permanent structure may be built within 50 feet of a gas main, or transmission line, or refined liquid product line with 36 inches of cover and record a corresponding covenant.
    - 24.3. No structure may be within 40 feet of a hazardous liquids pipeline bearing refined product, within 48 inches or more of cover. If a pipeline meets these criteria, the 40-foot setback line shall be shown in the final map and a corresponding covenant shall be recorded prior to or concurrently with recordation of any phase that is affected.
    - 24.4. No habitable portion of a structure may be built within thirty (30) feet of a crude oil pipeline operating at twenty percent (20%) or greater of its design strength.
    - 24.5. Prior to or concurrently with recordation of any phase within 250 feet of the pipeline easements, subdivider shall record a covenant disclosing the location of the pipelines on all lots of this subdivision within 250 feet of the pipelines.

American Petroleum Institute Standards and Guidelines for property development

25. Fire Apparatus Access Roads and Hydrants
    - 25.1. When fire protection, including fire apparatus access roads and water supplies for protection, is required to be installed, such shall be installed and made serviceable prior to any building permit issuance and throughout the time of construction.

25.2. Dead-End fire apparatus access roads in excess of 150 feet shall be provided with width and turnaround provisions in accordance with Table D103.4.

(*California Fire Code*)

Table D103.4
Requirments for Dead-End Fire Apparatus Access Roads

Length (Feet)	Width (Feet)	Turnaround Required
0-150	20	None required
151-500	20	120-foot Hammerhead, 60-foot "Y" or 96-foot diameter cul-de-sac
501-750	26	120-foot Hammerhead, 60-foot "Y" or 96-foot diameter cul-de-sac
Over 750	Special Approval Required	

25.3. Fire Apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus weighing at least 75,000 pounds and shall be surfaced with the first lift of asphalt to provide all-weather driving capabilities.

RECREATION AND PARKS

26. If median construction on South Mt Vernon is required, the Subdivider shall be responsible for improving median landscaping to City standards.

Orderly development.

CITY ATTORNEY

27. In consideration by the City of Bakersfield for land use entitlements, including but not limited to related environmental approvals related to or arising from this project, the applicant, and/or property owner and/or subdivider ("Applicant" herein) agrees to indemnify, defend, and hold harmless the City of Bakersfield, its officers, agents, employees, departments, commissioners and boards ("City" herein) against any and all liability, claims, actions, causes of action or demands whatsoever against them, or any of them, before administrative or judicial tribunals of any kind whatsoever, in any way arising from, the terms and provisions of this application, including without limitation any CEQA approval or any related development approvals or conditions whether imposed by the City, or not, except for CITY's sole active negligence or willful misconduct.

This indemnification condition does not prevent the Applicant from challenging any decision by the City related to this project and the obligations of this condition apply regardless of whether any other permits or entitlements are issued.

The City will promptly notify Applicant of any such claim, action or proceeding, falling under this condition within thirty (30) days of actually receiving such claim. The City, in its sole discretion, shall be allowed to choose the attorney or outside law firm to defend the City at the sole cost and expense of the Applicant and the City is not obligated to use any law firm or attorney chosen by another entity or party.

PLANNING

28. This subdivision shall comply with all provisions of the Bakersfield Municipal Code, and applicable resolutions, policies and standards in effect at the time the application for the subdivision map was deemed complete per Government Code Section 66474.2.

29. The subdivision shall be recorded in no more than 4 phases. Phases shall be identified numerically and not alphabetically.

    Orderly development.

30. Prior to recordation of each final map, subdivider shall submit a "will serve" or "water availability" letter or other documentation acceptable to the Planning Director from the water purveyor stating the purveyor will provide water service to the phase to be recorded.

    Required for orderly development and provide for the public health, welfare and safety by ensuring water service to the subdivision at the time of final map recordation because the water purveyor has included an expiration date in the initial "will serve" letter.

31. In the event a previously undocumented well is uncovered or discovered on the project site, the subdivider is responsible to contact the Department of Conservation's Division of Geologic Energy Management (CalGEM). The subdivider is responsible for any remedial operations on the well required by CalGEM. Subdivider shall also be subject to provisions of BMC Section 15.66.080 (B.)

    Police power based on public health, welfare and safety.

32. Prior to or concurrently with recordation of any phase within 500 feet of the drill site, subdivider shall record a covenant disclosing the location of the drill site on all lots of this subdivision within 500 feet of them.

    Comply with BMC Section BMC 15.66.080 C. and for public health, welfare and safety.

33. Prior to recordation of each final map, the subdivider shall provide written confirmation to the Planning Director that the abandoned well plug been leak tested by an independent, third party, qualified leak testing company and that it shows no sign of leakage. If there is evidence of leakage, re-abandonment of the well may be required to the satisfaction of the Department of Conservation's Division of Geologic Energy Management (CalGEM), confirmation of which the subdivider shall provide to the Planning Director.

    Police power based on public health, welfare and safety.

34. Prior to or concurrently with recordation of any final map containing abandoned oil well, subdivider shall provide a covenant disclosing the location of abandoned oil wells and the 10-foot non-buildable radii shall be recorded. The covenant shall be submitted to the City Attorney and Planning Director for review and approval prior to recordation of the final map.

    Police power based on public health, welfare and safety.

35. Prior to issuance of a building permit or development, whichever occurs first, of the Designated Remainder, the developer will either apply for a subdivision map or a Certificate of Compliance for the Designated Remainder.

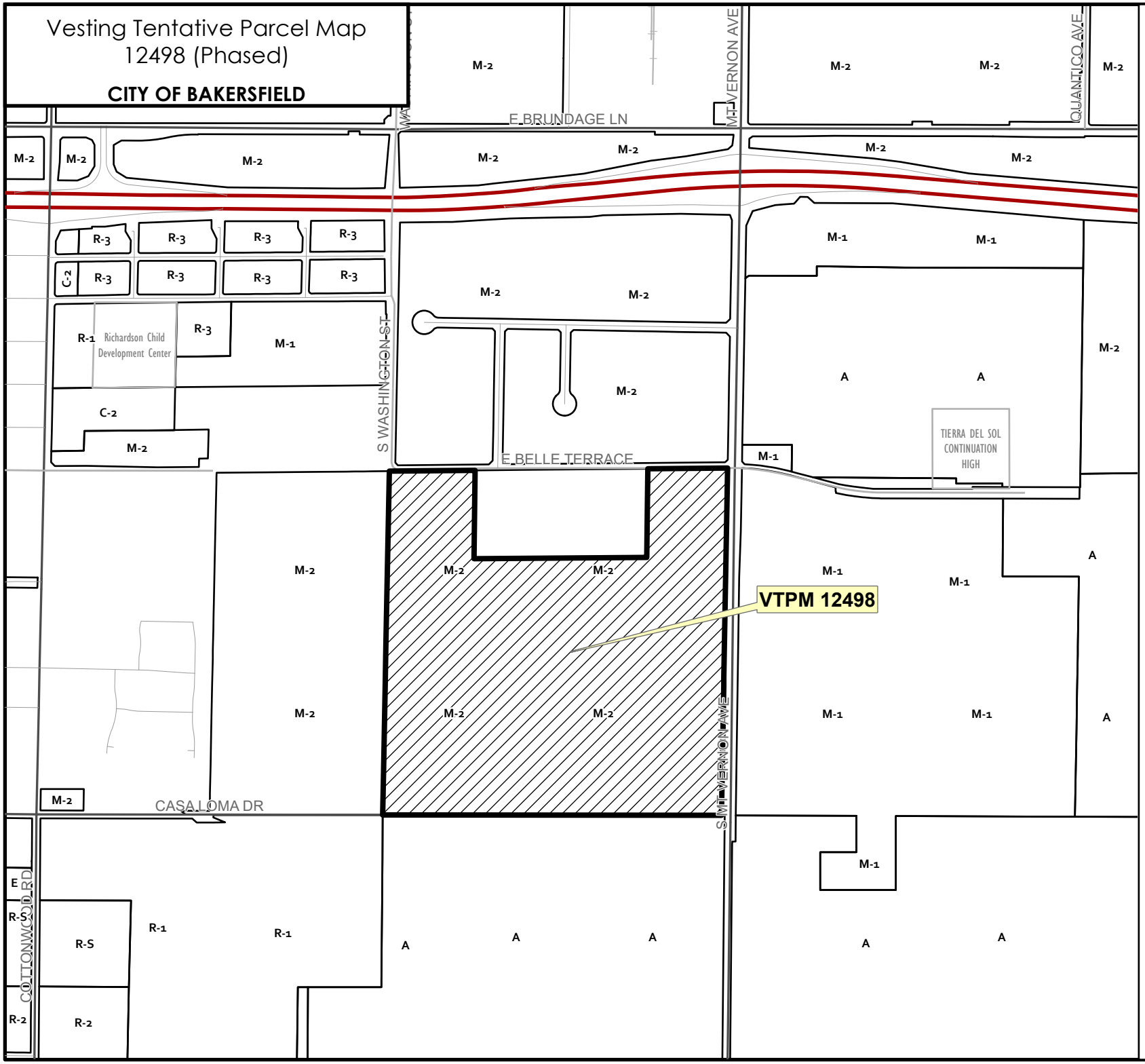
    Subdivision Map Act Section 66424.6

36. If during construction activities or ground disturbance, cultural resources are uncovered, the subdivider shall stop work and retain a qualified archeologist for further study. Subdivider shall notify the proper authorities and be subject to any mitigation measures required of the archeologist.

    Mitigation measure.

Vesting Tentative Parcel Map 12498 (Phased)

CITY OF BAKERSFIELD



LEGEND (ZONE DISTRICTS)

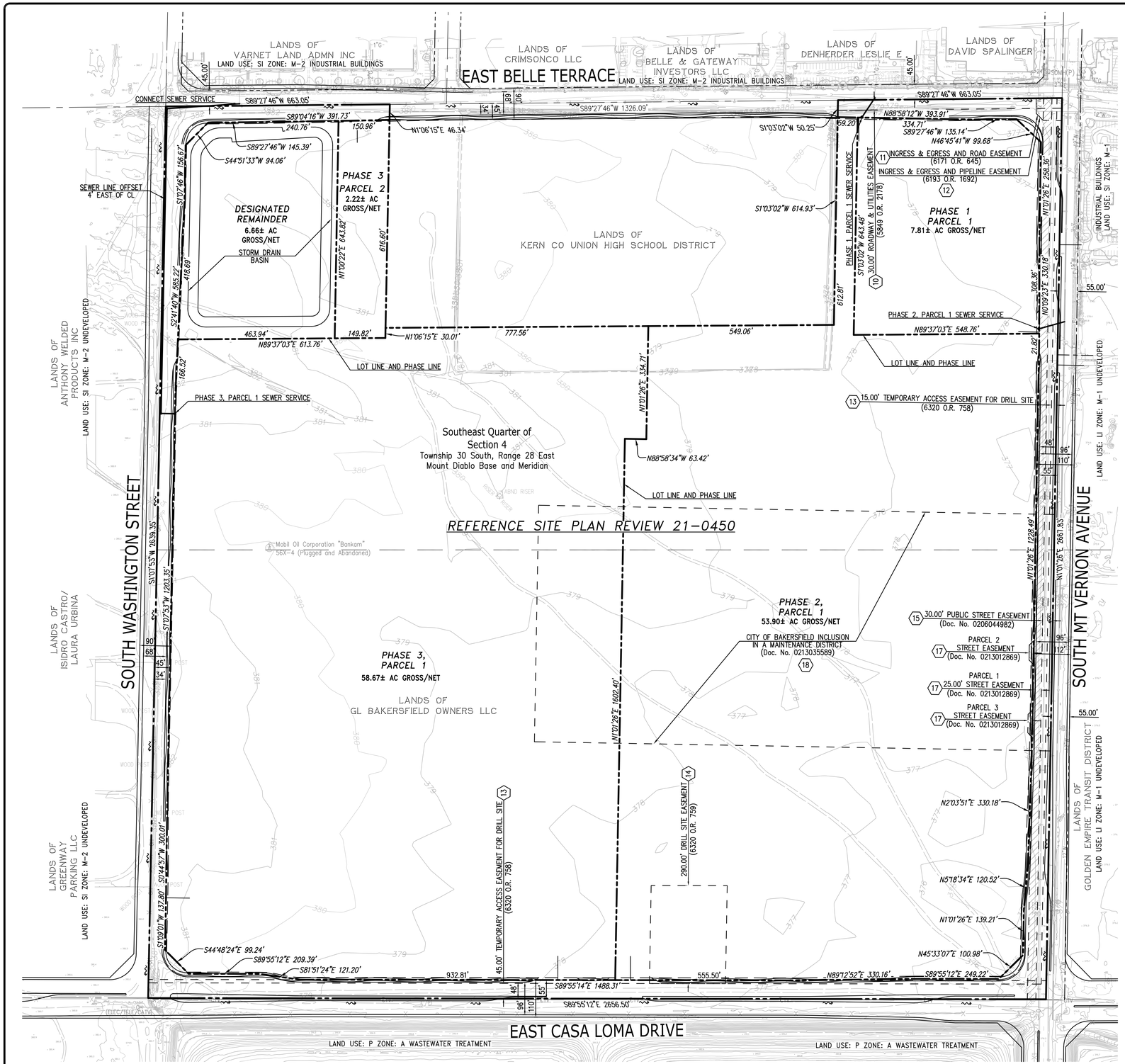
R-1 One Family Dwelling
6,000 sq.ft. min lot size
R-1-4.5 One Family Dwelling
4,500 sq.ft. min lot size
E Estate
10,000 sq.ft. min lot size
R-S Residential Suburban
24,000 sq.ft./dwelling unit
R-S-( ) Residential Suburban
1, 2.5, 5 or 10 min lot size
R-2 Limited Multiple Family Dwelling
4,500 sq.ft. min lot size (single family)
6,000 sq.ft. min lot size (multifamily)
2,500 sq.ft. lot area/dwelling unit
R-3 Multiple Family Dwelling
6,000 sq.ft. min lot size
1,250 sq.ft. lot area/dwelling unit
R-4 High Density Multiple Family Dwelling
6,000 sq.ft. min lot size
600 sq.ft. lot area/dwelling unit
R-H Residential Holding
20 acre min lot size
A Agriculture
6,000 sq.ft. min lot size
A-20A Agriculture
20 acre min lot size
PUD Planned Unit Development
TT Travel Trailer Park
MH Mobilehome
C-O Professional and Administrative Office
C-1 Neighborhood Commercial
C-2 Regional Commercial
C-C Commercial Center
C-B Central Business
PCD Planned Commercial Development
M-1 Light Manufacturing
M-2 General Manufacturing
M-3 Heavy Industrial
P Automobile Parking
RE Recreation
Ch Church Overlay
OS Open Space
HOSP Hospital Overlay
AD Architectural Design Overlay
FP-P Floodplain Primary
FP-S Floodplain Secondary
AA Airport Approach
DI Drilling Island
PE Petroleum Extraction Combining
SC Senior Citizen Overlay
HD Hillside Development Combining
WM- West Ming Specific Plan

BAKERSFIELD

Feet

0 520 1,040

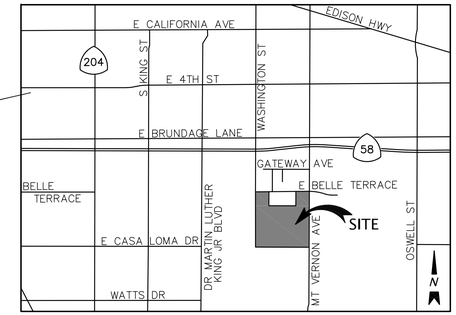
8/15/2023



EXISTING & PROPOSED CONDITIONS/PARCELS

NOTE:
PHASING SHOWN IS CONCEPTUAL, AND SUBJECT TO CHANGE. SHOULD PHASING SEQUENCING DIFFER FROM WHAT IS SHOWN ON THESE PLANS, ADDITIONAL COORDINATION WITH THE CITY SHALL BE REQUIRED.

LICENSED LAND SURVEYOR
DEAN A. JUKKOLA
No. 9032
STATE OF CALIFORNIA



VICINITY MAP

NOT TO SCALE

PROJECT DATA

OWNER
1. GL BAKERSFIELD OWNERS, LLC
18301 VON KARMAN AVE. SUITE 250
IRVINE, CA 92612-1009
(949) 331-1300

SUBDIVIDER:
2. KIER & WRIGHT CIVIL ENGINEERS & SURVEYORS, INC.
2850 COLLIER CANYON ROAD
LIVERMORE, CA 94551
(925) 245-8788

GENEAL NOTES:
3. ASSESSOR'S PARCEL NUMBER: 167-070-03-00-6
4. THIS DEVELOPMENT WILL CONFORM TO THE CITY OF BAKERSFIELD SUBDIVISION STANDARDS
5. FIRE PROTECTION IN CONFORMANCE WITH THE CITY OF BAKERSFIELD FIRE DEPARTMENT STANDARDS
6. THIS MAP SHALL FOLLOW THE "COMPLETE STREETS" POLICY PER RESOLUTION 035-13

STATISTICS:
7. APPROXIMATE ACREAGE: 141.4602± ACRES
8. EXISTING NUMBER OF PARCELS: 1
9. PROPOSED NUMBER OF PARCELS: 4 PARCELS AND 1 REMAINDER

UTILITIES:
10. WATER: CALIFORNIA WATER SERVICE COMPANY
11. SEWER: CITY OF BAKERSFIELD
12. STORM: CITY OF BAKERSFIELD
13. GAS: PACIFIC GAS AND ELECTRIC COMPANY
14. ELECTRIC: PACIFIC GAS AND ELECTRIC COMPANY
15. TELEPHONE: AT&T
16. CABLE: SPECTRUM

LAND USE:
17. EXISTING LAND USE: VACANT LAND, GENERAL PLAN DESIGNATION: SI (SERVICE INDUSTRAL)
18. PROPOSED LAND USE: WAREHOUSING AND DISTRIBUTION, GENERAL PLAN DESIGNATION: SI (SERVICE INDUSTRIAL)
19. EXISTING ZONING: M-2, GENERAL MANUFACTURING
20. PROPOSED ZONING: NO CHANGE

FLOOD ZONES:
21. THE SUBJECT PROPERTY IS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) FOR KERN COUNTY, CALIFORNIA, MAP NUMBER 06029C2325E FOR COMMUNITY NUMBER 060077 (CITY OF BAKERSFIELD), WITH AN EFFECTIVE DATE OF SEPTEMBER 26, 2008, AS BEING LOCATED IN FLOOD ZONE "X-UNSHADED": AREA OF MINIMAL FLOOD HAZARD.

LEGAL DESCRIPTION:
22. THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF BAKERSFIELD, COUNTY OF KERN, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

ALL OF THE SOUTHEAST QUARTER OF SECTION 4, TOWNSHIP 30 SOUTH, RANGE 28 EAST, MOUNT DIABLO BASE AND MERIDIAN, IN THE CITY OF BAKERSFIELD, COUNTY OF KERN, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

EXCEPTING THEREFROM THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER AND THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SAID SECTION 4.

ALSO EXCEPT ALL OIL, GAS, HYDROCARBON SUBSTANCES AND MINERALS IN AND UNDER SAID LAND AS PREVIOUSLY RESERVED OF RECORD.

BENCHMARK NOTE:
23. BENCHMARK H 55, FU0333: 1.5 MI E FROM BAKERSFIELD. 1.5 MILES EAST ALONG THE SOUTHERN PACIFIC-SANTA FE RAILROAD FROM THE STATION AT BAKERSFIELD, AT THE INTERSECTION OF MT. VERNON AVENUE AND U.S. HIGHWAY 466 (EDISON HIGHWAY), 44 FEET SOUTHWEST OF THE WEST CONCRETE PIER OF THE THIRD ROW FROM THE SOUTH EDGE OF A CONCRETE OVERPASS, 42 FEET NORTH OF THE CENTER LINE OF THE HIGHWAY, 45 FEET SOUTH OF THE SOUTH RAIL OF THE SOUTH TRACK, 9.3 FEET EAST-NORTHEAST OF A POWER POLE, 0.9 FEET SOUTH OF A WITNESS POST, ABOUT 2 FEET HIGHER THAN THE HIGHWAY, ABOUT 1 1/2 FEET LOWER THAN THE TRACK, AND SET IN THE TOP OF A CONCRETE POST PROJECTING 0.1 FOOT ABOVE THE GROUND.
ELEVATION = 423.37 FEET (NAVD 88)

EASEMENT INFORMATION TABLE:
(10) THE EFFECTS OF AN EASEMENT FOR ROAD, UTILITIES AND INCIDENTAL PURPOSES IN FAVOR OF KERN UNION HIGH SCHOOL DISTRICT PUBLIC FACILITIES FINANCING CORPORATION, RECORDED MARCH 5, 1986 IN BOOK 5849, AT PAGE 2178, OFFICIAL RECORDS OF KERN COUNTY.

(11) THE EFFECTS OF AN OFFER OF DEDICATION FOR INGRESS, EGRESS, ROAD AND INCIDENTAL PURPOSES IN FAVOR OF CITY OF BAKERSFIELD, RECORDED OCTOBER 10, 1988 IN BOOK 6171, AT PAGE 645, OFFICIAL RECORDS OF KERN COUNTY.

(12) THE EFFECTS OF AN EASEMENT FOR PIPELINE, INGRESS, EGRESS AND INCIDENTAL PURPOSES IN FAVOR OF CALIFORNIA WATER SERVICE COMPANY, RECORDED DECEMBER 22, 1988 IN BOOK 6193, AT PAGE 1692, OFFICIAL RECORDS OF KERN COUNTY.

(13)(14) THE EFFECTS OF AN EASEMENT FOR DRILL SITE AND INCIDENTAL PURPOSES IN FAVOR OF FRANCISCO D. SABICHI, SABICHI, OLLIE PRYOR, GERI BLOEMER COOPER, SHIRLEY STANFIELD, ANN FRANCES DILLON, DOROTHY BIMAT, CAROL RODGERS, RICHARD L. WILLETT, JR. AND DEAN SANDERS, RECORDED DECEMBER 01, 1989 IN BOOK 6320, AT PAGE 759, OFFICIAL RECORDS OF KERN COUNTY.

(15) THE EFFECTS OF AN EASEMENT FOR PUBLIC STREET AND INCIDENTAL PURPOSES IN FAVOR OF CITY OF BAKERSFIELD, RECORDED FEBRUARY 23, 2006 AS INSTRUMENT NO. 0206044982, OFFICIAL RECORDS OF KERN COUNTY.

(17) THE EFFECTS OF AN EASEMENT FOR STREET RIGHT OF WAY AND INCIDENTAL PURPOSES IN FAVOR OF CITY OF BAKERSFIELD, RECORDED JANUARY 29, 2013 AS INSTRUMENT NO. 0213012869, OFFICIAL RECORDS OF KERN COUNTY.

(18) THE EFFECTS OF A DOCUMENT ENTITLED "COVENANT DISCLOSING INCLUSION IN A MAINTENANCE DISTRICT", RECORDED MARCH 14, 2013 AS INSTRUMENT NO. 0213035589, OFFICIAL COUNTY OF KERN COUNTY.

NO.	REVISION	BY

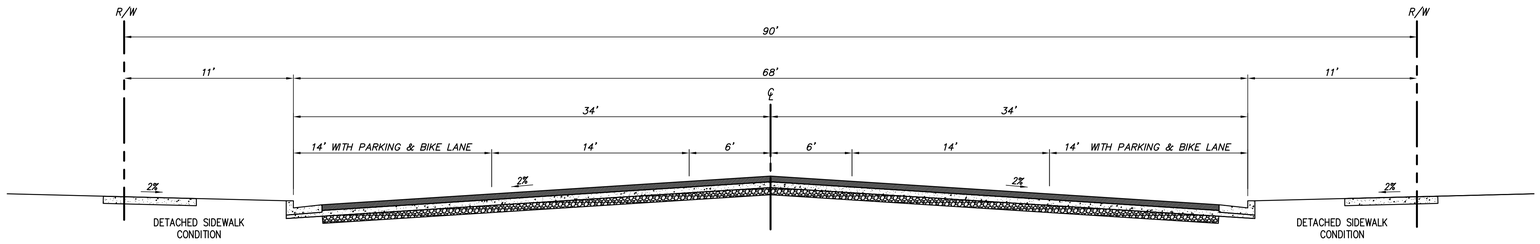
KIER+WRIGHT
250 Cherry Lane, Suite 107, 208
Manteca, CA 95337
Phone: (209) 328-1123
www.kierwright.com

VESTING TENTATIVE PARCEL MAP NO. 12498

BEING A SUBDIVISION OF A PORTION OF THE SOUTHEAST QUARTER OF SECTION 4, TOWNSHIP 30 SOUTH, RANGE 28 EAST, MOUNT DIABLO BASE AND MERIDIAN

BAKERSFIELD, KERN COUNTY RECORDS CALIFORNIA

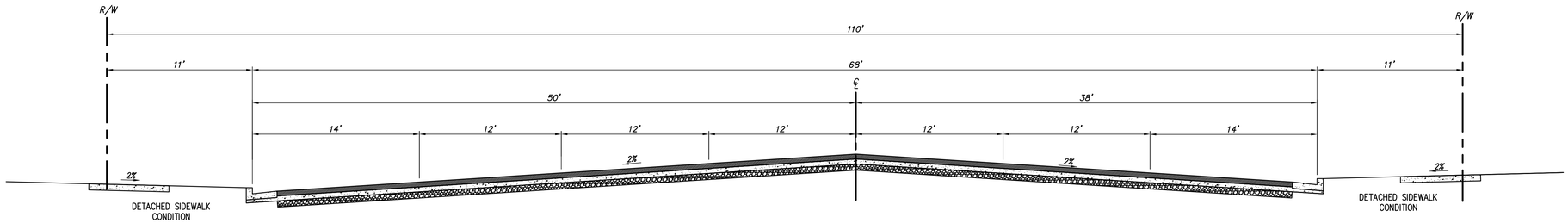
DATE	JUNE, 2023
SCALE	AS SHOWN
SURVEYOR	DAJ
DRAWN BY	JF
JOB NO.	A21602-1
SHEET	TM 1
OF	2 SHEETS



SOUTH WASHINGTON ST AND EAST BELLE TERRACE
TYPICAL SECTION

NOT TO SCALE

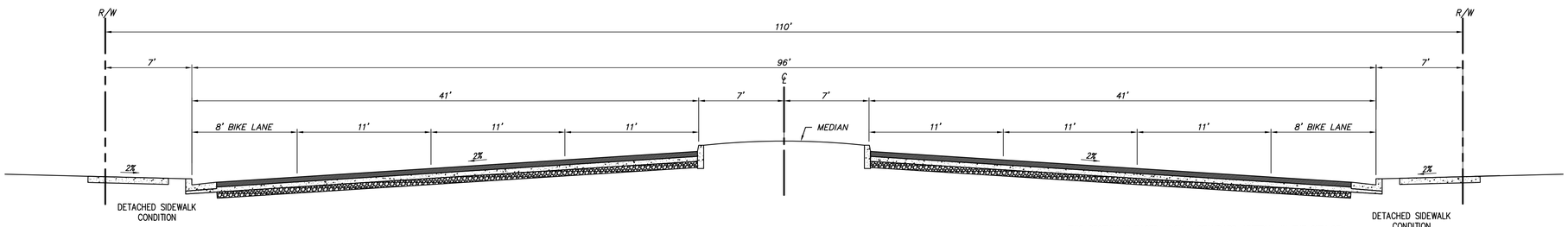
THIS SECTION IS BASED UPON A STANDARD ARTERIAL IN THE CITY OF BAKERSFIELD STANDARDS ST-16A OR AS DIRECTED BY CITY ENGINEER.



SOUTH WASHINGTON ST AND EAST BELLE TERRACE
EXPANDED INTERSECTION TYPICAL SECTION

NOT TO SCALE

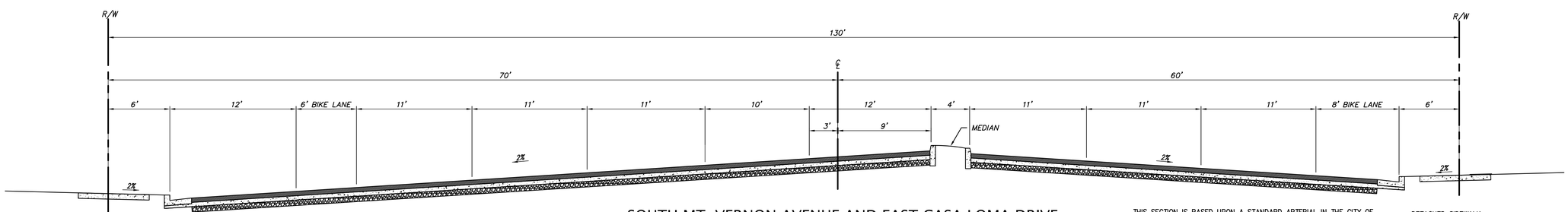
THIS SECTION IS BASED UPON A STANDARD ARTERIAL IN THE CITY OF BAKERSFIELD STANDARDS T6 OR AS DIRECTED BY CITY ENGINEER.



SOUTH MT. VERNON AVENUE AND EAST CASA LOMA DRIVE
TYPICAL SECTION

NOT TO SCALE

THIS SECTION IS BASED UPON A STANDARD ARTERIAL IN THE CITY OF BAKERSFIELD STANDARDS ST-16B OR AS DIRECTED BY CITY ENGINEER.



SOUTH MT. VERNON AVENUE AND EAST CASA LOMA DRIVE
EXPANDED INTERSECTION TYPICAL SECTION

NOT TO SCALE

THIS SECTION IS BASED UPON A STANDARD ARTERIAL IN THE CITY OF BAKERSFIELD STANDARDS T5 OR AS DIRECTED BY CITY ENGINEER.

NO.	REVISION	BY

NO.	REVISION	BY

KIER+WRIGHT
250 Cherry Lane, Suite 107, 208
Manteca, CA 95337
Phone: (209) 328-1123
www.kierwright.com

VESTING TENTATIVE PARCEL MAP NO. 12498

BEING A SUBDIVISION OF A PORTION OF THE SOUTHEAST QUARTER OF SECTION 4, TOWNSHIP 30 SOUTH, RANGE 28 EAST, MOUNT DIABLO BASE AND MERIDIAN

BAKERSFIELD, KERN COUNTY RECORDS CALIFORNIA

DATE	JUNE, 2023
SCALE	AS SHOWN
SURVEYOR	DAJ
DRAWN BY	JF
JOB NO.	A21602-1
SHEET	TM 2
OF	2 SHEETS

COVER SHEET
PLANNING DEPARTMENT
STAFF REPORT

MEETING DATE: September 21, 2023 **ITEM NUMBER:** Consent Public Hearings5.(b.)

TO: Chair Bashirtash & Planning Commission

FROM: Paul Johnson, Planning DIrector

PLANNER: Courtney Camps, Associate Planner

DATE:

WARD: Ward 3

SUBJECT:
Vesting Tentative Tract Map 7431 (Phased): McIntosh and Associates is proposing to subdivide 95.21 gross acres into 299 single family residential lots located at the northeast corner of Paladino Drive and Masterson Street. Proposed Mitigated Negative Declaration on file.

APPLICANT: McIntosh & Associates

OWNER: Vista Montaire LLC

LOCATION: Northeast corner of Paladino Drive and Masterson Street in northeast Bakersfield.

STAFF RECOMMENDATION:
Staff recommends approval.

ATTACHMENTS:

Description	Type
VTTM 7431_Staff Report	Staff Report
VTTM 7431_Map Set	Backup Material
VTTM 7431_IS_MND	Backup Material
AQIA by Provost	Backup Material
Biota by Pruett	Backup Material
Cultural Resources	Backup Material
GeoLabs_Grading_Seismic	Backup Material
Geologic Hazard Study	Backup Material
SEI_Geohaz Study Update	Backup Material
WZI_Peer Review	Backup Material
VTTM 7431_comment letter	Backup Material
VTTM 7431_RESO	Resolution

CITY OF BAKERSFIELD
PLANNING COMMISSION

MEETING DATE: September 21, 2023 **AGENDA:** 5.b.

TO: Chair Bashirtash and Members of the Planning Commission

FROM: Paul Johnson, Planning Director PJ

DATE: September 15, 2023

FILE: Vesting Tentative Tract Map 7431 (Phased)

WARD: 3

STAFF PLANNER: Courtney Camps, Associate Planner

REQUEST: A proposed vesting tentative tract map to subdivide 95.21 acres into 299 single-family residential lots, 9 landscape lots, 1 sump lot, and 1 existing drainage basin in the R-1 (One Family Dwelling) and R-1-HD (One Family Dwelling – Hillside Development) zones, including a request for alternate lot and street design, and to waive mineral rights signatures pursuant to BMC 16.20.060 A.1.

APPLICANT:
McIntosh and Associates
P.O. Box 21687
Bakersfield, CA 93390

OWNER:
Vista Montaire, LLC
532 Camino Mercado
Arroyo Grande, CA 93420

PROJECT LOCATION: Northeast corner of Paladino Drive and Masterson Street in northeast Bakersfield

APN: 386-050-62

PROJECT SIZE: 95.21 acres **CEQA:** Section 15162 (MND)

EXISTING GENERAL PLAN DESIGNATION: LR (Low Density Residential)

EXISTING ZONE CLASSIFICATION: R-1 (One Family Dwelling) and R-1-HD (One Family Dwelling – Hillside Development)

STAFF RECOMMENDATION: Adopt Resolution and suggested findings **APPROVING** Vesting Tentative Tract Map 7431 (Phased) with conditions.

SITE CHARACTERISTICS: The project site is vacant land. Surrounding properties are primarily developed as: *north* – 10-acre future City Park, vacant land, and single family residential; *east* - vacant land and single family residential; *south* – Cal Water Booster Pump and vacant land; and *west* - vacant land and single family residences.

BACKGROUND AND TIMELINE:

- **August 24, 1977 -** This site was annexed into the City as part of a larger annexation (Annexation 240, Rio Bravo Annexation) (Ordinance No. 2370).

- **March 26, 2003** - City Council approved Vesting Tentative Tract Map (VTTM) 6137 on an appeal by the Sierra Club (appeal denied). VTTM 6137 consists of 316 single-family lots and various open space lots. It should be noted that VTTM 6137 contained one large lot that was intended to be further subdivided for single family development with a separate tentative map. VTTM 7431 is the proposed subdivision of that lot (Resolution No. 055-03).

- **August 6, 2020** - Planning Commission approved TPM 12334 to subdivide 596 acres into two parcels for future single family residential development. The two parcels consisted of one parcel containing the land area of VTTM 7431 and the second parcel consisted of the remaining unrecorded portion of VTTM 6137. This created a separate legal lot to facilitate the tentative map application for VTTM 7431 (Resolution No. 43-20)

- **July 19, 2023** - The application for Vesting Tentative Tract Map 7431 was deemed complete.

PROJECT ANALYSIS:

The applicant is requesting a vesting tentative tract to subdivide 95.21 acres into 299 single-family residential lots, 9 landscape lots, 1 sump lot, and 1 existing drainage basin. The residential lots range in size from 6,572 square feet to 35, 497 square feet, and the typical lot size is approximately 60 feet wide by 110 feet deep (6,600 square feet). The net density is 4.77 units per net acre which is consistent with the LR designation of the project site of less than or equal to 7.26 dwelling units per net acre.

Circulation. Access to this subdivision would be from Paladino Drive (collector street) on the subdivision's south boundary, Masterson Street (arterial street) to the west, and Grand Canyon Drive (collector street) to the north. Along the northeast boundary Marquis Drive (local street) is proposed to be extended through this subdivision to provide circulation within the neighborhood.

Park Land. The City of Bakersfield Recreation and Parks Department provides park and recreational services to the project site. The nearest existing City park is City in the Hills Park located approximately one mile south of the project site. In 2007, the City acquired 10-acres along this subdivision's north boundary for a future park. The park land requirement for VTTM 7431 is not addressed in the 2007 agreement (Agreement No. 07-413); therefore, staff recommends payment of in-lieu fees to satisfy the park land requirement of Bakersfield Municipal Code ("BMC") Chapter 15.80 (Condition No. 15).

Geohazard (Alquist-Priolo Seismic) Areas

There are two separate but known Alquist-Priolo (Seismic) zones located on the western side of VTTM 7431. Each zone traverses in a northwest to southeast direction. State law requires these zones be investigated by a specific geological report prepared by a qualified geologic professional. Soils Engineering, Inc. conducted a Geological Investigation and recommended the following two items that have been incorporated as conditions of approval/mitigation measures (Condition No. 33 and 34):

1. Require a 50-foot setback from the identified fault locations for structures of human occupancy.
2. If structures for human occupancy are proposed for other areas within the fault zones and outside the areas studied by this report, additional geological investigation needs to be conducted.

The applicant designed the lot layout to comply with the 50-foot structure setback. Each of these residential lots subject to the seismic zone are over-sized to accommodate a development envelope to meet zoning setbacks. Nonetheless, staff recommends that the subdivider record a covenant on these lots to disclose to the property owner habitable structures are prohibited within the seismic zones (Condition No. 30).

Mineral Rights. The applicant is requesting the Planning Commission approve waiver of mineral rights signatures on the final map pursuant to BMC 16.20.060 A.1. as the party's right of surface entry has been waived by recorded document prior to recordation of any final map. Staff has received evidence of surface waiver; therefore, the final map shall have a statement indicating the mineral owner's name and nature of his or her interest. Nonetheless, should ownership change, staff is recommending a condition of approval requiring that prior to recordation of the first final map, the subdivider shall provide evidence verifying surface waiver from mineral interests otherwise the subdivider must return for a public hearing for a revised tentative map before the Planning Commission in accordance with BMC Section 16.20.060. Staff recommends the Planning Commission approve waiver of these signatures on the final map, subject to the condition (Condition No. 27).

The applicant submitted a letter stating that the California Department of Conservation's Division of Geologic Energy Management (CalGEM) stated that the project site is beyond their administrative boundaries of any oil or gas fields. There are no known wells on the property and no known active operators of record. If a well is uncovered, the subdivider must consult with CalGEM regarding proper abandonment of the well, in accordance with the municipal code (Condition No. 26).

Consistency/Deviation from Design Standards. The applicant requested five (5) deviations from City standards as listed below in Table A. Except as otherwise described in this staff report, the proposed project, subject to the conditions of approval, complies with the ordinances and policies of the City of Bakersfield.

Table A. Deviation Requests

REQUEST	APPLICANT'S REASON/JUSTIFICATION	STAFF COMMENT/ RECOMMENDATION
1) Double frontage lots for Phase 1 Lots 16-40 Phase 2 Lots 14-18, 45-55 Phase 3 Lots 15-31 Phase 4 Lots 5-18	Common lot and street layouts throughout the City utilize this lot and street layout.	Proposed double frontage lots are reasonable due to such controlling factors as traffic, safety, appearance and setback. The request for modification is consistent with subdivision design features - APPROVE
2) Reversed corner lots for Phase 2 Lots 11, 12, 29, 30, 32, 33, 34, 44, 45, 55, 57, 61, 67, 68, 74 & 83 Phase 3 Lots 1, 2, 12 &14 Phase 4 Lots 48, 49, 50 & 56	Unique shape and dimensions of property limit ability to adhere strictly to City standard.	Proposed configuration of the lots will allow for best usage of the property with uniform lot size - APPROVE
3) Block Length to exceed 1,000 feet on Black Opal Avenue between Goldstone Street and Chalcedony Avenue for Phases 1 & 3.	Development of the subdivision is restricted by the existing tract boundary and future road alignments.	Proposed block length is 1,032 feet. This has been reviewed by Public Works and Fire Department with no objection - APPROVE

4) Walls along side yards adjacent to Collector or Arterial Streets for Phase 2 Lots 42, 43, 55 & 57	Development of the subdivision is restricted by the existing tract boundary and future road alignments.	This has been reviewed by the Public Works Department with no objection - APPROVE
5) Reduction to 460 foot radius on Fossil Creek Drive (local street)	Development of the subdivision is restricted by the existing tract boundary and future road alignments.	This has been reviewed by the Fire Department with no objection - APPROVE

ENVIRONMENTAL REVIEW AND DETERMINATION:

Based upon an initial study, Staff determined the proposed project, with mitigation, would not have a significant effect on the environment. Therefore, a Mitigated Negative Declaration ("MND") was prepared for this project in accordance with the California Environmental Quality Act ("CEQA"). The MND was circulated for public and agency review from August 7, 2023 to September 5, 2023. The following special studies were submitted: biological resources, cultural resources, air quality analysis, seismic and geohazard resources. No comments related to the proposed MND were received by staff.

Environmental Conclusion. The State CEQA Guidelines and the City of Bakersfield's CEQA Implementation Procedures have been followed in the evaluation of the environmental effects of this project. With mitigation, significant environmental impacts were not identified for the proposed project.

PUBLIC NOTIFICATION:

Public notice for the proposed project and environmental determination was advertised in *The Bakersfield Californian* and posted on the bulletin board in the City of Bakersfield Development Services Building, 1715 Chester Avenue, Bakersfield, California. All property owners within 300 feet of the project site were notified by United States Postal Service mail regarding this public hearing in accordance with city ordinance and state law. Signs are required as part of the public notification process and must be posted between 20 to 60 days before the public hearing date. Photographs of the posted signage and the Declaration of Posting Public Hearing Notice signed by the applicant are on file at the Planning Division.

Comments Received. One comment was received from a property owner in the nearby Vista Montaire community. The commenter states that when they were being sold their home, no mention of this tract [VTTM 7431] was made. As such, the builder constructed a black aluminum see through fence that maximizes the views of Grand Canyon, Paladino and Masterson; a selling point for the home. Now that the home will no longer have the view that was paid for, nor privacy from the new homes and traffic, the builder, at their own expense, should install a cinderblock fence with see through fencing on top along Grand Canyon Avenue to no obstruct the entire views. The commenter stated that it seems unfair that they paid for a view that the builder knew was not going to last. A copy of the letter is attached.

In response, Staff recommended the commenter contact their original developer/seller.

CONCLUSIONS:

Consistency with General Plan and Zoning Ordinance. The proposal is consistent with land use goals and policies as contained in the General Plan, which provides for accommodations of new development which channels land uses in a phased, orderly manner and is coordinated with the provision of infrastructure

and public improvements (Goal No. 4); and encourages continuity of existing development and allows incremental expansion of infrastructure (Policy No. 79). Additionally, the proposed project is consistent with the Zoning Ordinance and any future development onsite will be required to comply with all applicable regulations and design standards as identified in the Zoning Ordinance.

Recommendation. Staff finds that the applicable provisions of CEQA have been complied with, and the proposal is compatible with the existing land use designation and land uses in the surrounding area. Staff finds the proposed subdivision is reasonable and the request to waive mineral rights is consistent with BMC Section 16.20.060 A.1. Based on information in the record, Staff recommends your Commission adopt the Resolution and findings **APPROVING** Vesting Tentative Tract Map 7431 as outlined in this staff report subject to the recommended conditions.

ATTACHMENTS:

Map Set

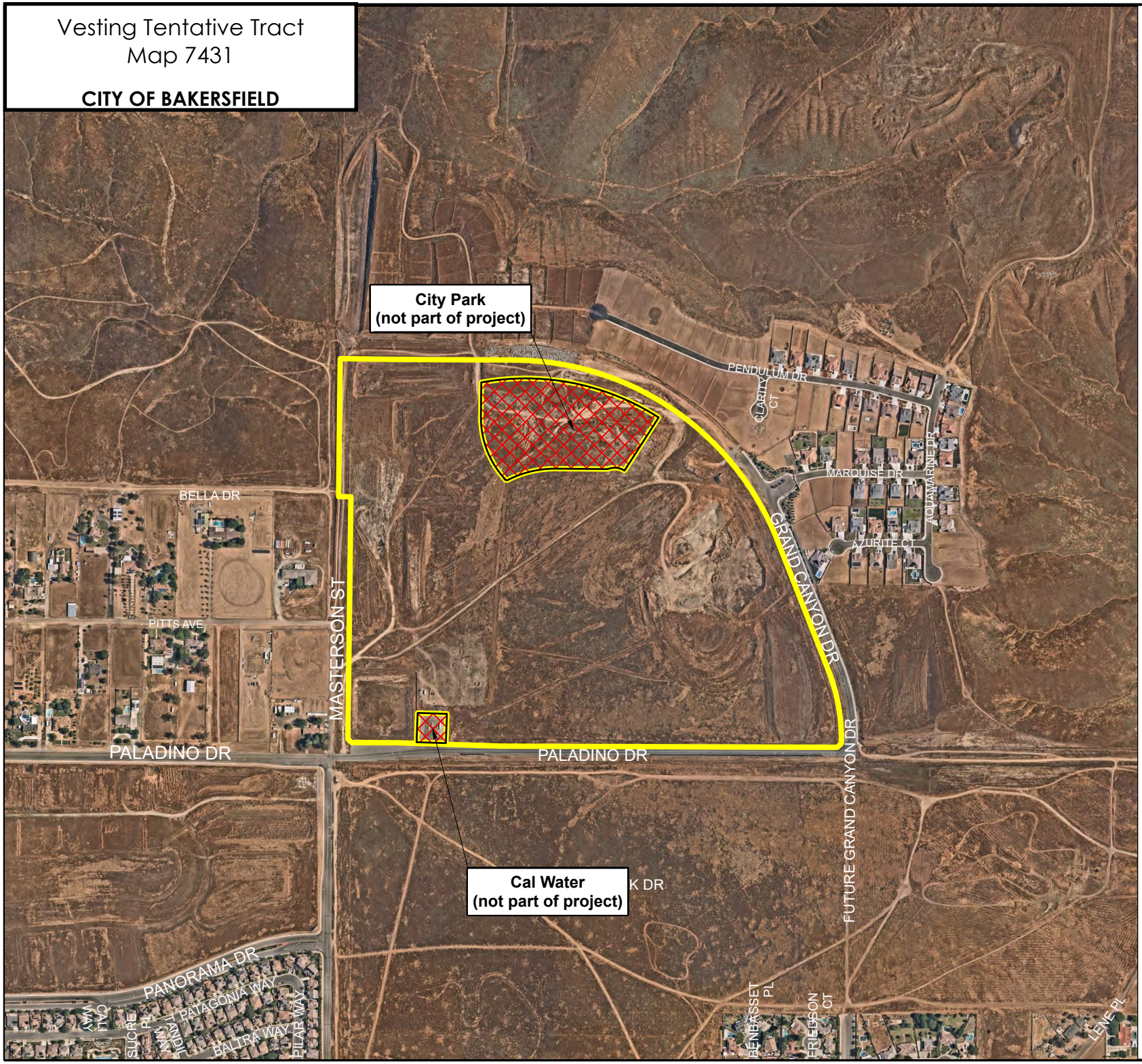
- Aerial
- Zone Classification
- General Plan Designation
- VTTM 6137, 7431 and TPM 12334 Overlay
- Geologic Map
- Vesting Tentative Tract Map 7431 (Phased)

Mitigated Negative Declaration with Attachments
Public Comments
Planning Commission Draft Resolution

MAP SET

Vesting Tentative Tract Map 7431

CITY OF BAKERSFIELD



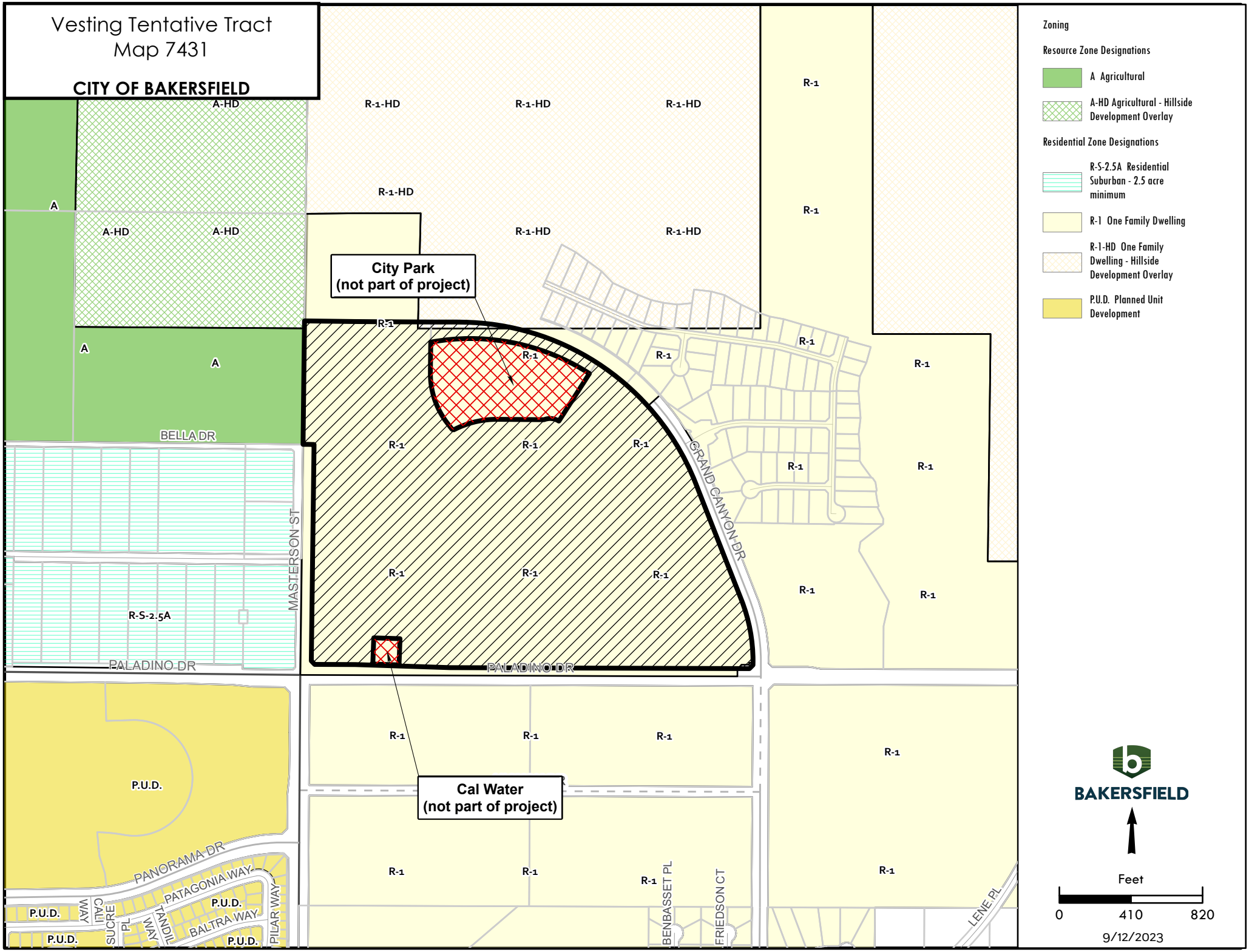
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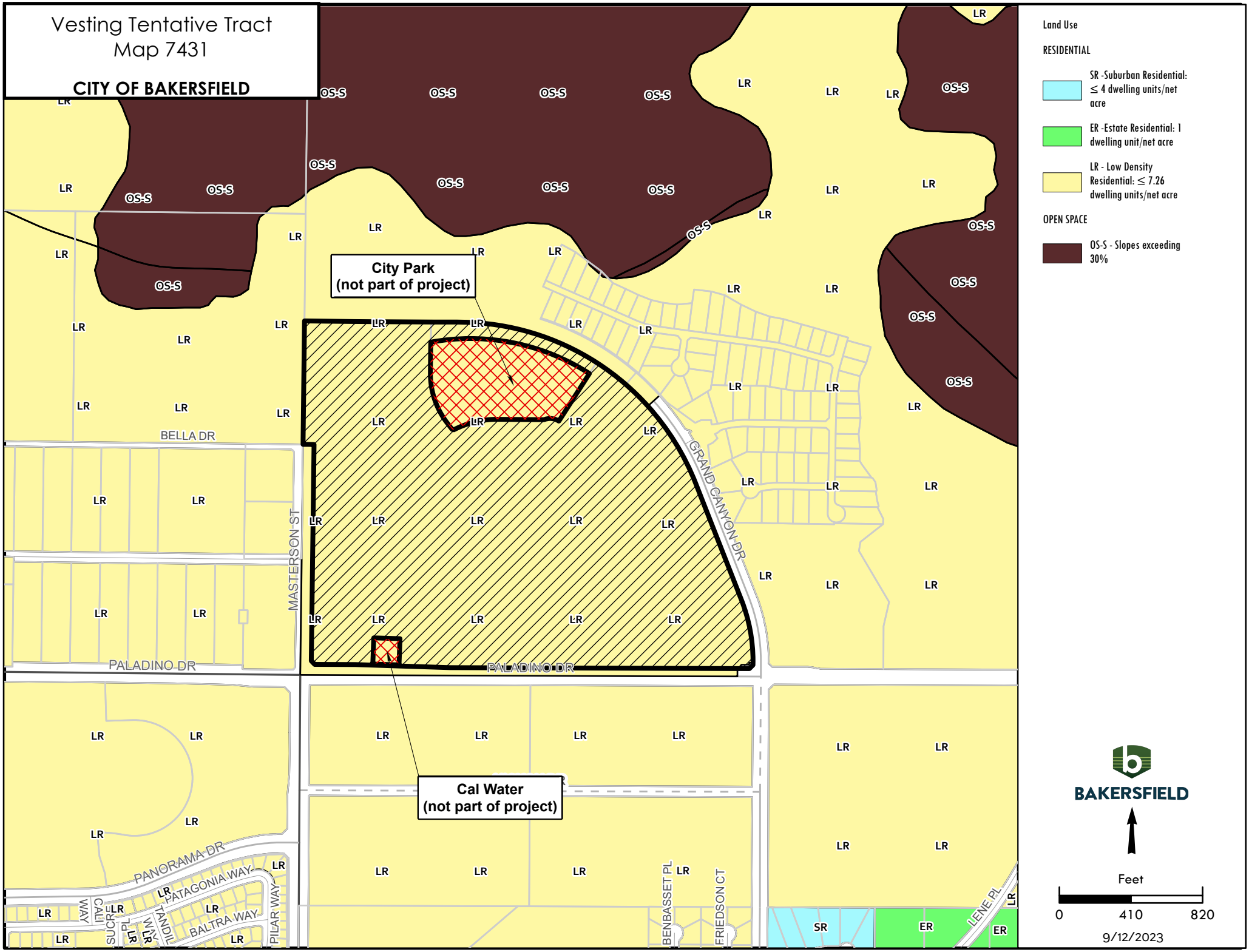
BAKERSFIELD

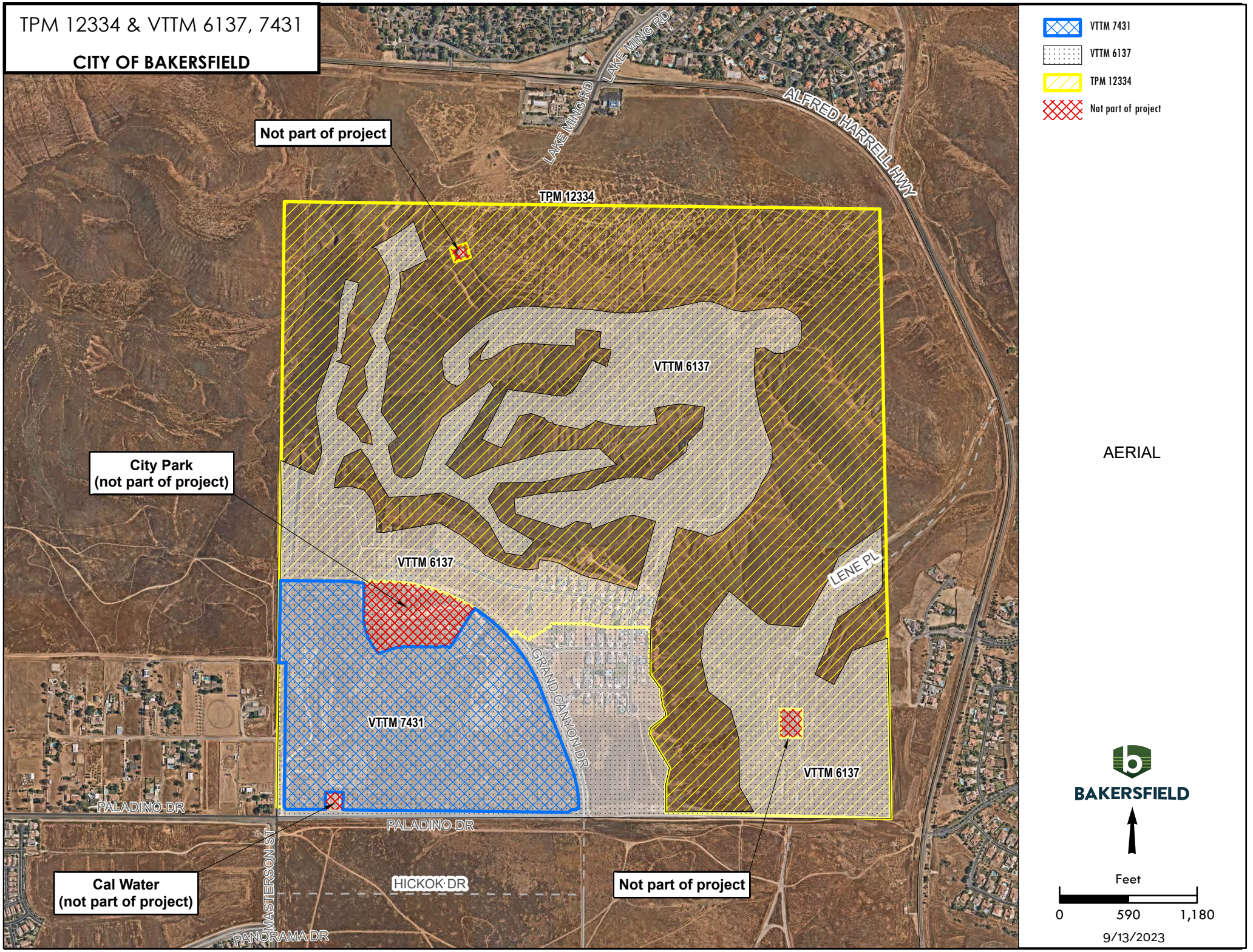
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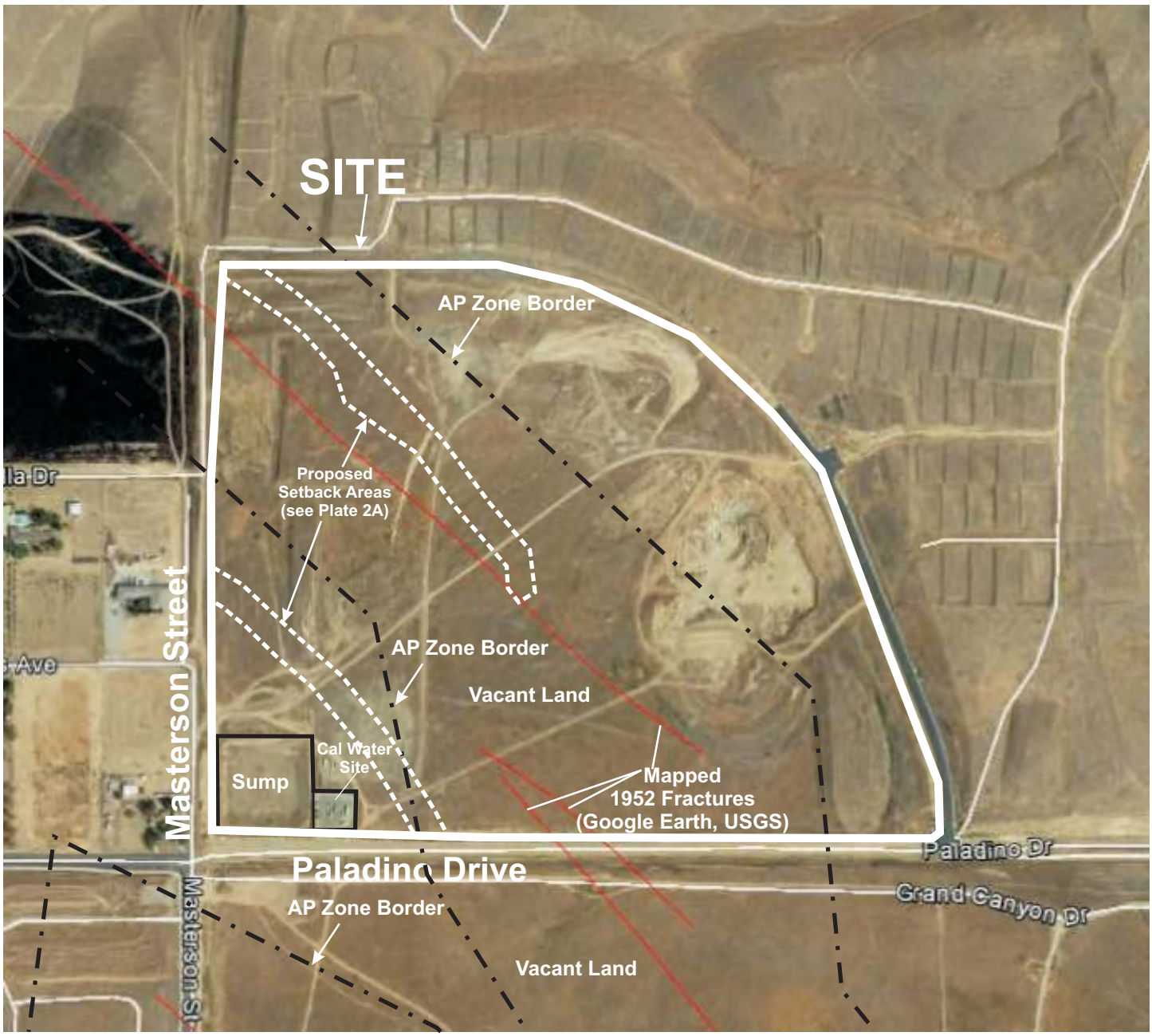
0 410 820

9/12/2023


Vesting Tentative Tract Map 7431
CITY OF BAKERSFIELD
City Park (not part of project)
Cal Water (not part of project)
BELLA DR
MASTERSON ST
PALADINO DR
GRAND CANYON DR
PANORAMA DR
PATAGONIA WAY
BALTRA WAY
TANDIL WAY
CALI WAY
SUCRE PL
PILAR WAY
BENBASSET PL
FRIEDSON CT
LENE PL
A
A-HD
R-1-HD
R-1
R-S-2.5A
P.U.D.
Zoning
Resource Zone Designations
A Agricultural
A-HD Agricultural - Hillside Development Overlay
Residential Zone Designations
R-S-2.5A Residential Suburban - 2.5 acre minimum
R-1 One Family Dwelling
R-1-HD One Family Dwelling - Hillside Development Overlay
P.U.D. Planned Unit Development
BAKERSFIELD
Feet
0
410
820
9/12/2023


Vesting Tentative Tract Map 7431
CITY OF BAKERSFIELD
City Park (not part of project)
Cal Water (not part of project)
BELLA DR
MASTERSON ST
GRAND CANYON DR
PALADINO DR
PANORAMA DR
PATAGONIA WAY
BALTRA WAY
CALI WAY
SUCRE PL
TANDIL WAY
PILAR WAY
BENBASSET PL
FRIEDSON CT
LENE PL
LR
OS-S
SR
ER
Land Use
RESIDENTIAL
SR -Suburban Residential: ≤ 4 dwelling units/net acre
ER -Estate Residential: 1 dwelling unit/net acre
LR - Low Density Residential: ≤ 7.26 dwelling units/net acre
OPEN SPACE
OS-S - Slopes exceeding 30%
BAKERSFIELD
Feet
0
410
820
9/12/2023


TPM 12334 & VTTM 6137, 7431
CITY OF BAKERSFIELD
VTTM 7431
VTTM 6137
TPM 12334
Not part of project
Not part of project
TPM 12334
VTTM 6137
City Park
(not part of project)
VTTM 6137
VTTM 7431
VTTM 6137
Cal Water
(not part of project)
Not part of project
LAKE MING RD
LAKE MING RD
ALFRED HARRELL HWY
LENE PL
GRAND CANYON DR
PALADINO DR
PALADINO DR
MASTERSON ST
HICKOK DR
PANORAMA DR
AERIAL
BAKERSFIELD
Feet
0
590
1,180
9/13/2023



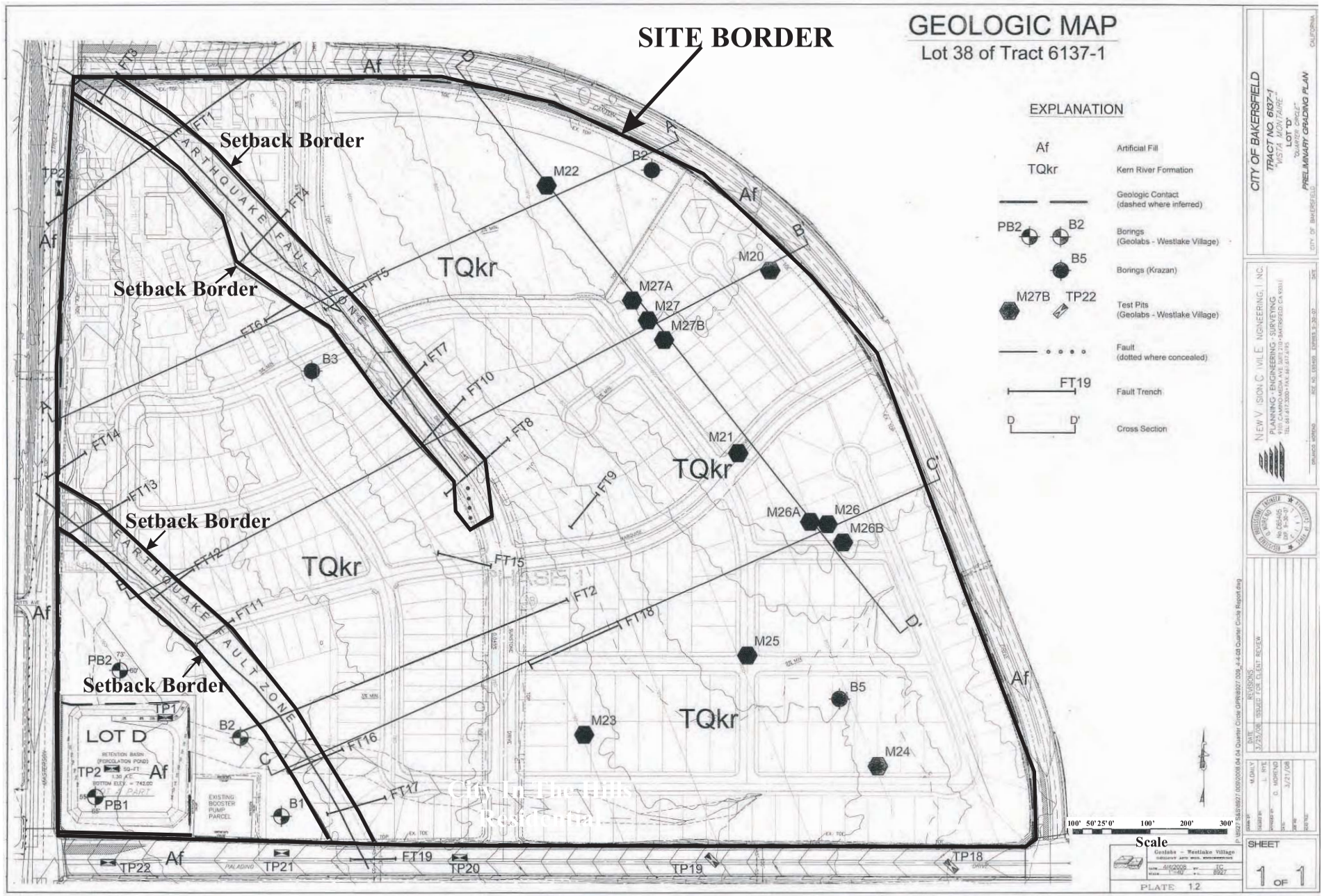
SOILS ENGINEERING, INC.
4400 Yeager Way
Bakersfield, CA 93313
(661) 831 - 5100

DATE: 9/19
PROJECT: #17222

Lot 38, Tract 6137
NE of Paladino Drive and Masterson Street
Bakersfield, CA

PLOT PLAN

PLATE
2



From Geolabs, Grading Plan Review and Updated Seismic, Foundation, and Retaining Wall Design Criteria, dated April 4, 2008

SEI File No. 17222
September 2019

Geologic Map
Lot 38, Tract 6137
Northeast of Paladino Dr. & Masterson St.
Bakersfield, CA

Plate 2A

VESTING TENTATIVE TRACT No. 7431

BEING A SUBDIVISION OF PARCEL 1 OF PARCEL MAP NO. 12334,
PARCEL MAP BOOK 62, PAGES 135–142;
ALSO BEING A PORTION OF THE SOUTHWEST QUARTER OF SECTION 9, TOWNSHIP 29 SOUTH, RANGE 29 EAST, M.D.M.,
IN THE CITY OF BAKERSFIELD, COUNTY OF KERN, STATE OF CALIFORNIA.
CONTAINING 299 RESIDENTIAL LOTS, 9 LANDSCAPE LOTS, 1 SUMP LOT AND 1 EXISTING DRAINAGE BASIN
95.21 ACRES

PROPERTY OWNER/SUBDIVIDER:
VISTA MONTAIRE LLC,
532 CAMINO MERCADO,
ARROYO GRANDE, CA 93420
CONTACT: JANET AXELSEN
PHONE: (805) 481–4033

ENGINEER:
McINTOSH & ASSOCIATES
10800 STOCKDALE HWY., SUITE 103
BAKERSFIELD, CA 93311
CONTACT: SAM WALKER
PHONE: (661) 834–4814

STATISTICS:

A.P.N.:	386–050–47, 54, 59 & 62
SITE ACREAGE:	95.21 ACRES (GROSS)
NET DENSITY:	62.70 BUILDABLE ACRES (NET) 299 BUILDABLE LOTS (6,000 SF MIN.) 4.77 D.U. PER ACRE
ZONING:	R–1, R–1–HD
LAND USE: EXISTING:	LR VACANT
PROPOSED:	SINGLE FAMILY RESIDENTIAL
UTILITIES:	
CABLE:	AT&T FIBER, SPECTRUM AND EARTHLINK FIBER
ELECTRIC:	P.G. & E.
GAS:	P.G. & E.
SEWER:	CITY OF BAKERSFIELD
TELEPHONE	AT&T AND SPECTRUM
WATER:	CALIFORNIA WATER SERVICE
SCHOOL DISTRICT:	BAKERSFIELD CITY SCHOOL DISTRICT
SCHOOL:	FLETCHER ELEMENTARY SCHOOL CATO MIDDLE SCHOOL HIGHLAND HIGH SCHOOL

FLOOD ZONE: X
FIRM PANEL NO.: 06029CC1861E

PHASING:
THE NUMBERING OF THE PHASES ARE FOR IDENTIFICATION PURPOSES AND DO NOT NECESSARILY IMPLY THE ORDER OF DEVELOPMENT. THIS TRACT WILL BE DEVELOPED IN UP TO 4 PHASES.

GENERAL NOTES:

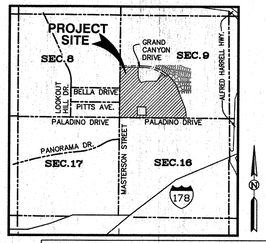
A. ALL ROAD IMPROVEMENTS AND DRAINAGE IN THIS SUBDIVISION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS ESTABLISHED BY THE CITY OF BAKERSFIELD.
B. IT IS ANTICIPATED THAT THE GRADING OF THIS TRACT WILL BE WITHIN THE AMOUNTS OUTLINED WITHIN SECTION 16.16.030(O) OF THE MUNICIPAL CODE.
C. THIS TRACT SHALL FOLLOW THE "COMPLETE STREET" POLICY PER RESOLUTION 035–13. STREET NAME SIGNS SHALL BE INSTALLED PER C.O.B. STD. T–1.
D. A 10' PUBLIC UTILITY EASEMENT (P.U.E.) IS PROPOSED AND IS LOCATED ON ALL FRONT AND SIDE YARDS ADJACENT TO INTERNAL STREETS.
E. ALL RETURN RADII ARE 20' UNLESS OTHERWISE NOTED. ALL CUL–DE–SAC AND KNUCKLE RETURN RADII ARE 25' UNLESS OTHERWISE NOTED.
F. ALL KNUCKLE RADIUS ARE 92' UNLESS OTHERWISE NOTED.
G. PAVEMENT STRUCTURES SHALL BE BASED ON SOILS REPORT DURING THE DESIGN PROCESS.
H. VESTING TENTATIVE TRACT 7413 IS LOCATED WITHIN BRECKENRIDGE PDA PER RESOLUTION 136–05.
I. FOR THE PURPOSE OF SUBMITTING THIS TENTATIVE MAP SUBDIVISION APPLICATION, THE CITY IS NEUTRAL TO THE SUBDIVIDER'S PROPOSAL TO RECONFIGURE THE EXISTING PARK SITE. A RECOMMENDATION WILL BE PROVIDED TO THE PLANNING COMMISSION FOR THEIR CONSIDERATION AT A PUBLIC HEARING.
J. NOTE TO PLANNING DEPARTMENT
RE: ALTERNATE STREET NAMES
THE FOLLOWING STREET NAMES ARE PROVIDED AS SUBSTITUTIONARY ALTERNATES. PLEASE CONSIDER THESE NAMES IN THE ORDER THEY ARE HEREBY SUBMITTED TO REPLACE NAMES ON THE MAP THAT MAY NOT BE ACCEPTABLE.
1. BLACK PEARL 2. TURQUOISE 3. EMERALD

MONUMENT LEGEND:

MON A CONC. MON. WITH BRASS CAP STAMPED "REPLACED 11/29/95", IN HWY WELL, FOR SW CORNER SEC. 9–29/29, PER TRACT MAP NO. 6137, BK. 58 OF MAPS, PGS. 157–161, K.C.R.
MON B CONC. MON. WITH BRASS CAP STAMPED "LS 7214", IN HWY WELL, PER RECORD OF SURVEY NO. 3910, BK. 33 OF RECORD OF SURVEYS, PG. 23. K.C.R.
MON C 5/8" REBAR WITH CAP, STAMPED "LS 7214", PER TRACT MAP NO. 6137 PHASE 2, BK. 65 OF MAPS, PGS. 79–85, K.C.R.
MON D 5/8" REBAR WITH CAP, STAMPED "LS 7214", PER PARCEL MAP NO. 12334, BK. 62 OF PARCEL MAPS, PGS. 135–142, K.C.R.
MON E NAIL AND TAG IN CONCRETE, STAMPED "LS 7214", IN LIEU OF A REBAR PER PARCEL MAP 12334, BK. 62 OF PARCEL MAPS, PGS. 135–142, K.C.R., ACCEPTED AS THE NORTHWEST CORNER OF THE BOOSTER PUMP PARCEL AS SHOWN ON PARCEL MAP 12334.
MON F REBAR AND CAP STAMPED "LS 7214" PER TRACT MAP NO. 6137 PHASE 2, M.B. 65, PG. 79.

EASEMENT LEGEND:

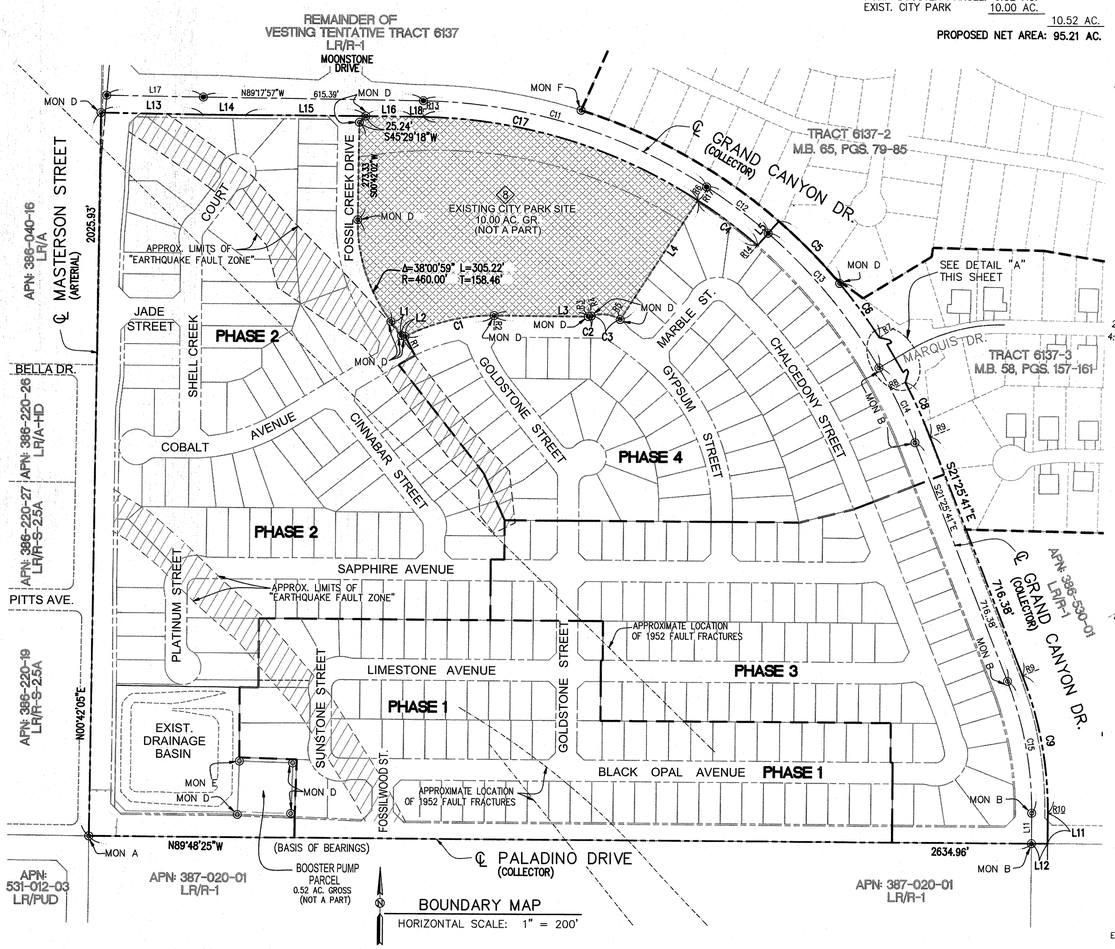
1. STREET RIGHT–OF–WAY DEED TO CITY OF BAKERSFIELD, RECORDED JUNE 8, 2018 PER DOCUMENT NO. 218071568, O.R.
2. SEWER LINE EASEMENT TO CITY OF BAKERSFIELD RECORDED MARCH 21, 1994 IN BOOK 7005, PAGE 2431, O.R.
3. ACCESS EASEMENT TO CALIFORNIA WATER SERVICE COMPANY, RECORDED AUGUST 22, 2005 PER DOCUMENT NO. 0205226495, O.R.
4. SLOPE AND DRAINAGE EASEMENT TO CALIFORNIA WATER SERVICE COMPANY, RECORDED AUGUST 22, 2005 PER DOCUMENT NO. 0205226500, O.R.
5. STORM DRAIN EASEMENT TO CITY OF BAKERSFIELD, RECORDED JANUARY 18, 2006 PER DOCUMENT NO. 0206013555, O.R.
6. STREET RIGHT–OF–WAY DEED TO CITY OF BAKERSFIELD, RECORDED NOVEMBER 13, 2006 PER DOCUMENT NOS. 0206281012.
7. 30' WIDE EASEMENT IN FAVOR OF SOUTHERN CALIFORNIA EDISON PER BOOK 161, PAGE 352, O.R.
8. GRANT DEED TO THE CITY OF BAKERSFIELD FOR PARK SITE, PARK STAGING, ACCESS ROAD EASEMENTS, HIKING TRAIL EASEMENT, RECORDED MARCH 17, 2008 PER DOCUMENT NO. 0208040416 AND RE–RECORDED MAY 30, 2013 PER DOCUMENT NO. 0213075862, O.R.
9. PUBLIC UTILITY EASEMENT TO PACIFIC GAS AND ELECTRIC COMPANY, RECORDED APRIL 16, 2018 PER DOCUMENT NO. 218044799, O.R. (APPROXIMATE LOCATION)
10. 55' PUBLIC ROAD EASEMENT PER BOOK 4957, PAGE 159, O.R.
11. 55' PUE EASEMENT GRANTED TO PACIFIC TELEPHONE AND TELEGRAPH COMPANY THE RIGHT TO CONSTRUCT AND INSTALL COMMUNICATION FACILITIES, AND THE RIGHT TO MAINTAIN, INSPECT, REPAIR, REPLACE, REMOVE, USE, OPERATE AND PATROL SAID FACILITIES RECORDED AUGUST 17, 1955 PER BOOK 2475, PAGE 34, O.R. (EXACT LOCATION CAN NOT BE ASCERTAINED)
12. STREET RIGHT–OF–WAY DEED TO CITY OF BAKERSFIELD, RECORDED NOVEMBER 13, 2006 PER DOCUMENT NOS. 0206281013.



CURVE TABLE				
NO.	LENGTH	RADIUS	TANGENT	DELTA
C1	258.23'	530.00'	131.73'	27°54'56"
C2	8.69'	25.00'	4.39'	19°55'16"
C3	84.22'	92.00'	45.32'	52°27'06"
C4	209.70'	1455.00'	105.03'	08°15'27"
C5	243.32'	1545.00'	121.91'	09°01'25"
C6	187.35'	1545.00'	93.79'	06°56'53"
C7	13.63'	32.00'	6.92'	24°23'56"
C8	168.02'	1545.00'	84.09'	06°13'52"
C9	394.92'	1045.00'	199.59'	21°37'32"
C10	13.63'	32.00'	6.92'	24°23'54"
C11	838.70'	1500.02'	430.63'	32°02'08"
C12	216.18'	1500.00'	108.28'	08°15'28"
C13	488.77'	1500.00'	246.57'	18°40'11"
C14	233.12'	1500.00'	116.80'	08°54'17"
C15	377.44'	1000.00'	190.99'	21°37'32"

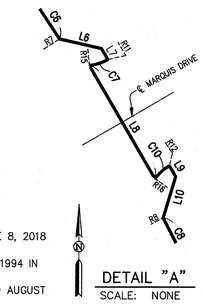
LINE TABLE			LINE TABLE		
LINE	BEARING	LENGTH	LINE	BEARING	LENGTH
L1	S37°18'57"E	49.27'	L10	S16°40'09"W	30.11'
L2	S77°11'57"E	10.39'	L11	S00°11'52"W	85.14'
L3	S89°33'28"E	262.90'	L12	S89°48'25"W	45.00'
L4	N32°44'16"E	398.60'	L13	S89°17'58"E	285.25'
L5	S40°59'55"W	90.00'	L14	S89°41'28"E	120.00'
L6	N77°20'22"W	30.14'	L15	S89°41'29"E	335.89'
L7	S30°20'07"E	8.84'	L16	N89°41'29"W	129.31'
L8	S30°20'07"E	91.72'	L17	N89°17'58"W	270.00'
L9	S30°20'07"E	8.84'	L18	S89°17'58"E	30.76'

RADIAL TABLE		RADIAL TABLE	
RAD	DIRECTION	RAD	DIRECTION
R1	S27°28'24"E	R11	S30°18'52"E
R2	N00°26'32"E	R12	N30°19'12"W
R3	N00°26'39"E	R13	S00°42'02"W
R4	S19°28'37"E	R14	N40°59'55"E
R5	N32°58'29"E	R15	S05°54'56"E
R6	N32°44'10"E	R16	N54°43'06"W
R7	N56°58'12"E	R17	N32°44'28"E
R8	N62°20'27"E	R18	S30°18'52"E
R9	N68°34'19"E	R19	N30°19'12"W
R10	S89°48'09"E		



BOUNDARY MAP
HORIZONTAL SCALE: 1" = 200'

EXISTING AREA:	105.73 AC.
LESS:	
PUMP BOOSTER PARCEL:	0.52 AC.
EXIST. CITY PARK	10.00 AC.
	10.52 AC.
PROPOSED NET AREA:	**95.21 AC.**



DETAIL "A"
SCALE: NONE

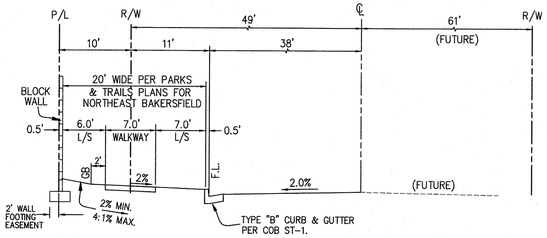
LEGEND:

ABBREVIATIONS

SF	SQUARE FEET
D.U.	DWELLING UNIT
AC.	ACRES
M1	SEE MONUMENT LEGEND
ST	STREET
L.S.	LANDSCAPE
◉	MONUMENT TO BE SET
◎	FOUND MONUMENT AS DESCRIBED
┼	EXISTING STREET NAME SIGN
Ⓢ	EXISTING SEWER MANHOLE
ⓒ	EXISTING SEWER CLEANOUT
Ⓓ	EXISTING STORM DRAIN MANHOLE

LEGEND (CONT'D.):

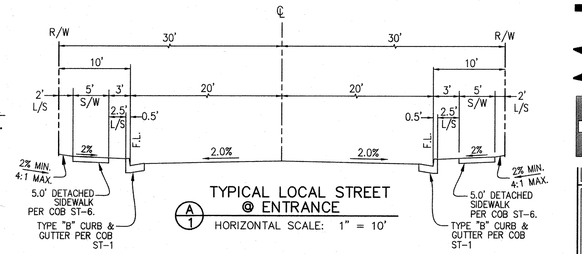
OH	EXISTING OVERHEAD POWER LINE
S	EXISTING SEWER LINE
D	EXISTING STORM DRAIN LINE
W	EXISTING WATER LINE
T	EXISTING TELEPHONE LINE
G	EXISTING GAS LINE
E	EXISTING UTILITY TRENCH
	EXISTING EDGE OF PAVEMENT
X	EXISTING CHAIN LINK FENCE
×777.4	EXISTING SPOT ELEVATION
778	EXISTING GROUND CONTOUR
D	PROPOSED STORM DRAIN
	PHASE LINE
	TRACT BOUNDARY
0.20% (MIN)	DIRECTION DRAINAGE AND APPROXIMATE GRADE
	WAIVER OF DIRECT ACCESS DEDICATED PER FINAL MAP
	PROPOSED CATCH BASIN
Ⓓ	PROPOSED DRAIN MANHOLE
	EXISTING CITY PARK BOUNDARY
3	SEE EASEMENT LEGEND
	EXISTING CITY PARK SITE (10.0 AC.)



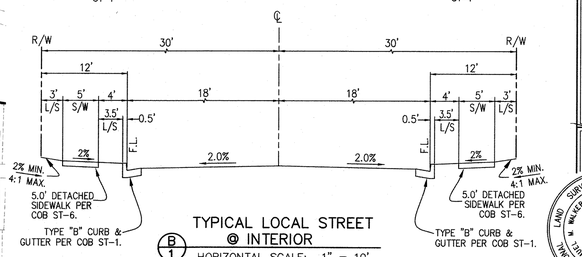
F/1 GRAND CANYON DRIVE
HORIZONTAL SCALE: 1" = 10'

PHASE LOTS:

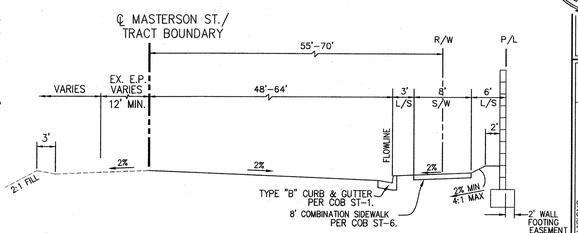
PHASE	NO. LOTS	BUILDABLE ACRES	D.U. PER ACRES	L.S. LOT	EX. DRAINAGE BASIN LOT	SUMP LOT	NOT A PART: EX. CALWATER PARCEL	NOT A PART: CITY PARK
1	74	13.24	5.59	2	–	–	–	–
2	83	22.72	3.65	4	1	1	1	–
3	78	13.02	5.99	2	–	–	–	–
4	64	13.72	4.66	1	–	–	–	1
TOTAL	**299**	**62.70**	**4.77**	**9**	**1**	**1**	**1**	**1**



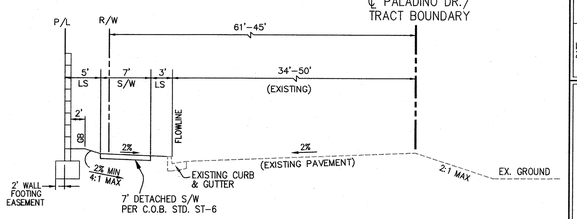
A/1 TYPICAL LOCAL STREET @ ENTRANCE
HORIZONTAL SCALE: 1" = 10'



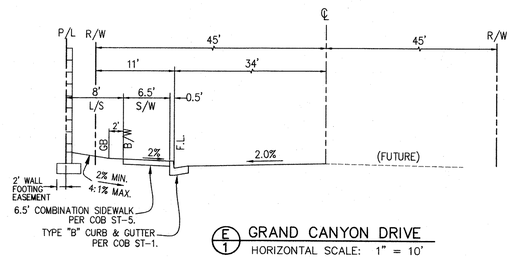
B/1 TYPICAL LOCAL STREET @ INTERIOR
HORIZONTAL SCALE: 1" = 10'



C/1 MASTERSON STREET
(ARTERIAL)
HORIZONTAL SCALE: 1" = 10'



D/1 PALADINO DRIVE
(COLLECTOR)
HORIZONTAL SCALE: 1" = 10'



E/1 GRAND CANYON DRIVE
HORIZONTAL SCALE: 1" = 10'

NOTE: ALL STREET PAVEMENT STRUCTURES SHALL BE BASED ON SOILS REPORT.

811 Know what's below. Call before you dig.

CITY RECORDS NO:

McINTOSH & ASSOCIATES
NEW GEN ENGINEERING GROUP
10800 STOCKDALE HWY, STE. 103
BAKERSFIELD, CALIFORNIA 93311
(661) 834 – 4814 ©2023
JOB NO: 22054.00
DATE: 6/22/23
DRAWN BY: SLU
ISSUED FOR:
REVISIONS
BY:
DATE:

PROFESSIONAL ENGINEER SAMUEL M. WALKER JR. No. 75578 STATE OF CALIFORNIA
DATE: 12 JUN 2023

VEST. TENT. TR. NO. 7431
POR. OF THE SW QTR. OF SEC. 9, T.29S., R.29E., M.D.M.
COVER SHEET

AutoCAD FILE: 22054T01

SHEET 1 OF 2 SHEETS

VESTING TENTATIVE TRACT No. 7431

BEING A SUBDIVISION OF PARCEL 1 OF PARCEL MAP NO. 12334, PARCEL MAP BOOK 62, PAGES 135–142; ALSO BEING A PORTION OF THE SOUTHWEST QUARTER OF SECTION 9, TOWNSHIP 29 SOUTH, RANGE 29 EAST, M.D.M., IN THE CITY OF BAKERSFIELD, COUNTY OF KERN, STATE OF CALIFORNIA.

NOTE:
1. FOR BOUNDARY DIMENSIONS, PLEASE REFER TO SHEET 1.

PHASE LOTS:

PHASE	NO. LOTS	BUILDABLE ACRES	D.U. PER ACRES	L.S. LOT	EX. DRAINAGE BASIN LOT	SUMP LOT	NOT A PART: EX. CALWATER PARCEL	NOT A PART: CITY PARK
1	74	13.24	5.59	2	–	–	–	–
2	83	22.72	3.65	4	1	1	1	–
3	78	13.02	5.99	2	–	–	–	–
4	64	13.72	4.66	1	–	–	–	1
TOTAL	**299**	**62.70**	**4.77**	**9**	**1**	**1**	**1**	**1**

EXISTING CITY PARK AREA (10.0 AC.)
EXISTING CITY PARK BOUNDARY

SEE SHEET 1
EXISTING CITY PARK SITE
SEE SHEET 1 FOR DETAILS
(NOT A PART)

SEE DETAIL "A" ON SHEET 1

REMAINDER OF VEST. TENT. TRACT 6137 OS-S & LR/R-1 & R-1-HD

MOONSTONE DR.

℄ GRAND CANYON DRIVE (COLLECTOR)

TRACT 6137-2 M.B. 65, PGS. 79-85

TRACT 6137-3 M.B. 58, PGS. 157-161

APN: 386-040-16 LR/A-HD

APN: 386-220-26 LR/A-HD

APN: 386-220-27 LR/R-S-25A

APN: 386-220-19 LR/R-S-25A

APN: 386-530-01 LR/R-1

APN: 387-020-01 LR/R-1

APN: 531-012-03 LR/PUD

℄ MASTERSON STREET (ARTERIAL)

℄ PALADINO DRIVE (COLLECTOR)

FOSSIL CREEK DRIVE

SHELL CREEK COURT

JADE STREET

BELLA DR.

COBALT AVENUE

CINNABAR STREET

MARBLE ST.

GYPSUM STREET

CHALCEDONY AVENUE

MARQUIS DR.

PITTS AVE.

PLATINUM STREET

LIMESTONE AVENUE

SAPPHIRE AVENUE

GOLDSTONE STREET

SUNSTONE STREET

FOSSILWOOD ST.

BLACK OPAL AVENUE

PHASE 1

PHASE 2

PHASE 3

PHASE 4

LOT A 4802 SF SUMP LOT

EX. DRAINAGE BASIN 2.82 AC. GR. (PRIVATELY MAINTAINED)

BOOSTER PUMP PARCEL 0.52 AC GR. (NOT A PART)

APPROX. LIMITS OF EARTHQUAKE FAULT ZONE

APPROXIMATE LOCATION OF 1952 FAULT FRACTURES

20' DRAIN EASEMENT

EX. CURB AND GUTTER (NO SIDEWALK)

EX. HOUSE

EX. ACCESS

EX. CATCH BASIN

L.S. LOT "1" 5462 SF

L.S. LOT "2" 748 SF

L.S. LOT "3" 1947 SF

L.S. LOT "5" 1268 SF

SCALE: 1" = 100'

811 Know what's below. Call before you dig.

CITY RECORDS NO:

McINTOSH & ASSOCIATES
NEW GEN ENGINEERING GROUP
10800 STOCKDALE HWY, STE 103
BAKERSFIELD, CALIFORNIA 93311
(661) 834 - 4814 ©2023

JOB NO. 22054.00
DATE: 6/22/23
DRAWN BY: SLU
ISSUED FOR:

PROFESSIONAL LAND SURVEYOR W. WALKER JR. No. 7515 STATE OF CALIFORNIA
DATE:

REVISIONS
BY:
DATE:

VEST. TENT. TR. NO. 7431
SOUTHWEST QUARTER OF SEC. 9, T.29S., R.29E.
TENTATIVE MAP

AutoCAD FILE: 22054TT02

SHEET 2 OF 2 SHEETS

BAKERSFIELD
THE SOUND OF Something Better

MITIGATED NEGATIVE DECLARATION

The City of Bakersfield Development Services Department has completed an initial study (attached) of the possible environmental effects of the following-described project and has determined that a Mitigated Negative Declaration is appropriate. It has been found that the proposed project, as described and proposed to be mitigated (if required), will not have a significant effect on the environment. This determination has been made according to the California Environmental Quality Act (CEQA), the State CEQA Guidelines, and the City of Bakersfield's CEQA Implementation Procedures.

PROJECT NO. (or Title): Vesting Tentative Tract Map 7431 (Phased)

COMMENT PERIOD BEGINS: August 7, 2023

COMMENT PERIOD ENDS: September 5, 2023

MITIGATION MEASURES *(included in the proposed project to avoid potentially significant effects, if required):*

Cultural Resources Impact Mitigation Measures:

1. During construction, if cultural resources are encountered during construction or ground disturbance activities, all work shall immediately cease, and the area cordoned off until a qualified cultural resource specialist can evaluate the find and make recommendations. Project is subject to any recommendations of the qualified specialist.

2. During construction, if human remains are discovered, further ground disturbance shall be prohibited pursuant to California Health and Safety Code Section 7050.5. and Public Resources Code Sections 5097.94, 5097.98 and 5097.99.

Geology and Soils

3. Development of the project site shall comply with the setback of a minimum of 50-feet from each of the two faults identified on Plates 2 and 2A of "Geological Hazard Report for Lot 38, Tract 6137 (SEI, 2019)" (attached) where no structures for human habitation may be located.

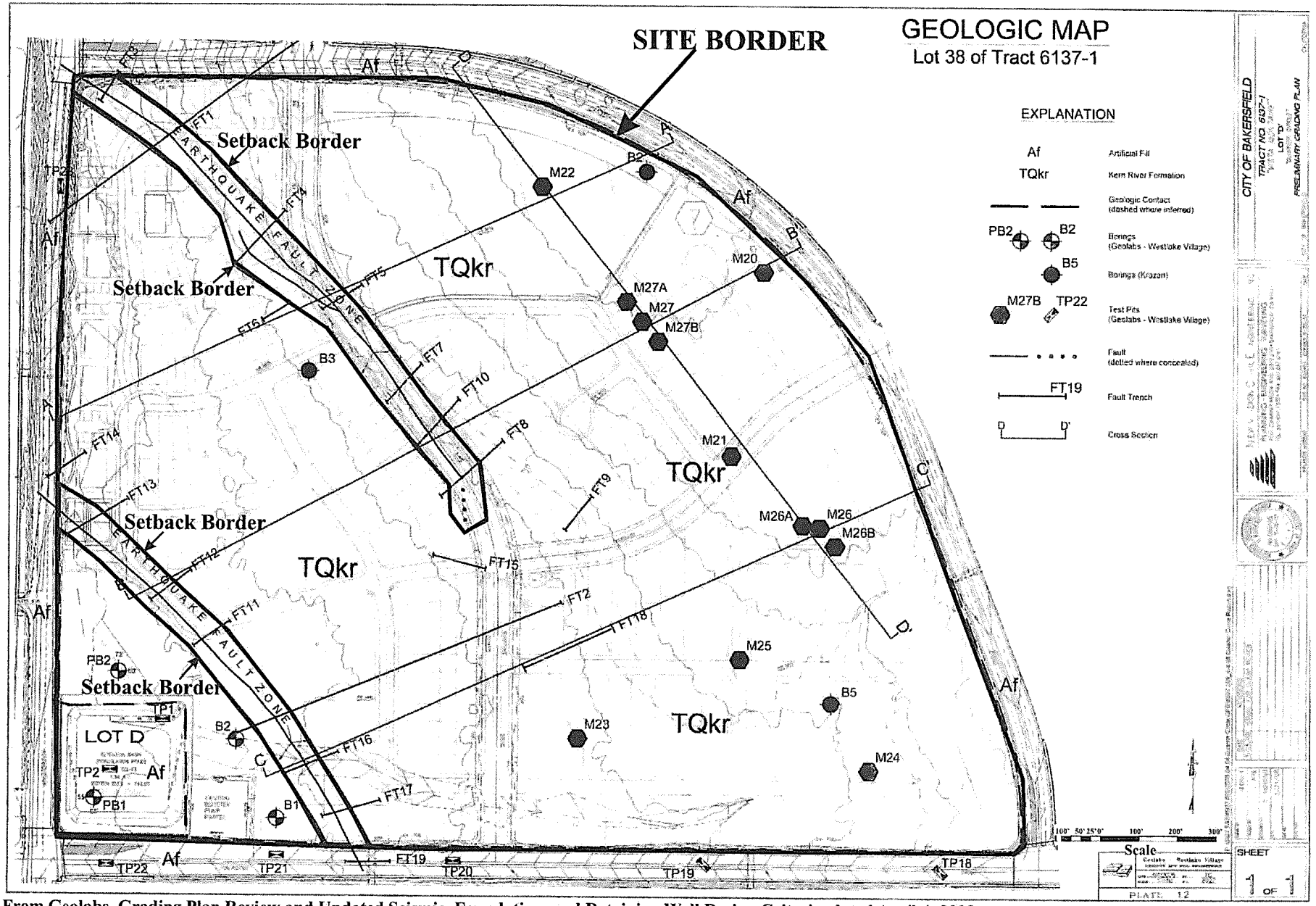
Traffic/Circulation Impact Mitigation Measures

4. Prior to issuance of building permits, the applicant/developer shall pay the Regional Transportation Impact Fee Program.

5. Prior to issuance of building permits and if necessary as determined by the City Engineer, the applicant/developer shall obtain a street permit or get approved a Traffic Control Plan from the City Public Works Department.



SOILS ENGINEERING, INC. **4400 Yeager Way** **Bakersfield, CA 93313** **(661) 831 - 5100** DATE: 9/19 PROJECT: #17222	**Lot 38, Tract 6137** **NE of Paladino Drive and Masterson Street** **Bakersfield, CA** **PLOT PLAN**	**PLATE** **2**



From Geolabs, Grading Plan Review and Updated Seismic, Foundation, and Retaining Wall Design Criteria, dated April 4, 2008

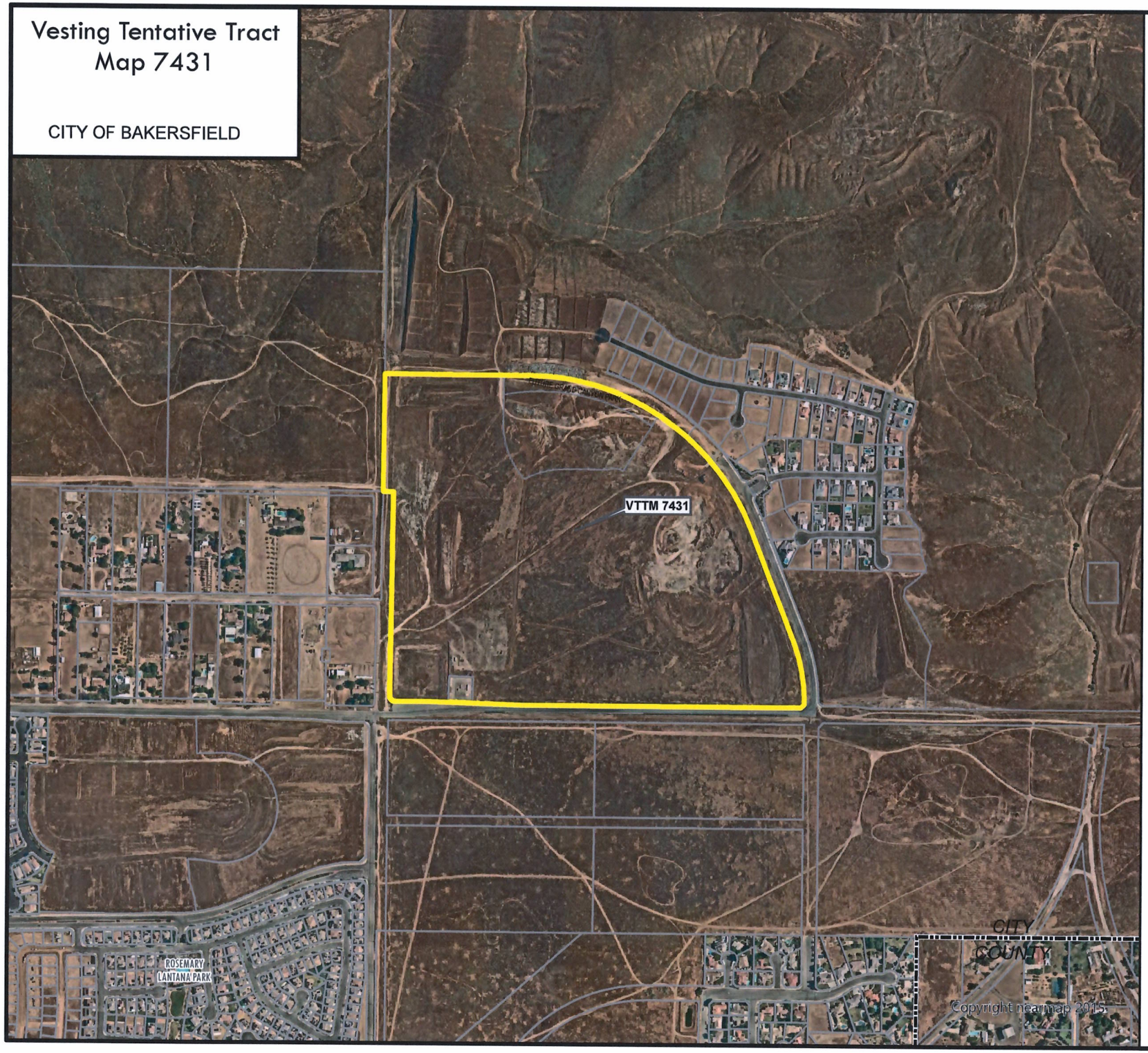
SEI File No. 17222
September 2019

Geologic Map
Lot 38, Tract 6137
Northeast of Paladino Dr. & Masterson St.
Bakersfield, CA

Plate 2A

Vesting Tentative Tract Map 7431

CITY OF BAKERSFIELD



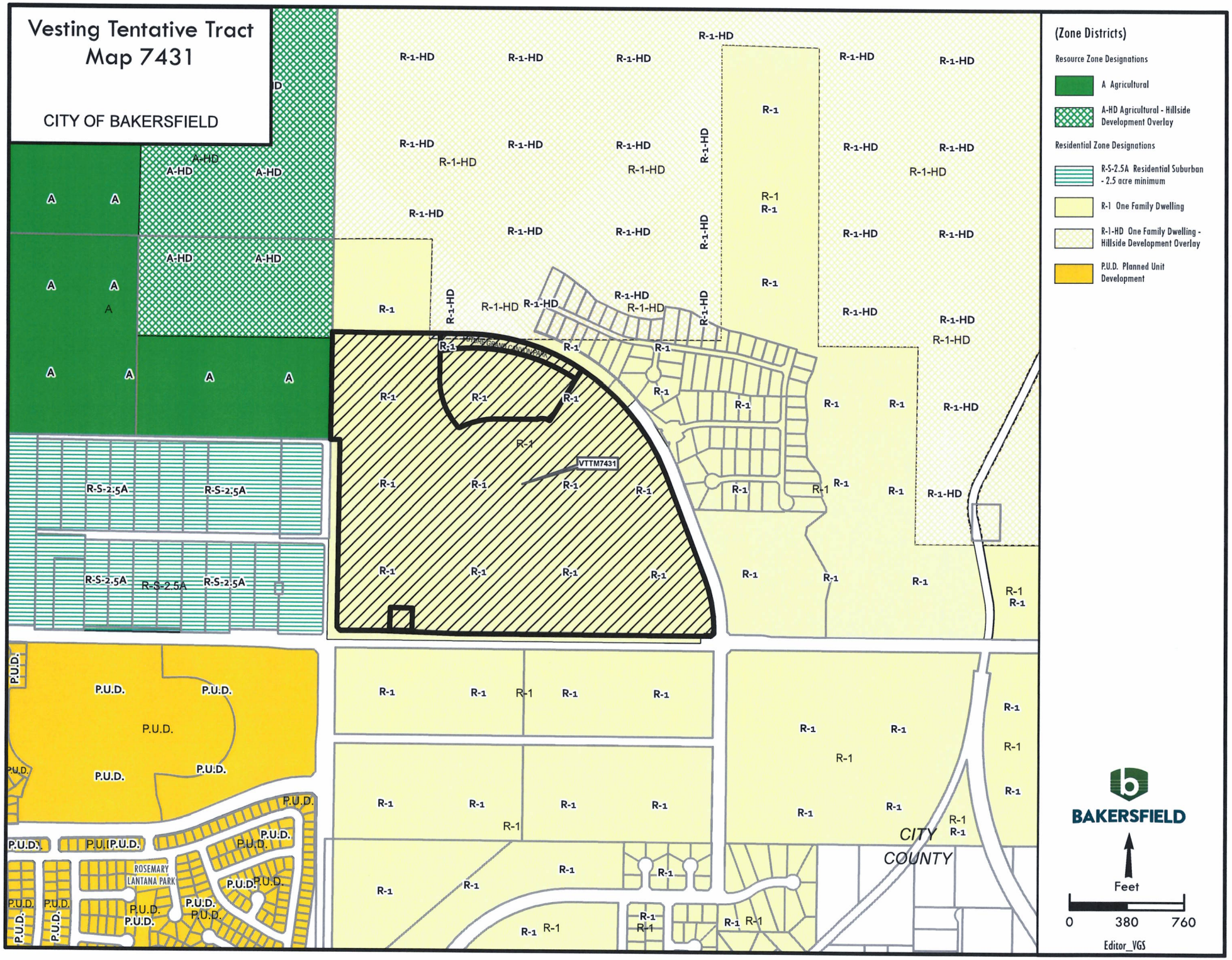
AERIAL

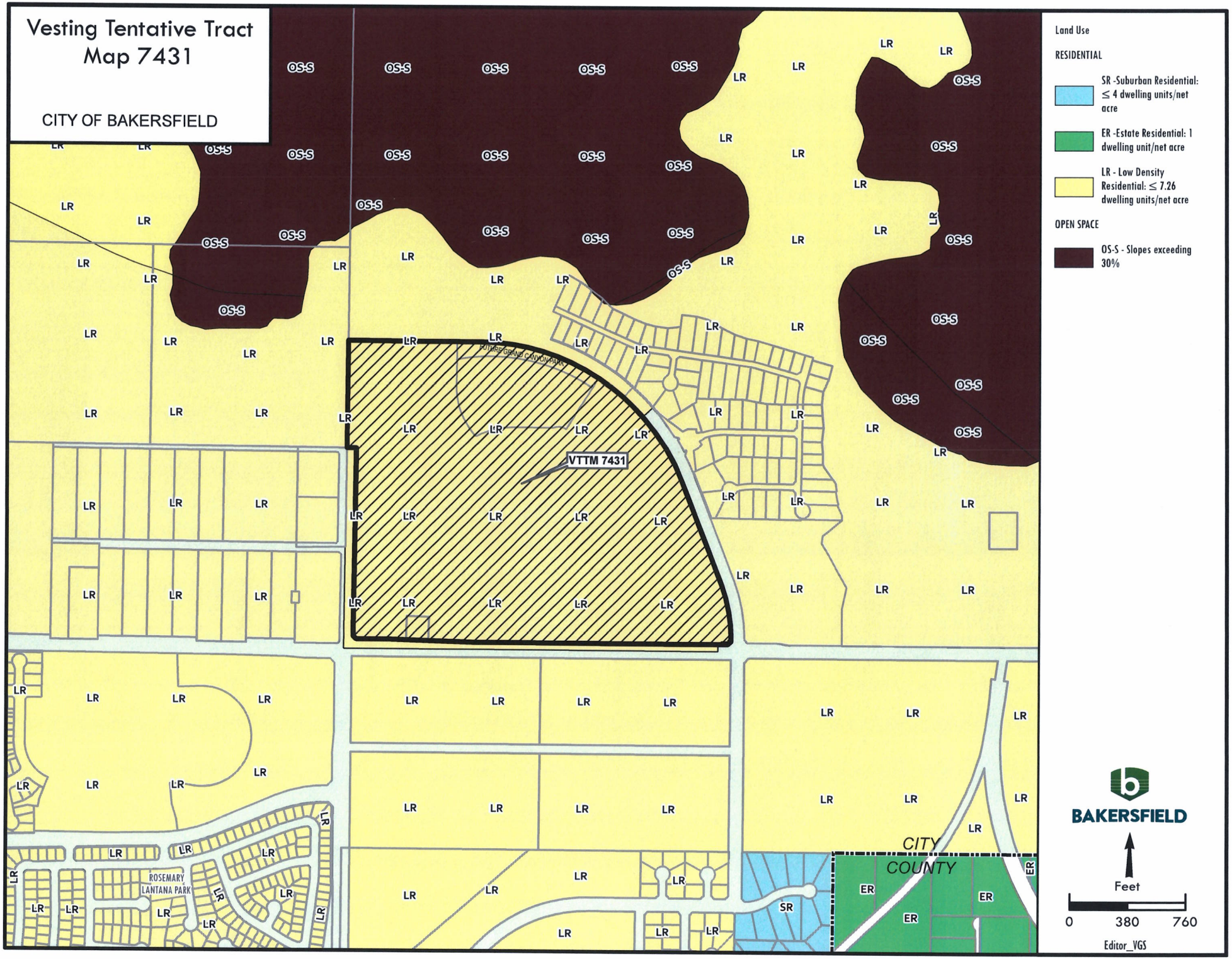
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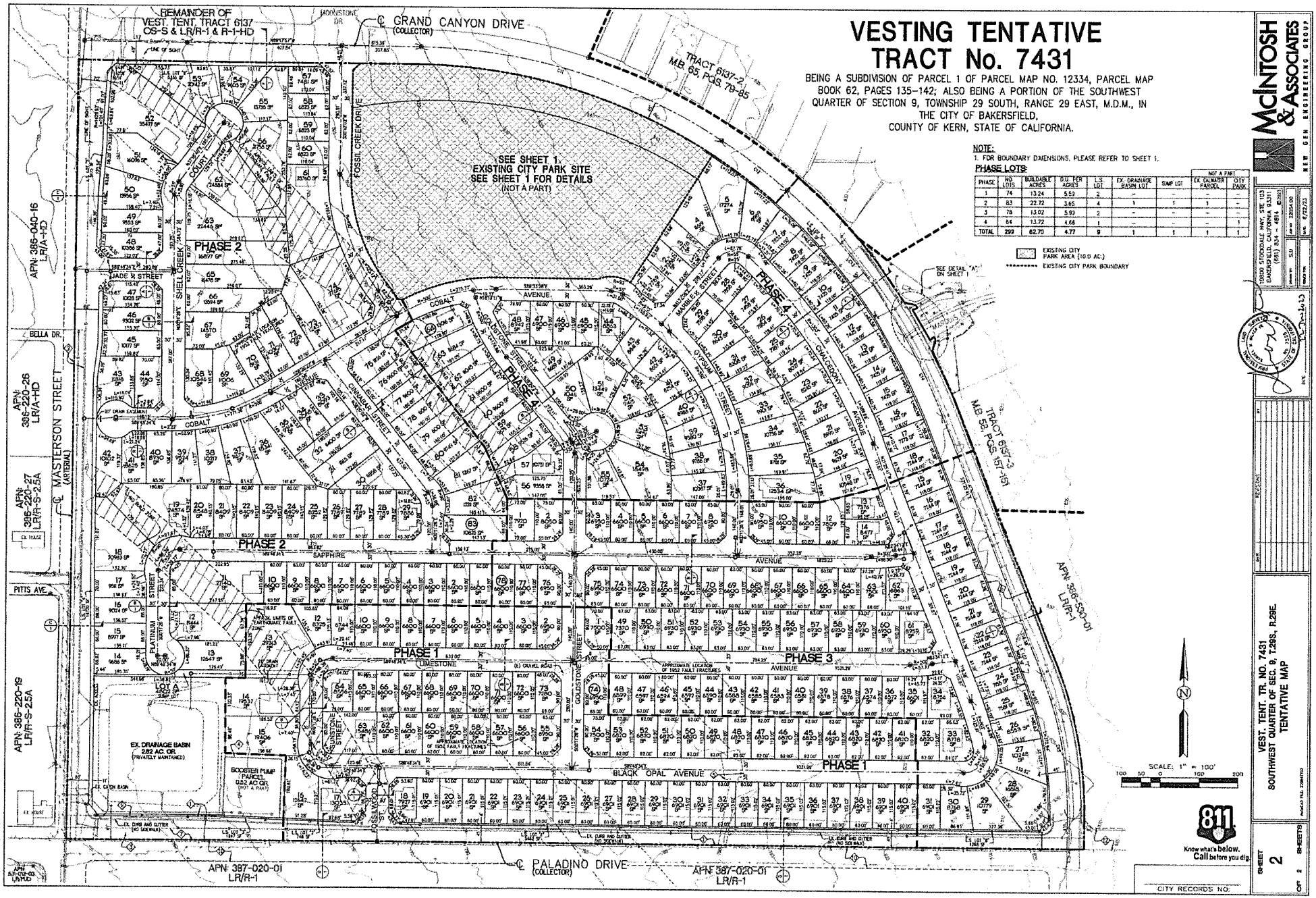
Feet

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Editor_VGS


Vesting Tentative Tract Map 7431
CITY OF BAKERSFIELD
VTTM7431
ROSEMARY LANTANA PARK
CITY COUNTY
(Zone Districts)
Resource Zone Designations
A Agricultural
A-HD Agricultural - Hillside Development Overlay
Residential Zone Designations
R-S-2.5A Residential Suburban - 2.5 acre minimum
R-1 One Family Dwelling
R-1-HD One Family Dwelling - Hillside Development Overlay
P.U.D. Planned Unit Development
BAKERSFIELD
Feet
0 380 760
Editor_VGS


Vesting Tentative Tract Map 7431
CITY OF BAKERSFIELD
VTTM 7431
ROSEMARY & LANTANA PARK
CITY
COUNTY
Land Use
RESIDENTIAL
SR -Suburban Residential: ≤ 4 dwelling units/net acre
ER -Estate Residential: 1 dwelling unit/net acre
LR - Low Density Residential: ≤ 7.26 dwelling units/net acre
OPEN SPACE
OS-S - Slopes exceeding 30%
BAKERSFIELD
Feet
0
380
760
Editor_VGS



VESTING TENTATIVE TRACT No. 7431

BEING A SUBDIVISION OF PARCEL 1 OF PARCEL MAP NO. 12334, PARCEL MAP BOOK 62, PAGES 135-142; ALSO BEING A PORTION OF THE SOUTHWEST QUARTER OF SECTION 9, TOWNSHIP 29 SOUTH, RANGE 29 EAST, M.D.M., IN THE CITY OF BAKERSFIELD, COUNTY OF KERN, STATE OF CALIFORNIA.

NOTE:
1. FOR BOUNDARY DIMENSIONS, PLEASE REFER TO SHEET 1.

PHASE LOTS:

PHASE	NO. LOTS	BUILDABLE ACRES	D.U. PER ACRES	L.S. LOT	EX. DRAINAGE BASIN LOT	SUMP LOT	NOT A PART: EX. CALWATER PARCEL	NOT A PART: CITY PARK
1	74	13.24	5.59	2	–	–	–	–
2	83	22.72	3.65	4	1	1	1	–
3	78	13.02	5.99	2	–	–	–	–
4	64	13.72	4.66	1	–	–	–	1
TOTAL	299	62.70	4.77	9	1	1	1	1

McINTOSH & ASSOCIATES
NEW GEN ENGINEERING GROUP
10800 STOCKDALE HWY, STE 103
BAKERSFIELD, CALIFORNIA 93311
(661) 834 - 4914

VEST. TENT. TR. NO. 7431
SOUTHWEST QUARTER OF SEC. 9, T.29S., R.29E.
TENTATIVE MAP

SHEET 2 OF 2 SHEETS

Know what's below. Call before you dig.

CITY RECORDS NO:

INITIAL STUDY
ENVIRONMENTAL ANALYSIS

1. **Project** *(Title & No.)*: Vesting Tentative Tract Map 7431 (Phased)

2. **Lead Agency** *(name and address)*: City of Bakersfield
   Development Services Department
   1715 Chester Avenue
   Bakersfield, California 93301

3. **Contact Person** *(name, title, phone)*: Courtney Camps, Associate Planner
   (661) 326-3733

4. **Project Location:** Northeast corner of Paladino Drive and Masterson Street

5. **Applicant** ***(name and address)***: McIntosh & Associates
   P.O. Box 21687
   Bakersfield, CA 93390

6. **General Plan Designation:** LR (Low Density Residential)

7. **Zoning:** R-1 (One-Family Dwelling)

8. **Description of Project (describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation.):**
   McIntosh & Associates, representing Vista Montaire LLC (property owner), is proposing to subdivide 105.73 acres into 299 single-family residential lots, 9 landscape lots, 1 existing park lot, 1 existing drainage basin lot, and 1 existing Cal Water lot. The applicant is also requesting modifications to City standards including block length, double frontage lots, walls along side yards adjacent to collector or arterial streets, reverse corner/key lots and alignment criteria for streets.

9. **Environmental setting (briefly describe the existing onsite conditions and surrounding land uses):**
   The project site consists of a vacant parcel of land, 1 existing park lot, 1 existing drainage basin lot, and 1 existing Cal Water lot. Adjacent properties to the north and south are vacant land. An existing single-family home ranchette including various out-buildings and accessory structures is located on the property west of the project site. In addition, there is existing single-family residential development to the east of the project site.

10. **Other public agencies whose approval is anticipated to be required** ***(e.g., permits, financing approval or participation agreement)***:
    - City of Bakersfield – Mitigated Negative Declaration consideration and adoption
    - City of Bakersfield – Building permits
    - City of Bakersfield – Regional Transportation Impact Fee Program and Local Mitigation
    - San Joaquin Valley Air Pollution Control District – Indirect Source Rule compliance
    - State Water Resources Control Board – National Pollutant Discharge Elimination System General permit

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

As indicated by the checklist on the following pages, the project would result in potentially significant impacts with respect to the environmental factors checked below (*Impacts reduced to a less than significant level through the incorporation of mitigation are not considered potentially significant*):

ENVIRONMENTAL DETERMINATION:

☐ Aesthetics	☐ Agriculture / Forestry Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Energy
☐ Geology and Soils	☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials
☐ Hydrology / Water Quality	☐ Land Use/Planning	☐ Mineral Resources
☐ Population / Housing	☐ Public Services	☐ Public Services
☐ Noise	☐ Transportation / Traffic	☐ Tribal Cultural Resources
☐ Wildfire	☐ Wildfire	☐ Mandatory Findings of Significance

On the basis of this initial evaluation:

☐ 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 is required.

☐ 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 has been (1) adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) addressed by mitigation measures based on the earlier analysis as described on the attached sheets. An environmental impact report 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 have been (1) analyzed adequately in an earlier environmental impact report or negative declaration pursuant to applicable legal standards, and (2) avoided or mitigated pursuant to that earlier environmental impact report or negative declaration, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature — *Date* 8.7.23

Courtney Camps, Associate Planner
Printed name

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (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).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
   a) Earlier Analysis Used. Identify and state where they are available for review.
   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used, or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:
   a) The significance criteria or threshold, if any, used to evaluate each question; and
   b) The mitigation measure identified, if any, to reduce the impact to less than significant.

I. AESTHETICS: Except as provided in Public Resources Code Section 21099, would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcrops, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In nonurbanized 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?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

II. AGRICULTURE RESOURCES:

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

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 nonagricultural use?	☐	☐	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
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))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
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?	☐	☐	☒	☐

III. AIR QUALITY:

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:

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?	☐	☐	☐	☒

IV. BIOLOGICAL RESOURCES:
Would the project:

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 U.S. Fish and Wildlife Service?	☐	☐	☒	☐
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 Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
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?	☐	☐	☐	☒

V. CULTURAL RESOURCES:
Would the project:

a)	Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☐	☒
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c)	Disturb any human remains, including those interred outsides of dedicated cemeteries?	☐	☒	☐	☐

VI. ENERGY:
Would the project:

a)	Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b)	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

VII. GEOLOGY AND SOILS:
Would the project;

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.	☐	☐	☒	☐

ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv. Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

VIII. GREENHOUSE GAS EMISSIONS:
Would the project:

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?	☐	☐	☒	☐

IX. HAZARDS AND HAZARDOUS MATERIALS:
Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
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?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
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 or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

X. HYDROLOGY AND WATER QUALITY:
Would the project:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
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 a substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?	☐	☐	☒	☐
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?	☐	☐	☒	☐
iv. Impede or redirect flood flows?	☐	☐	☐	☒
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

XI. LAND USE AND PLANNING:
Would the project:

a) Physically divide an established community?	☐	☐	☐	☒
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?	☐	☐	☐	☒

XII. MINERAL RESOURCES:
Would the project:

a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?	☐	☐	☐	☒
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?	☐	☐	☐	☒

XIII. NOISE:
Would the project result in:

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?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
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?	☐	☐	☐	☒

XIV. POPULATION AND HOUSING:
Would the project;

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)?	☐	☐	☒	☐

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

XV. PUBLIC SERVICES:

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?	☐	☒	☐	☐
ii. Police protection?	☐	☐	☒	☐
iii. Schools?	☐	☐	☒	☐
iv. Parks?	☐	☐	☒	☐
v. Other public facilities?	☐	☐	☒	☐

XVI. RECREATION:

a) Would the project 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?	☐	☐	☒	☐
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?	☐	☐	☒	☐

XVII. TRANSPORTATION:

Would the project:

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☒	☐	☐
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?	☐	☒	☐	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☒	☐	☐

XVIII. TRIBAL CULTURAL RESOURCES:

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 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)?	☐	☒	☐	☐
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 § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☐	☒	☐	☐

XVIV. UTILITIES AND SERVICE SYSTEMS:
Would the project:

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?	☐	☐	☒	☐
b)	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c)	Result in a determination by the waste water 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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
e)	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

XX. WILDFIRES:
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

a)	Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐

XXI. MANDATORY FINDINGS OF SIGNIFICANCE:

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 a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
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.)	☐	☐	☒	☐
c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

EVALUATION OF ENVIRONMENTAL EFFECTS

I. AESTHETICS

a. **No impact.** The project is located within the City limits at Paladino Drive and Masterson Street in northeast Bakersfield. The existing visual environment in the area adjacent to the project is predominately vacant land with adjacent single family residential to the east of the site. Vacant land is located to the north and rural residential to the west. The construction of single-family residential at the site would be in character and compatible with existing urban land uses in the vicinity of the site and is a natural extension of the urban growth occurring in the project area. Therefore, the project would not have a substantial adverse effect on a scenic vista.

b. **No impact.** There are no trees, rock outcrops, or historic buildings (Gardner 2004) located at the project site. Additionally, the project is not located adjacent to or near any officially designated or potentially eligible scenic highways to be listed on the California Department of Transportation (Caltrans) State Scenic Highway System. The closest section of highway eligible for sate scenic highway designation is State Route (SR) 14 located in Kern County over 55 miles to the east. Therefore, the project would not substantially damage scenic resources, including, but not limited to, trees, rock outcrops, and historic buildings within a state scenic highway.

c. **Less-than-significant impact.** Please refer to responses I.a, I.b and I.d. The project does not conflict with any applicable vista protection standards, scenic resource protection requirements or design criteria of federal, state, or local agencies and, the project would be consistent with the Metropolitan Bakersfield General Plan (MBGP) designations and Zoning Ordinance classifications for the project area. The area is not regarded or designated with in the Metropolitan Bakersfield General Plan as visually important or "scenic." Therefore, the project would not substantially degrade the existing visual character or quality of the site and its surroundings.

d. **Less-than-significant impact.** This project involves incremental urban growth within the City of Bakersfield's jurisdiction. This project would have to comply with City development standards, including Title 17 (zoning ordinance), Title 15 (buildings and construction), as well as California Code of Regulations Title 24. Together, these local and state requirements oblige project compliance with current lighting and signage standards that minimize unwanted light or glare to spill over into neighboring properties. Therefore, the project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

II. AGRICULTURE RESOURCES

a. **Less-than-significant impact.** The 95-acre project site is designated as Grazing Land by the Farmland Mapping and Monitoring Program (DOC 2020). The site is zoned R-1 and is currently fallow land not used for grazing. The project will not convert 100 acres or more of farmlands designated Prime, Unique, or of Statewide Importance to nonagricultural uses. Large parcel size is, in general, an important indicator of potential agricultural suitability and productivity. CEQA Guidelines Section 15206 does not regard the cancellation of less than 100 acres of land from the Williamson Act to be of statewide, regional, or area wide significance. Therefore, the project would not significantly convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to non-agricultural use.

b. **No impact.** The project site is currently zoned R-1 (One Family Dwelling) and is not under a Williamson Act contract. Therefore, the project would not conflict with existing zoning for agricultural use or a Williamson Act contract.

c. **No impact.** As discussed in II.b, the project site is zoned R-1. There are no forest lands located on the site. Therefore, the project would not conflict with existing zoning for, or cause rezoning of forest land or timberland, or timberland zoned Timberland Production.

d. **No impact.** Please refer to response II.c. Therefore, the project would not result in the loss of forestland or conversion of forest land to non-forest.

e. **Less-than-significant impact.** Please refer to responses II.a through II.d. This project is in an area designated for urban development by the Metropolitan Bakersfield General Plan. The project itself is typical of the development found in Metropolitan Bakersfield. Therefore, the project would not 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.

III. AIR QUALITY

a. **Less-than-significant impact.** An Air Quality Impact Analysis was conducted for the project. The methodology for the analysis followed the Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI) prepared by the San Joaquin Valley Air Pollution Control District (SJVAPCD) for quantification of emissions and evaluation of potential impacts to air resources and the SJVAPCD's Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA (Provost & Pritchard Consulting Group 2022).

The project is located within the SJVAPCD jurisdiction, in the San Joaquin Valley Air Basin (SJVAB). The SJVAB is designated nonattainment for ozone, particulate matter less than 10 microns (PM_{10}) and particulate matter less than 2.5 microns ($PM_{2.5}$). The SJVAPCD has annual emission significance thresholds used to determine whether a project would result in a substantial contribution for both operational and construction emissions (See **Table 1** and **Table 2**). As shown in **Table 1** and **Table 2** below, project-generated emissions are below the SJVAPCD's regional significance thresholds, and the project is consistent with current air quality attainment plans including control measures and regulations (Provost & Pritchard Consulting Group 2022). Therefore, the project would not result in a substantial adverse effect on the implementation of an air quality plan.

Table 2 Construction Emissions Summary, Criteria Pollutants

Emissions (in tons per year)						
	ROG	**NO_X**	**CO**	**PM_{10}**	**$PM_{2.5}$**	**SO_X**
Maximum Construction Year	3.5661	3.6868	3.5342	1.3265	0.5262	0.0089
Significance Threshold	10	10	100	15	15	27
Significant Impact?	No	No	No	No	No	No

Source: (Provost & Pritchard Consulting Group 2022)
Notes: CO=carbon monoxide; NO_X= nitrogen oxides, SO_X=sulfur oxides

Table 2 Operational Emissions Summary, Criteria Pollutants

Emissions (in tons per year)						
	ROG	**NO_X**	**CO**	**PM_{10}**	**$PM_{2.5}$**	**SO_X**
Maximum Construction Year	3.9530	3.0201	14.2545	3.1184	0.8885	0.0333
Significance Threshold	10	10	100	15	15	27
Significant Impact?	No	No	No	No	No	No

Source: (Provost & Pritchard Consulting Group 2022)

b. **Less-than-significant impact.** The SJVAPCD through its GAMAQI has determined that projects that exceed regional thresholds would have a cumulatively considerable health impact. As discussed in response III.a above, emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ associated with the construction and operation of the Project would not exceed the SJVAPCD significance thresholds. Therefore, the project would not have substantial adverse effects related to criteria pollutants.

c. **Less-than-significant impact.** Those who are sensitive to air pollution include children, the elderly, and persons with pre-existing respiratory or cardiovascular illness. The District considers a sensitive receptor a location that houses or attracts children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Examples of sensitive receptors include hospitals, residences, convalescent facilities, and schools. The closest off-site sensitive receptors are existing residences across Masterson Street and to the northeast, across Grand Canyon Drive. Additional more distant sensitive receptors are located in residential subdivisions west, south, and east of the project site. For criteria pollutants, impacts to receptors are based on emissions during the highest daily emissions during construction and operations. As shown in **Table 3**, emissions generated from construction and operation of the project are less than SJVAPCD screening criteria.

Table 3 Maximum Daily Construction And Operational; Emissions, Criteria Air Pollutants

Emissions (in tons per year)						
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$	SO_X
Construction - Summer	45.5205	34.5535	28.6096	0.0713	10.7933	5.0087
Construction – Winter	45.5108	34.5589	28.5168	0.0686	10.7933	5.0087
Operations- Winter	22.1415	19.6990	94.6724	0.1975	18.1327	5.3181
Operations -Summer	24.0345	18.3312	98.3670	0.2119	18.1326	5.3179
Significance Threshold	100	100	100	100	100	100
Significant Impact?	No	No	No	No	No	No

Source: (Provost & Pritchard Consulting Group 2022)

The project site is situated in a city growth area. The project includes urbanization of a site that was formerly used for agricultural purposes. Construction activities would generate fugitive dust that could contain *Coccidioides immitis* (*C. immitis*) spores. Therefore, implementation of the project would have a low probability of the site having *C. immitis* growth sites and exposure to the spores from disturbed soil. The project will minimize the generation of fugitive dust during construction activities by complying with SJVAPCD's Regulation VIII. Therefore, this regulation, combined with the relatively low probability of the presence of *C. immitis* spores, would reduce Valley fever impacts to less than significant (Provost & Pritchard Consulting Group 2022). Therefore, the project would not have a substantial adverse effect on exposing sensitive receptors to substantial pollutant concentrations.

d. **No impact.** The land use proposed for this project does not have the potential to create objectionable odors. This project is not included on the list of land uses generally regarded to have site odor problems per Table 6 of the GAMAQI (SJVACPD, 2022) (Provost & Pritchard Consulting Group 2022). Therefore, the project would not result in a substantial adverse effect related to odors.

IV. BIOLOGICAL RESOURCES

a. **Less-than-significant.** A Biological Assessment Report was prepared for the project to document biological resources identified during a reconnaissance field study and identify

potential impacts. The project site has been disturbed by earthwork conducted before 2014 and is currently fallow. Other than the borrow pit located near Grand Canyon Drive, almost the entire remainder of the site is covered in ruderal vegetation knee-high to six feet. Given the behavior of individual wildlife species, well above normal vegetation density and height could allow for subtle species sign to remain undetected on the ground. However, no special status species or evidence of presence were observed during the site survey (Pruett Biological Resources Consulting, Inc. 2023). The project must comply with listed plant and animal species protected under the Federal Endangered Species Act (FESA) and the California Endangered Species Act (CESA), as directed by the U.S. Fish and Wildlife Service and the California State Department of Fish and Wildlife, respectively. Therefore, the project would result in a less than significant impact on special status species.

b. **No Impact.** There is no riparian habitat or other sensitive natural communities located at the site. This project is also not located within, or adjacent to, the Kern River riparian habitat area. Therefore, the project would result in no impacts on any riparian habitat or other sensitive natural community.

c. **No Impact.** There are no wetlands, as defined by Section 404 of the federal Clean Water Act, located at the project site, and no features identified as wetlands categories are found in the National Wetlands Inventory within the project site (United States Fish and Wildlife Service, 2021). Therefore, the project would result in no impacts on federally protected wetlands.

d. **No Impact.** No evidence of nursery sites was observed during the site survey. In addition, the project site is not within an essential habitat connectivity area (CDFW, 2010). Therefore, the project would result in no impacts on migratory wildlife corridors or nursery sites.

e. **No Impact.** The project site does not include biological resources that are protected by local policies. Therefore, the project would result in no impact on any local policies or ordinances protecting biological resources.

f. **No Impact.** Please refer to response IV.e. The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, the project would result in no impact on an adopted Habitat Conservation Plan.

V. CULTURAL RESOURCES

a. **No Impact.** A Cultural Resources Assessment was prepared for the project to identify historic and cultural resources within the project site. A records search and field survey of the project site was conducted. No prehistoric or historical cultural resources were discovered during the field survey (Gardner 2004). According to the Historic Buildings and Sites in Bakersfield Map, the project site does not include a historic building or site (City of Bakersfield 2022). Therefore, the project would not result in substantial adverse effects on historical resources.

b. **Less than significant with mitigation incorporated.** No archeological resources have been documented within the project site (Gardner 2004). In addition, according to the Environmental Impact Report prepared for the MCGP, the majority of archeological sites within the city lie outside of urban development areas. The soil within the project site has been disturbed previously; therefore, the likelihood of archeological resources being present and intact is low. However, in the event that any unknown resources are

encountered, Mitigation Measure 1 would be implemented. With implementation of Mitigation Measure 1, the project would not significantly affect archeological resources.

c. **Less than significant with mitigation incorporated.** The project site is developed and is not within or adjacent to a former cemetery. The project could inadvertently uncover, or damage previously unknown human remains. Mitigation Measure 2 requires that if any human remains are found at the site during construction, work would cease, and the remains would be handled pursuant to applicable law. With implementation of Mitigation Measure 2, the project would not significantly disturb any human remains.

VI ENERGY

a. **Less-than-significant impact.** The project would comply with modern building standards, including California Code of Regulations Title 24, which outlines energy efficiency standards for new residential buildings to ensure that they do not wastefully, inefficiently, or unnecessarily consume energy.

b. **Less-than-significant impact.** There is no adopted plan by the City of Bakersfield for renewable energy or energy efficiency. As mentioned above, the project would comply with California Code of Regulations Title 24. Additionally, the City encourages applicants and developers to go beyond the required standards and make their developments even more efficient through programs such as LEED, or Leadership in Energy and Environmental Design, which is a green building rating system that provides a framework to create healthy, highly efficient, and cost-saving green buildings. Other encouraged programs available to applicants and developers are Title 20 appliance energy efficiency standards and 2005 building energy efficiency standards. Therefore, the project would result in a less than significant impact on a state or local plan for renewable energy or energy efficiency.

VII. GEOLOGY AND SOILS

a. **Less-than-significant with mitigation incorporated.** A Geological Hazard Study (Geo Labs – Westlake Village, 2008) for the project site (which is Parcel Map 12334 and was previously known as Lot 38 of Tract 6137) was prepared in 2008. An update Geological Hazard Study was prepared in 2019 by SEI. The 2019 study was peer reviewed in 2020 (WZI, 2020) and to meet requirements of the applicable building code. The 2019 study determined the locations of structure setbacks from identified seismic alignments. The inclusion of Mitigation Measure 3 will result in less than significant impact from geological hazards. The following discusses the potential for the project to expose people or structures to substantial adverse effects as a result of various geologic hazards. The City is within a seismically active area. According to the Metropolitan Bakersfield General Plan, major active fault systems border the southern portion of the San Joaquin Valley. Among these major active fault systems include the San Andreas, Breckenridge-Kern County, Garlock, Pond Poso, and White Wolf faults. There are numerous additional smaller faults suspected to occur within the Bakersfield area which may or may not be active. The active faults have a maximum credible Richter magnitude that ranges from 6.0 (Breckenridge-Kern County) to 8.3 (San Andreas). Potential seismic hazards in the planning area involve strong ground shaking, fault rupture, liquefaction, and landslides.

a.i **Less-than-significant impact.** Ground rupture is ground deformation that occurs along the surface trace of a fault during an earthquake. The project site is included within the limits of an "Earthquake Fault Zone" as defined in the Alquist-Priolo Earthquake Fault Zoning Act (DOC 2022). However, structures are not located within the boundaries of the earthquake fault zone. Therefore, the project would not expose people or structures to potential substantial adverse effects involving rupture of a known earthquake fault.

a.ii **Less-than-significant impact.** The City is within a seismically active area. Two geological hazard studies have been prepared for the project site: Geo Labs (2008) and SEI (2019). WZI (2019) concluded that the update prepared by SEI complied with the appropriate building code. Future structures proposed on the project site are required by state law and City ordinance to be constructed in accordance with the Uniform Building Code (specifically Seismic Zone 4, which has the most stringent seismic construction requirements in the United States), and to adhere to all modern earthquake construction standards. Therefore, the project would not expose people or structures to potential substantial adverse effects involving strong seismic ground shaking.

a.iii **Less-than-significant impact.** Two geological hazard studies have been prepared for the project site: Geo Labs (2008) and SEI (2019). WZI (2019) concluded that the update prepared by SEI complied with the appropriate building code. The most common seismic-related ground failure is liquefaction and lateral spreading. In both cases, during periods of ground motion caused by an event such as an earthquake, loose materials are transformed from a solid state to near-liquid state as a result of increased pore water pressure. Such ground failure generally requires a high-water table and poorly draining soils in order for such ground failure to occur. Soils underlain the southerly portion of the project site include Delano sandy loam, 0 to 2% slopes and Delano sandy loam, 5 to 9%, and the northerly portion Delano sandy loam 2 to 5% slope and Delano variant clay loam 0 to 9% slope. The potential for liquefaction at the project site is low. The site is not within an area with a high ground water. In addition, future structures proposed on the project site are required by state law and City ordinance to be constructed in accordance with the Uniform Building Code, including those relating to soil characteristics. Therefore, the project would not expose people or structures to potential substantial adverse effects involving seismic-related ground failure, including liquefaction.

a.iv **Less-than-significant impact.** In Kern County, the common types of landslides induced by earthquake occur on steeper slopes found in the foothills and along the Kern River Canyon; in these areas, landslides are generally associated with bluff and stream bank failure, rockslide, and slope slip on steep slopes. The project site slopes are between 5 to 9%, but such slopes would not be considered sleep enough to be considered at risk for landslides. Therefore, the project would not expose people or structures to potential substantial adverse effects involving landslides.

b. **Less-than-significant impact.** The project site's soils have low-to-medium susceptibility to erosion by rainfall (USDA 2022). The relatively low precipitation in the project area [on average about 6 inches/year results in surface runoff that is intermittent and temporary in nature. The erosion potential at the site and the fact that the soils are well drained coupled with low average rainfall in the area does not make the project site susceptible to substantial soil erosion or loss of topsoil.

Construction of the site would temporarily disturb soils, which could loosen soil, and the removal of vegetation could contribute to future soil loss and erosion by wind and storm water runoff. The project would have to request coverage under the National Pollutant Discharge Elimination System (NPDES) *General Permit for Storm Water Discharges Associated with Construction Activities* (No. 2012-0006-DWQ) (General Permit) because the project would result in 1 or more acres of ground disturbance. To conform to the requirements of the General Permit, a Storm Water Pollution Prevention Plan (SWPPP) would need to be prepared that specifies best management (BMPs) to prevent construction pollutants, including eroded soils (such as topsoil), from moving offsite.

Implementation of the General Permit and BMPs requirements would mitigate erosion of soil during construction activities.

During operation, the soils would be sufficiently compacted to required engineered specifications, revegetated in compliance with City requirements, or paved over with impervious surfaces such that the soils at the site would not be particularly susceptible to soil erosion. Therefore, the project would not result in substantial soil erosion or the loss of topsoil.

c. **Less-than-significant impact.** As discussed in VI.a.iii and VI.a.iv, the project site's soils would not expose people or structures to potential substantial adverse effects involving seismic-related ground failure, including liquefaction, lateral spreading, or landslides.

Subsidence is part of the baseline condition in the project area due to historic groundwater pumping the resultant subsidence that occurs with such activities. The project would not substantially contribute to this baseline condition because the projected water use would be consistent with Cal Water's *2015 Urban Water Management Plan* (UWMP) (Cal Water 2016), which takes into consideration sustainability of the groundwater basin and the need to reduce reliance on groundwater pumping in the future.

Future structures proposed on the project site are required by state law and City ordinance to be constructed in accordance with the Uniform Building Code, including those relating to soil characteristics. Therefore, the project would not 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.

d. **Less-than-significant impact.** When a soil has 35% or more clay content, it is considered a clayey soil. Delano soils generally have 10 to 35% clay content (USDA 2022) and therefore, have a low to high shrink swell. Additionally, future structures proposed on the project site are required by state law and City ordinance to be constructed in accordance with the Uniform Building Code, including those relating to soil characteristics. Therefore, the project would not be located on expansive soil creating substantial risks to life or property.

e. **No impact.** The project would not require the use of septic tanks or alternative wastewater disposal system. The project would hook up to existing City sewer in the area. Therefore, the project would not 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.

f. **No impact.** According to the Environmental Impact Report prepared for the MCGP, the city has a very low potential to contain paleontological resources. Therefore, the project would result in no impact on unique paleontological resources, sites or unique geologic features.

VIII. GREENHOUSE GAS EMISSIONS

a. **Less-than-significant impact.** Total greenhouse gas emissions (GHG) emissions generated during all phases of construction were combined and are presented in **Table 4**. The SJVAPCD does not recommend assessing the significance of construction-related emissions. However, other jurisdictions, such as the South Coast Air Quality Management District and the Sacramento Metropolitan Air Quality Management District, have concluded that construction emissions should be included since they may remain in the

atmosphere for years after construction is complete. In order to account for the construction emissions, amortization of the total emissions generated during construction were based on the life of the development (residential—30 years) and added to the operational emissions (Provost & Pritchard Consulting Group 2022).

Total GHG emissions generated during operations are presented in **Table 4**. The project would result in a 32.09 percent reduction in emissions, meeting the goal set by Assembly Bill (AB) 32. By meeting the reduction goal set by AB 32 and through compliance with applicable local, state, and federal plans and policies, the project would not have a substantial adverse effect related to greenhouse gas emissions (Provost & Pritchard Consulting Group 2022).

Table 4 Construction Emissions, Greenhouse Gases

	$MTCO_{2e}$	Percent Reduction
Operational Emissions	3,839.632	-
Total Construction Emissions	823.579	-
Amortized Construction Emissions	27.453	-
Total Operational Emissions plus Amortized Construction Emissions	3,867.085	-
2005 Operational Emissions plus Amortized Construction Emissions	5,694.317	-
Business as Usual Reduction	-	32.09%

Source: (Provost & Pritchard Consulting Group 2022)
Notes: $MTCO_{2e}$ =metric tons of carbon dioxide equivalent

b. **Less-than-significant impact.** The City of Bakersfield has not adopted a GHG reduction plan. In addition, the City has not completed the GHG inventory, benchmarking, or goal-setting process required to identify a reduction target and take advantage of the streamlining provisions contained in the CEQA Guidelines amendments adopted for Senate Bill (SB) 97 and clarifications provided in the CEQA Guidelines amendments adopted on December 28, 2018 (Provost & Pritchard Consulting Group 2022).

The SJVAPCD has adopted a Climate Action Plan, but it does not include measures that are applicable to development projects. Therefore, the SJVAPCD Climate Action Plan cannot be applied to the project. Since no other local or regional Climate Action Plan is in place, the project is assessed for its consistency with Air Resources Board's (ARB) adopted Scoping Plans. This would be achieved with an assessment of the project's compliance with Scoping Plan measures contained in the 2008 Scoping Plan and the 2017 Scoping Plan Update (Provost & Pritchard Consulting Group 2022).

The AB 32 Scoping Plan contains a variety of strategies to reduce the State's emissions. As shown in **Table 5**, the project is consistent with strategies that are applicable to the project. The 2017 Scoping Plan Update strategies primarily rely on increasing the stringency of existing regulations with which the project would continue to comply, support through the project's design, and implementation of the General Plan goals and policies (Provost & Pritchard Consulting Group 2022).

Accordingly, taking into account the proposed project's emissions, project design features, and the progress being made by the State towards reducing emissions in key sectors such as transportation, industry, and electricity, the project would be consistent with State GHG Plans and would further the State's goals of reducing GHG emissions to

1990 levels by 2020, 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050, and does not obstruct their attainment. Therefore, the project would not result in substantial adverse effects related to an applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

Table 5 AB 32 Consistency Table

Scoping Plan Strategy	Consistency Finding
Regulation for the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanism October 20, 2015 (CCR 95800)	**Consistent.** The Cap-and-Trade Program applies to large industrial sources such as power plants, refineries, and cement manufacturers. However, the regulation indirectly affects people who use the products and services produced by these industrial sources when increased cost of products or services (such as electricity and fuel) are transferred to the consumers. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period.
Pavley I 2005 Regulations to Control GHG Emissions from Motor Vehicles 2012 LEV III Amendments to the California Greenhouse Gas and Criteria Pollutant Exhaust and Evaporative Emission Standards	**Consistent.** This measure applies to all new vehicles starting with model year 2012. The project would not conflict with its implementation as it would apply to all new passenger vehicles purchased in California. Passenger vehicles, model year 2012 and later, associated with construction and operation of the project would be required to comply with the Pavley emissions standards.
2009 readopted in 2015. Regulations to Achieve Greenhouse Gas Emission Reductions Sub article 7. Low Carbon Fuel Standard CCR 95480	**Consistent.** This measure applies to transportation fuels utilized by vehicles in California. The project would not conflict with implementation of this measure. Motor vehicles associated with construction and operation of the project would utilize low carbon transportation fuels as required under this measure
Regional Transportation-Related Greenhouse Gas Targets of SB 375	**Consistent.** The project will provide a residential development in the region that is consistent with the land uses assessed in the 2018 Regional Transportation Plan/Sustainable Communities Strategy (SCS). The project is not within an SCS priority area and so is not subject to requirements applicable to those areas.
2010 Amendments to the Truck and Bus Regulation, the Drayage Truck Regulation and the Tractor-Trailer Greenhouse Gas Regulation	**Consistent.** This measure applies to medium- and heavy- duty vehicles that operate in the State. The project would not conflict with implementation of this measure. Medium- and heavy-duty vehicles associated with construction of the project would be required to comply with the requirements of this regulation.

Title 20 Appliance Efficiency Regulation Title 24 Part 6 Energy Efficiency Standards for Residential Buildings Title 24 Part 11 California Green Building Code Standards	**Consistent.** The project would not conflict with implementation of this measure. The project will comply with the latest energy efficiency standards and incorporate applicable energy efficiency features designed to reduce project energy consumption.
2010 Regulation to Implement the Renewable Electricity Standard (33% 2020) SB 350 Clean Energy and Pollution Reduction Act of 2015 (50% 2023)	**Consistent.** PG&E obtained 33 percent of its power supply from renewable sources such as solar and geothermal in 2017, and about 70 percent of the electricity it delivers is carbon-free, including nuclear and large hydroelectric facilities. The owner of the project would purchase power that consists of a greater percentage of renewable sources and could install renewable solar power systems that will assist the utility in achieving exceeding the renewable mandate.
Million Solar Roofs Program	**Consistent.** This measure is intended to increase solar throughout California by means of a variety of electricity providers and existing solar programs. Projects within the plan area will be able to take advantage of incentives that are in place at the time of construction. The project design does not preclude the future installation of solar panels.
Title 24 Part 11 California Green Building Code Standards SBX 7-7- The Water Conservation Act of 2009 Model Water Efficient Landscape Ordinance	**Consistent.** The project will comply with the California Green Building Standards Code, which requires a 20 percent reduction in indoor water use. The project will also comply with the MWELO as required by the City's development code and water ordinance.
Title 24 Part 11 California Green Building Code Standards AB 341 Statewide 75 Percent Diversion Goal	**Consistent.** The project would not conflict with implementation of these measures. The project is required to achieve the recycling mandates via compliance with the CALGreen code. The project would utilize City of Bakersfield recycling services.

Source: (Provost & Pritchard Consulting Group 2022)

IX. HAZARDS AND HAZARDOUS MATERIALS

a. **Less-than-significant impact.** The project would not involve the routine transport, use, or disposal of hazardous materials as defined by the Hazardous Materials Transportation Uniform Safety Act. However, construction activities would require the transport, storage, use, and/or disposal of hazardous materials such as fuels and greases for the fueling/servicing of construction equipment, and there is the potential for upset and accident conditions that could release such material into the environment. Such substances would be stored in temporary storage tanks/sheds that would be located at the site. Although these types of materials are not acutely hazardous, they are classified as hazardous materials and create the potential for accidental spillage, which could expose construction workers. All transport, storage, use, and disposal of hazardous materials used in the construction of the project would be in strict accordance with federal and state laws and regulations. During construction of the project, Material Safety Data Sheets (MSDS) for all applicable materials present at the site would be made readily available to onsite personnel. During construction, non-hazardous construction debris would be generated and disposed of at approved facilities for handling such waste. Also, during construction, waste disposal would be managed using portable toilets located at reasonably accessible onsite locations.

   The project is the development of up to 299 SFR units. Day-to-day activities in residences do not involve the routine transport, use, or disposal of hazardous materials as defined by the Hazardous Materials Transportation Uniform Safety Act. Maintenance of residences would require the transport, storage, use, and/or disposal of hazardous materials such as paints, cleaners, oils, batteries, and pesticides. Residential users should follow any instructions for use and storage provided on product labels carefully to prevent any accidents at home. Users should also read product labels for disposal directions to reduce the risk of products exploding, igniting, leaking, mixing with other chemicals, or posing other hazards on the way to a disposal facility. Additionally, residential hazardous waste can be dropped off at Metro Kern County Special Waste Facility located at 4951 Standard Street or at one-day hazardous waste collection events that take place throughout the year. Therefore, the project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

b. **Less-than-significant impact.** Please refer to response VIII.a. Therefore, the project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous material into the environment.

c. **No impact.** The closest school is Cesar Chavez Elementary School located just about 2.4 mile to the south of the site. Therefore, the project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school.

d. **No impact.** According to EnviroStor, no hazardous waste sites or materials are located within the project site (DTSC 2022). Therefore, the project would not result in a substantially adverse effect related to hazardous materials listed on Government Code 65962.5.

e. **No impact.** The project site is not located within the Kern County *Airport Land Use Compatibility Plan* area (Kern County 2012). The closest airport to the project site is the Bakersfield Municipal Airport located about 5 miles to the northeast of the site. Therefore, the project would not result in a safety hazard for people residing or working in the project area for a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport.

f. **Less-than-significant impact.** The project would have to develop or improve roads to the site as well as internal roads that are in compliance with the City's Fire Code to allow emergency vehicles adequate access to the site and all portions of the site. Access to the site would be maintained throughout the construction period, and appropriate detours would be provided in the event of potential temporary road closures. The project would not interfere with any local or regional emergency response or evacuation plans because the project would not result in a substantial alteration to the adjacent and area circulation system. The project is typical of urban development in Bakersfield and is not inconsistent with the adopted City of Bakersfield Hazardous Materials Area Plan (Bakersfield 1997). This plan identifies responsibilities and provides coordination of emergency response at the local level to hazardous materials incidents. Therefore, the project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

g. **Less-than-significant impact.** The project site is located within a "moderate" fire hazard severity zone (CalFire 2008). The project site currently does not possess excessive fuel loads. With the project, the site would be developed with hardscapes and irrigated landscaping, which would reduce fire potential at the site. Additionally, the City and County require "defensible space" within areas of the County susceptible to wildland fires as shown on CalFire maps through the Fire Hazard Reduction Program. Defensible space is the buffer created between a building and the grass, trees, shrubs, or any wildland area that surrounds it. Therefore, the project would not expose people or structures to a significant risk of loss, injury or death involving wild land fires, including where wild lands are adjacent to urbanized areas or where residences are intermixed with wild lands.

X. HYDROLOGY AND WATER QUALITY

a. **Less-than-significant impact.** Construction would include ground disturbing activities. As discussed in VI.b, the project site's soil types have a low-to-medium susceptibility to sheet and rill erosion by rainfall and a low susceptibility to wind erosion at the ground surface. Disturbance of onsite soils during construction could result in soil erosion and siltation, and subsequent water quality degradation through increased turbidity and sediment deposition during storm events to offsite locations. Additionally, disturbed soils have an increased potential for fugitive dust to be released into the air and carried offsite. As described in VI.b, the project would be required to comply with the General Permit. To conform to the requirements of the General Permit, a SWPPP would need to be prepared that specifies BMPs to prevent construction pollutants from moving offsite. The project is required to comply with the General Permit because project-related construction activities would disturb at least 1 acre of soil.

The City owns and maintains a municipal separate storm sewer system (MS4). The project's operational urban storm water discharges are covered under the Central Valley Water Quality Control Board (CVRWQCB) *National Pollutant Discharge Elimination System Permit and Waste Discharge Requirements General Permit for Discharges from Municipal Separate Storm Sewer Systems* (Order No. R5-2016-0040; NPDES No. CAS0085324) (MS4 Permit) (CVRWQCB 2016). The MS4 Permit mandates the implementation of a storm water

management framework to ensure that water quality is maintained within the City as a result of operational storm water discharges throughout the City, including the project site. By complying with the General Permit and MS4 Permit, the project would not violate any water quality standards or waste discharge requirements.

b. **Less-than-significant impact.** Potable water from the project would be supplied by California Water Service (Cal Water). Cal Water provided a "Will Serve Letter" (Cal Water 2023) for the project, and therefore groundwater levels have already been accounted for in the UWMP with the project (a future entitlement). Therefore, the project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.

c.i **Less-than-significant impact.** The project site contains ephemeral channels that do not have connectivity to a jurisdictional waterway and discharge to land. The project site would be graded and, as a result, the internal drainage pattern at the site would be altered from the baseline condition. Additionally, the project would result in increased impervious surfaces (i.e., building pads, sidewalks, asphalt parking area, etc.) at the site, which would reduce percolation to ground and result in greater amounts of storm water runoff concentrations at the site. If uncontrolled, differences in drainage patterns and increased impervious surfaces could result in substantial erosion or siltation on- or offsite. However, the project would be required to comply with the General Permit during construction and MS4 permit during operation. In order to comply with the MS4 Permit, the City requires compliance with adopted building codes, including complying with an approved drainage plan, which avoids on- and offsite flooding, erosion, and siltation problems. Therefore, the project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or offsite.

c.ii **Less-than-significant impact.** Please refer to response IX.c.i Therefore, the project would not create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.

c.iii **Less-than-significant impact.** Please refer to responses IX.a and IX.c.i. Therefore, the project would not create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.

c.iv **No Impact.** The project site is located within an area designated Zone X (FEMA 2017), which is outside the 100-year flood hazard area. Therefore, the project would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.

d. **No Impact.** The project is not located near any ocean or an enclosed body of water and therefore, would not be subject to inundation by tsunami or seiche. A mudflow is a type of landslide where earth and surface materials are rapidly transported downhill under the force of gravity. As discussed in VII.a.iv, landslides, including mudflow, occur on steeper slopes in the foothills and along the Kern River Canyon. The project site is generally flat, there are no such geologic features located at the project site, and the site is not located near the Kern River Canyon. Therefore. The project site would not be inundated by seiche, tsunami, or mud flow.

e. **Less-than-significant impact.** Please refer to response X.c.i. There is currently no adopted groundwater management plan for the project site or its vicinity. Therefore, the project would result in a less than significant impact related to obstructing a water quality control plan or a sustainable groundwater management plan.

XI. LAND USE AND PLANNING

a. **No impact.** The project is a continuation of the existing urban development pattern of the City or is an infill development. The project is not a long and linear feature, such as a freeway, railroad track, block wall, etc., that would have the potential to divide a community. The project is the development of a finite 95.21-acre project site that does not impede existing or future movement or development of the City. Therefore, the project would not physically divide an established community.

b. **No impact.** The project does not require any land use or zoning change. The proposed single-family residential development is consistent with the Low-Density designation of the MBGP and R-1 (One Family Dwelling) zone on the site. Therefore, the project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

XII. MINERAL RESOURCES

a. **No impact.** The project site is not within the administrative boundaries of an oilfield and there are no oil wells found on the site (DOGGR 2022). 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.

b. **No impact.** The project site is currently designated LR (Low Density Residential). No portion of the site is designated for a potential mineral resource extraction use such as R-MP (Mineral and Petroleum). Therefore, the project would not result in the loss of availability of a locally important mineral resource recovery site that is delineated in a local general plan, specific plan, or other land use plan.

XIII. NOISE

a. **Less-than-significant impact.** The project would generate noise during construction by the use of construction equipment. Typical construction equipment generates sound levels between 80 and 85 A-weighted decibels (dBA), which is a decibel system reflective of human hearing characteristics. At 80 to 85 dBA, the human response to such a sound level is annoyance and difficulty hearing conversation. Using the rule of thumb that noise attenuates 7.5 dBA per a doubling of distance away from the sound-emitting source, it would require 800 feet away from an 85-dBA sound-emitting source to obtain a 55 dBA sound level, which is considered "quiet" to the human ear. There are sensitive receptors (existing SFR) within 800 feet to the northeast of the project site. However, project construction would be limited to 6 a.m. and 9 p.m. on weekdays and 8 a.m. and 9 p.m. on weekends per Bakersfield Municipal Code Chapter 9.22 (Noise).

Project operations would generate sound levels typical of single-family residential land uses and residents would have to comply with Bakersfield Municipal Code regarding noise. Therefore, the project would not expose persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

b. **Less-than-significant impact.** Some groundborne vibration and noise would originate from earth movement and building activities during the project's construction phase. However, blasting, pile-driving, break-ramming, jackhammering, chipping, and other high impact-related construction activities that result in the creation of the greatest groundborne vibrations and noise levels would not occur as a consequence of the project. Additionally, groundborne vibration and noise attenuates at a shorter distance than airborne noise. Operation of single- and multi-family residential would not result in appreciable groundborne vibration or noise. Therefore, the project would not expose persons to or generation of excessive ground-borne vibration or ground-borne noise levels.

c. **No impact.** The project would not expose people residing or working in the project area to excessive noise levels for a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport.

XIV. POPULATION AND HOUSING

a. **Less-than-significant impact.** The project would accommodate population growth in this area through the development of new homes, and the project is the logical extension of existing urban development. The project would also require the extension of infrastructure. Therefore, the project would result in a less than significant impact on growth.

b. **No impact.** The project site consists of vacant land. Therefore, the project would not displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

XV. PUBLIC SERVICES

a.i **Less-than-significant impact with mitigation incorporated.** Fire protection services for the Metropolitan Bakersfield area are provided through a joint fire protection agreement between the City and County. Though the project may necessitate the addition of fire equipment and personnel to maintain current levels of service, this potential increase in fire protection services can be paid for by property taxes generated by this development. There is the potential that, during the construction phase, the project would impede emergency access. For projects that require minor impediments of a short duration (e.g., pouring a new driveway entrance), the project would be required to obtain a street permit from City Public Works. If a project requires lane closures and/or the diversion of traffic, then a Traffic Control Plan would be required. If necessary, the applicant/developer obtains a street permit or develop and get approved a Traffic Control Plan, for the construction period. Therefore, the project would result in less than significant with mitigation impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection.

a.ii **Less-than-significant impact.** Police protection will be provided by the Bakersfield Police Department upon project build out. Current City Police services standards require 1.09 officers for every 1,000 people in the City. However, this potential increase in services can be paid for by property taxes generated by this development. Therefore, the project would result in a less than significant impact on police protection performance objectives.

a.iii **Less-than-significant impact.** The project would produce up to 299 units to accommodate 933 residents and generate approximately school-aged children as indicated in **Table 6** below.

Table 6 Generation of School Aged Children

Number and Type of Dwelling Units	Elementary (K-8)	High School (9-12)	Total Pupils
299 single-family units	299 x 0.31	299 x 0.17	**144**
Totals	**93**	**51**	

This increase may necessitate the construction of additional school facilities. However, the need for additional schools can be paid for by existing school impact fees and increased property tax revenues. Therefore, the project would not 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 schools.

a.iv **Less-than-significant impact.** The project proposes a population increase of 933 and may result in an impact upon the quality and/or quantity of existing recreational opportunities and may also create a need for new parks or recreational facilities. The parkland requirements for the proposed project are calculated based on the General Plan and City Ordinance park standards of 2.5 acres for every 1,000 people and therefore, the park acreage estimated for the project is 0.024 acres. A 10-acre park site has been acquired to serve this project. The park is located along the northern boundary of the project site. No further park land dedication shall be required of this project. In addition, every residential unit must pay a park land development fee at the time of the issuance of building permits. Compliance with the park acreage dedication ordinance and the park development fee ordinance ensures that parks are dedicated and built in accordance with City standards to accommodate the increased population. Therefore, the project would not 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 parks.

a.v **Less-than-significant impact.** The project and eventual buildup of this area would result in an increase in maintenance responsibility for the City. Though the project may necessitate increased maintenance for other public facilities, this potential increase can be paid for by property taxes generated by this development. Therefore, the project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public facilities.

XVI. RECREATION

a. **Less-than-significant impact.** Please refer to response XV.a.iv. Therefore, the project would not 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.

b. **Less-than-significant impact.** Please refer to response XV.a.iv. Therefore, the project would not include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.

XVII. TRANSPORTATION AND TRAFFIC

a. **Less-than-significant with mitigation incorporated.** The project would result in temporary construction-related traffic impacts. Construction workers traveling to and from the project site as well as construction material delivery would result in additional vehicle trips to the area's roadway system. Construction material delivery may require a number of trips for oversized vehicles that may travel at slower speeds than existing traffic and, due to their size, may intrude into adjacent travel lanes. These trips may temporarily degrade level of service (LOS) on area roadways and at intersections. Additionally, the total number of vehicle trips associated with all construction-related traffic (including construction worker trips) could temporarily increase daily traffic volumes on local roadways and intersections. The project may require temporary lane closures or the need for flagmen to safely direct traffic on roadways near the project site. However, once the project is built, it would not result in any permanent traffic-related effects.

Policy 36 of the Metropolitan Bakersfield General Plan Circulation Element states:

> Prevent streets and intersections from degrading below Level of Service "C" where possible due to physical constraints (as defined in a Level of Service standard) or when the existing Level of Service if below "C" prevent where possible further degradation due to new development or expansion of existing development with a three-part mitigation program: adjacent right-of-way dedication, access improvements and/or an area-wide impact fee. The area-wide impact fee would be used where the physical changes for mitigation are not possible due to existing development and/or the mitigation measure is part of a larger project, such as freeways, which will be built at a later date.

Policy 36 of the Circulation Element of the MBGP requires the City to prevent streets and intersections from degrading below a level of service C, where possible, through dedication of adjacent right-of-way, access improvements, or an area wide impact fee. In addition, the Subdivision Ordinance requires all on-site street improvements and a proportional share of boundary street improvements to be built at the time the property is developed.

Mitigation Measures 4 and 5 require that the applicant/developer participation in the Regional Transportation Impact Fee Program and the payment of Local Mitigation fees. With implementation of these mitigation measures, the project would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system.

b. **Less-than-significant with mitigation incorporated.** Please refer to response XVII.a. Therefore, the project would result in a less than significant impact related to CEQA section 15064.3, subdivision (b).

c. **Less-than-significant impact.** The project would have to comply with all conditions placed on it by the City Traffic Engineering Division in order to comply with accepted traffic engineering standards intended to reduce traffic hazards, including designing the roads so that they do not result in design feature hazards. The project is with the City limits and surrounded by compatible existing and planned land uses and land use designations.

Therefore, the project would not substantially increase hazards due to a design feature or incompatible uses.

d. **Less-than-significant with mitigation incorporated.** There is the potential that, during the construction phase, the project would impede emergency access. For projects that require minor impediments of a short duration (e.g., pouring a new driveway entrance), the project would be required to obtain a street permit from City Public Works. If a project requires lane closures and/or the diversion of traffic, then a Traffic Control Plan would be required. Mitigation Measure 5 requires that, if the City Engineer determines necessary, the applicant/developer shall obtain a street permit or develop an approved a Traffic Control Plan, for the construction period. With implementation of mitigation, the project would not result in inadequate emergency access.

XVIII. TRIBAL CULTURAL RESOURCES

a. **Less-than-significant impact with mitigation incorporated.** The Cultural Resources Assessment (Gardner 2004) determined that there is no landscape, sacred place, or object with cultural value to a California Native American tribe located at the project site. Additionally, no portion of the site is eligible for listing in the California Register of Historical Resources or in a local register of historical resources (Gardner 2004). However, in the event that any unknown resources are encountered, Mitigation Measure 1 and Mitigation Measure 2 would be implemented. Therefore, the project would result in a less than significant impact with mitigation incorporated on tribal cultural resources.

b. **Less-than-significant impact with mitigation incorporated.** See response XVII.a. above. Therefore, the project would not cause a substantial adverse change in the significance of a tribal cultural resource that is determined by the lead agency to be significant.

XIX. UTILITIES AND SERVICE SYSTEMS

a. **Less-than-significant impact.** Refer to responses XIX.d and XIX.e. Therefore, the project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

b. **Less-than-significant impact.** The Cal Water has provided a "Will Serve Letter" stating that water service can be supplied to the development (Cal Water 2022). The proposed development would not result in a need for significant additional systems or substantially alter the existing water utilities in the area. Therefore, the project would have sufficient water supplies available from existing entitlements and resources, and new or expanded entitlements would not be needed.

c. **Less-than-significant impact.** Wastewater as a result of the project would be treated at WWTP No. 2, which is owned and operated by the City. Based on previous analyses, it is assumed that average daily water demand per dwelling unit is 325 gallons. With 299 dwelling units for the project, the project's average daily water demand would be 97,175 gpd [or 0.05 million gallons per day (MGD)] and therefore, it is assumed that wastewater capacity requirements to serve the project would also be 0.05 MGD. WWTP No. 2 has an overall capacity of 25 MGD with an average daily flow of 13.7 MGD. The current available capacity of 13.3 MGD (Bakersfield 2022). The project's contribution would account for less than 0.5% of the available capacity and therefore, WWTP No. 2 has sufficient capacity to serve the project. As a result, it has been determined that 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.

d. **Less-than-significant impact.** It is assumed that solid waste generated as a result of the project would be disposed at the Bena Landfill located at 2951 Neumarkel Road, Bakersfield, CA 93307. The amount of solid waste generated by the project would be negligible. The project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.

e. **Less-than-significant impact.** By law, the project would be required to comply with federal, state, and local statutes and regulations, including those relating to waste reduction, litter control, and solid waste disposal.

XX. WILDFIRE

a. **Less-than-significant impact with mitigation incorporated.** Please refer to response IX.f. There is the potential that, during the construction phase, the project would impede emergency access. For projects that require minor impediments of a short duration (e.g., pouring a new driveway entrance), the project would be required to obtain a street permit from City Public Works. If a project requires lane closures and/or the diversion of traffic, then a Traffic Control Plan would be required. Mitigation Measure 5 requires that, if necessary, the applicant/developer obtains a street permit or develop and get an approved Traffic Control Plan, for the construction period.

b. **Less-than-significant impact.** As discussed in response IX.g, the project site is within a "moderate" land fire hazard zone. The project site currently does not possess excessive fuel loads. With the project, the site would be developed with hardscapes and irrigated landscaping, which would reduce fire potential at the site. Therefore, the project would result in a less than significant impact on wildfire pollutant exposure or uncontrolled spread of wildfire.

c. **Less-than-significant impact.** Please refer to response XX.b above.

d. **Less-than-significant impact.** Please refer to response XX.b above.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

a. **Less-than-significant with mitigated incorporated.** The project must comply with listed plant and animal species protected under the Federal Endangered Species Act (FESA) and the California Endangered Species Act (CESA), as directed by the U.S. Fish and Wildlife Service and the California State Department of Fish and Wildlife, respectively. There are no important examples of the major periods of California history or prehistory found at the site. Therefore, the project with mitigation would not 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.

b. **Less-than-significant impact.** As described in the responses above, the project has no impacts that would be defined as individually limited, but cumulatively considerable.

c. **Less-than-significant impact with mitigation incorporated.** As described in the responses above, with mitigation incorporated, the project would have less than significant impacts and environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly.

BIBLIOGRAPHY/REFERENCE LIST

1. Bakersfield (City of Bakersfield). 1997. Hazardous Materials Area Plan. January.

2. Bakersfield. 1999. Proposed Subdivision & Engineering Design Manual. June.

3. Bakersfield. 2001. Metropolitan Bakersfield Habitat Conservation Plan and Final Environmental Impact Report.

4. Bakersfield. 2002. Bikeway Master Plan.

5. Bakersfield. 2013. City of Bakersfield Bicycle Transportation Plan. November.

6. Bakersfield 2016. Metropolitan Bakersfield General Plan and Final Environmental Impact Report. Revised: January 20, 2016.

7. Bakersfield. 2017. Wastewater Treatment Plants.

8. City of Bakersfield. (2022, July 26). Historic Buildings and sites in Bakersfield. ArcGIS StoryMaps. https://storymaps.arcgis.com/stories/eb1b154414724e1d8b39ef7ff1ee46a2

9. CalFire (Department of Forestry and Fire Protection). 2008. Draft Fire Hazard Severity Zones in LRA, Kern County.

10. Caltrans (California Department of Transportation). California State Scenic Highway Mapping System.

11. Cal Water (California Water Service), https://www.calwater.com/docs/uwmp2020/BK_2020_UWMP_FINAL.pdf

12. Cal Water. Will Serve Letter, 2023.

13. CBOC (California Burrowing Owl Consortium). 1993. Burrowing Owl Protocol and Mitigation Guidelines. April.

14. CDFW. (2010, February). California Essential Habitat Connectivity Project. California, United States. Retrieved May 17, 2023, from https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18366&inline

15. DOC (Department of Conservation). 2018. Farmland Mapping and Monitoring Program https://maps.conservation.ca.gov/DLRP/CIFF/

16. DOC (Department of Conservation Seismic Zones and soils https://maps.conservation.ca.gov/cgs/gmc/

17. 2020 Federal Census https://www.census.gov/quickfacts/bakersfieldcitycalifornia (2022).

18. CalGEM Well Finder. https://maps.conservation.ca.gov/doggr/wellfinder , (2022).

19. DTSC (Department of Toxic Substance Control). 2017. EnviroStor. https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=bakersfield%2C+ca

20. DWR (Department of Water Resources 2022) https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#gwlevels

21. FEMA (Federal Emergency Management Agency). 2017. FEMA Flood Map Service Center: Welcome! Available:<https://msc.fema.gov/portal>. Accessed: October 19, 2017.

22. Gardner, J. K. (n.d.). (rep.). A Cultural Resources Assessment of Tentative Tract 6137, APN 386-020-14, a 103-Acre Parcel of Land, for the City of Bakersfield, Kern County, California.

23. Kern County. 2009. Lake Isabella Dam Failure Evacuation Plan.

24. Kern County. 2012. Airport Land Use Compatibility Plan. November.

25. Kern County. 2017. Lake Isabella Flood Area.

26. Pruett Biological Resource Group, Inc. 2023. Biological Clearance Survey. April 17.

27. SJVAPCD (San Joaquin Valley Air Pollution Control District). 2022. Guide for Assessing and Mitigating Air Quality Impacts.

28. USDA (U.S. Department of Agriculture). Soil survey of Kern County, northeastern part, and southeastern part of Tulare County, California. https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

29. United States Fish and Wildlife Service. (2021, May 1). National Wetlands Inventory. United States. Retrieved May 17, 2023, from https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/

30. Biological Clearance Survey, Assessor's Parcel Map Number 386-050-47, -54, and -59, County of Kern, Bakersfield, California, Pruett Biological Resource Consulting, Inc., April 17, 2023.

31. A Cultural Resources Assessment of Tentative Tract 6137, City of Bakersfield, California. Jill K. Gardner, Center for Archaeological Research, CSUB, April 2004.

32. Air Quality Analysis, Quarter Round Subdivision, Provost & Pritchard Consulting Group, July 2022.

33. Seismic Study (Geolabs 2008)

34. GeoHazard by Soils Engineering (2019)

35. WZI Peer Review Letter on 2019 Geo Study

S&S Homes

Quarter Round Subdivision

Bakersfield, California
July 2022

Prepared for:
S&S Homes
Bakersfield, California

Prepared by:
Provost & Pritchard Consulting Group
400 East Main Street, Suite 300
Visalia, California 93291

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Report Prepared for:

S&S Homes of the Central Coast, Inc.
532 Camino Mercado
Arroyo Grande, CA 93420

Contact:

Pam Denney
(805) 994-1844

Report Prepared by:

Provost & Pritchard Consulting Group

Jarred Olsen, Associate Planner
Wyatt Czenshinski, Assistant Planner
Amy Wilson, QA/QC

Contact:
Jarred Olsen
(559) 636-1166

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Abbreviations

AB ..... Assembly Bill
AQ ..... Air Quality
AQI ..... Air quality index
AQP ..... Air Quality Plan
ARB ..... California Air Resources Board
CAAQS ..... California Ambient Air Quality Standards
CalEEMod ..... California Emissions Estimator Model
CCA ..... Clean Air Act
CCAA ..... California Clean Air Act
CDC ..... Centers for Disease Control
CDPH ..... California Department of Public Health
CEQA ..... California Environmental Quality Act
CO ..... Carbon monoxide
DCP ..... Dust Control Plan
District ..... San Joaquin Valley Air Pollution Control District
DPM ..... Diesel particulate matter
EMFAC ..... ARB Emission Factor
EPA ..... United States Environmental Protection Agency
GAMAQI ..... *Guideline for Assessing and Mitigating Air Quality Impacts*
GHG ..... Greenhouse Gas
HAP ..... Hazardous Air Pollutants
IPCC ..... United Nations Intergovernmental Panel on Climate Change
Kern COG ..... Kern County Council of Governments
Lead Agency ..... City of Bakersfield
MWh ..... megawatt-hour
NAAQS ..... National Ambient Air Quality Standards
NO_X ..... Oxides of Nitrogen
PG&E ..... Pacific Gas & Electric
PM_{10} ..... Particulate matter 10 microns or less
$PM_{2.5}$ ..... Particulate matter 2.5 microns or less
Project ..... Quarter Round Subdivision
ROG ..... Reactive organic gases

SJVAPCD..... San Joaquin Valley Air Pollution Control District

SO_2 ..... Sulfur dioxide

TAC..... Toxic Air Contaminant

VOC..... Volatile Organic Compounds

1 Executive Summary

1.1 Purpose and Methods of Analysis

The following air quality (AQ) and greenhouse gas (GHG) analysis was prepared to evaluate whether the estimated criteria air pollutants, toxic air contaminants (TACs), and GHG emissions generated from the construction and operation of the Quarter Round Subdivision (Project) would cause significant impacts to air resources in the Project area. This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000, et seq.). The methodology follows the *Guidance for Assessing and Mitigating Air Quality Impacts* (GAMAQI) prepared by the San Joaquin Valley Air Pollution Control District (SJVAPCD or District) for quantification of emissions and evaluation of potential impacts to air resources[1] and the SJVAPCD's *Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA*.[2]

1.2 Project Description

The site is currently vacant. The development proposes to develop a 295-lot single-family residential subdivision on approximately 105.7 acres. Project construction is expected to begin in January 2023 with full buildout in 2038.

1.3 Summary of Analysis Results

The following is a summary of the analysis results. As shown below, the Project would result in less than significant impacts for all air quality and GHG impact criteria analyzed.

Table 1-1 Impact Summary

Impact	Appendix G Question	Result
AIR-1	The project would not conflict with or obstruct implementation of the applicable air quality plan.	Less than Significant Impact.
AIR-2	The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors).	Less than Significant Impact.
AIR-3	The project would not expose sensitive receptors to substantial pollutant concentrations.	Less than Significant Impact.
AIR-4	The project would not create objectionable odors affecting a substantial number of people.	No Impact.
GHG-1	The project would not generate direct or indirect greenhouse gas emissions that would result in a significant impact on the environment.	Less than Significant Impact.
GHG-2	The project would not conflict with any applicable plan, policy or regulation of an agency adopted to reduce the emissions of greenhouse gases.	Less than Significant Impact.

[1] (San Joaquin Valley Air Pollution Control District, 2015)
[2] (San Joaquin Valley Air Pollution Control District, 2009)

2 Air Quality

2.1 Regulatory Setting

2.1.1 Federal

At the federal level, the EPA has been charged with implementing national air quality programs. The EPA's air quality mandates are drawn primarily from the federal Clean Air Act (CAA). The federal CAA was first signed into law in 1963. Congress substantially amended the federal CAA in 1970, 1977, and 1990.

The EPA deals with global, international, national, and interstate air pollution issues. Their primary role at the state level is one of oversight of state air quality programs. The EPA sets federal standards for vehicle and stationary sources and provides research and guidance in air pollution programs.

The federal CAA required the EPA to set National Ambient Air Quality Standards (NAAQS) for several problem air pollutants on the basis of human health and welfare criteria. Two types of NAAQS have been established: primary standards, which protect public health, and secondary standards, which protect public welfare (e.g., crops, forests, materials, visibility, etc.). Primary NAAQS have been established for the following criteria air pollutants:

- Carbon monoxide (CO)
- Ozone (O_3)
- Respirable particulate matter (PM_{10})
- Fine particulate matter ($PM_{2.5}$)
- Nitrogen dioxide (NO_2)
- Sulfur dioxide (SO_2)
- Lead (Pb)

All of the above, except CO, also have some form of secondary standard. The primary NAAQS standards are intended to protect, within an adequate margin of safety, those persons most susceptible to respiratory distress, such as people suffering from asthma or other illness, the elderly, very young children, or others engaged in strenuous work or exercise.

The EPA designates areas with air quality not meeting federal standards as "nonattainment." The federal CAA further classifies nonattainment areas based on the severity of the nonattainment problem, with marginal, moderate, serious, severe, and extreme nonattainment classifications for ozone. Nonattainment classifications for PM range from marginal to serious.

The federal CAA requires areas with air quality violating the NAAQS to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The SIP contains the strategies and control measures that states such as California will use to attain the NAAQS. The federal CAA amendments of 1990 require states containing areas that violate the NAAQS to revise their SIP to incorporate additional control measures to reduce air pollution. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, planning documents, rules, and regulations of Air Basins as reported by the agencies with jurisdiction over them. The EPA reviews SIPs to determine if they conform to the mandates of the federal CAA amendments and will achieve air quality goals when implemented. If the EPA determines a SIP to be inadequate, it may prepare a Federal Implementation Plan (FIP) for the nonattainment area and impose additional control measures.

In addition to setting health-based standards for air pollutants, the EPA also oversees state and local actions to improve air quality. The following list provides a brief explanation of important regulations set forth by EPA:

Federal Clean Air Act (CAA)

- Requires air quality plans to include measures necessary to achieve NAAQS.
- Requires all plans, programs, and projects that require federal approval, including transportation plans, to conform to air quality plans.
- Requires sanctions if all feasible measures are not expeditiously adopted.

2.1.2 State

States are required to develop and implement air pollution control plans designed to achieve and maintain the NAAQS established by the EPA. States may also 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 Health and Safety Code Section 39606(b) and its predecessor statutes.

The California Legislature established the ARB in 1967. The ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA) of 1988. The CCAA provides a planning framework for attainment of the CAAQS for ozone, CO, SO_2, and NO_2. The CCAA classifies ozone nonattainment areas as moderate, serious, severe, and extreme based on severity of violation of state ambient air quality standards. For each 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. Air districts responsible for air basins with air quality that is in violation of CAAQS for ozone, CO, SO_2, and NO_2 are required to prepare an air quality attainment plan (AQAP) that lays out a program to attain the CCAA mandates.

Other ARB duties include monitoring air quality in conjunction with air monitoring networks maintained by air pollution control districts (APCDs) and air quality management districts (AQMDs), establishing CAAQS (which are more stringent than the NAAQS in many cases), setting emissions standards for new motor vehicles, and reviewing district input for the SIP required by the federal CAA amendments. The SIP consists of the emissions standards for vehicular sources set by the ARB as well as attainment plans adopted by the APCD or AQMD and approved by the ARB.

The State of California, through the ARB and Bureau of Automotive Repair, develops programs to reduce pollution from vehicles and consumer products. The following list provides a brief explanation of important regulations set forth by the State of California:

California Clean Air Act (CCAA)

- Requires all feasible control measures, including transportation control measures, to reduce emissions.
- Provides for indirect source programs in attainment plans.
- Contains targets for emission reductions, vehicle miles traveled, and average vehicle ridership.

AB (Assembly Bill) 170

- Requires cities and counties in the Valley to incorporate strategies to improve air quality in their general planning efforts.

SB (Senate Bill) 709

- Gave the Air District more responsibility in terms of permitting, fee implementation, and agricultural assistance, but also gives the Air District the authority to require the use of best available control

technology (BACT) for existing sources, promote cleaner-burning alternative fuels, and encourage and facilitate ridesharing.
- Allows the Air District to adopt a surcharge on motor vehicle registration fees in counties within the Air District.

California Government Code Section 65089

- Requires trip reduction and travel demand management in Congestion Management Programs.

2.1.3 Regional

Air pollution does not respect political boundaries. Therefore, many air quality problems are best managed on a regional basis. In 1991 the State Legislature determined that management of an air basin by a single agency would be more effective than management through each county within that basin. Air basins are geographic areas sharing a common "air-shed." Most major metropolitan areas in California now fall under the authority of multi-county APCDs or AQMDs.

Air districts have the primary responsibility for control of air pollution from all sources other than direct motor vehicle emissions, which are the responsibility of the ARB and EPA. Air districts adopt and enforce rules and regulations to achieve state and federal ambient air quality standards and enforce applicable state and federal law.

The San Joaquin Valley Air Pollution Control District (SJVAPCD), formed in 1991, has jurisdiction over air quality matters in the SJVAB, spanning the counties of Fresno, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare, and a portion of Kern.

Until the passage of the CCAA, the primary role of county APCDs was controlling stationary sources of pollution, such as industrial processes and equipment. With the passage of the CCAA and federal CAA amendments, air districts were required to implement transportation control measures and were encouraged to adopt indirect source control programs to reduce mobile source emissions. These mandates created the necessity for air districts to work closely with cities, counties, and regional transportation planning agencies to develop new programs.

The Air District entered into a memorandum of understanding with the eight San Joaquin Valley county transportation planning agencies in 1992. This memorandum of understanding ensures a coordinated approach in the development and implementation of transportation plans throughout the Valley. This action has helped the Regional Transportation Planning Agencies comply with pertinent provisions of the federal and state Clean Air Acts as well as related transportation legislation (such as the Intermodal Surface Transportation Efficiency Act).

The Air District develops plans and implements control measures in an effort to advance Valley attainment of CAAQS and NAAQS. The Air District has developed plans to attain state and federal standards for ozone and particulate matter. The Air District's air quality plans include emissions inventories to measure the sources of air pollutants, to evaluate how well different control methods have worked, and to show how air pollution will be reduced. The plans also use computer modeling to estimate future levels of pollution and make sure that the Valley will meet air quality goals on time.

Control measures applicable to this Project are as follows:

Regulation VIII—Fugitive PM10 Prohibitions

Regulation VIII is a control measure that is one main strategies from the 2006 PM_{10} Plan for reducing the PM_{10} emissions that are part of fugitive dust. Projects over 10 acres are required to file a Dust Control Plan (DCP) containing dust control practices sufficient to comply with Regulation VIII. The Project is required to prepare a DCP to comply with Regulation VIII.

Rule 4002—National Emissions Standards for Hazardous Air Pollutants

The purpose of the rule is to incorporate the National Emission Standards for Hazardous Air Pollutants from Part 61, Chapter I, Subchapter C, Title 40, Code of Federal Regulations and the National Emission Standards for Hazardous Air Pollutants for Source Categories from Part 63, Chapter I, Subchapter C, Title 40, Code of Federal Regulations to protect the health and safety of the public from hazardous air pollutants, such as asbestos.

Rule 4102—Nuisance

The purpose of this rule is to protect the health and safety of the public, and applies to any source operation that emits or may emit air contaminants or other materials. Agricultural activities are exempt from the nuisance rule.

Rule 9510 – Indirect Source Review

The purpose of this rule is to ensure that land use development projects reduce their construction and operational NO_X and PM_{10} emissions by 20%/40% and 33.3%/50%, respectively. Operational emissions are required to be reduced over a period of 10 years. Emission reductions can be obtained either by implementing on-site improvements, such as using more efficient construction equipment, improved land use design, electrical vehicle chargers, photovoltaic panels, or by simply paying an in-lieu fee that goes towards emission-reducing projects elsewhere in the Air District's region. This project is required to submit an Air Impact Assessment and address its emissions prior to commencement of both construction and operation.

Other Measures

Other control measures that apply to the Project are Rule 4641—Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operation that requires reductions in VOC emissions during paving and Rule 4601—Architectural Coatings that limits the VOC content of all types of paints and coatings sold in the San Joaquin Valley. These measures apply at the point of sale of the asphalt and coatings, so Project compliance is ensured.

2.1.4 Local

The City of Bakersfield adopted its Metropolitan Bakersfield General Plan in December 2002.[3] The applicable air quality goals and policies from the Conservation Element are listed below.

- Goal 1. Promote air quality that is compatible with health, wellbeing, and enjoyment of life by controlling point sources and minimizing vehicular trips to reduce air pollutants.
- Goal 2. Continue working toward attainment of Federal, State, and Local standards as enforced by the San Joaquin Valley Air Pollution Control District.
- Goal 3. Reduce the amount of vehicular emissions in the planning area.
- Goal 4. Reduce air pollution associated with agricultural activities.
- Policy 1. Comply with and promote SJVAPCD control measures regarding reactive organic gases (ROG). Such measures are focused on:
    A. steam driven well vents,

[3] (City of Bakersfield, 2002)

B. Pseudo-cyclic wells,
C. natural gas processing plant fugitives,
D. heavy oil test stations,
E. light oil production fugitives,
F. refinery pumps and compressors, and
G. vehicle inspection and maintenance.

- Policy 2. Encourage land uses and land use practices which do not contribute significantly to air quality degradation.
- Policy 3. Require dust abatement measures during significant grading and construction operations.
- Policy 4. Consider air pollution impacts when evaluating discretionary permits for land use proposals. Consideration should include:
  A. Alternative access routes to reduce traffic congestion.
  B. Development phasing to match road capacities.
  C. Buffers including increased vegetation to increase emission dispersion and reduce impacts of gaseous or particulate matter on sensitive uses.
- Policy 5. Consider the location of sensitive receptors such as schools, hospitals, and housing developments when locating industrial uses to minimize the impact of industrial sources of air pollution.
- Policy 6. Participate in alternative fuel programs.
- Policy 7. Participate in regional air quality studies and comprehensive programs for air pollution reduction.
- Policy 9. Promote public education regarding air quality issues and alternative transportation.
- Policy 10. Implement Transportation System Management Program and for Metropolitan Bakersfield to improve traffic flow, reduce vehicle trips, and increase street capacity.
- Policy 11. Improve the capacity of the existing road system through improved signalization, more right turn lanes and traffic control systems.
- Policy 29. Encourage the use of alternative fuel and low or zero emission vehicles.

2.2 Environmental Setting

Air quality impacts are both local and regional. Regional and local air quality is impacted by topography, dominant airflows, atmospheric inversions, location, and season. The Project is located in the San Joaquin Valley Air Basin (Air Basin), which experiences some of the most challenging environmental conditions for air quality in the nation. The following section describes these conditions as they pertain to the Air Basin. The information in this section is primarily from the SJVAPCD's GAMAQI.[4]

2.2.1 Climate Meteorology, Topography

The San Joaquin Valley Air Basin (SJVAB), in which the City of Fowler is situated, has an inland Mediterranean climate characterized by warm, dry summers and cooler winters. Summer temperatures often exceed 100 degrees Fahrenheit (°F) and can vary as much as 30°F. Winters are for the most part mild and humid, with average high in the 50s, while the average daily low temperature is approximately 45°F.

The vertical dispersion of air pollutants in the Valley is limited by the presence of persistent temperature inversions. Air temperature usually decreases as altitude increases. A reversal of this atmospheric state, where the air temperature increases with height, is termed an inversion. Air above and below an inversion does not mix because of differences in air density thereby restricting air pollutant dispersal.

[4] (San Joaquin Valley Air Pollution Control District, 2015)

Wind speed and direction play an important role in the dispersion and transport of air pollutants. During summer periods, winds typically originate from the northern San Joaquin Valley and flow in a south-southeasterly direction through the Valley, down through the Tehachapi Pass and into the neighboring Southeast Desert Air Basin. During winter months, winds occasionally originate in the opposite direction, from the south end of the Valley and flow in a north-northwesterly direction. Also, during winter months, the Valley experiences light, variable winds, less than 10 miles per hour. Low wind speeds, combined with low inversion layers in the winter, create a climate conducive to high concentrations of certain air pollutants.

The SJVAB is basically a flat area bordered on the east by the Sierra Nevada Mountains; on the west by the Coast Ranges; and to the south by the Tehachapi Mountains. Airflow in the SJVAB is primarily influenced by marine air that enters through the Carquinez Straits where the San Joaquin-Sacramento Delta empties into the San Francisco Bay. The region's topographic features restrict air movement through and out of the basin. As a result, the SJVAB is highly susceptible to pollutant accumulation over time. Frequent transport of pollutants into the SJVAB from upwind sources also contributes to poor air quality.

2.2.2 Attainment Status

The EPA and the ARB designate air basins where ambient air quality standards are exceeded as "nonattainment" areas. If standards are met, the area is designated an "attainment" area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered "unclassified." National nonattainment areas are further designated marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Each standard has a different definition, or "form" of what constitutes attainment, based on specific air quality statistics. For example, the federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual $PM_{2.5}$ standard is met if the three-year average of the annual average $PM_{2.5}$ concentration is less than or equal to the standard. The current attainment designations for the Air Basin are shown in Error! Reference source not found.. The Air Basin is designated nonattainment for ozone, PM_{10}, and $PM_{2.5}$.

Table 2-1: Ambient Air Quality Attainment Designation

Ambient Air Quality Standards & Attainment Designation			
Pollutant	**Averaging Time**	**California Standards**	**National Standards**
Ozone (O_3)	1-hour	Nonattainment/Severe	No Federal Standard
	8-hour	Nonattainment	Nonattainment (Extreme)
Particulate Matter (PM_{10})	AAM[5]	Nonattainment	Attainment
	24-hour		
Fine Particulate Matter ($PM_{2.5}$)	AAM	Nonattainment	Nonattainment
	24-hour		
Carbon Monoxide (CO)	1-hour	Attainment/Unclassified	Attainment/Unclassified
	8-hour		
	8-hour (Lake Tahoe)		
Nitrogen Dioxide (NO_2)	AAM	Attainment	Attainment/Unclassified
	1-hour		
Sulfur Dioxide (SO_2)	AAM	Attainment	Attainment/Unclassified
	24-hour		

[5] Annual Arithmetic Mean

	3-hour 1-hour		
Lead (Pb)	30-day Average Calendar Quarter Rolling 3-Month Average	Attainment	No Designation/Classification
Sulfates (SO_4)	24-hour	Attainment	No Federal Standards
Hydrogen Sulfide (H_2S)	1-hour	Unclassified	No Federal Standards
Vinyl Chloride (C_2H_3Cl)	24-hour	Attainment	No Federal Standards
Visibility-Reducing Particle Matter	8-hour	Unclassified	No Federal Standards

Source: California Air Resources Board (CARB)

2.2.3 Ambient Air Quality Levels

Criteria air pollutant concentrations are measured at several monitoring stations in the surrounding area. **Table 2-2** summarizes the air quality data measured at monitoring stations near the project site during the last 3 years (2017-2019). The Bakersfield-Municipal Airport station is the closest station to the project site with recent data for ozone. The Bakersfield-410 E Planz Road station is the closest station to the project site with recent data for $PM_{2.5}$. The Bakersfield-Golden State Highway station is the closest station to the project site with recent data for PM_{10}. Both CARB and EPA use monitoring data to designate areas according to their attainment status for criteria air pollutants (attainment designations are summarized above in **Table 2-1**)

Table 2-2. Summary of Annual Data on Ambient Air Quality (2018-2020)

	2018	2019	2020
Ozone			
Maximum concentration (1-hr/8-hr avg, ppm)	0.111/0.098	0.092/0.080	0.118/0.102
Number of days state standard exceeded (1-hr/8-hr)	9/59	0/24	8/40
Number of days national standard exceeded (8-hr)	54	19	38
Fine Particulate Matter ($PM_{2.5}$)			
Maximum concentration (24-hour µg/m³)	100.9	83.7	158.6
Number of days national standard exceeded (24-hour measured)	9	3	17
Respirable Particulate Matter (PM_{10})			
Maximum concentration (µg/m³)	155.2	652.2	146.8
Number of days state standard exceeded	27	21	26
Number of days national standard exceeded	1	1	0
Notes: µg/m³ = micrograms per cubic meter; ppm = parts per million Source: CARB 2020			

2.3 Threshold of Significance

The District's annual emission significance thresholds used for the Project define the substantial contribution for both operational and construction emissions as follows:

Table 2-3 Thresholds of Significance

Criteria Pollutant	Construction	Operations
CO	100 tons per year	100 tons per year
NOx	10 tons per year	10 tons per year
SOx	27 tons per year	27 tons per year
PM_{10}	15 tons per year	15 tons per year
$PM_{2.5}$	15 tons per year	15 tons per year

Odor impacts on residential areas and other sensitive receptors, such as hospitals, day-care centers, schools, etc. warrant the closest scrutiny, but consideration should also be given to other land uses where people may congregate, such as recreational facilities, worksites, and commercial areas. The District has determined the common land use types that are known to produce odors in the Air Basin. These types are shown in **Table 2-4**Error! Reference source not found..

Table 2-4 Screening Levels for Potential Odor Sources

Odor Generator	Screening Distance
Wastewater Treatment Facilities	2 miles
Sanitary Landfills	1 mile
Transfer Stations	1 mile
Composting Facilities	1 mile
Petroleum Refineries	2 miles
Asphalt Batch Plants	1 mile
Chemical Manufacturers	1 mile
Fiberglass Manufacturers	1 mile
Painting/Coating Operations	1 mile
Food Processors	1 mile
Feed Lots and Dairies	1 mile
Rendering Plants	1 mile

2.4 Methodology

2.4.1 Short-Term Construction-Generated Emissions

Short-term construction emissions associated with the Project were calculated CalEEmod, Version 2020.4.0. These output files can be found in **Chapter 5**, The sections below detail the methodology of the air quality emissions analysis and its conclusions.

The emissions modeling includes emissions generated by off-road equipment, haul trucks, and worker commute trips. Emissions were quantified based on anticipated construction schedules and construction equipment requirements provided by the Project applicant. All remaining assumptions were based on the default parameters contained in the model.

2.4.2 Long-Term Operational Emissions

Operational emissions occur over the lifetime of the Project and are from three main sources: area sources, energy usage, and motor vehicles usage known as mobile sources. Area source emissions include emissions from natural gas, landscape, and painting. Full buildout is anticipated in 2038. The SJVAPCD considers construction and operational assumptions separately when making significance determinations. Modeling assumptions and output files are included in **Chapter 5**. The unmitigated long-term operational emissions for the Project are listed in **Table 2-6**.

2.5 Impact Analysis

The CEQA Guidelines define a significant effect on the environment as "a substantial, or potentially substantial, adverse change in the environment." To determine if a project would have a significant impact on air quality, the type, level, and impact of emissions generated by the project must be evaluated. A significant impact would occur if the Project would:

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 nonattainment under an applicable national or state ambient air quality standard;
c) Expose sensitive receptors to substantial pollutant concentrations; or
d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people.

While the final determination of whether a project is significant is within the purview of the Lead Agency pursuant to Section 15064(b) of the CEQA Guidelines, the District recommends that its quantitative air pollution thresholds be used to determine the significance of project emissions. If the Lead Agency finds that the Project has the potential to exceed these air pollution thresholds, the Project should be considered to have significant air quality impacts. The applicable District thresholds and methodologies are contained under each impact statement below.

2.5.1 Consistency with Air Quality Plan

Impact AIR-1: The project would not conflict with or obstruct implementation of the applicable air quality plan.

Impact Analysis

The CEQA Guidelines indicate that a significant impact would occur if the Project would conflict with or obstruct implementation of the applicable air quality plan. The GAMAQI indicates that projects that do not exceed SJVAPCD regional criteria pollutant emissions quantitative thresholds would not conflict with or obstruct the applicable air quality plan (AQP).

As discussed in Impact AIR-2 below, emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ associated with the construction and operation of the Project would not exceed the District's significance thresholds. Therefore, the Project would not contribute to air quality violations.

The Project's emissions would be less than significant for all criteria pollutants and would not result in inconsistency with the AQP for this criterion. The Project complies with all applicable control measures from the AQP therefore, the Project is consistent with the AQP, and the impact would be less than significant.

2.5.2 Cumulative Criteria Pollutant Impacts

Impact AIR-2: The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.

Impact Analysis

To result in a less than significant impact, the following criteria must be true:

a) Regional analysis: emissions of nonattainment pollutants must be below the District's regional significance thresholds. This is an approach recommended by the District in its GAMAQI.
b) Summary of projections: the project must be consistent with current air quality attainment plans including control measures and regulations. This is an approach consistent with Section 15130(b) of the CEQA Guidelines.
c) Cumulative health impacts: the project must result in less than significant cumulative health effects from the nonattainment pollutants.

Project-generated emissions are below the SJVAPCD's regional significance thresholds and the Project is consistent with current air quality attainment plans including control measures and regulations, as depicted below in **Table 2-5** and **Table 2-6**.

With respect to cumulative health impacts, the air basin is in non-attainment for ozone, $PM_{2.5}$, and PM_{10} (state only), which means that the background levels of those pollutants are at times higher than the ambient air quality standards. The air quality standards were set to protect public health, including the health of sensitive individuals (such as children, the elderly, and persons with pre-existing respiratory or cardiovascular illnesses (the infirm)). Therefore, when the concentration of those pollutants exceeds the standard, it is likely that some sensitive individuals in the population would experience adverse health effects. Since the air basin is already in non-attainment, it is considered to have an existing significant cumulative health impact without the Project. The issue is whether the Project's contribution to the existing violation of air quality standards is cumulatively considerable.

The SJVAPCD through its GAMAQI has determined that projects that exceed regional thresholds would have a cumulatively considerable health impact. As demonstrated in **Table 2-5** and **Table 2-6** the Project would not exceed the SJVAPCD's significance thresholds and its cumulatively considerable impacts would be less than significant.

Construction Emissions

Construction emissions were modeled using the CalEEMod version 2020.4.0. The results of the modeling are presented in **Table 2-5**Error! Reference source not found.. The emissions that would occur during construction activities were compared with the significance threshold for each pollutant. For assumptions in estimating the emissions, please refer to **Section 2.4**. As shown in **Table 2-5**Error! Reference source not found., the emissions are below the significance thresholds. Therefore, the emissions would be less than significant on a Project basis.

Table 2-5 Construction Emission Summary, Criteria Air Pollutants

	Emissions (in tons per year)					
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$	SO_X
Maximum Construction Year	3.5661	3.6868	3.5342	1.3265	0.5262	0.0089
Significance Threshold	10	10	100	15	15	27
Significant Impact?	No	No	No	No	No	No
Source: Chapter 5						

Operational Emissions

Operational emissions occur over the lifetime of the Project and are from two main sources: area sources and motor vehicles, or mobile sources. First occupancy is expected in 2024. The SJVAPCD considers construction and operational emissions separately when making significance determinations.

As shown in **Table 2-6**Error! Reference source not found., the emissions are below the SJVAPCD significance thresholds prior to application of mitigation measures or taking credit for Project design features that would reduce Project emissions and, therefore, would result in a less than significant impact.

Table 2-6 Operational Emissions Summary, Criteria Air Pollutants

	Emissions (in tons per year)					
	ROG	**NO_X**	**CO**	**PM_{10}**	**$PM_{2.5}$**	**SO_X**
Maximum Build-Out Year	3.9530	3.0201	14.2545	3.1184	0.8885	0.0333
Significance Threshold	10	10	100	15	15	27
Significant Impact?	No	No	No	No	No	No
Source: Chapter 5						

2.5.3 Sensitive Receptors

Impact AIR-3: The project would not expose sensitive receptors to substantial pollutant concentrations.

Impact Analysis

Sensitive Receptors

Those who are sensitive to air pollution include children, the elderly, and persons with pre-existing respiratory or cardiovascular illness. The District considers a sensitive receptor a location that houses or attracts children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Examples of sensitive receptors include hospitals, residences, convalescent facilities, and schools. The closest off-site sensitive receptors are existing residences across Masterson Street and to the northeast, across Grand Canyon Drive. Additional more distant sensitive receptors are located in residential subdivisions west, south, and east of the Project site. For criteria pollutants, impacts to receptors are based on emissions during the highest daily emissions during construction and operations. As shown in **Table 2-7**Error! Reference source not found., emissions generated from construction and operation of the Project are less than SJVAPCD screening criteria. Therefore, this impact would be less than significant.

Localized Pollutant Screening Analysis

Emissions occurring at or near the Project have the potential to create a localized impact, also referred to as an air pollutant hotspot. Localized emissions are considered significant if, when combined with background emissions, they would result in exceedance of any health-based air quality standard. The impact from localized pollutants is based on the impact to the nearest sensitive receptor.

The SJVAPCD's GAMAQI includes screening thresholds for identifying projects that need detailed analysis for localized impacts. Projects with on-site emission increases from construction activities or operational activities that exceed the 100 pounds per day screening level of any criteria pollutant after compliance with applicable rules and regulations and implementation of all enforceable mitigation measures would require preparation of an ambient air quality analysis. The criteria pollutants of concern for localized impact in the Air Basin are PM_{10}, $PM_{2.5}$, NO_X, and CO.

The highest daily emissions occur during Project grading activities except for ROG emissions, which are highest during application of architectural coatings. The results of the construction screening analysis are presented in **Table 2-7**.Error! Reference source not found.

Table 2-7 Maximum Daily Construction and Operational Emissions, Criteria Air Pollutants

Source	Daily Emissions (in Pounds)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Construction – Summer	45.5205	34.5535	28.6096	0.0713	10.7933	5.0087
Construction – Winter	45.5108	34.5589	28.5168	0.0686	10.7933	5.0087
Operations – Winter	22.1415	19.6990	94.6724	0.1975	18.1327	5.3181
Operations - Summer	24.0345	18.3312	98.3670	0.2119	18.1326	5.3179
SJVAPCD Significance Thresholds	100	100	100	100	100	100
Exceed Thresholds?	No	No	No	No	No	No

Maximum Daily Operational Emissions

An analysis of maximum daily emissions during operation was conducted to determine if emissions would exceed 100 pounds per day for any pollutant of concern. The maximum daily operational emissions would occur at Project buildout. Project buildout was modeled for 2038. Operational emissions include emissions generated on-site by area sources such as natural gas combustion and landscape maintenance, and off-site by motor vehicles accessing the Project. Most motor vehicle emissions would occur distant from the site and would not contribute to a violation of ambient air quality standards; therefore, operational emissions reflect a conservative assumption. The results of the screening analysis are presented in **Table 2-7**Error! Reference source not found..

The Project would not exceed SJVAPCD screening thresholds for localized operational criteria pollutant impacts; therefore, the Project's localized criteria pollutant impacts would be less than significant.

Valley Fever

Valley fever, or coccidioidomycosis, is an infection caused by inhalation of the spores of the fungus, *Coccidioides immitis (C. immitis)*. The spores live in soil and can live for an extended time in harsh environmental conditions. Activities or conditions that increase the amount of fugitive dust contribute to greater exposure, and they include dust storms, grading, and recreational off-road activities.

The Centers for Disease Control and Prevention indicates that 752 of the 8,657 persons (8.7 percent) hospitalized in California between 2000 and 2007 for Valley fever died.[6] California experienced a record number of Valley Fever cases in 2017 with 7,466 new cases. The San Joaquin Valley is considered an endemic area for Valley fever. Within the region, Kern County reported 37 percent of all new incidences of Valley Fever or approximately 2,762 cases.[7]

The distribution of *C. immitis* within endemic areas is not uniform and growth sites are commonly small (a few tens of meters) and widely scattered. Known sites appear to have some ecological factors in common suggesting that certain physical, chemical, and biological conditions are more favorable for *C. immitis growth*. Avoidance, when possible, of sites favorable for the occurrence of *C. immitis* is a prudent risk management strategy. Listed below are ecologic factors and sites favorable for the occurrence of *C. immitis*:

1) *Rodent burrows (often a favorable site for C. immitis, perhaps because temperatures are more moderate and humidity higher than on the ground surface)*
2) *Old (prehistoric) Indian campsites near fire pits*
3) *Areas with sparse vegetation and alkaline soils*
4) *Areas with high salinity soils*

[6] (Centers for Disease Control and Prevenetion, 2009)
[7] (California Department of Public Health, 2018)

5) *Areas adjacent to arroyos (where residual moisture may be available)*
6) *Packrat middens*
7) *Upper 30 centimeters of the soil horizon, especially in virgin undisturbed soils*
8) *Sandy, well-aerated soil with relatively high water-holding capacities*

Sites within endemic areas less favorable for the occurrence of *C. immitis* include:

1) *Cultivated fields*
2) *Heavily vegetated areas (e.g. grassy lawns)*
3) *Higher elevations (above 7,000 feet)*
4) *Areas where commercial fertilizers (e.g. ammonium sulfate) have been applied*
5) *Areas that are continually wet*
6) *Paved (asphalt or concrete) or oiled areas*
7) *Soils containing abundant microorganisms*
8) *Heavily urbanized areas where there is little undisturbed virgin soil (USGS 2000).*

The Project site is situated in a city growth area. The Project includes urbanization of a site that was formerly used for agricultural purposes. Therefore, implementation of the Project would have a low probability of the site having *C. immitis* growth sites and exposure to the spores from disturbed soil, however exposure to blowing dust should be minimized.

Construction activities would generate fugitive dust that could contain *C. immitis* spores. The Project will minimize the generation of fugitive dust during construction activities by complying with the District's Regulation VIII. Therefore, this regulation, combined with the relatively low probability of the presence of *C. immitis* spores, would reduce Valley fever impacts to less than significant.

During operations, dust emissions are anticipated to be negligible, because most of the Project area would be occupied by buildings, pavement, and landscaped areas. This condition would preclude the possibility of the Project from providing habitat suitable for *C. immitis* spores and for generating fugitive dust that may contribute to Valley fever exposure. Impacts would be less than significant.

2.5.4 Objectionable Odors

Impact AIR-4: The project would not create objectionable odors affecting a substantial number of people.

Impact Analysis

The Project would not engage in any of the activities listed in **Table 2-4**Error! Reference source not found.. Land uses that are typically identified as sources of objectionable odors include landfills, transfer stations, sewage treatment plants, wastewater pump stations, composting facilities, feed lots, coffee roaster, asphalt batch plants, and rendering plants, among other uses. The Project does not include any of these activities or land uses. The Project would therefore have no impact with respect to generation of emissions leading to odors or other adverse or objectionable emissions.

3 Greenhouse Gases

Climate change is a change in the average weather of the earth that is measured by alterations in wind patterns, storms, precipitation, and temperature. These changes are assessed using historical records of temperature changes occurring in the past, such as during previous ice ages. Many of the concerns regarding climate change use this data to extrapolate a level of statistical significance, specifically focusing on temperature records from the last 150 years (the Industrial Age) that differ from previous climate changes in rate and magnitude.

The United Nations Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. In its Fourth Assessment Report, the IPCC predicted that the global mean temperature change from 1990 to 2100, given six scenarios, could range from 1.1 degrees Celsius (°C) to 6.4°C. Regardless of analytical methodology, global average temperatures and sea levels are expected to rise under all scenarios.[8] The report also concluded that "[w]arming of the climate system is unequivocal," and that "[m]ost of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations."

An individual project cannot generate enough GHG emissions to cause a discernible change in global climate. However, the Project participates in the potential for global climate change by its incremental contribution of GHGs—and when combined with the cumulative increase of all other sources of GHGs—constitute potential influences on global climate change.

3.1 Regulatory Setting

3.1.1 Federal

Federal Clean Air Act

The U.S. Environmental Protection Agency (EPA) is the federal agency responsible for executing the federal Clean Air Act (CAA) and its amendments. In 2007, the U.S. Supreme Court ruled that carbon dioxide (CO_2) is an air pollutant, as defined under the CAA, and thus the EPA has the authority to regulate GHG emissions. The ruling resulted in the EPA taking steps to regulate GHG emissions and lend support for State and local agency in their efforts to reduce GHG emissions.

Federal Regulations for Vehicle Fuel Economy Standards

The EPA and the National Highway Traffic Safety Administration (NHTSA) in 2012 issued final rules to reduce GHG emissions and improve the Corporate Average Fuel Economy (CAFE) standards for light-duty vehicles of model years 2017 and beyond. These CAFE standards have been enacted since 1978 under the Energy Policy and Conservation Act. This program requires automobile manufacturers to build a single nation light-duty fleet that meets both the requirements under federal programs and those of California and other states. This program would improve fuel economy to 54.5 miles per gallon-equivalent (mpge) limiting vehicle emissions to 153 grams of CO_2 per mile for the fleet of cars and light-duty trucks by model year 2025, which represents five percent annual increases in fuel economy.

The EPA and NHTSA jointly published in 2018 a notice of proposed rulemaking entitled "The Safer Affordable Fuel-Efficient Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks" (SAFE Rule), which proposed:

(1) new and amended CO_2 and CAFE standards for passenger cars and light trucks;

[8] (Intergovernmental Panel on Climate Change, 2007)

(2) to withdraw the waiver EPA had previously provided to California for that State's GHG and zero emission vehicle (ZEV) programs under Section 209 of the Clean Air Act, and;
(3) regulatory text to implement NHTSA's statutory authority to set nationally applicable fuel economy standards to explicitly preempt California's GHG and ZEV programs.

In 2019, Part One of the SAFE Rule (One National Program) became effective, which withdrew California's waiver from EPA and finalized NHTSA's regulatory text related to preemption of State regulations. In 2020, EPA and NHTSA announced Part Two of the SAFE Rule, which would establish amended fuel economy and CO_2 standards for passenger cars and light trucks of model years 2021-2026. These revised standards would increase in stringency by 1.5 percent per year from model year 2020 over model years 2021-2026.

3.1.2 State

Executive Order (EO) S-3-05

In 2005, Governor Schwarzenegger issued EO S-3-05, proclaiming that California is vulnerable to the impacts of climate change. The EO declares that increasing temperatures could reduce the Sierra Nevada snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To address those concerns, the EO established GHG emission targets for the State and identified responsibilities for State agencies in meeting the targets. Specifically, statewide emissions are to be reduced to 2000 levels by 2010, 1990 levels by 2020, and to 80 percent below 1990 levels by 2050.

Assembly Bill 32

In 2006, AB 32, the California Global Warming Solutions Act of 2006, was signed into law. AB 32 establishes regulations, reporting requirements, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. AB 32 also requires that:

"(a) the statewide greenhouse gas emissions limit shall remain in effect unless otherwise amended or repealed.
(b) It is the intent of the Legislature that the statewide greenhouse gas emissions limit continue in existence and be used to maintain and continue reductions in emissions of greenhouse gases beyond 2020.
(c) The [CARB] shall make recommendations to the Governor and the Legislature on how to continue reductions of greenhouse gas emissions beyond 2020." [California Health and Safety Code, Division 25.5, Part 3, Section 38551]

Executive Order B-30-15

In 2015, Governor Brown issued EO B-30-15 which established a California GHG reduction target of 40 percent below 1990 levels by 2030. This emission reduction target of 40 percent below 1990 levels by 2030 set the next interim step in the State's continuing efforts to pursue the long-term target previously established under EO S-3-05 to reach the goal of reducing emissions 80 percent below 1990 levels by 2050. This is consistent with scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius, the threshold at which major climate disruptions are projected, such as super droughts and rising sea levels.

Senate Bill 32

In 2016, SB 32 was signed into law and serve to extend California's GHG reduction programs beyond 2020. SB 32 amended existing regulations to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030, codifying the 2030 target established by EO B-30-15.

Assembly Bill (AB) 1493 (Pavley)

AB 1493, enacted in 2002, requires the reduction of GHGs from automobiles and light-duty trucks to the maximum extent feasible and cost-effective. In 2004, CARB approved the "Pavley I" regulations that applied to new passenger vehicles beginning with model year 2009 through 2016. Pavley I was anticipated to reduce GHG emissions from regulated vehicles by 30 percent from 2002 levels by 2016. Pavley II was incorporated into Amendments to the Low-Emission Vehicle Program referred to as LEV III. The amendments, which took effect in 2012, apply to vehicles for model years 2017 through 2025. The regulation will reduce GHGs from new cars by 34 percent from 2016 levels by 2025.

Advanced Clean Cars Program

Also in 2012, CARB approved the Advanced Clean Cars program which sought to combine the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of zero-emission vehicles, into a single package of regulatory standards for vehicle model years 2017 through 2025. These regulations strengthen the GHG standard for 2017 models and beyond and would be achieved through existing and more efficient technologies. The program's Zero Emissions Vehicle (ZEV) regulation would require battery, fuel cell, and/or plug-in hybrid electric vehicles to comprise up to 15 percent of California's new vehicle sales by 2025. The program also included a clean fuels outlet regulation designed to support the development of zero-emission hydrogen fuel cell vehicles by requiring increased numbers of hydrogen fueling stations throughout the state. By 2025, when it was assumed, the rules would be fully implemented, the statewide fleet of new cars and light trucks would emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions than the statewide fleet in 2016.

Senate Bill 100

In 2018, SB 100 increased California's Renewable Energy Portfolio targets for utility companies to 52 percent renewables by 2027 and 60 percent renewables by 2030. It also established a new zero-carbon electricity mandate by 2040.

California Building Energy Efficiency Standards (Title 24, Part 6)

California Code of Regulations (CCR), Title 24, Part 6, is California's Energy Efficiency Standards for Residential and Non-Residential Buildings. Title 24 Part 6 was established by California Energy Commission (CEC) in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy-efficiency standards for residential and nonresidential buildings. These standards are updated triennially and have resulted in substantial gains in energy efficiency in new construction with each code update cycle.

The 2019 Title 24 Part 6 Building Energy Efficiency Standards were adopted by CEC in 2018 and took effect in 2020. The standards are designed to move the State closer to its zero net energy goals for new residential development. It does so by requiring all new residences to install enough renewable energy to offset all the site electricity needs of each residential unit. CEC estimates that the combination of mandatory on-site renewable energy and prescriptively required energy efficiency features will result in new residential construction that uses 53 percent less energy than the 2016 standards. Nonresidential buildings are anticipated to reduce energy consumption by 30 percent compared to the 2016 standards primarily through prescriptive requirements for high-efficiency lighting.

The Title 24 Building Energy Efficiency Standards are enforced through the local plan check and building permit process. Local government agencies may adopt and enforce additional energy standards for new buildings as reasonably necessary in response to local climatologic, geologic, or topographic conditions, provided that these standards are demonstrated to be cost effective and exceed the energy performance required by Title 24 Part 6.

California Green Building Standards (Title 24, Part 11)

In 2008, the California Building Standards Commission adopted Part 11 of CCR Title 24, titled the California Green Building Standards Code (CALGreen Code) which became effective in 2009 as a voluntary code. The 2010 CALGreen Code was the first mandatory edition and took effect in 2011 and is now a part of the triennial code update cycle. The CALGreen Code establishes mandatory measures for residential and non- residential building construction and encourages sustainable construction practices in the following five categories: (1) planning and design, (2) energy efficiency, (3) water efficiency and conservation, (4) material conservation and resource efficiency, and (5) indoor environmental quality. Although the CALGreen Code was adopted as part of the State's efforts to reduce GHG emissions, the CALGreen Code standards have co-benefits of reducing energy consumption from residential and non-residential buildings subject to the standard.

Senate Bill 97

SB 97, enacted in 2007, amended the CEQA statute to clearly establish that GHG emissions and the effects of GHG emissions are appropriate subjects for CEQA analysis. The legislation directed the California Office of Planning and Research to develop draft CEQA Guidelines "for the mitigation of GHG emissions or the effects of GHG emissions" and directed the California Natural Resources Agency to certify and adopt the State CEQA Guidelines. CEQA Guidelines Section 15183.5, Tiering and Streamlining the Analysis of GHG Emissions, was added as part of the CEQA Guideline amendments that became effective in 2010 and describes the criteria needed in a GHG reduction plan that would allow for the tiering and streamlining of CEQA analysis for development projects.

Senate Bill X7-7

SB x7-7 requires water suppliers to reduce urban per capita water consumption 20 percent from a baseline level by 2020. The production and treatment of water, as well as the treatment of wastewater, requires substantial amount of electricity, and thus there this a direct relationship between water and greenhouse gases.

California Integrated Waste Management Act

To minimize the amount of solid waste that must be disposed of in landfills, the State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties were required to divert 25 percent of all solid waste from landfill facilities by 1995, and 50 percent by 2000. Through other statutes and regulations, this 50 percent diversion rate also applies to State agencies. In order of priority, waste reduction efforts must promote source reduction, recycling and composting, and environmentally safe transformation and land disposal.

In 2011, AB 341 modified the California Integrated Waste Management Act and directed the California Department of Resources Recycling and Recovery (CalRecycle) to develop and adopt regulations for mandatory commercial recycling. The resulting Mandatory Commercial Recycling Regulation (2012) requires that after 2012, certain businesses that generate four cubic yards or more of commercial solid waste per week shall arrange recycling services. To comply with this requirement, businesses may either separate recyclables and self-haul them or subscribe to a recycling service that includes mixed waste processing. AB 341 also established a statewide recycling goal of 75 percent; the 50 percent disposal reduction mandate still applies for cities and counties under AB 939, the Integrated Waste Management Act.

Climate Change Scoping Plan

In 2017, the CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the State's 2030 GHG emissions reduction target of 40 percent below 1990 levels and substantially advance toward our 2050 climate goal to reduce GHG emissions by 80 percent below 1990 levels. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, and implementation of recently adopted policies and legislation. The 2017 Scoping Plan includes a wide variety of

goals related to energy efficiency and renewable energy that are intended to help meet the State's 2030 target.[9] For plan level documents, like General Plans, CARB recommends statewide targets of no more than six metric tons CO2e ($MTCO_2e$) per capita by 2030 and no more than two $MTCO_2e$ per capita by 2050.

Cap-and-Trade Program

The Cap-and-Trade program was developed to reduce GHG emissions from major emissions sources (covered entities) by setting a firm cap on statewide GHG emissions that is gradually reduced over time while employing market mechanisms to cost-effectively achieve the State's emission-reduction goals. It sets a statewide limit on sources responsible for 85 percent of California's GHG emissions, including electricity generators, large industrial facilities emitting a specified amount of annual emissions, and distributors of transportation, natural gas, and other fuels, and establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The program is designed to provide the approximately 450 entities covered by the program with the flexibility to seek out and implement the lowest cost options to reduce emissions. All covered entities are required to demonstrate compliance with the cap-and-trade program by implementing GHG reduction activities on-site or through use of free or purchased allowances, or purchase of offsets.

3.2 Threshold of Significance

Section 15064.4(b) of the CEQA Guidelines' states that a lead agency may take into account the following three considerations in assessing the significance of impacts from GHG emissions:

The City of Bakersfield has not adopted its own GHG thresholds or prepared a Climate Action Plan that can be used as a basis for determining project significance. The City assesses GHG emissions using a threshold approach adopted by the SJVAPCD, which requires projects to meet a 29 percent reduction from Business-as-Usual (BAU) in accordance with SJVAPCD methodologies.

The SJVAPCD's *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA* includes thresholds based on whether the project will reduce or mitigate GHG levels by 29 percent from BAU levels compared with 2005 levels by 2020.[10] The GHG reduction level for the State to reach 1990 emission levels by 2020 was reduced to 21.7 percent from BAU in 2020 in the 2014 First Update to the Scoping Plan to account for slower than projected growth after the 2008 recession.[11]

In addition, the State has reported that the 2016 greenhouse gas inventory was below the 2020 target for the first time and was even lower in 2017.[12] Furthermore, the 2017 Scoping Plan states that California is on track to achieve the 2020 target.[13] This means that the State's strategy has successfully reduced GHG emissions while accommodating the growth in population and vehicle miles traveled that occurred in the State since 2005.

The Project is expected to commence operations in 2022. This date is beyond the AB 32 2020 milestone year and the SJVAPCD and other agencies have not developed a new threshold based on SB 32 2030 targets. Therefore, this analysis uses a significance approach based on continued progress toward later goals. The analysis of the project's reduction from BAU based on emissions in 2030 compared with the 21.7 percent reduction is used as one measure of significance.

[9] (California Air Resources Board, 2017)
[10] (San Joaquin Valley Air Pollution Control District, 2009)
[11] (California Air Resources Board, 2014)
[12] (California Air Resources Board, 2018)
[13] (California Air Resources Board, 2017)

3.3 Methodology

3.3.1 Short-Term Construction-Generated Emissions

Short-term construction emissions associated with the Project were calculated CalEEmod, Version 2020.4.0. These output files can be found in **Chapter 5**. The sections below detail the methodology of the air quality emissions analysis and its conclusions. The emissions modeling includes emissions generated by off-road equipment, haul trucks, and worker commute trips.

3.3.2 Long-Term Operational Emissions

Operational emissions occur over the lifetime of the Project and are from three main sources: area sources, energy usage, and motor vehicles usage known as mobile sources. Area source emissions include emissions from natural gas, landscape, and painting. First occupancy of the Project is expected as early as February 2021 and was used as the Project buildout modeling year for the subdivision as a conservative assumption. The SJVAPCD considers construction and operational assumptions separately when making significance determinations. Modeling assumptions and output files are included in **Chapter 5**.

3.4 Impact Analysis

3.4.1 Greenhouse Gas Inventory

Impact GHG-1: The project would generate direct and indirect greenhouse gas emissions; however, these emissions would not result in a significant impact on the environment.

Impact Analysis

Construction

Total GHG emissions generated during all phases of construction were combined and are presented in Table 30. The SJVAPCD does not recommend assessing the significance of construction-related emissions. However, other jurisdictions, such as the SCAQMD and the SMAQMD, have concluded that construction emissions should be included since they may remain in the atmosphere for years after construction is complete. In order to account for the construction emissions, amortization of the total emissions generated during construction were based on the life of the development (residential—30 years) and added to the operational emissions.

Table 3-1 Construction Emissions, Greenhouse Gases

	$MTCO_2e$
Total Construction Emissions	823.5788
Amortized over 30 years	27.4526

Notes:
Calculation totals use unrounded numbers from CalEEMod output.
Source: Chapter 5

Operations

Total GHG emissions generated during operations are presented in **Table 3-2**Error! Reference source not found.. The amortized construction emissions have been added to the operational emissions generated by the Project. The Project would result in a percent reduction in emissions by 32.09% ({[(3,839.6324 + 27.4526)/5,694.3165)]-1} x -100 = 32.09), meeting the goal set by AB 32. By meeting the reduction goal set by

AB 32 and through compliance with applicable local, state, and federal plans and policies, the Project would result in a less than significant impact in regards to GHG emissions.

Table 3-2 Operational Emissions, Greenhouse Gases

	$MTCO_2e$	Percent Reduction
Operational Emissions	3,839.6324	
Amortized Construction Emissions	27.4526	
Total Operational Emissions plus Amortized Construction Emissions	3,867.085	
2005 Operational Emissions plus Amortized Construction Emissions	5,694.3165	
BAU Reduction		32.09%

Notes:
Calculation totals use unrounded numbers from CalEEMod output.
Source: Chapter 5

3.4.2 Greenhouse Gas Reduction Plans

Impact GHG-2: The project would not conflict with any applicable plan, policy, or regulation of an agency adopted to reduce the emissions of greenhouse gases.

Impact Analysis

The City of Bakersfield has not adopted a GHG reduction plan. In addition, the City has not completed the GHG inventory, benchmarking, or goal- setting process required to identify a reduction target and take advantage of the streamlining provisions contained in the CEQA Guidelines amendments adopted for SB 97 and clarifications provided in the CEQA Guidelines amendments adopted on December 28, 2018.

The SJVAPCD has adopted a Climate Action Plan, but it does not contain measures that are applicable to development projects. Therefore, the SJVAPCD Climate Action Plan cannot be applied to the project. Since no other local or regional Climate Action Plan is in place, the project is assessed for its consistency with ARB's adopted Scoping Plans. This would be achieved with an assessment of the project's compliance with Scoping Plan measures contained in the 2008 Scoping Plan and the 2017 Scoping Plan Update.

AB 32 Scoping Plan

The Scoping Plan contains a variety of strategies to reduce the State's emissions. As shown in **Table 3-3**, the project is consistent with most of the strategies, while others are not applicable to the project. As discussed earlier, the 2017 Scoping Plan Update strategies primarily rely on increasing the stringency of existing regulations with which the project would continue to comply, support through the project's design, and implementation of the General Plan goals and policies.

Table 3-3 AB 32 Consistency Table

Scoping Plan Strategy	Consistency Finding
Regulation for the California Cap on Greenhouse Gas Emissions and Market- Based Compliance Mechanism October 20, 2015 (CCR 95800)	**Consistent.** The Cap-and-Trade Program applies to large industrial sources such as power plants, refineries, and cement manufacturers. However, the regulation indirectly affects people who use the products and services produced by these industrial sources when increased cost of products or services (such as electricity and fuel) are transferred to the consumers. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade

Scoping Plan Strategy	Consistency Finding
	Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period.
Pavley I 2005 Regulations to Control GHG Emissions from Motor Vehicles **2012 LEV III Amendments to the California Greenhouse Gas and Criteria Pollutant Exhaust and Evaporative Emission Standards**	**Consistent.** This measure applies to all new vehicles starting with model year 2012. The project would not conflict with its implementation as it would apply to all new passenger vehicles purchased in California. Passenger vehicles, model year 2012 and later, associated with construction and operation of the project would be required to comply with the Pavley emissions standards.
2009 readopted in 2015. Regulations to Achieve Greenhouse Gas Emission Reductions Subarticle 7. Low Carbon Fuel Standard CCR 95480	**Consistent.** This measure applies to transportation fuels utilized by vehicles in California. The project would not conflict with implementation of this measure. Motor vehicles associated with construction and operation of the project would utilize low carbon transportation fuels as required under this measure.
Regional Transportation-Related Greenhouse Gas Targets of SB 375	**Consistent.** The project will provide a residential development in the region that is consistent with the land uses assessed in the 2018 Regional Transportation Plan/Sustainable Communities Strategy (SCS). The project is not within an SCS priority area and so is not subject to requirements applicable to those areas.
Goods Movement Action Plan of January 2007	**Not applicable.** The project does not propose any changes to maritime, rail, or intermodal facilities or forms of transportation.
2010 Amendments to the Truck and Bus Regulation, the Drayage Truck Regulation and the Tractor-Trailer Greenhouse Gas Regulation	**Consistent.** This measure applies to medium- and heavy- duty vehicles that operate in the State. The project would not conflict with implementation of this measure. Medium- and heavy-duty vehicles associated with construction of the project would be required to comply with the requirements of this regulation.
High Speed Rail	**Not applicable.** This is statewide measure cannot be implemented by a project applicant or lead agency.
Title 20 Appliance Efficiency Regulation **Title 24 Part 6 Energy Efficiency Standards for Residential Buildings** **Title 24 Part 11 California Green Building Code Standards**	**Consistent.** The project would not conflict with implementation of this measure. The project will comply with the latest energy efficiency standards and incorporate applicable energy efficiency features designed to reduce project energy consumption.
2010 Regulation to Implement the Renewable Electricity Standard (33% 2020) **SB 350 Clean Energy and Pollution Reduction Act of 2015 (50% 2030)**	**Consistent.** PG&E obtained 33 percent of its power supply from renewable sources such as solar and geothermal in 2017, and about 70 percent of the electricity it delivers is carbon-free, including nuclear and large hydroelectric facilities. The owner of the project would purchase power that consists of a greater percentage of renewable sources and could install renewable solar power systems that will assist the utility in achieving exceeding the renewable mandate.

Scoping Plan Strategy	Consistency Finding
Million Solar Roofs Program	**Consistent.** This measure is intended to increase solar throughout California by means of a variety of electricity providers and existing solar programs. Projects within the plan area will be able to take advantage of incentives that are in place at the time of construction. The project design does not preclude the future installation of solar panels.
Title 24 Part 11 California Green Building Code Standards **SBX 7-7—The Water Conservation Act of 2009** **Model Water Efficient Landscape Ordinance**	**Consistent.** The project will comply with the California Green Building Standards Code, which requires a 20 percent reduction in indoor water use. The project will also comply with the MWELO as required by the City's development code and water ordinance.
Title 24 Part 11 California Green Building Code Standards	**Consistent.** The State will increase the use of green building practices. The project would implement required green building strategies through existing regulation that requires the project to comply with various CALGreen requirements. The project includes sustainability design features that support the Green Building Strategy.
2010 ARB Mandatory Reporting of Industrial Emissions Regulation	**Not applicable.** The project is not an industrial land use.
Title 24 Part 11 California Green Building Code Standards **AB 341 Statewide 75 Percent Diversion Goal**	**Consistent.** The project would not conflict with implementation of these measures. The project is required to achieve the recycling mandates via compliance with the CALGreen code. The project would utilize City of Bakersfield recycling services.
Cap-and-Trade Offset Projects for Sustainable Forests	**Not applicable.** The project site is in an area designated for urban uses. No forested lands exist on-site.
ARB Refrigerant Management Program CCR 95380	**Not applicable.** The regulations are applicable to refrigerants used by large air conditioning systems and large commercial and industrial refrigerators and cold storage system. The project is not expected to use large systems subject to the refrigerant management regulations adopted by ARB.
Cap-and-Trade Offset Projects for Livestock and Rice Cultivation	**Not applicable.** The project site is proposed for urban development. No grazing, feedlot, or other agricultural activities that generate manure occur currently exist on-site or are proposed to be implemented by the project.

SB 32 Scoping Plan

The 2017 Climate Change Scoping Plan Update (2017 Scoping Plan) includes the strategy that the State intends to pursue to achieve the 2030 targets of Executive Order S-3-05 and SB 32. The 2017 Scoping Plan includes the following summary of its overall strategy for reaching the 2030 target:

- SB 350, which seeks to achieve a 50 percent Renewables Portfolio Standard (RPS) by 2030, as well as doubling of energy efficiency savings by 2030.
- Low Carbon Fuel Standard (LCFS), which proposed increased stringency (reducing carbon intensity 18 percent by 2030, up from 10 percent in 2020).

- Mobile Source Strategy (Cleaner Technology and Fuels Scenario), which sought to maintain existing GHG standards for light- and heavy-duty vehicles, as well as put 4.2 million zero-emission vehicles (ZEVs) on the roads.
- Sustainable Freight Action Plan - Improve freight system efficiency. - Maximize use of near-zero emission vehicles and equipment powered by renewable energy. - Deploy over 100,000 zero-emission trucks and equipment by 2030.
- Short-Lived Climate Pollutant (SLCP) Reduction Strategy sought to reduce emissions of methane and hydrofluorocarbons, as well as black carbon, by 40 percent and 50 percent below 2013 levels by 2030, respectively.

Table 3-4 provides an analysis of the project's consistency with the 2017 Scoping Plan Update measures.

Table 3-4 SB 32 Consistency Table

Scoping Plan Strategy	Consistency Finding
SB 350 50% Renewable Mandate Utilities subject to the legislation will be required to increase their renewable energy mix from 33% in 2020 to 50% in 2030.	**Consistent.** The project will purchase electricity from a utility subject to the SB 350 Renewable Mandate.
SB 350 Double Building Energy Efficiency by 2030 This is equivalent to a 20 percent reduction from 2014 building energy usage compared to current projected 2030 levels	**Not Applicable.** This measure applies to existing buildings. New structures are required to comply with Title 24 Energy Efficiency Standards that are expected to increase in stringency until nonresidential buildings achieve zero net energy.
Low Carbon Fuel Standard This measure requires fuel providers to meet an 18 percent reduction in carbon content by 2030.	**Consistent.** Vehicles accessing the project site will use fuel containing lower carbon content as the fuel standard is implemented. Mobile Source Strategy (Cleaner Technology and Fuels Scenario) Vehicle manufacturers will be required to meet existing regulations mandated by the LEV III and Heavy-Duty Vehicle programs. The strategy includes a goal of having 4.2 million ZEVs on the road by 2030 and increasing numbers of ZEV trucks and buses. Consistent. Project customers and employees can be expected to purchase increasing numbers of more fuel efficient and zero emission cars and trucks each year. The 2019 CALGreen Code requires electrical service in commercial projects to be EV charger- ready.
Sustainable Freight Action Plan The plan's target is to improve freight system efficiency 25 percent by increasing the value of goods and services produced from the freight sector, relative to the amount of carbon that it produces by 2030. This would be achieved by deploying over 100,000 freight vehicles and equipment capable of zero emission operation and maximize near-zero emission freight vehicles and equipment powered by renewable energy by 2030.	**Not Applicable.** The measure applies to owners and operators of trucks and freight operations. However, trucks accessing the project site are expected to be made by increasing number of ZEV delivery trucks.

Short-Lived Climate Pollutant (SLCP) Reduction Strategy The strategy requires the reduction of SLCPs by 40 percent from 2013 levels by 2030 and the reduction of black carbon by 50 percent from 2013 levels by 2030.	**Consistent.** The project will be accessed by vehicles meeting increasingly stringent particulate matter standards that reduce black carbon compared to older trucks.
SB 375 Sustainable Communities Strategies Requires Regional Transportation Plans to include a sustainable communities strategy for reduction of per capita vehicle miles traveled.	**Consistent.** The project will provide a residential development in the region that is consistent with the Regional Transportation Plan/Sustainable Communities Strategy (SCS) assumptions. The project is not within an SCS priority area and therefore is not subject to requirements applicable to those areas.
Post-2020 Cap-and-Trade Program The Post 2020 Cap-and-Trade Program continues the existing program for another 10 years. The Cap-and-Trade Program applies to large industrial sources such as power plants, refineries, and cement manufacturers.	**Consistent.** The post-2020 Cap-and-Trade Program indirectly affects people who use the products and services produced by the regulated industrial sources when increased cost of products or services (such as electricity and fuel) are transferred to the consumers. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap- and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the program's first compliance period.
Natural and Working Lands Action Plan ARB is working in coordination with several other agencies at the federal, state, and local levels, stakeholders, and with the public, to develop measures as outlined in the Scoping Plan Update and the governor's Executive Order B-30-15 to reduce GHG emissions and to cultivate net carbon sequestration potential for California's natural and working land.	**Not Applicable.** The project is commercial development and will not be considered natural or working lands.

Accordingly, taking into account the proposed project's emissions, project design features, and the progress being made by the State towards reducing emissions in key sectors such as transportation, industry, and electricity, the project would be consistent with State GHG Plans and would further the State's goals of reducing GHG emissions to 1990 levels by 2020, 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050, and does not obstruct their attainment. Impacts would be less than significant.

4 References

California Air Resources Board. (2014, May). *First Update to the Climate Change Scoping Plan.* Retrieved from https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf

California Air Resources Board. (2017, January 20). *The 2017 Climate Change Scoping Plan Update, the Proposed Strategy for Achieving California's 2030 Greenhouse Gas Target.* Retrieved from https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/2030sp_pp_final.pdf

California Air Resources Board. (2018, July 11). *Climate pollutants fall below 1990 levels for first time.* Retrieved June 30, 2022, from https://ww2.arb.ca.gov/news/climate-pollutants-fall-below-1990-levels-first-time

California Department of Public Health. (2018, August 16). *Increase in Reported Valley Fever Cases in California in 2017*. Retrieved June 30, 2022, from https://www.cdph.ca.gov/Programs/OPA/Pages/NR18-041.aspx

Centers for Disease Control and Prevenetion. (2009, February 13). *Increase in Coccidioidomycosis --- California, 2000--2007*. Retrieved June 30, 2022, from https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5805a1.htm

City of Bakersfield. (2002, December). Metropolitan Bakersfield General Plan. Retrieved June 30, 2022, from https://content.civicplus.com/api/assets/37a2e20d-e610-431f-a222-9f4f2ecd2ddd

Intergovernmental Panel on Climate Change. (2007). *Climate Change 2007 - The Physical Science Basis*. Retrieved from https://www.ipcc.ch/report/ar4/wg1/

San Joaquin Valley Air Pollution Control District. (2009, November 5). Guidance for Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA. Retrieved June 30 2022, from http://www.valleyair.org/programs/CCAP/11-05-09/3_CCAP_FINAL_LU_Guidance_Nov_05_2009.pdf

San Joaquin Valley Air Pollution Control District. (2015, March 19). Guidance for Assessing and Mitigating Air Quality Impacts. Retrieved June 30, 2022, from https://www.valleyair.org/transportation/GAMAQI.pdf

5 CalEEMod Output Files

S&S Homes - Kern-San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

S&S Homes

Kern-San Joaquin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	295.00	Dwelling Unit	94.93	531,000.00	935
City Park	10.77	Acre	10.77	469,141.20	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	32
Climate Zone	7			**Operational Year**	2027
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - lot acreage per tract map
population based on 3.17 x 295935

Construction Phase -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	1/7/2039	4/2/2038
tblConstructionPhase	PhaseEndDate	5/1/2037	7/25/2036
tblConstructionPhase	PhaseEndDate	6/13/2025	9/6/2024
tblConstructionPhase	PhaseEndDate	3/5/2038	5/29/2037
tblConstructionPhase	PhaseEndDate	4/5/2024	6/30/2023

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstructionPhase	PhaseStartDate	3/6/2038	5/30/2037
tblConstructionPhase	PhaseStartDate	6/14/2025	9/7/2024
tblConstructionPhase	PhaseStartDate	4/6/2024	7/1/2023
tblConstructionPhase	PhaseStartDate	5/2/2037	7/26/2036
tblLandUse	LotAcreage	95.78	94.93
tblLandUse	Population	844.00	935.00
tblWoodstoves	NumberCatalytic	94.93	0.00
tblWoodstoves	NumberNoncatalytic	94.93	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

S&S Homes - Kern-San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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					
2023	0.2197	2.2462	1.8543	4.1300e-003	0.8950	0.0927	0.9877	0.2712	0.0852	0.3564	0.0000	362.9188	362.9188	0.1149	2.4000e-004	365.8627
2024	0.3933	3.6868	3.5342	8.5500e-003	1.1793	0.1472	1.3265	0.3901	0.1360	0.5262	0.0000	760.0120	760.0120	0.1840	0.0150	769.0738
2025	0.2930	2.3131	3.1048	8.9100e-003	0.4127	0.0745	0.4873	0.1118	0.0701	0.1819	0.0000	808.0734	808.0734	0.0784	0.0455	823.5788
2026	0.2859	2.3036	3.0503	8.7700e-003	0.4127	0.0744	0.4871	0.1118	0.0700	0.1818	0.0000	795.0881	795.0881	0.0778	0.0443	810.2314
2027	0.2797	2.2946	3.0038	8.6400e-003	0.4127	0.0743	0.4870	0.1118	0.0699	0.1817	0.0000	782.9948	782.9948	0.0773	0.0432	797.7865
2028	0.2730	2.2787	2.9540	8.4900e-003	0.4112	0.0739	0.4850	0.1114	0.0696	0.1809	0.0000	768.8968	768.8968	0.0765	0.0419	783.3087
2029	0.2688	2.2807	2.9319	8.4100e-003	0.4127	0.0741	0.4868	0.1118	0.0697	0.1815	0.0000	761.5770	761.5770	0.0764	0.0411	775.7436
2030	0.2563	1.6835	2.9134	8.8300e-003	0.4127	0.0245	0.4372	0.1118	0.0242	0.1360	0.0000	792.7248	792.7248	0.0187	0.0403	805.1889
2031	0.2516	1.6792	2.8892	8.7500e-003	0.4127	0.0244	0.4371	0.1118	0.0241	0.1359	0.0000	784.5176	784.5176	0.0184	0.0395	796.7463
2032	0.2484	1.6820	2.8799	8.7000e-003	0.4143	0.0244	0.4387	0.1122	0.0241	0.1364	0.0000	780.2732	780.2732	0.0182	0.0390	792.3447
2033	0.2429	1.6663	2.8409	8.5700e-003	0.4112	0.0241	0.4353	0.1114	0.0239	0.1352	0.0000	767.9903	767.9903	0.0179	0.0381	779.7948
2034	0.2397	1.6634	2.8260	8.5100e-003	0.4112	0.0240	0.4352	0.1114	0.0238	0.1352	0.0000	762.3730	762.3730	0.0177	0.0376	774.0227
2035	0.2257	1.5661	2.8189	8.4900e-003	0.4127	0.0165	0.4293	0.1118	0.0163	0.1281	0.0000	760.3470	760.3470	0.0166	0.0373	771.8816
2036	0.1944	1.1702	2.5146	6.4700e-003	0.2425	0.0200	0.2625	0.0656	0.0199	0.0855	0.0000	574.3487	574.3487	0.0148	0.0214	581.0943
2037	3.5661	0.3235	1.0588	2.0200e-003	0.0443	0.0109	0.0552	0.0118	0.0109	0.0227	0.0000	175.3185	175.3185	6.1000e-003	6.1000e-004	175.6534
2038	1.5017	0.0266	0.0864	2.0000e-004	0.0162	3.7000e-004	0.0166	4.3100e-003	3.7000e-004	4.6700e-003	0.0000	18.2084	18.2084	4.6000e-004	2.2000e-004	18.2867
Maximum	**3.5661**	**3.6868**	**3.5342**	**8.9100e-003**	**1.1793**	**0.1472**	**1.3265**	**0.3901**	**0.1360**	**0.5262**	**0.0000**	**808.0734**	**808.0734**	**0.1840**	**0.0455**	**823.5788**

2.1 Overall Construction

S&S Homes - Kern-San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2023	0.2197	2.2461	1.8543	4.1300e-003	0.3555	0.0927	0.4481	0.1075	0.0852	0.1927	0.0000	362.9184	362.9184	0.1149	2.4000e-004	365.8623
2024	0.3933	3.6868	3.5341	8.5500e-003	0.5479	0.1472	0.6951	0.1759	0.1360	0.3119	0.0000	760.0113	760.0113	0.1840	0.0150	769.0731
2025	0.2930	2.3131	3.1048	8.9100e-003	0.4127	0.0745	0.4873	0.1118	0.0701	0.1819	0.0000	808.0730	808.0730	0.0784	0.0455	823.5785
2026	0.2859	2.3036	3.0503	8.7700e-003	0.4127	0.0744	0.4871	0.1118	0.0700	0.1818	0.0000	795.0877	795.0877	0.0778	0.0443	810.2310
2027	0.2797	2.2946	3.0038	8.6400e-003	0.4127	0.0743	0.4870	0.1118	0.0699	0.1817	0.0000	782.9944	782.9944	0.0773	0.0432	797.7862
2028	0.2730	2.2787	2.9540	8.4900e-003	0.4112	0.0739	0.4850	0.1114	0.0696	0.1809	0.0000	768.8964	768.8964	0.0765	0.0419	783.3084
2029	0.2688	2.2807	2.9319	8.4100e-003	0.4127	0.0741	0.4868	0.1118	0.0697	0.1815	0.0000	761.5766	761.5766	0.0764	0.0411	775.7433
2030	0.2563	1.6835	2.9134	8.8300e-003	0.4127	0.0245	0.4372	0.1118	0.0242	0.1360	0.0000	792.7244	792.7244	0.0187	0.0403	805.1885
2031	0.2516	1.6792	2.8892	8.7500e-003	0.4127	0.0244	0.4371	0.1118	0.0241	0.1359	0.0000	784.5172	784.5172	0.0184	0.0395	796.7459
2032	0.2484	1.6820	2.8799	8.7000e-003	0.4143	0.0244	0.4387	0.1122	0.0241	0.1364	0.0000	780.2728	780.2728	0.0182	0.0390	792.3443
2033	0.2429	1.6663	2.8409	8.5700e-003	0.4112	0.0241	0.4353	0.1114	0.0239	0.1352	0.0000	767.9899	767.9899	0.0179	0.0381	779.7944
2034	0.2397	1.6634	2.8260	8.5100e-003	0.4112	0.0240	0.4352	0.1114	0.0238	0.1352	0.0000	762.3726	762.3726	0.0177	0.0376	774.0223
2035	0.2257	1.5661	2.8189	8.4900e-003	0.4127	0.0165	0.4293	0.1118	0.0163	0.1281	0.0000	760.3466	760.3466	0.0166	0.0373	771.8812
2036	0.1944	1.1702	2.5146	6.4700e-003	0.2425	0.0200	0.2625	0.0656	0.0199	0.0855	0.0000	574.3483	574.3483	0.0148	0.0214	581.0939
2037	3.5661	0.3235	1.0588	2.0200e-003	0.0443	0.0109	0.0552	0.0118	0.0109	0.0227	0.0000	175.3184	175.3184	6.1000e-003	6.1000e-004	175.6533
2038	1.5017	0.0266	0.0864	2.0000e-004	0.0162	3.7000e-004	0.0166	4.3100e-003	3.7000e-004	4.6700e-003	0.0000	18.2084	18.2084	4.6000e-004	2.2000e-004	18.2867
Maximum	**3.5661**	**3.6868**	**3.5341**	**8.9100e-003**	**0.5479**	**0.1472**	**0.6951**	**0.1759**	**0.1360**	**0.3119**	**0.0000**	**808.0730**	**808.0730**	**0.1840**	**0.0455**	**823.5785**

S&S Homes - Kern-San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	16.94	0.00	15.22	19.17	0.00	13.95	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)
2	4-16-2023	7-15-2023	0.2033	0.2033
3	7-16-2023	10-15-2023	1.2467	1.2467
4	10-16-2023	1-15-2024	1.2346	1.2346
5	1-16-2024	4-15-2024	1.1599	1.1599
6	4-16-2024	7-15-2024	1.1600	1.1600
7	7-16-2024	10-15-2024	0.9706	0.9706
8	10-16-2024	1-15-2025	0.6950	0.6950
9	1-16-2025	4-15-2025	0.6456	0.6456
10	4-16-2025	7-15-2025	0.6453	0.6453
11	7-16-2025	10-15-2025	0.6539	0.6539
12	10-16-2025	1-15-2026	0.6607	0.6607
13	1-16-2026	4-15-2026	0.6414	0.6414
14	4-16-2026	7-15-2026	0.6410	0.6410
15	7-16-2026	10-15-2026	0.6495	0.6495
16	10-16-2026	1-15-2027	0.6565	0.6565
17	1-16-2027	4-15-2027	0.6375	0.6375
18	4-16-2027	7-15-2027	0.6371	0.6371
19	7-16-2027	10-15-2027	0.6456	0.6456
20	10-16-2027	1-15-2028	0.6526	0.6526
21	1-16-2028	4-15-2028	0.6412	0.6412
22	4-16-2028	7-15-2028	0.6337	0.6337
23	7-16-2028	10-15-2028	0.6422	0.6422
24	10-16-2028	1-15-2029	0.6493	0.6493

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

25	**1-16-2029**	**4-15-2029**	0.6311	0.6311
26	**4-16-2029**	**7-15-2029**	0.6306	0.6306
27	**7-16-2029**	**10-15-2029**	0.6390	0.6390
28	**10-16-2029**	**1-15-2030**	0.6216	0.6216
29	**1-16-2030**	**4-15-2030**	0.4808	0.4808
30	**4-16-2030**	**7-15-2030**	0.4786	0.4786
31	**7-16-2030**	**10-15-2030**	0.4854	0.4854
32	**10-16-2030**	**1-15-2031**	0.4927	0.4927
33	**1-16-2031**	**4-15-2031**	0.4785	0.4785
34	**4-16-2031**	**7-15-2031**	0.4762	0.4762
35	**7-16-2031**	**10-15-2031**	0.4830	0.4830
36	**10-16-2031**	**1-15-2032**	0.4904	0.4904
37	**1-16-2032**	**4-15-2032**	0.4819	0.4819
38	**4-16-2032**	**7-15-2032**	0.4742	0.4742
39	**7-16-2032**	**10-15-2032**	0.4809	0.4809
40	**10-16-2032**	**1-15-2033**	0.4884	0.4884
41	**1-16-2033**	**4-15-2033**	0.4749	0.4749
42	**4-16-2033**	**7-15-2033**	0.4724	0.4724
43	**7-16-2033**	**10-15-2033**	0.4791	0.4791
44	**10-16-2033**	**1-15-2034**	0.4867	0.4867
45	**1-16-2034**	**4-15-2034**	0.4733	0.4733
46	**4-16-2034**	**7-15-2034**	0.4708	0.4708
47	**7-16-2034**	**10-15-2034**	0.4775	0.4775
48	**10-16-2034**	**1-15-2035**	0.4805	0.4805
49	**1-16-2035**	**4-15-2035**	0.4440	0.4440
50	**4-16-2035**	**7-15-2035**	0.4411	0.4411
51	**7-16-2035**	**10-15-2035**	0.4475	0.4475
52	**10-16-2035**	**1-15-2036**	0.4555	0.4555
53	**1-16-2036**	**4-15-2036**	0.4490	0.4490

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

54	**4-16-2036**	**7-15-2036**	0.4411	0.4411
55	**7-16-2036**	**10-15-2036**	0.2257	0.2257
56	**10-16-2036**	**1-15-2037**	0.1988	0.1988
57	**1-16-2037**	**4-15-2037**	0.1945	0.1945
58	**4-16-2037**	**7-15-2037**	0.8726	0.8726
59	**7-16-2037**	**10-15-2037**	1.5220	1.5220
60	**10-16-2037**	**1-15-2038**	1.5219	1.5219
61	**1-16-2038**	**4-15-2038**	1.2738	1.2738
		Highest	1.5220	1.5220

2.2 Overall Operational

Unmitigated 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	2.6553	0.1356	2.2354	8.2000e-004		0.0211	0.0211		0.0211	0.0211	0.0000	131.3744	131.3744	5.8800e-003	2.3400e-003	132.2195
Energy	0.0378	0.3230	0.1375	2.0600e-003		0.0261	0.0261		0.0261	0.0261	0.0000	590.7749	590.7749	0.0422	0.0111	595.1406
Mobile	1.2600	2.5616	11.8817	0.0304	3.0424	0.0289	3.0712	0.8142	0.0272	0.8414	0.0000	2,820.6398	2,820.6398	0.1385	0.1707	2,874.9781
Waste						0.0000	0.0000		0.0000	0.0000	78.0054	0.0000	78.0054	4.6100	0.0000	193.2550
Water						0.0000	0.0000		0.0000	0.0000	6.0978	17.7021	23.7999	0.6292	0.0151	44.0393
Total	**3.9530**	**3.0201**	**14.2545**	**0.0333**	**3.0424**	**0.0760**	**3.1184**	**0.8142**	**0.0744**	**0.8885**	**84.1031**	**3,560.4912**	**3,644.5943**	**5.4258**	**0.1993**	**3,839.6324**

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

	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	2.6553	0.1356	2.2354	8.2000e-004		0.0211	0.0211		0.0211	0.0211	0.0000	131.3744	131.3744	5.8800e-003	2.3400e-003	132.2195
Energy	0.0378	0.3230	0.1375	2.0600e-003		0.0261	0.0261		0.0261	0.0261	0.0000	590.7749	590.7749	0.0422	0.0111	595.1406
Mobile	1.2600	2.5616	11.8817	0.0304	3.0424	0.0289	3.0712	0.8142	0.0272	0.8414	0.0000	2,820.6398	2,820.6398	0.1385	0.1707	2,874.9781
Waste						0.0000	0.0000		0.0000	0.0000	78.0054	0.0000	78.0054	4.6100	0.0000	193.2550
Water						0.0000	0.0000		0.0000	0.0000	6.0978	17.7021	23.7999	0.6292	0.0151	44.0393
Total	**3.9530**	**3.0201**	**14.2545**	**0.0333**	**3.0424**	**0.0760**	**3.1184**	**0.8142**	**0.0744**	**0.8885**	**84.1031**	**3,560.4912**	**3,644.5943**	**5.4258**	**0.1993**	**3,839.6324**

	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	N20	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	Site Preparation	Site Preparation	10/21/2023	6/30/2023	5	120	
2	Grading	Grading	7/1/2023	9/6/2024	5	310	
3	Building Construction	Building Construction	9/7/2024	7/25/2036	5	3100	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Paving	Paving	7/26/2036	5/29/2037	5	220	
5	Architectural Coating	Architectural Coating	5/30/2037	4/2/2038	5	220	

Acres of Grading (Site Preparation Phase): 180

Acres of Grading (Grading Phase): 930

Acres of Paving: 0

Residential Indoor: 1,075,275; Residential Outdoor: 358,425; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
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
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
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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
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	303.00	108.00	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	61.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 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					
Fugitive Dust	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
Off-Road	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
Total	**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**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2023

Unmitigated 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	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
Total	**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**

Mitigated 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					
Fugitive Dust	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
Off-Road	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
Total	**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**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2023

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	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
Total	**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**

3.3 Grading - 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					
Fugitive Dust					0.8846	0.0000	0.8846	0.2684	0.0000	0.2684	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2159	2.2435	1.8233	4.0400e-003		0.0926	0.0926		0.0852	0.0852	0.0000	354.4789	354.4789	0.1147	0.0000	357.3450
Total	**0.2159**	**2.2435**	**1.8233**	**4.0400e-003**	**0.8846**	**0.0926**	**0.9772**	**0.2684**	**0.0852**	**0.3536**	**0.0000**	**354.4789**	**354.4789**	**0.1147**	**0.0000**	**357.3450**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2023

Unmitigated 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	3.8000e-003	2.6300e-003	0.0310	9.0000e-005	0.0105	6.0000e-005	0.0105	2.7800e-003	5.0000e-005	2.8400e-003	0.0000	8.4400	8.4400	2.5000e-004	2.4000e-004	8.5177
Total	**3.8000e-003**	**2.6300e-003**	**0.0310**	**9.0000e-005**	**0.0105**	**6.0000e-005**	**0.0105**	**2.7800e-003**	**5.0000e-005**	**2.8400e-003**	**0.0000**	**8.4400**	**8.4400**	**2.5000e-004**	**2.4000e-004**	**8.5177**

Mitigated 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					
Fugitive Dust					0.3450	0.0000	0.3450	0.1047	0.0000	0.1047	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2159	2.2435	1.8233	4.0400e-003		0.0926	0.0926		0.0852	0.0852	0.0000	354.4784	354.4784	0.1147	0.0000	357.3446
Total	**0.2159**	**2.2435**	**1.8233**	**4.0400e-003**	**0.3450**	**0.0926**	**0.4376**	**0.1047**	**0.0852**	**0.1899**	**0.0000**	**354.4784**	**354.4784**	**0.1147**	**0.0000**	**357.3446**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2023

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	3.8000e-003	2.6300e-003	0.0310	9.0000e-005	0.0105	6.0000e-005	0.0105	2.7800e-003	5.0000e-005	2.8400e-003	0.0000	8.4400	8.4400	2.5000e-004	2.4000e-004	8.5177
Total	**3.8000e-003**	**2.6300e-003**	**0.0310**	**9.0000e-005**	**0.0105**	**6.0000e-005**	**0.0105**	**2.7800e-003**	**5.0000e-005**	**2.8400e-003**	**0.0000**	**8.4400**	**8.4400**	**2.5000e-004**	**2.4000e-004**	**8.5177**

3.3 Grading - 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					
Fugitive Dust					1.0351	0.0000	1.0351	0.3512	0.0000	0.3512	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2896	2.9139	2.4951	5.5900e-003		0.1202	0.1202		0.1106	0.1106	0.0000	490.6757	490.6757	0.1587	0.0000	494.6431
Total	**0.2896**	**2.9139**	**2.4951**	**5.5900e-003**	**1.0351**	**0.1202**	**1.1553**	**0.3512**	**0.1106**	**0.4617**	**0.0000**	**490.6757**	**490.6757**	**0.1587**	**0.0000**	**494.6431**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Unmitigated 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	4.8500e-003	3.2200e-003	0.0398	1.2000e-004	0.0145	7.0000e-005	0.0146	3.8500e-003	7.0000e-005	3.9200e-003	0.0000	11.3043	11.3043	3.2000e-004	3.1000e-004	11.4039
Total	**4.8500e-003**	**3.2200e-003**	**0.0398**	**1.2000e-004**	**0.0145**	**7.0000e-005**	**0.0146**	**3.8500e-003**	**7.0000e-005**	**3.9200e-003**	**0.0000**	**11.3043**	**11.3043**	**3.2000e-004**	**3.1000e-004**	**11.4039**

Mitigated 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					
Fugitive Dust					0.4037	0.0000	0.4037	0.1370	0.0000	0.1370	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2896	2.9139	2.4951	5.5900e-003		0.1202	0.1202		0.1106	0.1106	0.0000	490.6751	490.6751	0.1587	0.0000	494.6425
Total	**0.2896**	**2.9139**	**2.4951**	**5.5900e-003**	**0.4037**	**0.1202**	**0.5239**	**0.1370**	**0.1106**	**0.2475**	**0.0000**	**490.6751**	**490.6751**	**0.1587**	**0.0000**	**494.6425**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 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	4.8500e-003	3.2200e-003	0.0398	1.2000e-004	0.0145	7.0000e-005	0.0146	3.8500e-003	7.0000e-005	3.9200e-003	0.0000	11.3043	11.3043	3.2000e-004	3.1000e-004	11.4039
Total	**4.8500e-003**	**3.2200e-003**	**0.0398**	**1.2000e-004**	**0.0145**	**7.0000e-005**	**0.0146**	**3.8500e-003**	**7.0000e-005**	**3.9200e-003**	**0.0000**	**11.3043**	**11.3043**	**3.2000e-004**	**3.1000e-004**	**11.4039**

3.4 Building Construction - 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	0.0603	0.5512	0.6628	1.1100e-003		0.0252	0.0252		0.0237	0.0237	0.0000	95.0581	95.0581	0.0225	0.0000	95.6201
Total	**0.0603**	**0.5512**	**0.6628**	**1.1100e-003**		**0.0252**	**0.0252**		**0.0237**	**0.0237**	**0.0000**	**95.0581**	**95.0581**	**0.0225**	**0.0000**	**95.6201**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Unmitigated 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	5.0200e-003	0.1963	0.0622	8.9000e-004	0.0296	1.2900e-003	0.0309	8.5300e-003	1.2400e-003	9.7700e-003	0.0000	84.9550	84.9550	3.2000e-004	0.0125	88.7008
Worker	0.0335	0.0222	0.2743	8.5000e-004	0.1001	5.2000e-004	0.1006	0.0266	4.7000e-004	0.0271	0.0000	78.0188	78.0188	2.1800e-003	2.1200e-003	78.7059
Total	**0.0385**	**0.2185**	**0.3365**	**1.7400e-003**	**0.1297**	**1.8100e-003**	**0.1315**	**0.0351**	**1.7100e-003**	**0.0368**	**0.0000**	**162.9738**	**162.9738**	**2.5000e-003**	**0.0147**	**167.4067**

Mitigated 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	0.0603	0.5512	0.6628	1.1000e-003		0.0252	0.0252		0.0237	0.0237	0.0000	95.0580	95.0580	0.0225	0.0000	95.6200
Total	**0.0603**	**0.5512**	**0.6628**	**1.1000e-003**		**0.0252**	**0.0252**		**0.0237**	**0.0237**	**0.0000**	**95.0580**	**95.0580**	**0.0225**	**0.0000**	**95.6200**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 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	5.0200e-003	0.1963	0.0622	8.9000e-004	0.0296	1.2900e-003	0.0309	8.5300e-003	1.2400e-003	9.7700e-003	0.0000	84.9550	84.9550	3.2000e-004	0.0125	88.7008
Worker	0.0335	0.0222	0.2743	8.5000e-004	0.1001	5.2000e-004	0.1006	0.0266	4.7000e-004	0.0271	0.0000	78.0188	78.0188	2.1800e-003	2.1200e-003	78.7059
Total	**0.0385**	**0.2185**	**0.3365**	**1.7400e-003**	**0.1297**	**1.8100e-003**	**0.1315**	**0.0351**	**1.7100e-003**	**0.0368**	**0.0000**	**162.9738**	**162.9738**	**2.5000e-003**	**0.0147**	**167.4067**

3.4 Building Construction - 2025

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2025

Unmitigated 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	0.0156	0.6227	0.1940	2.7700e-003	0.0941	4.1200e-003	0.0982	0.0272	3.9400e-003	0.0311	0.0000	265.5064	265.5064	9.8000e-004	0.0392	277.1992
Worker	0.0989	0.0631	0.8118	2.6200e-003	0.3186	1.5600e-003	0.3202	0.0846	1.4300e-003	0.0861	0.0000	239.9121	239.9121	6.2700e-003	6.3000e-003	241.9461
Total	**0.1145**	**0.6858**	**1.0058**	**5.3900e-003**	**0.4127**	**5.6800e-003**	**0.4184**	**0.1118**	**5.3700e-003**	**0.1172**	**0.0000**	**505.4185**	**505.4185**	**7.2500e-003**	**0.0455**	**519.1453**

Mitigated 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	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2025

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	0.0156	0.6227	0.1940	2.7700e-003	0.0941	4.1200e-003	0.0982	0.0272	3.9400e-003	0.0311	0.0000	265.5064	265.5064	9.8000e-004	0.0392	277.1992
Worker	0.0989	0.0631	0.8118	2.6200e-003	0.3186	1.5600e-003	0.3202	0.0846	1.4300e-003	0.0861	0.0000	239.9121	239.9121	6.2700e-003	6.3000e-003	241.9461
Total	**0.1145**	**0.6858**	**1.0058**	**5.3900e-003**	**0.4127**	**5.6800e-003**	**0.4184**	**0.1118**	**5.3700e-003**	**0.1172**	**0.0000**	**505.4185**	**505.4185**	**7.2500e-003**	**0.0455**	**519.1453**

3.4 Building Construction - 2026

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2026

Unmitigated 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	0.0154	0.6196	0.1907	2.7200e-003	0.0941	4.0900e-003	0.0982	0.0272	3.9200e-003	0.0311	0.0000	260.5421	260.5421	9.5000e-004	0.0384	272.0013
Worker	0.0921	0.0568	0.7605	2.5300e-003	0.3186	1.4700e-003	0.3201	0.0846	1.3500e-003	0.0860	0.0000	231.8911	231.8911	5.6800e-003	5.9200e-003	233.7966
Total	**0.1075**	**0.6763**	**0.9512**	**5.2500e-003**	**0.4127**	**5.5600e-003**	**0.4183**	**0.1118**	**5.2700e-003**	**0.1171**	**0.0000**	**492.4332**	**492.4332**	**6.6300e-003**	**0.0443**	**505.7979**

Mitigated 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	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2026

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	0.0154	0.6196	0.1907	2.7200e-003	0.0941	4.0900e-003	0.0982	0.0272	3.9200e-003	0.0311	0.0000	260.5421	260.5421	9.5000e-004	0.0384	272.0013
Worker	0.0921	0.0568	0.7605	2.5300e-003	0.3186	1.4700e-003	0.3201	0.0846	1.3500e-003	0.0860	0.0000	231.8911	231.8911	5.6800e-003	5.9200e-003	233.7966
Total	**0.1075**	**0.6763**	**0.9512**	**5.2500e-003**	**0.4127**	**5.5600e-003**	**0.4183**	**0.1118**	**5.2700e-003**	**0.1171**	**0.0000**	**492.4332**	**492.4332**	**6.6300e-003**	**0.0443**	**505.7979**

3.4 Building Construction - 2027

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2027

Unmitigated 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	0.0151	0.6158	0.1880	2.6700e-003	0.0941	4.0700e-003	0.0982	0.0272	3.8900e-003	0.0311	0.0000	255.2363	255.2363	9.3000e-004	0.0376	266.4499
Worker	0.0862	0.0515	0.7167	2.4500e-003	0.3186	1.3800e-003	0.3200	0.0846	1.2700e-003	0.0859	0.0000	225.1036	225.1036	5.1900e-003	5.6000e-003	226.9032
Total	**0.1013**	**0.6673**	**0.9047**	**5.1200e-003**	**0.4127**	**5.4500e-003**	**0.4182**	**0.1118**	**5.1600e-003**	**0.1170**	**0.0000**	**480.3399**	**480.3399**	**6.1200e-003**	**0.0432**	**493.3530**

Mitigated 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	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2027

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	0.0151	0.6158	0.1880	2.6700e-003	0.0941	4.0700e-003	0.0982	0.0272	3.8900e-003	0.0311	0.0000	255.2363	255.2363	9.3000e-004	0.0376	266.4499
Worker	0.0862	0.0515	0.7167	2.4500e-003	0.3186	1.3800e-003	0.3200	0.0846	1.2700e-003	0.0859	0.0000	225.1036	225.1036	5.1900e-003	5.6000e-003	226.9032
Total	**0.1013**	**0.6673**	**0.9047**	**5.1200e-003**	**0.4127**	**5.4500e-003**	**0.4182**	**0.1118**	**5.1600e-003**	**0.1170**	**0.0000**	**480.3399**	**480.3399**	**6.1200e-003**	**0.0432**	**493.3530**

3.4 Building Construction - 2028

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	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645	0.0000	301.4953	301.4953	0.0709	0.0000	303.2671
Total	**0.1778**	**1.6211**	**2.0910**	**3.5000e-003**		**0.0686**	**0.0686**		**0.0645**	**0.0645**	**0.0000**	**301.4953**	**301.4953**	**0.0709**	**0.0000**	**303.2671**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2028

Unmitigated 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	0.0148	0.6106	0.1851	2.6000e-003	0.0937	4.0300e-003	0.0978	0.0271	3.8500e-003	0.0309	0.0000	249.1913	249.1913	9.0000e-004	0.0366	260.1266
Worker	0.0804	0.0470	0.6778	2.3800e-003	0.3174	1.2900e-003	0.3187	0.0843	1.1800e-003	0.0855	0.0000	218.2102	218.2102	4.7500e-003	5.3200e-003	219.9151
Total	**0.0953**	**0.6576**	**0.8630**	**4.9800e-003**	**0.4112**	**5.3200e-003**	**0.4165**	**0.1114**	**5.0300e-003**	**0.1164**	**0.0000**	**467.4015**	**467.4015**	**5.6500e-003**	**0.0419**	**480.0416**

Mitigated 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	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645	0.0000	301.4949	301.4949	0.0709	0.0000	303.2667
Total	**0.1778**	**1.6211**	**2.0910**	**3.5000e-003**		**0.0686**	**0.0686**		**0.0645**	**0.0645**	**0.0000**	**301.4949**	**301.4949**	**0.0709**	**0.0000**	**303.2667**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2028

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	0.0148	0.6106	0.1851	2.6000e-003	0.0937	4.0300e-003	0.0978	0.0271	3.8500e-003	0.0309	0.0000	249.1913	249.1913	9.0000e-004	0.0366	260.1266
Worker	0.0804	0.0470	0.6778	2.3800e-003	0.3174	1.2900e-003	0.3187	0.0843	1.1800e-003	0.0855	0.0000	218.2102	218.2102	4.7500e-003	5.3200e-003	219.9151
Total	**0.0953**	**0.6576**	**0.8630**	**4.9800e-003**	**0.4112**	**5.3200e-003**	**0.4165**	**0.1114**	**5.0300e-003**	**0.1164**	**0.0000**	**467.4015**	**467.4015**	**5.6500e-003**	**0.0419**	**480.0416**

3.4 Building Construction - 2029

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	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2029

Unmitigated 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	0.0147	0.6099	0.1840	2.5600e-003	0.0941	4.0100e-003	0.0981	0.0272	3.8400e-003	0.0310	0.0000	245.2685	245.2685	8.9000e-004	0.0360	256.0197
Worker	0.0756	0.0435	0.6489	2.3300e-003	0.3186	1.2000e-003	0.3198	0.0846	1.1100e-003	0.0858	0.0000	213.6536	213.6536	4.4000e-003	5.1200e-003	215.2904
Total	**0.0903**	**0.6534**	**0.8329**	**4.8900e-003**	**0.4127**	**5.2100e-003**	**0.4180**	**0.1118**	**4.9500e-003**	**0.1168**	**0.0000**	**458.9221**	**458.9221**	**5.2900e-003**	**0.0411**	**471.3101**

Mitigated 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	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2029

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	0.0147	0.6099	0.1840	2.5600e-003	0.0941	4.0100e-003	0.0981	0.0272	3.8400e-003	0.0310	0.0000	245.2685	245.2685	8.9000e-004	0.0360	256.0197
Worker	0.0756	0.0435	0.6489	2.3300e-003	0.3186	1.2000e-003	0.3198	0.0846	1.1100e-003	0.0858	0.0000	213.6536	213.6536	4.4000e-003	5.1200e-003	215.2904
Total	**0.0903**	**0.6534**	**0.8329**	**4.8900e-003**	**0.4127**	**5.2100e-003**	**0.4180**	**0.1118**	**4.9500e-003**	**0.1168**	**0.0000**	**458.9221**	**458.9221**	**5.2900e-003**	**0.0411**	**471.3101**

3.4 Building Construction - 2030

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	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0336	343.0336	0.0138	0.0000	343.3777
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0336**	**343.0336**	**0.0138**	**0.0000**	**343.3777**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2030

Unmitigated 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	0.0146	0.6077	0.1826	2.5200e-003	0.0941	3.9900e-003	0.0981	0.0272	3.8200e-003	0.0310	0.0000	240.8268	240.8268	8.7000e-004	0.0353	251.3727
Worker	0.0709	0.0403	0.6223	2.2800e-003	0.3186	1.1300e-003	0.3198	0.0846	1.0400e-003	0.0857	0.0000	208.8644	208.8644	4.0700e-003	4.9400e-003	210.4385
Total	**0.0854**	**0.6480**	**0.8049**	**4.8000e-003**	**0.4127**	**5.1200e-003**	**0.4179**	**0.1118**	**4.8600e-003**	**0.1167**	**0.0000**	**449.6912**	**449.6912**	**4.9400e-003**	**0.0403**	**461.8112**

Mitigated 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	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0332	343.0332	0.0138	0.0000	343.3773
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0332**	**343.0332**	**0.0138**	**0.0000**	**343.3773**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2030

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	0.0146	0.6077	0.1826	2.5200e-003	0.0941	3.9900e-003	0.0981	0.0272	3.8200e-003	0.0310	0.0000	240.8268	240.8268	8.7000e-004	0.0353	251.3727
Worker	0.0709	0.0403	0.6223	2.2800e-003	0.3186	1.1300e-003	0.3198	0.0846	1.0400e-003	0.0857	0.0000	208.8644	208.8644	4.0700e-003	4.9400e-003	210.4385
Total	**0.0854**	**0.6480**	**0.8049**	**4.8000e-003**	**0.4127**	**5.1200e-003**	**0.4179**	**0.1118**	**4.8600e-003**	**0.1167**	**0.0000**	**449.6912**	**449.6912**	**4.9400e-003**	**0.0403**	**461.8112**

3.4 Building Construction - 2031

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	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0336	343.0336	0.0138	0.0000	343.3777
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0336**	**343.0336**	**0.0138**	**0.0000**	**343.3777**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2031

Unmitigated 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	0.0144	0.6061	0.1817	2.4700e-003	0.0941	3.9700e-003	0.0981	0.0272	3.8000e-003	0.0310	0.0000	236.8652	236.8652	8.6000e-004	0.0347	247.2296
Worker	0.0663	0.0376	0.5990	2.2300e-003	0.3186	1.0500e-003	0.3197	0.0846	9.7000e-004	0.0856	0.0000	204.6188	204.6188	3.7800e-003	4.7800e-003	206.1390
Total	**0.0807**	**0.6437**	**0.7807**	**4.7000e-003**	**0.4127**	**5.0200e-003**	**0.4178**	**0.1118**	**4.7700e-003**	**0.1166**	**0.0000**	**441.4840**	**441.4840**	**4.6400e-003**	**0.0395**	**453.3686**

Mitigated 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	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0332	343.0332	0.0138	0.0000	343.3773
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0332**	**343.0332**	**0.0138**	**0.0000**	**343.3773**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2031

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	0.0144	0.6061	0.1817	2.4700e-003	0.0941	3.9700e-003	0.0981	0.0272	3.8000e-003	0.0310	0.0000	236.8652	236.8652	8.6000e-004	0.0347	247.2296
Worker	0.0663	0.0376	0.5990	2.2300e-003	0.3186	1.0500e-003	0.3197	0.0846	9.7000e-004	0.0856	0.0000	204.6188	204.6188	3.7800e-003	4.7800e-003	206.1390
Total	**0.0807**	**0.6437**	**0.7807**	**4.7000e-003**	**0.4127**	**5.0200e-003**	**0.4178**	**0.1118**	**4.7700e-003**	**0.1166**	**0.0000**	**441.4840**	**441.4840**	**4.6400e-003**	**0.0395**	**453.3686**

3.4 Building Construction - 2032

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	0.1715	1.0394	2.1166	4.0600e-003		0.0194	0.0194		0.0194	0.0194	0.0000	344.3479	344.3479	0.0138	0.0000	344.6933
Total	**0.1715**	**1.0394**	**2.1166**	**4.0600e-003**		**0.0194**	**0.0194**		**0.0194**	**0.0194**	**0.0000**	**344.3479**	**344.3479**	**0.0138**	**0.0000**	**344.6933**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2032

Unmitigated 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	0.0144	0.6071	0.1821	2.4500e-003	0.0945	3.9700e-003	0.0984	0.0273	3.8000e-003	0.0311	0.0000	234.2817	234.2817	8.6000e-004	0.0343	244.5263
Worker	0.0625	0.0355	0.5813	2.2000e-003	0.3199	9.9000e-004	0.3209	0.0850	9.1000e-004	0.0859	0.0000	201.6436	201.6436	3.5500e-003	4.6700e-003	203.1252
Total	**0.0769**	**0.6426**	**0.7633**	**4.6500e-003**	**0.4143**	**4.9600e-003**	**0.4193**	**0.1122**	**4.7100e-003**	**0.1169**	**0.0000**	**435.9253**	**435.9253**	**4.4100e-003**	**0.0390**	**447.6514**

Mitigated 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	0.1715	1.0394	2.1166	4.0600e-003		0.0194	0.0194		0.0194	0.0194	0.0000	344.3475	344.3475	0.0138	0.0000	344.6929
Total	**0.1715**	**1.0394**	**2.1166**	**4.0600e-003**		**0.0194**	**0.0194**		**0.0194**	**0.0194**	**0.0000**	**344.3475**	**344.3475**	**0.0138**	**0.0000**	**344.6929**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2032

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	0.0144	0.6071	0.1821	2.4500e-003	0.0945	3.9700e-003	0.0984	0.0273	3.8000e-003	0.0311	0.0000	234.2817	234.2817	8.6000e-004	0.0343	244.5263
Worker	0.0625	0.0355	0.5813	2.2000e-003	0.3199	9.9000e-004	0.3209	0.0850	9.1000e-004	0.0859	0.0000	201.6436	201.6436	3.5500e-003	4.6700e-003	203.1252
Total	**0.0769**	**0.6426**	**0.7633**	**4.6500e-003**	**0.4143**	**4.9600e-003**	**0.4193**	**0.1122**	**4.7100e-003**	**0.1169**	**0.0000**	**435.9253**	**435.9253**	**4.4100e-003**	**0.0390**	**447.6514**

3.4 Building Construction - 2033

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	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7193	341.7193	0.0137	0.0000	342.0621
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7193**	**341.7193**	**0.0137**	**0.0000**	**342.0621**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2033

Unmitigated 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	0.0143	0.6014	0.1807	2.4000e-003	0.0937	3.9300e-003	0.0977	0.0271	3.7600e-003	0.0308	0.0000	229.4502	229.4502	8.5000e-004	0.0336	239.4781
Worker	0.0584	0.0334	0.5598	2.1500e-003	0.3174	9.2000e-004	0.3183	0.0843	8.5000e-004	0.0852	0.0000	196.8208	196.8208	3.3000e-003	4.5300e-003	198.2546
Total	**0.0727**	**0.6348**	**0.7404**	**4.5500e-003**	**0.4112**	**4.8500e-003**	**0.4160**	**0.1114**	**4.6100e-003**	**0.1160**	**0.0000**	**426.2710**	**426.2710**	**4.1500e-003**	**0.0381**	**437.7327**

Mitigated 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	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7189	341.7189	0.0137	0.0000	342.0617
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7189**	**341.7189**	**0.0137**	**0.0000**	**342.0617**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2033

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	0.0143	0.6014	0.1807	2.4000e-003	0.0937	3.9300e-003	0.0977	0.0271	3.7600e-003	0.0308	0.0000	229.4502	229.4502	8.5000e-004	0.0336	239.4781
Worker	0.0584	0.0334	0.5598	2.1500e-003	0.3174	9.2000e-004	0.3183	0.0843	8.5000e-004	0.0852	0.0000	196.8208	196.8208	3.3000e-003	4.5300e-003	198.2546
Total	**0.0727**	**0.6348**	**0.7404**	**4.5500e-003**	**0.4112**	**4.8500e-003**	**0.4160**	**0.1114**	**4.6100e-003**	**0.1160**	**0.0000**	**426.2710**	**426.2710**	**4.1500e-003**	**0.0381**	**437.7327**

3.4 Building Construction - 2034

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	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7193	341.7193	0.0137	0.0000	342.0621
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7193**	**341.7193**	**0.0137**	**0.0000**	**342.0621**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2034

Unmitigated 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	0.0142	0.6000	0.1808	2.3700e-003	0.0937	3.9100e-003	0.0977	0.0271	3.7400e-003	0.0308	0.0000	226.7156	226.7156	8.4000e-004	0.0332	236.6187
Worker	0.0553	0.0319	0.5448	2.1100e-003	0.3174	8.7000e-004	0.3183	0.0843	8.0000e-004	0.0851	0.0000	193.9380	193.9380	3.1000e-003	4.4500e-003	195.3419
Total	**0.0695**	**0.6319**	**0.7256**	**4.4800e-003**	**0.4112**	**4.7800e-003**	**0.4159**	**0.1114**	**4.5400e-003**	**0.1159**	**0.0000**	**420.6536**	**420.6536**	**3.9400e-003**	**0.0376**	**431.9607**

Mitigated 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	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7189	341.7189	0.0137	0.0000	342.0617
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7189**	**341.7189**	**0.0137**	**0.0000**	**342.0617**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2034

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	0.0142	0.6000	0.1808	2.3700e-003	0.0937	3.9100e-003	0.0977	0.0271	3.7400e-003	0.0308	0.0000	226.7156	226.7156	8.4000e-004	0.0332	236.6187
Worker	0.0553	0.0319	0.5448	2.1100e-003	0.3174	8.7000e-004	0.3183	0.0843	8.0000e-004	0.0851	0.0000	193.9380	193.9380	3.1000e-003	4.4500e-003	195.3419
Total	**0.0695**	**0.6319**	**0.7256**	**4.4800e-003**	**0.4112**	**4.7800e-003**	**0.4159**	**0.1114**	**4.5400e-003**	**0.1159**	**0.0000**	**420.6536**	**420.6536**	**3.9400e-003**	**0.0376**	**431.9607**

3.4 Building Construction - 2035

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	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0336	343.0336	0.0128	0.0000	343.3530
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0336**	**343.0336**	**0.0128**	**0.0000**	**343.3530**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2035

Unmitigated 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	0.0142	0.6006	0.1816	2.3500e-003	0.0941	3.9100e-003	0.0980	0.0272	3.7400e-003	0.0309	0.0000	225.1524	225.1524	8.4000e-004	0.0329	234.9822
Worker	0.0526	0.0309	0.5339	2.1000e-003	0.3186	8.2000e-004	0.3195	0.0846	7.5000e-004	0.0854	0.0000	192.1610	192.1610	2.9500e-003	4.4000e-003	193.5463
Total	**0.0669**	**0.6315**	**0.7156**	**4.4500e-003**	**0.4127**	**4.7300e-003**	**0.4175**	**0.1118**	**4.4900e-003**	**0.1163**	**0.0000**	**417.3134**	**417.3134**	**3.7900e-003**	**0.0373**	**428.5285**

Mitigated 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	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0332	343.0332	0.0128	0.0000	343.3526
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0332**	**343.0332**	**0.0128**	**0.0000**	**343.3526**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2035

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	0.0142	0.6006	0.1816	2.3500e-003	0.0941	3.9100e-003	0.0980	0.0272	3.7400e-003	0.0309	0.0000	225.1524	225.1524	8.4000e-004	0.0329	234.9822
Worker	0.0526	0.0309	0.5339	2.1000e-003	0.3186	8.2000e-004	0.3195	0.0846	7.5000e-004	0.0854	0.0000	192.1610	192.1610	2.9500e-003	4.4000e-003	193.5463
Total	**0.0669**	**0.6315**	**0.7156**	**4.4500e-003**	**0.4127**	**4.7300e-003**	**0.4175**	**0.1118**	**4.4900e-003**	**0.1163**	**0.0000**	**417.3134**	**417.3134**	**3.7900e-003**	**0.0373**	**428.5285**

3.4 Building Construction - 2036

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	0.0907	0.5335	1.2008	2.3100e-003		6.7400e-003	6.7400e-003		6.7400e-003	6.7400e-003	0.0000	195.8315	195.8315	7.2900e-003	0.0000	196.0138
Total	**0.0907**	**0.5335**	**1.2008**	**2.3100e-003**		**6.7400e-003**	**6.7400e-003**		**6.7400e-003**	**6.7400e-003**	**0.0000**	**195.8315**	**195.8315**	**7.2900e-003**	**0.0000**	**196.0138**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2036

Unmitigated 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	8.1300e-003	0.3429	0.1037	1.3400e-003	0.0537	2.2300e-003	0.0560	0.0155	2.1300e-003	0.0176	0.0000	128.5353	128.5353	4.8000e-004	0.0188	134.1469
Worker	0.0301	0.0176	0.3048	1.2000e-003	0.1819	4.7000e-004	0.1824	0.0483	4.3000e-004	0.0488	0.0000	109.7011	109.7011	1.6800e-003	2.5100e-003	110.4920
Total	**0.0382**	**0.3605**	**0.4085**	**2.5400e-003**	**0.2356**	**2.7000e-003**	**0.2383**	**0.0638**	**2.5600e-003**	**0.0664**	**0.0000**	**238.2364**	**238.2364**	**2.1600e-003**	**0.0213**	**244.6389**

Mitigated 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	0.0907	0.5335	1.2008	2.3100e-003		6.7400e-003	6.7400e-003		6.7400e-003	6.7400e-003	0.0000	195.8312	195.8312	7.2900e-003	0.0000	196.0136
Total	**0.0907**	**0.5335**	**1.2008**	**2.3100e-003**		**6.7400e-003**	**6.7400e-003**		**6.7400e-003**	**6.7400e-003**	**0.0000**	**195.8312**	**195.8312**	**7.2900e-003**	**0.0000**	**196.0136**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2036

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	8.1300e-003	0.3429	0.1037	1.3400e-003	0.0537	2.2300e-003	0.0560	0.0155	2.1300e-003	0.0176	0.0000	128.5353	128.5353	4.8000e-004	0.0188	134.1469
Worker	0.0301	0.0176	0.3048	1.2000e-003	0.1819	4.7000e-004	0.1824	0.0483	4.3000e-004	0.0488	0.0000	109.7011	109.7011	1.6800e-003	2.5100e-003	110.4920
Total	**0.0382**	**0.3605**	**0.4085**	**2.5400e-003**	**0.2356**	**2.7000e-003**	**0.2383**	**0.0638**	**2.5600e-003**	**0.0664**	**0.0000**	**238.2364**	**238.2364**	**2.1600e-003**	**0.0213**	**244.6389**

3.5 Paving - 2036

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	0.0644	0.2755	0.8939	1.5800e-003		0.0106	0.0106		0.0106	0.0106	0.0000	136.1623	136.1623	5.2400e-003	0.0000	136.2933
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0644**	**0.2755**	**0.8939**	**1.5800e-003**		**0.0106**	**0.0106**		**0.0106**	**0.0106**	**0.0000**	**136.1623**	**136.1623**	**5.2400e-003**	**0.0000**	**136.2933**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2036

Unmitigated 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	1.1300e-003	6.6000e-004	0.0114	4.0000e-005	6.8300e-003	2.0000e-005	6.8500e-003	1.8100e-003	2.0000e-005	1.8300e-003	0.0000	4.1186	4.1186	6.0000e-005	9.0000e-005	4.1483
Total	**1.1300e-003**	**6.6000e-004**	**0.0114**	**4.0000e-005**	**6.8300e-003**	**2.0000e-005**	**6.8500e-003**	**1.8100e-003**	**2.0000e-005**	**1.8300e-003**	**0.0000**	**4.1186**	**4.1186**	**6.0000e-005**	**9.0000e-005**	**4.1483**

Mitigated 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	0.0644	0.2755	0.8939	1.5800e-003		0.0106	0.0106		0.0106	0.0106	0.0000	136.1621	136.1621	5.2400e-003	0.0000	136.2931
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0644**	**0.2755**	**0.8939**	**1.5800e-003**		**0.0106**	**0.0106**		**0.0106**	**0.0106**	**0.0000**	**136.1621**	**136.1621**	**5.2400e-003**	**0.0000**	**136.2931**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2036

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	1.1300e-003	6.6000e-004	0.0114	4.0000e-005	6.8300e-003	2.0000e-005	6.8500e-003	1.8100e-003	2.0000e-005	1.8300e-003	0.0000	4.1186	4.1186	6.0000e-005	9.0000e-005	4.1483
Total	**1.1300e-003**	**6.6000e-004**	**0.0114**	**4.0000e-005**	**6.8300e-003**	**2.0000e-005**	**6.8500e-003**	**1.8100e-003**	**2.0000e-005**	**1.8300e-003**	**0.0000**	**4.1186**	**4.1186**	**6.0000e-005**	**9.0000e-005**	**4.1483**

3.5 Paving - 2037

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	0.0610	0.2609	0.8464	1.5000e-003		0.0100	0.0100		0.0100	0.0100	0.0000	128.9324	128.9324	4.9600e-003	0.0000	129.0565
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0610**	**0.2609**	**0.8464**	**1.5000e-003**		**0.0100**	**0.0100**		**0.0100**	**0.0100**	**0.0000**	**128.9324**	**128.9324**	**4.9600e-003**	**0.0000**	**129.0565**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2037

Unmitigated 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	1.0700e-003	6.3000e-004	0.0108	4.0000e-005	6.4700e-003	2.0000e-005	6.4800e-003	1.7200e-003	2.0000e-005	1.7300e-003	0.0000	3.8999	3.8999	6.0000e-005	9.0000e-005	3.9281
Total	**1.0700e-003**	**6.3000e-004**	**0.0108**	**4.0000e-005**	**6.4700e-003**	**2.0000e-005**	**6.4800e-003**	**1.7200e-003**	**2.0000e-005**	**1.7300e-003**	**0.0000**	**3.8999**	**3.8999**	**6.0000e-005**	**9.0000e-005**	**3.9281**

Mitigated 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	0.0610	0.2609	0.8464	1.5000e-003		0.0100	0.0100		0.0100	0.0100	0.0000	128.9323	128.9323	4.9600e-003	0.0000	129.0563
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0610**	**0.2609**	**0.8464**	**1.5000e-003**		**0.0100**	**0.0100**		**0.0100**	**0.0100**	**0.0000**	**128.9323**	**128.9323**	**4.9600e-003**	**0.0000**	**129.0563**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2037

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	1.0700e-003	6.3000e-004	0.0108	4.0000e-005	6.4700e-003	2.0000e-005	6.4800e-003	1.7200e-003	2.0000e-005	1.7300e-003	0.0000	3.8999	3.8999	6.0000e-005	9.0000e-005	3.9281
Total	**1.0700e-003**	**6.3000e-004**	**0.0108**	**4.0000e-005**	**6.4700e-003**	**2.0000e-005**	**6.4800e-003**	**1.7200e-003**	**2.0000e-005**	**1.7300e-003**	**0.0000**	**3.8999**	**3.8999**	**6.0000e-005**	**9.0000e-005**	**3.9281**

3.6 Architectural Coating - 2037

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					
Archit. Coating	3.4887					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0800e-003	0.0583	0.1382	2.3000e-004		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	19.6601	19.6601	7.3000e-004	0.0000	19.6782
Total	**3.4978**	**0.0583**	**0.1382**	**2.3000e-004**		**7.6000e-004**	**7.6000e-004**		**7.6000e-004**	**7.6000e-004**	**0.0000**	**19.6601**	**19.6601**	**7.3000e-004**	**0.0000**	**19.6782**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2037

Unmitigated 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	6.2500e-003	3.6700e-003	0.0634	2.5000e-004	0.0379	1.0000e-004	0.0380	0.0101	9.0000e-005	0.0101	0.0000	22.8262	22.8262	3.5000e-004	5.2000e-004	22.9907
Total	**6.2500e-003**	**3.6700e-003**	**0.0634**	**2.5000e-004**	**0.0379**	**1.0000e-004**	**0.0380**	**0.0101**	**9.0000e-005**	**0.0101**	**0.0000**	**22.8262**	**22.8262**	**3.5000e-004**	**5.2000e-004**	**22.9907**

Mitigated 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					
Archit. Coating	3.4887					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0800e-003	0.0583	0.1382	2.3000e-004		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	19.6600	19.6600	7.3000e-004	0.0000	19.6782
Total	**3.4978**	**0.0583**	**0.1382**	**2.3000e-004**		**7.6000e-004**	**7.6000e-004**		**7.6000e-004**	**7.6000e-004**	**0.0000**	**19.6600**	**19.6600**	**7.3000e-004**	**0.0000**	**19.6782**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2037

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	6.2500e-003	3.6700e-003	0.0634	2.5000e-004	0.0379	1.0000e-004	0.0380	0.0101	9.0000e-005	0.0101	0.0000	22.8262	22.8262	3.5000e-004	5.2000e-004	22.9907
Total	**6.2500e-003**	**3.6700e-003**	**0.0634**	**2.5000e-004**	**0.0379**	**1.0000e-004**	**0.0380**	**0.0101**	**9.0000e-005**	**0.0101**	**0.0000**	**22.8262**	**22.8262**	**3.5000e-004**	**5.2000e-004**	**22.9907**

3.6 Architectural Coating - 2038

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					
Archit. Coating	1.4952					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.8900e-003	0.0250	0.0592	1.0000e-004		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004	0.0000	8.4257	8.4257	3.1000e-004	0.0000	8.4335
Total	**1.4991**	**0.0250**	**0.0592**	**1.0000e-004**		**3.3000e-004**	**3.3000e-004**		**3.3000e-004**	**3.3000e-004**	**0.0000**	**8.4257**	**8.4257**	**3.1000e-004**	**0.0000**	**8.4335**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2038

Unmitigated 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	2.6800e-003	1.5700e-003	0.0272	1.1000e-004	0.0162	4.0000e-005	0.0163	4.3100e-003	4.0000e-005	4.3500e-003	0.0000	9.7826	9.7826	1.5000e-004	2.2000e-004	9.8532
Total	**2.6800e-003**	**1.5700e-003**	**0.0272**	**1.1000e-004**	**0.0162**	**4.0000e-005**	**0.0163**	**4.3100e-003**	**4.0000e-005**	**4.3500e-003**	**0.0000**	**9.7826**	**9.7826**	**1.5000e-004**	**2.2000e-004**	**9.8532**

Mitigated 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					
Archit. Coating	1.4952					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.8900e-003	0.0250	0.0592	1.0000e-004		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004	0.0000	8.4257	8.4257	3.1000e-004	0.0000	8.4335
Total	**1.4991**	**0.0250**	**0.0592**	**1.0000e-004**		**3.3000e-004**	**3.3000e-004**		**3.3000e-004**	**3.3000e-004**	**0.0000**	**8.4257**	**8.4257**	**3.1000e-004**	**0.0000**	**8.4335**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2038

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	2.6800e-003	1.5700e-003	0.0272	1.1000e-004	0.0162	4.0000e-005	0.0163	4.3100e-003	4.0000e-005	4.3500e-003	0.0000	9.7826	9.7826	1.5000e-004	2.2000e-004	9.8532
Total	**2.6800e-003**	**1.5700e-003**	**0.0272**	**1.1000e-004**	**0.0162**	**4.0000e-005**	**0.0163**	**4.3100e-003**	**4.0000e-005**	**4.3500e-003**	**0.0000**	**9.7826**	**9.7826**	**1.5000e-004**	**2.2000e-004**	**9.8532**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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					
Mitigated	1.2600	2.5616	11.8817	0.0304	3.0424	0.0289	3.0712	0.8142	0.0272	0.8414	0.0000	2,820.6398	2,820.6398	0.1385	0.1707	2,874.9781
Unmitigated	1.2600	2.5616	11.8817	0.0304	3.0424	0.0289	3.0712	0.8142	0.0272	0.8414	0.0000	2,820.6398	2,820.6398	0.1385	0.1707	2,874.9781

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	8.40	21.11	23.59	26,441	26,441
Single Family Housing	2,784.80	2,814.30	2522.25	8,001,452	8,001,452
Total	2,793.20	2,835.41	2,545.84	8,027,893	8,027,893

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	46.40	16.40	37.20	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.491744	0.054986	0.180747	0.153452	0.027634	0.008574	0.014177	0.038442	0.000573	0.000231	0.024179	0.001379	0.003882
Single Family Housing	0.491744	0.054986	0.180747	0.153452	0.027634	0.008574	0.014177	0.038442	0.000573	0.000231	0.024179	0.001379	0.003882

5.0 Energy Detail

S&S Homes - Kern-San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	216.6898	216.6898	0.0351	4.2500e-003	218.8325
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	216.6898	216.6898	0.0351	4.2500e-003	218.8325
NaturalGas Mitigated	0.0378	0.3230	0.1375	2.0600e-003		0.0261	0.0261		0.0261	0.0261	0.0000	374.0852	374.0852	7.1700e-003	6.8600e-003	376.3082
NaturalGas Unmitigated	0.0378	0.3230	0.1375	2.0600e-003		0.0261	0.0261		0.0261	0.0261	0.0000	374.0852	374.0852	7.1700e-003	6.8600e-003	376.3082

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	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										MT/yr					
City Park	0	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
Single Family Housing	7.01009e+006	0.0378	0.3230	0.1375	2.0600e-003		0.0261	0.0261		0.0261	0.0261	0.0000	374.0852	374.0852	7.1700e-003	6.8600e-003	376.3082
Total		**0.0378**	**0.3230**	**0.1375**	**2.0600e-003**		**0.0261**	**0.0261**		**0.0261**	**0.0261**	**0.0000**	**374.0852**	**374.0852**	**7.1700e-003**	**6.8600e-003**	**376.3082**

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										MT/yr					
City Park	0	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
Single Family Housing	7.01009e+006	0.0378	0.3230	0.1375	2.0600e-003		0.0261	0.0261		0.0261	0.0261	0.0000	374.0852	374.0852	7.1700e-003	6.8600e-003	376.3082
Total		**0.0378**	**0.3230**	**0.1375**	**2.0600e-003**		**0.0261**	**0.0261**		**0.0261**	**0.0261**	**0.0000**	**374.0852**	**374.0852**	**7.1700e-003**	**6.8600e-003**	**376.3082**

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			
City Park	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2.34199e+006	216.6898	0.0351	4.2500e-003	218.8325
Total		**216.6898**	**0.0351**	**4.2500e-003**	**218.8325**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2.34199e+006	216.6898	0.0351	4.2500e-003	218.8325
Total		**216.6898**	**0.0351**	**4.2500e-003**	**218.8325**

6.0 Area Detail

S&S Homes - Kern-San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.1 Mitigation Measures Area

	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					
Mitigated	2.6553	0.1356	2.2354	8.2000e-004		0.0211	0.0211		0.0211	0.0211	0.0000	131.3744	131.3744	5.8800e-003	2.3400e-003	132.2195
Unmitigated	2.6553	0.1356	2.2354	8.2000e-004		0.0211	0.0211		0.0211	0.0211	0.0000	131.3744	131.3744	5.8800e-003	2.3400e-003	132.2195

S&S Homes - Kern-San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	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	0.4984					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.0782					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0129	0.1104	0.0470	7.0000e-004		8.9200e-003	8.9200e-003		8.9200e-003	8.9200e-003	0.0000	127.7962	127.7962	2.4500e-003	2.3400e-003	128.5556
Landscaping	0.0657	0.0252	2.1884	1.2000e-004		0.0121	0.0121		0.0121	0.0121	0.0000	3.5782	3.5782	3.4300e-003	0.0000	3.6639
Total	**2.6552**	**0.1356**	**2.2354**	**8.2000e-004**		**0.0211**	**0.0211**		**0.0211**	**0.0211**	**0.0000**	**131.3744**	**131.3744**	**5.8800e-003**	**2.3400e-003**	**132.2195**

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	0.4984					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.0782					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0129	0.1104	0.0470	7.0000e-004		8.9200e-003	8.9200e-003		8.9200e-003	8.9200e-003	0.0000	127.7962	127.7962	2.4500e-003	2.3400e-003	128.5556
Landscaping	0.0657	0.0252	2.1884	1.2000e-004		0.0121	0.0121		0.0121	0.0121	0.0000	3.5782	3.5782	3.4300e-003	0.0000	3.6639
Total	**2.6552**	**0.1356**	**2.2354**	**8.2000e-004**		**0.0211**	**0.0211**		**0.0211**	**0.0211**	**0.0000**	**131.3744**	**131.3744**	**5.8800e-003**	**2.3400e-003**	**132.2195**

7.0 Water Detail

7.1 Mitigation Measures Water

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	23.7999	0.6292	0.0151	44.0393
Unmitigated	23.7999	0.6292	0.0151	44.0393

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 12.8323	4.1555	6.7000e-004	8.0000e-005	4.1966
Single Family Housing	19.2204 / 12.1172	19.6444	0.6285	0.0151	39.8427
Total		**23.7999**	**0.6292**	**0.0151**	**44.0393**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 12.8323	4.1555	6.7000e-004	8.0000e-005	4.1966
Single Family Housing	19.2204 / 12.1172	19.6444	0.6285	0.0151	39.8427
Total		**23.7999**	**0.6292**	**0.0151**	**44.0393**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	78.0054	4.6100	0.0000	193.2550
Unmitigated	78.0054	4.6100	0.0000	193.2550

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.93	0.1888	0.0112	0.0000	0.4677
Single Family Housing	383.35	77.8166	4.5988	0.0000	192.7873
Total		**78.0054**	**4.6100**	**0.0000**	**193.2550**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.93	0.1888	0.0112	0.0000	0.4677
Single Family Housing	383.35	77.8166	4.5988	0.0000	192.7873
Total		**78.0054**	**4.6100**	**0.0000**	**193.2550**

9.0 Operational Offroad

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

S&S Homes - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

S&S Homes

Kern-San Joaquin County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	295.00	Dwelling Unit	94.93	531,000.00	935
City Park	10.77	Acre	10.77	469,141.20	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	32
Climate Zone	7			**Operational Year**	2027
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - lot acreage per tract map
population based on 3.17 x 295935

Construction Phase -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	1/7/2039	4/2/2038
tblConstructionPhase	PhaseEndDate	5/1/2037	7/25/2036
tblConstructionPhase	PhaseEndDate	6/13/2025	9/6/2024
tblConstructionPhase	PhaseEndDate	3/5/2038	5/29/2037
tblConstructionPhase	PhaseEndDate	4/5/2024	6/30/2023

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstructionPhase	PhaseStartDate	3/6/2038	5/30/2037
tblConstructionPhase	PhaseStartDate	6/14/2025	9/7/2024
tblConstructionPhase	PhaseStartDate	4/6/2024	7/1/2023
tblConstructionPhase	PhaseStartDate	5/2/2037	7/26/2036
tblLandUse	LotAcreage	95.78	94.93
tblLandUse	Population	844.00	935.00
tblWoodstoves	NumberCatalytic	94.93	0.00
tblWoodstoves	NumberNoncatalytic	94.93	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

S&S Homes - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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	lb/day										lb/day					
2023	3.3907	34.5535	28.6096	0.0636	9.3679	1.4254	10.7933	3.6973	1.3113	5.0087	0.0000	6,168.0567	6,168.0567	1.9484	3.8900e-003	6,217.9261
2024	3.2817	32.4104	28.2387	0.0713	9.3679	1.3362	10.7041	3.6973	1.2293	4.9267	0.0000	7,131.8526	7,131.8526	1.9474	0.3914	7,265.2260
2025	2.3838	17.4724	24.8009	0.0701	3.2215	0.5710	3.7925	0.8712	0.5374	1.4085	0.0000	7,013.0237	7,013.0237	0.6604	0.3812	7,143.1397
2026	2.3197	17.4040	24.3088	0.0690	3.2215	0.5702	3.7917	0.8712	0.5366	1.4078	0.0000	6,896.6543	6,896.6543	0.6552	0.3716	7,023.7628
2027	2.2632	17.3391	23.8903	0.0679	3.2215	0.5693	3.7908	0.8712	0.5358	1.4069	0.0000	6,788.9258	6,788.9258	0.6509	0.3621	6,913.1075
2028	2.2121	17.2878	23.5454	0.0670	3.2215	0.5684	3.7899	0.8712	0.5349	1.4061	0.0000	6,689.9152	6,689.9152	0.6472	0.3534	6,811.3935
2029	2.1638	17.2394	23.2466	0.0661	3.2215	0.5675	3.7891	0.8712	0.5341	1.4053	0.0000	6,598.8001	6,598.8001	0.6440	0.3452	6,717.7693
2030	2.0613	12.6657	23.0695	0.0693	3.2216	0.1873	3.4089	0.8712	0.1853	1.0565	0.0000	6,858.1281	6,858.1281	0.1565	0.3379	6,962.7427
2031	2.0185	12.6347	22.8531	0.0686	3.2216	0.1866	3.4082	0.8712	0.1847	1.0558	0.0000	6,785.4999	6,785.4999	0.1540	0.3315	6,888.1485
2032	1.9809	12.6091	22.6720	0.0680	3.2216	0.1860	3.4076	0.8712	0.1841	1.0552	0.0000	6,721.6017	6,721.6017	0.1519	0.3260	6,822.5529
2033	1.9475	12.5881	22.5193	0.0674	3.2216	0.1854	3.4070	0.8712	0.1835	1.0547	0.0000	6,665.4241	6,665.4241	0.1501	0.3213	6,764.9072
2034	1.9178	12.5675	22.3858	0.0669	3.2216	0.1849	3.4064	0.8712	0.1830	1.0542	0.0000	6,615.5735	6,615.5735	0.1485	0.3170	6,713.7572
2035	1.7987	11.7738	22.2324	0.0665	3.2216	0.1266	3.3482	0.8712	0.1248	0.9960	0.0000	6,571.7612	6,571.7612	0.1387	0.3133	6,668.6033
2036	1.7987	11.7738	22.2324	0.0665	3.2216	0.1877	3.3482	0.8712	0.1877	0.9960	0.0000	6,571.7612	6,571.7612	0.1387	0.3133	6,668.6033
2037	45.5205	4.8872	16.0552	0.0289	0.5011	0.1877	0.5123	0.1329	0.1877	0.2204	0.0000	2,744.3453	2,744.3453	0.1034	7.1900e-003	2,747.4570
2038	45.5205	0.8025	2.7497	6.5000e-003	0.5011	0.0112	0.5123	0.1329	0.0111	0.1440	0.0000	638.6175	638.6175	0.0151	7.1900e-003	641.1379
Maximum	**45.5205**	**34.5535**	**28.6096**	**0.0713**	**9.3679**	**1.4254**	**10.7933**	**3.6973**	**1.3113**	**5.0087**	**0.0000**	**7,131.8526**	**7,131.8526**	**1.9484**	**0.3914**	**7,265.2260**

2.1 Overall Construction (Maximum Daily Emission)

S&S Homes - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	lb/day										lb/day					
2023	3.3907	34.5535	28.6096	0.0636	3.7537	1.4254	5.1791	1.4685	1.3113	2.7799	0.0000	6,168.0567	6,168.0567	1.9484	3.8900e-003	6,217.9261
2024	3.2817	32.4104	28.2387	0.0713	3.7537	1.3362	5.0899	1.4685	1.2293	2.6979	0.0000	7,131.8526	7,131.8526	1.9474	0.3914	7,265.2260
2025	2.3838	17.4724	24.8009	0.0701	3.2215	0.5710	3.7925	0.8712	0.5374	1.4085	0.0000	7,013.0237	7,013.0237	0.6604	0.3812	7,143.1397
2026	2.3197	17.4040	24.3088	0.0690	3.2215	0.5702	3.7917	0.8712	0.5366	1.4078	0.0000	6,896.6543	6,896.6543	0.6552	0.3716	7,023.7628
2027	2.2632	17.3391	23.8903	0.0679	3.2215	0.5693	3.7908	0.8712	0.5358	1.4069	0.0000	6,788.9258	6,788.9258	0.6509	0.3621	6,913.1075
2028	2.2121	17.2878	23.5454	0.0670	3.2215	0.5684	3.7899	0.8712	0.5349	1.4061	0.0000	6,689.9152	6,689.9152	0.6472	0.3534	6,811.3935
2029	2.1638	17.2394	23.2466	0.0661	3.2215	0.5675	3.7891	0.8712	0.5341	1.4053	0.0000	6,598.8001	6,598.8001	0.6440	0.3452	6,717.7693
2030	2.0613	12.6657	23.0695	0.0693	3.2216	0.1873	3.4089	0.8712	0.1853	1.0565	0.0000	6,858.1281	6,858.1281	0.1565	0.3379	6,962.7427
2031	2.0185	12.6347	22.8531	0.0686	3.2216	0.1866	3.4082	0.8712	0.1847	1.0558	0.0000	6,785.4999	6,785.4999	0.1540	0.3315	6,888.1485
2032	1.9809	12.6091	22.6720	0.0680	3.2216	0.1860	3.4076	0.8712	0.1841	1.0552	0.0000	6,721.6017	6,721.6017	0.1519	0.3260	6,822.5529
2033	1.9475	12.5881	22.5193	0.0674	3.2216	0.1854	3.4070	0.8712	0.1835	1.0547	0.0000	6,665.4241	6,665.4241	0.1501	0.3213	6,764.9072
2034	1.9178	12.5675	22.3858	0.0669	3.2216	0.1849	3.4064	0.8712	0.1830	1.0542	0.0000	6,615.5735	6,615.5735	0.1485	0.3170	6,713.7572
2035	1.7987	11.7738	22.2324	0.0665	3.2216	0.1266	3.3482	0.8712	0.1248	0.9960	0.0000	6,571.7612	6,571.7612	0.1387	0.3133	6,668.6033
2036	1.7987	11.7738	22.2324	0.0665	3.2216	0.1877	3.3482	0.8712	0.1877	0.9960	0.0000	6,571.7612	6,571.7612	0.1387	0.3133	6,668.6033
2037	45.5205	4.8872	16.0552	0.0289	0.5011	0.1877	0.5123	0.1329	0.1877	0.2204	0.0000	2,744.3453	2,744.3453	0.1034	7.1900e-003	2,747.4570
2038	45.5205	0.8025	2.7497	6.5000e-003	0.5011	0.0112	0.5123	0.1329	0.0111	0.1440	0.0000	638.6175	638.6175	0.0151	7.1900e-003	641.1379
Maximum	**45.5205**	**34.5535**	**28.6096**	**0.0713**	**3.7537**	**1.4254**	**5.1791**	**1.4685**	**1.3113**	**2.7799**	**0.0000**	**7,131.8526**	**7,131.8526**	**1.9484**	**0.3914**	**7,265.2260**

S&S Homes - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	19.23	0.00	17.22	24.61	0.00	18.12	0.00	0.00	0.00	0.00	0.00	0.00

S&S Homes - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated 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	lb/day										lb/day					
Area	15.1636	2.9715	25.4612	0.0185		0.3525	0.3525		0.3525	0.3525	0.0000	3,479.7076	3,479.7076	0.1078	0.0630	3,501.1747
Energy	0.2071	1.7699	0.7532	0.0113		0.1431	0.1431		0.1431	0.1431		2,259.4975	2,259.4975	0.0433	0.0414	2,272.9245
Mobile	8.6638	13.5898	72.1526	0.1822	17.4742	0.1627	17.6369	4.6691	0.1532	4.8223		18,610.0620	18,610.0620	0.8292	1.0389	18,940.3968
Total	**24.0345**	**18.3312**	**98.3670**	**0.2119**	**17.4742**	**0.6584**	**18.1326**	**4.6691**	**0.6489**	**5.3179**	**0.0000**	**24,349.2671**	**24,349.2671**	**0.9804**	**1.1434**	**24,714.4960**

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	lb/day										lb/day					
Area	15.1636	2.9715	25.4612	0.0185		0.3525	0.3525		0.3525	0.3525	0.0000	3,479.7076	3,479.7076	0.1078	0.0630	3,501.1747
Energy	0.2071	1.7699	0.7532	0.0113		0.1431	0.1431		0.1431	0.1431		2,259.4975	2,259.4975	0.0433	0.0414	2,272.9245
Mobile	8.6638	13.5898	72.1526	0.1822	17.4742	0.1627	17.6369	4.6691	0.1532	4.8223		18,610.0620	18,610.0620	0.8292	1.0389	18,940.3968
Total	**24.0345**	**18.3312**	**98.3670**	**0.2119**	**17.4742**	**0.6584**	**18.1326**	**4.6691**	**0.6489**	**5.3179**	**0.0000**	**24,349.2671**	**24,349.2671**	**0.9804**	**1.1434**	**24,714.4960**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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	N20	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	Site Preparation	Site Preparation	10/21/2023	6/30/2023	5	120	
2	Grading	Grading	7/1/2023	9/6/2024	5	310	
3	Building Construction	Building Construction	9/7/2024	7/25/2036	5	3100	
4	Paving	Paving	7/26/2036	5/29/2037	5	220	
5	Architectural Coating	Architectural Coating	5/30/2037	4/2/2038	5	220	

Acres of Grading (Site Preparation Phase): 180

Acres of Grading (Grading Phase): 930

Acres of Paving: 0

Residential Indoor: 1,075,275; Residential Outdoor: 358,425; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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
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
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

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
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	303.00	108.00	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	61.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 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	lb/day										lb/day					
Fugitive Dust	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
Off-Road	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
Total	**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**

Unmitigated 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	lb/day										lb/day					
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	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
Total	**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**

S&S Homes - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2023

Mitigated 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	lb/day										lb/day					
Fugitive Dust	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
Off-Road	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
Total	**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**

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	lb/day										lb/day					
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	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
Total	**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**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 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	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Unmitigated 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	lb/day										lb/day					
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
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
Worker	0.0689	0.0379	0.5584	1.5500e-003	0.1643	8.8000e-004	0.1652	0.0436	8.1000e-004	0.0444		156.5790	156.5790	4.1600e-003	3.8900e-003	157.8425
Total	**0.0689**	**0.0379**	**0.5584**	**1.5500e-003**	**0.1643**	**8.8000e-004**	**0.1652**	**0.0436**	**8.1000e-004**	**0.0444**		**156.5790**	**156.5790**	**4.1600e-003**	**3.8900e-003**	**157.8425**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2023

Mitigated 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	lb/day										lb/day					
Fugitive Dust					3.5894	0.0000	3.5894	1.4250	0.0000	1.4250			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**3.5894**	**1.4245**	**5.0139**	**1.4250**	**1.3105**	**2.7355**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	lb/day										lb/day					
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
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
Worker	0.0689	0.0379	0.5584	1.5500e-003	0.1643	8.8000e-004	0.1652	0.0436	8.1000e-004	0.0444		156.5790	156.5790	4.1600e-003	3.8900e-003	157.8425
Total	**0.0689**	**0.0379**	**0.5584**	**1.5500e-003**	**0.1643**	**8.8000e-004**	**0.1652**	**0.0436**	**8.1000e-004**	**0.0444**		**156.5790**	**156.5790**	**4.1600e-003**	**3.8900e-003**	**157.8425**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 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	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286		6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**9.2036**	**1.3354**	**10.5390**	**3.6538**	**1.2286**	**4.8823**		**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

Unmitigated 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	lb/day										lb/day					
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
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
Worker	0.0635	0.0335	0.5159	1.5000e-003	0.1643	8.3000e-004	0.1651	0.0436	7.6000e-004	0.0443		151.4265	151.4265	3.7400e-003	3.6100e-003	152.5950
Total	**0.0635**	**0.0335**	**0.5159**	**1.5000e-003**	**0.1643**	**8.3000e-004**	**0.1651**	**0.0436**	**7.6000e-004**	**0.0443**		**151.4265**	**151.4265**	**3.7400e-003**	**3.6100e-003**	**152.5950**

S&S Homes - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Mitigated 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	lb/day										lb/day					
Fugitive Dust					3.5894	0.0000	3.5894	1.4250	0.0000	1.4250			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286	0.0000	6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**3.5894**	**1.3354**	**4.9248**	**1.4250**	**1.2286**	**2.6535**	**0.0000**	**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

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	lb/day										lb/day					
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
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
Worker	0.0635	0.0335	0.5159	1.5000e-003	0.1643	8.3000e-004	0.1651	0.0436	7.6000e-004	0.0443		151.4265	151.4265	3.7400e-003	3.6100e-003	152.5950
Total	**0.0635**	**0.0335**	**0.5159**	**1.5000e-003**	**0.1643**	**8.3000e-004**	**0.1651**	**0.0436**	**7.6000e-004**	**0.0443**		**151.4265**	**151.4265**	**3.7400e-003**	**3.6100e-003**	**152.5950**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 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	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.1268	4.5643	1.4939	0.0216	0.7324	0.0315	0.7639	0.2109	0.0302	0.2411		2,282.0424	2,282.0424	8.7600e-003	0.3367	2,382.6036
Worker	0.9626	0.5071	7.8155	0.0227	2.4891	0.0126	2.5017	0.6602	0.0116	0.6718		2,294.1113	2,294.1113	0.0566	0.0547	2,311.8148
Total	**1.0894**	**5.0714**	**9.3094**	**0.0443**	**3.2215**	**0.0441**	**3.2656**	**0.8711**	**0.0417**	**0.9129**		**4,576.1537**	**4,576.1537**	**0.0654**	**0.3914**	**4,694.4184**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Mitigated 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	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

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	lb/day										lb/day					
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
Vendor	0.1268	4.5643	1.4939	0.0216	0.7324	0.0315	0.7639	0.2109	0.0302	0.2411		2,282.0424	2,282.0424	8.7600e-003	0.3367	2,382.6036
Worker	0.9626	0.5071	7.8155	0.0227	2.4891	0.0126	2.5017	0.6602	0.0116	0.6718		2,294.1113	2,294.1113	0.0566	0.0547	2,311.8148
Total	**1.0894**	**5.0714**	**9.3094**	**0.0443**	**3.2215**	**0.0441**	**3.2656**	**0.8711**	**0.0417**	**0.9129**		**4,576.1537**	**4,576.1537**	**0.0654**	**0.3914**	**4,694.4184**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2025

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	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.1242	4.5504	1.4640	0.0212	0.7324	0.0315	0.7639	0.2109	0.0301	0.2411		2,240.6900	2,240.6900	8.4500e-003	0.3303	2,339.3157
Worker	0.8922	0.4523	7.2522	0.0219	2.4891	0.0119	2.5010	0.6602	0.0110	0.6712		2,215.8594	2,215.8594	0.0510	0.0510	2,232.3259
Total	**1.0164**	**5.0027**	**8.7163**	**0.0432**	**3.2215**	**0.0434**	**3.2649**	**0.8712**	**0.0411**	**0.9123**		**4,456.5494**	**4,456.5494**	**0.0595**	**0.3812**	**4,571.6417**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2025

Mitigated 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	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	lb/day										lb/day					
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
Vendor	0.1242	4.5504	1.4640	0.0212	0.7324	0.0315	0.7639	0.2109	0.0301	0.2411		2,240.6900	2,240.6900	8.4500e-003	0.3303	2,339.3157
Worker	0.8922	0.4523	7.2522	0.0219	2.4891	0.0119	2.5010	0.6602	0.0110	0.6712		2,215.8594	2,215.8594	0.0510	0.0510	2,232.3259
Total	**1.0164**	**5.0027**	**8.7163**	**0.0432**	**3.2215**	**0.0434**	**3.2649**	**0.8712**	**0.0411**	**0.9123**		**4,456.5494**	**4,456.5494**	**0.0595**	**0.3812**	**4,571.6417**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2026

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	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.1219	4.5274	1.4390	0.0208	0.7324	0.0313	0.7638	0.2109	0.0300	0.2409		2,198.7903	2,198.7903	8.1900e-003	0.3237	2,295.4482
Worker	0.8304	0.4069	6.7852	0.0212	2.4891	0.0113	2.5003	0.6602	0.0104	0.6706		2,141.3896	2,141.3896	0.0461	0.0479	2,156.8166
Total	**0.9523**	**4.9344**	**8.2242**	**0.0420**	**3.2215**	**0.0426**	**3.2641**	**0.8712**	**0.0403**	**0.9115**		**4,340.1799**	**4,340.1799**	**0.0543**	**0.3716**	**4,452.2647**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2026

Mitigated 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	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	lb/day										lb/day					
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
Vendor	0.1219	4.5274	1.4390	0.0208	0.7324	0.0313	0.7638	0.2109	0.0300	0.2409		2,198.7903	2,198.7903	8.1900e-003	0.3237	2,295.4482
Worker	0.8304	0.4069	6.7852	0.0212	2.4891	0.0113	2.5003	0.6602	0.0104	0.6706		2,141.3896	2,141.3896	0.0461	0.0479	2,156.8166
Total	**0.9523**	**4.9344**	**8.2242**	**0.0420**	**3.2215**	**0.0426**	**3.2641**	**0.8712**	**0.0403**	**0.9115**		**4,340.1799**	**4,340.1799**	**0.0543**	**0.3716**	**4,452.2647**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2027

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	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.1200	4.4999	1.4186	0.0204	0.7325	0.0311	0.7636	0.2109	0.0298	0.2407		2,154.0061	2,154.0061	7.9600e-003	0.3167	2,248.5932
Worker	0.7758	0.3695	6.3871	0.0206	2.4891	0.0106	2.4997	0.6602	9.7400e-003	0.6700		2,078.4453	2,078.4453	0.0420	0.0454	2,093.0162
Total	**0.8958**	**4.8695**	**7.8057**	**0.0410**	**3.2215**	**0.0417**	**3.2632**	**0.8712**	**0.0395**	**0.9107**		**4,232.4514**	**4,232.4514**	**0.0499**	**0.3621**	**4,341.6094**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2027

Mitigated 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	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	lb/day										lb/day					
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
Vendor	0.1200	4.4999	1.4186	0.0204	0.7325	0.0311	0.7636	0.2109	0.0298	0.2407		2,154.0061	2,154.0061	7.9600e-003	0.3167	2,248.5932
Worker	0.7758	0.3695	6.3871	0.0206	2.4891	0.0106	2.4997	0.6602	9.7400e-003	0.6700		2,078.4453	2,078.4453	0.0420	0.0454	2,093.0162
Total	**0.8958**	**4.8695**	**7.8057**	**0.0410**	**3.2215**	**0.0417**	**3.2632**	**0.8712**	**0.0395**	**0.9107**		**4,232.4514**	**4,232.4514**	**0.0499**	**0.3621**	**4,341.6094**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2028

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	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.1182	4.4796	1.4018	0.0200	0.7325	0.0309	0.7634	0.2109	0.0296	0.2405		2,111.0737	2,111.0737	7.7800e-003	0.3101	2,203.6690
Worker	0.7264	0.3385	6.0590	0.0200	2.4891	9.8900e-003	2.4990	0.6602	9.1000e-003	0.6693		2,022.3672	2,022.3672	0.0385	0.0433	2,036.2265
Total	**0.8447**	**4.8182**	**7.4607**	**0.0400**	**3.2215**	**0.0408**	**3.2624**	**0.8712**	**0.0387**	**0.9098**		**4,133.4409**	**4,133.4409**	**0.0463**	**0.3534**	**4,239.8955**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2028

Mitigated 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	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	lb/day										lb/day					
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
Vendor	0.1182	4.4796	1.4018	0.0200	0.7325	0.0309	0.7634	0.2109	0.0296	0.2405		2,111.0737	2,111.0737	7.7800e-003	0.3101	2,203.6690
Worker	0.7264	0.3385	6.0590	0.0200	2.4891	9.8900e-003	2.4990	0.6602	9.1000e-003	0.6693		2,022.3672	2,022.3672	0.0385	0.0433	2,036.2265
Total	**0.8447**	**4.8182**	**7.4607**	**0.0400**	**3.2215**	**0.0408**	**3.2624**	**0.8712**	**0.0387**	**0.9098**		**4,133.4409**	**4,133.4409**	**0.0463**	**0.3534**	**4,239.8955**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2029

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	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.1168	4.4575	1.3878	0.0196	0.7325	0.0307	0.7632	0.2109	0.0294	0.2403		2,069.8759	2,069.8759	7.6200e-003	0.3037	2,160.5652
Worker	0.6797	0.3121	5.7742	0.0195	2.4891	9.2300e-003	2.4983	0.6602	8.4900e-003	0.6687		1,972.4498	1,972.4498	0.0354	0.0415	1,985.7061
Total	**0.7964**	**4.7697**	**7.1620**	**0.0391**	**3.2215**	**0.0399**	**3.2615**	**0.8712**	**0.0379**	**0.9090**		**4,042.3257**	**4,042.3257**	**0.0430**	**0.3452**	**4,146.2713**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2029

Mitigated 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	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	lb/day										lb/day					
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
Vendor	0.1168	4.4575	1.3878	0.0196	0.7325	0.0307	0.7632	0.2109	0.0294	0.2403		2,069.8759	2,069.8759	7.6200e-003	0.3037	2,160.5652
Worker	0.6797	0.3121	5.7742	0.0195	2.4891	9.2300e-003	2.4983	0.6602	8.4900e-003	0.6687		1,972.4498	1,972.4498	0.0354	0.0415	1,985.7061
Total	**0.7964**	**4.7697**	**7.1620**	**0.0391**	**3.2215**	**0.0399**	**3.2615**	**0.8712**	**0.0379**	**0.9090**		**4,042.3257**	**4,042.3257**	**0.0430**	**0.3452**	**4,146.2713**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2030

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	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.1156	4.4411	1.3771	0.0193	0.7325	0.0306	0.7630	0.2110	0.0292	0.2402		2,032.3884	2,032.3884	7.5000e-003	0.2979	2,121.3455
Worker	0.6366	0.2900	5.5354	0.0191	2.4891	8.6200e-003	2.4977	0.6602	7.9300e-003	0.6682		1,928.1930	1,928.1930	0.0328	0.0400	1,940.9443
Total	**0.7522**	**4.7311**	**6.9125**	**0.0383**	**3.2216**	**0.0392**	**3.2607**	**0.8712**	**0.0372**	**0.9083**		**3,960.5813**	**3,960.5813**	**0.0403**	**0.3379**	**4,062.2898**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2030

Mitigated 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	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

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	lb/day										lb/day					
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
Vendor	0.1156	4.4411	1.3771	0.0193	0.7325	0.0306	0.7630	0.2110	0.0292	0.2402		2,032.3884	2,032.3884	7.5000e-003	0.2979	2,121.3455
Worker	0.6366	0.2900	5.5354	0.0191	2.4891	8.6200e-003	2.4977	0.6602	7.9300e-003	0.6682		1,928.1930	1,928.1930	0.0328	0.0400	1,940.9443
Total	**0.7522**	**4.7311**	**6.9125**	**0.0383**	**3.2216**	**0.0392**	**3.2607**	**0.8712**	**0.0372**	**0.9083**		**3,960.5813**	**3,960.5813**	**0.0403**	**0.3379**	**4,062.2898**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2031

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	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.1147	4.4297	1.3704	0.0189	0.7325	0.0304	0.7629	0.2110	0.0291	0.2400		1,998.9512	1,998.9512	7.4100e-003	0.2928	2,086.3773
Worker	0.5948	0.2704	5.3256	0.0187	2.4891	8.0600e-003	2.4971	0.6602	7.4200e-003	0.6676		1,889.0020	1,889.0020	0.0304	0.0388	1,901.3184
Total	**0.7094**	**4.7001**	**6.6961**	**0.0376**	**3.2216**	**0.0385**	**3.2600**	**0.8712**	**0.0365**	**0.9077**		**3,887.9532**	**3,887.9532**	**0.0378**	**0.3315**	**3,987.6956**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2031

Mitigated 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	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

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	lb/day										lb/day					
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
Vendor	0.1147	4.4297	1.3704	0.0189	0.7325	0.0304	0.7629	0.2110	0.0291	0.2400		1,998.9512	1,998.9512	7.4100e-003	0.2928	2,086.3773
Worker	0.5948	0.2704	5.3256	0.0187	2.4891	8.0600e-003	2.4971	0.6602	7.4200e-003	0.6676		1,889.0020	1,889.0020	0.0304	0.0388	1,901.3184
Total	**0.7094**	**4.7001**	**6.6961**	**0.0376**	**3.2216**	**0.0385**	**3.2600**	**0.8712**	**0.0365**	**0.9077**		**3,887.9532**	**3,887.9532**	**0.0378**	**0.3315**	**3,987.6956**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2032

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	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.1140	4.4200	1.3674	0.0187	0.7325	0.0303	0.7628	0.2110	0.0290	0.2399		1,969.5969	1,969.5969	7.3400e-003	0.2883	2,055.6829
Worker	0.5578	0.2545	5.1476	0.0184	2.4891	7.5500e-003	2.4966	0.6602	6.9400e-003	0.6672		1,854.4581	1,854.4581	0.0283	0.0378	1,866.4172
Total	**0.6718**	**4.6745**	**6.5151**	**0.0370**	**3.2216**	**0.0378**	**3.2594**	**0.8712**	**0.0359**	**0.9071**		**3,824.0550**	**3,824.0550**	**0.0357**	**0.3260**	**3,922.1001**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2032

Mitigated 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	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

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	lb/day										lb/day					
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
Vendor	0.1140	4.4200	1.3674	0.0187	0.7325	0.0303	0.7628	0.2110	0.0290	0.2399		1,969.5969	1,969.5969	7.3400e-003	0.2883	2,055.6829
Worker	0.5578	0.2545	5.1476	0.0184	2.4891	7.5500e-003	2.4966	0.6602	6.9400e-003	0.6672		1,854.4581	1,854.4581	0.0283	0.0378	1,866.4172
Total	**0.6718**	**4.6745**	**6.5151**	**0.0370**	**3.2216**	**0.0378**	**3.2594**	**0.8712**	**0.0359**	**0.9071**		**3,824.0550**	**3,824.0550**	**0.0357**	**0.3260**	**3,922.1001**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2033

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	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.1136	4.4120	1.3673	0.0184	0.7325	0.0302	0.7627	0.2110	0.0289	0.2398		1,943.8104	1,943.8104	7.3000e-003	0.2843	2,028.7233
Worker	0.5248	0.2414	4.9950	0.0181	2.4891	7.0800e-003	2.4962	0.6602	6.5200e-003	0.6667		1,824.0670	1,824.0670	0.0265	0.0369	1,835.7310
Total	**0.6384**	**4.6534**	**6.3623**	**0.0365**	**3.2216**	**0.0373**	**3.2588**	**0.8712**	**0.0354**	**0.9066**		**3,767.8774**	**3,767.8774**	**0.0338**	**0.3213**	**3,864.4543**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2033

Mitigated 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	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

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	lb/day										lb/day					
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
Vendor	0.1136	4.4120	1.3673	0.0184	0.7325	0.0302	0.7627	0.2110	0.0289	0.2398		1,943.8104	1,943.8104	7.3000e-003	0.2843	2,028.7233
Worker	0.5248	0.2414	4.9950	0.0181	2.4891	7.0800e-003	2.4962	0.6602	6.5200e-003	0.6667		1,824.0670	1,824.0670	0.0265	0.0369	1,835.7310
Total	**0.6384**	**4.6534**	**6.3623**	**0.0365**	**3.2216**	**0.0373**	**3.2588**	**0.8712**	**0.0354**	**0.9066**		**3,767.8774**	**3,767.8774**	**0.0338**	**0.3213**	**3,864.4543**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2034

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	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.1133	4.4021	1.3682	0.0182	0.7325	0.0301	0.7626	0.2110	0.0288	0.2397		1,920.6360	1,920.6360	7.2700e-003	0.2808	2,004.4920
Worker	0.4953	0.2308	4.8606	0.0178	2.4891	6.6500e-003	2.4957	0.6602	6.1200e-003	0.6663		1,797.3908	1,797.3908	0.0249	0.0362	1,808.8124
Total	**0.6086**	**4.6329**	**6.2288**	**0.0360**	**3.2216**	**0.0367**	**3.2583**	**0.8712**	**0.0349**	**0.9060**		**3,718.0268**	**3,718.0268**	**0.0322**	**0.3170**	**3,813.3044**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2034

Mitigated 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	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

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	lb/day										lb/day					
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
Vendor	0.1133	4.4021	1.3682	0.0182	0.7325	0.0301	0.7626	0.2110	0.0288	0.2397		1,920.6360	1,920.6360	7.2700e-003	0.2808	2,004.4920
Worker	0.4953	0.2308	4.8606	0.0178	2.4891	6.6500e-003	2.4957	0.6602	6.1200e-003	0.6663		1,797.3908	1,797.3908	0.0249	0.0362	1,808.8124
Total	**0.6086**	**4.6329**	**6.2288**	**0.0360**	**3.2216**	**0.0367**	**3.2583**	**0.8712**	**0.0349**	**0.9060**		**3,718.0268**	**3,718.0268**	**0.0322**	**0.3170**	**3,813.3044**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2035

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	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.1130	4.3899	1.3691	0.0180	0.7325	0.0299	0.7624	0.2110	0.0286	0.2396		1,900.0777	1,900.0777	7.2500e-003	0.2776	1,982.9938
Worker	0.4689	0.2225	4.7456	0.0176	2.4891	6.2700e-003	2.4953	0.6602	5.7700e-003	0.6660		1,774.1368	1,774.1368	0.0236	0.0357	1,785.3648
Total	**0.5819**	**4.6124**	**6.1146**	**0.0356**	**3.2216**	**0.0362**	**3.2578**	**0.8712**	**0.0344**	**0.9056**		**3,674.2145**	**3,674.2145**	**0.0308**	**0.3133**	**3,768.3586**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2035

Mitigated 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	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

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	lb/day										lb/day					
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
Vendor	0.1130	4.3899	1.3691	0.0180	0.7325	0.0299	0.7624	0.2110	0.0286	0.2396		1,900.0777	1,900.0777	7.2500e-003	0.2776	1,982.9938
Worker	0.4689	0.2225	4.7456	0.0176	2.4891	6.2700e-003	2.4953	0.6602	5.7700e-003	0.6660		1,774.1368	1,774.1368	0.0236	0.0357	1,785.3648
Total	**0.5819**	**4.6124**	**6.1146**	**0.0356**	**3.2216**	**0.0362**	**3.2578**	**0.8712**	**0.0344**	**0.9056**		**3,674.2145**	**3,674.2145**	**0.0308**	**0.3133**	**3,768.3586**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2036

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	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.1130	4.3899	1.3691	0.0180	0.7325	0.0299	0.7624	0.2110	0.0286	0.2396		1,900.0777	1,900.0777	7.2500e-003	0.2776	1,982.9938
Worker	0.4689	0.2225	4.7456	0.0176	2.4891	6.2700e-003	2.4953	0.6602	5.7700e-003	0.6660		1,774.1368	1,774.1368	0.0236	0.0357	1,785.3648
Total	**0.5819**	**4.6124**	**6.1146**	**0.0356**	**3.2216**	**0.0362**	**3.2578**	**0.8712**	**0.0344**	**0.9056**		**3,674.2145**	**3,674.2145**	**0.0308**	**0.3133**	**3,768.3586**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2036

Mitigated 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	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

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	lb/day										lb/day					
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
Vendor	0.1130	4.3899	1.3691	0.0180	0.7325	0.0299	0.7624	0.2110	0.0286	0.2396		1,900.0777	1,900.0777	7.2500e-003	0.2776	1,982.9938
Worker	0.4689	0.2225	4.7456	0.0176	2.4891	6.2700e-003	2.4953	0.6602	5.7700e-003	0.6660		1,774.1368	1,774.1368	0.0236	0.0357	1,785.3648
Total	**0.5819**	**4.6124**	**6.1146**	**0.0356**	**3.2216**	**0.0362**	**3.2578**	**0.8712**	**0.0344**	**0.9056**		**3,674.2145**	**3,674.2145**	**0.0308**	**0.3133**	**3,768.3586**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2036

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	lb/day										lb/day					
Off-Road	1.1405	4.8761	15.8203	0.0281		0.1874	0.1874		0.1874	0.1874		2,656.5168	2,656.5168	0.1022		2,659.0727
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1405**	**4.8761**	**15.8203**	**0.0281**		**0.1874**	**0.1874**		**0.1874**	**0.1874**		**2,656.5168**	**2,656.5168**	**0.1022**		**2,659.0727**

Unmitigated 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	lb/day										lb/day					
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
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
Worker	0.0232	0.0110	0.2349	8.7000e-004	0.1232	3.1000e-004	0.1235	0.0327	2.9000e-004	0.0330		87.8286	87.8286	1.1700e-003	1.7700e-003	88.3844
Total	**0.0232**	**0.0110**	**0.2349**	**8.7000e-004**	**0.1232**	**3.1000e-004**	**0.1235**	**0.0327**	**2.9000e-004**	**0.0330**		**87.8286**	**87.8286**	**1.1700e-003**	**1.7700e-003**	**88.3844**

S&S Homes - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2036

Mitigated 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	lb/day										lb/day					
Off-Road	1.1405	4.8761	15.8203	0.0281		0.1874	0.1874		0.1874	0.1874	0.0000	2,656.5168	2,656.5168	0.1022		2,659.0726
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1405**	**4.8761**	**15.8203**	**0.0281**		**0.1874**	**0.1874**		**0.1874**	**0.1874**	**0.0000**	**2,656.5168**	**2,656.5168**	**0.1022**		**2,659.0726**

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	lb/day										lb/day					
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
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
Worker	0.0232	0.0110	0.2349	8.7000e-004	0.1232	3.1000e-004	0.1235	0.0327	2.9000e-004	0.0330		87.8286	87.8286	1.1700e-003	1.7700e-003	88.3844
Total	**0.0232**	**0.0110**	**0.2349**	**8.7000e-004**	**0.1232**	**3.1000e-004**	**0.1235**	**0.0327**	**2.9000e-004**	**0.0330**		**87.8286**	**87.8286**	**1.1700e-003**	**1.7700e-003**	**88.3844**

S&S Homes - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2037

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	lb/day										lb/day					
Off-Road	1.1405	4.8761	15.8203	0.0281		0.1874	0.1874		0.1874	0.1874		2,656.5168	2,656.5168	0.1022		2,659.0727
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1405**	**4.8761**	**15.8203**	**0.0281**		**0.1874**	**0.1874**		**0.1874**	**0.1874**		**2,656.5168**	**2,656.5168**	**0.1022**		**2,659.0727**

Unmitigated 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	lb/day										lb/day					
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
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
Worker	0.0232	0.0110	0.2349	8.7000e-004	0.1232	3.1000e-004	0.1235	0.0327	2.9000e-004	0.0330		87.8286	87.8286	1.1700e-003	1.7700e-003	88.3844
Total	**0.0232**	**0.0110**	**0.2349**	**8.7000e-004**	**0.1232**	**3.1000e-004**	**0.1235**	**0.0327**	**2.9000e-004**	**0.0330**		**87.8286**	**87.8286**	**1.1700e-003**	**1.7700e-003**	**88.3844**

S&S Homes - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2037

Mitigated 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	lb/day										lb/day					
Off-Road	1.1405	4.8761	15.8203	0.0281		0.1874	0.1874		0.1874	0.1874	0.0000	2,656.5168	2,656.5168	0.1022		2,659.0726
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1405**	**4.8761**	**15.8203**	**0.0281**		**0.1874**	**0.1874**		**0.1874**	**0.1874**	**0.0000**	**2,656.5168**	**2,656.5168**	**0.1022**		**2,659.0726**

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	lb/day										lb/day					
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
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
Worker	0.0232	0.0110	0.2349	8.7000e-004	0.1232	3.1000e-004	0.1235	0.0327	2.9000e-004	0.0330		87.8286	87.8286	1.1700e-003	1.7700e-003	88.3844
Total	**0.0232**	**0.0110**	**0.2349**	**8.7000e-004**	**0.1232**	**3.1000e-004**	**0.1235**	**0.0327**	**2.9000e-004**	**0.0330**		**87.8286**	**87.8286**	**1.1700e-003**	**1.7700e-003**	**88.3844**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2037

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	lb/day										lb/day					
Archit. Coating	45.3082					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003		281.4481	281.4481	0.0104		281.7081
Total	**45.4261**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**		**281.4481**	**281.4481**	**0.0104**		**281.7081**

Unmitigated 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	lb/day										lb/day					
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
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
Worker	0.0944	0.0448	0.9554	3.5300e-003	0.5011	1.2600e-003	0.5024	0.1329	1.1600e-003	0.1341		357.1695	357.1695	4.7400e-003	7.1900e-003	359.4299
Total	**0.0944**	**0.0448**	**0.9554**	**3.5300e-003**	**0.5011**	**1.2600e-003**	**0.5024**	**0.1329**	**1.1600e-003**	**0.1341**		**357.1695**	**357.1695**	**4.7400e-003**	**7.1900e-003**	**359.4299**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2037

Mitigated 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	lb/day										lb/day					
Archit. Coating	45.3082					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003	0.0000	281.4481	281.4481	0.0104		281.7081
Total	**45.4261**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0104**		**281.7081**

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	lb/day										lb/day					
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
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
Worker	0.0944	0.0448	0.9554	3.5300e-003	0.5011	1.2600e-003	0.5024	0.1329	1.1600e-003	0.1341		357.1695	357.1695	4.7400e-003	7.1900e-003	359.4299
Total	**0.0944**	**0.0448**	**0.9554**	**3.5300e-003**	**0.5011**	**1.2600e-003**	**0.5024**	**0.1329**	**1.1600e-003**	**0.1341**		**357.1695**	**357.1695**	**4.7400e-003**	**7.1900e-003**	**359.4299**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2038

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	lb/day										lb/day					
Archit. Coating	45.3082					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003		281.4481	281.4481	0.0104		281.7081
Total	**45.4261**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**		**281.4481**	**281.4481**	**0.0104**		**281.7081**

Unmitigated 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	lb/day										lb/day					
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
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
Worker	0.0944	0.0448	0.9554	3.5300e-003	0.5011	1.2600e-003	0.5024	0.1329	1.1600e-003	0.1341		357.1695	357.1695	4.7400e-003	7.1900e-003	359.4299
Total	**0.0944**	**0.0448**	**0.9554**	**3.5300e-003**	**0.5011**	**1.2600e-003**	**0.5024**	**0.1329**	**1.1600e-003**	**0.1341**		**357.1695**	**357.1695**	**4.7400e-003**	**7.1900e-003**	**359.4299**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2038

Mitigated 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	lb/day										lb/day					
Archit. Coating	45.3082					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003	0.0000	281.4481	281.4481	0.0104		281.7081
Total	**45.4261**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0104**		**281.7081**

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	lb/day										lb/day					
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
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
Worker	0.0944	0.0448	0.9554	3.5300e-003	0.5011	1.2600e-003	0.5024	0.1329	1.1600e-003	0.1341		357.1695	357.1695	4.7400e-003	7.1900e-003	359.4299
Total	**0.0944**	**0.0448**	**0.9554**	**3.5300e-003**	**0.5011**	**1.2600e-003**	**0.5024**	**0.1329**	**1.1600e-003**	**0.1341**		**357.1695**	**357.1695**	**4.7400e-003**	**7.1900e-003**	**359.4299**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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	lb/day										lb/day					
Mitigated	8.6638	13.5898	72.1526	0.1822	17.4742	0.1627	17.6369	4.6691	0.1532	4.8223		18,610.0620	18,610.0620	0.8292	1.0389	18,940.3968
Unmitigated	8.6638	13.5898	72.1526	0.1822	17.4742	0.1627	17.6369	4.6691	0.1532	4.8223		18,610.0620	18,610.0620	0.8292	1.0389	18,940.3968

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	8.40	21.11	23.59	26,441	26,441
Single Family Housing	2,784.80	2,814.30	2522.25	8,001,452	8,001,452
Total	2,793.20	2,835.41	2,545.84	8,027,893	8,027,893

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	46.40	16.40	37.20	86	11	3

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.491744	0.054986	0.180747	0.153452	0.027634	0.008574	0.014177	0.038442	0.000573	0.000231	0.024179	0.001379	0.003882
Single Family Housing	0.491744	0.054986	0.180747	0.153452	0.027634	0.008574	0.014177	0.038442	0.000573	0.000231	0.024179	0.001379	0.003882

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	lb/day										lb/day					
NaturalGas Mitigated	0.2071	1.7699	0.7532	0.0113		0.1431	0.1431		0.1431	0.1431		2,259.4975	2,259.4975	0.0433	0.0414	2,272.9245
NaturalGas Unmitigated	0.2071	1.7699	0.7532	0.0113		0.1431	0.1431		0.1431	0.1431		2,259.4975	2,259.4975	0.0433	0.0414	2,272.9245

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	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	lb/day										lb/day					
City Park	0	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
Single Family Housing	19205.7	0.2071	1.7699	0.7532	0.0113		0.1431	0.1431		0.1431	0.1431		2,259.4975	2,259.4975	0.0433	0.0414	2,272.9245
Total		**0.2071**	**1.7699**	**0.7532**	**0.0113**		**0.1431**	**0.1431**		**0.1431**	**0.1431**		**2,259.4975**	**2,259.4975**	**0.0433**	**0.0414**	**2,272.9245**

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	lb/day										lb/day					
City Park	0	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
Single Family Housing	19.2057	0.2071	1.7699	0.7532	0.0113		0.1431	0.1431		0.1431	0.1431		2,259.4975	2,259.4975	0.0433	0.0414	2,272.9245
Total		**0.2071**	**1.7699**	**0.7532**	**0.0113**		**0.1431**	**0.1431**		**0.1431**	**0.1431**		**2,259.4975**	**2,259.4975**	**0.0433**	**0.0414**	**2,272.9245**

6.0 Area Detail

S&S Homes - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.1 Mitigation Measures Area

	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	lb/day										lb/day					
Mitigated	15.1636	2.9715	25.4612	0.0185		0.3525	0.3525		0.3525	0.3525	0.0000	3,479.7076	3,479.7076	0.1078	0.0630	3,501.1747
Unmitigated	15.1636	2.9715	25.4612	0.0185		0.3525	0.3525		0.3525	0.3525	0.0000	3,479.7076	3,479.7076	0.1078	0.0630	3,501.1747

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	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	lb/day										lb/day					
Architectural Coating	2.7309					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.3876					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3150	2.6914	1.1453	0.0172		0.2176	0.2176		0.2176	0.2176	0.0000	3,435.8824	3,435.8824	0.0659	0.0630	3,456.3001
Landscaping	0.7301	0.2801	24.3159	1.2900e-003		0.1349	0.1349		0.1349	0.1349		43.8253	43.8253	0.0420		44.8746
Total	**15.1636**	**2.9715**	**25.4612**	**0.0185**		**0.3525**	**0.3525**		**0.3525**	**0.3525**	**0.0000**	**3,479.7076**	**3,479.7076**	**0.1078**	**0.0630**	**3,501.1747**

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	lb/day										lb/day					
Architectural Coating	2.7309					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.3876					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3150	2.6914	1.1453	0.0172		0.2176	0.2176		0.2176	0.2176	0.0000	3,435.8824	3,435.8824	0.0659	0.0630	3,456.3001
Landscaping	0.7301	0.2801	24.3159	1.2900e-003		0.1349	0.1349		0.1349	0.1349		43.8253	43.8253	0.0420		44.8746
Total	**15.1636**	**2.9715**	**25.4612**	**0.0185**		**0.3525**	**0.3525**		**0.3525**	**0.3525**	**0.0000**	**3,479.7076**	**3,479.7076**	**0.1078**	**0.0630**	**3,501.1747**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

S&S Homes - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

S&S Homes

Kern-San Joaquin County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	295.00	Dwelling Unit	94.93	531,000.00	935
City Park	10.77	Acre	10.77	469,141.20	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	32
Climate Zone	7			**Operational Year**	2027
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - lot acreage per tract map
population based on 3.17 x 295935

Construction Phase -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	1/7/2039	4/2/2038
tblConstructionPhase	PhaseEndDate	5/1/2037	7/25/2036
tblConstructionPhase	PhaseEndDate	6/13/2025	9/6/2024
tblConstructionPhase	PhaseEndDate	3/5/2038	5/29/2037
tblConstructionPhase	PhaseEndDate	4/5/2024	6/30/2023

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstructionPhase	PhaseStartDate	3/6/2038	5/30/2037
tblConstructionPhase	PhaseStartDate	6/14/2025	9/7/2024
tblConstructionPhase	PhaseStartDate	4/6/2024	7/1/2023
tblConstructionPhase	PhaseStartDate	5/2/2037	7/26/2036
tblLandUse	LotAcreage	95.78	94.93
tblLandUse	Population	844.00	935.00
tblWoodstoves	NumberCatalytic	94.93	0.00
tblWoodstoves	NumberNoncatalytic	94.93	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

S&S Homes - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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	lb/day										lb/day					
2023	3.3819	34.5589	28.5168	0.0635	9.3679	1.4254	10.7933	3.6973	1.3113	5.0087	0.0000	6,149.5895	6,149.5895	1.9488	4.2500e-003	6,199.5761
2024	3.2737	32.4153	28.1547	0.0686	9.3679	1.3362	10.7041	3.6973	1.2293	4.9267	0.0000	6,866.8073	6,866.8073	1.9478	0.3975	7,002.1307
2025	2.2656	17.8648	23.6926	0.0676	3.2215	0.5711	3.7926	0.8712	0.5375	1.4086	0.0000	6,757.7263	6,757.7263	0.6651	0.3870	6,889.6681
2026	2.2112	17.7878	23.2897	0.0665	3.2215	0.5702	3.7918	0.8712	0.5367	1.4078	0.0000	6,650.4948	6,650.4948	0.6596	0.3770	6,779.3243
2027	2.1628	17.7152	22.9450	0.0656	3.2215	0.5694	3.7909	0.8712	0.5359	1.4070	0.0000	6,550.3810	6,550.3810	0.6551	0.3672	6,676.1955
2028	2.1185	17.6577	22.6599	0.0647	3.2215	0.5685	3.7900	0.8712	0.5350	1.4062	0.0000	6,458.0643	6,458.0643	0.6511	0.3583	6,581.1009
2029	2.0769	17.6035	22.4112	0.0638	3.2215	0.5676	3.7891	0.8712	0.5342	1.4054	0.0000	6,372.8187	6,372.8187	0.6477	0.3499	6,493.2824
2030	1.9805	13.0253	22.2757	0.0671	3.2216	0.1874	3.4090	0.8712	0.1854	1.0565	0.0000	6,637.2881	6,637.2881	0.1600	0.3425	6,743.3431
2031	1.9436	12.9906	22.0950	0.0664	3.2216	0.1867	3.4083	0.8712	0.1847	1.0559	0.0000	6,569.1632	6,569.1632	0.1573	0.3359	6,673.2053
2032	1.9112	12.9621	21.9436	0.0659	3.2216	0.1861	3.4076	0.8712	0.1841	1.0553	0.0000	6,509.2054	6,509.2054	0.1550	0.3303	6,611.5119
2033	1.8826	12.9387	21.8158	0.0654	3.2216	0.1855	3.4071	0.8712	0.1836	1.0548	0.0000	6,456.4831	6,456.4831	0.1530	0.3254	6,557.2902
2034	1.8575	12.9162	21.7041	0.0649	3.2216	0.1849	3.4065	0.8712	0.1831	1.0543	0.0000	6,409.6612	6,409.6612	0.1513	0.3211	6,509.1434
2035	1.7428	12.1206	21.5689	0.0645	3.2216	0.1267	3.3483	0.8712	0.1249	0.9961	0.0000	6,368.4856	6,368.4856	0.1414	0.3174	6,466.6059
2036	1.7428	12.1206	21.5689	0.0645	3.2216	0.1877	3.3483	0.8712	0.1877	0.9961	0.0000	6,368.4856	6,368.4856	0.1414	0.3174	6,466.6059
2037	45.5108	4.8887	16.0199	0.0288	0.5011	0.1877	0.5123	0.1329	0.1877	0.2204	0.0000	2,734.0760	2,734.0760	0.1036	7.8300e-003	2,737.2389
2038	45.5108	0.8088	2.6059	6.0900e-003	0.5011	0.0112	0.5123	0.1329	0.0111	0.1440	0.0000	596.8557	596.8557	0.0158	7.8300e-003	599.5842
Maximum	**45.5108**	**34.5589**	**28.5168**	**0.0686**	**9.3679**	**1.4254**	**10.7933**	**3.6973**	**1.3113**	**5.0087**	**0.0000**	**6,866.8073**	**6,866.8073**	**1.9488**	**0.3975**	**7,002.1307**

2.1 Overall Construction (Maximum Daily Emission)

S&S Homes - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	lb/day										lb/day					
2023	3.3819	34.5589	28.5168	0.0635	3.7537	1.4254	5.1791	1.4685	1.3113	2.7799	0.0000	6,149.5895	6,149.5895	1.9488	4.2500e-003	6,199.5761
2024	3.2737	32.4153	28.1547	0.0686	3.7537	1.3362	5.0899	1.4685	1.2293	2.6979	0.0000	6,866.8073	6,866.8073	1.9478	0.3975	7,002.1307
2025	2.2656	17.8648	23.6926	0.0676	3.2215	0.5711	3.7926	0.8712	0.5375	1.4086	0.0000	6,757.7263	6,757.7263	0.6651	0.3870	6,889.6681
2026	2.2112	17.7878	23.2897	0.0665	3.2215	0.5702	3.7918	0.8712	0.5367	1.4078	0.0000	6,650.4948	6,650.4948	0.6596	0.3770	6,779.3243
2027	2.1628	17.7152	22.9450	0.0656	3.2215	0.5694	3.7909	0.8712	0.5359	1.4070	0.0000	6,550.3810	6,550.3810	0.6551	0.3672	6,676.1955
2028	2.1185	17.6577	22.6599	0.0647	3.2215	0.5685	3.7900	0.8712	0.5350	1.4062	0.0000	6,458.0643	6,458.0643	0.6511	0.3583	6,581.1009
2029	2.0769	17.6035	22.4112	0.0638	3.2215	0.5676	3.7891	0.8712	0.5342	1.4054	0.0000	6,372.8187	6,372.8187	0.6477	0.3499	6,493.2824
2030	1.9805	13.0253	22.2757	0.0671	3.2216	0.1874	3.4090	0.8712	0.1854	1.0565	0.0000	6,637.2881	6,637.2881	0.1600	0.3425	6,743.3431
2031	1.9436	12.9906	22.0950	0.0664	3.2216	0.1867	3.4083	0.8712	0.1847	1.0559	0.0000	6,569.1632	6,569.1632	0.1573	0.3359	6,673.2053
2032	1.9112	12.9621	21.9436	0.0659	3.2216	0.1861	3.4076	0.8712	0.1841	1.0553	0.0000	6,509.2054	6,509.2054	0.1550	0.3303	6,611.5119
2033	1.8826	12.9387	21.8158	0.0654	3.2216	0.1855	3.4071	0.8712	0.1836	1.0548	0.0000	6,456.4831	6,456.4831	0.1530	0.3254	6,557.2902
2034	1.8575	12.9162	21.7041	0.0649	3.2216	0.1849	3.4065	0.8712	0.1831	1.0543	0.0000	6,409.6612	6,409.6612	0.1513	0.3211	6,509.1434
2035	1.7428	12.1206	21.5689	0.0645	3.2216	0.1267	3.3483	0.8712	0.1249	0.9961	0.0000	6,368.4856	6,368.4856	0.1414	0.3174	6,466.6059
2036	1.7428	12.1206	21.5689	0.0645	3.2216	0.1877	3.3483	0.8712	0.1877	0.9961	0.0000	6,368.4856	6,368.4856	0.1414	0.3174	6,466.6059
2037	45.5108	4.8887	16.0199	0.0288	0.5011	0.1877	0.5123	0.1329	0.1877	0.2204	0.0000	2,734.0760	2,734.0760	0.1036	7.8300e-003	2,737.2389
2038	45.5108	0.8088	2.6059	6.0900e-003	0.5011	0.0112	0.5123	0.1329	0.0111	0.1440	0.0000	596.8557	596.8557	0.0158	7.8300e-003	599.5842
Maximum	**45.5108**	**34.5589**	**28.5168**	**0.0686**	**3.7537**	**1.4254**	**5.1791**	**1.4685**	**1.3113**	**2.7799**	**0.0000**	**6,866.8073**	**6,866.8073**	**1.9488**	**0.3975**	**7,002.1307**

S&S Homes - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	19.23	0.00	17.22	24.61	0.00	18.12	0.00	0.00	0.00	0.00	0.00	0.00

S&S Homes - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated 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	lb/day										lb/day					
Area	15.1636	2.9715	25.4612	0.0185		0.3525	0.3525		0.3525	0.3525	0.0000	3,479.7076	3,479.7076	0.1078	0.0630	3,501.1747
Energy	0.2071	1.7699	0.7532	0.0113		0.1431	0.1431		0.1431	0.1431		2,259.4975	2,259.4975	0.0433	0.0414	2,272.9245
Mobile	6.7708	14.9575	68.4580	0.1678	17.4742	0.1629	17.6371	4.6691	0.1534	4.8225		17,153.3762	17,153.3762	0.9011	1.0827	17,498.5402
Total	**22.1415**	**19.6990**	**94.6724**	**0.1975**	**17.4742**	**0.6585**	**18.1327**	**4.6691**	**0.6490**	**5.3181**	**0.0000**	**22,892.5813**	**22,892.5813**	**1.0523**	**1.1871**	**23,272.6394**

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	lb/day										lb/day					
Area	15.1636	2.9715	25.4612	0.0185		0.3525	0.3525		0.3525	0.3525	0.0000	3,479.7076	3,479.7076	0.1078	0.0630	3,501.1747
Energy	0.2071	1.7699	0.7532	0.0113		0.1431	0.1431		0.1431	0.1431		2,259.4975	2,259.4975	0.0433	0.0414	2,272.9245
Mobile	6.7708	14.9575	68.4580	0.1678	17.4742	0.1629	17.6371	4.6691	0.1534	4.8225		17,153.3762	17,153.3762	0.9011	1.0827	17,498.5402
Total	**22.1415**	**19.6990**	**94.6724**	**0.1975**	**17.4742**	**0.6585**	**18.1327**	**4.6691**	**0.6490**	**5.3181**	**0.0000**	**22,892.5813**	**22,892.5813**	**1.0523**	**1.1871**	**23,272.6394**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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	N20	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	Site Preparation	Site Preparation	10/21/2023	6/30/2023	5	120	
2	Grading	Grading	7/1/2023	9/6/2024	5	310	
3	Building Construction	Building Construction	9/7/2024	7/25/2036	5	3100	
4	Paving	Paving	7/26/2036	5/29/2037	5	220	
5	Architectural Coating	Architectural Coating	5/30/2037	4/2/2038	5	220	

Acres of Grading (Site Preparation Phase): 180

Acres of Grading (Grading Phase): 930

Acres of Paving: 0

Residential Indoor: 1,075,275; Residential Outdoor: 358,425; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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
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
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

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
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	303.00	108.00	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	61.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

S&S Homes - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 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	lb/day										lb/day					
Fugitive Dust	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
Off-Road	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
Total	**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**

Unmitigated 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	lb/day										lb/day					
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	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
Total	**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**

S&S Homes - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2023

Mitigated 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	lb/day										lb/day					
Fugitive Dust	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
Off-Road	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
Total	**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**

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	lb/day										lb/day					
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	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
Total	**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**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 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	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Unmitigated 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	lb/day										lb/day					
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
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
Worker	0.0601	0.0433	0.4657	1.3700e-003	0.1643	8.8000e-004	0.1652	0.0436	8.1000e-004	0.0444		138.1117	138.1117	4.5200e-003	4.2500e-003	139.4925
Total	**0.0601**	**0.0433**	**0.4657**	**1.3700e-003**	**0.1643**	**8.8000e-004**	**0.1652**	**0.0436**	**8.1000e-004**	**0.0444**		**138.1117**	**138.1117**	**4.5200e-003**	**4.2500e-003**	**139.4925**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2023

Mitigated 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	lb/day										lb/day					
Fugitive Dust					3.5894	0.0000	3.5894	1.4250	0.0000	1.4250			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**3.5894**	**1.4245**	**5.0139**	**1.4250**	**1.3105**	**2.7355**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	lb/day										lb/day					
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
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
Worker	0.0601	0.0433	0.4657	1.3700e-003	0.1643	8.8000e-004	0.1652	0.0436	8.1000e-004	0.0444		138.1117	138.1117	4.5200e-003	4.2500e-003	139.4925
Total	**0.0601**	**0.0433**	**0.4657**	**1.3700e-003**	**0.1643**	**8.8000e-004**	**0.1652**	**0.0436**	**8.1000e-004**	**0.0444**		**138.1117**	**138.1117**	**4.5200e-003**	**4.2500e-003**	**139.4925**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 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	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286		6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**9.2036**	**1.3354**	**10.5390**	**3.6538**	**1.2286**	**4.8823**		**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

Unmitigated 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	lb/day										lb/day					
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
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
Worker	0.0556	0.0383	0.4319	1.3200e-003	0.1643	8.3000e-004	0.1651	0.0436	7.6000e-004	0.0443		133.6124	133.6124	4.0900e-003	3.9400e-003	134.8894
Total	**0.0556**	**0.0383**	**0.4319**	**1.3200e-003**	**0.1643**	**8.3000e-004**	**0.1651**	**0.0436**	**7.6000e-004**	**0.0443**		**133.6124**	**133.6124**	**4.0900e-003**	**3.9400e-003**	**134.8894**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Mitigated 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	lb/day										lb/day					
Fugitive Dust					3.5894	0.0000	3.5894	1.4250	0.0000	1.4250			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286	0.0000	6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**3.5894**	**1.3354**	**4.9248**	**1.4250**	**1.2286**	**2.6535**	**0.0000**	**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

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	lb/day										lb/day					
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
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
Worker	0.0556	0.0383	0.4319	1.3200e-003	0.1643	8.3000e-004	0.1651	0.0436	7.6000e-004	0.0443		133.6124	133.6124	4.0900e-003	3.9400e-003	134.8894
Total	**0.0556**	**0.0383**	**0.4319**	**1.3200e-003**	**0.1643**	**8.3000e-004**	**0.1651**	**0.0436**	**7.6000e-004**	**0.0443**		**133.6124**	**133.6124**	**4.0900e-003**	**3.9400e-003**	**134.8894**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 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	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.1185	4.8930	1.5449	0.0217	0.7324	0.0316	0.7640	0.2109	0.0302	0.2412		2,286.8803	2,286.8803	8.4000e-003	0.3378	2,387.7480
Worker	0.8422	0.5803	6.5437	0.0200	2.4891	0.0126	2.5017	0.6602	0.0116	0.6718		2,024.2281	2,024.2281	0.0619	0.0597	2,043.5751
Total	**0.9608**	**5.4734**	**8.0886**	**0.0417**	**3.2215**	**0.0442**	**3.2657**	**0.8711**	**0.0418**	**0.9130**		**4,311.1084**	**4,311.1084**	**0.0703**	**0.3975**	**4,431.3230**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Mitigated 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	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

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	lb/day										lb/day					
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
Vendor	0.1185	4.8930	1.5449	0.0217	0.7324	0.0316	0.7640	0.2109	0.0302	0.2412		2,286.8803	2,286.8803	8.4000e-003	0.3378	2,387.7480
Worker	0.8422	0.5803	6.5437	0.0200	2.4891	0.0126	2.5017	0.6602	0.0116	0.6718		2,024.2281	2,024.2281	0.0619	0.0597	2,043.5751
Total	**0.9608**	**5.4734**	**8.0886**	**0.0417**	**3.2215**	**0.0442**	**3.2657**	**0.8711**	**0.0418**	**0.9130**		**4,311.1084**	**4,311.1084**	**0.0703**	**0.3975**	**4,431.3230**

S&S Homes - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2025

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	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.1161	4.8777	1.5149	0.0213	0.7324	0.0316	0.7640	0.2109	0.0302	0.2412		2,245.4546	2,245.4546	8.0900e-003	0.3313	2,344.3764
Worker	0.7822	0.5175	6.0930	0.0194	2.4891	0.0119	2.5010	0.6602	0.0110	0.6712		1,955.7974	1,955.7974	0.0560	0.0557	1,973.7936
Total	**0.8982**	**5.3952**	**7.6080**	**0.0406**	**3.2215**	**0.0435**	**3.2650**	**0.8712**	**0.0412**	**0.9124**		**4,201.2520**	**4,201.2520**	**0.0641**	**0.3870**	**4,318.1700**

S&S Homes - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2025

Mitigated 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	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	lb/day										lb/day					
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
Vendor	0.1161	4.8777	1.5149	0.0213	0.7324	0.0316	0.7640	0.2109	0.0302	0.2412		2,245.4546	2,245.4546	8.0900e-003	0.3313	2,344.3764
Worker	0.7822	0.5175	6.0930	0.0194	2.4891	0.0119	2.5010	0.6602	0.0110	0.6712		1,955.7974	1,955.7974	0.0560	0.0557	1,973.7936
Total	**0.8982**	**5.3952**	**7.6080**	**0.0406**	**3.2215**	**0.0435**	**3.2650**	**0.8712**	**0.0412**	**0.9124**		**4,201.2520**	**4,201.2520**	**0.0641**	**0.3870**	**4,318.1700**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2026

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	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.1138	4.8527	1.4897	0.0209	0.7324	0.0314	0.7639	0.2109	0.0301	0.2410		2,203.4758	2,203.4758	7.8400e-003	0.3247	2,300.4205
Worker	0.7300	0.4654	5.7153	0.0187	2.4891	0.0113	2.5003	0.6602	0.0104	0.6706		1,890.5447	1,890.5447	0.0508	0.0523	1,907.4057
Total	**0.8438**	**5.3181**	**7.2050**	**0.0396**	**3.2215**	**0.0427**	**3.2642**	**0.8712**	**0.0404**	**0.9116**		**4,094.0205**	**4,094.0205**	**0.0587**	**0.3770**	**4,207.8262**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2026

Mitigated 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	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	lb/day										lb/day					
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
Vendor	0.1138	4.8527	1.4897	0.0209	0.7324	0.0314	0.7639	0.2109	0.0301	0.2410		2,203.4758	2,203.4758	7.8400e-003	0.3247	2,300.4205
Worker	0.7300	0.4654	5.7153	0.0187	2.4891	0.0113	2.5003	0.6602	0.0104	0.6706		1,890.5447	1,890.5447	0.0508	0.0523	1,907.4057
Total	**0.8438**	**5.3181**	**7.2050**	**0.0396**	**3.2215**	**0.0427**	**3.2642**	**0.8712**	**0.0404**	**0.9116**		**4,094.0205**	**4,094.0205**	**0.0587**	**0.3770**	**4,207.8262**

S&S Homes - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2027

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	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.1119	4.8230	1.4690	0.0205	0.7325	0.0312	0.7637	0.2109	0.0299	0.2408		2,158.6134	2,158.6134	7.6200e-003	0.3177	2,253.4792
Worker	0.6835	0.4226	5.3913	0.0182	2.4891	0.0106	2.4997	0.6602	9.7400e-003	0.6700		1,835.2933	1,835.2933	0.0465	0.0495	1,851.2183
Total	**0.7954**	**5.2455**	**6.8604**	**0.0386**	**3.2215**	**0.0418**	**3.2633**	**0.8712**	**0.0396**	**0.9108**		**3,993.9067**	**3,993.9067**	**0.0541**	**0.3672**	**4,104.6975**

S&S Homes - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2027

Mitigated 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	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	lb/day										lb/day					
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
Vendor	0.1119	4.8230	1.4690	0.0205	0.7325	0.0312	0.7637	0.2109	0.0299	0.2408		2,158.6134	2,158.6134	7.6200e-003	0.3177	2,253.4792
Worker	0.6835	0.4226	5.3913	0.0182	2.4891	0.0106	2.4997	0.6602	9.7400e-003	0.6700		1,835.2933	1,835.2933	0.0465	0.0495	1,851.2183
Total	**0.7954**	**5.2455**	**6.8604**	**0.0386**	**3.2215**	**0.0418**	**3.2633**	**0.8712**	**0.0396**	**0.9108**		**3,993.9067**	**3,993.9067**	**0.0541**	**0.3672**	**4,104.6975**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2028

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	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.1102	4.8010	1.4520	0.0200	0.7325	0.0310	0.7635	0.2109	0.0297	0.2406		2,115.6019	2,115.6019	7.4300e-003	0.3110	2,208.4686
Worker	0.6409	0.3870	5.1232	0.0177	2.4891	9.8900e-003	2.4990	0.6602	9.1000e-003	0.6693		1,785.9880	1,785.9880	0.0428	0.0472	1,801.1343
Total	**0.7511**	**5.1880**	**6.5752**	**0.0377**	**3.2215**	**0.0409**	**3.2624**	**0.8712**	**0.0388**	**0.9099**		**3,901.5899**	**3,901.5899**	**0.0502**	**0.3583**	**4,009.6029**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2028

Mitigated 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	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	lb/day										lb/day					
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
Vendor	0.1102	4.8010	1.4520	0.0200	0.7325	0.0310	0.7635	0.2109	0.0297	0.2406		2,115.6019	2,115.6019	7.4300e-003	0.3110	2,208.4686
Worker	0.6409	0.3870	5.1232	0.0177	2.4891	9.8900e-003	2.4990	0.6602	9.1000e-003	0.6693		1,785.9880	1,785.9880	0.0428	0.0472	1,801.1343
Total	**0.7511**	**5.1880**	**6.5752**	**0.0377**	**3.2215**	**0.0409**	**3.2624**	**0.8712**	**0.0388**	**0.9099**		**3,901.5899**	**3,901.5899**	**0.0502**	**0.3583**	**4,009.6029**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2029

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	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.1088	4.7772	1.4379	0.0197	0.7325	0.0308	0.7633	0.2109	0.0295	0.2404		2,074.3239	2,074.3239	7.2800e-003	0.3046	2,165.2781
Worker	0.6008	0.3567	4.8886	0.0172	2.4891	9.2300e-003	2.4983	0.6602	8.4900e-003	0.6687		1,742.0204	1,742.0204	0.0395	0.0453	1,756.5062
Total	**0.7095**	**5.1339**	**6.3265**	**0.0369**	**3.2215**	**0.0400**	**3.2616**	**0.8712**	**0.0380**	**0.9091**		**3,816.3443**	**3,816.3443**	**0.0467**	**0.3499**	**3,921.7843**

S&S Homes - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2029

Mitigated 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	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	lb/day										lb/day					
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
Vendor	0.1088	4.7772	1.4379	0.0197	0.7325	0.0308	0.7633	0.2109	0.0295	0.2404		2,074.3239	2,074.3239	7.2800e-003	0.3046	2,165.2781
Worker	0.6008	0.3567	4.8886	0.0172	2.4891	9.2300e-003	2.4983	0.6602	8.4900e-003	0.6687		1,742.0204	1,742.0204	0.0395	0.0453	1,756.5062
Total	**0.7095**	**5.1339**	**6.3265**	**0.0369**	**3.2215**	**0.0400**	**3.2616**	**0.8712**	**0.0380**	**0.9091**		**3,816.3443**	**3,816.3443**	**0.0467**	**0.3499**	**3,921.7843**

S&S Homes - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2030

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	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.1076	4.7595	1.4271	0.0193	0.7325	0.0306	0.7631	0.2110	0.0293	0.2402		2,036.7637	2,036.7637	7.1600e-003	0.2988	2,125.9803
Worker	0.5638	0.3312	4.6916	0.0169	2.4891	8.6200e-003	2.4977	0.6602	7.9300e-003	0.6682		1,702.9776	1,702.9776	0.0366	0.0437	1,716.9099
Total	**0.6714**	**5.0907**	**6.1187**	**0.0362**	**3.2216**	**0.0393**	**3.2608**	**0.8712**	**0.0372**	**0.9084**		**3,739.7413**	**3,739.7413**	**0.0438**	**0.3425**	**3,842.8902**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2030

Mitigated 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	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

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	lb/day										lb/day					
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
Vendor	0.1076	4.7595	1.4271	0.0193	0.7325	0.0306	0.7631	0.2110	0.0293	0.2402		2,036.7637	2,036.7637	7.1600e-003	0.2988	2,125.9803
Worker	0.5638	0.3312	4.6916	0.0169	2.4891	8.6200e-003	2.4977	0.6602	7.9300e-003	0.6682		1,702.9776	1,702.9776	0.0366	0.0437	1,716.9099
Total	**0.6714**	**5.0907**	**6.1187**	**0.0362**	**3.2216**	**0.0393**	**3.2608**	**0.8712**	**0.0372**	**0.9084**		**3,739.7413**	**3,739.7413**	**0.0438**	**0.3425**	**3,842.8902**

S&S Homes - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2031

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	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.1067	4.7473	1.4204	0.0190	0.7325	0.0305	0.7630	0.2110	0.0292	0.2401		2,003.2653	2,003.2653	7.0700e-003	0.2936	2,090.9463
Worker	0.5278	0.3087	4.5176	0.0165	2.4891	8.0600e-003	2.4971	0.6602	7.4200e-003	0.6676		1,668.3511	1,668.3511	0.0340	0.0423	1,681.8062
Total	**0.6344**	**5.0560**	**5.9380**	**0.0355**	**3.2216**	**0.0386**	**3.2601**	**0.8712**	**0.0366**	**0.9078**		**3,671.6164**	**3,671.6164**	**0.0411**	**0.3359**	**3,772.7525**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2031

Mitigated 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	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

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	lb/day										lb/day					
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
Vendor	0.1067	4.7473	1.4204	0.0190	0.7325	0.0305	0.7630	0.2110	0.0292	0.2401		2,003.2653	2,003.2653	7.0700e-003	0.2936	2,090.9463
Worker	0.5278	0.3087	4.5176	0.0165	2.4891	8.0600e-003	2.4971	0.6602	7.4200e-003	0.6676		1,668.3511	1,668.3511	0.0340	0.0423	1,681.8062
Total	**0.6344**	**5.0560**	**5.9380**	**0.0355**	**3.2216**	**0.0386**	**3.2601**	**0.8712**	**0.0366**	**0.9078**		**3,671.6164**	**3,671.6164**	**0.0411**	**0.3359**	**3,772.7525**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2032

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	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.1060	4.7370	1.4175	0.0187	0.7325	0.0304	0.7629	0.2110	0.0291	0.2400		1,973.8590	1,973.8590	7.0000e-003	0.2891	2,060.1962
Worker	0.4961	0.2904	4.3692	0.0162	2.4891	7.5500e-003	2.4966	0.6602	6.9400e-003	0.6672		1,637.7997	1,637.7997	0.0318	0.0412	1,650.8629
Total	**0.6021**	**5.0274**	**5.7866**	**0.0349**	**3.2216**	**0.0379**	**3.2595**	**0.8712**	**0.0360**	**0.9072**		**3,611.6586**	**3,611.6586**	**0.0388**	**0.3303**	**3,711.0591**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2032

Mitigated 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	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

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	lb/day										lb/day					
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
Vendor	0.1060	4.7370	1.4175	0.0187	0.7325	0.0304	0.7629	0.2110	0.0291	0.2400		1,973.8590	1,973.8590	7.0000e-003	0.2891	2,060.1962
Worker	0.4961	0.2904	4.3692	0.0162	2.4891	7.5500e-003	2.4966	0.6602	6.9400e-003	0.6672		1,637.7997	1,637.7997	0.0318	0.0412	1,650.8629
Total	**0.6021**	**5.0274**	**5.7866**	**0.0349**	**3.2216**	**0.0379**	**3.2595**	**0.8712**	**0.0360**	**0.9072**		**3,611.6586**	**3,611.6586**	**0.0388**	**0.3303**	**3,711.0591**

S&S Homes - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2033

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	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.1056	4.7287	1.4175	0.0185	0.7325	0.0303	0.7628	0.2110	0.0290	0.2399		1,948.0334	1,948.0334	6.9700e-003	0.2852	2,033.1949
Worker	0.4679	0.2754	4.2413	0.0159	2.4891	7.0800e-003	2.4962	0.6602	6.5200e-003	0.6667		1,610.9030	1,610.9030	0.0298	0.0403	1,623.6425
Total	**0.5734**	**5.0041**	**5.6588**	**0.0344**	**3.2216**	**0.0373**	**3.2589**	**0.8712**	**0.0355**	**0.9066**		**3,558.9364**	**3,558.9364**	**0.0368**	**0.3254**	**3,656.8373**

S&S Homes - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2033

Mitigated 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	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

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	lb/day										lb/day					
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
Vendor	0.1056	4.7287	1.4175	0.0185	0.7325	0.0303	0.7628	0.2110	0.0290	0.2399		1,948.0334	1,948.0334	6.9700e-003	0.2852	2,033.1949
Worker	0.4679	0.2754	4.2413	0.0159	2.4891	7.0800e-003	2.4962	0.6602	6.5200e-003	0.6667		1,610.9030	1,610.9030	0.0298	0.0403	1,623.6425
Total	**0.5734**	**5.0041**	**5.6588**	**0.0344**	**3.2216**	**0.0373**	**3.2589**	**0.8712**	**0.0355**	**0.9066**		**3,558.9364**	**3,558.9364**	**0.0368**	**0.3254**	**3,656.8373**

S&S Homes - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2034

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	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.1052	4.7183	1.4187	0.0182	0.7325	0.0301	0.7626	0.2110	0.0288	0.2398		1,924.8272	1,924.8272	6.9400e-003	0.2816	2,008.9297
Worker	0.4432	0.2632	4.1284	0.0157	2.4891	6.6500e-003	2.4957	0.6602	6.1200e-003	0.6663		1,587.2873	1,587.2873	0.0281	0.0395	1,599.7609
Total	**0.5484**	**4.9815**	**5.5471**	**0.0339**	**3.2216**	**0.0368**	**3.2584**	**0.8712**	**0.0349**	**0.9061**		**3,512.1145**	**3,512.1145**	**0.0350**	**0.3211**	**3,608.6906**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2034

Mitigated 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	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

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	lb/day										lb/day					
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
Vendor	0.1052	4.7183	1.4187	0.0182	0.7325	0.0301	0.7626	0.2110	0.0288	0.2398		1,924.8272	1,924.8272	6.9400e-003	0.2816	2,008.9297
Worker	0.4432	0.2632	4.1284	0.0157	2.4891	6.6500e-003	2.4957	0.6602	6.1200e-003	0.6663		1,587.2873	1,587.2873	0.0281	0.0395	1,599.7609
Total	**0.5484**	**4.9815**	**5.5471**	**0.0339**	**3.2216**	**0.0368**	**3.2584**	**0.8712**	**0.0349**	**0.9061**		**3,512.1145**	**3,512.1145**	**0.0350**	**0.3211**	**3,608.6906**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2035

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	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.1049	4.7055	1.4198	0.0181	0.7325	0.0300	0.7625	0.2110	0.0287	0.2396		1,904.2416	1,904.2416	6.9200e-003	0.2785	1,987.4024
Worker	0.4211	0.2538	4.0314	0.0155	2.4891	6.2700e-003	2.4953	0.6602	5.7700e-003	0.6660		1,566.6972	1,566.6972	0.0266	0.0389	1,578.9587
Total	**0.5260**	**4.9593**	**5.4512**	**0.0336**	**3.2216**	**0.0363**	**3.2578**	**0.8712**	**0.0345**	**0.9056**		**3,470.9388**	**3,470.9388**	**0.0335**	**0.3174**	**3,566.3611**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2035

Mitigated 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	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

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	lb/day										lb/day					
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
Vendor	0.1049	4.7055	1.4198	0.0181	0.7325	0.0300	0.7625	0.2110	0.0287	0.2396		1,904.2416	1,904.2416	6.9200e-003	0.2785	1,987.4024
Worker	0.4211	0.2538	4.0314	0.0155	2.4891	6.2700e-003	2.4953	0.6602	5.7700e-003	0.6660		1,566.6972	1,566.6972	0.0266	0.0389	1,578.9587
Total	**0.5260**	**4.9593**	**5.4512**	**0.0336**	**3.2216**	**0.0363**	**3.2578**	**0.8712**	**0.0345**	**0.9056**		**3,470.9388**	**3,470.9388**	**0.0335**	**0.3174**	**3,566.3611**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2036

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	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.1049	4.7055	1.4198	0.0181	0.7325	0.0300	0.7625	0.2110	0.0287	0.2396		1,904.2416	1,904.2416	6.9200e-003	0.2785	1,987.4024
Worker	0.4211	0.2538	4.0314	0.0155	2.4891	6.2700e-003	2.4953	0.6602	5.7700e-003	0.6660		1,566.6972	1,566.6972	0.0266	0.0389	1,578.9587
Total	**0.5260**	**4.9593**	**5.4512**	**0.0336**	**3.2216**	**0.0363**	**3.2578**	**0.8712**	**0.0345**	**0.9056**		**3,470.9388**	**3,470.9388**	**0.0335**	**0.3174**	**3,566.3611**

S&S Homes - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2036

Mitigated 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	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

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	lb/day										lb/day					
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
Vendor	0.1049	4.7055	1.4198	0.0181	0.7325	0.0300	0.7625	0.2110	0.0287	0.2396		1,904.2416	1,904.2416	6.9200e-003	0.2785	1,987.4024
Worker	0.4211	0.2538	4.0314	0.0155	2.4891	6.2700e-003	2.4953	0.6602	5.7700e-003	0.6660		1,566.6972	1,566.6972	0.0266	0.0389	1,578.9587
Total	**0.5260**	**4.9593**	**5.4512**	**0.0336**	**3.2216**	**0.0363**	**3.2578**	**0.8712**	**0.0345**	**0.9056**		**3,470.9388**	**3,470.9388**	**0.0335**	**0.3174**	**3,566.3611**

S&S Homes - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2036

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	lb/day										lb/day					
Off-Road	1.1405	4.8761	15.8203	0.0281		0.1874	0.1874		0.1874	0.1874		2,656.5168	2,656.5168	0.1022		2,659.0727
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1405**	**4.8761**	**15.8203**	**0.0281**		**0.1874**	**0.1874**		**0.1874**	**0.1874**		**2,656.5168**	**2,656.5168**	**0.1022**		**2,659.0727**

Unmitigated 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	lb/day										lb/day					
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
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
Worker	0.0209	0.0126	0.1996	7.7000e-004	0.1232	3.1000e-004	0.1235	0.0327	2.9000e-004	0.0330		77.5593	77.5593	1.3200e-003	1.9300e-003	78.1663
Total	**0.0209**	**0.0126**	**0.1996**	**7.7000e-004**	**0.1232**	**3.1000e-004**	**0.1235**	**0.0327**	**2.9000e-004**	**0.0330**		**77.5593**	**77.5593**	**1.3200e-003**	**1.9300e-003**	**78.1663**

S&S Homes - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2036

Mitigated 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	lb/day										lb/day					
Off-Road	1.1405	4.8761	15.8203	0.0281		0.1874	0.1874		0.1874	0.1874	0.0000	2,656.5168	2,656.5168	0.1022		2,659.0726
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1405**	**4.8761**	**15.8203**	**0.0281**		**0.1874**	**0.1874**		**0.1874**	**0.1874**	**0.0000**	**2,656.5168**	**2,656.5168**	**0.1022**		**2,659.0726**

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	lb/day										lb/day					
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
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
Worker	0.0209	0.0126	0.1996	7.7000e-004	0.1232	3.1000e-004	0.1235	0.0327	2.9000e-004	0.0330		77.5593	77.5593	1.3200e-003	1.9300e-003	78.1663
Total	**0.0209**	**0.0126**	**0.1996**	**7.7000e-004**	**0.1232**	**3.1000e-004**	**0.1235**	**0.0327**	**2.9000e-004**	**0.0330**		**77.5593**	**77.5593**	**1.3200e-003**	**1.9300e-003**	**78.1663**

S&S Homes - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2037

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	lb/day										lb/day					
Off-Road	1.1405	4.8761	15.8203	0.0281		0.1874	0.1874		0.1874	0.1874		2,656.5168	2,656.5168	0.1022		2,659.0727
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1405**	**4.8761**	**15.8203**	**0.0281**		**0.1874**	**0.1874**		**0.1874**	**0.1874**		**2,656.5168**	**2,656.5168**	**0.1022**		**2,659.0727**

Unmitigated 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	lb/day										lb/day					
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
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
Worker	0.0209	0.0126	0.1996	7.7000e-004	0.1232	3.1000e-004	0.1235	0.0327	2.9000e-004	0.0330		77.5593	77.5593	1.3200e-003	1.9300e-003	78.1663
Total	**0.0209**	**0.0126**	**0.1996**	**7.7000e-004**	**0.1232**	**3.1000e-004**	**0.1235**	**0.0327**	**2.9000e-004**	**0.0330**		**77.5593**	**77.5593**	**1.3200e-003**	**1.9300e-003**	**78.1663**

S&S Homes - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2037

Mitigated 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	lb/day										lb/day					
Off-Road	1.1405	4.8761	15.8203	0.0281		0.1874	0.1874		0.1874	0.1874	0.0000	2,656.5168	2,656.5168	0.1022		2,659.0726
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1405**	**4.8761**	**15.8203**	**0.0281**		**0.1874**	**0.1874**		**0.1874**	**0.1874**	**0.0000**	**2,656.5168**	**2,656.5168**	**0.1022**		**2,659.0726**

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	lb/day										lb/day					
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
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
Worker	0.0209	0.0126	0.1996	7.7000e-004	0.1232	3.1000e-004	0.1235	0.0327	2.9000e-004	0.0330		77.5593	77.5593	1.3200e-003	1.9300e-003	78.1663
Total	**0.0209**	**0.0126**	**0.1996**	**7.7000e-004**	**0.1232**	**3.1000e-004**	**0.1235**	**0.0327**	**2.9000e-004**	**0.0330**		**77.5593**	**77.5593**	**1.3200e-003**	**1.9300e-003**	**78.1663**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2037

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	lb/day										lb/day					
Archit. Coating	45.3082					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003		281.4481	281.4481	0.0104		281.7081
Total	**45.4261**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**		**281.4481**	**281.4481**	**0.0104**		**281.7081**

Unmitigated 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	lb/day										lb/day					
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
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
Worker	0.0848	0.0511	0.8116	3.1200e-003	0.5011	1.2600e-003	0.5024	0.1329	1.1600e-003	0.1341		315.4077	315.4077	5.3500e-003	7.8300e-003	317.8762
Total	**0.0848**	**0.0511**	**0.8116**	**3.1200e-003**	**0.5011**	**1.2600e-003**	**0.5024**	**0.1329**	**1.1600e-003**	**0.1341**		**315.4077**	**315.4077**	**5.3500e-003**	**7.8300e-003**	**317.8762**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2037

Mitigated 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	lb/day										lb/day					
Archit. Coating	45.3082					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003	0.0000	281.4481	281.4481	0.0104		281.7081
Total	**45.4261**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0104**		**281.7081**

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	lb/day										lb/day					
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
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
Worker	0.0848	0.0511	0.8116	3.1200e-003	0.5011	1.2600e-003	0.5024	0.1329	1.1600e-003	0.1341		315.4077	315.4077	5.3500e-003	7.8300e-003	317.8762
Total	**0.0848**	**0.0511**	**0.8116**	**3.1200e-003**	**0.5011**	**1.2600e-003**	**0.5024**	**0.1329**	**1.1600e-003**	**0.1341**		**315.4077**	**315.4077**	**5.3500e-003**	**7.8300e-003**	**317.8762**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2038

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	lb/day										lb/day					
Archit. Coating	45.3082					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003		281.4481	281.4481	0.0104		281.7081
Total	**45.4261**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**		**281.4481**	**281.4481**	**0.0104**		**281.7081**

Unmitigated 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	lb/day										lb/day					
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
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
Worker	0.0848	0.0511	0.8116	3.1200e-003	0.5011	1.2600e-003	0.5024	0.1329	1.1600e-003	0.1341		315.4077	315.4077	5.3500e-003	7.8300e-003	317.8762
Total	**0.0848**	**0.0511**	**0.8116**	**3.1200e-003**	**0.5011**	**1.2600e-003**	**0.5024**	**0.1329**	**1.1600e-003**	**0.1341**		**315.4077**	**315.4077**	**5.3500e-003**	**7.8300e-003**	**317.8762**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2038

Mitigated 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	lb/day										lb/day					
Archit. Coating	45.3082					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003	0.0000	281.4481	281.4481	0.0104		281.7081
Total	**45.4261**	**0.7577**	**1.7943**	**2.9700e-003**		**9.9000e-003**	**9.9000e-003**		**9.9000e-003**	**9.9000e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0104**		**281.7081**

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	lb/day										lb/day					
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
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
Worker	0.0848	0.0511	0.8116	3.1200e-003	0.5011	1.2600e-003	0.5024	0.1329	1.1600e-003	0.1341		315.4077	315.4077	5.3500e-003	7.8300e-003	317.8762
Total	**0.0848**	**0.0511**	**0.8116**	**3.1200e-003**	**0.5011**	**1.2600e-003**	**0.5024**	**0.1329**	**1.1600e-003**	**0.1341**		**315.4077**	**315.4077**	**5.3500e-003**	**7.8300e-003**	**317.8762**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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	lb/day										lb/day					
Mitigated	6.7708	14.9575	68.4580	0.1678	17.4742	0.1629	17.6371	4.6691	0.1534	4.8225		17,153.3762	17,153.3762	0.9011	1.0827	17,498.5402
Unmitigated	6.7708	14.9575	68.4580	0.1678	17.4742	0.1629	17.6371	4.6691	0.1534	4.8225		17,153.3762	17,153.3762	0.9011	1.0827	17,498.5402

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	8.40	21.11	23.59	26,441	26,441
Single Family Housing	2,784.80	2,814.30	2522.25	8,001,452	8,001,452
Total	2,793.20	2,835.41	2,545.84	8,027,893	8,027,893

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	46.40	16.40	37.20	86	11	3

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.491744	0.054986	0.180747	0.153452	0.027634	0.008574	0.014177	0.038442	0.000573	0.000231	0.024179	0.001379	0.003882
Single Family Housing	0.491744	0.054986	0.180747	0.153452	0.027634	0.008574	0.014177	0.038442	0.000573	0.000231	0.024179	0.001379	0.003882

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	lb/day										lb/day					
NaturalGas Mitigated	0.2071	1.7699	0.7532	0.0113		0.1431	0.1431		0.1431	0.1431		2,259.4975	2,259.4975	0.0433	0.0414	2,272.9245
NaturalGas Unmitigated	0.2071	1.7699	0.7532	0.0113		0.1431	0.1431		0.1431	0.1431		2,259.4975	2,259.4975	0.0433	0.0414	2,272.9245

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	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	lb/day										lb/day					
City Park	0	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
Single Family Housing	19205.7	0.2071	1.7699	0.7532	0.0113		0.1431	0.1431		0.1431	0.1431		2,259.4975	2,259.4975	0.0433	0.0414	2,272.9245
Total		**0.2071**	**1.7699**	**0.7532**	**0.0113**		**0.1431**	**0.1431**		**0.1431**	**0.1431**		**2,259.4975**	**2,259.4975**	**0.0433**	**0.0414**	**2,272.9245**

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	lb/day										lb/day					
City Park	0	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
Single Family Housing	19.2057	0.2071	1.7699	0.7532	0.0113		0.1431	0.1431		0.1431	0.1431		2,259.4975	2,259.4975	0.0433	0.0414	2,272.9245
Total		**0.2071**	**1.7699**	**0.7532**	**0.0113**		**0.1431**	**0.1431**		**0.1431**	**0.1431**		**2,259.4975**	**2,259.4975**	**0.0433**	**0.0414**	**2,272.9245**

6.0 Area Detail

S&S Homes - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.1 Mitigation Measures Area

	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	lb/day										lb/day					
Mitigated	15.1636	2.9715	25.4612	0.0185		0.3525	0.3525		0.3525	0.3525	0.0000	3,479.7076	3,479.7076	0.1078	0.0630	3,501.1747
Unmitigated	15.1636	2.9715	25.4612	0.0185		0.3525	0.3525		0.3525	0.3525	0.0000	3,479.7076	3,479.7076	0.1078	0.0630	3,501.1747

S&S Homes - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	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	lb/day										lb/day					
Architectural Coating	2.7309					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.3876					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3150	2.6914	1.1453	0.0172		0.2176	0.2176		0.2176	0.2176	0.0000	3,435.8824	3,435.8824	0.0659	0.0630	3,456.3001
Landscaping	0.7301	0.2801	24.3159	1.2900e-003		0.1349	0.1349		0.1349	0.1349		43.8253	43.8253	0.0420		44.8746
Total	**15.1636**	**2.9715**	**25.4612**	**0.0185**		**0.3525**	**0.3525**		**0.3525**	**0.3525**	**0.0000**	**3,479.7076**	**3,479.7076**	**0.1078**	**0.0630**	**3,501.1747**

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	lb/day										lb/day					
Architectural Coating	2.7309					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.3876					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3150	2.6914	1.1453	0.0172		0.2176	0.2176		0.2176	0.2176	0.0000	3,435.8824	3,435.8824	0.0659	0.0630	3,456.3001
Landscaping	0.7301	0.2801	24.3159	1.2900e-003		0.1349	0.1349		0.1349	0.1349		43.8253	43.8253	0.0420		44.8746
Total	**15.1636**	**2.9715**	**25.4612**	**0.0185**		**0.3525**	**0.3525**		**0.3525**	**0.3525**	**0.0000**	**3,479.7076**	**3,479.7076**	**0.1078**	**0.0630**	**3,501.1747**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

S&S Homes 2005 - Kern-San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

S&S Homes 2005

Kern-San Joaquin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	295.00	Dwelling Unit	94.93	531,000.00	935
City Park	10.77	Acre	10.77	469,141.20	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	32
Climate Zone	7			**Operational Year**	2010
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	524	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PGE historical data

Land Use - Acreage Based on Tract Map
Population based on 3.17 x 295

Construction Phase -

Energy Use - Historical Pge data

Table Name	Column Name	Default Value	New Value
tblEnergyUse	NT24E	5,099.35	6,155.97
tblEnergyUse	NT24NG	6,069.60	4,769.00
tblEnergyUse	Refrigerator	1,251.38	827.00
tblEnergyUse	T24E	988.10	174.14
tblEnergyUse	T24NG	26,247.02	18,994.02

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblLandUse	LotAcreage	95.78	94.93
tblLandUse	Population	844.00	935.00
tblProjectCharacteristics	CO2IntensityFactor	203.98	524
tblWoodstoves	NumberCatalytic	94.93	0.00
tblWoodstoves	NumberNoncatalytic	94.93	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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					
2005	0.7257	5.4581	2.3513	0.0353	1.7555	0.3220	2.0775	0.7019	0.3220	1.0239	0.0000	330.6963	330.6963	0.0592	1.3600e-003	332.5824
2006	1.6079	13.4385	6.4234	0.0892	1.2970	0.6810	1.9780	0.4891	0.6810	1.1701	0.0000	874.5938	874.5938	0.1311	2.6900e-003	878.6708
2007	1.9533	10.4412	10.1902	0.0761	0.9451	0.6163	1.5614	0.1975	0.6101	0.8075	0.0000	1,035.3457	1,035.3457	0.1487	0.0837	1,064.0065
2008	1.9985	10.1425	10.6448	0.0749	0.4143	0.6112	1.0255	0.1122	0.6042	0.7164	0.0000	1,056.7924	1,056.7924	0.1511	0.0930	1,088.2915
2009	1.9908	10.1038	10.6042	0.0746	0.4127	0.6089	1.0216	0.1118	0.6019	0.7137	0.0000	1,052.7589	1,052.7589	0.1505	0.0927	1,084.1378
2010	1.3443	8.0051	7.9568	0.0108	0.4127	0.4617	0.8745	0.1118	0.4374	0.5492	0.0000	1,008.4467	1,008.4467	0.1377	0.0766	1,034.7141
2011	1.2661	7.6099	7.5390	0.0107	0.4111	0.4424	0.8535	0.1114	0.4189	0.5302	0.0000	998.0716	998.0716	0.1323	0.0741	1,023.4514
2012	1.1886	7.2707	7.0755	0.0107	0.4127	0.4247	0.8374	0.1118	0.4016	0.5134	0.0000	997.2800	997.2800	0.1269	0.0721	1,021.9466
2013	1.0926	6.8133	6.5425	0.0106	0.4127	0.3946	0.8073	0.1118	0.3728	0.4846	0.0000	981.9481	981.9481	0.1206	0.0693	1,005.6085
2014	0.9774	6.2991	5.9272	0.0105	0.4127	0.3572	0.7699	0.1118	0.3371	0.4489	0.0000	970.3267	970.3267	0.1138	0.0666	993.0184
2015	0.8931	5.8924	5.4617	0.0103	0.4127	0.3324	0.7451	0.1118	0.3134	0.4251	0.0000	958.9385	958.9385	0.1083	0.0640	980.7066
2016	0.8076	5.4867	5.0308	0.0102	0.4127	0.3047	0.7174	0.1118	0.2870	0.3988	0.0000	945.2372	945.2372	0.1032	0.0613	966.0967
2017	0.7124	4.9835	4.5964	0.0100	0.4111	0.2690	0.6801	0.1114	0.2532	0.3645	0.0000	925.6979	925.6979	0.0977	0.0588	945.6505
2018	0.6125	4.4155	4.2084	9.8200e-003	0.4051	0.2251	0.6302	0.1097	0.2120	0.3217	0.0000	901.4685	901.4685	0.0939	0.0559	920.4672
2019	1.2173	1.6917	1.7257	2.7600e-003	0.0243	0.0918	0.1161	6.4500e-003	0.0847	0.0911	0.0000	248.1428	248.1428	0.0711	8.0000e-004	250.1579
2020	3.9831	0.1627	0.3271	6.7000e-004	0.0428	9.9300e-003	0.0527	0.0114	9.9100e-003	0.0213	0.0000	60.0933	60.0933	3.1600e-003	1.2700e-003	60.5517
Maximum	**3.9831**	**13.4385**	**10.6448**	**0.0892**	**1.7555**	**0.6810**	**2.0775**	**0.7019**	**0.6810**	**1.1701**	**0.0000**	**1,056.7924**	**1,056.7924**	**0.1511**	**0.0930**	**1,088.2915**

2.1 Overall Construction

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2005	0.7257	5.4581	2.3513	0.0353	1.7555	0.3220	2.0775	0.7019	0.3220	1.0239	0.0000	330.6960	330.6960	0.0592	1.3600e-003	332.5820
2006	1.6079	13.4385	6.4234	0.0892	1.2970	0.6810	1.9780	0.4891	0.6810	1.1701	0.0000	874.5928	874.5928	0.1311	2.6900e-003	878.6698
2007	1.9533	10.4412	10.1902	0.0761	0.9451	0.6163	1.5614	0.1975	0.6101	0.8075	0.0000	1,035.3453	1,035.3453	0.1487	0.0837	1,064.0060
2008	1.9985	10.1425	10.6448	0.0749	0.4143	0.6112	1.0255	0.1122	0.6042	0.7164	0.0000	1,056.7920	1,056.7920	0.1511	0.0930	1,088.2911
2009	1.9908	10.1038	10.6042	0.0746	0.4127	0.6089	1.0216	0.1118	0.6019	0.7137	0.0000	1,052.7585	1,052.7585	0.1505	0.0927	1,084.1374
2010	1.3443	8.0050	7.9568	0.0108	0.4127	0.4617	0.8745	0.1118	0.4374	0.5492	0.0000	1,008.4464	1,008.4464	0.1377	0.0766	1,034.7137
2011	1.2661	7.6099	7.5390	0.0107	0.4111	0.4424	0.8535	0.1114	0.4189	0.5302	0.0000	998.0712	998.0712	0.1323	0.0741	1,023.4511
2012	1.1886	7.2707	7.0754	0.0107	0.4127	0.4247	0.8374	0.1118	0.4016	0.5134	0.0000	997.2796	997.2796	0.1269	0.0721	1,021.9463
2013	1.0926	6.8133	6.5425	0.0106	0.4127	0.3946	0.8073	0.1118	0.3728	0.4846	0.0000	981.9478	981.9478	0.1206	0.0693	1,005.6082
2014	0.9774	6.2991	5.9272	0.0105	0.4127	0.3572	0.7699	0.1118	0.3371	0.4489	0.0000	970.3263	970.3263	0.1138	0.0666	993.0180
2015	0.8931	5.8924	5.4617	0.0103	0.4127	0.3324	0.7451	0.1118	0.3134	0.4251	0.0000	958.9381	958.9381	0.1083	0.0640	980.7062
2016	0.8076	5.4867	5.0308	0.0102	0.4127	0.3047	0.7174	0.1118	0.2870	0.3988	0.0000	945.2368	945.2368	0.1032	0.0613	966.0963
2017	0.7124	4.9835	4.5964	0.0100	0.4111	0.2690	0.6801	0.1114	0.2532	0.3645	0.0000	925.6975	925.6975	0.0977	0.0588	945.6502
2018	0.6125	4.4155	4.2084	9.8200e-003	0.4051	0.2251	0.6302	0.1097	0.2120	0.3217	0.0000	901.4682	901.4682	0.0939	0.0559	920.4668
2019	1.2173	1.6917	1.7257	2.7600e-003	0.0243	0.0918	0.1161	6.4500e-003	0.0847	0.0911	0.0000	248.1426	248.1426	0.0711	8.0000e-004	250.1577
2020	3.9831	0.1627	0.3271	6.7000e-004	0.0428	9.9300e-003	0.0527	0.0114	9.9100e-003	0.0213	0.0000	60.0933	60.0933	3.1600e-003	1.2700e-003	60.5517
Maximum	**3.9831**	**13.4385**	**10.6448**	**0.0892**	**1.7555**	**0.6810**	**2.0775**	**0.7019**	**0.6810**	**1.1701**	**0.0000**	**1,056.7920**	**1,056.7920**	**0.1511**	**0.0930**	**1,088.2911**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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	N20	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	6-14-2005	9-13-2005	2.6263	2.6263
2	9-14-2005	12-13-2005	2.7902	2.7902
3	12-14-2005	3-13-2006	3.7215	3.7215
4	3-14-2006	6-13-2006	3.8037	3.8037
5	6-14-2006	9-13-2006	3.8035	3.8035
6	9-14-2006	12-13-2006	3.7628	3.7628
7	12-14-2006	3-13-2007	3.4359	3.4359
8	3-14-2007	6-13-2007	3.0226	3.0226
9	6-14-2007	9-13-2007	3.0100	3.0100
10	9-14-2007	12-13-2007	3.0290	3.0290
11	12-14-2007	3-13-2008	3.0409	3.0409
12	3-14-2008	6-13-2008	3.0226	3.0226
13	6-14-2008	9-13-2008	3.0100	3.0100
14	9-14-2008	12-13-2008	3.0290	3.0290
15	12-14-2008	3-13-2009	3.0075	3.0075
16	3-14-2009	6-13-2009	3.0226	3.0226
17	6-14-2009	9-13-2009	3.0100	3.0100
18	9-14-2009	12-13-2009	3.0290	3.0290
19	12-14-2009	3-13-2010	2.4615	2.4615
20	3-14-2010	6-13-2010	2.3367	2.3367
21	6-14-2010	9-13-2010	2.3270	2.3270
22	9-14-2010	12-13-2010	2.3416	2.3416
23	12-14-2010	3-13-2011	2.2374	2.2374

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

24	**3-14-2011**	**6-13-2011**	2.2280	2.2280
25	**6-14-2011**	**9-13-2011**	2.2190	2.2190
26	**9-14-2011**	**12-13-2011**	2.2317	2.2317
27	**12-14-2011**	**3-13-2012**	2.1484	2.1484
28	**3-14-2012**	**6-13-2012**	2.1166	2.1166
29	**6-14-2012**	**9-13-2012**	2.1087	2.1087
30	**9-14-2012**	**12-13-2012**	2.1183	2.1183
31	**12-14-2012**	**3-13-2013**	1.9917	1.9917
32	**3-14-2013**	**6-13-2013**	1.9795	1.9795
33	**6-14-2013**	**9-13-2013**	1.9727	1.9727
34	**9-14-2013**	**12-13-2013**	1.9794	1.9794
35	**12-14-2013**	**3-13-2014**	1.8383	1.8383
36	**3-14-2014**	**6-13-2014**	1.8231	1.8231
37	**6-14-2014**	**9-13-2014**	1.8173	1.8173
38	**9-14-2014**	**12-13-2014**	1.8214	1.8214
39	**12-14-2014**	**3-13-2015**	1.7086	1.7086
40	**3-14-2015**	**6-13-2015**	1.7008	1.7008
41	**6-14-2015**	**9-13-2015**	1.6958	1.6958
42	**9-14-2015**	**12-13-2015**	1.6980	1.6980
43	**12-14-2015**	**3-13-2016**	1.6033	1.6033
44	**3-14-2016**	**6-13-2016**	1.5781	1.5781
45	**6-14-2016**	**9-13-2016**	1.5737	1.5737
46	**9-14-2016**	**12-13-2016**	1.5747	1.5747
47	**12-14-2016**	**3-13-2017**	1.4468	1.4468
48	**3-14-2017**	**6-13-2017**	1.4340	1.4340
49	**6-14-2017**	**9-13-2017**	1.4302	1.4302
50	**9-14-2017**	**12-13-2017**	1.4303	1.4303
51	**12-14-2017**	**3-13-2018**	1.2911	1.2911
52	**3-14-2018**	**6-13-2018**	1.2731	1.2731

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

53	**6-14-2018**	**9-13-2018**	1.2696	1.2696
54	**9-14-2018**	**12-13-2018**	1.2700	1.2700
55	**12-14-2018**	**3-13-2019**	0.6347	0.6347
56	**3-14-2019**	**6-13-2019**	0.5528	0.5528
57	**6-14-2019**	**9-13-2019**	0.5528	0.5528
58	**9-14-2019**	**12-13-2019**	1.0574	1.0574
59	**12-14-2019**	**3-13-2020**	1.5509	1.5509
60	**3-14-2020**	**6-13-2020**	1.5667	1.5667
61	**6-14-2020**	**9-13-2020**	1.3454	1.3454
		Highest	3.8037	3.8037

2.2 Overall Operational

Unmitigated 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	3.0054	0.1383	2.3781	8.2000e-004		0.0205	0.0205		0.0205	0.0205	0.0000	131.3744	131.3744	6.8100e-003	2.3400e-003	132.2428
Energy	0.0378	0.3230	0.1375	2.0600e-003		0.0261	0.0261		0.0261	0.0261	0.0000	930.7354	930.7354	0.0422	0.0111	935.1011
Mobile	4.1236	11.5368	43.2353	0.0454	3.0554	0.2722	3.3276	0.8200	0.2594	1.0794	0.0000	4,206.6661	4,206.6661	0.4393	0.3624	4,325.6295
Waste						0.0000	0.0000		0.0000	0.0000	78.0054	0.0000	78.0054	4.6100	0.0000	193.2550
Water						0.0000	0.0000		0.0000	0.0000	6.0978	45.4746	51.5723	0.6292	0.0151	71.8117
Total	**7.1668**	**11.9981**	**45.7509**	**0.0483**	**3.0554**	**0.3188**	**3.3741**	**0.8200**	**0.3060**	**1.1260**	**84.1031**	**5,314.2505**	**5,398.3536**	**5.7275**	**0.3909**	**5,658.0401**

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

	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	3.0054	0.1383	2.3781	8.2000e-004		0.0205	0.0205		0.0205	0.0205	0.0000	131.3744	131.3744	6.8100e-003	2.3400e-003	132.2428
Energy	0.0378	0.3230	0.1375	2.0600e-003		0.0261	0.0261		0.0261	0.0261	0.0000	930.7354	930.7354	0.0422	0.0111	935.1011
Mobile	4.1236	11.5368	43.2353	0.0454	3.0554	0.2722	3.3276	0.8200	0.2594	1.0794	0.0000	4,206.6661	4,206.6661	0.4393	0.3624	4,325.6295
Waste						0.0000	0.0000		0.0000	0.0000	78.0054	0.0000	78.0054	4.6100	0.0000	193.2550
Water						0.0000	0.0000		0.0000	0.0000	6.0978	45.4746	51.5723	0.6292	0.0151	71.8117
Total	**7.1668**	**11.9981**	**45.7509**	**0.0483**	**3.0554**	**0.3188**	**3.3741**	**0.8200**	**0.3060**	**1.1260**	**84.1031**	**5,314.2505**	**5,398.3536**	**5.7275**	**0.3909**	**5,658.0401**

	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	N20	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	Site Preparation	Site Preparation	6/14/2005	11/28/2005	5	120	
2	Grading	Grading	11/29/2005	2/5/2007	5	310	
3	Building Construction	Building Construction	2/6/2007	12/24/2018	5	3100	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Paving	Paving	12/25/2018	10/28/2019	5	220	
5	Architectural Coating	Architectural Coating	10/29/2019	8/31/2020	5	220	

Acres of Grading (Site Preparation Phase): 180

Acres of Grading (Grading Phase): 930

Acres of Paving: 0

Residential Indoor: 1,075,275; Residential Outdoor: 358,425; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
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
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
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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
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	303.00	108.00	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	61.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2005

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					
Fugitive Dust					1.1794	0.0000	1.1794	0.6062	0.0000	0.6062	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.5599	4.1955	1.5789	0.0270		0.2589	0.2589		0.2589	0.2589	0.0000	240.0277	240.0277	0.0456	0.0000	241.1686
Total	**0.5599**	**4.1955**	**1.5789**	**0.0270**	**1.1794**	**0.2589**	**1.4383**	**0.6062**	**0.2589**	**0.8651**	**0.0000**	**240.0277**	**240.0277**	**0.0456**	**0.0000**	**241.1686**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2005

Unmitigated 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	0.0174	0.0221	0.1794	1.1000e-004	8.7000e-003	2.3000e-004	8.9300e-003	2.3100e-003	2.1000e-004	2.5200e-003	0.0000	9.9369	9.9369	1.4500e-003	1.1200e-003	10.3057
Total	**0.0174**	**0.0221**	**0.1794**	**1.1000e-004**	**8.7000e-003**	**2.3000e-004**	**8.9300e-003**	**2.3100e-003**	**2.1000e-004**	**2.5200e-003**	**0.0000**	**9.9369**	**9.9369**	**1.4500e-003**	**1.1200e-003**	**10.3057**

Mitigated 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					
Fugitive Dust					1.1794	0.0000	1.1794	0.6062	0.0000	0.6062	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.5599	4.1955	1.5789	0.0270		0.2589	0.2589		0.2589	0.2589	0.0000	240.0274	240.0274	0.0456	0.0000	241.1683
Total	**0.5599**	**4.1955**	**1.5789**	**0.0270**	**1.1794**	**0.2589**	**1.4383**	**0.6062**	**0.2589**	**0.8651**	**0.0000**	**240.0274**	**240.0274**	**0.0456**	**0.0000**	**241.1683**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2005

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	0.0174	0.0221	0.1794	1.1000e-004	8.7000e-003	2.3000e-004	8.9300e-003	2.3100e-003	2.1000e-004	2.5200e-003	0.0000	9.9369	9.9369	1.4500e-003	1.1200e-003	10.3057
Total	**0.0174**	**0.0221**	**0.1794**	**1.1000e-004**	**8.7000e-003**	**2.3000e-004**	**8.9300e-003**	**2.3100e-003**	**2.1000e-004**	**2.5200e-003**	**0.0000**	**9.9369**	**9.9369**	**1.4500e-003**	**1.1200e-003**	**10.3057**

3.3 Grading - 2005

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					
Fugitive Dust					0.5654	0.0000	0.5654	0.0930	0.0000	0.0930	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1446	1.2356	0.5531	8.2100e-003		0.0628	0.0628		0.0628	0.0628	0.0000	78.5235	78.5235	0.0118	0.0000	78.8179
Total	**0.1446**	**1.2356**	**0.5531**	**8.2100e-003**	**0.5654**	**0.0628**	**0.6282**	**0.0930**	**0.0628**	**0.1558**	**0.0000**	**78.5235**	**78.5235**	**0.0118**	**0.0000**	**78.8179**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2005

Unmitigated 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	3.8600e-003	4.9100e-003	0.0399	2.0000e-005	1.9300e-003	5.0000e-005	1.9800e-003	5.1000e-004	5.0000e-005	5.6000e-004	0.0000	2.2082	2.2082	3.2000e-004	2.5000e-004	2.2902
Total	**3.8600e-003**	**4.9100e-003**	**0.0399**	**2.0000e-005**	**1.9300e-003**	**5.0000e-005**	**1.9800e-003**	**5.1000e-004**	**5.0000e-005**	**5.6000e-004**	**0.0000**	**2.2082**	**2.2082**	**3.2000e-004**	**2.5000e-004**	**2.2902**

Mitigated 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					
Fugitive Dust					0.5654	0.0000	0.5654	0.0930	0.0000	0.0930	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1446	1.2356	0.5531	8.2100e-003		0.0628	0.0628		0.0628	0.0628	0.0000	78.5234	78.5234	0.0118	0.0000	78.8178
Total	**0.1446**	**1.2356**	**0.5531**	**8.2100e-003**	**0.5654**	**0.0628**	**0.6282**	**0.0930**	**0.0628**	**0.1558**	**0.0000**	**78.5234**	**78.5234**	**0.0118**	**0.0000**	**78.8178**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2005

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	3.8600e-003	4.9100e-003	0.0399	2.0000e-005	1.9300e-003	5.0000e-005	1.9800e-003	5.1000e-004	5.0000e-005	5.6000e-004	0.0000	2.2082	2.2082	3.2000e-004	2.5000e-004	2.2902
Total	**3.8600e-003**	**4.9100e-003**	**0.0399**	**2.0000e-005**	**1.9300e-003**	**5.0000e-005**	**1.9800e-003**	**5.1000e-004**	**5.0000e-005**	**5.6000e-004**	**0.0000**	**2.2082**	**2.2082**	**3.2000e-004**	**2.5000e-004**	**2.2902**

3.3 Grading - 2006

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					
Fugitive Dust					1.2760	0.0000	1.2760	0.4836	0.0000	0.4836	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5661	13.3854	5.9915	0.0889		0.6805	0.6805		0.6805	0.6805	0.0000	850.6716	850.6716	0.1276	0.0000	853.8608
Total	**1.5661**	**13.3854**	**5.9915**	**0.0889**	**1.2760**	**0.6805**	**1.9565**	**0.4836**	**0.6805**	**1.1641**	**0.0000**	**850.6716**	**850.6716**	**0.1276**	**0.0000**	**853.8608**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2006

Unmitigated 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	0.0418	0.0532	0.4319	2.6000e-004	0.0210	5.4000e-004	0.0215	5.5700e-003	5.0000e-004	6.0700e-003	0.0000	23.9222	23.9222	3.4800e-003	2.6900e-003	24.8101
Total	**0.0418**	**0.0532**	**0.4319**	**2.6000e-004**	**0.0210**	**5.4000e-004**	**0.0215**	**5.5700e-003**	**5.0000e-004**	**6.0700e-003**	**0.0000**	**23.9222**	**23.9222**	**3.4800e-003**	**2.6900e-003**	**24.8101**

Mitigated 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					
Fugitive Dust					1.2760	0.0000	1.2760	0.4836	0.0000	0.4836	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5661	13.3853	5.9915	0.0889		0.6805	0.6805		0.6805	0.6805	0.0000	850.6706	850.6706	0.1276	0.0000	853.8597
Total	**1.5661**	**13.3853**	**5.9915**	**0.0889**	**1.2760**	**0.6805**	**1.9565**	**0.4836**	**0.6805**	**1.1641**	**0.0000**	**850.6706**	**850.6706**	**0.1276**	**0.0000**	**853.8597**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2006

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	0.0418	0.0532	0.4319	2.6000e-004	0.0210	5.4000e-004	0.0215	5.5700e-003	5.0000e-004	6.0700e-003	0.0000	23.9222	23.9222	3.4800e-003	2.6900e-003	24.8101
Total	**0.0418**	**0.0532**	**0.4319**	**2.6000e-004**	**0.0210**	**5.4000e-004**	**0.0215**	**5.5700e-003**	**5.0000e-004**	**6.0700e-003**	**0.0000**	**23.9222**	**23.9222**	**3.4800e-003**	**2.6900e-003**	**24.8101**

3.3 Grading - 2007

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					
Fugitive Dust					0.5714	0.0000	0.5714	0.0963	0.0000	0.0963	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1566	1.3385	0.5992	8.8900e-003		0.0681	0.0681		0.0681	0.0681	0.0000	85.0672	85.0672	0.0128	0.0000	85.3861
Total	**0.1566**	**1.3385**	**0.5992**	**8.8900e-003**	**0.5714**	**0.0681**	**0.6395**	**0.0963**	**0.0681**	**0.1643**	**0.0000**	**85.0672**	**85.0672**	**0.0128**	**0.0000**	**85.3861**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2007

Unmitigated 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	4.1800e-003	5.3200e-003	0.0432	3.0000e-005	2.1000e-003	5.0000e-005	2.1500e-003	5.6000e-004	5.0000e-005	6.1000e-004	0.0000	2.3922	2.3922	3.5000e-004	2.7000e-004	2.4810
Total	**4.1800e-003**	**5.3200e-003**	**0.0432**	**3.0000e-005**	**2.1000e-003**	**5.0000e-005**	**2.1500e-003**	**5.6000e-004**	**5.0000e-005**	**6.1000e-004**	**0.0000**	**2.3922**	**2.3922**	**3.5000e-004**	**2.7000e-004**	**2.4810**

Mitigated 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					
Fugitive Dust					0.5714	0.0000	0.5714	0.0963	0.0000	0.0963	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1566	1.3385	0.5992	8.8900e-003		0.0681	0.0681		0.0681	0.0681	0.0000	85.0671	85.0671	0.0128	0.0000	85.3860
Total	**0.1566**	**1.3385**	**0.5992**	**8.8900e-003**	**0.5714**	**0.0681**	**0.6395**	**0.0963**	**0.0681**	**0.1643**	**0.0000**	**85.0671**	**85.0671**	**0.0128**	**0.0000**	**85.3860**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2007

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	4.1800e-003	5.3200e-003	0.0432	3.0000e-005	2.1000e-003	5.0000e-005	2.1500e-003	5.6000e-004	5.0000e-005	6.1000e-004	0.0000	2.3922	2.3922	3.5000e-004	2.7000e-004	2.4810
Total	**4.1800e-003**	**5.3200e-003**	**0.0432**	**3.0000e-005**	**2.1000e-003**	**5.0000e-005**	**2.1500e-003**	**5.6000e-004**	**5.0000e-005**	**6.1000e-004**	**0.0000**	**2.3922**	**2.3922**	**3.5000e-004**	**2.7000e-004**	**2.4810**

3.4 Building Construction - 2007

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	0.8831	4.8698	2.3956	0.0357		0.4089	0.4089		0.4089	0.4089	0.0000	308.8617	308.8617	0.0721	0.0000	310.6635
Total	**0.8831**	**4.8698**	**2.3956**	**0.0357**		**0.4089**	**0.4089**		**0.4089**	**0.4089**	**0.0000**	**308.8617**	**308.8617**	**0.0721**	**0.0000**	**310.6635**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2007

Unmitigated 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	0.3367	3.4993	1.2378	0.0279	0.0847	0.1319	0.2166	0.0245	0.1262	0.1507	0.0000	311.4511	311.4511	0.0158	0.0466	325.7448
Worker	0.5727	0.7282	5.9145	3.5900e-003	0.2869	7.4300e-003	0.2943	0.0762	6.8900e-003	0.0831	0.0000	327.5736	327.5736	0.0477	0.0368	339.7311
Total	**0.9094**	**4.2275**	**7.1522**	**0.0314**	**0.3716**	**0.1393**	**0.5110**	**0.1007**	**0.1331**	**0.2338**	**0.0000**	**639.0246**	**639.0246**	**0.0635**	**0.0834**	**665.4758**

Mitigated 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	0.8831	4.8698	2.3956	0.0357		0.4089	0.4089		0.4089	0.4089	0.0000	308.8613	308.8613	0.0721	0.0000	310.6632
Total	**0.8831**	**4.8698**	**2.3956**	**0.0357**		**0.4089**	**0.4089**		**0.4089**	**0.4089**	**0.0000**	**308.8613**	**308.8613**	**0.0721**	**0.0000**	**310.6632**

S&S Homes 2005 - Kern-San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2007

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	0.3367	3.4993	1.2378	0.0279	0.0847	0.1319	0.2166	0.0245	0.1262	0.1507	0.0000	311.4511	311.4511	0.0158	0.0466	325.7448
Worker	0.5727	0.7282	5.9145	3.5900e-003	0.2869	7.4300e-003	0.2943	0.0762	6.8900e-003	0.0831	0.0000	327.5736	327.5736	0.0477	0.0368	339.7311
Total	**0.9094**	**4.2275**	**7.1522**	**0.0314**	**0.3716**	**0.1393**	**0.5110**	**0.1007**	**0.1331**	**0.2338**	**0.0000**	**639.0246**	**639.0246**	**0.0635**	**0.0834**	**665.4758**

3.4 Building Construction - 2008

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	0.9846	5.4293	2.6709	0.0398		0.4558	0.4558		0.4558	0.4558	0.0000	344.3479	344.3479	0.0804	0.0000	346.3568
Total	**0.9846**	**5.4293**	**2.6709**	**0.0398**		**0.4558**	**0.4558**		**0.4558**	**0.4558**	**0.0000**	**344.3479**	**344.3479**	**0.0804**	**0.0000**	**346.3568**

S&S Homes 2005 - Kern-San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2008

Unmitigated 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	0.3754	3.9014	1.3800	0.0311	0.0945	0.1471	0.2415	0.0273	0.1407	0.1680	0.0000	347.2348	347.2348	0.0176	0.0520	363.1707
Worker	0.6385	0.8119	6.5940	4.0000e-003	0.3199	8.2900e-003	0.3281	0.0850	7.6800e-003	0.0927	0.0000	365.2097	365.2097	0.0532	0.0410	378.7640
Total	**1.0139**	**4.7133**	**7.9740**	**0.0351**	**0.4143**	**0.1554**	**0.5697**	**0.1122**	**0.1484**	**0.2606**	**0.0000**	**712.4445**	**712.4445**	**0.0708**	**0.0930**	**741.9347**

Mitigated 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	0.9846	5.4293	2.6709	0.0398		0.4558	0.4558		0.4558	0.4558	0.0000	344.3475	344.3475	0.0804	0.0000	346.3564
Total	**0.9846**	**5.4293**	**2.6709**	**0.0398**		**0.4558**	**0.4558**		**0.4558**	**0.4558**	**0.0000**	**344.3475**	**344.3475**	**0.0804**	**0.0000**	**346.3564**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2008

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	0.3754	3.9014	1.3800	0.0311	0.0945	0.1471	0.2415	0.0273	0.1407	0.1680	0.0000	347.2348	347.2348	0.0176	0.0520	363.1707
Worker	0.6385	0.8119	6.5940	4.0000e-003	0.3199	8.2900e-003	0.3281	0.0850	7.6800e-003	0.0927	0.0000	365.2097	365.2097	0.0532	0.0410	378.7640
Total	**1.0139**	**4.7133**	**7.9740**	**0.0351**	**0.4143**	**0.1554**	**0.5697**	**0.1122**	**0.1484**	**0.2606**	**0.0000**	**712.4445**	**712.4445**	**0.0708**	**0.0930**	**741.9347**

3.4 Building Construction - 2009

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	0.9808	5.4086	2.6607	0.0397		0.4541	0.4541		0.4541	0.4541	0.0000	343.0336	343.0336	0.0801	0.0000	345.0348
Total	**0.9808**	**5.4086**	**2.6607**	**0.0397**		**0.4541**	**0.4541**		**0.4541**	**0.4541**	**0.0000**	**343.0336**	**343.0336**	**0.0801**	**0.0000**	**345.0348**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2009

Unmitigated 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	0.3740	3.8865	1.3747	0.0309	0.0941	0.1465	0.2406	0.0272	0.1402	0.1673	0.0000	345.9095	345.9095	0.0175	0.0518	361.7846
Worker	0.6361	0.8088	6.5688	3.9800e-003	0.3186	8.2500e-003	0.3269	0.0846	7.6500e-003	0.0923	0.0000	363.8158	363.8158	0.0530	0.0409	377.3183
Total	**1.0100**	**4.6953**	**7.9435**	**0.0349**	**0.4127**	**0.1548**	**0.5675**	**0.1118**	**0.1478**	**0.2596**	**0.0000**	**709.7253**	**709.7253**	**0.0705**	**0.0927**	**739.1029**

Mitigated 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	0.9808	5.4086	2.6607	0.0397		0.4541	0.4541		0.4541	0.4541	0.0000	343.0332	343.0332	0.0801	0.0000	345.0344
Total	**0.9808**	**5.4086**	**2.6607**	**0.0397**		**0.4541**	**0.4541**		**0.4541**	**0.4541**	**0.0000**	**343.0332**	**343.0332**	**0.0801**	**0.0000**	**345.0344**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2009

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	0.3740	3.8865	1.3747	0.0309	0.0941	0.1465	0.2406	0.0272	0.1402	0.1673	0.0000	345.9095	345.9095	0.0175	0.0518	361.7846
Worker	0.6361	0.8088	6.5688	3.9800e-003	0.3186	8.2500e-003	0.3269	0.0846	7.6500e-003	0.0923	0.0000	363.8158	363.8158	0.0530	0.0409	377.3183
Total	**1.0100**	**4.6953**	**7.9435**	**0.0349**	**0.4127**	**0.1548**	**0.5675**	**0.1118**	**0.1478**	**0.2596**	**0.0000**	**709.7253**	**709.7253**	**0.0705**	**0.0927**	**739.1029**

3.4 Building Construction - 2010

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	0.6164	4.6640	2.5603	3.5200e-003		0.3413	0.3413		0.3222	0.3222	0.0000	326.0372	326.0372	0.0883	0.0000	328.2446
Total	**0.6164**	**4.6640**	**2.5603**	**3.5200e-003**		**0.3413**	**0.3413**		**0.3222**	**0.3222**	**0.0000**	**326.0372**	**326.0372**	**0.0883**	**0.0000**	**328.2446**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2010

Unmitigated 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	0.2713	2.8344	0.9954	3.4500e-003	0.0941	0.1158	0.2098	0.0272	0.1107	0.1379	0.0000	331.2633	331.2633	0.0128	0.0494	346.2936
Worker	0.4566	0.5068	4.4011	3.8200e-003	0.3186	4.7300e-003	0.3234	0.0846	4.3900e-003	0.0890	0.0000	351.1462	351.1462	0.0366	0.0272	360.1760
Total	**0.7279**	**3.3411**	**5.3965**	**7.2700e-003**	**0.4127**	**0.1205**	**0.5332**	**0.1118**	**0.1151**	**0.2269**	**0.0000**	**682.4095**	**682.4095**	**0.0494**	**0.0766**	**706.4696**

Mitigated 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	0.6164	4.6639	2.5603	3.5200e-003		0.3413	0.3413		0.3222	0.3222	0.0000	326.0368	326.0368	0.0883	0.0000	328.2442
Total	**0.6164**	**4.6639**	**2.5603**	**3.5200e-003**		**0.3413**	**0.3413**		**0.3222**	**0.3222**	**0.0000**	**326.0368**	**326.0368**	**0.0883**	**0.0000**	**328.2442**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2010

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	0.2713	2.8344	0.9954	3.4500e-003	0.0941	0.1158	0.2098	0.0272	0.1107	0.1379	0.0000	331.2633	331.2633	0.0128	0.0494	346.2936
Worker	0.4566	0.5068	4.4011	3.8200e-003	0.3186	4.7300e-003	0.3234	0.0846	4.3900e-003	0.0890	0.0000	351.1462	351.1462	0.0366	0.0272	360.1760
Total	**0.7279**	**3.3411**	**5.3965**	**7.2700e-003**	**0.4127**	**0.1205**	**0.5332**	**0.1118**	**0.1151**	**0.2269**	**0.0000**	**682.4095**	**682.4095**	**0.0494**	**0.0766**	**706.4696**

3.4 Building Construction - 2011

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	0.5885	4.5179	2.5319	3.5000e-003		0.3309	0.3309		0.3123	0.3123	0.0000	324.0331	324.0331	0.0865	0.0000	326.1951
Total	**0.5885**	**4.5179**	**2.5319**	**3.5000e-003**		**0.3309**	**0.3309**		**0.3123**	**0.3123**	**0.0000**	**324.0331**	**324.0331**	**0.0865**	**0.0000**	**326.1951**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2011

Unmitigated 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	0.2479	2.6289	0.9322	3.4300e-003	0.0937	0.1073	0.2010	0.0271	0.1026	0.1297	0.0000	328.5430	328.5430	0.0117	0.0488	343.3818
Worker	0.4298	0.4631	4.0749	3.7700e-003	0.3174	4.2900e-003	0.3217	0.0843	3.9700e-003	0.0883	0.0000	345.4955	345.4955	0.0341	0.0253	353.8746
Total	**0.6776**	**3.0920**	**5.0071**	**7.2000e-003**	**0.4111**	**0.1116**	**0.5227**	**0.1114**	**0.1066**	**0.2180**	**0.0000**	**674.0385**	**674.0385**	**0.0458**	**0.0741**	**697.2564**

Mitigated 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	0.5885	4.5179	2.5319	3.5000e-003		0.3309	0.3309		0.3123	0.3123	0.0000	324.0327	324.0327	0.0865	0.0000	326.1947
Total	**0.5885**	**4.5179**	**2.5319**	**3.5000e-003**		**0.3309**	**0.3309**		**0.3123**	**0.3123**	**0.0000**	**324.0327**	**324.0327**	**0.0865**	**0.0000**	**326.1947**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2011

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	0.2479	2.6289	0.9322	3.4300e-003	0.0937	0.1073	0.2010	0.0271	0.1026	0.1297	0.0000	328.5430	328.5430	0.0117	0.0488	343.3818
Worker	0.4298	0.4631	4.0749	3.7700e-003	0.3174	4.2900e-003	0.3217	0.0843	3.9700e-003	0.0883	0.0000	345.4955	345.4955	0.0341	0.0253	353.8746
Total	**0.6776**	**3.0920**	**5.0071**	**7.2000e-003**	**0.4111**	**0.1116**	**0.5227**	**0.1114**	**0.1066**	**0.2180**	**0.0000**	**674.0385**	**674.0385**	**0.0458**	**0.0741**	**697.2564**

3.4 Building Construction - 2012

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	0.5722	4.4621	2.5368	3.5200e-003		0.3262	0.3262		0.3075	0.3075	0.0000	324.6738	324.6738	0.0853	0.0000	326.8060
Total	**0.5722**	**4.4621**	**2.5368**	**3.5200e-003**		**0.3262**	**0.3262**		**0.3075**	**0.3075**	**0.0000**	**324.6738**	**324.6738**	**0.0853**	**0.0000**	**326.8060**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2012

Unmitigated 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	0.2196	2.3926	0.8353	3.4400e-003	0.0941	0.0946	0.1887	0.0272	0.0905	0.1177	0.0000	329.9466	329.9466	0.0104	0.0490	344.8012
Worker	0.3969	0.4161	3.7033	3.7300e-003	0.3186	3.8400e-003	0.3225	0.0846	3.5600e-003	0.0882	0.0000	342.6596	342.6596	0.0312	0.0232	350.3394
Total	**0.6164**	**2.8086**	**4.5386**	**7.1700e-003**	**0.4127**	**0.0985**	**0.5112**	**0.1118**	**0.0941**	**0.2059**	**0.0000**	**672.6062**	**672.6062**	**0.0417**	**0.0721**	**695.1407**

Mitigated 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	0.5722	4.4621	2.5368	3.5200e-003		0.3262	0.3262		0.3075	0.3075	0.0000	324.6734	324.6734	0.0853	0.0000	326.8056
Total	**0.5722**	**4.4621**	**2.5368**	**3.5200e-003**		**0.3262**	**0.3262**		**0.3075**	**0.3075**	**0.0000**	**324.6734**	**324.6734**	**0.0853**	**0.0000**	**326.8056**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2012

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	0.2196	2.3926	0.8353	3.4400e-003	0.0941	0.0946	0.1887	0.0272	0.0905	0.1177	0.0000	329.9466	329.9466	0.0104	0.0490	344.8012
Worker	0.3969	0.4161	3.7033	3.7300e-003	0.3186	3.8400e-003	0.3225	0.0846	3.5600e-003	0.0882	0.0000	342.6596	342.6596	0.0312	0.0232	350.3394
Total	**0.6164**	**2.8086**	**4.5386**	**7.1700e-003**	**0.4127**	**0.0985**	**0.5112**	**0.1118**	**0.0941**	**0.2059**	**0.0000**	**672.6062**	**672.6062**	**0.0417**	**0.0721**	**695.1407**

3.4 Building Construction - 2013

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	0.5428	4.3095	2.5141	3.5200e-003		0.3116	0.3116		0.2935	0.2935	0.0000	323.4520	323.4520	0.0836	0.0000	325.5414
Total	**0.5428**	**4.3095**	**2.5141**	**3.5200e-003**		**0.3116**	**0.3116**		**0.2935**	**0.2935**	**0.0000**	**323.4520**	**323.4520**	**0.0836**	**0.0000**	**325.5414**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2013

Unmitigated 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	0.1869	2.1358	0.7056	3.3800e-003	0.0941	0.0796	0.1737	0.0272	0.0762	0.1033	0.0000	323.7912	323.7912	8.8400e-003	0.0483	338.4155
Worker	0.3629	0.3680	3.3229	3.6600e-003	0.3186	3.4400e-003	0.3221	0.0846	3.1900e-003	0.0878	0.0000	334.7050	334.7050	0.0282	0.0210	341.6516
Total	**0.5498**	**2.5038**	**4.0284**	**7.0400e-003**	**0.4127**	**0.0831**	**0.4958**	**0.1118**	**0.0794**	**0.1912**	**0.0000**	**658.4962**	**658.4962**	**0.0370**	**0.0693**	**680.0672**

Mitigated 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	0.5428	4.3095	2.5141	3.5200e-003		0.3116	0.3116		0.2935	0.2935	0.0000	323.4516	323.4516	0.0836	0.0000	325.5410
Total	**0.5428**	**4.3095**	**2.5141**	**3.5200e-003**		**0.3116**	**0.3116**		**0.2935**	**0.2935**	**0.0000**	**323.4516**	**323.4516**	**0.0836**	**0.0000**	**325.5410**

S&S Homes 2005 - Kern-San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2013

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	0.1869	2.1358	0.7056	3.3800e-003	0.0941	0.0796	0.1737	0.0272	0.0762	0.1033	0.0000	323.7912	323.7912	8.8400e-003	0.0483	338.4155
Worker	0.3629	0.3680	3.3229	3.6600e-003	0.3186	3.4400e-003	0.3221	0.0846	3.1900e-003	0.0878	0.0000	334.7050	334.7050	0.0282	0.0210	341.6516
Total	**0.5498**	**2.5038**	**4.0284**	**7.0400e-003**	**0.4127**	**0.0831**	**0.4958**	**0.1118**	**0.0794**	**0.1912**	**0.0000**	**658.4962**	**658.4962**	**0.0370**	**0.0693**	**680.0672**

3.4 Building Construction - 2014

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	0.5067	4.1016	2.4783	3.5200e-003		0.2918	0.2918		0.2747	0.2747	0.0000	322.1068	322.1068	0.0820	0.0000	324.1557
Total	**0.5067**	**4.1016**	**2.4783**	**3.5200e-003**		**0.2918**	**0.2918**		**0.2747**	**0.2747**	**0.0000**	**322.1068**	**322.1068**	**0.0820**	**0.0000**	**324.1557**

S&S Homes 2005 - Kern-San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2014

Unmitigated 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	0.1541	1.8812	0.5918	3.3500e-003	0.0941	0.0623	0.1564	0.0272	0.0597	0.0868	0.0000	320.7326	320.7326	7.3800e-003	0.0479	335.1763
Worker	0.3166	0.3163	2.8571	3.5900e-003	0.3186	3.0300e-003	0.3217	0.0846	2.8000e-003	0.0874	0.0000	327.4874	327.4874	0.0245	0.0188	333.6864
Total	**0.4707**	**2.1975**	**3.4489**	**6.9400e-003**	**0.4127**	**0.0654**	**0.4781**	**0.1118**	**0.0625**	**0.1742**	**0.0000**	**648.2199**	**648.2199**	**0.0318**	**0.0666**	**668.8627**

Mitigated 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	0.5067	4.1016	2.4783	3.5200e-003		0.2918	0.2918		0.2747	0.2747	0.0000	322.1064	322.1064	0.0820	0.0000	324.1553
Total	**0.5067**	**4.1016**	**2.4783**	**3.5200e-003**		**0.2918**	**0.2918**		**0.2747**	**0.2747**	**0.0000**	**322.1064**	**322.1064**	**0.0820**	**0.0000**	**324.1553**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2014

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	0.1541	1.8812	0.5918	3.3500e-003	0.0941	0.0623	0.1564	0.0272	0.0597	0.0868	0.0000	320.7326	320.7326	7.3800e-003	0.0479	335.1763
Worker	0.3166	0.3163	2.8571	3.5900e-003	0.3186	3.0300e-003	0.3217	0.0846	2.8000e-003	0.0874	0.0000	327.4874	327.4874	0.0245	0.0188	333.6864
Total	**0.4707**	**2.1975**	**3.4489**	**6.9400e-003**	**0.4127**	**0.0654**	**0.4781**	**0.1118**	**0.0625**	**0.1742**	**0.0000**	**648.2199**	**648.2199**	**0.0318**	**0.0666**	**668.8627**

3.4 Building Construction - 2015

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	0.4794	3.9412	2.4539	3.5100e-003		0.2773	0.2773		0.2607	0.2607	0.0000	319.7702	319.7702	0.0803	0.0000	321.7775
Total	**0.4794**	**3.9412**	**2.4539**	**3.5100e-003**		**0.2773**	**0.2773**		**0.2607**	**0.2607**	**0.0000**	**319.7702**	**319.7702**	**0.0803**	**0.0000**	**321.7775**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2015

Unmitigated 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	0.1354	1.6788	0.5266	3.3100e-003	0.0941	0.0524	0.1465	0.0272	0.0501	0.0773	0.0000	316.7771	316.7771	6.5300e-003	0.0472	331.0084
Worker	0.2783	0.2724	2.4812	3.5200e-003	0.3186	2.7600e-003	0.3214	0.0846	2.5500e-003	0.0872	0.0000	322.3912	322.3912	0.0215	0.0168	327.9207
Total	**0.4137**	**1.9512**	**3.0078**	**6.8300e-003**	**0.4127**	**0.0552**	**0.4679**	**0.1118**	**0.0527**	**0.1645**	**0.0000**	**639.1683**	**639.1683**	**0.0280**	**0.0640**	**658.9291**

Mitigated 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	0.4794	3.9412	2.4539	3.5100e-003		0.2773	0.2773		0.2607	0.2607	0.0000	319.7698	319.7698	0.0803	0.0000	321.7772
Total	**0.4794**	**3.9412**	**2.4539**	**3.5100e-003**		**0.2773**	**0.2773**		**0.2607**	**0.2607**	**0.0000**	**319.7698**	**319.7698**	**0.0803**	**0.0000**	**321.7772**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2015

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	0.1354	1.6788	0.5266	3.3100e-003	0.0941	0.0524	0.1465	0.0272	0.0501	0.0773	0.0000	316.7771	316.7771	6.5300e-003	0.0472	331.0084
Worker	0.2783	0.2724	2.4812	3.5200e-003	0.3186	2.7600e-003	0.3214	0.0846	2.5500e-003	0.0872	0.0000	322.3912	322.3912	0.0215	0.0168	327.9207
Total	**0.4137**	**1.9512**	**3.0078**	**6.8300e-003**	**0.4127**	**0.0552**	**0.4679**	**0.1118**	**0.0527**	**0.1645**	**0.0000**	**639.1683**	**639.1683**	**0.0280**	**0.0640**	**658.9291**

3.4 Building Construction - 2016

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	0.4463	3.7416	2.4227	3.5100e-003		0.2577	0.2577		0.2421	0.2421	0.0000	317.3540	317.3540	0.0788	0.0000	319.3235
Total	**0.4463**	**3.7416**	**2.4227**	**3.5100e-003**		**0.2577**	**0.2577**		**0.2421**	**0.2421**	**0.0000**	**317.3540**	**317.3540**	**0.0788**	**0.0000**	**319.3235**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2016

Unmitigated 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	0.1185	1.5135	0.4727	3.2700e-003	0.0941	0.0445	0.1385	0.0272	0.0425	0.0697	0.0000	312.6654	312.6654	5.7500e-003	0.0465	326.6573
Worker	0.2427	0.2315	2.1354	3.4400e-003	0.3186	2.5100e-003	0.3212	0.0846	2.3200e-003	0.0870	0.0000	315.2179	315.2179	0.0187	0.0149	320.1159
Total	**0.3613**	**1.7450**	**2.6081**	**6.7100e-003**	**0.4127**	**0.0470**	**0.4597**	**0.1118**	**0.0448**	**0.1566**	**0.0000**	**627.8833**	**627.8833**	**0.0244**	**0.0613**	**646.7732**

Mitigated 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	0.4463	3.7416	2.4227	3.5100e-003		0.2577	0.2577		0.2421	0.2421	0.0000	317.3536	317.3536	0.0788	0.0000	319.3231
Total	**0.4463**	**3.7416**	**2.4227**	**3.5100e-003**		**0.2577**	**0.2577**		**0.2421**	**0.2421**	**0.0000**	**317.3536**	**317.3536**	**0.0788**	**0.0000**	**319.3231**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2016

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	0.1185	1.5135	0.4727	3.2700e-003	0.0941	0.0445	0.1385	0.0272	0.0425	0.0697	0.0000	312.6654	312.6654	5.7500e-003	0.0465	326.6573
Worker	0.2427	0.2315	2.1354	3.4400e-003	0.3186	2.5100e-003	0.3212	0.0846	2.3200e-003	0.0870	0.0000	315.2179	315.2179	0.0187	0.0149	320.1159
Total	**0.3613**	**1.7450**	**2.6081**	**6.7100e-003**	**0.4127**	**0.0470**	**0.4597**	**0.1118**	**0.0448**	**0.1566**	**0.0000**	**627.8833**	**627.8833**	**0.0244**	**0.0613**	**646.7732**

3.4 Building Construction - 2017

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	0.4049	3.4521	2.3637	3.5000e-003		0.2324	0.2324		0.2183	0.2183	0.0000	312.6407	312.6407	0.0770	0.0000	314.5663
Total	**0.4049**	**3.4521**	**2.3637**	**3.5000e-003**		**0.2324**	**0.2324**		**0.2183**	**0.2183**	**0.0000**	**312.6407**	**312.6407**	**0.0770**	**0.0000**	**314.5663**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2017

Unmitigated 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	0.0943	1.3366	0.3973	3.2000e-003	0.0937	0.0342	0.1279	0.0271	0.0327	0.0598	0.0000	306.8749	306.8749	4.6400e-003	0.0456	320.5906
Worker	0.2132	0.1949	1.8354	3.3400e-003	0.3174	2.3500e-003	0.3198	0.0843	2.1700e-003	0.0865	0.0000	306.1823	306.1823	0.0161	0.0131	310.4936
Total	**0.3075**	**1.5314**	**2.2327**	**6.5400e-003**	**0.4111**	**0.0366**	**0.4477**	**0.1114**	**0.0349**	**0.1463**	**0.0000**	**613.0572**	**613.0572**	**0.0207**	**0.0588**	**631.0842**

Mitigated 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	0.4049	3.4521	2.3637	3.5000e-003		0.2324	0.2324		0.2183	0.2183	0.0000	312.6403	312.6403	0.0770	0.0000	314.5660
Total	**0.4049**	**3.4521**	**2.3637**	**3.5000e-003**		**0.2324**	**0.2324**		**0.2183**	**0.2183**	**0.0000**	**312.6403**	**312.6403**	**0.0770**	**0.0000**	**314.5660**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2017

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	0.0943	1.3366	0.3973	3.2000e-003	0.0937	0.0342	0.1279	0.0271	0.0327	0.0598	0.0000	306.8749	306.8749	4.6400e-003	0.0456	320.5906
Worker	0.2132	0.1949	1.8354	3.3400e-003	0.3174	2.3500e-003	0.3198	0.0843	2.1700e-003	0.0865	0.0000	306.1823	306.1823	0.0161	0.0131	310.4936
Total	**0.3075**	**1.5314**	**2.2327**	**6.5400e-003**	**0.4111**	**0.0366**	**0.4477**	**0.1114**	**0.0349**	**0.1463**	**0.0000**	**613.0572**	**613.0572**	**0.0207**	**0.0588**	**631.0842**

3.4 Building Construction - 2018

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	0.3430	2.9939	2.2503	3.4400e-003		0.1920	0.1920		0.1805	0.1805	0.0000	304.3421	304.3421	0.0746	0.0000	306.2062
Total	**0.3430**	**2.9939**	**2.2503**	**3.4400e-003**		**0.1920**	**0.1920**		**0.1805**	**0.1805**	**0.0000**	**304.3421**	**304.3421**	**0.0746**	**0.0000**	**306.2062**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2018

Unmitigated 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	0.0807	1.2158	0.3544	3.1200e-003	0.0923	0.0285	0.1208	0.0266	0.0273	0.0539	0.0000	298.5005	298.5005	3.9800e-003	0.0444	311.8263
Worker	0.1846	0.1618	1.5653	3.2000e-003	0.3125	2.2200e-003	0.3148	0.0830	2.0400e-003	0.0851	0.0000	293.1397	293.1397	0.0137	0.0115	296.9043
Total	**0.2653**	**1.3776**	**1.9196**	**6.3200e-003**	**0.4048**	**0.0307**	**0.4355**	**0.1097**	**0.0293**	**0.1390**	**0.0000**	**591.6401**	**591.6401**	**0.0177**	**0.0559**	**608.7306**

Mitigated 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	0.3430	2.9939	2.2503	3.4400e-003		0.1920	0.1920		0.1805	0.1805	0.0000	304.3417	304.3417	0.0746	0.0000	306.2058
Total	**0.3430**	**2.9939**	**2.2503**	**3.4400e-003**		**0.1920**	**0.1920**		**0.1805**	**0.1805**	**0.0000**	**304.3417**	**304.3417**	**0.0746**	**0.0000**	**306.2058**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2018

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	0.0807	1.2158	0.3544	3.1200e-003	0.0923	0.0285	0.1208	0.0266	0.0273	0.0539	0.0000	298.5005	298.5005	3.9800e-003	0.0444	311.8263
Worker	0.1846	0.1618	1.5653	3.2000e-003	0.3125	2.2200e-003	0.3148	0.0830	2.0400e-003	0.0851	0.0000	293.1397	293.1397	0.0137	0.0115	296.9043
Total	**0.2653**	**1.3776**	**1.9196**	**6.3200e-003**	**0.4048**	**0.0307**	**0.4355**	**0.1097**	**0.0293**	**0.1390**	**0.0000**	**591.6401**	**591.6401**	**0.0177**	**0.0559**	**608.7306**

3.5 Paving - 2018

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	4.1100e-003	0.0438	0.0370	6.0000e-005		2.3900e-003	2.3900e-003		2.2000e-003	2.2000e-003	0.0000	5.2029	5.2029	1.6200e-003	0.0000	5.2434
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.1100e-003**	**0.0438**	**0.0370**	**6.0000e-005**		**2.3900e-003**	**2.3900e-003**		**2.2000e-003**	**2.2000e-003**	**0.0000**	**5.2029**	**5.2029**	**1.6200e-003**	**0.0000**	**5.2434**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2018

Unmitigated 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	1.8000e-004	1.6000e-004	1.5100e-003	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2834	0.2834	1.0000e-005	1.0000e-005	0.2871
Total	**1.8000e-004**	**1.6000e-004**	**1.5100e-003**	**0.0000**	**3.0000e-004**	**0.0000**	**3.0000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2834**	**0.2834**	**1.0000e-005**	**1.0000e-005**	**0.2871**

Mitigated 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	4.1100e-003	0.0438	0.0370	6.0000e-005		2.3900e-003	2.3900e-003		2.2000e-003	2.2000e-003	0.0000	5.2029	5.2029	1.6200e-003	0.0000	5.2434
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.1100e-003**	**0.0438**	**0.0370**	**6.0000e-005**		**2.3900e-003**	**2.3900e-003**		**2.2000e-003**	**2.2000e-003**	**0.0000**	**5.2029**	**5.2029**	**1.6200e-003**	**0.0000**	**5.2434**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2018

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	1.8000e-004	1.6000e-004	1.5100e-003	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2834	0.2834	1.0000e-005	1.0000e-005	0.2871
Total	**1.8000e-004**	**1.6000e-004**	**1.5100e-003**	**0.0000**	**3.0000e-004**	**0.0000**	**3.0000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2834**	**0.2834**	**1.0000e-005**	**1.0000e-005**	**0.2871**

3.5 Paving - 2019

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	0.1564	1.6387	1.5765	2.4500e-003		0.0886	0.0886		0.0816	0.0816	0.0000	220.1082	220.1082	0.0696	0.0000	221.8492
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1564**	**1.6387**	**1.5765**	**2.4500e-003**		**0.0886**	**0.0886**		**0.0816**	**0.0816**	**0.0000**	**220.1082**	**220.1082**	**0.0696**	**0.0000**	**221.8492**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2019

Unmitigated 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	6.8300e-003	5.7200e-003	0.0571	1.3000e-004	0.0130	9.0000e-005	0.0131	3.4500e-003	8.0000e-005	3.5300e-003	0.0000	11.8509	11.8509	5.0000e-004	4.3000e-004	11.9909
Total	**6.8300e-003**	**5.7200e-003**	**0.0571**	**1.3000e-004**	**0.0130**	**9.0000e-005**	**0.0131**	**3.4500e-003**	**8.0000e-005**	**3.5300e-003**	**0.0000**	**11.8509**	**11.8509**	**5.0000e-004**	**4.3000e-004**	**11.9909**

Mitigated 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	0.1564	1.6387	1.5765	2.4500e-003		0.0886	0.0886		0.0816	0.0816	0.0000	220.1080	220.1080	0.0696	0.0000	221.8489
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1564**	**1.6387**	**1.5765**	**2.4500e-003**		**0.0886**	**0.0886**		**0.0816**	**0.0816**	**0.0000**	**220.1080**	**220.1080**	**0.0696**	**0.0000**	**221.8489**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2019

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	6.8300e-003	5.7200e-003	0.0571	1.3000e-004	0.0130	9.0000e-005	0.0131	3.4500e-003	8.0000e-005	3.5300e-003	0.0000	11.8509	11.8509	5.0000e-004	4.3000e-004	11.9909
Total	**6.8300e-003**	**5.7200e-003**	**0.0571**	**1.3000e-004**	**0.0130**	**9.0000e-005**	**0.0131**	**3.4500e-003**	**8.0000e-005**	**3.5300e-003**	**0.0000**	**11.8509**	**11.8509**	**5.0000e-004**	**4.3000e-004**	**11.9909**

3.6 Architectural Coating - 2019

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					
Archit. Coating	1.0421					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1300e-003	0.0422	0.0424	7.0000e-005		2.9600e-003	2.9600e-003		2.9600e-003	2.9600e-003	0.0000	5.8725	5.8725	5.0000e-004	0.0000	5.8849
Total	**1.0482**	**0.0422**	**0.0424**	**7.0000e-005**		**2.9600e-003**	**2.9600e-003**		**2.9600e-003**	**2.9600e-003**	**0.0000**	**5.8725**	**5.8725**	**5.0000e-004**	**0.0000**	**5.8849**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2019

Unmitigated 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	5.9400e-003	4.9800e-003	0.0497	1.1000e-004	0.0113	8.0000e-005	0.0114	3.0000e-003	7.0000e-005	3.0700e-003	0.0000	10.3112	10.3112	4.3000e-004	3.7000e-004	10.4330
Total	**5.9400e-003**	**4.9800e-003**	**0.0497**	**1.1000e-004**	**0.0113**	**8.0000e-005**	**0.0114**	**3.0000e-003**	**7.0000e-005**	**3.0700e-003**	**0.0000**	**10.3112**	**10.3112**	**4.3000e-004**	**3.7000e-004**	**10.4330**

Mitigated 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					
Archit. Coating	1.0421					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1300e-003	0.0422	0.0424	7.0000e-005		2.9600e-003	2.9600e-003		2.9600e-003	2.9600e-003	0.0000	5.8725	5.8725	5.0000e-004	0.0000	5.8849
Total	**1.0482**	**0.0422**	**0.0424**	**7.0000e-005**		**2.9600e-003**	**2.9600e-003**		**2.9600e-003**	**2.9600e-003**	**0.0000**	**5.8725**	**5.8725**	**5.0000e-004**	**0.0000**	**5.8849**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2019

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	5.9400e-003	4.9800e-003	0.0497	1.1000e-004	0.0113	8.0000e-005	0.0114	3.0000e-003	7.0000e-005	3.0700e-003	0.0000	10.3112	10.3112	4.3000e-004	3.7000e-004	10.4330
Total	**5.9400e-003**	**4.9800e-003**	**0.0497**	**1.1000e-004**	**0.0113**	**8.0000e-005**	**0.0114**	**3.0000e-003**	**7.0000e-005**	**3.0700e-003**	**0.0000**	**10.3112**	**10.3112**	**4.3000e-004**	**3.7000e-004**	**10.4330**

3.6 Architectural Coating - 2020

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					
Archit. Coating	3.9418					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0211	0.1465	0.1593	2.6000e-004		9.6500e-003	9.6500e-003		9.6500e-003	9.6500e-003	0.0000	22.2133	22.2133	1.7200e-003	0.0000	22.2563
Total	**3.9629**	**0.1465**	**0.1593**	**2.6000e-004**		**9.6500e-003**	**9.6500e-003**		**9.6500e-003**	**9.6500e-003**	**0.0000**	**22.2133**	**22.2133**	**1.7200e-003**	**0.0000**	**22.2563**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2020

Unmitigated 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	0.0203	0.0162	0.1678	4.1000e-004	0.0428	2.8000e-004	0.0431	0.0114	2.6000e-004	0.0116	0.0000	37.8800	37.8800	1.4400e-003	1.2700e-003	38.2954
Total	**0.0203**	**0.0162**	**0.1678**	**4.1000e-004**	**0.0428**	**2.8000e-004**	**0.0431**	**0.0114**	**2.6000e-004**	**0.0116**	**0.0000**	**37.8800**	**37.8800**	**1.4400e-003**	**1.2700e-003**	**38.2954**

Mitigated 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					
Archit. Coating	3.9418					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0211	0.1465	0.1593	2.6000e-004		9.6500e-003	9.6500e-003		9.6500e-003	9.6500e-003	0.0000	22.2133	22.2133	1.7200e-003	0.0000	22.2563
Total	**3.9629**	**0.1465**	**0.1593**	**2.6000e-004**		**9.6500e-003**	**9.6500e-003**		**9.6500e-003**	**9.6500e-003**	**0.0000**	**22.2133**	**22.2133**	**1.7200e-003**	**0.0000**	**22.2563**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2020

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	0.0203	0.0162	0.1678	4.1000e-004	0.0428	2.8000e-004	0.0431	0.0114	2.6000e-004	0.0116	0.0000	37.8800	37.8800	1.4400e-003	1.2700e-003	38.2954
Total	**0.0203**	**0.0162**	**0.1678**	**4.1000e-004**	**0.0428**	**2.8000e-004**	**0.0431**	**0.0114**	**2.6000e-004**	**0.0116**	**0.0000**	**37.8800**	**37.8800**	**1.4400e-003**	**1.2700e-003**	**38.2954**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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					
Mitigated	4.1236	11.5368	43.2353	0.0454	3.0554	0.2722	3.3276	0.8200	0.2594	1.0794	0.0000	4,206.6661	4,206.6661	0.4393	0.3624	4,325.6295
Unmitigated	4.1236	11.5368	43.2353	0.0454	3.0554	0.2722	3.3276	0.8200	0.2594	1.0794	0.0000	4,206.6661	4,206.6661	0.4393	0.3624	4,325.6295

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	8.40	21.11	23.59	26,441	26,441
Single Family Housing	2,784.80	2,814.30	2522.25	8,001,452	8,001,452
Total	2,793.20	2,835.41	2,545.84	8,027,893	8,027,893

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	46.40	16.40	37.20	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.432435	0.061153	0.166286	0.195483	0.048748	0.010779	0.015542	0.029798	0.000916	0.000247	0.027292	0.001795	0.009527
Single Family Housing	0.432435	0.061153	0.166286	0.195483	0.048748	0.010779	0.015542	0.029798	0.000916	0.000247	0.027292	0.001795	0.009527

5.0 Energy Detail

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Historical Energy Use: Y

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	556.6503	556.6503	0.0351	4.2500e-003	558.7930
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	556.6503	556.6503	0.0351	4.2500e-003	558.7930
NaturalGas Mitigated	0.0378	0.3230	0.1375	2.0600e-003		0.0261	0.0261		0.0261	0.0261	0.0000	374.0851	374.0851	7.1700e-003	6.8600e-003	376.3081
NaturalGas Unmitigated	0.0378	0.3230	0.1375	2.0600e-003		0.0261	0.0261		0.0261	0.0261	0.0000	374.0851	374.0851	7.1700e-003	6.8600e-003	376.3081

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	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										MT/yr					
City Park	0	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
Single Family Housing	7.01009e+006	0.0378	0.3230	0.1375	2.0600e-003		0.0261	0.0261		0.0261	0.0261	0.0000	374.0851	374.0851	7.1700e-003	6.8600e-003	376.3081
Total		**0.0378**	**0.3230**	**0.1375**	**2.0600e-003**		**0.0261**	**0.0261**		**0.0261**	**0.0261**	**0.0000**	**374.0851**	**374.0851**	**7.1700e-003**	**6.8600e-003**	**376.3081**

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										MT/yr					
City Park	0	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
Single Family Housing	7.01009e+006	0.0378	0.3230	0.1375	2.0600e-003		0.0261	0.0261		0.0261	0.0261	0.0000	374.0851	374.0851	7.1700e-003	6.8600e-003	376.3081
Total		**0.0378**	**0.3230**	**0.1375**	**2.0600e-003**		**0.0261**	**0.0261**		**0.0261**	**0.0261**	**0.0000**	**374.0851**	**374.0851**	**7.1700e-003**	**6.8600e-003**	**376.3081**

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			
City Park	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2.34199e+006	556.6503	0.0351	4.2500e-003	558.7930
Total		**556.6503**	**0.0351**	**4.2500e-003**	**558.7930**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2.34199e+006	556.6503	0.0351	4.2500e-003	558.7930
Total		**556.6503**	**0.0351**	**4.2500e-003**	**558.7930**

6.0 Area Detail

S&S Homes 2005 - Kern-San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.1 Mitigation Measures Area

	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					
Mitigated	3.0054	0.1383	2.3781	8.2000e-004		0.0205	0.0205		0.0205	0.0205	0.0000	131.3744	131.3744	6.8100e-003	2.3400e-003	132.2428
Unmitigated	3.0054	0.1383	2.3781	8.2000e-004		0.0205	0.0205		0.0205	0.0205	0.0000	131.3744	131.3744	6.8100e-003	2.3400e-003	132.2428

S&S Homes 2005 - Kern-San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	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	0.8307					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.0782					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0129	0.1104	0.0470	7.0000e-004		8.9200e-003	8.9200e-003		8.9200e-003	8.9200e-003	0.0000	127.7962	127.7962	2.4500e-003	2.3400e-003	128.5556
Landscaping	0.0836	0.0279	2.3312	1.2000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	3.5782	3.5782	4.3600e-003	0.0000	3.6872
Total	**3.0054**	**0.1383**	**2.3781**	**8.2000e-004**		**0.0205**	**0.0205**		**0.0205**	**0.0205**	**0.0000**	**131.3744**	**131.3744**	**6.8100e-003**	**2.3400e-003**	**132.2428**

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	0.8307					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.0782					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0129	0.1104	0.0470	7.0000e-004		8.9200e-003	8.9200e-003		8.9200e-003	8.9200e-003	0.0000	127.7962	127.7962	2.4500e-003	2.3400e-003	128.5556
Landscaping	0.0836	0.0279	2.3312	1.2000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	3.5782	3.5782	4.3600e-003	0.0000	3.6872
Total	**3.0054**	**0.1383**	**2.3781**	**8.2000e-004**		**0.0205**	**0.0205**		**0.0205**	**0.0205**	**0.0000**	**131.3744**	**131.3744**	**6.8100e-003**	**2.3400e-003**	**132.2428**

7.0 Water Detail

7.1 Mitigation Measures Water

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	51.5723	0.6292	0.0151	71.8117
Unmitigated	51.5723	0.6292	0.0151	71.8117

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 12.8323	10.6750	6.7000e-004	8.0000e-005	10.7161
Single Family Housing	19.2204 / 12.1172	40.8973	0.6285	0.0151	61.0957
Total		**51.5723**	**0.6292**	**0.0151**	**71.8117**

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			
City Park	0 / 12.8323	10.6750	6.7000e-004	8.0000e-005	10.7161
Single Family Housing	19.2204 / 12.1172	40.8973	0.6285	0.0151	61.0957
Total		**51.5723**	**0.6292**	**0.0151**	**71.8117**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	78.0054	4.6100	0.0000	193.2550
Unmitigated	78.0054	4.6100	0.0000	193.2550

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.93	0.1888	0.0112	0.0000	0.4677
Single Family Housing	383.35	77.8166	4.5988	0.0000	192.7873
Total		**78.0054**	**4.6100**	**0.0000**	**193.2550**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.93	0.1888	0.0112	0.0000	0.4677
Single Family Housing	383.35	77.8166	4.5988	0.0000	192.7873
Total		**78.0054**	**4.6100**	**0.0000**	**193.2550**

9.0 Operational Offroad

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

S&S Homes 2005 - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

S&S Homes 2005

Kern-San Joaquin County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	295.00	Dwelling Unit	94.93	531,000.00	935
City Park	10.77	Acre	10.77	469,141.20	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	32
Climate Zone	7			**Operational Year**	2010
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	524	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PGE historical data

Land Use - Acreage Based on Tract Map
Population based on 3.17 x 295

Construction Phase -

Energy Use - Historical Pge data

Table Name	Column Name	Default Value	New Value
tblEnergyUse	NT24E	5,099.35	6,155.97
tblEnergyUse	NT24NG	6,069.60	4,769.00
tblEnergyUse	Refrigerator	1,251.38	827.00
tblEnergyUse	T24E	988.10	174.14
tblEnergyUse	T24NG	26,247.02	18,994.02

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblLandUse	LotAcreage	95.78	94.93
tblLandUse	Population	844.00	935.00
tblProjectCharacteristics	CO2IntensityFactor	203.98	524
tblWoodstoves	NumberCatalytic	94.93	0.00
tblWoodstoves	NumberNoncatalytic	94.93	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

S&S Homes 2005 - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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	lb/day										lb/day					
2005	12.4194	103.3407	49.9946	0.6860	19.8049	5.2387	24.1237	10.1417	5.2384	14.4603	0.0000	7,435.9220	7,435.9220	1.1115	0.0216	7,470.1407
2006	12.4194	103.3407	49.9946	0.6860	9.3679	5.2387	14.6066	3.6973	5.2384	8.9357	0.0000	7,435.9220	7,435.9220	1.1115	0.0216	7,470.1407
2007	16.0179	103.3407	89.8956	0.6860	9.3679	5.2387	14.6066	3.6973	5.2384	8.9357	0.0000	9,204.7460	9,204.7460	1.2745	0.7644	9,464.3825
2008	16.0179	75.5897	89.8956	0.5754	3.2215	4.6595	7.8810	0.8711	4.6066	5.4777	0.0000	9,204.7460	9,204.7460	1.2745	0.7644	9,464.3825
2009	16.0179	75.5897	89.8956	0.5754	3.2215	4.6595	7.8810	0.8711	4.6066	5.4777	0.0000	9,204.7460	9,204.7460	1.2745	0.7644	9,464.3825
2010	10.8696	59.9514	67.1671	0.0856	3.2214	3.5373	6.7587	0.8711	3.3506	4.2217	0.0000	8,809.4938	8,809.4938	1.1645	0.6345	9,027.6828
2011	10.2816	57.2543	63.7695	0.0852	3.2213	3.4022	6.6236	0.8711	3.2211	4.0922	0.0000	8,749.5846	8,749.5846	1.1231	0.6165	8,961.3808
2012	9.6154	54.5631	59.4530	0.0847	3.2213	3.2535	6.4747	0.8711	3.0767	3.9478	0.0000	8,706.1696	8,706.1696	1.0730	0.5988	8,911.4482
2013	8.8449	51.1927	54.8226	0.0836	3.2213	3.0234	6.2447	0.8711	2.8564	3.7275	0.0000	8,569.3227	8,569.3227	1.0189	0.5760	8,766.4488
2014	7.9185	47.3906	49.5364	0.0828	3.2213	2.7366	5.9578	0.8711	2.5829	3.4539	0.0000	8,464.9670	8,464.9670	0.9614	0.5546	8,654.2604
2015	7.2311	44.3803	45.4194	0.0818	3.2213	2.5467	5.7681	0.8711	2.4008	3.2719	0.0000	8,363.9561	8,363.9561	0.9147	0.5332	8,545.7115
2016	6.5349	41.3607	41.6181	0.0808	3.2214	2.3344	5.5558	0.8711	2.1987	3.0698	0.0000	8,241.6914	8,241.6914	0.8709	0.5119	8,416.0173
2017	5.7886	37.7400	37.9847	0.0797	3.2214	2.0688	5.2902	0.8711	1.9473	2.8184	0.0000	8,099.1812	8,099.1812	0.8277	0.4928	8,266.7187
2018	5.0264	33.6143	34.8349	0.0786	3.2214	1.7397	4.9611	0.8711	1.6387	2.5098	0.0000	7,957.8823	7,957.8823	0.7930	0.4763	8,119.6533
2019	45.8814	15.2937	15.2944	0.0241	0.5011	0.8254	0.9486	0.1329	0.7594	0.7921	0.0000	2,390.1030	2,390.1030	0.7191	0.0171	2,409.3301
2020	45.8266	1.8574	4.1097	8.1700e-003	0.5011	0.1142	0.6153	0.1329	0.1139	0.2468	0.0000	806.9677	806.9677	0.0397	0.0154	812.5559
Maximum	**45.8814**	**103.3407**	**89.8956**	**0.6860**	**19.8049**	**5.2387**	**24.1237**	**10.1417**	**5.2384**	**14.4603**	**0.0000**	**9,204.7460**	**9,204.7460**	**1.2745**	**0.7644**	**9,464.3825**

2.1 Overall Construction (Maximum Daily Emission)

S&S Homes 2005 - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	lb/day										lb/day					
2005	12.4194	103.3407	49.9946	0.6860	19.8049	5.2387	24.1237	10.1417	5.2384	14.4603	0.0000	7,435.9220	7,435.9220	1.1115	0.0216	7,470.1407
2006	12.4194	103.3407	49.9946	0.6860	9.3679	5.2387	14.6066	3.6973	5.2384	8.9357	0.0000	7,435.9220	7,435.9220	1.1115	0.0216	7,470.1407
2007	16.0179	103.3407	89.8956	0.6860	9.3679	5.2387	14.6066	3.6973	5.2384	8.9357	0.0000	9,204.7460	9,204.7460	1.2745	0.7644	9,464.3825
2008	16.0179	75.5897	89.8956	0.5754	3.2215	4.6595	7.8810	0.8711	4.6066	5.4777	0.0000	9,204.7460	9,204.7460	1.2745	0.7644	9,464.3825
2009	16.0179	75.5897	89.8956	0.5754	3.2215	4.6595	7.8810	0.8711	4.6066	5.4777	0.0000	9,204.7460	9,204.7460	1.2745	0.7644	9,464.3825
2010	10.8696	59.9514	67.1671	0.0856	3.2214	3.5373	6.7587	0.8711	3.3506	4.2217	0.0000	8,809.4938	8,809.4938	1.1645	0.6345	9,027.6828
2011	10.2816	57.2543	63.7695	0.0852	3.2213	3.4022	6.6236	0.8711	3.2211	4.0922	0.0000	8,749.5846	8,749.5846	1.1231	0.6165	8,961.3808
2012	9.6154	54.5631	59.4530	0.0847	3.2213	3.2535	6.4747	0.8711	3.0767	3.9478	0.0000	8,706.1696	8,706.1696	1.0730	0.5988	8,911.4482
2013	8.8449	51.1927	54.8226	0.0836	3.2213	3.0234	6.2447	0.8711	2.8564	3.7275	0.0000	8,569.3227	8,569.3227	1.0189	0.5760	8,766.4488
2014	7.9185	47.3906	49.5364	0.0828	3.2213	2.7366	5.9578	0.8711	2.5829	3.4539	0.0000	8,464.9670	8,464.9670	0.9614	0.5546	8,654.2604
2015	7.2311	44.3803	45.4194	0.0818	3.2213	2.5467	5.7681	0.8711	2.4008	3.2719	0.0000	8,363.9561	8,363.9561	0.9147	0.5332	8,545.7115
2016	6.5349	41.3607	41.6181	0.0808	3.2214	2.3344	5.5558	0.8711	2.1987	3.0698	0.0000	8,241.6914	8,241.6914	0.8709	0.5119	8,416.0173
2017	5.7886	37.7400	37.9847	0.0797	3.2214	2.0688	5.2902	0.8711	1.9473	2.8184	0.0000	8,099.1812	8,099.1812	0.8277	0.4928	8,266.7187
2018	5.0264	33.6143	34.8349	0.0786	3.2214	1.7397	4.9611	0.8711	1.6387	2.5098	0.0000	7,957.8823	7,957.8823	0.7930	0.4763	8,119.6533
2019	45.8814	15.2937	15.2944	0.0241	0.5011	0.8254	0.9486	0.1329	0.7594	0.7921	0.0000	2,390.1030	2,390.1030	0.7191	0.0171	2,409.3301
2020	45.8266	1.8574	4.1097	8.1700e-003	0.5011	0.1142	0.6153	0.1329	0.1139	0.2468	0.0000	806.9677	806.9677	0.0397	0.0154	812.5559
Maximum	**45.8814**	**103.3407**	**89.8956**	**0.6860**	**19.8049**	**5.2387**	**24.1237**	**10.1417**	**5.2384**	**14.4603**	**0.0000**	**9,204.7460**	**9,204.7460**	**1.2745**	**0.7644**	**9,464.3825**

S&S Homes 2005 - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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	N20	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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated 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	lb/day										lb/day					
Area	17.1831	3.0019	27.0473	0.0185		0.3457	0.3457		0.3457	0.3457	0.0000	3,479.7076	3,479.7076	0.1193	0.0630	3,501.4605
Energy	0.2071	1.7699	0.7532	0.0113		0.1431	0.1431		0.1431	0.1431		2,259.4970	2,259.4970	0.0433	0.0414	2,272.9241
Mobile	27.4090	61.0786	275.0134	0.2733	17.5473	1.5346	19.0819	4.7020	1.4625	6.1645		27,913.6320	27,913.6320	2.6681	2.1726	28,627.7802
Total	**44.7992**	**65.8505**	**302.8139**	**0.3030**	**17.5473**	**2.0234**	**19.5707**	**4.7020**	**1.9513**	**6.6533**	**0.0000**	**33,652.8367**	**33,652.8367**	**2.8306**	**2.2771**	**34,402.1648**

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	lb/day										lb/day					
Area	17.1831	3.0019	27.0473	0.0185		0.3457	0.3457		0.3457	0.3457	0.0000	3,479.7076	3,479.7076	0.1193	0.0630	3,501.4605
Energy	0.2071	1.7699	0.7532	0.0113		0.1431	0.1431		0.1431	0.1431		2,259.4970	2,259.4970	0.0433	0.0414	2,272.9241
Mobile	27.4090	61.0786	275.0134	0.2733	17.5473	1.5346	19.0819	4.7020	1.4625	6.1645		27,913.6320	27,913.6320	2.6681	2.1726	28,627.7802
Total	**44.7992**	**65.8505**	**302.8139**	**0.3030**	**17.5473**	**2.0234**	**19.5707**	**4.7020**	**1.9513**	**6.6533**	**0.0000**	**33,652.8367**	**33,652.8367**	**2.8306**	**2.2771**	**34,402.1648**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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	N20	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	Site Preparation	Site Preparation	6/14/2005	11/28/2005	5	120	
2	Grading	Grading	11/29/2005	2/5/2007	5	310	
3	Building Construction	Building Construction	2/6/2007	12/24/2018	5	3100	
4	Paving	Paving	12/25/2018	10/28/2019	5	220	
5	Architectural Coating	Architectural Coating	10/29/2019	8/31/2020	5	220	

Acres of Grading (Site Preparation Phase): 180

Acres of Grading (Grading Phase): 930

Acres of Paving: 0

Residential Indoor: 1,075,275; Residential Outdoor: 358,425; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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
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
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

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
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	303.00	108.00	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	61.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2005

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	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	9.3315	69.9253	26.3154	0.4499		4.3151	4.3151		4.3151	4.3151		4,409.7537	4,409.7537	0.8384		4,430.7146
Total	**9.3315**	**69.9253**	**26.3154**	**0.4499**	**19.6570**	**4.3151**	**23.9721**	**10.1025**	**4.3151**	**14.4176**		**4,409.7537**	**4,409.7537**	**0.8384**		**4,430.7146**

Unmitigated 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	lb/day										lb/day					
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
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
Worker	0.3352	0.3389	3.5158	1.9900e-003	0.1479	3.7600e-003	0.1516	0.0392	3.4800e-003	0.0427		200.5265	200.5265	0.0268	0.0194	206.9857
Total	**0.3352**	**0.3389**	**3.5158**	**1.9900e-003**	**0.1479**	**3.7600e-003**	**0.1516**	**0.0392**	**3.4800e-003**	**0.0427**		**200.5265**	**200.5265**	**0.0268**	**0.0194**	**206.9857**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2005

Mitigated 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	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	9.3315	69.9253	26.3154	0.4499		4.3151	4.3151		4.3151	4.3151	0.0000	4,409.7537	4,409.7537	0.8384		4,430.7146
Total	**9.3315**	**69.9253**	**26.3154**	**0.4499**	**19.6570**	**4.3151**	**23.9721**	**10.1025**	**4.3151**	**14.4176**	**0.0000**	**4,409.7537**	**4,409.7537**	**0.8384**		**4,430.7146**

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	lb/day										lb/day					
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
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
Worker	0.3352	0.3389	3.5158	1.9900e-003	0.1479	3.7600e-003	0.1516	0.0392	3.4800e-003	0.0427		200.5265	200.5265	0.0268	0.0194	206.9857
Total	**0.3352**	**0.3389**	**3.5158**	**1.9900e-003**	**0.1479**	**3.7600e-003**	**0.1516**	**0.0392**	**3.4800e-003**	**0.0427**		**200.5265**	**200.5265**	**0.0268**	**0.0194**	**206.9857**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2005

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	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	12.0469	102.9642	46.0882	0.6838		5.2345	5.2345		5.2345	5.2345		7,213.1148	7,213.1148	1.0817		7,240.1567
Total	**12.0469**	**102.9642**	**46.0882**	**0.6838**	**9.2036**	**5.2345**	**14.4381**	**3.6538**	**5.2345**	**8.8883**		**7,213.1148**	**7,213.1148**	**1.0817**		**7,240.1567**

Unmitigated 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	lb/day										lb/day					
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
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
Worker	0.3725	0.3765	3.9065	2.2100e-003	0.1643	4.1800e-003	0.1685	0.0436	3.8700e-003	0.0475		222.8073	222.8073	0.0298	0.0216	229.9841
Total	**0.3725**	**0.3765**	**3.9065**	**2.2100e-003**	**0.1643**	**4.1800e-003**	**0.1685**	**0.0436**	**3.8700e-003**	**0.0475**		**222.8073**	**222.8073**	**0.0298**	**0.0216**	**229.9841**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2005

Mitigated 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	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	12.0469	102.9642	46.0882	0.6838		5.2345	5.2345		5.2345	5.2345	0.0000	7,213.1148	7,213.1148	1.0817		7,240.1567
Total	**12.0469**	**102.9642**	**46.0882**	**0.6838**	**9.2036**	**5.2345**	**14.4381**	**3.6538**	**5.2345**	**8.8883**	**0.0000**	**7,213.1148**	**7,213.1148**	**1.0817**		**7,240.1567**

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	lb/day										lb/day					
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
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
Worker	0.3725	0.3765	3.9065	2.2100e-003	0.1643	4.1800e-003	0.1685	0.0436	3.8700e-003	0.0475		222.8073	222.8073	0.0298	0.0216	229.9841
Total	**0.3725**	**0.3765**	**3.9065**	**2.2100e-003**	**0.1643**	**4.1800e-003**	**0.1685**	**0.0436**	**3.8700e-003**	**0.0475**		**222.8073**	**222.8073**	**0.0298**	**0.0216**	**229.9841**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2006

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	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	12.0469	102.9642	46.0882	0.6838		5.2345	5.2345		5.2345	5.2345		7,213.1148	7,213.1148	1.0817		7,240.1567
Total	**12.0469**	**102.9642**	**46.0882**	**0.6838**	**9.2036**	**5.2345**	**14.4381**	**3.6538**	**5.2345**	**8.8883**		**7,213.1148**	**7,213.1148**	**1.0817**		**7,240.1567**

Unmitigated 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	lb/day										lb/day					
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
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
Worker	0.3725	0.3765	3.9065	2.2100e-003	0.1643	4.1800e-003	0.1685	0.0436	3.8700e-003	0.0475		222.8073	222.8073	0.0298	0.0216	229.9841
Total	**0.3725**	**0.3765**	**3.9065**	**2.2100e-003**	**0.1643**	**4.1800e-003**	**0.1685**	**0.0436**	**3.8700e-003**	**0.0475**		**222.8073**	**222.8073**	**0.0298**	**0.0216**	**229.9841**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2006

Mitigated 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	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	12.0469	102.9642	46.0882	0.6838		5.2345	5.2345		5.2345	5.2345	0.0000	7,213.1148	7,213.1148	1.0817		7,240.1567
Total	**12.0469**	**102.9642**	**46.0882**	**0.6838**	**9.2036**	**5.2345**	**14.4381**	**3.6538**	**5.2345**	**8.8883**	**0.0000**	**7,213.1148**	**7,213.1148**	**1.0817**		**7,240.1567**

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	lb/day										lb/day					
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
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
Worker	0.3725	0.3765	3.9065	2.2100e-003	0.1643	4.1800e-003	0.1685	0.0436	3.8700e-003	0.0475		222.8073	222.8073	0.0298	0.0216	229.9841
Total	**0.3725**	**0.3765**	**3.9065**	**2.2100e-003**	**0.1643**	**4.1800e-003**	**0.1685**	**0.0436**	**3.8700e-003**	**0.0475**		**222.8073**	**222.8073**	**0.0298**	**0.0216**	**229.9841**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2007

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	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	12.0469	102.9642	46.0882	0.6838		5.2345	5.2345		5.2345	5.2345		7,213.1148	7,213.1148	1.0817		7,240.1567
Total	**12.0469**	**102.9642**	**46.0882**	**0.6838**	**9.2036**	**5.2345**	**14.4381**	**3.6538**	**5.2345**	**8.8883**		**7,213.1148**	**7,213.1148**	**1.0817**		**7,240.1567**

Unmitigated 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	lb/day										lb/day					
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
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
Worker	0.3725	0.3765	3.9065	2.2100e-003	0.1643	4.1800e-003	0.1685	0.0436	3.8700e-003	0.0475		222.8073	222.8073	0.0298	0.0216	229.9841
Total	**0.3725**	**0.3765**	**3.9065**	**2.2100e-003**	**0.1643**	**4.1800e-003**	**0.1685**	**0.0436**	**3.8700e-003**	**0.0475**		**222.8073**	**222.8073**	**0.0298**	**0.0216**	**229.9841**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2007

Mitigated 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	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	12.0469	102.9642	46.0882	0.6838		5.2345	5.2345		5.2345	5.2345	0.0000	7,213.1148	7,213.1148	1.0817		7,240.1567
Total	**12.0469**	**102.9642**	**46.0882**	**0.6838**	**9.2036**	**5.2345**	**14.4381**	**3.6538**	**5.2345**	**8.8883**	**0.0000**	**7,213.1148**	**7,213.1148**	**1.0817**		**7,240.1567**

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	lb/day										lb/day					
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
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
Worker	0.3725	0.3765	3.9065	2.2100e-003	0.1643	4.1800e-003	0.1685	0.0436	3.8700e-003	0.0475		222.8073	222.8073	0.0298	0.0216	229.9841
Total	**0.3725**	**0.3765**	**3.9065**	**2.2100e-003**	**0.1643**	**4.1800e-003**	**0.1685**	**0.0436**	**3.8700e-003**	**0.0475**		**222.8073**	**222.8073**	**0.0298**	**0.0216**	**229.9841**

S&S Homes 2005 - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2007

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	lb/day										lb/day					
Off-Road	7.5157	41.4450	20.3882	0.3041		3.4797	3.4797		3.4797	3.4797		2,897.5468	2,897.5468	0.6762		2,914.4505
Total	**7.5157**	**41.4450**	**20.3882**	**0.3041**		**3.4797**	**3.4797**		**3.4797**	**3.4797**		**2,897.5468**	**2,897.5468**	**0.6762**		**2,914.4505**

Unmitigated 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	lb/day										lb/day					
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
Vendor	2.8595	28.4407	10.3246	0.2379	0.7324	1.1166	1.8490	0.2109	1.0683	1.2792		2,931.6695	2,931.6695	0.1473	0.4373	3,065.6734
Worker	5.6427	5.7041	59.1829	0.0335	2.4891	0.0633	2.5523	0.6602	0.0587	0.7189		3,375.5298	3,375.5298	0.4510	0.3270	3,484.2585
Total	**8.5022**	**34.1447**	**69.5075**	**0.2713**	**3.2215**	**1.1799**	**4.4013**	**0.8711**	**1.1269**	**1.9980**		**6,307.1993**	**6,307.1993**	**0.5983**	**0.7644**	**6,549.9320**

S&S Homes 2005 - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2007

Mitigated 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	lb/day										lb/day					
Off-Road	7.5157	41.4450	20.3882	0.3041		3.4797	3.4797		3.4797	3.4797	0.0000	2,897.5468	2,897.5468	0.6762		2,914.4505
Total	**7.5157**	**41.4450**	**20.3882**	**0.3041**		**3.4797**	**3.4797**		**3.4797**	**3.4797**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.6762**		**2,914.4505**

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	lb/day										lb/day					
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
Vendor	2.8595	28.4407	10.3246	0.2379	0.7324	1.1166	1.8490	0.2109	1.0683	1.2792		2,931.6695	2,931.6695	0.1473	0.4373	3,065.6734
Worker	5.6427	5.7041	59.1829	0.0335	2.4891	0.0633	2.5523	0.6602	0.0587	0.7189		3,375.5298	3,375.5298	0.4510	0.3270	3,484.2585
Total	**8.5022**	**34.1447**	**69.5075**	**0.2713**	**3.2215**	**1.1799**	**4.4013**	**0.8711**	**1.1269**	**1.9980**		**6,307.1993**	**6,307.1993**	**0.5983**	**0.7644**	**6,549.9320**

S&S Homes 2005 - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2008

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	lb/day										lb/day					
Off-Road	7.5157	41.4450	20.3882	0.3041		3.4797	3.4797		3.4797	3.4797		2,897.5468	2,897.5468	0.6762		2,914.4505
Total	**7.5157**	**41.4450**	**20.3882**	**0.3041**		**3.4797**	**3.4797**		**3.4797**	**3.4797**		**2,897.5468**	**2,897.5468**	**0.6762**		**2,914.4505**

Unmitigated 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	lb/day										lb/day					
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
Vendor	2.8595	28.4407	10.3246	0.2379	0.7324	1.1166	1.8490	0.2109	1.0683	1.2792		2,931.6695	2,931.6695	0.1473	0.4373	3,065.6734
Worker	5.6427	5.7041	59.1829	0.0335	2.4891	0.0633	2.5523	0.6602	0.0587	0.7189		3,375.5298	3,375.5298	0.4510	0.3270	3,484.2585
Total	**8.5022**	**34.1447**	**69.5075**	**0.2713**	**3.2215**	**1.1799**	**4.4013**	**0.8711**	**1.1269**	**1.9980**		**6,307.1993**	**6,307.1993**	**0.5983**	**0.7644**	**6,549.9320**

S&S Homes 2005 - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2008

Mitigated 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	lb/day										lb/day					
Off-Road	7.5157	41.4450	20.3882	0.3041		3.4797	3.4797		3.4797	3.4797	0.0000	2,897.5468	2,897.5468	0.6762		2,914.4505
Total	**7.5157**	**41.4450**	**20.3882**	**0.3041**		**3.4797**	**3.4797**		**3.4797**	**3.4797**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.6762**		**2,914.4505**

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	lb/day										lb/day					
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
Vendor	2.8595	28.4407	10.3246	0.2379	0.7324	1.1166	1.8490	0.2109	1.0683	1.2792		2,931.6695	2,931.6695	0.1473	0.4373	3,065.6734
Worker	5.6427	5.7041	59.1829	0.0335	2.4891	0.0633	2.5523	0.6602	0.0587	0.7189		3,375.5298	3,375.5298	0.4510	0.3270	3,484.2585
Total	**8.5022**	**34.1447**	**69.5075**	**0.2713**	**3.2215**	**1.1799**	**4.4013**	**0.8711**	**1.1269**	**1.9980**		**6,307.1993**	**6,307.1993**	**0.5983**	**0.7644**	**6,549.9320**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2009

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	lb/day										lb/day					
Off-Road	7.5157	41.4450	20.3882	0.3041		3.4797	3.4797		3.4797	3.4797		2,897.5468	2,897.5468	0.6762		2,914.4505
Total	**7.5157**	**41.4450**	**20.3882**	**0.3041**		**3.4797**	**3.4797**		**3.4797**	**3.4797**		**2,897.5468**	**2,897.5468**	**0.6762**		**2,914.4505**

Unmitigated 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	lb/day										lb/day					
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
Vendor	2.8595	28.4407	10.3246	0.2379	0.7324	1.1166	1.8490	0.2109	1.0683	1.2792		2,931.6695	2,931.6695	0.1473	0.4373	3,065.6734
Worker	5.6427	5.7041	59.1829	0.0335	2.4891	0.0633	2.5523	0.6602	0.0587	0.7189		3,375.5298	3,375.5298	0.4510	0.3270	3,484.2585
Total	**8.5022**	**34.1447**	**69.5075**	**0.2713**	**3.2215**	**1.1799**	**4.4013**	**0.8711**	**1.1269**	**1.9980**		**6,307.1993**	**6,307.1993**	**0.5983**	**0.7644**	**6,549.9320**

S&S Homes 2005 - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2009

Mitigated 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	lb/day										lb/day					
Off-Road	7.5157	41.4450	20.3882	0.3041		3.4797	3.4797		3.4797	3.4797	0.0000	2,897.5468	2,897.5468	0.6762		2,914.4505
Total	**7.5157**	**41.4450**	**20.3882**	**0.3041**		**3.4797**	**3.4797**		**3.4797**	**3.4797**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.6762**		**2,914.4505**

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	lb/day										lb/day					
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
Vendor	2.8595	28.4407	10.3246	0.2379	0.7324	1.1166	1.8490	0.2109	1.0683	1.2792		2,931.6695	2,931.6695	0.1473	0.4373	3,065.6734
Worker	5.6427	5.7041	59.1829	0.0335	2.4891	0.0633	2.5523	0.6602	0.0587	0.7189		3,375.5298	3,375.5298	0.4510	0.3270	3,484.2585
Total	**8.5022**	**34.1447**	**69.5075**	**0.2713**	**3.2215**	**1.1799**	**4.4013**	**0.8711**	**1.1269**	**1.9980**		**6,307.1993**	**6,307.1993**	**0.5983**	**0.7644**	**6,549.9320**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2010

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	lb/day										lb/day					
Off-Road	4.7235	35.7390	19.6189	0.0270		2.6150	2.6150		2.4692	2.4692		2,753.9809	2,753.9809	0.7458		2,772.6260
Total	**4.7235**	**35.7390**	**19.6189**	**0.0270**		**2.6150**	**2.6150**		**2.4692**	**2.4692**		**2,753.9809**	**2,753.9809**	**0.7458**		**2,772.6260**

Unmitigated 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	lb/day										lb/day					
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
Vendor	2.0816	20.6287	7.6342	0.0265	0.7323	0.8861	1.6184	0.2109	0.8477	1.0586		2,800.9349	2,800.9349	0.1080	0.4162	2,927.6538
Worker	4.0645	3.5837	39.9140	0.0321	2.4891	0.0363	2.5253	0.6602	0.0336	0.6938		3,254.5780	3,254.5780	0.3107	0.2183	3,327.4030
Total	**6.1461**	**24.2124**	**47.5482**	**0.0586**	**3.2214**	**0.9223**	**4.1437**	**0.8711**	**0.8813**	**1.7524**		**6,055.5129**	**6,055.5129**	**0.4187**	**0.6345**	**6,255.0568**

S&S Homes 2005 - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2010

Mitigated 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	lb/day										lb/day					
Off-Road	4.7235	35.7390	19.6189	0.0270		2.6150	2.6150		2.4692	2.4692	0.0000	2,753.9809	2,753.9809	0.7458		2,772.6260
Total	**4.7235**	**35.7390**	**19.6189**	**0.0270**		**2.6150**	**2.6150**		**2.4692**	**2.4692**	**0.0000**	**2,753.9809**	**2,753.9809**	**0.7458**		**2,772.6260**

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	lb/day										lb/day					
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
Vendor	2.0816	20.6287	7.6342	0.0265	0.7323	0.8861	1.6184	0.2109	0.8477	1.0586		2,800.9349	2,800.9349	0.1080	0.4162	2,927.6538
Worker	4.0645	3.5837	39.9140	0.0321	2.4891	0.0363	2.5253	0.6602	0.0336	0.6938		3,254.5780	3,254.5780	0.3107	0.2183	3,327.4030
Total	**6.1461**	**24.2124**	**47.5482**	**0.0586**	**3.2214**	**0.9223**	**4.1437**	**0.8711**	**0.8813**	**1.7524**		**6,055.5129**	**6,055.5129**	**0.4187**	**0.6345**	**6,255.0568**

S&S Homes 2005 - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2011

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	lb/day										lb/day					
Off-Road	4.5267	34.7529	19.4761	0.0270		2.5450	2.5450		2.4020	2.4020		2,747.5797	2,747.5797	0.7333		2,765.9118
Total	**4.5267**	**34.7529**	**19.4761**	**0.0270**		**2.5450**	**2.5450**		**2.4020**	**2.4020**		**2,747.5797**	**2,747.5797**	**0.7333**		**2,765.9118**

Unmitigated 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	lb/day										lb/day					
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
Vendor	1.9091	19.2125	7.1728	0.0264	0.7322	0.8243	1.5565	0.2109	0.7886	0.9995		2,788.4355	2,788.4355	0.0992	0.4132	2,914.0387
Worker	3.8458	3.2889	37.1206	0.0318	2.4891	0.0330	2.5220	0.6602	0.0306	0.6908		3,213.5694	3,213.5694	0.2906	0.2033	3,281.4303
Total	**5.7549**	**22.5014**	**44.2935**	**0.0582**	**3.2213**	**0.8573**	**4.0786**	**0.8711**	**0.8192**	**1.6903**		**6,002.0050**	**6,002.0050**	**0.3898**	**0.6165**	**6,195.4690**

S&S Homes 2005 - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2011

Mitigated 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	lb/day										lb/day					
Off-Road	4.5267	34.7529	19.4761	0.0270		2.5450	2.5450		2.4020	2.4020	0.0000	2,747.5797	2,747.5797	0.7333		2,765.9118
Total	**4.5267**	**34.7529**	**19.4761**	**0.0270**		**2.5450**	**2.5450**		**2.4020**	**2.4020**	**0.0000**	**2,747.5797**	**2,747.5797**	**0.7333**		**2,765.9118**

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	lb/day										lb/day					
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
Vendor	1.9091	19.2125	7.1728	0.0264	0.7322	0.8243	1.5565	0.2109	0.7886	0.9995		2,788.4355	2,788.4355	0.0992	0.4132	2,914.0387
Worker	3.8458	3.2889	37.1206	0.0318	2.4891	0.0330	2.5220	0.6602	0.0306	0.6908		3,213.5694	3,213.5694	0.2906	0.2033	3,281.4303
Total	**5.7549**	**22.5014**	**44.2935**	**0.0582**	**3.2213**	**0.8573**	**4.0786**	**0.8711**	**0.8192**	**1.6903**		**6,002.0050**	**6,002.0050**	**0.3898**	**0.6165**	**6,195.4690**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2012

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	lb/day										lb/day					
Off-Road	4.3845	34.1922	19.4394	0.0270		2.4997	2.4997		2.3564	2.3564		2,742.4642	2,742.4642	0.7204		2,760.4745
Total	**4.3845**	**34.1922**	**19.4394**	**0.0270**		**2.4997**	**2.4997**		**2.3564**	**2.3564**		**2,742.4642**	**2,742.4642**	**0.7204**		**2,760.4745**

Unmitigated 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	lb/day										lb/day					
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
Vendor	1.6851	17.4259	6.3975	0.0264	0.7322	0.7244	1.4566	0.2109	0.6931	0.9039		2,789.5442	2,789.5442	0.0880	0.4131	2,914.8363
Worker	3.5459	2.9451	33.6161	0.0313	2.4891	0.0294	2.5185	0.6602	0.0273	0.6875		3,174.1612	3,174.1612	0.2646	0.1858	3,236.1375
Total	**5.2309**	**20.3710**	**40.0136**	**0.0577**	**3.2213**	**0.7538**	**3.9751**	**0.8711**	**0.7203**	**1.5914**		**5,963.7053**	**5,963.7053**	**0.3526**	**0.5988**	**6,150.9737**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2012

Mitigated 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	lb/day										lb/day					
Off-Road	4.3845	34.1922	19.4394	0.0270		2.4997	2.4997		2.3564	2.3564	0.0000	2,742.4642	2,742.4642	0.7204		2,760.4745
Total	**4.3845**	**34.1922**	**19.4394**	**0.0270**		**2.4997**	**2.4997**		**2.3564**	**2.3564**	**0.0000**	**2,742.4642**	**2,742.4642**	**0.7204**		**2,760.4745**

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	lb/day										lb/day					
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
Vendor	1.6851	17.4259	6.3975	0.0264	0.7322	0.7244	1.4566	0.2109	0.6931	0.9039		2,789.5442	2,789.5442	0.0880	0.4131	2,914.8363
Worker	3.5459	2.9451	33.6161	0.0313	2.4891	0.0294	2.5185	0.6602	0.0273	0.6875		3,174.1612	3,174.1612	0.2646	0.1858	3,236.1375
Total	**5.2309**	**20.3710**	**40.0136**	**0.0577**	**3.2213**	**0.7538**	**3.9751**	**0.8711**	**0.7203**	**1.5914**		**5,963.7053**	**5,963.7053**	**0.3526**	**0.5988**	**6,150.9737**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2013

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	lb/day										lb/day					
Off-Road	4.1593	33.0232	19.2651	0.0270		2.3874	2.3874		2.2487	2.2487		2,732.1439	2,732.1439	0.7060		2,749.7927
Total	**4.1593**	**33.0232**	**19.2651**	**0.0270**		**2.3874**	**2.3874**		**2.2487**	**2.2487**		**2,732.1439**	**2,732.1439**	**0.7060**		**2,749.7927**

Unmitigated 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	lb/day										lb/day					
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
Vendor	1.4349	15.5635	5.3959	0.0259	0.7322	0.6097	1.3418	0.2108	0.5833	0.7941		2,737.4266	2,737.4266	0.0747	0.4078	2,860.8305
Worker	3.2506	2.6060	30.1616	0.0307	2.4891	0.0264	2.5155	0.6602	0.0245	0.6847		3,099.7522	3,099.7522	0.2383	0.1682	3,155.8256
Total	**4.6855**	**18.1695**	**35.5575**	**0.0567**	**3.2213**	**0.6361**	**3.8573**	**0.8711**	**0.6077**	**1.4788**		**5,837.1788**	**5,837.1788**	**0.3129**	**0.5760**	**6,016.6561**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2013

Mitigated 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	lb/day										lb/day					
Off-Road	4.1593	33.0232	19.2651	0.0270		2.3874	2.3874		2.2487	2.2487	0.0000	2,732.1439	2,732.1439	0.7060		2,749.7927
Total	**4.1593**	**33.0232**	**19.2651**	**0.0270**		**2.3874**	**2.3874**		**2.2487**	**2.2487**	**0.0000**	**2,732.1439**	**2,732.1439**	**0.7060**		**2,749.7927**

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	lb/day										lb/day					
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
Vendor	1.4349	15.5635	5.3959	0.0259	0.7322	0.6097	1.3418	0.2108	0.5833	0.7941		2,737.4266	2,737.4266	0.0747	0.4078	2,860.8305
Worker	3.2506	2.6060	30.1616	0.0307	2.4891	0.0264	2.5155	0.6602	0.0245	0.6847		3,099.7522	3,099.7522	0.2383	0.1682	3,155.8256
Total	**4.6855**	**18.1695**	**35.5575**	**0.0567**	**3.2213**	**0.6361**	**3.8573**	**0.8711**	**0.6077**	**1.4788**		**5,837.1788**	**5,837.1788**	**0.3129**	**0.5760**	**6,016.6561**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2014

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	lb/day										lb/day					
Off-Road	3.8827	31.4296	18.9909	0.0269		2.2360	2.2360		2.1047	2.1047		2,720.7811	2,720.7811	0.6923		2,738.0882
Total	**3.8827**	**31.4296**	**18.9909**	**0.0269**		**2.2360**	**2.2360**		**2.1047**	**2.1047**		**2,720.7811**	**2,720.7811**	**0.6923**		**2,738.0882**

Unmitigated 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	lb/day										lb/day					
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
Vendor	1.1837	13.7161	4.5187	0.0257	0.7322	0.4773	1.2095	0.2109	0.4567	0.6675		2,711.4161	2,711.4161	0.0623	0.4038	2,833.3183
Worker	2.8521	2.2449	26.0268	0.0302	2.4891	0.0232	2.5123	0.6602	0.0215	0.6817		3,032.7698	3,032.7698	0.2068	0.1507	3,082.8538
Total	**4.0358**	**15.9610**	**30.5455**	**0.0558**	**3.2213**	**0.5006**	**3.7218**	**0.8711**	**0.4782**	**1.3492**		**5,744.1859**	**5,744.1859**	**0.2691**	**0.5546**	**5,916.1722**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2014

Mitigated 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	lb/day										lb/day					
Off-Road	3.8827	31.4296	18.9909	0.0269		2.2360	2.2360		2.1047	2.1047	0.0000	2,720.7811	2,720.7811	0.6923		2,738.0882
Total	**3.8827**	**31.4296**	**18.9909**	**0.0269**		**2.2360**	**2.2360**		**2.1047**	**2.1047**	**0.0000**	**2,720.7811**	**2,720.7811**	**0.6923**		**2,738.0882**

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	lb/day										lb/day					
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
Vendor	1.1837	13.7161	4.5187	0.0257	0.7322	0.4773	1.2095	0.2109	0.4567	0.6675		2,711.4161	2,711.4161	0.0623	0.4038	2,833.3183
Worker	2.8521	2.2449	26.0268	0.0302	2.4891	0.0232	2.5123	0.6602	0.0215	0.6817		3,032.7698	3,032.7698	0.2068	0.1507	3,082.8538
Total	**4.0358**	**15.9610**	**30.5455**	**0.0558**	**3.2213**	**0.5006**	**3.7218**	**0.8711**	**0.4782**	**1.3492**		**5,744.1859**	**5,744.1859**	**0.2691**	**0.5546**	**5,916.1722**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2015

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	lb/day										lb/day					
Off-Road	3.6734	30.2005	18.8039	0.0269		2.1245	2.1245		1.9976	1.9976		2,701.0442	2,701.0442	0.6782		2,718.0002
Total	**3.6734**	**30.2005**	**18.8039**	**0.0269**		**2.1245**	**2.1245**		**1.9976**	**1.9976**		**2,701.0442**	**2,701.0442**	**0.6782**		**2,718.0002**

Unmitigated 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	lb/day										lb/day					
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
Vendor	1.0408	12.2443	4.0142	0.0254	0.7323	0.4010	1.1333	0.2109	0.3837	0.5946		2,677.6370	2,677.6370	0.0552	0.3984	2,797.7458
Worker	2.5169	1.9355	22.6013	0.0295	2.4891	0.0212	2.5102	0.6602	0.0196	0.6798		2,985.2749	2,985.2749	0.1812	0.1348	3,029.9655
Total	**3.5577**	**14.1798**	**26.6155**	**0.0549**	**3.2213**	**0.4222**	**3.6435**	**0.8711**	**0.4032**	**1.2743**		**5,662.9119**	**5,662.9119**	**0.2364**	**0.5332**	**5,827.7113**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2015

Mitigated 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	lb/day										lb/day					
Off-Road	3.6734	30.2005	18.8039	0.0269		2.1245	2.1245		1.9976	1.9976	0.0000	2,701.0442	2,701.0442	0.6782		2,718.0002
Total	**3.6734**	**30.2005**	**18.8039**	**0.0269**		**2.1245**	**2.1245**		**1.9976**	**1.9976**	**0.0000**	**2,701.0442**	**2,701.0442**	**0.6782**		**2,718.0002**

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	lb/day										lb/day					
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
Vendor	1.0408	12.2443	4.0142	0.0254	0.7323	0.4010	1.1333	0.2109	0.3837	0.5946		2,677.6370	2,677.6370	0.0552	0.3984	2,797.7458
Worker	2.5169	1.9355	22.6013	0.0295	2.4891	0.0212	2.5102	0.6602	0.0196	0.6798		2,985.2749	2,985.2749	0.1812	0.1348	3,029.9655
Total	**3.5577**	**14.1798**	**26.6155**	**0.0549**	**3.2213**	**0.4222**	**3.6435**	**0.8711**	**0.4032**	**1.2743**		**5,662.9119**	**5,662.9119**	**0.2364**	**0.5332**	**5,827.7113**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2016

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	lb/day										lb/day					
Off-Road	3.4202	28.6715	18.5644	0.0269		1.9749	1.9749		1.8554	1.8554		2,680.6350	2,680.6350	0.6655		2,697.2713
Total	**3.4202**	**28.6715**	**18.5644**	**0.0269**		**1.9749**	**1.9749**		**1.8554**	**1.8554**		**2,680.6350**	**2,680.6350**	**0.6655**		**2,697.2713**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.9118	11.0423	3.5979	0.0250	0.7323	0.3403	1.0726	0.2109	0.3256	0.5364		2,642.4651	2,642.4651	0.0486	0.3922	2,760.5555
Worker	2.2030	1.6470	19.4557	0.0289	2.4891	0.0193	2.5083	0.6602	0.0178	0.6780		2,918.5913	2,918.5913	0.1569	0.1197	2,958.1905
Total	**3.1147**	**12.6892**	**23.0536**	**0.0539**	**3.2214**	**0.3595**	**3.5809**	**0.8711**	**0.3433**	**1.2144**		**5,561.0564**	**5,561.0564**	**0.2055**	**0.5119**	**5,718.7460**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2016

Mitigated 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	lb/day										lb/day					
Off-Road	3.4202	28.6715	18.5644	0.0269		1.9749	1.9749		1.8554	1.8554	0.0000	2,680.6350	2,680.6350	0.6655		2,697.2713
Total	**3.4202**	**28.6715**	**18.5644**	**0.0269**		**1.9749**	**1.9749**		**1.8554**	**1.8554**	**0.0000**	**2,680.6350**	**2,680.6350**	**0.6655**		**2,697.2713**

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	lb/day										lb/day					
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
Vendor	0.9118	11.0423	3.5979	0.0250	0.7323	0.3403	1.0726	0.2109	0.3256	0.5364		2,642.4651	2,642.4651	0.0486	0.3922	2,760.5555
Worker	2.2030	1.6470	19.4557	0.0289	2.4891	0.0193	2.5083	0.6602	0.0178	0.6780		2,918.5913	2,918.5913	0.1569	0.1197	2,958.1905
Total	**3.1147**	**12.6892**	**23.0536**	**0.0539**	**3.2214**	**0.3595**	**3.5809**	**0.8711**	**0.3433**	**1.2144**		**5,561.0564**	**5,561.0564**	**0.2055**	**0.5119**	**5,718.7460**

S&S Homes 2005 - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2017

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	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791		2,650.9797	2,650.9797	0.6531		2,667.3078
Total	**3.1149**	**26.5546**	**18.1825**	**0.0269**		**1.7879**	**1.7879**		**1.6791**	**1.6791**		**2,650.9797**	**2,650.9797**	**0.6531**		**2,667.3078**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.7290	9.7922	3.0282	0.0247	0.7323	0.2629	0.9952	0.2109	0.2515	0.4624		2,603.0121	2,603.0121	0.0394	0.3867	2,719.2191
Worker	1.9448	1.3932	16.7739	0.0282	2.4891	0.0181	2.5072	0.6602	0.0167	0.6769		2,845.1893	2,845.1893	0.1352	0.1061	2,880.1917
Total	**2.6737**	**11.1854**	**19.8022**	**0.0528**	**3.2214**	**0.2810**	**3.5024**	**0.8711**	**0.2682**	**1.1393**		**5,448.2015**	**5,448.2015**	**0.1746**	**0.4928**	**5,599.4108**

S&S Homes 2005 - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2017

Mitigated 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	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791	0.0000	2,650.9797	2,650.9797	0.6531		2,667.3078
Total	**3.1149**	**26.5546**	**18.1825**	**0.0269**		**1.7879**	**1.7879**		**1.6791**	**1.6791**	**0.0000**	**2,650.9797**	**2,650.9797**	**0.6531**		**2,667.3078**

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	lb/day										lb/day					
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
Vendor	0.7290	9.7922	3.0282	0.0247	0.7323	0.2629	0.9952	0.2109	0.2515	0.4624		2,603.0121	2,603.0121	0.0394	0.3867	2,719.2191
Worker	1.9448	1.3932	16.7739	0.0282	2.4891	0.0181	2.5072	0.6602	0.0167	0.6769		2,845.1893	2,845.1893	0.1352	0.1061	2,880.1917
Total	**2.6737**	**11.1854**	**19.8022**	**0.0528**	**3.2214**	**0.2810**	**3.5024**	**0.8711**	**0.2682**	**1.1393**		**5,448.2015**	**5,448.2015**	**0.1746**	**0.4928**	**5,599.4108**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2018

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	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099		2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**		**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.6344	9.0475	2.7398	0.0244	0.7323	0.2225	0.9548	0.2109	0.2128	0.4237		2,571.1020	2,571.1020	0.0344	0.3819	2,685.7679
Worker	1.7125	1.1768	14.5147	0.0274	2.4891	0.0173	2.5064	0.6602	0.0160	0.6762		2,765.8451	2,765.8451	0.1164	0.0944	2,796.8971
Total	**2.3469**	**10.2243**	**17.2545**	**0.0517**	**3.2214**	**0.2398**	**3.4612**	**0.8711**	**0.2288**	**1.0999**		**5,336.9472**	**5,336.9472**	**0.1508**	**0.4763**	**5,482.6651**

S&S Homes 2005 - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2018

Mitigated 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	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099	0.0000	2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**	**0.0000**	**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

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	lb/day										lb/day					
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
Vendor	0.6344	9.0475	2.7398	0.0244	0.7323	0.2225	0.9548	0.2109	0.2128	0.4237		2,571.1020	2,571.1020	0.0344	0.3819	2,685.7679
Worker	1.7125	1.1768	14.5147	0.0274	2.4891	0.0173	2.5064	0.6602	0.0160	0.6762		2,765.8451	2,765.8451	0.1164	0.0944	2,796.8971
Total	**2.3469**	**10.2243**	**17.2545**	**0.0517**	**3.2214**	**0.2398**	**3.4612**	**0.8711**	**0.2288**	**1.0999**		**5,336.9472**	**5,336.9472**	**0.1508**	**0.4763**	**5,482.6651**

S&S Homes 2005 - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2018

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	lb/day										lb/day					
Off-Road	1.6437	17.5209	14.7964	0.0228		0.9561	0.9561		0.8797	0.8797		2,294.0887	2,294.0887	0.7142		2,311.9432
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6437**	**17.5209**	**14.7964**	**0.0228**		**0.9561**	**0.9561**		**0.8797**	**0.8797**		**2,294.0887**	**2,294.0887**	**0.7142**		**2,311.9432**

Unmitigated 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	lb/day										lb/day					
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
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
Worker	0.0848	0.0583	0.7186	1.3500e-003	0.1232	8.6000e-004	0.1241	0.0327	7.9000e-004	0.0335		136.9230	136.9230	5.7600e-003	4.6700e-003	138.4603
Total	**0.0848**	**0.0583**	**0.7186**	**1.3500e-003**	**0.1232**	**8.6000e-004**	**0.1241**	**0.0327**	**7.9000e-004**	**0.0335**		**136.9230**	**136.9230**	**5.7600e-003**	**4.6700e-003**	**138.4603**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2018

Mitigated 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	lb/day										lb/day					
Off-Road	1.6437	17.5209	14.7964	0.0228		0.9561	0.9561		0.8797	0.8797	0.0000	2,294.0887	2,294.0887	0.7142		2,311.9432
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6437**	**17.5209**	**14.7964**	**0.0228**		**0.9561**	**0.9561**		**0.8797**	**0.8797**	**0.0000**	**2,294.0887**	**2,294.0887**	**0.7142**		**2,311.9432**

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	lb/day										lb/day					
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
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
Worker	0.0848	0.0583	0.7186	1.3500e-003	0.1232	8.6000e-004	0.1241	0.0327	7.9000e-004	0.0335		136.9230	136.9230	5.7600e-003	4.6700e-003	138.4603
Total	**0.0848**	**0.0583**	**0.7186**	**1.3500e-003**	**0.1232**	**8.6000e-004**	**0.1241**	**0.0327**	**7.9000e-004**	**0.0335**		**136.9230**	**136.9230**	**5.7600e-003**	**4.6700e-003**	**138.4603**

S&S Homes 2005 - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2019

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	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4544**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**		**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

Unmitigated 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	lb/day										lb/day					
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
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
Worker	0.0755	0.0496	0.6296	1.3200e-003	0.1232	8.3000e-004	0.1241	0.0327	7.6000e-004	0.0335		133.1006	133.1006	5.0100e-003	4.1900e-003	134.4753
Total	**0.0755**	**0.0496**	**0.6296**	**1.3200e-003**	**0.1232**	**8.3000e-004**	**0.1241**	**0.0327**	**7.6000e-004**	**0.0335**		**133.1006**	**133.1006**	**5.0100e-003**	**4.1900e-003**	**134.4753**

S&S Homes 2005 - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2019

Mitigated 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	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4544**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**	**0.0000**	**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

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	lb/day										lb/day					
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
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
Worker	0.0755	0.0496	0.6296	1.3200e-003	0.1232	8.3000e-004	0.1241	0.0327	7.6000e-004	0.0335		133.1006	133.1006	5.0100e-003	4.1900e-003	134.4753
Total	**0.0755**	**0.0496**	**0.6296**	**1.3200e-003**	**0.1232**	**8.3000e-004**	**0.1241**	**0.0327**	**7.6000e-004**	**0.0335**		**133.1006**	**133.1006**	**5.0100e-003**	**4.1900e-003**	**134.4753**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2019

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	lb/day										lb/day					
Archit. Coating	45.3082					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	**45.5746**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**282.0423**

Unmitigated 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	lb/day										lb/day					
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
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
Worker	0.3068	0.2018	2.5604	5.3600e-003	0.5011	3.3700e-003	0.5045	0.1329	3.1100e-003	0.1360		541.2756	541.2756	0.0204	0.0171	546.8663
Total	**0.3068**	**0.2018**	**2.5604**	**5.3600e-003**	**0.5011**	**3.3700e-003**	**0.5045**	**0.1329**	**3.1100e-003**	**0.1360**		**541.2756**	**541.2756**	**0.0204**	**0.0171**	**546.8663**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2019

Mitigated 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	lb/day										lb/day					
Archit. Coating	45.3082					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	**45.5746**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**282.0423**

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	lb/day										lb/day					
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
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
Worker	0.3068	0.2018	2.5604	5.3600e-003	0.5011	3.3700e-003	0.5045	0.1329	3.1100e-003	0.1360		541.2756	541.2756	0.0204	0.0171	546.8663
Total	**0.3068**	**0.2018**	**2.5604**	**5.3600e-003**	**0.5011**	**3.3700e-003**	**0.5045**	**0.1329**	**3.1100e-003**	**0.1360**		**541.2756**	**541.2756**	**0.0204**	**0.0171**	**546.8663**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2020

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	lb/day										lb/day					
Archit. Coating	45.3082					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**45.5504**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

Unmitigated 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	lb/day										lb/day					
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
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
Worker	0.2763	0.1736	2.2782	5.2000e-003	0.5011	3.2300e-003	0.5043	0.1329	2.9700e-003	0.1359		525.5197	525.5197	0.0179	0.0154	530.5630
Total	**0.2763**	**0.1736**	**2.2782**	**5.2000e-003**	**0.5011**	**3.2300e-003**	**0.5043**	**0.1329**	**2.9700e-003**	**0.1359**		**525.5197**	**525.5197**	**0.0179**	**0.0154**	**530.5630**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2020

Mitigated 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	lb/day										lb/day					
Archit. Coating	45.3082					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**45.5504**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

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	lb/day										lb/day					
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
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
Worker	0.2763	0.1736	2.2782	5.2000e-003	0.5011	3.2300e-003	0.5043	0.1329	2.9700e-003	0.1359		525.5197	525.5197	0.0179	0.0154	530.5630
Total	**0.2763**	**0.1736**	**2.2782**	**5.2000e-003**	**0.5011**	**3.2300e-003**	**0.5043**	**0.1329**	**2.9700e-003**	**0.1359**		**525.5197**	**525.5197**	**0.0179**	**0.0154**	**530.5630**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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	lb/day										lb/day					
Mitigated	27.4090	61.0786	275.0134	0.2733	17.5473	1.5346	19.0819	4.7020	1.4625	6.1645		27,913.6320	27,913.6320	2.6681	2.1726	28,627.7802
Unmitigated	27.4090	61.0786	275.0134	0.2733	17.5473	1.5346	19.0819	4.7020	1.4625	6.1645		27,913.6320	27,913.6320	2.6681	2.1726	28,627.7802

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	8.40	21.11	23.59	26,441	26,441
Single Family Housing	2,784.80	2,814.30	2522.25	8,001,452	8,001,452
Total	2,793.20	2,835.41	2,545.84	8,027,893	8,027,893

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	46.40	16.40	37.20	86	11	3

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.432435	0.061153	0.166286	0.195483	0.048748	0.010779	0.015542	0.029798	0.000916	0.000247	0.027292	0.001795	0.009527
Single Family Housing	0.432435	0.061153	0.166286	0.195483	0.048748	0.010779	0.015542	0.029798	0.000916	0.000247	0.027292	0.001795	0.009527

5.0 Energy Detail

Historical Energy Use: Y

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	lb/day										lb/day					
NaturalGas Mitigated	0.2071	1.7699	0.7532	0.0113		0.1431	0.1431		0.1431	0.1431		2,259.4970	2,259.4970	0.0433	0.0414	2,272.9241
NaturalGas Unmitigated	0.2071	1.7699	0.7532	0.0113		0.1431	0.1431		0.1431	0.1431		2,259.4970	2,259.4970	0.0433	0.0414	2,272.9241

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	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	lb/day										lb/day					
City Park	0	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
Single Family Housing	19205.7	0.2071	1.7699	0.7532	0.0113		0.1431	0.1431		0.1431	0.1431		2,259.4970	2,259.4970	0.0433	0.0414	2,272.9241
Total		**0.2071**	**1.7699**	**0.7532**	**0.0113**		**0.1431**	**0.1431**		**0.1431**	**0.1431**		**2,259.4970**	**2,259.4970**	**0.0433**	**0.0414**	**2,272.9241**

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	lb/day										lb/day					
City Park	0	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
Single Family Housing	19.2057	0.2071	1.7699	0.7532	0.0113		0.1431	0.1431		0.1431	0.1431		2,259.4970	2,259.4970	0.0433	0.0414	2,272.9241
Total		**0.2071**	**1.7699**	**0.7532**	**0.0113**		**0.1431**	**0.1431**		**0.1431**	**0.1431**		**2,259.4970**	**2,259.4970**	**0.0433**	**0.0414**	**2,272.9241**

6.0 Area Detail

S&S Homes 2005 - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.1 Mitigation Measures Area

	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	lb/day										lb/day					
Mitigated	17.1831	3.0019	27.0473	0.0185		0.3457	0.3457		0.3457	0.3457	0.0000	3,479.7076	3,479.7076	0.1193	0.0630	3,501.4605
Unmitigated	17.1831	3.0019	27.0473	0.0185		0.3457	0.3457		0.3457	0.3457	0.0000	3,479.7076	3,479.7076	0.1193	0.0630	3,501.4605

S&S Homes 2005 - Kern-San Joaquin County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	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	lb/day										lb/day					
Architectural Coating	4.5515					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.3876					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3150	2.6914	1.1453	0.0172		0.2176	0.2176		0.2176	0.2176	0.0000	3,435.8824	3,435.8824	0.0659	0.0630	3,456.3001
Landscaping	0.9290	0.3105	25.9020	1.2900e-003		0.1281	0.1281		0.1281	0.1281		43.8253	43.8253	0.0534		45.1604
Total	**17.1831**	**3.0019**	**27.0473**	**0.0185**		**0.3457**	**0.3457**		**0.3457**	**0.3457**	**0.0000**	**3,479.7076**	**3,479.7076**	**0.1193**	**0.0630**	**3,501.4605**

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	lb/day										lb/day					
Architectural Coating	4.5515					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.3876					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3150	2.6914	1.1453	0.0172		0.2176	0.2176		0.2176	0.2176	0.0000	3,435.8824	3,435.8824	0.0659	0.0630	3,456.3001
Landscaping	0.9290	0.3105	25.9020	1.2900e-003		0.1281	0.1281		0.1281	0.1281		43.8253	43.8253	0.0534		45.1604
Total	**17.1831**	**3.0019**	**27.0473**	**0.0185**		**0.3457**	**0.3457**		**0.3457**	**0.3457**	**0.0000**	**3,479.7076**	**3,479.7076**	**0.1193**	**0.0630**	**3,501.4605**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

S&S Homes 2005 - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

S&S Homes 2005

Kern-San Joaquin County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	295.00	Dwelling Unit	94.93	531,000.00	935
City Park	10.77	Acre	10.77	469,141.20	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	32
Climate Zone	7			**Operational Year**	2010
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	524	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PGE historical data

Land Use - Acreage Based on Tract Map
Population based on 3.17 x 295

Construction Phase -

Energy Use - Historical Pge data

Table Name	Column Name	Default Value	New Value
tblEnergyUse	NT24E	5,099.35	6,155.97
tblEnergyUse	NT24NG	6,069.60	4,769.00
tblEnergyUse	Refrigerator	1,251.38	827.00
tblEnergyUse	T24E	988.10	174.14
tblEnergyUse	T24NG	26,247.02	18,994.02

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblLandUse	LotAcreage	95.78	94.93
tblLandUse	Population	844.00	935.00
tblProjectCharacteristics	CO2IntensityFactor	203.98	524
tblWoodstoves	NumberCatalytic	94.93	0.00
tblWoodstoves	NumberNoncatalytic	94.93	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

S&S Homes 2005 - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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	lb/day										lb/day					
2005	12.3807	103.4005	49.3323	0.6857	19.8049	5.2387	24.1237	10.1417	5.2384	14.4603	0.0000	7,408.7318	7,408.7318	1.1122	0.0238	7,443.6364
2006	12.3807	103.4005	49.3323	0.6857	9.3679	5.2387	14.6066	3.6973	5.2384	8.9357	0.0000	7,408.7318	7,408.7318	1.1122	0.0238	7,443.6364
2007	15.4757	103.4005	80.5458	0.6857	9.3679	5.2387	14.6066	3.6973	5.2384	8.9357	0.0000	8,769.7393	8,769.7393	1.2879	0.7973	9,039.5397
2008	15.4757	78.0910	80.5458	0.5694	3.2215	4.6738	7.8953	0.8711	4.6203	5.4914	0.0000	8,769.7393	8,769.7393	1.2879	0.7973	9,039.5397
2009	15.4757	78.0910	80.5458	0.5694	3.2215	4.6738	7.8953	0.8711	4.6203	5.4914	0.0000	8,769.7393	8,769.7393	1.2879	0.7973	9,039.5397
2010	10.4488	61.8839	60.0795	0.0816	3.2214	3.5395	6.7608	0.8711	3.3526	4.2237	0.0000	8,408.7850	8,408.7850	1.1740	0.6576	8,634.1032
2011	9.8756	59.0517	57.1511	0.0813	3.2213	3.4042	6.6255	0.8711	3.2230	4.0941	0.0000	8,355.2668	8,355.2668	1.1322	0.6380	8,573.6921
2012	9.2295	56.1801	53.4552	0.0808	3.2213	3.2552	6.4765	0.8711	3.0784	3.9494	0.0000	8,317.5830	8,317.5830	1.0817	0.6183	8,528.8751
2013	8.4782	52.6261	49.4478	0.0798	3.2213	3.0246	6.2459	0.8711	2.8576	3.7286	0.0000	8,190.6529	8,190.6529	1.0273	0.5933	8,393.1473
2014	7.5756	48.6371	44.7694	0.0791	3.2213	2.7376	5.9589	0.8711	2.5838	3.4549	0.0000	8,094.6153	8,094.6153	0.9688	0.5699	8,288.6529
2015	6.9117	45.4798	41.2887	0.0782	3.2213	2.5476	5.7689	0.8711	2.4017	3.2727	0.0000	8,000.3701	8,000.3701	0.9218	0.5468	8,186.3621
2016	6.2425	42.3361	38.0561	0.0773	3.2214	2.3352	5.5566	0.8711	2.1994	3.0705	0.0000	7,887.3141	7,887.3141	0.8778	0.5240	8,065.4087
2017	5.5243	38.5950	34.9234	0.0763	3.2214	2.0694	5.2908	0.8711	1.9478	2.8189	0.0000	7,755.4882	7,755.4882	0.8341	0.5035	7,926.3702
2018	4.7888	34.3902	32.2067	0.0753	3.2214	1.7401	4.9616	0.8711	1.6392	2.5103	0.0000	7,625.5502	7,625.5502	0.7991	0.4859	7,790.3139
2019	45.8396	15.3010	15.1789	0.0240	0.5011	0.8254	0.9486	0.1329	0.7594	0.7921	0.0000	2,374.2083	2,374.2083	0.7194	0.0187	2,393.5622
2020	45.7894	1.8829	3.7012	7.5500e-003	0.5011	0.1142	0.6153	0.1329	0.1139	0.2468	0.0000	744.4100	744.4100	0.0409	0.0169	750.4642
Maximum	**45.8396**	**103.4005**	**80.5458**	**0.6857**	**19.8049**	**5.2387**	**24.1237**	**10.1417**	**5.2384**	**14.4603**	**0.0000**	**8,769.7393**	**8,769.7393**	**1.2879**	**0.7973**	**9,039.5397**

2.1 Overall Construction (Maximum Daily Emission)

S&S Homes 2005 - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	lb/day										lb/day					
2005	12.3807	103.4005	49.3323	0.6857	19.8049	5.2387	24.1237	10.1417	5.2384	14.4603	0.0000	7,408.7318	7,408.7318	1.1122	0.0238	7,443.6364
2006	12.3807	103.4005	49.3323	0.6857	9.3679	5.2387	14.6066	3.6973	5.2384	8.9357	0.0000	7,408.7318	7,408.7318	1.1122	0.0238	7,443.6364
2007	15.4757	103.4005	80.5458	0.6857	9.3679	5.2387	14.6066	3.6973	5.2384	8.9357	0.0000	8,769.7393	8,769.7393	1.2879	0.7973	9,039.5397
2008	15.4757	78.0910	80.5458	0.5694	3.2215	4.6738	7.8953	0.8711	4.6203	5.4914	0.0000	8,769.7393	8,769.7393	1.2879	0.7973	9,039.5397
2009	15.4757	78.0910	80.5458	0.5694	3.2215	4.6738	7.8953	0.8711	4.6203	5.4914	0.0000	8,769.7393	8,769.7393	1.2879	0.7973	9,039.5397
2010	10.4488	61.8839	60.0795	0.0816	3.2214	3.5395	6.7608	0.8711	3.3526	4.2237	0.0000	8,408.7850	8,408.7850	1.1740	0.6576	8,634.1032
2011	9.8756	59.0517	57.1511	0.0813	3.2213	3.4042	6.6255	0.8711	3.2230	4.0941	0.0000	8,355.2668	8,355.2668	1.1322	0.6380	8,573.6921
2012	9.2295	56.1801	53.4552	0.0808	3.2213	3.2552	6.4765	0.8711	3.0784	3.9494	0.0000	8,317.5830	8,317.5830	1.0817	0.6183	8,528.8751
2013	8.4782	52.6261	49.4478	0.0798	3.2213	3.0246	6.2459	0.8711	2.8576	3.7286	0.0000	8,190.6529	8,190.6529	1.0273	0.5933	8,393.1473
2014	7.5756	48.6371	44.7694	0.0791	3.2213	2.7376	5.9589	0.8711	2.5838	3.4549	0.0000	8,094.6153	8,094.6153	0.9688	0.5699	8,288.6529
2015	6.9117	45.4798	41.2887	0.0782	3.2213	2.5476	5.7689	0.8711	2.4017	3.2727	0.0000	8,000.3701	8,000.3701	0.9218	0.5468	8,186.3621
2016	6.2425	42.3361	38.0561	0.0773	3.2214	2.3352	5.5566	0.8711	2.1994	3.0705	0.0000	7,887.3141	7,887.3141	0.8778	0.5240	8,065.4087
2017	5.5243	38.5950	34.9234	0.0763	3.2214	2.0694	5.2908	0.8711	1.9478	2.8189	0.0000	7,755.4882	7,755.4882	0.8341	0.5035	7,926.3702
2018	4.7888	34.3902	32.2067	0.0753	3.2214	1.7401	4.9616	0.8711	1.6392	2.5103	0.0000	7,625.5502	7,625.5502	0.7991	0.4859	7,790.3139
2019	45.8396	15.3010	15.1789	0.0240	0.5011	0.8254	0.9486	0.1329	0.7594	0.7921	0.0000	2,374.2083	2,374.2083	0.7194	0.0187	2,393.5622
2020	45.7894	1.8829	3.7012	7.5500e-003	0.5011	0.1142	0.6153	0.1329	0.1139	0.2468	0.0000	744.4100	744.4100	0.0409	0.0169	750.4642
Maximum	**45.8396**	**103.4005**	**80.5458**	**0.6857**	**19.8049**	**5.2387**	**24.1237**	**10.1417**	**5.2384**	**14.4603**	**0.0000**	**8,769.7393**	**8,769.7393**	**1.2879**	**0.7973**	**9,039.5397**

S&S Homes 2005 - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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	N20	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

S&S Homes 2005 - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated 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	lb/day										lb/day					
Area	17.1831	3.0019	27.0473	0.0185		0.3457	0.3457		0.3457	0.3457	0.0000	3,479.7076	3,479.7076	0.1193	0.0630	3,501.4605
Energy	0.2071	1.7699	0.7532	0.0113		0.1431	0.1431		0.1431	0.1431		2,259.4970	2,259.4970	0.0433	0.0414	2,272.9241
Mobile	23.0068	67.2033	242.6383	0.2497	17.5473	1.5378	19.0851	4.7020	1.4656	6.1676		25,523.9018	25,523.9018	2.8525	2.3220	26,287.1636
Total	**40.3970**	**71.9752**	**270.4388**	**0.2794**	**17.5473**	**2.0266**	**19.5739**	**4.7020**	**1.9544**	**6.6564**	**0.0000**	**31,263.1065**	**31,263.1065**	**3.0151**	**2.4264**	**32,061.5482**

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	lb/day										lb/day					
Area	17.1831	3.0019	27.0473	0.0185		0.3457	0.3457		0.3457	0.3457	0.0000	3,479.7076	3,479.7076	0.1193	0.0630	3,501.4605
Energy	0.2071	1.7699	0.7532	0.0113		0.1431	0.1431		0.1431	0.1431		2,259.4970	2,259.4970	0.0433	0.0414	2,272.9241
Mobile	23.0068	67.2033	242.6383	0.2497	17.5473	1.5378	19.0851	4.7020	1.4656	6.1676		25,523.9018	25,523.9018	2.8525	2.3220	26,287.1636
Total	**40.3970**	**71.9752**	**270.4388**	**0.2794**	**17.5473**	**2.0266**	**19.5739**	**4.7020**	**1.9544**	**6.6564**	**0.0000**	**31,263.1065**	**31,263.1065**	**3.0151**	**2.4264**	**32,061.5482**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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	N20	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	Site Preparation	Site Preparation	6/14/2005	11/28/2005	5	120	
2	Grading	Grading	11/29/2005	2/5/2007	5	310	
3	Building Construction	Building Construction	2/6/2007	12/24/2018	5	3100	
4	Paving	Paving	12/25/2018	10/28/2019	5	220	
5	Architectural Coating	Architectural Coating	10/29/2019	8/31/2020	5	220	

Acres of Grading (Site Preparation Phase): 180

Acres of Grading (Grading Phase): 930

Acres of Paving: 0

Residential Indoor: 1,075,275; Residential Outdoor: 358,425; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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
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
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

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
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	303.00	108.00	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	61.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2005

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	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	9.3315	69.9253	26.3154	0.4499		4.3151	4.3151		4.3151	4.3151		4,409.7537	4,409.7537	0.8384		4,430.7146
Total	**9.3315**	**69.9253**	**26.3154**	**0.4499**	**19.6570**	**4.3151**	**23.9721**	**10.1025**	**4.3151**	**14.4176**		**4,409.7537**	**4,409.7537**	**0.8384**		**4,430.7146**

Unmitigated 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	lb/day										lb/day					
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
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
Worker	0.3004	0.3927	2.9197	1.7500e-003	0.1479	3.7600e-003	0.1516	0.0392	3.4800e-003	0.0427		176.0553	176.0553	0.0275	0.0214	183.1318
Total	**0.3004**	**0.3927**	**2.9197**	**1.7500e-003**	**0.1479**	**3.7600e-003**	**0.1516**	**0.0392**	**3.4800e-003**	**0.0427**		**176.0553**	**176.0553**	**0.0275**	**0.0214**	**183.1318**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2005

Mitigated 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	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	9.3315	69.9253	26.3154	0.4499		4.3151	4.3151		4.3151	4.3151	0.0000	4,409.7537	4,409.7537	0.8384		4,430.7146
Total	**9.3315**	**69.9253**	**26.3154**	**0.4499**	**19.6570**	**4.3151**	**23.9721**	**10.1025**	**4.3151**	**14.4176**	**0.0000**	**4,409.7537**	**4,409.7537**	**0.8384**		**4,430.7146**

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	lb/day										lb/day					
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
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
Worker	0.3004	0.3927	2.9197	1.7500e-003	0.1479	3.7600e-003	0.1516	0.0392	3.4800e-003	0.0427		176.0553	176.0553	0.0275	0.0214	183.1318
Total	**0.3004**	**0.3927**	**2.9197**	**1.7500e-003**	**0.1479**	**3.7600e-003**	**0.1516**	**0.0392**	**3.4800e-003**	**0.0427**		**176.0553**	**176.0553**	**0.0275**	**0.0214**	**183.1318**

S&S Homes 2005 - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2005

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	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	12.0469	102.9642	46.0882	0.6838		5.2345	5.2345		5.2345	5.2345		7,213.1148	7,213.1148	1.0817		7,240.1567
Total	**12.0469**	**102.9642**	**46.0882**	**0.6838**	**9.2036**	**5.2345**	**14.4381**	**3.6538**	**5.2345**	**8.8883**		**7,213.1148**	**7,213.1148**	**1.0817**		**7,240.1567**

Unmitigated 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	lb/day										lb/day					
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
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
Worker	0.3338	0.4363	3.2441	1.9400e-003	0.1643	4.1800e-003	0.1685	0.0436	3.8700e-003	0.0475		195.6170	195.6170	0.0306	0.0238	203.4798
Total	**0.3338**	**0.4363**	**3.2441**	**1.9400e-003**	**0.1643**	**4.1800e-003**	**0.1685**	**0.0436**	**3.8700e-003**	**0.0475**		**195.6170**	**195.6170**	**0.0306**	**0.0238**	**203.4798**

S&S Homes 2005 - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2005

Mitigated 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	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	12.0469	102.9642	46.0882	0.6838		5.2345	5.2345		5.2345	5.2345	0.0000	7,213.1148	7,213.1148	1.0817		7,240.1567
Total	**12.0469**	**102.9642**	**46.0882**	**0.6838**	**9.2036**	**5.2345**	**14.4381**	**3.6538**	**5.2345**	**8.8883**	**0.0000**	**7,213.1148**	**7,213.1148**	**1.0817**		**7,240.1567**

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	lb/day										lb/day					
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
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
Worker	0.3338	0.4363	3.2441	1.9400e-003	0.1643	4.1800e-003	0.1685	0.0436	3.8700e-003	0.0475		195.6170	195.6170	0.0306	0.0238	203.4798
Total	**0.3338**	**0.4363**	**3.2441**	**1.9400e-003**	**0.1643**	**4.1800e-003**	**0.1685**	**0.0436**	**3.8700e-003**	**0.0475**		**195.6170**	**195.6170**	**0.0306**	**0.0238**	**203.4798**

S&S Homes 2005 - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2006

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	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	12.0469	102.9642	46.0882	0.6838		5.2345	5.2345		5.2345	5.2345		7,213.1148	7,213.1148	1.0817		7,240.1567
Total	**12.0469**	**102.9642**	**46.0882**	**0.6838**	**9.2036**	**5.2345**	**14.4381**	**3.6538**	**5.2345**	**8.8883**		**7,213.1148**	**7,213.1148**	**1.0817**		**7,240.1567**

Unmitigated 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	lb/day										lb/day					
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
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
Worker	0.3338	0.4363	3.2441	1.9400e-003	0.1643	4.1800e-003	0.1685	0.0436	3.8700e-003	0.0475		195.6170	195.6170	0.0306	0.0238	203.4798
Total	**0.3338**	**0.4363**	**3.2441**	**1.9400e-003**	**0.1643**	**4.1800e-003**	**0.1685**	**0.0436**	**3.8700e-003**	**0.0475**		**195.6170**	**195.6170**	**0.0306**	**0.0238**	**203.4798**

S&S Homes 2005 - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2006

Mitigated 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	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	12.0469	102.9642	46.0882	0.6838		5.2345	5.2345		5.2345	5.2345	0.0000	7,213.1148	7,213.1148	1.0817		7,240.1567
Total	**12.0469**	**102.9642**	**46.0882**	**0.6838**	**9.2036**	**5.2345**	**14.4381**	**3.6538**	**5.2345**	**8.8883**	**0.0000**	**7,213.1148**	**7,213.1148**	**1.0817**		**7,240.1567**

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	lb/day										lb/day					
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
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
Worker	0.3338	0.4363	3.2441	1.9400e-003	0.1643	4.1800e-003	0.1685	0.0436	3.8700e-003	0.0475		195.6170	195.6170	0.0306	0.0238	203.4798
Total	**0.3338**	**0.4363**	**3.2441**	**1.9400e-003**	**0.1643**	**4.1800e-003**	**0.1685**	**0.0436**	**3.8700e-003**	**0.0475**		**195.6170**	**195.6170**	**0.0306**	**0.0238**	**203.4798**

S&S Homes 2005 - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2007

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	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	12.0469	102.9642	46.0882	0.6838		5.2345	5.2345		5.2345	5.2345		7,213.1148	7,213.1148	1.0817		7,240.1567
Total	**12.0469**	**102.9642**	**46.0882**	**0.6838**	**9.2036**	**5.2345**	**14.4381**	**3.6538**	**5.2345**	**8.8883**		**7,213.1148**	**7,213.1148**	**1.0817**		**7,240.1567**

Unmitigated 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	lb/day										lb/day					
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
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
Worker	0.3338	0.4363	3.2441	1.9400e-003	0.1643	4.1800e-003	0.1685	0.0436	3.8700e-003	0.0475		195.6170	195.6170	0.0306	0.0238	203.4798
Total	**0.3338**	**0.4363**	**3.2441**	**1.9400e-003**	**0.1643**	**4.1800e-003**	**0.1685**	**0.0436**	**3.8700e-003**	**0.0475**		**195.6170**	**195.6170**	**0.0306**	**0.0238**	**203.4798**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2007

Mitigated 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	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	12.0469	102.9642	46.0882	0.6838		5.2345	5.2345		5.2345	5.2345	0.0000	7,213.1148	7,213.1148	1.0817		7,240.1567
Total	**12.0469**	**102.9642**	**46.0882**	**0.6838**	**9.2036**	**5.2345**	**14.4381**	**3.6538**	**5.2345**	**8.8883**	**0.0000**	**7,213.1148**	**7,213.1148**	**1.0817**		**7,240.1567**

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	lb/day										lb/day					
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
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
Worker	0.3338	0.4363	3.2441	1.9400e-003	0.1643	4.1800e-003	0.1685	0.0436	3.8700e-003	0.0475		195.6170	195.6170	0.0306	0.0238	203.4798
Total	**0.3338**	**0.4363**	**3.2441**	**1.9400e-003**	**0.1643**	**4.1800e-003**	**0.1685**	**0.0436**	**3.8700e-003**	**0.0475**		**195.6170**	**195.6170**	**0.0306**	**0.0238**	**203.4798**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2007

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	lb/day										lb/day					
Off-Road	7.5157	41.4450	20.3882	0.3041		3.4797	3.4797		3.4797	3.4797		2,897.5468	2,897.5468	0.6762		2,914.4505
Total	**7.5157**	**41.4450**	**20.3882**	**0.3041**		**3.4797**	**3.4797**		**3.4797**	**3.4797**		**2,897.5468**	**2,897.5468**	**0.6762**		**2,914.4505**

Unmitigated 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	lb/day										lb/day					
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
Vendor	2.9027	30.0360	11.0093	0.2358	0.7324	1.1309	1.8633	0.2109	1.0820	1.2929		2,908.5945	2,908.5945	0.1489	0.4364	3,042.3709
Worker	5.0573	6.6100	49.1484	0.0295	2.4891	0.0633	2.5523	0.6602	0.0587	0.7189		2,963.5980	2,963.5980	0.4628	0.3609	3,082.7184
Total	**7.9600**	**36.6460**	**60.1577**	**0.2653**	**3.2215**	**1.1942**	**4.4157**	**0.8711**	**1.1406**	**2.0118**		**5,872.1926**	**5,872.1926**	**0.6117**	**0.7973**	**6,125.0892**

S&S Homes 2005 - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2007

Mitigated 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	lb/day										lb/day					
Off-Road	7.5157	41.4450	20.3882	0.3041		3.4797	3.4797		3.4797	3.4797	0.0000	2,897.5468	2,897.5468	0.6762		2,914.4505
Total	**7.5157**	**41.4450**	**20.3882**	**0.3041**		**3.4797**	**3.4797**		**3.4797**	**3.4797**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.6762**		**2,914.4505**

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	lb/day										lb/day					
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
Vendor	2.9027	30.0360	11.0093	0.2358	0.7324	1.1309	1.8633	0.2109	1.0820	1.2929		2,908.5945	2,908.5945	0.1489	0.4364	3,042.3709
Worker	5.0573	6.6100	49.1484	0.0295	2.4891	0.0633	2.5523	0.6602	0.0587	0.7189		2,963.5980	2,963.5980	0.4628	0.3609	3,082.7184
Total	**7.9600**	**36.6460**	**60.1577**	**0.2653**	**3.2215**	**1.1942**	**4.4157**	**0.8711**	**1.1406**	**2.0118**		**5,872.1926**	**5,872.1926**	**0.6117**	**0.7973**	**6,125.0892**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2008

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	lb/day										lb/day					
Off-Road	7.5157	41.4450	20.3882	0.3041		3.4797	3.4797		3.4797	3.4797		2,897.5468	2,897.5468	0.6762		2,914.4505
Total	**7.5157**	**41.4450**	**20.3882**	**0.3041**		**3.4797**	**3.4797**		**3.4797**	**3.4797**		**2,897.5468**	**2,897.5468**	**0.6762**		**2,914.4505**

Unmitigated 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	lb/day										lb/day					
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
Vendor	2.9027	30.0360	11.0093	0.2358	0.7324	1.1309	1.8633	0.2109	1.0820	1.2929		2,908.5945	2,908.5945	0.1489	0.4364	3,042.3709
Worker	5.0573	6.6100	49.1484	0.0295	2.4891	0.0633	2.5523	0.6602	0.0587	0.7189		2,963.5980	2,963.5980	0.4628	0.3609	3,082.7184
Total	**7.9600**	**36.6460**	**60.1577**	**0.2653**	**3.2215**	**1.1942**	**4.4157**	**0.8711**	**1.1406**	**2.0118**		**5,872.1926**	**5,872.1926**	**0.6117**	**0.7973**	**6,125.0892**

S&S Homes 2005 - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2008

Mitigated 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	lb/day										lb/day					
Off-Road	7.5157	41.4450	20.3882	0.3041		3.4797	3.4797		3.4797	3.4797	0.0000	2,897.5468	2,897.5468	0.6762		2,914.4505
Total	**7.5157**	**41.4450**	**20.3882**	**0.3041**		**3.4797**	**3.4797**		**3.4797**	**3.4797**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.6762**		**2,914.4505**

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	lb/day										lb/day					
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
Vendor	2.9027	30.0360	11.0093	0.2358	0.7324	1.1309	1.8633	0.2109	1.0820	1.2929		2,908.5945	2,908.5945	0.1489	0.4364	3,042.3709
Worker	5.0573	6.6100	49.1484	0.0295	2.4891	0.0633	2.5523	0.6602	0.0587	0.7189		2,963.5980	2,963.5980	0.4628	0.3609	3,082.7184
Total	**7.9600**	**36.6460**	**60.1577**	**0.2653**	**3.2215**	**1.1942**	**4.4157**	**0.8711**	**1.1406**	**2.0118**		**5,872.1926**	**5,872.1926**	**0.6117**	**0.7973**	**6,125.0892**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2009

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	lb/day										lb/day					
Off-Road	7.5157	41.4450	20.3882	0.3041		3.4797	3.4797		3.4797	3.4797		2,897.5468	2,897.5468	0.6762		2,914.4505
Total	**7.5157**	**41.4450**	**20.3882**	**0.3041**		**3.4797**	**3.4797**		**3.4797**	**3.4797**		**2,897.5468**	**2,897.5468**	**0.6762**		**2,914.4505**

Unmitigated 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	lb/day										lb/day					
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
Vendor	2.9027	30.0360	11.0093	0.2358	0.7324	1.1309	1.8633	0.2109	1.0820	1.2929		2,908.5945	2,908.5945	0.1489	0.4364	3,042.3709
Worker	5.0573	6.6100	49.1484	0.0295	2.4891	0.0633	2.5523	0.6602	0.0587	0.7189		2,963.5980	2,963.5980	0.4628	0.3609	3,082.7184
Total	**7.9600**	**36.6460**	**60.1577**	**0.2653**	**3.2215**	**1.1942**	**4.4157**	**0.8711**	**1.1406**	**2.0118**		**5,872.1926**	**5,872.1926**	**0.6117**	**0.7973**	**6,125.0892**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2009

Mitigated 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	lb/day										lb/day					
Off-Road	7.5157	41.4450	20.3882	0.3041		3.4797	3.4797		3.4797	3.4797	0.0000	2,897.5468	2,897.5468	0.6762		2,914.4505
Total	**7.5157**	**41.4450**	**20.3882**	**0.3041**		**3.4797**	**3.4797**		**3.4797**	**3.4797**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.6762**		**2,914.4505**

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	lb/day										lb/day					
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
Vendor	2.9027	30.0360	11.0093	0.2358	0.7324	1.1309	1.8633	0.2109	1.0820	1.2929		2,908.5945	2,908.5945	0.1489	0.4364	3,042.3709
Worker	5.0573	6.6100	49.1484	0.0295	2.4891	0.0633	2.5523	0.6602	0.0587	0.7189		2,963.5980	2,963.5980	0.4628	0.3609	3,082.7184
Total	**7.9600**	**36.6460**	**60.1577**	**0.2653**	**3.2215**	**1.1942**	**4.4157**	**0.8711**	**1.1406**	**2.0118**		**5,872.1926**	**5,872.1926**	**0.6117**	**0.7973**	**6,125.0892**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2010

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	lb/day										lb/day					
Off-Road	4.7235	35.7390	19.6189	0.0270		2.6150	2.6150		2.4692	2.4692		2,753.9809	2,753.9809	0.7458		2,772.6260
Total	**4.7235**	**35.7390**	**19.6189**	**0.0270**		**2.6150**	**2.6150**		**2.4692**	**2.4692**		**2,753.9809**	**2,753.9809**	**0.7458**		**2,772.6260**

Unmitigated 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	lb/day										lb/day					
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
Vendor	2.0937	22.0002	7.7359	0.0264	0.7323	0.8883	1.6205	0.2109	0.8498	1.0607		2,794.4554	2,794.4554	0.1083	0.4170	2,921.4301
Worker	3.6316	4.1446	32.7247	0.0282	2.4891	0.0363	2.5253	0.6602	0.0336	0.6938		2,860.3488	2,860.3488	0.3199	0.2406	2,940.0471
Total	**5.7253**	**26.1448**	**40.4606**	**0.0547**	**3.2214**	**0.9245**	**4.1459**	**0.8711**	**0.8834**	**1.7545**		**5,654.8041**	**5,654.8041**	**0.4282**	**0.6576**	**5,861.4772**

S&S Homes 2005 - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2010

Mitigated 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	lb/day										lb/day					
Off-Road	4.7235	35.7390	19.6189	0.0270		2.6150	2.6150		2.4692	2.4692	0.0000	2,753.9809	2,753.9809	0.7458		2,772.6260
Total	**4.7235**	**35.7390**	**19.6189**	**0.0270**		**2.6150**	**2.6150**		**2.4692**	**2.4692**	**0.0000**	**2,753.9809**	**2,753.9809**	**0.7458**		**2,772.6260**

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	lb/day										lb/day					
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
Vendor	2.0937	22.0002	7.7359	0.0264	0.7323	0.8883	1.6205	0.2109	0.8498	1.0607		2,794.4554	2,794.4554	0.1083	0.4170	2,921.4301
Worker	3.6316	4.1446	32.7247	0.0282	2.4891	0.0363	2.5253	0.6602	0.0336	0.6938		2,860.3488	2,860.3488	0.3199	0.2406	2,940.0471
Total	**5.7253**	**26.1448**	**40.4606**	**0.0547**	**3.2214**	**0.9245**	**4.1459**	**0.8711**	**0.8834**	**1.7545**		**5,654.8041**	**5,654.8041**	**0.4282**	**0.6576**	**5,861.4772**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2011

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	lb/day										lb/day					
Off-Road	4.5267	34.7529	19.4761	0.0270		2.5450	2.5450		2.4020	2.4020		2,747.5797	2,747.5797	0.7333		2,765.9118
Total	**4.5267**	**34.7529**	**19.4761**	**0.0270**		**2.5450**	**2.5450**		**2.4020**	**2.4020**		**2,747.5797**	**2,747.5797**	**0.7333**		**2,765.9118**

Unmitigated 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	lb/day										lb/day					
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
Vendor	1.9198	20.4955	7.2734	0.0263	0.7322	0.8263	1.5585	0.2109	0.7905	1.0014		2,782.4006	2,782.4006	0.0995	0.4139	2,908.2360
Worker	3.4291	3.8034	30.4016	0.0280	2.4891	0.0330	2.5220	0.6602	0.0306	0.6908		2,825.2865	2,825.2865	0.2995	0.2241	2,899.5443
Total	**5.3488**	**24.2989**	**37.6750**	**0.0543**	**3.2213**	**0.8592**	**4.0806**	**0.8711**	**0.8211**	**1.6922**		**5,607.6871**	**5,607.6871**	**0.3989**	**0.6380**	**5,807.7803**

S&S Homes 2005 - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2011

Mitigated 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	lb/day										lb/day					
Off-Road	4.5267	34.7529	19.4761	0.0270		2.5450	2.5450		2.4020	2.4020	0.0000	2,747.5797	2,747.5797	0.7333		2,765.9118
Total	**4.5267**	**34.7529**	**19.4761**	**0.0270**		**2.5450**	**2.5450**		**2.4020**	**2.4020**	**0.0000**	**2,747.5797**	**2,747.5797**	**0.7333**		**2,765.9118**

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	lb/day										lb/day					
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
Vendor	1.9198	20.4955	7.2734	0.0263	0.7322	0.8263	1.5585	0.2109	0.7905	1.0014		2,782.4006	2,782.4006	0.0995	0.4139	2,908.2360
Worker	3.4291	3.8034	30.4016	0.0280	2.4891	0.0330	2.5220	0.6602	0.0306	0.6908		2,825.2865	2,825.2865	0.2995	0.2241	2,899.5443
Total	**5.3488**	**24.2989**	**37.6750**	**0.0543**	**3.2213**	**0.8592**	**4.0806**	**0.8711**	**0.8211**	**1.6922**		**5,607.6871**	**5,607.6871**	**0.3989**	**0.6380**	**5,807.7803**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2012

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	lb/day										lb/day					
Off-Road	4.3845	34.1922	19.4394	0.0270		2.4997	2.4997		2.3564	2.3564		2,742.4642	2,742.4642	0.7204		2,760.4745
Total	**4.3845**	**34.1922**	**19.4394**	**0.0270**		**2.4997**	**2.4997**		**2.3564**	**2.3564**		**2,742.4642**	**2,742.4642**	**0.7204**		**2,760.4745**

Unmitigated 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	lb/day										lb/day					
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
Vendor	1.6936	18.5832	6.4973	0.0263	0.7322	0.7262	1.4583	0.2109	0.6947	0.9056		2,783.6605	2,783.6605	0.0883	0.4137	2,909.1354
Worker	3.1514	3.4047	27.5185	0.0276	2.4891	0.0294	2.5185	0.6602	0.0273	0.6875		2,791.4583	2,791.4583	0.2731	0.2046	2,859.2653
Total	**4.8450**	**21.9879**	**34.0158**	**0.0539**	**3.2213**	**0.7556**	**3.9768**	**0.8711**	**0.7220**	**1.5931**		**5,575.1188**	**5,575.1188**	**0.3613**	**0.6183**	**5,768.4006**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2012

Mitigated 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	lb/day										lb/day					
Off-Road	4.3845	34.1922	19.4394	0.0270		2.4997	2.4997		2.3564	2.3564	0.0000	2,742.4642	2,742.4642	0.7204		2,760.4745
Total	**4.3845**	**34.1922**	**19.4394**	**0.0270**		**2.4997**	**2.4997**		**2.3564**	**2.3564**	**0.0000**	**2,742.4642**	**2,742.4642**	**0.7204**		**2,760.4745**

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	lb/day										lb/day					
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
Vendor	1.6936	18.5832	6.4973	0.0263	0.7322	0.7262	1.4583	0.2109	0.6947	0.9056		2,783.6605	2,783.6605	0.0883	0.4137	2,909.1354
Worker	3.1514	3.4047	27.5185	0.0276	2.4891	0.0294	2.5185	0.6602	0.0273	0.6875		2,791.4583	2,791.4583	0.2731	0.2046	2,859.2653
Total	**4.8450**	**21.9879**	**34.0158**	**0.0539**	**3.2213**	**0.7556**	**3.9768**	**0.8711**	**0.7220**	**1.5931**		**5,575.1188**	**5,575.1188**	**0.3613**	**0.6183**	**5,768.4006**

S&S Homes 2005 - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2013

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	lb/day										lb/day					
Off-Road	4.1593	33.0232	19.2651	0.0270		2.3874	2.3874		2.2487	2.2487		2,732.1439	2,732.1439	0.7060		2,749.7927
Total	**4.1593**	**33.0232**	**19.2651**	**0.0270**		**2.3874**	**2.3874**		**2.2487**	**2.2487**		**2,732.1439**	**2,732.1439**	**0.7060**		**2,749.7927**

Unmitigated 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	lb/day										lb/day					
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
Vendor	1.4403	16.5911	5.4865	0.0259	0.7322	0.6109	1.3430	0.2108	0.5844	0.7953		2,731.7943	2,731.7943	0.0748	0.4082	2,855.2966
Worker	2.8785	3.0118	24.6961	0.0270	2.4891	0.0264	2.5155	0.6602	0.0245	0.6847		2,726.7147	2,726.7147	0.2465	0.1852	2,788.0580
Total	**4.3189**	**19.6029**	**30.1827**	**0.0529**	**3.2213**	**0.6373**	**3.8585**	**0.8711**	**0.6089**	**1.4799**		**5,458.5090**	**5,458.5090**	**0.3213**	**0.5933**	**5,643.3546**

S&S Homes 2005 - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2013

Mitigated 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	lb/day										lb/day					
Off-Road	4.1593	33.0232	19.2651	0.0270		2.3874	2.3874		2.2487	2.2487	0.0000	2,732.1439	2,732.1439	0.7060		2,749.7927
Total	**4.1593**	**33.0232**	**19.2651**	**0.0270**		**2.3874**	**2.3874**		**2.2487**	**2.2487**	**0.0000**	**2,732.1439**	**2,732.1439**	**0.7060**		**2,749.7927**

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	lb/day										lb/day					
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
Vendor	1.4403	16.5911	5.4865	0.0259	0.7322	0.6109	1.3430	0.2108	0.5844	0.7953		2,731.7943	2,731.7943	0.0748	0.4082	2,855.2966
Worker	2.8785	3.0118	24.6961	0.0270	2.4891	0.0264	2.5155	0.6602	0.0245	0.6847		2,726.7147	2,726.7147	0.2465	0.1852	2,788.0580
Total	**4.3189**	**19.6029**	**30.1827**	**0.0529**	**3.2213**	**0.6373**	**3.8585**	**0.8711**	**0.6089**	**1.4799**		**5,458.5090**	**5,458.5090**	**0.3213**	**0.5933**	**5,643.3546**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2014

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	lb/day										lb/day					
Off-Road	3.8827	31.4296	18.9909	0.0269		2.2360	2.2360		2.1047	2.1047		2,720.7811	2,720.7811	0.6923		2,738.0882
Total	**3.8827**	**31.4296**	**18.9909**	**0.0269**		**2.2360**	**2.2360**		**2.1047**	**2.1047**		**2,720.7811**	**2,720.7811**	**0.6923**		**2,738.0882**

Unmitigated 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	lb/day										lb/day					
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
Vendor	1.1868	14.6173	4.6110	0.0256	0.7322	0.4783	1.2105	0.2109	0.4576	0.6685		2,706.1818	2,706.1818	0.0624	0.4041	2,828.1571
Worker	2.5061	2.5903	21.1676	0.0265	2.4891	0.0232	2.5123	0.6602	0.0215	0.6817		2,667.6524	2,667.6524	0.2141	0.1658	2,722.4076
Total	**3.6929**	**17.2075**	**25.7786**	**0.0522**	**3.2213**	**0.5016**	**3.7228**	**0.8711**	**0.4791**	**1.3502**		**5,373.8342**	**5,373.8342**	**0.2765**	**0.5699**	**5,550.5647**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2014

Mitigated 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	lb/day										lb/day					
Off-Road	3.8827	31.4296	18.9909	0.0269		2.2360	2.2360		2.1047	2.1047	0.0000	2,720.7811	2,720.7811	0.6923		2,738.0882
Total	**3.8827**	**31.4296**	**18.9909**	**0.0269**		**2.2360**	**2.2360**		**2.1047**	**2.1047**	**0.0000**	**2,720.7811**	**2,720.7811**	**0.6923**		**2,738.0882**

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	lb/day										lb/day					
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
Vendor	1.1868	14.6173	4.6110	0.0256	0.7322	0.4783	1.2105	0.2109	0.4576	0.6685		2,706.1818	2,706.1818	0.0624	0.4041	2,828.1571
Worker	2.5061	2.5903	21.1676	0.0265	2.4891	0.0232	2.5123	0.6602	0.0215	0.6817		2,667.6524	2,667.6524	0.2141	0.1658	2,722.4076
Total	**3.6929**	**17.2075**	**25.7786**	**0.0522**	**3.2213**	**0.5016**	**3.7228**	**0.8711**	**0.4791**	**1.3502**		**5,373.8342**	**5,373.8342**	**0.2765**	**0.5699**	**5,550.5647**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2015

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	lb/day										lb/day					
Off-Road	3.6734	30.2005	18.8039	0.0269		2.1245	2.1245		1.9976	1.9976		2,701.0442	2,701.0442	0.6782		2,718.0002
Total	**3.6734**	**30.2005**	**18.8039**	**0.0269**		**2.1245**	**2.1245**		**1.9976**	**1.9976**		**2,701.0442**	**2,701.0442**	**0.6782**		**2,718.0002**

Unmitigated 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	lb/day										lb/day					
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
Vendor	1.0421	13.0486	4.1063	0.0253	0.7323	0.4019	1.1342	0.2109	0.3845	0.5954		2,673.2583	2,673.2583	0.0552	0.3987	2,793.4513
Worker	2.1962	2.2308	18.3785	0.0260	2.4891	0.0212	2.5102	0.6602	0.0196	0.6798		2,626.0677	2,626.0677	0.1884	0.1481	2,674.9106
Total	**3.2383**	**15.2794**	**22.4848**	**0.0513**	**3.2213**	**0.4231**	**3.6444**	**0.8711**	**0.4041**	**1.2752**		**5,299.3260**	**5,299.3260**	**0.2436**	**0.5468**	**5,468.3619**

S&S Homes 2005 - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2015

Mitigated 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	lb/day										lb/day					
Off-Road	3.6734	30.2005	18.8039	0.0269		2.1245	2.1245		1.9976	1.9976	0.0000	2,701.0442	2,701.0442	0.6782		2,718.0002
Total	**3.6734**	**30.2005**	**18.8039**	**0.0269**		**2.1245**	**2.1245**		**1.9976**	**1.9976**	**0.0000**	**2,701.0442**	**2,701.0442**	**0.6782**		**2,718.0002**

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	lb/day										lb/day					
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
Vendor	1.0421	13.0486	4.1063	0.0253	0.7323	0.4019	1.1342	0.2109	0.3845	0.5954		2,673.2583	2,673.2583	0.0552	0.3987	2,793.4513
Worker	2.1962	2.2308	18.3785	0.0260	2.4891	0.0212	2.5102	0.6602	0.0196	0.6798		2,626.0677	2,626.0677	0.1884	0.1481	2,674.9106
Total	**3.2383**	**15.2794**	**22.4848**	**0.0513**	**3.2213**	**0.4231**	**3.6444**	**0.8711**	**0.4041**	**1.2752**		**5,299.3260**	**5,299.3260**	**0.2436**	**0.5468**	**5,468.3619**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2016

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	lb/day										lb/day					
Off-Road	3.4202	28.6715	18.5644	0.0269		1.9749	1.9749		1.8554	1.8554		2,680.6350	2,680.6350	0.6655		2,697.2713
Total	**3.4202**	**28.6715**	**18.5644**	**0.0269**		**1.9749**	**1.9749**		**1.8554**	**1.8554**		**2,680.6350**	**2,680.6350**	**0.6655**		**2,697.2713**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.9114	11.7691	3.6876	0.0250	0.7323	0.3411	1.0734	0.2109	0.3263	0.5372		2,639.1216	2,639.1216	0.0485	0.3925	2,757.3082
Worker	1.9109	1.8955	15.8042	0.0254	2.4891	0.0193	2.5083	0.6602	0.0178	0.6780		2,567.5576	2,567.5576	0.1638	0.1315	2,610.8291
Total	**2.8223**	**13.6646**	**19.4917**	**0.0504**	**3.2214**	**0.3603**	**3.5817**	**0.8711**	**0.3441**	**1.2152**		**5,206.6791**	**5,206.6791**	**0.2123**	**0.5240**	**5,368.1374**

S&S Homes 2005 - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2016

Mitigated 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	lb/day										lb/day					
Off-Road	3.4202	28.6715	18.5644	0.0269		1.9749	1.9749		1.8554	1.8554	0.0000	2,680.6350	2,680.6350	0.6655		2,697.2713
Total	**3.4202**	**28.6715**	**18.5644**	**0.0269**		**1.9749**	**1.9749**		**1.8554**	**1.8554**	**0.0000**	**2,680.6350**	**2,680.6350**	**0.6655**		**2,697.2713**

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	lb/day										lb/day					
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
Vendor	0.9114	11.7691	3.6876	0.0250	0.7323	0.3411	1.0734	0.2109	0.3263	0.5372		2,639.1216	2,639.1216	0.0485	0.3925	2,757.3082
Worker	1.9109	1.8955	15.8042	0.0254	2.4891	0.0193	2.5083	0.6602	0.0178	0.6780		2,567.5576	2,567.5576	0.1638	0.1315	2,610.8291
Total	**2.8223**	**13.6646**	**19.4917**	**0.0504**	**3.2214**	**0.3603**	**3.5817**	**0.8711**	**0.3441**	**1.2152**		**5,206.6791**	**5,206.6791**	**0.2123**	**0.5240**	**5,368.1374**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2017

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	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791		2,650.9797	2,650.9797	0.6531		2,667.3078
Total	**3.1149**	**26.5546**	**18.1825**	**0.0269**		**1.7879**	**1.7879**		**1.6791**	**1.6791**		**2,650.9797**	**2,650.9797**	**0.6531**		**2,667.3078**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.7260	10.4388	3.1068	0.0246	0.7323	0.2635	0.9958	0.2109	0.2521	0.4629		2,600.8528	2,600.8528	0.0392	0.3870	2,717.1675
Worker	1.6834	1.6016	13.6342	0.0248	2.4891	0.0181	2.5072	0.6602	0.0167	0.6769		2,503.6558	2,503.6558	0.1418	0.1164	2,541.8949
Total	**2.4094**	**12.0404**	**16.7409**	**0.0494**	**3.2214**	**0.2816**	**3.5030**	**0.8711**	**0.2687**	**1.1399**		**5,104.5085**	**5,104.5085**	**0.1810**	**0.5035**	**5,259.0624**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2017

Mitigated 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	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791	0.0000	2,650.9797	2,650.9797	0.6531		2,667.3078
Total	**3.1149**	**26.5546**	**18.1825**	**0.0269**		**1.7879**	**1.7879**		**1.6791**	**1.6791**	**0.0000**	**2,650.9797**	**2,650.9797**	**0.6531**		**2,667.3078**

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	lb/day										lb/day					
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
Vendor	0.7260	10.4388	3.1068	0.0246	0.7323	0.2635	0.9958	0.2109	0.2521	0.4629		2,600.8528	2,600.8528	0.0392	0.3870	2,717.1675
Worker	1.6834	1.6016	13.6342	0.0248	2.4891	0.0181	2.5072	0.6602	0.0167	0.6769		2,503.6558	2,503.6558	0.1418	0.1164	2,541.8949
Total	**2.4094**	**12.0404**	**16.7409**	**0.0494**	**3.2214**	**0.2816**	**3.5030**	**0.8711**	**0.2687**	**1.1399**		**5,104.5085**	**5,104.5085**	**0.1810**	**0.5035**	**5,259.0624**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2018

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	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099		2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**		**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

Unmitigated 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	lb/day										lb/day					
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
Vendor	0.6303	9.6489	2.8140	0.0243	0.7323	0.2230	0.9553	0.2109	0.2133	0.4242		2,570.0003	2,570.0003	0.0342	0.3823	2,684.7928
Worker	1.4789	1.3513	11.8123	0.0241	2.4891	0.0173	2.5064	0.6602	0.0160	0.6762		2,434.6148	2,434.6148	0.1227	0.1035	2,468.5328
Total	**2.1093**	**11.0002**	**14.6263**	**0.0484**	**3.2214**	**0.2403**	**3.4617**	**0.8711**	**0.2293**	**1.1004**		**5,004.6151**	**5,004.6151**	**0.1569**	**0.4859**	**5,153.3256**

S&S Homes 2005 - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2018

Mitigated 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	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099	0.0000	2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**	**0.0000**	**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

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	lb/day										lb/day					
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
Vendor	0.6303	9.6489	2.8140	0.0243	0.7323	0.2230	0.9553	0.2109	0.2133	0.4242		2,570.0003	2,570.0003	0.0342	0.3823	2,684.7928
Worker	1.4789	1.3513	11.8123	0.0241	2.4891	0.0173	2.5064	0.6602	0.0160	0.6762		2,434.6148	2,434.6148	0.1227	0.1035	2,468.5328
Total	**2.1093**	**11.0002**	**14.6263**	**0.0484**	**3.2214**	**0.2403**	**3.4617**	**0.8711**	**0.2293**	**1.1004**		**5,004.6151**	**5,004.6151**	**0.1569**	**0.4859**	**5,153.3256**

S&S Homes 2005 - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2018

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	lb/day										lb/day					
Off-Road	1.6437	17.5209	14.7964	0.0228		0.9561	0.9561		0.8797	0.8797		2,294.0887	2,294.0887	0.7142		2,311.9432
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6437**	**17.5209**	**14.7964**	**0.0228**		**0.9561**	**0.9561**		**0.8797**	**0.8797**		**2,294.0887**	**2,294.0887**	**0.7142**		**2,311.9432**

Unmitigated 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	lb/day										lb/day					
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
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
Worker	0.0732	0.0669	0.5848	1.1900e-003	0.1232	8.6000e-004	0.1241	0.0327	7.9000e-004	0.0335		120.5255	120.5255	6.0800e-003	5.1200e-003	122.2046
Total	**0.0732**	**0.0669**	**0.5848**	**1.1900e-003**	**0.1232**	**8.6000e-004**	**0.1241**	**0.0327**	**7.9000e-004**	**0.0335**		**120.5255**	**120.5255**	**6.0800e-003**	**5.1200e-003**	**122.2046**

S&S Homes 2005 - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2018

Mitigated 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	lb/day										lb/day					
Off-Road	1.6437	17.5209	14.7964	0.0228		0.9561	0.9561		0.8797	0.8797	0.0000	2,294.0887	2,294.0887	0.7142		2,311.9432
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6437**	**17.5209**	**14.7964**	**0.0228**		**0.9561**	**0.9561**		**0.8797**	**0.8797**	**0.0000**	**2,294.0887**	**2,294.0887**	**0.7142**		**2,311.9432**

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	lb/day										lb/day					
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
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
Worker	0.0732	0.0669	0.5848	1.1900e-003	0.1232	8.6000e-004	0.1241	0.0327	7.9000e-004	0.0335		120.5255	120.5255	6.0800e-003	5.1200e-003	122.2046
Total	**0.0732**	**0.0669**	**0.5848**	**1.1900e-003**	**0.1232**	**8.6000e-004**	**0.1241**	**0.0327**	**7.9000e-004**	**0.0335**		**120.5255**	**120.5255**	**6.0800e-003**	**5.1200e-003**	**122.2046**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2019

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	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4544**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**		**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

Unmitigated 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	lb/day										lb/day					
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
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
Worker	0.0652	0.0569	0.5141	1.1600e-003	0.1232	8.3000e-004	0.1241	0.0327	7.6000e-004	0.0335		117.2058	117.2058	5.3100e-003	4.5900e-003	118.7074
Total	**0.0652**	**0.0569**	**0.5141**	**1.1600e-003**	**0.1232**	**8.3000e-004**	**0.1241**	**0.0327**	**7.6000e-004**	**0.0335**		**117.2058**	**117.2058**	**5.3100e-003**	**4.5900e-003**	**118.7074**

S&S Homes 2005 - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2019

Mitigated 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	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4544**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**	**0.0000**	**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

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	lb/day										lb/day					
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
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
Worker	0.0652	0.0569	0.5141	1.1600e-003	0.1232	8.3000e-004	0.1241	0.0327	7.6000e-004	0.0335		117.2058	117.2058	5.3100e-003	4.5900e-003	118.7074
Total	**0.0652**	**0.0569**	**0.5141**	**1.1600e-003**	**0.1232**	**8.3000e-004**	**0.1241**	**0.0327**	**7.6000e-004**	**0.0335**		**117.2058**	**117.2058**	**5.3100e-003**	**4.5900e-003**	**118.7074**

S&S Homes 2005 - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2019

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	lb/day										lb/day					
Archit. Coating	45.3082					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	**45.5746**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**282.0423**

Unmitigated 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	lb/day										lb/day					
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
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
Worker	0.2650	0.2315	2.0905	4.7200e-003	0.5011	3.3700e-003	0.5045	0.1329	3.1100e-003	0.1360		476.6368	476.6368	0.0216	0.0187	482.7434
Total	**0.2650**	**0.2315**	**2.0905**	**4.7200e-003**	**0.5011**	**3.3700e-003**	**0.5045**	**0.1329**	**3.1100e-003**	**0.1360**		**476.6368**	**476.6368**	**0.0216**	**0.0187**	**482.7434**

S&S Homes 2005 - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2019

Mitigated 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	lb/day										lb/day					
Archit. Coating	45.3082					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	**45.5746**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**282.0423**

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	lb/day										lb/day					
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
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
Worker	0.2650	0.2315	2.0905	4.7200e-003	0.5011	3.3700e-003	0.5045	0.1329	3.1100e-003	0.1360		476.6368	476.6368	0.0216	0.0187	482.7434
Total	**0.2650**	**0.2315**	**2.0905**	**4.7200e-003**	**0.5011**	**3.3700e-003**	**0.5045**	**0.1329**	**3.1100e-003**	**0.1360**		**476.6368**	**476.6368**	**0.0216**	**0.0187**	**482.7434**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2020

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	lb/day										lb/day					
Archit. Coating	45.3082					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**45.5504**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

Unmitigated 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	lb/day										lb/day					
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
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
Worker	0.2391	0.1990	1.8698	4.5800e-003	0.5011	3.2300e-003	0.5043	0.1329	2.9700e-003	0.1359		462.9620	462.9620	0.0191	0.0169	468.4714
Total	**0.2391**	**0.1990**	**1.8698**	**4.5800e-003**	**0.5011**	**3.2300e-003**	**0.5043**	**0.1329**	**2.9700e-003**	**0.1359**		**462.9620**	**462.9620**	**0.0191**	**0.0169**	**468.4714**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2020

Mitigated 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	lb/day										lb/day					
Archit. Coating	45.3082					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**45.5504**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

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	lb/day										lb/day					
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
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
Worker	0.2391	0.1990	1.8698	4.5800e-003	0.5011	3.2300e-003	0.5043	0.1329	2.9700e-003	0.1359		462.9620	462.9620	0.0191	0.0169	468.4714
Total	**0.2391**	**0.1990**	**1.8698**	**4.5800e-003**	**0.5011**	**3.2300e-003**	**0.5043**	**0.1329**	**2.9700e-003**	**0.1359**		**462.9620**	**462.9620**	**0.0191**	**0.0169**	**468.4714**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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	lb/day										lb/day					
Mitigated	23.0068	67.2033	242.6383	0.2497	17.5473	1.5378	19.0851	4.7020	1.4656	6.1676		25,523.9018	25,523.9018	2.8525	2.3220	26,287.1636
Unmitigated	23.0068	67.2033	242.6383	0.2497	17.5473	1.5378	19.0851	4.7020	1.4656	6.1676		25,523.9018	25,523.9018	2.8525	2.3220	26,287.1636

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	8.40	21.11	23.59	26,441	26,441
Single Family Housing	2,784.80	2,814.30	2522.25	8,001,452	8,001,452
Total	2,793.20	2,835.41	2,545.84	8,027,893	8,027,893

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	10.80	7.30	7.50	46.40	16.40	37.20	86	11	3

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.432435	0.061153	0.166286	0.195483	0.048748	0.010779	0.015542	0.029798	0.000916	0.000247	0.027292	0.001795	0.009527
Single Family Housing	0.432435	0.061153	0.166286	0.195483	0.048748	0.010779	0.015542	0.029798	0.000916	0.000247	0.027292	0.001795	0.009527

5.0 Energy Detail

Historical Energy Use: Y

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	lb/day										lb/day					
NaturalGas Mitigated	0.2071	1.7699	0.7532	0.0113		0.1431	0.1431		0.1431	0.1431		2,259.4970	2,259.4970	0.0433	0.0414	2,272.9241
NaturalGas Unmitigated	0.2071	1.7699	0.7532	0.0113		0.1431	0.1431		0.1431	0.1431		2,259.4970	2,259.4970	0.0433	0.0414	2,272.9241

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	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	lb/day										lb/day					
City Park	0	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
Single Family Housing	19205.7	0.2071	1.7699	0.7532	0.0113		0.1431	0.1431		0.1431	0.1431		2,259.4970	2,259.4970	0.0433	0.0414	2,272.9241
Total		**0.2071**	**1.7699**	**0.7532**	**0.0113**		**0.1431**	**0.1431**		**0.1431**	**0.1431**		**2,259.4970**	**2,259.4970**	**0.0433**	**0.0414**	**2,272.9241**

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	lb/day										lb/day					
City Park	0	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
Single Family Housing	19.2057	0.2071	1.7699	0.7532	0.0113		0.1431	0.1431		0.1431	0.1431		2,259.4970	2,259.4970	0.0433	0.0414	2,272.9241
Total		**0.2071**	**1.7699**	**0.7532**	**0.0113**		**0.1431**	**0.1431**		**0.1431**	**0.1431**		**2,259.4970**	**2,259.4970**	**0.0433**	**0.0414**	**2,272.9241**

6.0 Area Detail

S&S Homes 2005 - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.1 Mitigation Measures Area

	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	lb/day										lb/day					
Mitigated	17.1831	3.0019	27.0473	0.0185		0.3457	0.3457		0.3457	0.3457	0.0000	3,479.7076	3,479.7076	0.1193	0.0630	3,501.4605
Unmitigated	17.1831	3.0019	27.0473	0.0185		0.3457	0.3457		0.3457	0.3457	0.0000	3,479.7076	3,479.7076	0.1193	0.0630	3,501.4605

S&S Homes 2005 - Kern-San Joaquin County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	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	lb/day										lb/day					
Architectural Coating	4.5515					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.3876					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3150	2.6914	1.1453	0.0172		0.2176	0.2176		0.2176	0.2176	0.0000	3,435.8824	3,435.8824	0.0659	0.0630	3,456.3001
Landscaping	0.9290	0.3105	25.9020	1.2900e-003		0.1281	0.1281		0.1281	0.1281		43.8253	43.8253	0.0534		45.1604
Total	**17.1831**	**3.0019**	**27.0473**	**0.0185**		**0.3457**	**0.3457**		**0.3457**	**0.3457**	**0.0000**	**3,479.7076**	**3,479.7076**	**0.1193**	**0.0630**	**3,501.4605**

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	lb/day										lb/day					
Architectural Coating	4.5515					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.3876					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3150	2.6914	1.1453	0.0172		0.2176	0.2176		0.2176	0.2176	0.0000	3,435.8824	3,435.8824	0.0659	0.0630	3,456.3001
Landscaping	0.9290	0.3105	25.9020	1.2900e-003		0.1281	0.1281		0.1281	0.1281		43.8253	43.8253	0.0534		45.1604
Total	**17.1831**	**3.0019**	**27.0473**	**0.0185**		**0.3457**	**0.3457**		**0.3457**	**0.3457**	**0.0000**	**3,479.7076**	**3,479.7076**	**0.1193**	**0.0630**	**3,501.4605**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

17 April 2023

Ms. Janet Axelsen
S&S Homes of the Central Coast, Inc.
532 Camino Mercado
Arroyo Grande, California 93420

Subj: Biological Clearance Survey – 105.74 Gross Acres, APNs 386-050-61 (Portion), 386-050-47, -54, and -59, Bakersfield, California.

PURPOSE

The purpose of this report is to document biological resources identified during a reconnaissance-level field study of the project site and identify potential impacts to biological resources resulting from the project. The California Department of Fish and Wildlife (CDFW) and United States Fish and Wildlife Service (USFWS) have not been. contacted regarding the preparation of this report. If California Environmental Quality threshold determinations warrant, further consultation may be required with CDFW and USFWS. If additional consultation with the agencies results in the need for Application for a California Incidental Take Permit, Cal. Code Regs., tit. 14, § 783.2 outlines requirements for detailed species-specific take analysis, proposed measures to minimize and fully mitigate impacts, compliance monitoring, and funding.

PROJECT LEGAL DESCRIPTION

The project consists of 105.74 gross acres of Vesting Tentative Tract Number 7431, Assessor's Parcel Numbers 386-050-61 (Portion), 386-050-47, -54, and -59, within the incorporated limits of the City of Bakersfield, County of Kern, California (Attachment 1).

PROJECT BACKGROUND

Beginning phases for the project were initiated in 2004. Attachment 2 shows disturbance at this time commensurate with excavation required for geologic surveys to confirm soil composition and distribution of fault lines. By April 2006, rough grading for offsite improvements and related borrow pits and spoil piles are evident as reflected in Attachment 3. Attachment 4, taken in October 2009, illustrates a much greater degree of earthwork related to off-site improvements, borrow pit excavation, and spoil pile stockpiling. By April 2014, historic aerial imagery suggests construction activities at the site ceased. The aerial imagery is in line with the housing construction crash of 2008. A biological clearance survey of Paladino Drive and a portion of Grand Canyon was conducted by McCormick Biological, Inc. (MBI) in August 2015, letter report dated 07 August 2015. Mr. Steven P. Pruett was the MBI Project Biologist directing work and authored the biological clearance survey letter report. No additional field studies are known. Aerial imagery shows that approximately 1,600-feet of Grand Canyon Drive was constructed in 2018. Approximately one-half mile of Paladino Drive was constructed in 2020, connecting Masterson Street to the south end of Grand Canyon Drive. By 2014, intensive earth disturbance hand been conducted on all but about 20-acres of the project. Other than the construction of Paladino Drive and Grand Canyon Drive, no work is known to PruettBio or is reflected in aerial imagery.

Earth disturbance as described above, was subject to the Metropolitan Bakersfield Habitat Conservation Plan (MBHCP), Endangered Species Act section 10(a)(1)(B) permit and California Endangered Species Act incidental take permit (ITP) issued by the CDFW, pursuant to Fish and Game Code section 2081(b)(ITP No. 2081-2013-058-04), for the MBHCP. At that time, no less than a 30-day biological clearance survey and protocol-level surveys for the detection of blunt-nosed leopard lizard (Gambelia sila) should have been required, completed, and submitted to the City of Bakersfield Planning and Community Development Department, the CDFW, and the USFWS.

The MBHCP and associated permitting expired 31 December 22. Through agreement between the federal and state agencies and the City of Bakersfield (Permittee), urban development permits approved/permitted by 31 December 22 will be subject to, and will be afforded take coverage under, the MBHCP assuming ground disturbance begins no later than 01 June 23. Fee payment required by the MBHCP, allowing for participation in the plan and allowance for take coverage, should have been required prior to any of the earth disturbance that has been conducted on the project.

PRE-ACTIVITY SURVEY

Federal- and State-Listed or otherwise special-status species that have the historical or current distributions within a 10-mile radius of the project include but are not limited to: Blunt-nosed leopard lizard (*Gambelia sila*), San Joaquin antelope squirrel (*Ammospermophilus nelsoni*, SJAS), San Joaquin kit fox (*Vulpes macrotis mutica*, SJKF), and Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*, TKR), Bakersfield cactus (*Opuntia basilaris* var. *treleasei*, BACA), Kern mallow (*Eremalche parryi* ssp. *kernensis*), and burrowing owl (*Athene cunicularia*, BUOW). BUOW is afforded protection under the Migratory Bird Treaty Act (1918), BOUW populations in the San Joaquin Valley occur in close association with California ground squirrels (*Otospermophilus beecheyi*). If observed, San Joaquin kit fox (SJKF) dens were classified as defined by the *USFWS Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (2011). All plant taxa encountered were identified to the extent possible given the diagnostic features present. Identifications were made using keys contained in *The Jepson Manual: Vascular Plants of California* and online updates containing revisions to taxonomic treatments (Baldwin et al. 2012; Jepson Flora Project 2015).

A field study was conducted on full coverage transects for the detection of the listed and special-status species with evidence of occupation or transitory occurrence. The field study was conducted on 22 April 2023, by Steven P. Pruett, a CDFW-approved Qualified Biologist for the species potentially occurring in the vicinity of the project. Mr. Pruett was accompanied by Mr. Tyus Thompson. The project was evaluated on transects at intervals no greater than 100-feet (30-meters).

SURVEY RESULTS AND CONCLUSIONS

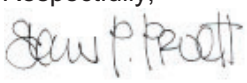
Kern County in general and specifically the Bakersfield area have experienced well-above average, and stratified, rainfall in the past six months. Precipitation amounts and patterns to-date have resulted in well above average seasonal vegetation growth. Although the bulk of the project was heavily impacted by earthwork before 2014, the project has been fallow and recovering for nine years. This, taken in concert with above average rainfall has hidden much of the previous disturbance. Other than the borrow pit located near Grand Canyon Drive, almost the entire remainder of the site is covered in ruderal vegetation knee-high to six-feet (Attachments 7 through 14).

The fieldwork conducted for the preparation of this report meets the federal and state general survey guidelines for timing and spacing requirements for the detection of special-status species required for a biological clearance survey. Given the behavior of individual wildlife species, well above normal vegetation density and height could allow for subtle species sign to remain undetected on the ground.

No SJKF potential, known, or natal dens were observed. No SJKF scat, track, or other evidence suggesting SJKF presence was observed. No BUOW was observed. No BUOW burrows or evidence of BUOW presence was observed. No BACA was observed on the project. Given previous intensive earth disturbance and specific personal knowledge of the project and vicinity, no BACA is believed to exist on the project. No large mammal trails were detected through vegetation. No avian ground nests were detected. The project is not within the current published range of TKR. No burrows exhibiting typical kangaroo rat architecture or sign were observed. No evidence of any special-status species was observed during the field survey.

Please do not hesitate to contact me if you have any questions of require additional information.

Respectfully,



Steven P. Pruett, Principal Biologist

Attachments



Attachment 1: Aerial photograph of the project and vicinity (Google Earth Pro 2023).



Attachment 2: Aerial photograph of the project site show disturbance in December 2004 (Google Earth Pro 2023).



Attachment 3: Aerial photograph of the project site show disturbance in April 2006 (Google Earth Pro 2023).



Attachment 4: Aerial photograph of the project site show disturbance in October 2009 (Google Earth Pro 2023).



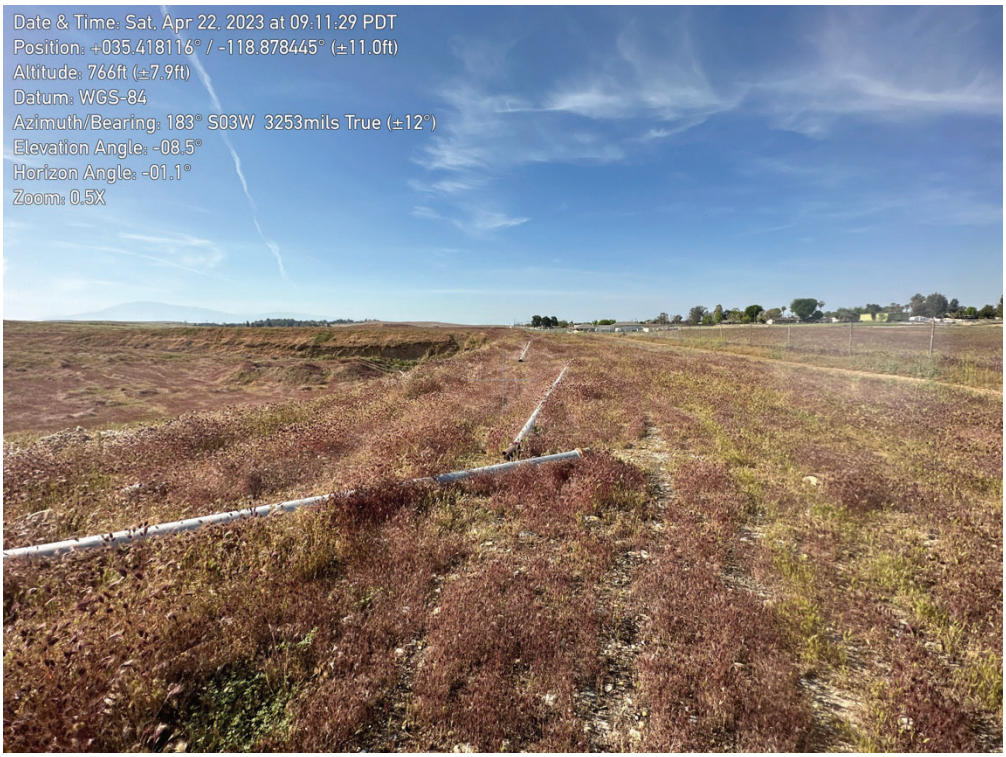
Attachment 5: Aerial photograph of the project site show disturbance in April 2014 (Google Earth Pro 2023).



Attachment 6: Aerial photograph of the project site show disturbance in April 2021 (Google Earth Pro 2023).



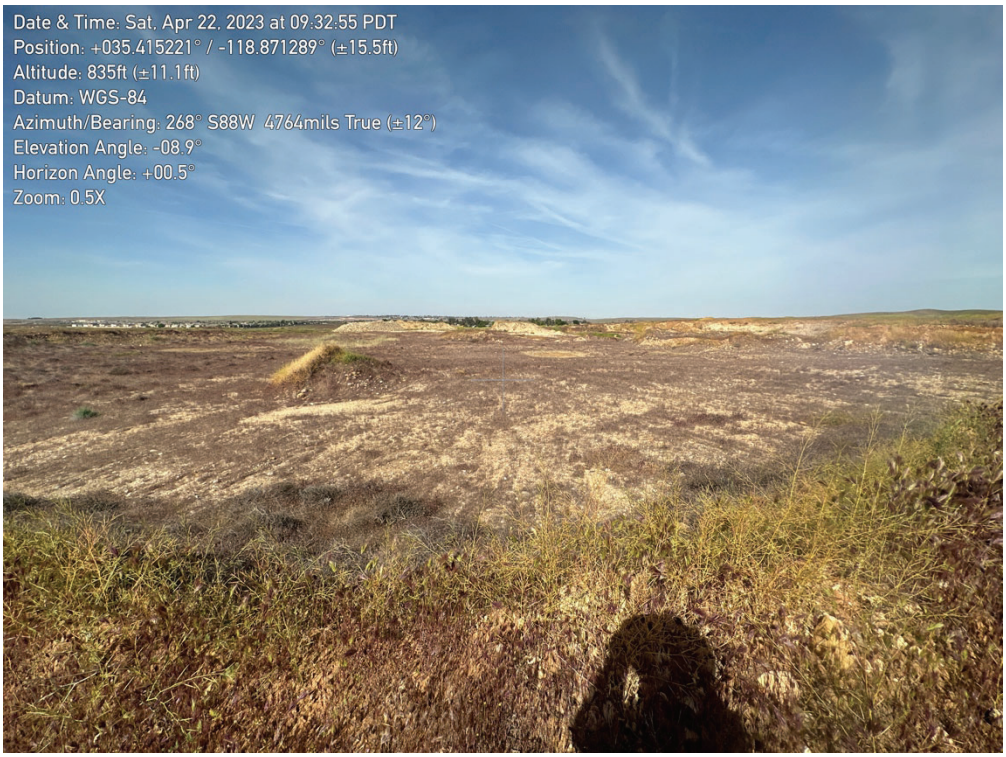
Attachment 7. Photograph taken near the northwest corner of the project facing east along Grand Canyon Drive (22Apr23).



Attachment 8. Photograph taken near the northwest corner of the project facing south along Masterson Street (22Apr23).



Attachment 9. Photograph showing an old laydown yard in the northeast quarter of the project (22Apr23).



Attachment 10. Photograph showing a borrow pit in the east half of the project near Grand Canyon Drive (22Apr23).



Attachment 11. Photograph taken near the intersection of Paladino Drive and Grand Canyon Drive, facing east (22Apr23).



Attachment 12. Photograph taken in the southwest quarter of the project (22Apr23).



Attachment 13. Photograph showing rock piles from previous project screening (22Apr23).



Attachment 14. Photograph showing a storage/laydown yard on the project (22Apr23).

A CULTURAL RESOURCES ASSESSMENT OF TENTATIVE TRACT 6137, APN 386-020-14, A 103-ACRE PARCEL OF LAND, FOR THE CITY OF BAKERSFIELD, KERN COUNTY, CALIFORNIA

Prepared by:

Jill K. Gardner, M.A., RPA
Center for Archaeological Research
California State University
9001 Stockdale Highway
Bakersfield, California 93311-1099

Dr. Mark Q. Sutton, Director

CAR Project No. 04-14

Prepared for:

The Keith Companies
4195 East Thousand Oaks Boulevard, Suite 250
Thousand Oaks, CA 91362

April 2004

EXECUTIVE SUMMARY

In April 2004, a cultural resources assessment was conducted on behalf of the City of Bakersfield for Tentative Tract 6137, APN 386-020-14, on a 103-acre parcel of land at the intersection of Alfred Harrell Highway and Lake Ming Road in Kern County, California. The assessment, the purpose of which was to satisfy California Environmental Quality Act (CEQA) requirements regarding cultural resources on lands proposed for development, consisted of an historical resources records search at the Southern San Joaquin Valley Historical Resources Information Center at California State University, Bakersfield, and a pedestrian survey of the subject property. No prehistoric or historical cultural resources were identified on the subject property and no further cultural resources work is recommended.

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INTRODUCTION

At the request of The Keith Companies of Thousand Oaks, California, the Center for Archaeological Research (CAR) at California State University, Bakersfield, conducted a cultural resources assessment on behalf of the City of Bakersfield in Kern County, California. This assessment was for Tentative Tract 6137, APN 386-020-14, a 103-acre parcel of land located in northeast Bakersfield. Plans call for rezoning most of the parcel from commercial to residential. This assessment is intended to satisfy requirements of the California Environmental Quality Act (CEQA) regarding the identification and protection of any significant archaeological resources on lands proposed for development.

PROJECT LOCATION

The subject property is located at the intersection of Alfred Harrell Highway and Lake Ming Road northeast of the City of Bakersfield. The property occupies portions of the southern half of Section 4, T29S, R29E, MDBM, as shown on the Rio Bravo Ranch and Oil Center, CA, USGS 7.5' series topographic quadrangles (Fig. 1).

RECORDS SEARCH

A cultural resources records search for the subject property and surrounding area was conducted at the Southern San Joaquin Valley Historical Resources Information Center at California State University, Bakersfield (RS No. 04-098). The records search indicated that two cultural resource studies have been conducted on the property itself (KE-1744 and KE-2816) and seven have been conducted within about a half mile (see Appendix A). Two of these studies (KE-1744 and KE-2689) resulted in the documentation of historical resources related to construction of the Alfred Harrell Highway and two studies (KE-1080 and KE-2789) resulted in the discovery of an archaeological site (CA-KER-1106; the same site recorded twice, but well outside the project boundaries). Fourteen prehistoric isolates (milling tools, flaked stone) were also recorded in one of the studies (KE-1110). No properties listed on the *National Register of Historic Places*, *California Historical Landmarks*, *California Points of Historical Interest*, or the *Historical Resources Inventory* are present on or within a half mile of the subject parcel.

ENVIRONMENTAL BACKGROUND

The study area is located on the flat plain comprising the east side of the southern San Joaquin Valley. The climate is characterized by hot, dry summers and mild, semi-arid winters. The average yearly precipitation is 6.36 in., with approximately 70% falling between December and April. Prior to the emergence of modern agriculture in the region, the San Joaquin Valley had a vastly different landscape, at one time being dominated by a network of interconnecting lakes, rivers, streams, and sloughs (e.g., Sutton 1997:3). Thus, up until the late nineteenth century, the valley was home to a number of biotic communities typically associated with a mesic environment, such as large tracts of grassland and freshwater marsh communities (Twisselmann 1967). Many of the plants that make up these communities were important to the prehistoric inhabitants of the area,

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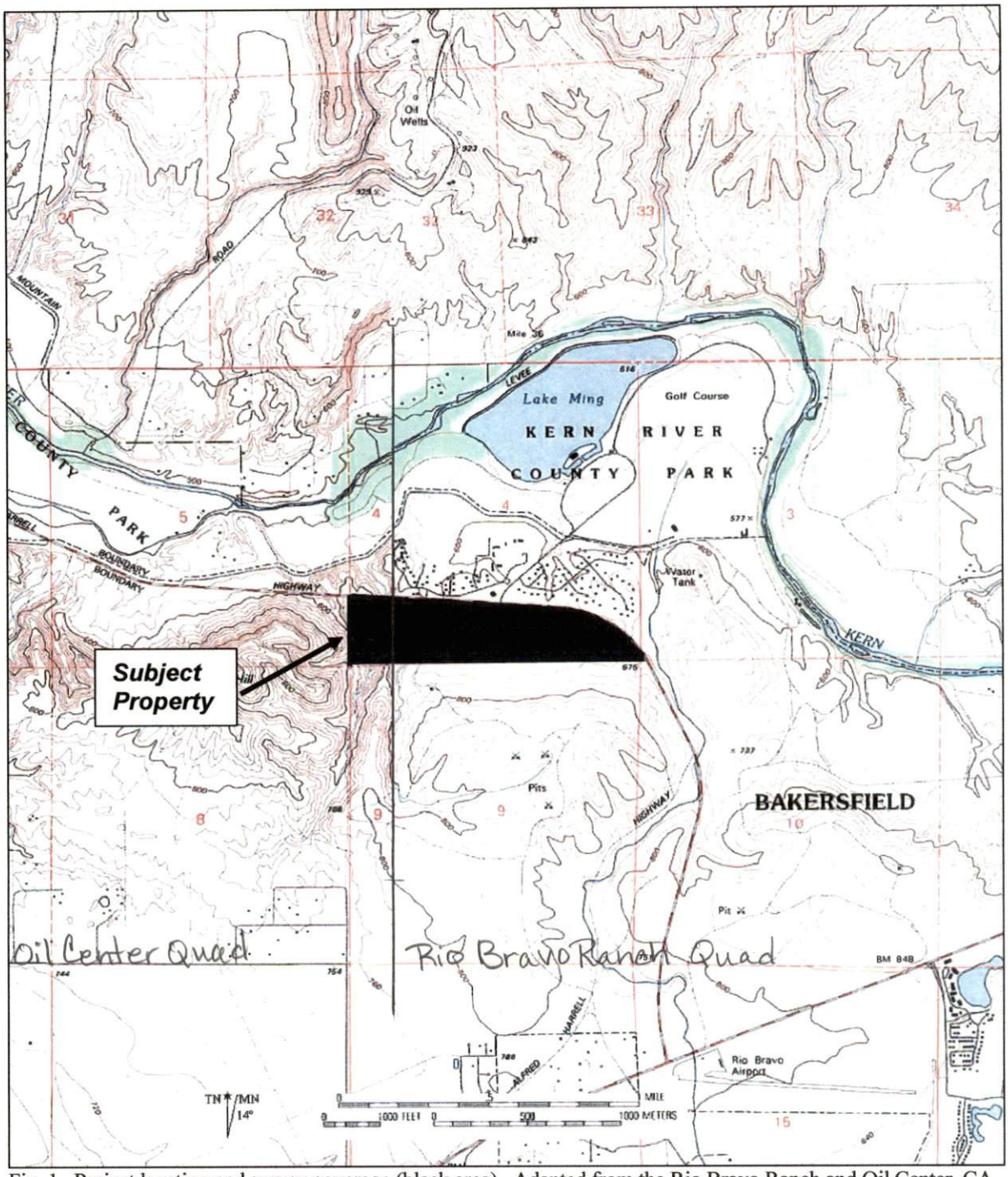


Fig. 1. Project location and survey coverage (black area). Adapted from the Rio Bravo Ranch and Oil Center, CA, USGS 7.5' series topographic quadrangles.

including tule, grassnut roots, grass seeds, clover, mustard greens, and salt grass (Latta 1976; Powers 1976; Osborne 1992:57).

An extensive variety of animals was also represented in the valley, although many species are either extinct locally, or have experienced a dramatic decline in population subsequent to Euroamerican contact. Extant mammal species associated with the valley faunal community

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include coyotes, foxes, badgers, California jackrabbits, cottontail rabbits, ground squirrels, wood rats, pocket gophers, and a variety of mice, among others (Osborne 1992:52; Sutton 1997:6). Waterfowl and other birds also reside in the valley–although in greatly reduced numbers–including teals, mallards, wood ducks, Canadian geese, American coots, grebes, hawks, and a variety of passerine (perching) birds, to list a few (Cogswell 1977). Fish species included, but were not limited to, Sacramento blackfish, Sacramento sucker, hitch, trout, perch, chub, and salmon, among others (Moyle 1976). Invertebrates, including freshwater mussels and clams, insects (e.g., grasshoppers, caterpillars, bees), reptiles (lizards and snakes), and amphibians (frogs and toads), were also once abundant in the valley.

CULTURAL BACKGROUND

The San Joaquin Valley has been occupied by Native American groups for thousands of years. There is significant evidence of human habitation in the lake country of the San Joaquin Valley dating as far back as 11,000 years ago, although only a few archaeological sites of this age have so far been identified. The most notable of these is the Witt Site on the western shore of Tulare Lake (Fenenga 1993). Below is a general characterization of the Holocene prehistory of the San Joaquin Valley, utilizing the taxonomic system proposed by Beardsley (1954a, 1954b) and detailed by Moratto (1984:181-183).

Cultural Chronology of the San Joaquin Valley

During the Early Horizon (8,000 to 4,000 B.P.), it is believed that people generally were nomadic and that their subsistence was based on hunting large game and fishing. Common artifacts found in sites from this period include hand-molded baked clay net weights, *Olivella* and *Haliotis* shell beads and ornaments, charmstones, and heavy stemmed projectile points.

The Middle Horizon (4,000 to 1,500 B.P.) was characterized by a more diversified subsistence, with increased emphasis on seed processing, along with hunting, fowling, and fishing. Artifacts include *Haliotis* shell ornaments in varied geometric shapes, *Olivella* and *Haliotis* beads, distinctive spindle-shaped charmstones, cobble mortars, chisel-ended pestles, and large, heavy projectile points. There was extensive use of bone for tools, such as awls, fish spear tips, saws, and pressure flakers used in the manufacture of projectile points and other stone tools.

In the Late Horizon (1,500 B.P. to Historic Contact), subsistence strategies intensified on the processing of plant foods, with less emphasis on hunting, fowling, and fishing. Artifacts include *Olivella* beads, *Haliotis* ornaments, stone beads and cylinders, clamshell disk beads, tubular smoking pipes of stone, arrow-shaft straighteners, small side-notched projectile points, flat-bottomed mortars, and well-crafted cylindrical pestles.

Southern Valley Yokuts Ethnography

The Native American inhabitants of the southern San Joaquin Valley during ethnographic times are known collectively as the Southern Valley Yokuts. The Yokuts have been the subject

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of considerable study by numerous researchers, including Kroeber (1925), Gifford and Schenck (1926, 1929), Gayton (1948), Powers (1976), Latta (1977), and Wallace (1978). The following discussion draws primarily from these sources.

The Yokuts have been separated into three geographical divisions, Northern Valley, Southern Valley, and Foothill. The Southern Valley Yokuts occupied the region around the project areas. There were more than 40 Yokuts tribes, each tribe having a distinct name, dialect, and territory. Their tribes were organized into single, large village settlements or in several smaller settlements grouped together. Each group consisted of as many as 350 people and was self-governed. Every village had a captain and a central chief, to whom the captain reported, and these titles were hereditary.

Availability of resources, such as fish, waterfowl, shellfish, roots, and seeds, enabled the Yokuts to occupy permanent villages most of the year, practicing a mixed subsistence strategy that emphasized fishing, fowling, hunting, and the collection of shellfish, roots, and seeds. Fishing provided their primary food resource and generally was done by netting. Perhaps due to the abundance of game animals and plant resources, agriculture was not practiced by the Yokuts (Beals 1974:45).

European contact with the Southern Valley Yokuts was first recorded in 1772, when a detachment of Spanish soldiers under the command of Pedro Fages ventured through the Tejon Pass into the San Joaquin Valley. No further contact is indicated until the Franciscan friar Garcés arrived in 1776. When California was annexed by the United States, the San Joaquin Valley was overrun with settlers, and native lands passed into Euroamerican hands. The few remaining Southern Valley Yokuts were sent to the Tejon reservation established at the base of the Tehachapi Mountains or to the Fresno reservation near Madera. These reservations failed to prosper, and the Native Americans who remained on them were moved to the Tule River reservation in 1859.

FIELD PROCEDURE

A field survey of the subject property was conducted by CAR personnel on April 1, 2004 (see Appendix B for qualifications). East-west transects, spaced 10 to 15 meters apart, were walked over the entire property. Because the property is devoid of trees and bushes, containing only low grasses, ground visibility was very good. There was a significant number of river cobbles on the property, and a large, dry drainage cuts through the western edge of the property.

RESULTS AND RECOMMENDATIONS

No prehistoric or historical cultural resources were discovered in the course of the field survey. It is unlikely that any cultural resources will be impacted by the proposed development of the subject property and no further cultural resource work is recommended. However, in the event any as-yet undetected (i.e., buried) cultural resources are encountered on the property at a future time, a qualified archaeologist should be contacted to evaluate any such discoveries.

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REFERENCES

Beals, Ralph L.

1974 Indian Occupancy, Subsistence, and Land Use Patterns in California. In: California Indians VI, edited by David Agee Horr, pp. 9-264. New York: Garland Publishing.

Beardsley, Richard K.

1954a Temporal and Areal Relationships in Central California Archaeology. Berkeley: Reports of the University of California Archaeological Survey No. 24.

1954b Temporal and Areal Relationships in Central California Archaeology. Berkeley: Reports of the University of California Archaeological Survey No. 25.

Cogswell, Howard L.

1977 Water Birds of California. Berkeley: University of California Press.

Fenenga, Gerrit L.

1993 Test Excavations at the Witt Site (CA-KIN-32). In: Contributions to Tulare Lake Archaeology II, Finding the Evidence: The Quest for Tulare Lake's Archaeological Past, William J. Wallace and Francis A. Riddell, editors, pp. 25-38. Redondo Beach: Tulare Lake Archaeological Research Group.

Gayton, A. H.

1948 Yokuts and Western Mono Ethnography I: Tulare Lake, Southern Valley, and Central Foothill Yokuts. Berkeley: University of California Anthropological Records 10(1).

Gifford, E. W., and W. Egbert Schenck

1926 Archaeology of the Southern San Joaquin Valley, California. Berkeley: University of California Publications in American Archaeology and Ethnology 23(1).

1929 Archaeology of the Northern San Joaquin Valley. Berkeley: University of California Publications in American Archaeology and Ethnology 25(4).

Kroeber, A. L.

1925 Handbook of California Indians. Bureau of American Ethnology Bulletin 78.

Latta, Frank F.

1976 Tailholt Tales. Santa Cruz: Bear State Books.

1977 Handbook of Yokuts Indians. Santa Cruz: Bear State Books.

Moratto, Michael

1984 California Archaeology. Orlando: Academic Press.

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Moyle, Peter B.
1976 Inland Fishes of California. Berkeley: University of California Press.

Osborne, Richard H.
1992 An Ethnographic Overview of the Southern Valley Yokuts. Kern County Archaeological Society Journal 3:36-65.

Powers, Stephen
1976 Tribes of California. Washington: Contributions to North American Ethnology, Vol. 3, United States Geographical and Geological Survey of the Rocky Mountain Region.

Sutton, Mark Q.
1997 A Background for Archaeological Investigations at Buena Vista Lake, Southern San Joaquin Valley, California. Kern County Archaeological Society Journal 8:3-21.

Twisselmann, Ernest C.
1967 A Flora of Kern County, California. San Francisco: University of San Francisco.

Wallace, William J.
1978 Southern Valley Yokuts. In: Handbook of North American Indians, Vol. 8, California, Robert F. Heizer, ed., pp. 448-461. Washington: Smithsonian Institution.

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Kish LaPierre, Staff Archaeologist
Center for Archaeological Research
California State University, Bakersfield
9001 Stockdale Highway
Bakersfield, California 93311-1099

EDUCATION:

B.A. Anthropology, CSU Fresno
M.A. Anthropology, CSU Bakersfield (in progress)

SPECIALTY:

Archaeology of southern California, in particular the southern and central San Joaquin Valley.

AREAS OF FIELDWORK:

Field survey and excavation experience in the southern and central San Joaquin Valley.

SUMMARY OF EXPERIENCE:

Over three years of field experience, and participation in several surveys and excavation projects.

A complete vita is available upon request.

KE 02883

Andrew Monastero, Staff Archaeologist
Center for Archaeological Research
California State University, Bakersfield
9001 Stockdale Highway
Bakersfield, California 93311-1099

EDUCATION:

B.A. Anthropology, University of Nevada, Reno
M.A. Anthropology, CSU Bakersfield (in progress)

SPECIALTY:

Archaeology of southern California, in particular the southern San Joaquin Valley and western Mojave Desert.

AREAS OF FIELDWORK:

Field survey and excavation experience in the western Mojave Desert and San Joaquin Valley.

SUMMARY OF EXPERIENCE:

Over two years of field experience, and participation in several surveys and excavation projects.

A complete vita is available upon request.

KE-02883

Greg Rogers, Archaeological Technician
Center for Archaeological Research
California State University, Bakersfield
9001 Stockdale Highway
Bakersfield, California 93311-1099

EDUCATION:

B.A. Anthropology, CSU Bakersfield (in progress)

SPECIALTY:

Archaeology of southern California, in particular the southern San Joaquin Valley and western Mojave Desert.

AREAS OF FIELDWORK:

Field survey and excavation experience in the western Mojave Desert and San Joaquin Valley.

SUMMARY OF EXPERIENCE:

Over a year of field experience, and participation in several surveys and excavation projects.

A complete vita is available upon request.

KE-02883

Audry Williams, Staff Archaeologist
Center for Archaeological Research
California State University, Bakersfield
9001 Stockdale Highway
Bakersfield, California 93311-1099

EDUCATION:

M.A. Anthropology, CSU Bakersfield (in progress)
B.A. Anthropology, CSU Bakersfield

SPECIALTY:

Archaeology of southern California, in particular the southern San Joaquin Valley and western Mojave Desert.

AREAS OF FIELDWORK:

Field survey and excavation experience in the western Mojave Desert and southern San Joaquin Valley.

SUMMARY OF EXPERIENCE:

Over five years of field experience, and participation in numerous surveys and excavation projects.

A complete vita is available upon request.

KE- 02883

Grading Plan Review and Updated Seismic, Foundation, and Retaining Wall Design Criteria, Lot 38 of Tract 6137-1, City of Bakersfield, California

W.O. 8927
April 4, 2008

GEOLABS-WESTLAKE VILLAGE

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GEOLABS-WESTLAKE VILLAGE
Foundation and Soils Engineering, Geology
31119 Via Colinas, Suite 502 • Westlake Village, CA 91362
Voice: (818) 889-2562 (805) 495-2197
Fax: (818) 889-2995 (805) 379-2603
a dba of
R & R Services
Corporation

April 4, 2008
W.O. 8927

S&S Homes of the Central Coast, Inc.
1350 East Grand Avenue
Arroyo Grande, California 93420

Attention: Mr. Dan Pike

SUBJECT: Grading Plan Review and Updated Seismic, Foundation, And Retaining Wall Design Criteria, Lot 38 of Tract 6137-1, City of Bakersfield, California

Mr. Pike;

In accordance with your request, our firm has undertaken a study of the geotechnical conditions at the subject property (Plate 1.1). Our purpose was to evaluate the distribution and engineering characteristics of the earth materials that occur at the site so that we might assess their impact upon the proposed development of the property.

Recommendations provided in previous reports remain applicable unless superseded herein (Geolabs Westlake Village (GWV), February 24, 2005). Of note, seismic, foundation, and retaining wall design criteria are updated based upon the 2007 California Building Code (CBC).

The scope of work performed to date for this report includes the following tasks:

- mapping of the site and its immediate vicinity;
- logging and sampling of four exploratory borings excavated with a truck-mounted bucket-auger drill rig;
- logging and sampling of 21 exploratory test pits;
- logging and sampling of 19 fault trenches;
- selected laboratory testing of the retrieved samples;
- review of previous work which was judged both pertinent to our purpose and readily available to our office;
- soil engineering analysis of the assembled data;
- preparation of this report.

Field data and the approximate locations of exploratory excavations are shown on the enclosed Geologic Map (Plate 1.2). Descriptions of the materials encountered in the exploratory excavations are provided on the enclosed logs (GWV borings on Plates B1, B2, PB1, and PB2; Krazan & Associates (Krazan) borings B2, B3, and B5; GWV test pits on Plates M20 to M27B and TP1, TP2, TP17 to TP22). Fault trench logs are provided in the referenced fault location and activity repot (GWV, November 14, 2005). Our findings are presented in the following sections, followed by a discussion of these findings and geotechnical recommendations.

Krazan borings B2, B3, and B5 were drilled and logged as a part of the initial study of the 640 acre parcel (Krazan, October 6, 2000). Fault trenches were excavated during fault location and activity assessment of Tract 6137 (GWV, November 14, 2005). Borings by GWV were drilled in conjunction with basin percolation testing. Test pits TP1 and TP2 were also excavated during basin design and testing (September 22, 2006). Test pits TP18 to TP22 were excavated as a part of Paladino Drive construction. Test Pits M20 to M27B were excavated recently as a part of the currently proposed Quarter Circle development.

SITE DESCRIPTION

Lot 38 of Phase 1 within Tract 6137-1, also know as the Quarter Circle, comprise that portion of Tract 6137 bound by Paladino Drive along the south, Masterson Street along the west, and Grand Canyon Drive around the north and east.

Natural slope gradients in the project area are on the order of 10:1 or flatter. The maximum relief in the project area is on the order of 85 feet, from the highest point in the northeastern area to the lowest point in the southwest.

A retention basin and booster pump station are located in the southwestern corner of the project.

PROPOSED PROJECT

The Quarter Circle will be graded to create a super-pad that drains toward the southwest at a gradient of approximately 2%. Sunstone Drive is proposed roughly north to south through the middle of the site.

Minor slopes, on the order of five feet or less, are illustrated on the map adjacent to Sunstone Drive and in the northeastern portion of the site. We anticipate cut slopes will be constructed about the perimeter of the site along Grand Canyon Drive to accommodate the difference in grades. The maximum depth of cut and fill per plan are on the order of 25 feet and 20 feet, respectively.

PREVIOUS GEOTECHNICAL STUDY

A previous geotechnical study was performed in the area, by Krazan in late 2000 for the purpose of preliminarily evaluating the geotechnical conditions of the property. Exploratory borings were excavated as a part of the Krazan study and we have included the logs of the pertinent borings herein, for completeness.

A Grading Plan Review report was prepared for Phases 1 to 3 of Tract 6137, dated February 24, 2005 (GWV). Fault location and activity was assessed in the GWV report dated November 14, 2005. The existing retention basin in the southwestern corner was addressed in the GWV report dated September 22, 2006.

EARTH MATERIALS

Exploratory logs and geologic mapping of the site indicate that a significant amount of oversize rock (greater than 12 inches in any dimension) in the form of crystalline igneous and metamorphic cobbles and boulders are present on the site. These materials will be encountered in conglomerate beds of the Kern River Formation. Subsurface conditions are illustrated on cross sections A-A', B-B', C-C', and D-D' (Plate 2.1).

SEISMIC GROUND MOTION VALUES - GENERAL PROCEDURE

This section serves to update previous recommendations to the current 2007 CBC. It replaces the seismicity portion of the Faulting and Seismicity section of the previous Grading Plan Review (GWV, February 24, 2005).

For this report we provide seismic ground motion values in accordance with the 2007 CBC (California Building Code). This code addresses seismic design based on response spectra considering an earthquake with a 2% probability of exceedance in 50 years (2475 year return period). Seismic ground motion values were determined using the general procedure within CBC §1613.5. The maximum considered earthquake and design spectral response accelerations were determined using the Java Ground Motion Parameter Calculator (version 5.0.8) available on the USGS Earthquake Hazards Program website.

Output from the analysis is summarized herein.

Latitude: 35.4123° Longitude: -118.8696°	**Factor/Coefficient**	**Value**
Site Profile Type	Site Class	C
Short-Period MCE at 0.2s	S_s	1.167
1.0s Period MCE	S_1	0.406
Site Coefficient	F_a	1.0
Site Coefficient	F_v	1.398
Adjusted MCE Spectral Response Parameters	S_{ms} S_{m1}	1.167 0.566
Design Spectral Acceleration Parameters	S_{DS} S_{D1}	0.778 0.377

DISCUSSION AND RECOMMENDATIONS

Data from our field exploration, laboratory testing, reference reports, and engineering analyses, coupled with inferred conditions about our exploratory excavations, is the basis for the following discussion. Recommendations, based upon the presently available data, are presented for your consideration.

REMOVALS

Removal recommendations provided in the referenced Grading Plan Review for Phases 1

to 3 of Tract 6137 remain applicable to construction of the site. In summary, removals should extend through undocumented fill soils, topsoil, colluvium, alluvium, and weathered units of the Kern River Formation. Also, we expect many of the cut lots will expose conglomeratic units within the Kern River Formation that frequently contain clasts larger than 12 inches in diameter. While not required by the Uniform Building Code, we suggest that in these situations, the building areas could be overexcavated to the bottom of the deepest utility line or footing and replaced with fill containing clasts smaller in diameter. This would help facilitate trenching operations.

Streets

Over excavation of the streets should be considered where planned in areas of cut and shallow fill. The City of Bakersfield standard details indicate trench backfill shall be free of clasts three-inches or greater in maximum dimension. Where utilities pass through areas of cobble and boulder bearing units of the Kern River Formation trenching, sieving, and backfilling may prove arduous. We suggest consideration of the overexcavation of such beds to provide for more uniform and easier trenching conditions. Such overexcavation should extend at least one foot below the deepest utility.

FOUNDATION SYSTEMS

Conventional or post-tension foundations may be utilized for the residential structures. Recommendations for each are provided for your consideration. The requirements for conventional foundation design are not intended to be applied to the design of the post-tension system.

Expansion index testing performed within other portions of Tentative Tract indicates materials within the ranges of 0-20, 21-50, and 51-90 are present. Recommendations for each expansion index range are provided below.

Conventional Foundations

Continuous or pad footings may be used to support the proposed residential structures. In order to achieve the capacities specified below, they should be founded a minimum of 12 inches into bedrock or engineered fill (not partially into each), with the concrete placed against in-place, undisturbed material. Foundation design criteria are based, in part, upon the expansive properties of the materials anticipated to be present near the finished pad grade. CBC §1805.8 requires design for expansive soils. The parameters provided in the following table are our minimum design values for the pertinent expansion index ranges. Some of these values are empirical in nature. As directed in the CBC, the foundations and slab designer should evaluate and design the foundations for effects of expansive soils. The final foundation and slab-on-grade configuration should contain details that are not less than the values provided herein. Laboratory testing to verify the expansive properties of the near-pad-grade materials should be performed at the completion of rough grading.

Pre-saturation guidelines are presented in the following table. The depth is intended to be measured from the adjacent pad grade. Pre-saturation of the foundation soils should be initiated well before concrete is scheduled to be placed. Care should be taken to see that the water has properly penetrated the soil. Last minute flooding is not a good practice. Excess water remaining in the target pre-saturation zone at the time of concrete placement will penetrate further into the soil, possibly causing additional expansion and uplift of the curing concrete.

A persistent difficultly in attaining the desired pre-saturation is the tendency to deeply saturate soil below footings when trying to achieve saturation of the soil beneath the floor slabs. Flooding of the footing trenches commonly results in the presence of compressible mud at the bottom of the footing trench. This practice should be avoided. Where such mud is present, it should be removed prior to concrete placement.

Expansion Index Range ..... 0 - 20
Pre-Moisten Depth ..... 12"

Footings[1]
- Allowable Bearing Capacity ..... 1500 PSF[2]
- Lateral Resistance ..... 350 PSF/Ft[2] [3]
- Maximum Lateral Resistance ..... 1500 PSF[2] [3]
- Coefficient of Friction 0.4
- Minimum Embedment Into Foundation Material ..... 12 inches
- Minimum Embedment Below Adjacent Grade[4] ..... 12 inches
- Minimum Reinforcement ..... 2 #4 bars, 1 near top, 1 near bottom

Slabs-On-Grade
- Bedding ..... 2" of clean sand[5]
- Thickness ..... Nominal 4"
- Minimum Reinforcement ..... #3 bars18"ocew

Expansion Index Range ..... 21 - 50
Pre-Saturation Depth ..... 18"

Footings[1]
- Allowable Bearing Capacity ..... 1500 PSF[2]
- Lateral Resistance ..... 225 PSF/Ft[2] [3]
- Maximum Lateral Resistance ..... 1500 PSF[2] [3]
- Coefficient of Friction 0.35
- Minimum Embedment Into Foundation Material ..... 12 inches
- Minimum Embedment Below Adjacent Grade[4] ..... 15 inches
- Minimum Reinforcement ..... 2 #4 bars, 1 near top, 1 near bottom

Slabs-On-Grade
- Bedding ..... 4" of clean sand[5]
- Thickness ..... Full 4"
- Minimum Reinforcement ..... #3 bars18"ocew

Expansion Index Range ..... 51 - 90
Pre-Saturation Depth ..... 24"

Footings[1]
- Allowable Bearing Capacity ..... 1500 PSF[2]
- Lateral Resistance ..... 200 PSF/Ft[2] [3]
- Maximum Lateral Resistance ..... 1500 PSF[2] [3]
- Coefficient of Friction 0.3
- Minimum Embedment Into Foundation Material ..... 12 inches
- Minimum Embedment Below Adjacent Grade[4] ..... 21 inches
- Minimum Reinforcement ..... 2 #4 bars, 1 near top, 1 near bottom

Slabs-On-Grade
- Bedding ..... 4" of clean sand[5]
- Thickness ..... Full 4"
- Minimum Reinforcement ..... #4 bars18"ocew

(1) Bearing portions of all footings should be at least five feet (measured horizontally) from the face of adjacent, descending slopes. All footings should bear at least three feet below an imaginary plane projected upward at 1.5:1 from the toe of locally over-steepened slopes. Pad footings should be at least 24 inches square.

(2) May be increased by 1/3 for short duration loading such as by wind or seismic forces.

(3) Decrease by 1/3 when combined with friction.

(4) Applies to exterior footings.

(5) Place vapor barrier (10 mil. visqueen) one inch below top of sand layer beneath all areas where moisture penetration of the slab is undesirable.

Post-Tensioned Foundations

Post-tensioned foundations may be used to support the proposed structures. These foundations are typically designed to resist deformation related to expansive soils. The recent building code (2007 CBC) references the design methodology within the PTI publication "Standard Requirements for Analysis of Shallow Concrete Foundations on Expansive Soils" which is based on the PTI publication "Design of Post-Tensioned Slabs-on-Ground", 3rd Ed. Older codes such as the 2001 California Building Code were based on the PTI publication "Design of Post-Tensioned Slabs-on-Ground", 2nd Ed.

Geotechnical parameters developed using these two versions of the methodology may be significantly different. Both sets of parameters are provided for your consideration.

Thornthwaite Moisture Index	-20 in/yr
Depth to Constant Soil Suction	5 feet
Constant Soil Suction	3.25 to 3.67 pf

Parameter (**PTI 2nd Ed.**)	EI 0 to 50	EI 51 to 90
E_m Center Moisture Variation Distance	5.5 feet	5.5 feet
E_m Edge Moisture Variation Distance	3.0 feet	3.0 feet
Y_m Center Lift	1.5 in.	2.5 in.
Y_m Edge Lift	0.25 in.	0.5 in.

These edge lift values are based on the effects of climatic variations only, as specified in the 2001 CBC.

The following geotechnical parameters were developed using the methodology of the PTI 3rd Ed. encoded in the computer program VOLFLO by GTK, Inc.

Parameter (**PTI 3rd Ed.**)	EI 0 to 50	EI 51 to 90
E_m Center Moisture Variation Distance	9.0 feet	9.0 feet
E_m Edge Moisture Variation Distance	6.1 feet	5.9 feet
Y_m Center Lift	0.46 in	0.45 in.
Y_m Edge Lift	0.78 in	0.75 in.

These parameters attempt to address the typical soil characteristics for the soils in the expansion index grouping using statistical averages of a variety of soil properties. The design criteria are considered minimums and may not be adequate to represent worst-case conditions such as adverse drainage and/or improper landscaping and maintenance. Additional protection may be provided by adjusting the parameters for sources of moisture variation such as flower beds, lawns, and trees. This is discretionary. Additional parameters for this modification can be provided upon request.

Both sets of PTI values have been prepared considering the deepened edges noted in the following table. Deepened perimeter edges of different depth will have an impact on the magnitude of the values provided. Other edge depths can be analyzed upon request. The depth of the deepened beams should be no less than specified in the following table. The bottom of the deepened perimeter beams should be designed to resist tension, using cable or reinforcement per the Structural Engineer. Pre-swelling of the soils must also be used to minimize uplift after construction. The following table includes recommended pre-saturation depths to be used when pre-swelling.

Expansion Index	Typical "K" Values	Exterior Footing Depth	Pre-saturation Depth
0 - 20	900 - 200	12 in.	12 in.
21 - 50	200 - 100	15 in.	21 in.
51 - 90	100 - 40	21 in.	27 in.

General Post-Tension Discussion

The allowable bearing capacity may be taken as 1000 PSF at pad grade and 1500 PSF at twelve inches embedment and with a minimum width of twelve inches. This may be increased by

one-third for short duration loading, such as by wind or seismic forces. Care should be exercised to see that all spoils from the slab subgrade are removed or property compacted.

Pre-saturation of the foundation soils should be initiated well before concrete is scheduled to be placed. Care should be taken to see that the water has properly penetrated the soil. Last minute flooding is not a good practice. Excess water remaining in the target pre-saturation zone at the time of concrete placement will penetrate further into the soil, possibly causing additional expansion and uplift of the curing concrete.

A minimum of one inch of sand should be placed beneath the slab. A vapor retarder (i.e., ten mil visqueen) should be installed where moisture penetration of the slab is undesirable.

Other aspects of the design, including but not limited to minimum reinforcement, footing embedment and the need for interior footings, are to be determined by the project structural engineer. However, cold joints (in deepened footings and/or sunken rooms) should not be allowed.

RETAINING WALLS

Conventional Cantilever Walls

Retaining walls may be used within the subject project. Foundation design criteria are provided in the preceding section. Lateral loading criteria for cantilevered wall designs with level backfills are presented in the table below. The loading criteria are in part a function of the type of backfill material. Criteria for various Unified Soil Classification designations are provided. Soil classified as SM predominates at the subject site. The use of clayey soils for backfill should be avoided. Earth materials for backfill and bearing support may be assumed to have a total soil unit weight of 125 pcf.

Lateral Design[1]

	Equivalent Fluid Density (PCF)[1]	
USCS Class:	GW, GP, SW, SP	GC, GM, SM
Active Pressure	30	45
At-rest Pressure	60	60

(1) Based on Table 1601.1 of the 2007 CBC. Special design required for wall height in excess of fifteen feet.

Retaining walls that are free to deflect may be designed for active pressure. Retaining walls that are restrained should be designed for at-rest pressure. The 2007 CBC §1610 allows basement walls which extend not more than 8 feet below grade with supporting flexible floor systems to be designed for active pressure.

For walls supporting slopes steeper than 5:1 (H:V), the equivalent fluid densities in the table should be increased. The values may be increased 1 pcf for each 2 degrees of backfill gradient. For example, ascending backfill with a gradient of 2:1 may use an equivalent fluid density that is increased by 13 pcf. Recommendations for other backfill conditions may be provided upon request.

All retaining walls should be provided with adequate backdrainage systems. Either weep holes or pipe outlets should be installed. Free draining material should be used behind weep holes or about pipe drains. Care should be exercised to see that weep holes are installed and maintained above the finish grade adjacent to the face of the wall.

Backfill for retaining walls should be properly compacted. An impervious cap should be provided at the top of the backfill to retard infiltration of water. A typical backfill detail is provided in the Typical Details appendix of this report.

Additional surcharge, such as that due to proposed structures, traffic, hydrostatic pressure, or other loading, should be included in the wall design. Use of expansive soil as backfill for retaining walls will result in a surcharge to the wall, the magnitude of which is dependent upon the expansion index of the backfill. This may be avoided by using sand or gravel as backfill adjacent to the wall. Details regarding this type of construction may be provided upon request.

CLOSURE

This geotechnical report has been prepared in accordance with generally accepted engineering practices at this time and location. No other warranties, either express or implied, are made as to the professional advice provided under the terms of our agreement and included in

this report.

Thank you for this opportunity to be of service. Please do not hesitate to call if you have any questions regarding this report.

Respectfully submitted,
GEOLABS-WESTLAKE VILLAGE

Steve Diem
C.E.G. 2246

Ronald Z. Shmerling
C.E.G. 1047
R.C.E. 35444

XC: (6) Addressee

REFERENCE LIST:

BSK, March 23, 2006; Review of Fault Location and Activity Assessment Investigation, Lot 38, Tract 6137, Northeast Corner of Paladino Drive and Masterson Street, The Views, Bakersfield, California

Geolabs Westlake Village, April 11, 2007; Supplemental Geotechnical Investigation, Vesting Tentative Tract 6137, The Views, City of Bakersfield, California

..., December 1, 2006; Report of Field Density Tests, Fault Trench Backfill, Tract 6137, City of Bakersfield, California

..., November 14, 2005; Fault Location and Activity Assessment Investigation, Lot 38, Tract 6137, Northeast Corner of Paladino Drive and Masterson Street, The Views, City of Bakersfield, California

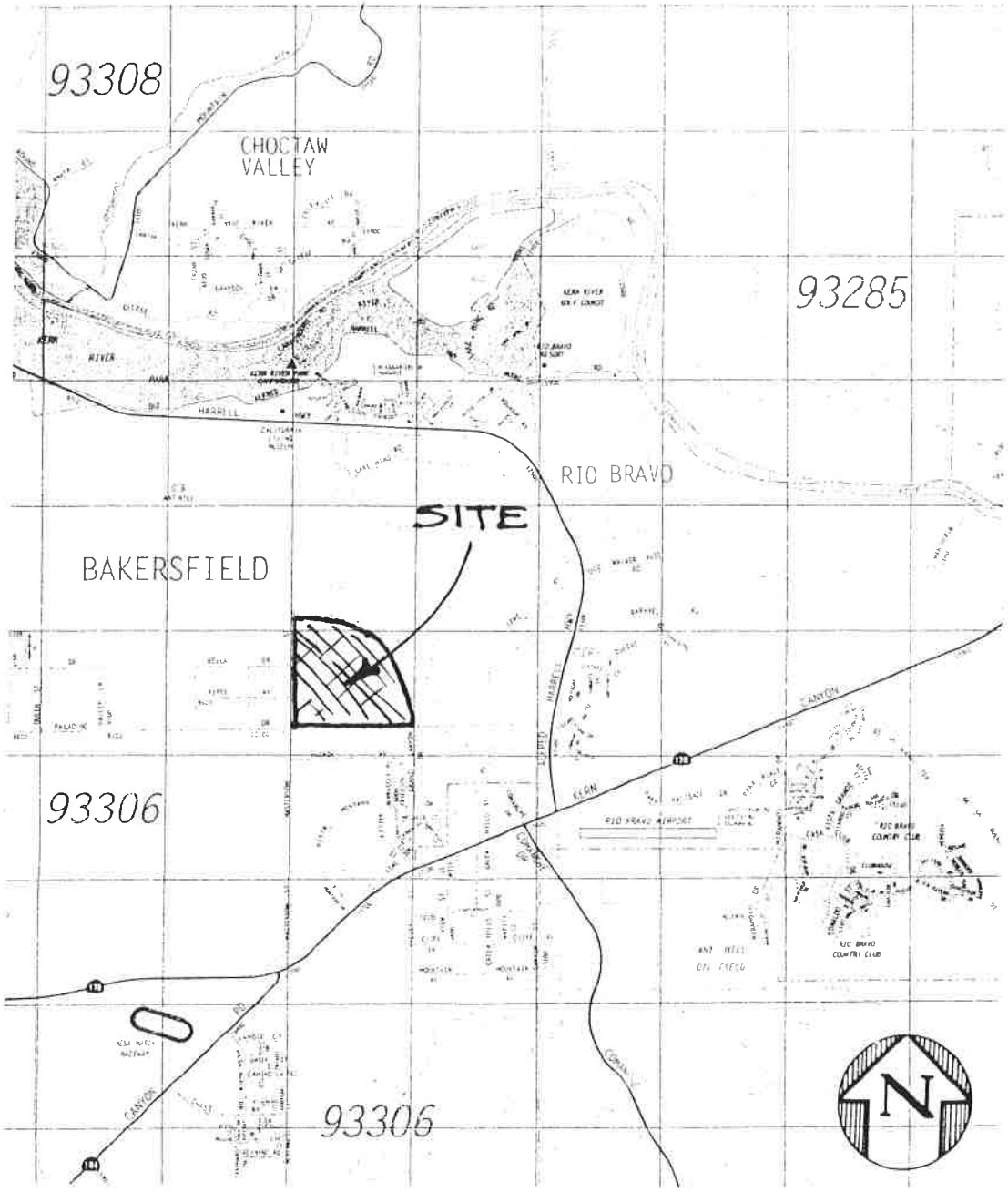
..., March 21, 2005; Supplementary Subsurface Investigation, Proposed Drainage Basin Northeast of the Intersection of Masterson Street and Paladino Drive, Phases 1-3, Tentative Tract 6137, The Views, City of Bakersfield, California

..., February 24, 2005; Grading Plan Review Report (Scale 1" =40'), Phases 1-3 (122 Lots Including Paladino Drive, Solitaire Drive, and a Portion of Masterson Street), Tract 6137, The Views, City of Bakersfield, California

..., November 1, 2004; Percolation Testing, Proposed Retention Basin Northeast of the Intersection of Masterson Street and Paladino Drive, Phases 1-3, Tentative Tract 6137, The Views, City of Bakersfield, California

Krazan & Associates, Inc., October 6, 2000; Exploratory Borings with Soil Classification, Proposed Subdivision Development, Section 9, Highway 178 and Alfred Harrell Highway, Bakersfield, California

..., June 28, 2000; Phase I Environmental Site Assessment, Proposed Development Property, Township 29 South, Range 29 East, Section 9, Bakersfield, California



SITE LOCATION

Geolabs-Westlake Village
GEOLOGY AND SOIL ENGINEERING

DATE _____ BY CS
SCALE N.A. W.O. 8927

Plate 1.1

SUBSURFACE DATA

LOG OF BORING B1

CLIENT: S&S Homes						PROJECT: Tract 6137	W.O.: 8927.004
LOCATION: Const. Trailer						ELEVATION: 768'	DATE: 4/17/06
RIG TYPE: 24" Bucket						HAMMER WEIGHTS: Kelly Bar Weights	DROP:
	N	U	B	M	DD	DESCRIPTION	ATTITUDES
0						Old Alluvium: Brown silty SAND, moist, loose, sparse pebbles below 2'.	
	7			13.4	116.1		
5	3			7.3	97.3	Kern River Formation: Yellow silty SANDSTONE, slightly moist, massive, severely weathered with abundant carbonate veinlets.	
10	4			6.7	95.1	Pale brown to light gray silty fine grained SANDSTONE, slightly moist, dense, slightly friable.	
15	5			4.0	116.2	Dark yellow coarse grained SANDSTONE, locally clean with intergranular porosity, dense, slightly friable, local cobbles (lenses?), chattering drilling.	
20	7			2.0	117.6	Pale brown fine to coarse grained silty SANDSTONE, locally with cobbles, dry, slightly friable. Mild caving below 22', somewhat difficult drilling.	
25	8					Pale brown to pale yellow silty cobbly SANDSTONE, dry, dense, slightly friable, sampler blocked and no recovery.	
30						Continues silty cobbly SANDSTONE, caving from above, in-place sample unlikely due to caving.	
35						Silty cobbly SANDSTONE, no sample recovered.	
40						Cobbles, no sample recovered.	
45							

ADDITIONAL COMMENTS: Kelly Bar Weights: 0-30', 4,365 lbs.
31-60', 2,898 lbs.
61-90', 1,841 lbs.

SURFACE DATA

LOG OF BORING B1

CLIENT: S&S Homes	PROJECT: Tract 6137	W.O.: 8927.004
LOCATION: Const. Trailer	ELEVATION: 768'	DATE: 4/17/06
RIG TYPE: 24" Bucket	HAMMER WEIGHTS: Kelly Bar Weights	DROP:

	N	U	B	M	DD	DESCRIPTION	ATTITUDES
40							
45						Broken drive chain at 46', drilling halted.	
50						Total Depth - 46' No groundwater Caving continuous from 22' Refusal on hard conglomerate at 46'	
55							
60							
65							
70							
75							
80							
85							

ADDITIONAL COMMENTS: Kelly Bar Weights: 0-30', 4,365 lbs.
31-60', 2,898 lbs.
61-90', 1,841 lbs.

SUBSURFACE DATA

LOG OF BORING B2

CLIENT: S&S Homes						PROJECT: Tract 6465 West	W.O.: 8927.002
LOCATION: SW Basin						ELEVATION: 764'	DATE: 4/18/06
RIG TYPE: 24" Bucket						HAMMER WEIGHTS: Kelly Bar Weights	DROP:
	N	U	B	M	DD	DESCRIPTION	ATTITUDES
0						Fill: Stockpile (spread out) from basin excavation, brown silty SAND with pebbles, loose, slightly moist to dry, horizontally laminated.	
5	3			14.0	113.1	Brown silty SAND, moist, medium dense, horizontal lamination, dry.	
10	9			3.6	125.8	Alluvium: Pale brown SAND and silty SAND, medium dense, moist, run over in stockpile placement.	
15	12			4.0	127.6	Kern River Formation: Pale brown to pale yellow silty SANDSTONE with sparse pebbles, slightly moist, dense, sparse carbonate linings. Pale brown silty coarse grained SANDSTONE with sparse pebbles, very slightly moist, dense, massive, sparse carbonate pore linings and pebble coatings.	
20	12			3.5	131.2	Yellowish brown silty pebbly coarse grained SANDSTONE, dry, very dense, massive, pebbles abundant and leave pore-free casts.	
25						Yellowish brown to orangish brown (oxidation coating) pebbly poorly sorted silty coarse grained SANDSTONE, massive, dry, dense.	
30						Pale yellow to orangish brown pebbly silty medium grained SANDSTONE, dry, dense, slightly friable. @31' - Rig chattering, sidewalls caving.	
35						Yellow pebbly silty medium grained SANDSTONE, dry, dense, friable, caving, 5' takes 20+ minutes.	
40						Pale yellow cobbly silty medium to coarse grained SANDSTONE, dry, dense, friable, caving, sparse blowing silt and fine sand in spoils pile.	
45							

ADDITIONAL COMMENTS: Kelly Bar Weights: 0-30', 4,365 lbs.
31-60', 2,898 lbs.
61-90', 1,841 lbs.

SURFACE DATA

LOG OF BORING B2

CLIENT: S&S Homes	PROJECT: Tract 6465 West	W.O.: 8927.002
LOCATION: SW Basin	ELEVATION: 764'	DATE: 4/18/06
RIG TYPE: 24" Bucket	HAMMER WEIGHTS: Kelly Bar Weights	DROP:

	N	U	B	M	DD	DESCRIPTION	ATTITUDES
40							
45						Pale yellow medium grained silty SANDSTONE, moderately sorted, scattered cobbles and pebble lenses,friable, caving.	
50						Total Depth - 45' No groundwater Caving continuous below 20' Refusal on hard conglomerate at 45'	
55							
60							
65							
70							
75							
80							
85							

ADDITIONAL COMMENTS: Kelly Bar Weights: 0-30', 4,365 lbs.
31-60', 2,898 lbs.
61-90', 1,841 lbs.

SUBSURFACE DATA

LOG OF BORING PB1

CLIENT: S&S Homes	PROJECT: Tract 6137	W.O.: 8927
LOCATION: Bakersfield	ELEVATION: 758'	DATE: 6/7/05
RIG TYPE: 24" Bucket	HAMMER WEIGHTS:	DROP:

	N	U	B	M	DD	DESCRIPTION	ATTITUDES
0						Colluvium: Pale brown silty pebbly SAND, poorly sorted, dry, loose and soft.	
						@2.5' - Kern River Formation: Light brown to light grayish brown pebbly SANSTONE, dry at top to slightly moist below 4', dense and massive below 5'.	
5							
10	5/12"					Pale yellow sandy CONGLOMERATE, clasts are cobbles and very hard, unit is dry, dense, caving and friable.	
						Light gray to light yellow pebbly SANDSTONE, slightly moist, dense, friable, poorly sorted, pebbles decrease with depth.	
15						Pebbles very sparse by 16' in light gray coarse grained SANDSTONE, which fines with depth.	
20	11/10"						
						Light gray to light yellow pebbly medium to fine grained SANDSTONE, very sparse small cobbles, dry, very dense, friable, caving.	
25							
30	15/6"					Pebbles lenses from 31-34.5', caving, hard drilling.	
						Light yellow medium to fine grained SANDSTONE, dry, dense, difficult drilling, frible, falling out of bucket.	
35							
						Light yellow to light gray pebbly medium to coarse grained SANDSTONE, dry, dense, friable, caving, difficult drilling.	
40	15/4"					Total Depth - 40'	
						No groundwater	
45						Caving from 9-13.5', 23-34.5', 38-40'	

ADDITIONAL COMMENTS: Kelly Bar Weights: 0-24', 1,042 lbs.
25-49', 1,752 lbs.
50-75', 2,803 lbs.

Logged by: SR

Geolabs-Westlake Village

PLATE PB1

SURFACE DATA

LOG OF BORING PB2

CLIENT: S&S Homes	PROJECT: Tract 6137	W.O.: 8927
LOCATION: Bakersfield	ELEVATION: 758'	DATE: 6/8/05
RIG TYPE: 24" Bucket	HAMMER WEIGHTS:	DROP:

	N	U	B	M	DD	DESCRIPTION	ATTITUDES
0						Alluvium: Dark yellow to yellowish brown very silty SAND and pebbly silty SAND, dry, loose, pervasively burrowed. Kern River Formation: Yellowish brown silty to pebbly fine to coarse grained SANDSTONE, dry, dense, hard drilling, bucket refusal at 9.5', core barrel on with crowd.	
5							
	15/4"						
10						Cobble lenses at 10'. Yellowish brown silty pebbly SANDSTONE, slightly moist, dense, slightly friable, pebble lenses throughout.	
15							
20	8/12"					Light yellow silty fine grained SANDSTONE, pebbles absent, over pale brown very silty very fine grained SANDSTONE, slightly moist, dense, infriable, coarsens with depth.	
25						Light yellowish brown silty poorly sorted coarse grained SANDSTONE with scattered small pebbles, over light brown moderately sorted medium grained SANDSTONE, slightly moist to dry, slightly friable.	
30	25/6"					Light yellow moderately sorted medium to coarse grained SANDSTONE with scattered cobbles, dry, dense, friable, caving to 4' diameter.	
35						Very light gray medium grained SANDSTONE with scattered pebbles, dry, dense, slightly friable, cobble lens at 33-35', caving to 4' diameter.	
40						Total Depth - 35' No groundwater Caving from 28-35'	
45							

ADDITIONAL COMMENTS: Kelly Bar Weights: 0-24', 1,042 lbs.
25-49', 1,752 lbs.
50-75', 2,803 lbs.

Log of Drill Hole B2

Project: Subdivision Development | **Project No:** 022-00092

Client: Catellus Development Corporation | **Figure No.:** A-2

Location: Highway 178 and Alfred Harrell Highway | **Logged By:** Marty Groth

Depth to Water> **Initial:** None | **At Completion:** None

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
0		Ground Surface				
		SILTY CLAYEY SAND (SC) Loose, fine- to coarse-grained with GRAVEL; light brown, damp, drills easily				
2		***SANDY CLAY (CL)*** Very stiff, fine- to coarse-grained; brown, damp, drills firmly		8.2	■	23
4		***GRAVELLY SAND (SP)*** Dense, fine- to coarse grained with cobbles; brown, damp, drills firmly				
6		End of Borehole				
8		Auger Refusal at 5 feet				
10						
12						
14						
16						
18						
20						

Penetration Test blows/ft: 20 40 60

Water Content (%): Wp |—0—| Wl 10 20 30 40

Drill Method: Solid Flight

Drill Rig: CME 45

Driller: Brent Snyder

Krazan and Associates

Drill Date: 9-20-00

Hole Size: 4½ inches

Sheet: 1 of 1

Log of Drill Hole B3

Project: Subdivision Development — Project No: 022-00092

Client: Catellus Development Corporation — Figure No.: A-3

Location: Highway 178 and Alfred Harrell Highway — Logged By: Marty Groth

Depth to Water> — Initial: None — At Completion: None

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
0		Ground Surface				
		CLAYEY SILTY SAND (SM) Loose, fine- to coarse-grained with traces of fine- to coarse-grained GRAVEL and COBBLES; light brown, damp, drills easily		9.1		
2		***CLAYEY SAND (SC)*** Very dense, fine- to coarse-grained, weakly cemented; brown, damp, drills firmly	108.8	4.2		
4		***GRAVELLY SAND (SP)*** Very dense, fine- to coarse-grained with COBBLES AND BOULDERS; brown, damp, drills firmly				
6						
8		***SAND (SP)*** Medium dense, fine- to coarse-grained with fine- to coarse-grained; light brown, damp, drills firmly				
10						
12						
14		End of Borehole				
16						
18						
20						

Penetration Test blows/ft: 20 40 60

Water Content (%): Wp |—0—| Wl 10 20 30 40

Drill Method: Backhoe — **Krazan and Associates** — Drill Date: 9-20-00

Drill Rig: Backhoe — Hole Size: 3 feet

Driller: Brent Snyder — Sheet: 1 of 1

Log of Drill Hole B5

Project: Subdivision Development

Project No: 022-00092

Client: Catellus Development Corporation

Figure No.: A-5

Location: Highway 178 and Alfred Harrell Highway

Logged By: Marty Groth

Depth to Water> Initial: None At Completion: None

SUBSURFACE PROFILE			SAMPLE				Penetration Test blows/ft	Water Content (%)
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.	20 40 60	Wp |—0—| Wl 10 20 30 40
0		Ground Surface						
		SANDY CLAY (CL) Stiff, fine- to medium-grained; brown, damp, drills firmly						
2			110.4	7.8		18		
		GRAVELLY SAND (SP) Very dense, fine- to coarse-grained, with COBBLES; brown, damp, drills firmly						
4			110.1	9.8		31		
		With thin lenses of CLAY at 5 feet						
6		Auger Refusal at 7 feet						
		End of Borehole						
8								
10								
12								
14								
16								
18								
20								

Drill Method: Backhoe

Drill Rig: Backhoe

Driller: Brent Snyder

Krazan and Associates

Drill Date: 9-20-00

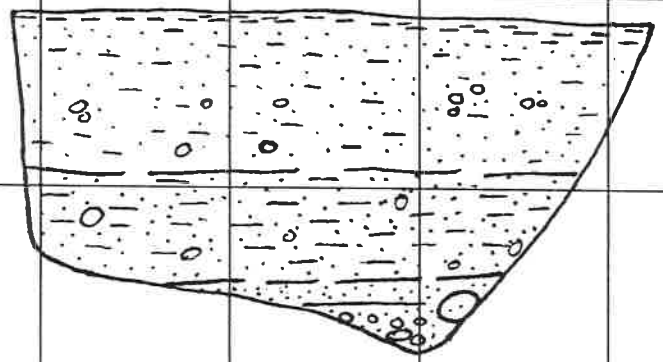
Hole Size: 3 feet

Sheet: 1 of 1

LOG OF EXCAVATION Trench No. M20	Logged By: NM	Date Excavated: 2/20/08	Client: S&S Homes

Depth (ft)	Description	Comments
0 - 0.5	Processed ground surface, clayey SAND, dry, medium dense.	
0.5 - 4	Weathered Kern River Formation: Medium orangish brown sandy CLAY with occasional gravels, abundant calcium carbonate stains, pinhole porosity, dry to moist with depth, medium dense.	
4 - 6.5	Gradational contact with medium orange brown clayey SAND with occasional gravels, abundant calcium carbonate stains, pinhole porosity, moist, medium dense.	
6.5 - 8.5	Kern River Formation: Gradational contact to light gray fine to medium grained SAND and gravelly SAND with gravels and cobbles, visual observation 25-35% clasts greater than 3/4", friable, moist, dense.	

Graphic Log

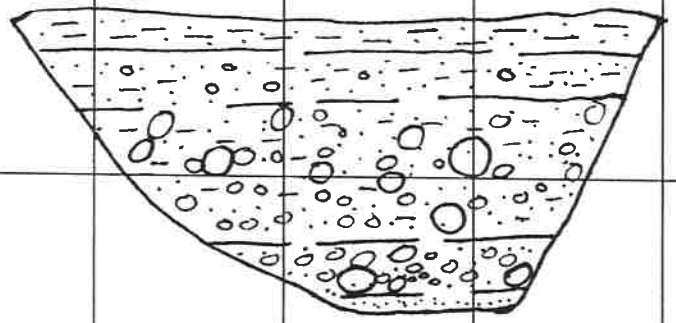


scale 1" = 5'	GEOLABS-WESTLAKE VILLAGE	W.O. 8927	PLATE M20

LOG OF EXCAVATION Trench No. M21	Logged By: NM	Date Excavated: 2/20/08	Client: S&S Homes

Depth (ft)	Description	Comments
0 - 1	Artificial Fill: Light medium brown sandy SILT, porous, rootlets, dry, medium stiff.	
1 - 2	Weathered Kern River Formation: Medium brown sandy CLAY with occasional gravels, pinhole porosity, dry, medium stiff.	
2 - 5.5	Gradational contact to medium brown clayey SAND with abundant gravels and cobbles, visual observation 25-35% clasts greater than 3/4", well graded subangular to rounded clasts, occasional pinhole porosity within matrix, moist, dense.	
5.5 - 7.5	Kern River Formation: Light gray gravelly SAND with abundant cobbles, subrounded to rounded clasts, visual observation 40-50% clasts greater than 3/4", friable, moist, dense/very dense.	

Graphic Log

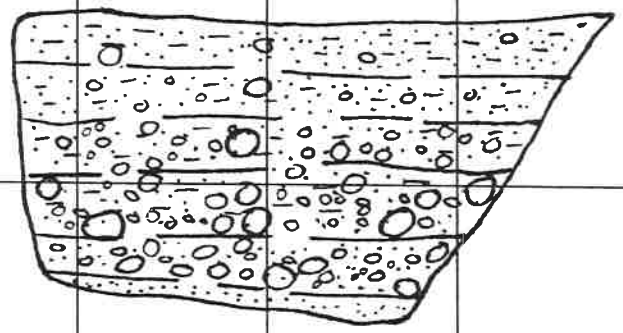


scale 1" = 5'	GEOLABS-WESTLAKE VILLAGE	W.O. 8927	PLATE M21

LOG OF EXCAVATION Trench No. M22	Logged By: NM	Date Excavated: 2/20/08	Client: S&S Homes

Depth (ft)	Description	Comments
0 - 1.5	Artificial Fill: Medium brown clayey SAND with occasional gravels/cobbles, dry, medium dense.	
1.5 - 2.5	Weathered Kern River Formation: sandy CLAY with occasional gravels and cobbles, abundant calcium carbonate stains.	
2.5 - 3.5	Gradational contact to sandy CLAY and clayey SAND with gravels and cobbles, matrix supported, visual observation 20-30% clasts greater than 3/4", well graded, moist, very stiff/dense.	
3.5 - 5.5	Medium brown clayey SAND with gravels and cobbles, matrix supported, well graded, moist, dense.	
5.5 - 6.5	Kern River Formation: Gradational cotnact to light gray sandy GRAVEL with cobbles, friable, well graded, moist, dense.	
6.5 - 7.5	Light gray fine to medium grained SANDSTONE, friable, massive, moist, very dense.	

Graphic Log

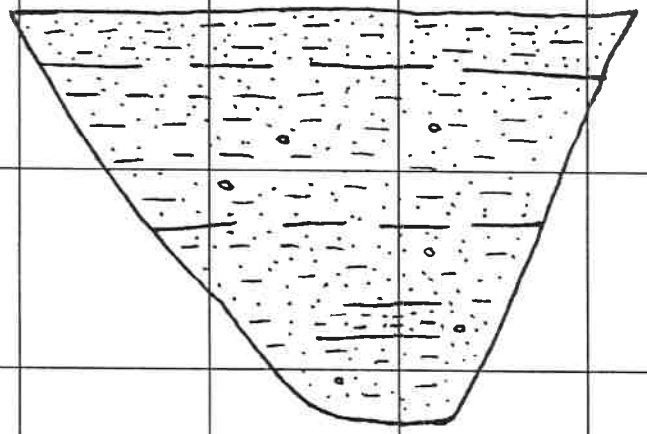


scale 1" = 5'	GEOLABS-WESTLAKE VILLAGE	W.O. 8927	PLATE M22

LOG OF EXCAVATION Trench No. M23	Logged By: NM	Date Excavated: 2/21/08	Client: S&S Homes

Depth (ft)	Description	Comments
0 - 1.5	Topsoil: Dark brown sandy CLAY, rootlets, pinhole porosity, dry, medium stiff to stiff at 1.5'.	
1.5 - 5.5	Weathered Kern River Formation: Gradational cotnact to medium brown sandy CLAY with very sparse gravels, calcium carbonate stains from 4.5-5.5' depth, pinhole porosity, moist, very stiff.	
5.5 - 10.5	Kern River Formation: Gradational contact to light brown fine to medium grained silty SAND with very sparse gravels (less than 5%), mostly massive with a 1' thick discontinuous interbed of sandy CLAY at 7.5', moist, dense.	

Graphic Log

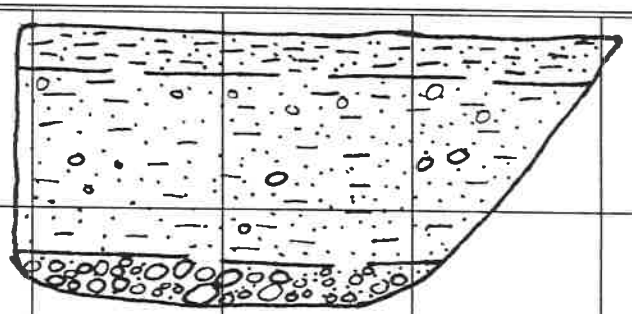


scale 1" = 5'	GEOLABS-WESTLAKE VILLAGE	W.O. 8927	PLATE M23

LOG OF EXCAVATION Trench No. M24	Logged By: NM	Date Excavated: 2/21/08	Client: S&S Homes

Depth (ft)	Description	Comments
0 - 1	Topsoil: Medium brown sandy CLAY, rootlets, pinhole porosity, dry, medium stiff.	
1 - 6	Weathered Kern River Formation: Medium orangish brown clayey SAND with lesser sandy clay (upper 2', occasional gravels and cobbles, visual observation 5-10% clasts greater than 3/4", massive, occasional pinhole porosity, moist, dense/very stiff.	
6 - 7	Kern River Formation: Gradational contact to light brown sandy GRAVEL with abundant cobbles and lesser boulders, visual observation 50-60% greater than 3/4", well graded, subrounded to rounded clasts, slightly friable, moist, very dense.	

Graphic Log

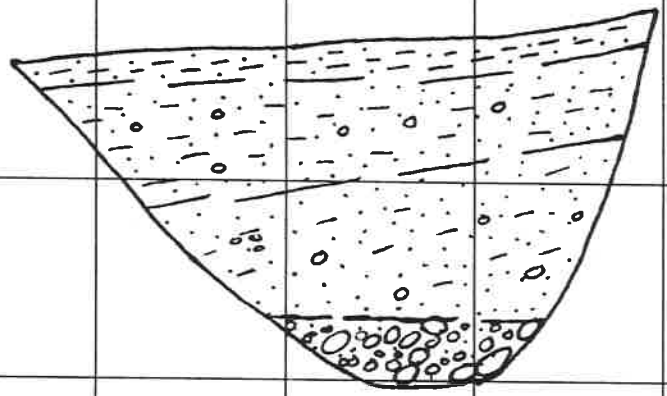


scale 1" = 5'	GEOLABS-WESTLAKE VILLAGE	W.O. 8927	PLATE M24

LOG OF EXCAVATION Trench No. M25	Logged By: NM	Date Excavated: 2/21/08	Client: S&S Homes

Depth (ft)	Description	Comments
0 - 1	Topsoil: Dark brown silty CLAY, porous, moist, medium stiff.	
1 - 3	Weathered Kern River Formation: Medium orangish brown sandy CLAY with sparse gravels (visual observation less than 5% clasts greater than 3/4"), pinhole porosity, calcium carbonate stains fron 1-2" depth, dry, stiff.	
3 - 7	Medium orangish clayey SAND with sparse gravels, occasional pinhole porosity, massive, moist, dense.	
7 - 8.5	Kern River Formation: Undulating contact with light brown sandy GRAVEL with abundant cobbles and lesser boulders (visual observation 40-50% of clasts greater than 3/4"), well graded, slightly friable, moist, very dense.	

Graphic Log

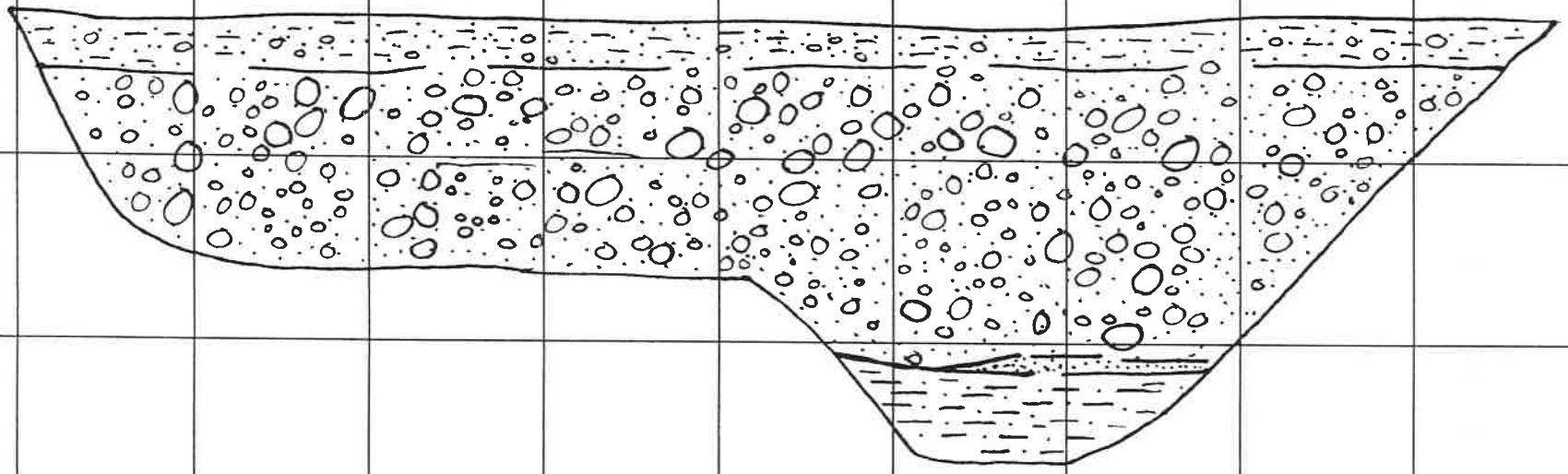


scale 1" = 5'	GEOLABS-WESTLAKE VILLAGE	W.O. 8927	PLATE M25

LOG OF EXCAVATION Trench No. M26	Logged By: NM	Date Excavated: 2/21/08	Client: S&S Homes

Depth (ft)	Description	Comments
0 - 1.5	Topsoil: Medium brown sandy CLAY to clayey SAND with gravels, slightly porous, dry, medium stiff/medium dense.	
1.5 - 9	Kern River Formation: (Upper 3-4' weathered) Light medium brown gravel CONGLOMERATE with occasional boulders, visual observation 50-60% clasts greater than 3/4" diameter, well graded, moist, very dense.	
9 - 9.5	Light brown fine to coarse grained SANDSTONE, friable, moist, very dense.	
9.5 - 12	Irregular contact to dark olive brown clayey SILTSTONE with occasional orange oxidation stains, massive, moist, hard.	

Graphic Log

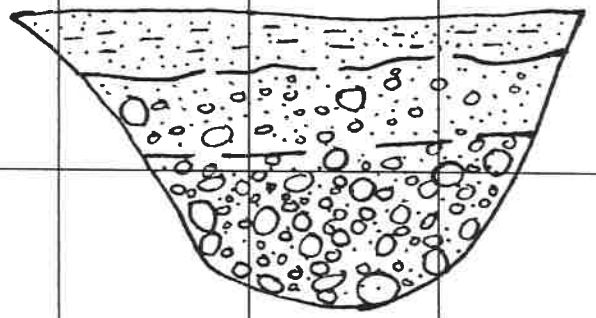


scale 1" = 5'	GEOLABS-WESTLAKE VILLAGE	W.O. 8927	PLATE M26

LOG OF EXCAVATION Trench No. M26A	Logged By: NM	Date Excavated: 2/21/08	Client: S&S Homes

Depth (ft)	Description	Comments
0 - 1.5	Artificial Fill: Medium brown clayey SAND, rootlets, moist, medium dense.	
1.5 - 4	Weathered Kern River Formation: Medium brown to light medium brown sandy GRAVEL with cobbles and occasional boulders, occasional calcium carbonate stains, dry, very dense.	
4 - 7.5	Kern River Formation: Light medium brown sandy GRAVEL with cobbles and occasional boulders, visual observation approximately 25-35% clasts greater than 3/4", clasts are subangular to rounded (mostly competent granitics), occasional discontinuous fine to medium grained SAND interbeds up to 1' thick and 2-3' long, very dense.	

Graphic Log

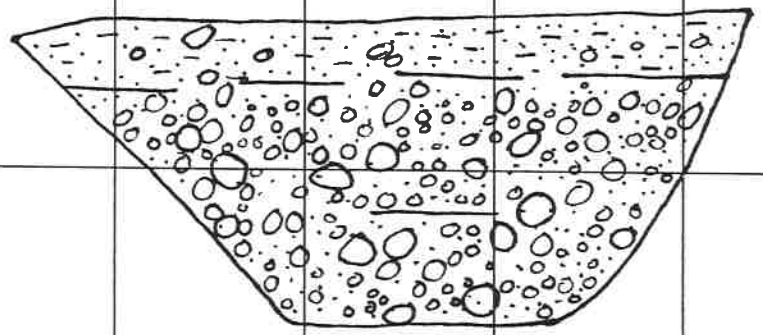


scale 1" = 5'	GEOLABS-WESTLAKE VILLAGE	W.O. 8927	PLATE M26A

LOG OF EXCAVATION Trench No. M26B	Logged By: NM	Date Excavated: 2/21/08	Client: S&S Homes

Depth (ft)	Description	Comments
0 - 1.5	Topsoil: Medium brown clayey SAND with occasional gravels and cobbles, porous, rootlets, dry, medium dense.	
1.5 - 7.5	Kern River Formation: (Upper 3-4' weathered) Medium brown sandy gravel CONGLOMERATE with abundant cobbles and occasional boulders, subangular to rounded, mostly granitic clasts, visual observation 50-60% of clasts greater than 3/4"), dry, very dense.	

Graphic Log

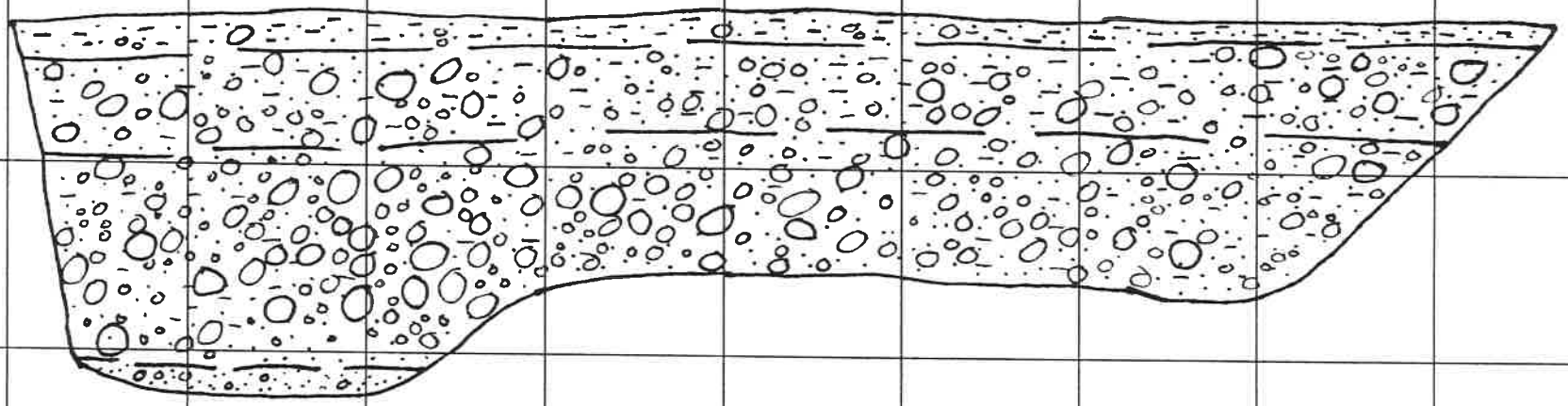


scale 1" = 5'	GEOLABS-WESTLAKE VILLAGE	W.O. 8927	PLATE M26B

LOG OF EXCAVATION Trench No. M27	Logged By: NM	Date Excavated: 2/21/08	Client: S&S Homes

Depth (ft)	Description	Comments
0 - 1	Topsoil: Medium brown clayey SAND with occasional gravels and cobbles, rootlets, porous, medium dense.	
1 - 3.5	Weathered Kern River Formation: Clayey SAND with abundant gravels and lesser cobbles, well graded, moist, dense.	
3.5 - 9	Light medium brown sandy gravel CONGLOMERATE with abundant cobbles and lesser boulders, visual observation 50-60% clasts greater than 3/4", well graded, moist, very dense.	
9 - 10	Light gray gravelly SANDSTONE, well graded, friable, moist, very dense.	

Graphic Log

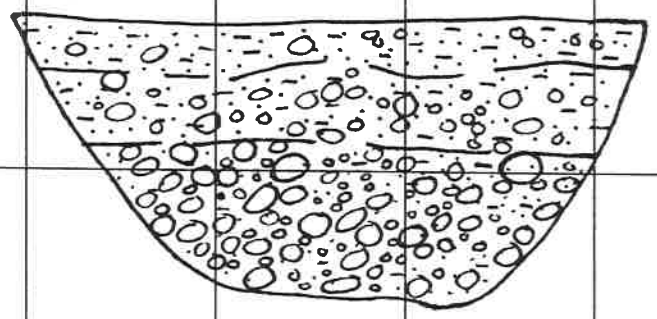


scale 1" = 5'	GEOLABS-WESTLAKE VILLAGE	W.O. 8927	PLATE M27

LOG OF EXCAVATION Trench No. M27A	Logged By: NM	Date Excavated: 2/21/08	Client: S&S Homes

Depth (ft)	Description	Comments
0 - 1	Artificial Fill: Medium brown clayey SAND with occasional gravels, rootlets, porous, dry, medium dense.	
1 - 3	Weathered Kern River Formation: Irregular contact with medium brown clayey SAND to sandy CLAY with gravels and occasional cobbles, calcium carbonate stains from 2-3', dry, dense.	
3 - 7	Kern River Formation: Light medium brown sandy gravel CONGLOMERATE with abundant cobbles and lesser boulders, rounded to subangular mostly granitic clasts, visual observation 50-60% clasts greater than 3/4", well graded, moist, very dense.	

Graphic Log

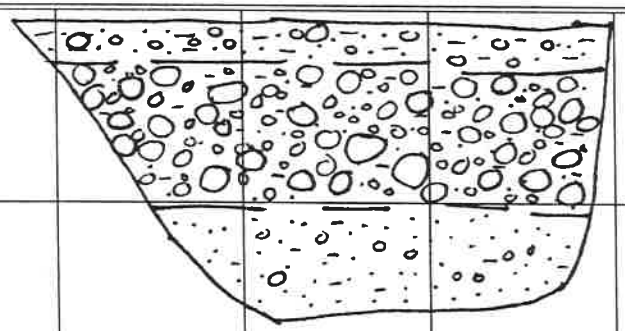


scale 1" = 5'	GEOLABS-WESTLAKE VILLAGE	W.O. 8927	PLATE M27A

LOG OF EXCAVATION Trench No. M27B	Logged By: NM	Date Excavated: 2/21/08	Client: S&S Homes

Depth (ft)	Description	Comments
0 - 1	Topsoil: Light medium brown clayey SAND with gravels and occasional cobbles, rootlets, porous, medium dense.	
1 - 4.5	Weathered Kern River Formation: Medium brown to whitish brown sandy GRAVEL with abundant cobbles and occasional boulders, calcium carbonate stains, visual observation 40-50% clasts greater than 3/4".	
4.5 - 7	Kern River Formation: Light whitish brown fine to coarse grained SANDSTONE, occasional calcium carbonate stains, massive, moist, well graded, very dense.	

Graphic Log

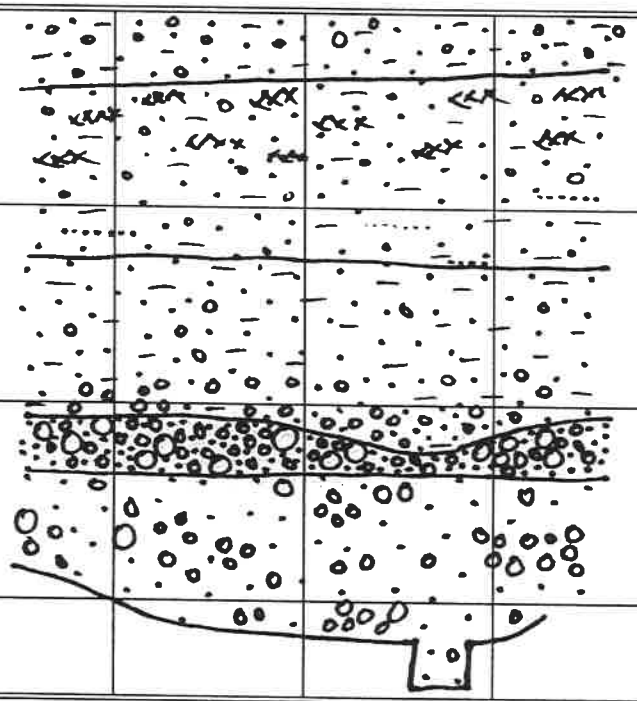


scale 1" = 5'	GEOLABS-WESTLAKE VILLAGE	W.O. 8927	PLATE M27B

LOG OF EXCAVATION Trench No. TP1	Logged By: SR	Date Excavated: 10/13/04	Client: S&S Homes

Depth (ft)	Description	Comments
0 - 2	Topsoil: Dark brown pebbly silty SAND, dry and loose.	
2 - 6.5	Kern River Formation: Brown and yellowish gray silty fine to very coarse grained SANDSTONE as interbedded stringers and thin beds, dry, slightly friable, carbonate cement in upper 3.5' and nearly infriable, dry, moderately dense.	
6.5 - 10.5	Light yellowish gray silty mediumgrained SANDSTONE grading downward to yellowish brown silty very poorly sorted SANDSTONE with floating pebbles, dry to slightly moist at base, dense, nearly infriable.	
10.5 - 11.5	Light gray sandy pebble/cobble CONGLOMERATE, dry, dense, friable.	
11.5 - 17	Pale brown, brown, and yellowish brown interbedded medium to very coarse grained SANDSTONE, locally with floating pebbles, dry, moderately dense, sub-horizontal bedding, friable.	

Graphic Log

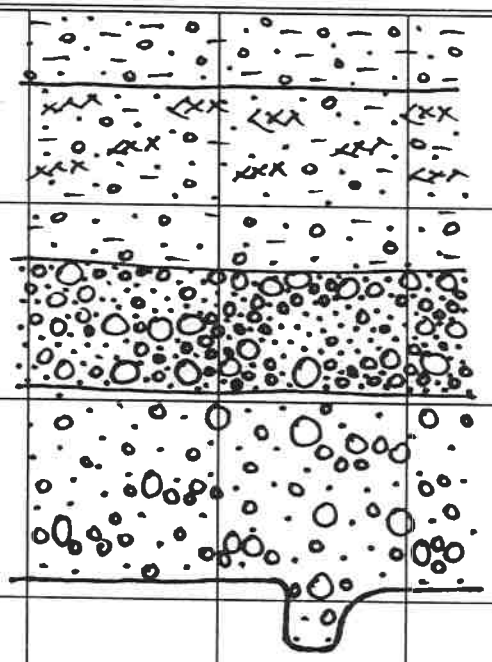


scale 1" = 5'	GEOLABS-WESTLAKE VILLAGE	W.O. 8927	PLATE TP1

LOG OF EXCAVATION Trench No. TP2	Logged By: SR	Date Excavated: 10/13/04	Client: S&S Homes

Depth (ft)	Description	Comments
0 - 2	Topsoil: Brown pebbly silty SAND, dry, loose, infriable.	
2 - 6.5	Kern River Formation: Pale brown to light yellowish brown silty poorly sorted SANDSTONE with floating pebbles, carbonate cemented in upper 3' and infriable, slightly friable below, dry, moderately dense.	
6.5 - 9.5	Light gray sandy pebble/cobble CONGLOMERATE with sparse pale yellow beds of pebbly coarse SANDSTONE, dry, moderately dense, friable where light gray.	
9.5 - 16	Light gray to pale brown medium to very coarse grained SANDSTONE with floating pebbles and cobbles, sparse cobble CONGLOMERATE lenses, dry, dense, friable.	

Graphic Log

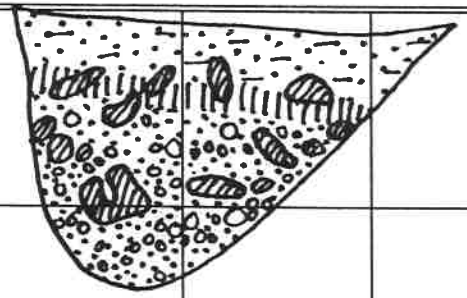


scale 1" = 5'	GEOLABS-WESTLAKE VILLAGE	W.O. 8927	PLATE TP2

LOG OF EXCAVATION Trench No. TP17	Logged By: SR	Date Excavated: 2/1/05	Client: S&S Homes

Depth (ft)	Description	Comments
0 - 1.6	Alluvium (Colluvium?): Dark brown silty SAND, moist, loose, pervasively burrowed.	
1.6 - 7	Kern River Formation: Dark yellow to yellow coarse grained SANDSTONE to sandy pebble CONGLOMERATE, channeled and bedding is discontinuous, slightly moist to dry, dense, infriable, stained white with carbonate grain coatings and veins, heavily burrowed in upper five feet and top contact obliterated, most clasts degraded.	

Graphic Log

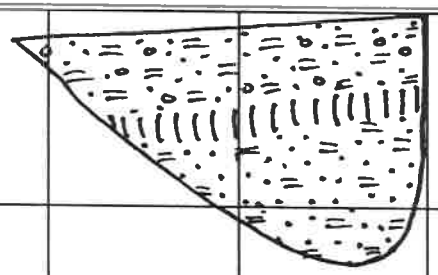


scale 1" = 5'	GEOLABS-WESTLAKE VILLAGE	W.O. 8927	PLATE TP17

LOG OF EXCAVATION Trench No. TP18	Logged By: SR	Date Excavated: 2/1/05	Client: S&S Homes

Depth (ft)	Description	Comments
0 - 2.2	Alluvium: Brown (top) to reddish brown sandy CLAY, moderately developed blocky structure with clay films on ped surfaces and coarse sand grains and sparse pebbles, moist and soft in top half to slightly moist and stiff below, gradational base.	
2.2 - 6.2	Kern River Formation: Reddish yellow sandy CLAY colluvium over severely weathered yellow SANDSTONE and silty SANDSTONE, colluvium is slightly moist, very stiff, sandstone is slightly moist, massive, medium dense with pinprick to 1mm pores on 3-10mm spacing, contains carbonate veins and concretions in top 1.5', both clay and sandstone are moderately hard to dig.	

Graphic Log

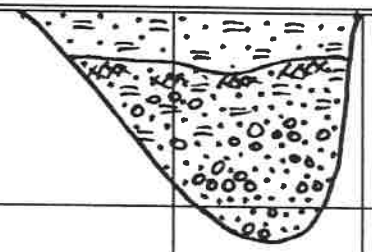


scale 1" = 5'	GEOLABS-WESTLAKE VILLAGE	W.O. 8927	PLATE TP18

LOG OF EXCAVATION Trench No. TP19	Logged By: SR	Date Excavated: 2/1/05	Client: S&S Homes

Depth (ft)	Description	Comments
0 - 1.3	Alluvium: Dark brown sandy CLAY, moist, soft, very porous, scattered pebbles and burrows.	
1.3 - 6	Kern River Formation: Reddish brown (top) to reddish yellow sandy CLAY colluvium(about 3') over severely weathered pale brown to yellow pebbly very coarse grained SANDSTONE with sparse pebble lenses, colluvium is carbonate rich in upper foot, including abundant veins and coatings along blocky peds, becomes slightly moist and very stiff in lower 2', sandstone is slightly moist, dense, infriable, massive except for gradational contacts with pebble lenses.	

Graphic Log



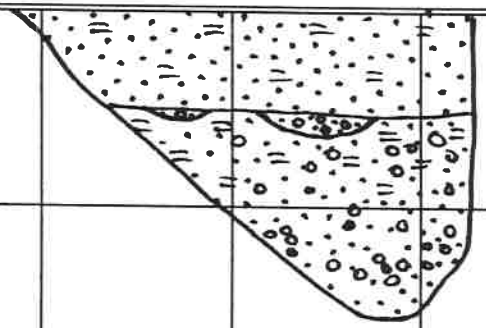
scale 1" = 5'	GEOLABS-WESTLAKE VILLAGE	W.O. 8927	PLATE TP19

LOG OF EXCAVATION Trench No. TP20	Logged By: SR	Date Excavated: 2/2/05	Client: S&S Homes

Depth (ft)	Description	Comments
0 - 2.7	Alluvium: Dark yellowish brown (may be false color due to sunrise-brown?) clayey SAND, very moist at surface to slightly moist at base, loose, burrowed, transitions to reddish brown at base with pores to 8mm diameter in burrow infills, blocky structure in bottom 1.5'.	
2.7 - 3	Old Alluvium: Light reddish yellow pebbly SAND lens, medium dense, nearly dry, slightly friable.	
2.7 - 7.6	Kern River Formation: Reddish yellow clayey SAND with scattered pebbles (colluvium) over dark yellow pebbly poorly sorted SANDSTONE, all severely weathered with carbonate spots, streaks, and concretions in top 3' of unit and pinprick pores on 1-5mm spacing all the way to bottom of unit, slightly moist, infriable, very firm but medium dense.	

S87E

Graphic Log

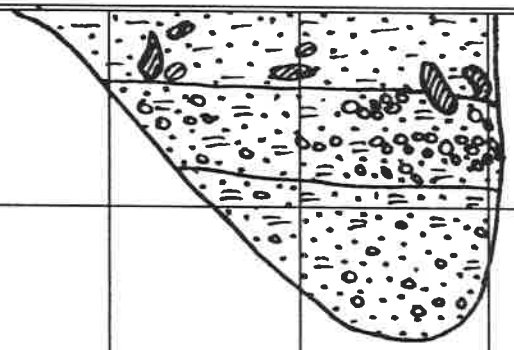


scale 1" = 5'	GEOLABS-WESTLAKE VILLAGE	W.O. 8927	PLATE TP20

LOG OF EXCAVATION Trench No. TP21	Logged By: SR	Date Excavated: 2/2/05	Client: S&S Homes

Depth (ft)	Description	Comments
0 - 2	Alluvium: Dark brown silty SAND, moist, loose, pervasively burrowed.	
2 - 4.6	Old Alluvium: Dark yellowish red clayey poorly sorted coarse grained SAND and clayey sandy GRAVEL, slightly moist, pervasive carbonates (veins, spots, clast coatings) throughout, pinprick to 2mm pores on 1-5mm spacing, clay films and weak blocky structure developing in pebble poor areas.	
4.6 - 8	Kern River Formation: Reddish brown clayey poorly sorted SANDSTONE mottled in olive brown, severely weathered with carbonate concretions and pinprick to 3mm pores on 2-5mm (locally 1-3mm) spacing in upper 2' and medium dense below, dry, slightly friable in lower 1.5'.	

Graphic Log



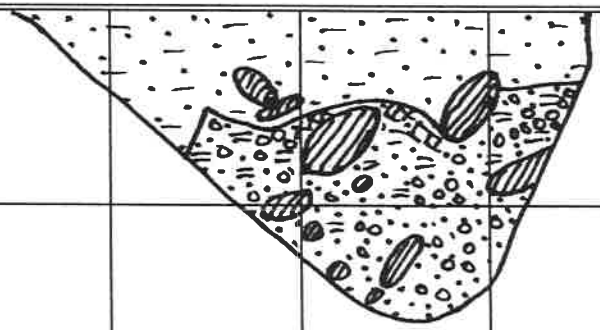
scale 1" = 5'	GEOLABS-WESTLAKE VILLAGE	W.O. 8927	PLATE TP21

LOG OF EXCAVATION Trench No. TP22	Logged By: SR	Date Excavated: 2/2/05	Client: S&S Homes

Depth (ft)	Description	Comments
0 - 2	Alluvium: Brown silty SAND becoming light brown in bottom 6", moist, loose, perasively burrowed.	
2 - 7.5	Kern River Formation: Reddish brown pebbly clayey SAND colluvium(1-1.5') developed over yellowish brown, dark yellow, and light yellowish gray very coarse grained SANDSTONE, dry to slightly moist, very firm but still porous, colluvium has locally moderately developed blocky structure with carbonate coatings on ped faces, pinprick to 3mm pores on 1-3mm centers, sandstone is clayey (secondary?) and has pinprick to 1mm pores on 1-3mm spacing, unit is pervasively (locally entirely) burrowed, opposite trench wall has isolated bedrock pieces floating in burrow infill to 7' deep.	

S83W

Graphic Log



scale 1" = 5'	GEOLABS-WESTLAKE VILLAGE	W.O. 8927	PLATE TP22

APPENDIX A

SEISMICITY ANALYSES

USGS - Seismic Hazard Curves and Uniform Hazard Response Spectra (Java Applet output)

Conterminous 48 States
2006 International Building Code
Latitude = 35.41232
Longitude = -118.86963
Spectral Response Accelerations Ss and S1
Ss and S1 = Mapped Spectral Acceleration Values
Site Class B - Fa = 1.0 ,Fv = 1.0
Data are based on a 0.01 deg grid spacing

Period (sec)	Sa (g)	
0.2	1.167	(Ss, Site Class B)
1.0	0.406	(S1, Site Class B)

Conterminous 48 States
2006 International Building Code
Latitude = 35.41232
Longitude = -118.86963
Spectral Response Accelerations SMs and SM1
SMs = FaSs and SM1 = FvS1
Site Class C - Fa = 1.0 ,Fv = 1.394

Period (sec)	Sa (g)	
0.2	1.167	(SMs, Site Class C)
1.0	0.566	(SM1, Site Class C)

Conterminous 48 States
2006 International Building Code
Latitude = 35.41232
Longitude = -118.86963
SDs = 2/3 x SMs and SD1 = 2/3 x SM1
Site Class C - Fa = 1.0 ,Fv = 1.394

Period (sec)	Sa (g)	
0.2	0.778	(SDs, Site Class C)
1.0	0.377	(SD1, Site Class C)

Conterminous 48 States
2006 International Building Code
Latitude = 35.41232
Longitude = -118.86963
MCE Response Spectra for Site Class B
Ss and S1 = Mapped Spectral Acceleration Values
Site Class B - Fa = 1.0 ,Fv = 1.0

Period (sec)	Sa (g)	Sd (inches)
0.000	0.467	0.000
0.070	1.167	0.055
0.200	1.167	0.456
0.348	1.167	1.379
0.400	1.014	1.586
0.500	0.812	1.982
0.600	0.676	2.379
0.700	0.580	2.775
0.800	0.507	3.172
0.900	0.451	3.568
1.000	0.406	3.964
1.100	0.369	4.361
1.200	0.338	4.757
1.300	0.312	5.154
1.400	0.290	5.550
1.500	0.271	5.947
1.600	0.254	6.343
1.700	0.239	6.739
1.800	0.225	7.136
1.900	0.214	7.532
2.000	0.203	7.929

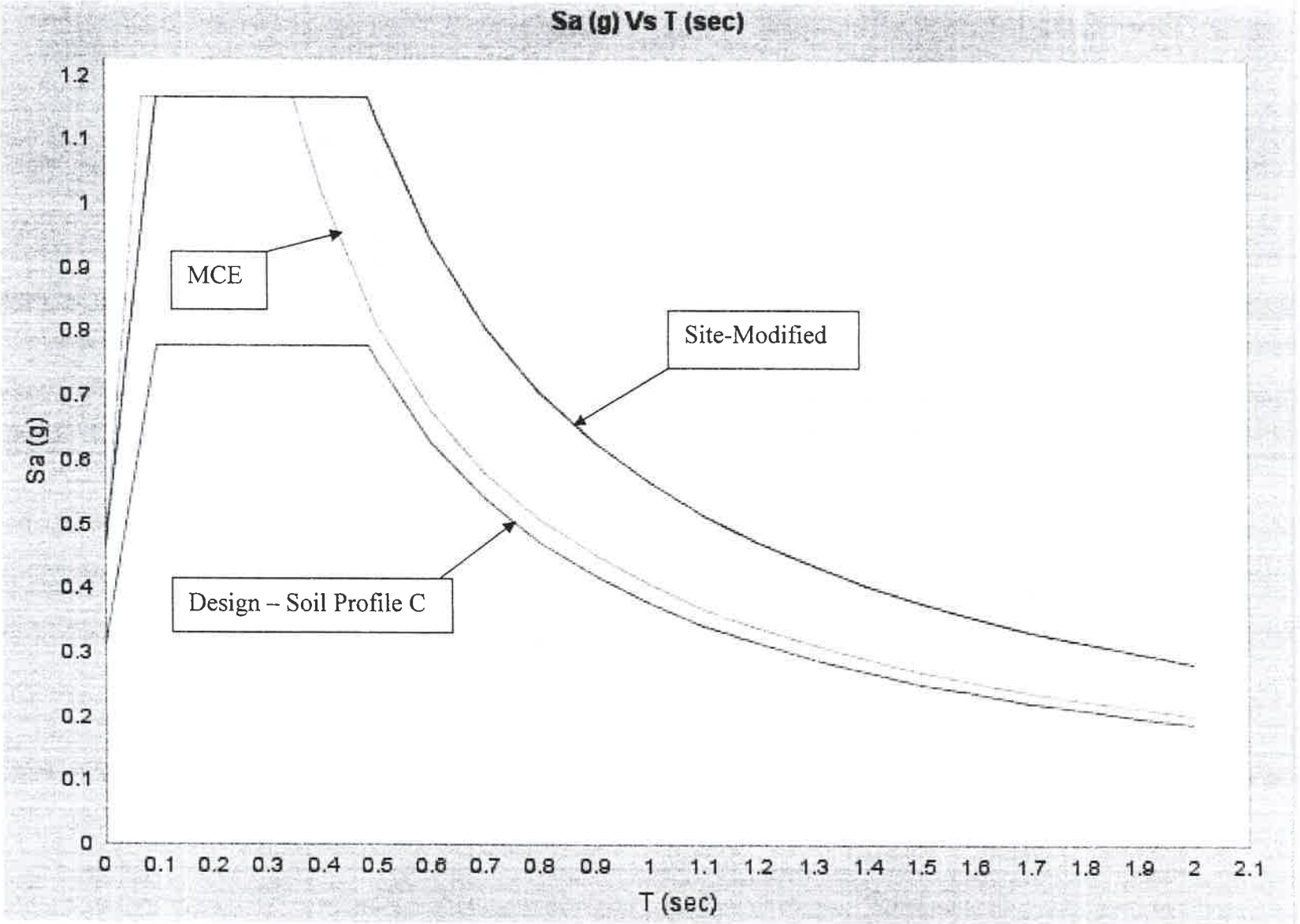
Conterminous 48 States
2006 International Building Code
Latitude = 35.41232
Longitude = -118.86963
Site Modified Response Spectra for Site Class Site Class C
SMs = FaSs and SM1 = FvS1
Site Class C - Fa = 1.0 ,Fv = 1.394

Period (sec)	Sa (g)	Sd (inches)
0.000	0.467	0.000
0.097	1.167	0.107
0.200	1.167	0.456
0.485	1.167	2.679
0.500	1.131	2.763
0.600	0.943	3.316
0.700	0.808	3.868
0.800	0.707	4.421
0.900	0.628	4.974
1.000	0.566	5.526
1.100	0.514	6.079
1.200	0.471	6.632
1.300	0.435	7.184
1.400	0.404	7.737
1.500	0.377	8.290
1.600	0.354	8.842
1.700	0.333	9.395
1.800	0.314	9.947
1.900	0.298	10.500
2.000	0.283	11.053

Conterminous 48 States
2006 International Building Code
Latitude = 35.41232
Longitude = -118.86963
Design Response Spectra for Site Class Site Class C
SDs = 2/3 x SMs and SD1 = 2/3 x SM1
Site Class C - Fa = 1.0 ,Fv = 1.394

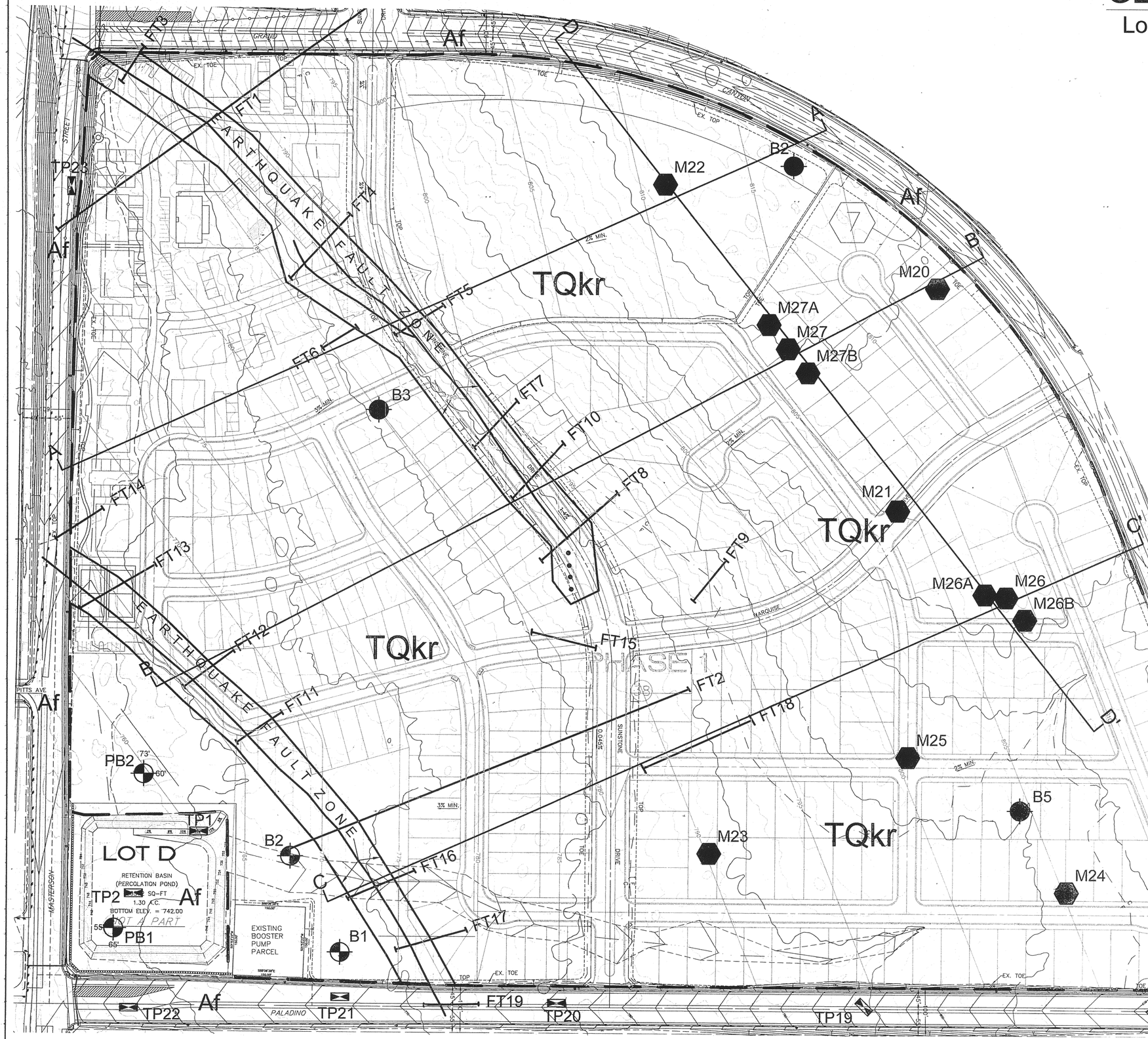
Period (sec)	Sa (g)	Sd (inches)
0.000	0.311	0.000
0.097	0.778	0.071
0.200	0.778	0.304
0.485	0.778	1.786
0.500	0.754	1.842
0.600	0.628	2.211
0.700	0.539	2.579
0.800	0.471	2.947
0.900	0.419	3.316
1.000	0.377	3.684
1.100	0.343	4.053

1.200	0.314	4.421
1.300	0.290	4.790
1.400	0.269	5.158
1.500	0.251	5.526
1.600	0.236	5.895
1.700	0.222	6.263
1.800	0.209	6.632
1.900	0.198	7.000
2.000	0.189	7.368


Sa (g) Vs T (sec)
Sa (g)
T (sec)
MCE
Site-Modified
Design – Soil Profile C
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2
2.1

GEOLOGIC MAP

Lot 38 of Tract 6137-1



EXPLANATION

Af	Artificial Fill
TQkr	Kern River Formation
	Geologic Contact (dashed where inferred)
PB2 B2	Borings (Geolabs - Westlake Village)
B5	Borings (Krazan)
M27B TP22	Test Pits (Geolabs - Westlake Village)
	Fault (dotted where concealed)
FT19	Fault Trench
D D'	Cross Section

1"=40'

CITY OF BAKERSFIELD
TRACT NO. 6137-1
"VISTA MONTAIRE"
LOT "D"
"QUARTER CIRCLE"
PRELIMINARY GRADING PLAN
CITY OF BAKERSFIELD CALIFORNIA

NEW VISION CIVIL ENGINEERING, INC.
PLANNING · ENGINEERING · SURVEYING
9101 CAMINO MEDIA AVE. SUITE 210 · BAKERSFIELD, CA 93311
TEL: 661.617.3300 · FAX: 661.617.8195
RCE NO. C65405 EXPIRES 9-30-07
ORLANDO MORENO

REGISTERED PROFESSIONAL ENGINEER O. MORENO No. C65405 EXP. 9-30-07 CIVIL STATE OF CALIFORNIA

DATE	REVISIONS
3/25/08	ISSUED FOR CLIENT REVIEW

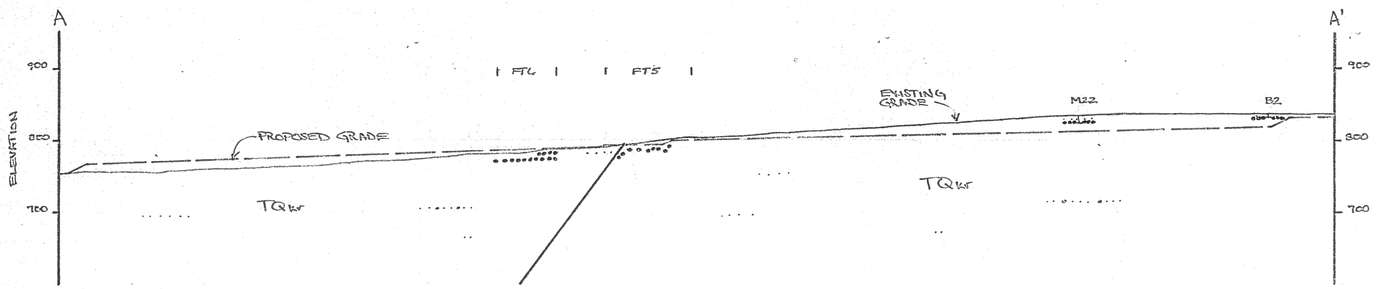
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CHECKED BY: L. RYE
APPROVED BY: O. MORENO
DATE: 3/21/08
JOB NO.
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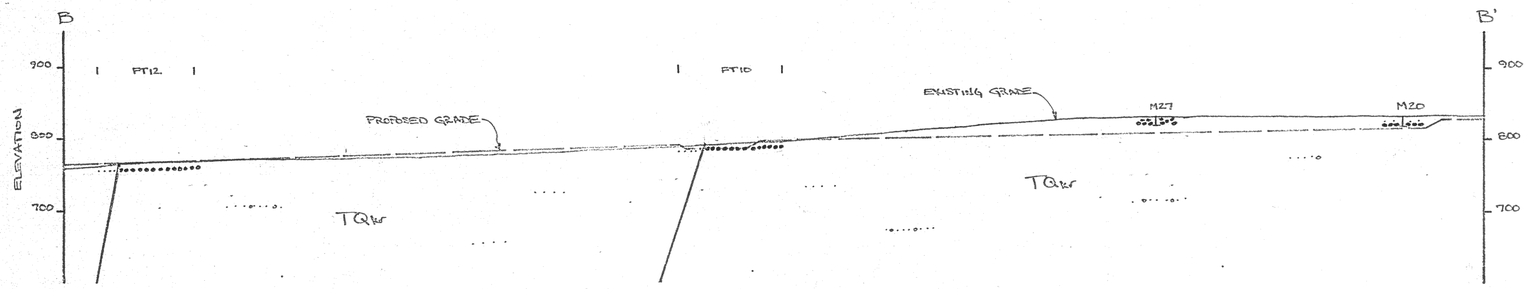
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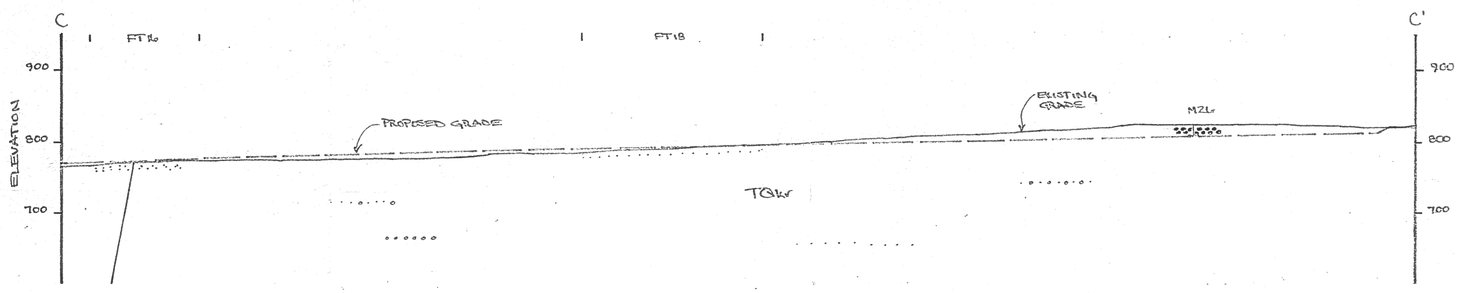
Geolabs – Westlake Village
GEOLOGY AND SOIL ENGINEERING
DATE 4/4/2008 BY TC
SCALE 1"=40' W.O. 8927

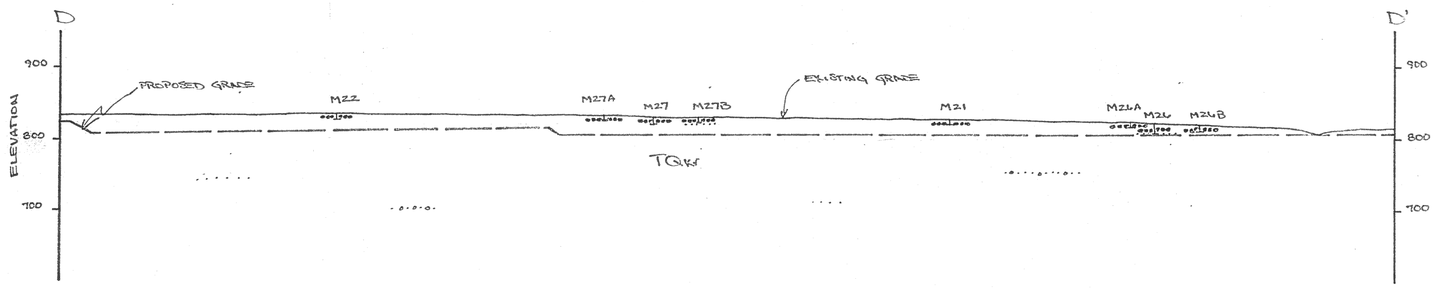
PLATE 1.2

SHEET 1 OF 1









Geolabs – Westlake Village
GEOLOGY AND SOIL ENGINEERING
DATE 4-4-08 BY RD
SCALE 1" = 100' W.O. 6927

PLATE 2.1

SOILS ENGINEERING, INC.

GEOLOGICAL HAZARD REPORT

For

LOT 38, TRACT 6137
Portion of Section 9, T29S, R29E
Northeast of Paladino Drive and Masterson Street
Bakersfield, California

Prepared For:

S&S Homes of the Central Coast, Inc.
532 Camino Mercado
Arroyo Grande, CA 93420
Attention: Ms. Adrienne Ankerstrom

File No. 19-17222

Prepared By:

Soils Engineering, Inc.
4400 Yeager Way
Bakersfield, CA. 93313

September 2019

SOILS ENGINEERING, INC.

September 9, 2019

File No. 19-17222

S&S Homes of the Central Coast, Inc.
532 Camino Mercado
Arroyo Grande, CA 93420

Attention: Ms. Adrienne Ankerstrom

Subject: Geological Hazard Study for
Lot 38, Tract 6137
Northeast of Paladino Drive and Masterson Street
Bakersfield, California

Dear Ms. Ankerstrom:

In accordance with your request and authorization, Soils Engineering, Inc. (SEI) has performed a Geological Hazards Study for the above described subject property in Bakersfield, California (site). This study was conducted in compliance with the California Code of Regulations, Title 24, and Chapters 16, 18 and 33 of the 2016 California Building Code. This Geological Hazard Study summarizes previous work conducted by Geolabs-Westlake Village (2004 to 2008) and others along with additional research by SEI to satisfy the City of Bakersfield requirements.

Our Geological Hazards Assessment indicates that there is a low probability for liquefaction to occur during a major earthquake at the site. The maximum peak ground acceleration at the site would be 0.303g as a result of a mean earthquake of magnitude 6.41 approximately 26.87 kilometers away. The computer-modeling program Eqsearchwin estimated that a ground motion of 0.391g occurred at this site from a 6.1 magnitude earthquake (aftershock) on the White Wolf Fault in 1952. The site-specific design acceleration values to be utilized for the proposed improvements should be 0.766g for short periods (S_{Ds}) and 0.421g for the 1 second period (S_{D1}). The seismic design category is a D for both short and 1-second periods per the 2016 CBC.

Active faults (2) have been identified on this site and appropriate 50 feet setbacks in all directions from these fault locations will be required as shown on Plate 2A.

In the event of a major earthquake, there is a very low potential for rock falls or landslides to impact the site. The site is located outside of the potential flood zone of an upstream disaster (dam failure). The estimated amount of total dynamic settlement that would occur at this site during a major earthquake is estimated at <0.5" and the differential settlement is <0.25" which appears to be acceptable. Expansion potential appears to be moderate at this site. Hydrocollapse potential appears to be low and the regional subsidence potential should not be an issue at this site requiring any special mitigation or requirements.

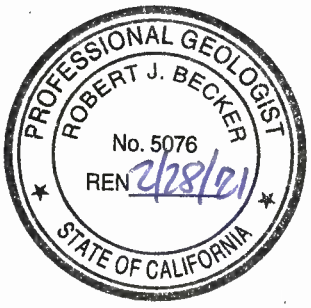
No other geological assessment or remedial action is recommended.

The accompanying report is an instrument of service of ***Soils Engineering, Inc.*** The report summarizes our findings and relates our opinions with respect to the potential for geological hazards to affect the site. Note that our findings and opinions are based on information that we obtained on given dates, through records review, site review, and related activities. It is possible that other information exists or subsequently has become known, just as it is possible for conditions we observed to have changed after our observation. No other warranty expressed or implied is made.

Please contact Soils Engineering, Inc. at (661) 831-5100 if you have any questions concerning this report.

Sincerely,
SOILS ENGINEERING, INC.

Robert J. Becker
P.G. 5076, CEG 2238, Expires 2/28/21



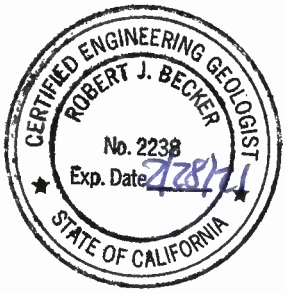


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Plate 3 - Seismic Atlas Map -Rio Bravo Ranch & Oil Center Quads
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Plate 6- DOGGR Oil Well Map
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Attachment A: Deterministic Site Parameters - EQFAULTWIN data, EQSEARCHWIN data, OSHPD Seismic Design Summary, and USGS Unified Hazard Tool results are attached.

Attachment B - Lake Isabella Flood Inundation Map, FEMA Map, Geolabs Fault Location Report, and Unmarked Aerial Photos (1952, 1956, 1975, 1981 and 1990) in Pocket

SOILS ENGINEERING, INC.

GEOLOGICAL HAZARD STUDY

For

Lot 38, Tract 6137

Northeast of Paladino Drive and Masterson Street

Bakersfield, California

September 2019

1.0 Introduction

Soils Engineering, Inc. (SEI) has conducted a Geological Hazards Study of Lot 38 of Tract 6137 located northeast of the intersection of Paladino Drive and Masterson Street (Site) in Bakersfield, California (see Location Map, Plate 1). The central site location coordinates are approximately 35.35.414880° north latitude and -118.875337° west longitude. The following is an Executive Summary of the investigation conducted between August 15 and September 6, 2019.

A site reconnaissance was conducted on August 12, 2019 by SEI personnel consisting of walking the property and evaluating the surrounding geological features. The site area is vacant land with low to moderate weed growth (see Plate 2 for a Plot Plan). The proposed improvements to the Site will consist of residential housing. A fenced drainage sump and a California Water Service facility (treatment vessels, etc.) are located in the southwestern corner of the area and are not part of this investigation.

2.0 Geology and Hydrology

2.1.1 Geologic Setting

The site is relatively flat with a gentle slope to the south-southwest with surface elevations similar to adjacent properties and road surfaces. The project site rests on non-marine sedimentary rocks identified as Quaternary Pliocene-Pleistocene (QPc) on geologic maps within the southern portion of the San Joaquin Valley. QPc is also known as the Kern River formation (TQkr) in this area consisting of semi-consolidated sand, silt and gravels. See attached Geologic Map (Plate 2A) as interpreted from on-site soil boring logs, fault trenches and pits conducted by Geolabs (2004 to 2008) and Krazan and Associates (2000), along with the Bakersfield Sheet of the Geologic Map of California (Smith, Department of Conservation Division of Mines and Geology (CDMG), 1964).

The site area is located within an Alquist-Priolo (AP) Special Studies Earthquake Fault Zone with three (3) surface fault splays shown on the Rio Bravo Ranch Quadrangle AP Map within the site area (see Plates 2 and 3A). These fault traces were identified on the site following the July 21, 1952 Arvin-Tehachapi earthquake (magnitude 7.5), which was attributed to the northeast-southwest trending White Wolf fault approximately 16.3 miles southeast of the site area. This major earthquake in July 1952 caused surface ruptures along multiple northwest-southeast

trending faults including some within the site area. Other active faults within 50 miles include: the Edison Fault which is located approximately 7 kilometers southeast of the site; the Kern Front Fault, approximately 15 kilometers to the northwest; the White Wolf Fault, approximately 26.2 kilometers to the southeast; Pleito Trust, approximately 48 kilometers to the southwest; the Garlock (West) Fault, approximately 56.9 kilometers to the southeast; the San Andreas Fault (various segments) approximately 66.3 kilometers to the west, southwest; the Big Pine Fault, approximately 67 to the southwest, and the San Gabriel Fault approximately 78 kilometers away. The Seismic Hazard Atlas maps of the Rio Bravo Ranch and the Oil Center Quadrangles show the local faults and geology in the area (Plate 3). Nearby active faults are shown on the 2010 Fault Activity Map of California (CDMG, 2010) within the general area of the site (Plate 5A) and on the EQFault California Fault Map (Plate 5).

2.1.2 Regional Faults

A brief description of the major regional faults within 50 miles of the site is included below:

White Wolf Fault

The White Wolf fault is located about 16.3 miles southeast of the site. It traverses the southeastern end of the San Joaquin Valley from Wheeler Ridge to just northeast of Caliente (over 33 miles long). The White Wolf faulT is generally believed to be a high angle reverse fault with a left-lateral component. It is possible that the White Wolf fault might be part of a larger right-lateral fault system which includes the Breckenridge and Kern Canyon faults(Ross, 1986). Data from oil wells in the North Tejon area indicate total vertical displacement to be approximately 10,000 feet. The average slip rate of the fault is estimated to be between 3 and 8.5 mm/yr. The average recurrence interval between major ruptures is unknown (Southern California Earthquake Data Center, 2002). On July 21, 1952, the well-known Kern County earthquake occurred as a result of movement along the White Wolf fault. The initial shock was a 7.7 magnitude event with the epicenter near Wheeler Ridge, about 29 miles south of the site. The ground ruptured discontinuously along most of the length of the fault with a maximum vertical displacement of about 3 feet. Following the initial earthquake, 19 aftershocks of magnitude 5.0 or greater occurred from July 21, 1952 through August 22, 1952. Surface ruptures associated with these events appear to have occurred in the western portion of the site as shown on Plates 2 and 3A.

San Andreas Fault

The San Andreas fault, located about 41 miles southwest of the property, extends from the Gulf of California to at least as far north as Cape Mendocino. It has a northwest-southeast trend parallel to the crest of the Coast Ranges. This fault has been active in Historic time along this entire length. Movement along this fault is right-lateral, with the western block (Pacific Plate) being displaced northerly in relation to the eastern block (Continental Plate). The average slip rate of the fault is estimated to be between 20 and 35 millimeters per year (mm/yr) and the average recurrence interval between major ruptures is estimated at 140 years (Southern California Earthquake Data Center, 2002). In 1857 the historic "Fort Tejon" earthquake occurred along the San Andreas fault with an estimated magnitude of at least 7.9. Ground rupture occurred

along the fault over a distance at least 200 miles with the maximum right-lateral displacement of approximately 30 feet. Destruction was total in the Fort Tejon area approximately 5 miles north of the fault.

Pond-Poso Creek Fault

The Pond-Poso Creek fault extends in a northwesterly direction from the Sierra Nevada foothills east of Bakersfield to north of the Kern-Tulare County line. It is an active fault which trends to within about 8 miles to the north of the site. It has a length of approximately 45 miles. Work in the Pond area by Fugro, Inc. (1974) indicates 9 inches of displacement along its trace at a depth of 10 feet, 35 feet at a depth of 250 feet, and approximately 1,000 feet at the top of the Acoustic Basement. It is a normal fault, downthrown to the southwest, and dips at about 70 degrees. Repairs to county roads crossing the trace of the fault indicate that creep movement is occurring on the fault.

Kern Front Fault

The Kern Front fault extends in a northerly direction starting approximately 1-mile northeast of the old Kern County Airport (Meadows Field) in northern Bakersfield, extending north near Poso Creek. It is an active fault, which lies about 9 miles northwest of the site. It has a length of approximately 6 miles. It is a normal fault, downthrown to the west. Repairs to county roads crossing the trace of the fault indicate that creep movement is occuring on the fault, likely from oil withdrawal in the area.

Breckenridge-Kern Canyon Fault System

The Breckenridge-Kern Canyon fault system is located in the southern Sierra Nevada mountains about 17 miles east of the site. It trends northerly from the south end of Walker Basin to north of Mount Whitney, a distance of almost 100 miles. It is a high angle fault system with a total vertical displacement of probably as much as 4,000 feet. Basement rock correlations indicate right-lateral offset of up to 15 kilometers (Ross, 1986). Latest surface movement on the Kern Canyon segment was more than 3.5 million years ago (Norris and Webb, 1976). However, historic seismic activity attributed to this system suggests that it may be active at depth. A publication of the California Division of Mines and Geology (Jennings, 1994a) shows a band of accurately located earthquake epicenters associated with the fault system. Fault investigations in the area of the Lake Isabella Dam has verified that this fault is active.

Sierra Nevada Fault

The Sierra Nevada fault is located about 51 miles east of the site. It intersects the Garlock fault near the southern end of the Sierra Nevada Mountains and shows a vertical displacement of more than 10,000 feet (Norris and Webb, 1976). It trends northerly along the eastern face of the mountain range. Evidence for active fault movement consists of recent escarpments in alluvium and damage in an abandoned aqueduct tunnel along the trace of the fault. The average slip rate of the fault is estimated to be less than 1 mm/yr. The average recurrence interval between major ruptures is uncertain (Southern California Earthquake Data Center, 2002).

Garlock Fault
The Garlock fault is situated about 35 miles southeast of the site. The Garlock fault extends for a distance of about 150 miles to the northeast from its intersection with the San Andreas fault by the town of Lebec. An apparent offset of dike swarms along the zone indicates left-lateral displacement of as much as 40 miles (Smith, 1962). The average slip rate of the fault is estimated to be between 2 to 11 mm/yr and the average recurrence interval between major ruptures is estimated to be between 200 and 3000 years (Southern California Earthquake Data Center, 2002).

Big Pine Fault
The Big Pine fault is located about 41.6 miles south of the site. It joins the San Andreas just east of Cuddy Valley and has been mapped for a distance of approximately 50 miles in a southwesterly direction. Poyner (1960) suggests left-lateral displacement of approximately 12 to 15 miles. Surface rupture in 1852 was attributed to movement at the eastern end of the Big Pine fault. However, more recent data indicate that the rupture reported in 1852 was probably caused by landslides (Southern California Earthquake Data Center, 2002). The average slip rate of the fault is estimated to be between 1 to 4 mm/yr (Southern California Earthquake Data Center, 2002). Stream offsets of up to 3,000 feet during Quaternary time have been estimated (Norris and Webb, 1976).

Pleito Fault
The Pleito thrust fault, located about 30 miles south of the site, delineates the northern base of the San Emigdio Range at the south edge of the San Joaquin Valley. It extends from Live Oak Canyon east of Interstate Route 5 to two miles west of Pleito Creek, a distance of approximately 18 miles. It dips at a low angle to the south beneath the San Emigdio Range. The Pleito fault was recognized as a south dipping thrust fault of probable low angle dip by Hoots (1930), who also postulated displacement of 10,000+ feet along the fault. South of Wheeler Ridge, the average recurrence interval for moderate to large earthquakes has been estimated to be about 500 years (Hall, 1987). Hall (1984) estimated an average uplift rate of 0.5 mm/yr.

San Gabriel Fault
The San Gabriel fault, located about 48.5 miles south of the site, is unconformably overlapped by the Pliocene age Hungry Valley formation. The fault may extend to the northwest at depth. From the point of surface exposure it can be traced for about 90 miles to the southeast. It is a right-lateral fault with a displacement of 21 miles since Miocene time. Vertical displacement is as much as 14,000 feet (Norris and Webb, 1976). The San Gabriel fault shows evidence of Quaternary displacement (Jennings, 1975), but apparently has not been active in Holocene time (Norris and Webb, 1976). The average slip rate of the fault is estimated to be between 1 and 5 mm/yr. The average recurrence interval between major ruptures is unknown (Southern California Earthquake Data Center, 2002).

2.2 Surface Lithology

Earth materials identified in multiple onsite soil borings conducted by Krazan in 2000, and pits and fault trenches conducted by Geolabs in 2004 to 2006, consisted generally of semi-consolidated intervals of Silty Sand (SM), Sandy Silt (ML), and Well-Graded Sand (SW) with intervals of abundant cobbles (conglomerates, GW) in the top 46 feet below ground surface (bgs). These soils are classified as SM, ML, SW or GW, respectively, in the Unified Soils Classification System. Older alluvium as Silty Sand (SM) was encountered in the top 1' to 3' underlain by a semi-consolidated silty sand or sandstone (SM). Intervals of sand with cobbles were encountered from as shallow as 2' to the total depth investigated (46'). See Plate 2B for Geologic Cross-sections from Geolabs fault trenches conducted across the site. See attached boring logs, pit logs and trench logs from Krazan and Geolabs in Appendix B for more detail.

2.3.1 Previous On-Site Fault Investigation

Geolabs conducted a study to determine the presence of active faulting within the site area in 2005. In Geolabs report titled "Fault Location and Activity Assessment Investigation", dated November 14, 2005 (Fault Location Report), it is stated that they conducted 19 exploratory trenches across the site, reviewed available pertinent published and unpublished data, did a geological analysis of the assembled data to produce the Fault Location Report.

Geolabs findings from the Fault Location Report are stated below:

"Two "Master Trenches", FT-l and FT-2, were excavated so as to provide a continuous exposure completely across the AP Zone. Two separate and distinct faults were observed therein. The most northerly fault (Fault A) was encountered in fault trench FT-l between Stations 5+10 and 5+30, while the southernmost fault (Fault B) was observed in fault trench FT-2 between Stations 6+70 and 6+80. These faults represent different traces, but both were trending between N40W and N50W and were essentially vertical features with a normal sense of displacement. Seventeen (17) additional, supplemental trenches were then excavated in order to trace the above faults across the project area.

A minor splay of Fault A was encountered in fault trench FT-4 at about Station 1+50 and because of its somewhat more north-south trend, fault trench FT-6 was excavated in an attempt to intercept it. No faulting was observed in FT-6, so it was interpreted as joining Fault A in the vicinity of fault trench FT-5.

The amount of throw on the northernmost fault (Fault A) appears to diminish toward the southeast and the fault actually dies out southeasterly of fault trench FT-8. It was not encountered in trenches FT-2, FT-9, FT-15, or FT-18. The total vertical displacement on Fault A exceeded the depth of trench FT-l (about 12 feet), while at trench FT-8 (Station 1+30) the vertical throw appears to be only about 6"-12". We observed in trench FT-8, especially, that the

lateral throw may exceed the vertical component, as can be seen by the unequal thickness of the Unit 4 conglomerate across the fault.

The southernmost fault exhibited vertical displacements that exceeded the depth of all of the trenches (10'-12') in which it was observed (FT-2, 11-14, 16, 17, and 19). The possibility of a substantial lateral component of throw on this fault cannot be ruled out."

Plate 2A is a Geologic Map showing Geolabs fault trench locations, the approximate location of the active faults identified on the Tract Map and the appropriate setback from these faults (50' in all directions).

Geolabs Conclusions and recommendations are stated below:

"Our conclusions and recommendations with respect to the design of the development on Lot 38 of Tract 6137 are presented below for your consideration. Clearly defined and sufficiently Active faults traverse portions of Lot 38 as shown on Plate 1 (see Plate 2A). As required by the City of Bakersfield, we have recommended a Structural Setback with a width of fifty (50) feet on each of the faults, within which no structures for human habitation may be placed. The setback zones may be used for parks, open space, streets and front and rear yards."

See Plate 2A for the location of the appropriate setbacks from these faults (50' in all directions).

See Appendix B for the complete Geolabs Fault Location Report.

2.3.2 Other Nearby Historical Geologic Investigations

The following are summaries of geological investigations conducted by others in the vicinity of the site.

Investigation by Bruer and Others

Surface ruptures were mapped by Bruer and others (1952) after the 1952 Kern County earthquake. Some of these ruptures, trend northwest-southeast within Section 9. Bruer and others (1952) mapped "Group A" fissure which Bruer (1952) defined as "fissures which apparently cannot be explained by simple slumping, surface settling, or fracturing by 'ground roll' alone at boundaries of different types of ground surfaces; probably closely related to subsurface movement." The map by Bruer and others (1952) is at a scale of 1:62,500. Bruer (1952) notes that the detail and accuracy of the field investigation varied depending on land access, work by road crews and farmers that obliterated evidence of some of the ruptures, available time, etc. Therefore, the accuracy of the mapped location of the surface ruptures is uncertain. Bruer (1952) discussed many of the individual ruptures and also included 31 photographs of ruptures. According to Bruer (1952) some of the areas had been recently plowed obscuring surface features.

Investigation by Bartow & Doukas
Bartow & Doukas (1976) and Bartow (1981) prepared a geologic map of the "Geology of the Lamont, Edison, Oil Center and Rio Bravo Ranch Quadrangles". On this map potential faults were identified traversing across portions of the site within Section 9 that "cut Kern River Formation".

Investigation by T.C. Smith
Smith (1984) prepared a Fault Evaluation Report (FER-145) of the "Faults East of Bakersfield, Kern County" that had previously been zoned as AP Earthquake Fault Zones (EFZs), including the surface ruptures mapped by Bruer and others (1952) and the potential faults identified by Bartow & Doukas (1976), Bartow (1981) and Wood and Dale (1964). Smith (1984) noted that the ruptures in the vicinity of the site were first observed after the initial earthquake of July 21, 1952 and before the large aftershock of July 29, 1952. Smith (1984) indicated that the ruptures may have been associated with more than one earthquake.

Multiple scarps and tonal lineaments were mapped by Smith (1984) within portions of Section 16 just south of the site area as shown on Plate 6A. In Figure 2B of FER-145 Smith (1984) has a note that the potential faults of Bartow (1981) within the site area "Cuts Kern River Formation". These fault locations are similar to what Bruer mapped in 1952. See Plate 6A for some of these historical geologic maps which include the site area.

No other site-specific investigations were found on file with the State Geologist at the time of this investigation. Multiple geologic investigations within Section 16 to the south of the site were reviewed as part of this investigation (Park & Smith, and Smith and Gutcher 1975 to 2004). The fault investigation by SEI of the City in the Hills development (2005) to the southwest of the subject site was also reviewed.

2.4 Hydrology

Unconfined Aquifer - The depth to the unconfined aquifer as shown on maps prepared by the Kern Water Agency, and dated Summer 2012, is interpreted as >200 feet below the ground surface (see Plate 4). Due to lack of data in the area a more accurate depth to water is not possible.

Perched Water, Ground Water or Seepage - No perched water levels beneath the site are shown on groundwater maps dated Summer 2011 (Kern County Water Agency). Subsurface layers of clay comprise a partial aquiclude to the penetration of seepage from surface sources.

Groundwater Quality - Maps prepared by the Kern County Water Agency, dated March 1997 do not have any data for the site area.

3.0 Seismic and Fault Hazards

3.1 Seismic History

There have been a number of historic earthquakes that may have affected the Bakersfield area. The following is a short summary of the major known events:

- 1/9/1857 - Fort Tejon Earthquake- San Andreas Fault, Estimated Magnitude 8.2+, 30 feet of slippage over a 200 mile area, widespread damage.

- 7/21/1952 - Arvin/Tehachapi - White Wolf Fault, Magnitude 7.7, Extensive damage to buildings and highways.

- 8/22/1952 - Bakersfield Quake (Aftershock of Arvin/Tehachapi) - 6 miles ESE of Bakersfield, Magnitude 5.8. Closest aftershock to Bakersfield causing extensive damage to already weakened buildings.

The Kern County Seismic Hazard Atlas Map and the State Alquist-Priolo Maps show surface faulting or surface fractures occurred on-site from the 1952 earthquakes.

SEI utilized the software program EQSEARCHWIN version 3.0 (Thomas F. Blake) to evaluate historical earthquakes in the area of the site over the last 200 years. The Earthquake Epicenter Map (Plate 3B) shows earthquake magnitudes and the epicentral distance from the site. The majority of the seismic activity in the area of the site has been along the White Wolf Fault and the San Andreas Fault. The closest earthquake of at least 5.0 magnitude to the site was 4.2 kilometers away, at a magnitude of 6.1 in July 1952. The largest magnitude earthquake within 100 miles was 7.9 on the San Andreas Fault in 1857. The largest estimated site acceleration is 0.391g from the 6.1 magnitude earthquake (aftershock) on the White Wolf Fault in 1952. The EQSEARCHWIN estimation of Peak Acceleration from California Earthquake Catalogs Table, Earthquake Recurrence Curve, Earthquake Epicenter Map and a graph of the Number of Earthquakes (N) above Magnitude (M) are presented in Attachment A.

3.2 Seismic Evaluation

The site is located in the Rio Bravo Ranch Quadrangle within the southwestern ¼ of Section 9, Township 29 South, Range 29 East and is within an Alquist-Priolo special study zone (see Plate 3A AP Fault Map). Local faults and general geology are shown on the Rio Bravo Ranch & Oil Center Quadrangles Seismic Hazard Atlas Maps prepared for the Kern County Council of Governments (Plate 3).

According to the Kern County Seismic Atlas maps the Edison Fault which is located approximately 7 kilometers southeast of the site. The nearest major active fault, as indicated by the computer-modeling program EQFault version 3.0, is the Kern Front Fault, approximately 15

kilometers to the northwest. Other major faults include: the White Wolf Fault, approximately 26.2 kilometers to the southeast; the Pleito Trust, approximately 48 kilometers to the southwest; the Garlock (West) Fault, approximately 56.9 kilometers to the southeast; the San Andreas Fault (various segments) approximately 66.3 kilometers to the west, southwest; the Big Pine Fault, approximately 67 to the southwest, and the San Gabriel Fault approximately 78 kilometers away. Regional faults in relation to the site location are presented on Plate 5A and are from the 2010 Fault Activity Map of California (CDMG, 2010).

3.2.1 Historical Aerial Photo Review

SEI has reviewed historical aerial photos for the site area to interpret geological features. This included aerial photos for the years 1952, 1956, 1975, 1981, and 1990. Potential lineaments trending to the north-northwest were identified within the southwestern portion of the site in some of the aerial photos. These potential fault lineaments correspond to some of the geologic features identified historically by Bartow & Doukas (1976), Bartow (1981), Smith (1984) and Bruer (1952). Interpretation of aerial photos and surface reconnaissance by others historically in the vicinity of the site are shown on Plate 6A. Unmarked copies of the 1952, 1975, 1981 and 1990 aerials are included in Appendix B.

3.3 Seismic Design Values

In accordance with the 2016 California Building Code (CBC) the Site Class for the site is a D (Stiff Soil). Based on this information the following seismic design data has been determined for the site location utilizing the latest Seismic Design Mapping program (OSHPD).

SEISMIC DESIGN CRITERIA	VALUE	SOURCE
Risk Category	**II**	2016 CBC Table 1604.5
Site Class	**D**	Site Specific Soils Report 2016 CBC Section 1613.3.2, ASCE 7-10 Table 20.3-1
Mapped MCE_R Spectral Response Acceleration, short period, S_s	**1.074**	USGS maps/Software - 2016 CBC Figure 1613.3 (1)
Mapped MCE_R Spectral Response Acceleration, at 1-sec. Period, S_1	**0.39**	USGS Maps/Software - 2016 CBC Figure 1613.3 (2)
Site Coefficient, F_a	**1.07**	USGS Software - 2016 CBC Table 1613.3.3 (1)
Site Coefficient, F_v	**1.62**	USGS Software - 2016 CBC Table 1613.3.3 (2)
Adjusted MCE_R Spectral Response Acceleration, Short periods, $S_{MS} = F_a S_s$	**1.149**	USGS Software - 2016 CBC Section 1613.3.3
Adjusted MCE_R Spectral Response Acceleration, 1-sec. Period, $S_{M1} = F_v S_1$	**0.632**	USGS Software - 2016 CBC Section 1613.3.3
Design Spectral Response Acceleration, short periods, $S_{DS} = 2/3 S_{MS}$	**0.766**	USGS Software - 2016 CBC Section 1613.3.4

SEISMIC DESIGN CRITERIA	VALUE	SOURCE
Design Spectral Response Acceleration, 1-sec period, S_{D1}= 2/3 S_{MI}	**0.421**	USGS Software - 2016 CBC Section 1613.3.4
Peak Ground Acceleration (PGA) for Max. Considered Earthquake (MCE_G)	***0.411g***	*USGS Software – ASCE 7-10 Fig 22-7*
Site Coefficient, F_{PGA} = 1.089, $PGA_M = F_{PGA}$* PGA =	***0.448g***	*USGS Software – ASCE 7-10 Table 11.8-1*
Site-Specific Ground Motion Procedures for Seismic Design, C_{RS}	***1.007***	*USGS Software - ASCE 7-10 Fig 22-17*
Site-Specific Ground Motion Procedures for Seismic Design, C_{R1}	***1.06***	*USGS Software - ASCE 7-10 Fig 22-18*
Seismic Design Category short periods (S_{DS})	**D**	2016 CBC Table 1613.3.5 (1)
Seismic Design Category, 1-sec period (S_{D1})	**D**	2016 CBC Table 1613.3.5 (2)

MCE_R = Maximum Considered Earthquake (risk targeted),
MCE_G = Maximum Considered Earthquake (geometric mean)

These values are from the 2016 California Building Code (CBC). See OSHPD Seismic Design Results in Attachment A.

3.4 Possible Earthquake Effects

A number of active faults are located within a 50-mile radius of the subject site. To evaluate the affect a major earthquake might have on the site, the computer modeling program EQFaultwin vers. 3.0 (Thomas Blake) was utilized. Site-specific parameters were inputted, and the program computed the maximum peak site ground accelerations resulting from an earthquake. Because ground accelerations are based largely on fault distance and magnitude, we have focused our analysis on those faults which are close to the site, or that have large maximum credible magnitudes, or a combination of the two. The result of this analysis is presented below in Table A.

This analysis estimates that a maximum peak ground acceleration of 0.259g would be felt at the site as a result of a maximum earthquake of magnitude 7.3 on the White Wolf Fault approximately 26.2 kilometers away. A maximum probable earthquake of magnitude 6.3 on the Kern Front Fault would create a peak site ground acceleration of 0.228g at the site. A maximum probable earthquake of magnitude 8.0 on the San Andreas Fault would create a peak site ground acceleration of 0.152g at the site. See attached Deterministic Site Parameters for a full listing of computed values for faults within a 100-mile radius of the site in Appendix A. Also attached is a California Fault Map showing nearby faults in relationship to the site (Plate 5).

TABLE A

FAULT	Approximate Distance (Km)	Maximum Earthquake Magnitude (Mw)	Maximum Peak Ground Acceleration (g)	Estimated Site Intensity (MM)
Edison Fault	7	<6.5	Unknown	Unknown
Kern Front	15	6.3	0.228	**IX**
White Wolf	26.2	7.3	**0.259**	**IX**
Pleito Thrust	48	7.0	0.140	VIII
Garlock (West)	56.9	7.3	0.118	VII
San Andreas (1857 Rupture and other segments)	66.3	7.4 to **8.0**	0.110 to 0.152	VII to VIII
Big Pine	67	6.9	0.084	VII
San Gabriel	78	7.2	0.088	VII

Deaggregated seismic source parameters were evaluated utilizing the USGS program Unified Hazard Tool. This resulted in a maximum considered earthquake (MCE) value of 0.303g and a 6.41 mean magnitude earthquake 26.87 kilometers away from the site based on 10% chance of exceedance every 50 years (see attached Plot results in Attachment A).

3.5 *Potential For Ground Rupture, Ground Shaking, Ground Failure*

Ground rupture may occur along a fault trace in a major earthquake. Since two (2) active fault traces have been identified on the site it is possible that ground rupture could occur in these areas of the site. Some ground shaking is likely at this site in the event of a major earthquake on one of the nearby faults. Based on the predicted maximum horizontal accelerations at the site and the soil types identified in this investigation significant ground failure is not likely to occur at this site.

3.6 *Potential for Earthquake-Induced Flooding*

The site is located in an area of limited surface waters and it is highly unlikely that flooding would occur at this site during a major earthquake. The Flood Insurance Rate Map indicates that this area of Bakersfield is in Flood Zone X, with minimal flooding expected in the site area. The site is located outside of the Lake Isabella Dam Failure Inundation area as shown on maps prepared by the US Army Corp of Engineers and included within Appendix B.

3.7 *Liquefaction Potential*

No shallow groundwater was encountered in any of the previous soil borings conducted to a maximum depth of 46' below ground surface. SEI reviewed historical groundwater conditions in this part of Bakersfield and it appears that the historic high groundwater data for the site would be >50' bgs. Based on this information and the dense subsurface material identified on-site liquefaction potential at this site is minimal.

3.8 *Slope Stability*

The site is located in an area with <0.5 percent slopes across the site. No bedrock outcrops are present within 1/2 mile of the site. No evidence of historic landslides or creep was observed in this area. There is a very low potential for rockfalls or landslides to impact the site in the event of a major earthquake. Overall the site appears to be stable.

3.9 *Settlement*

The estimated amount of dynamic settlement that is estimated to occur during a major earthquake event is <0.5 inches based on the dense material identified on-site during the subsurface investigation. The estimated amount of differential settlement is <0.25". This amount of dynamic and differential settlement appears to be acceptable for the proposed site improvements.

3.10 Expansive Soil and Hydrocollapse Potential

Based on the lithology encountered in the top 10 feet in the soil borings and fault trenches (mainly silty sand and sandy silt), it appears that highly expansive surface soils are not present at this site.

3.12 Regional Land Subsidence Potential

The City of Bakersfield Safety Element includes a discussion on land subsidence potential in the Bakersfield area. The main causes of land subsidence are Tectonic Subsidence, Oil & Gas Fluid Extraction, Groundwater Withdrawal and Hydrocompaction of Moisture Deficient Alluvial Deposits. Figure 15 in the Safety Element shows the areas of significant subsidence within the Bakersfield area. The project site is located outside of the area where the lowest amount of historic land subsidence has occurred and outside of the area of hydrocompaction as shown on attached Plate 7. In addition, the site is in an area where oil & gas activity is minor, agricultural use is not present and no public water wells are present nearby, so groundwater withdrawal appears to be limited. Based on this information it appears that regional subsidence should not

be an issue at this site requiring any special mitigation or requirements.

4.0 *Conclusions & Recommendations*

Our Geological Hazards Assessment indicates that there is a low probability for liquefaction to occur during a major earthquake at the site. The maximum peak ground acceleration at the site would be 0.303g as a result of a mean earthquake of magnitude 6.41 approximately 26.87 kilometers away. The computer-modeling program Eqsearchwin estimated that a ground motion of 0.391g occurred at this site from a 6.1 magnitude earthquake (aftershock) on the White Wolf Fault in 1952. The site-specific design acceleration values to be utilized for the proposed improvements should be 0.766g for short periods (S_{Ds}) and 0.421g for the 1 second period (S_{D1}). The seismic design category is a D for both short and 1-second periods per the 2016 CBC.

Active faults (2) have been identified on this site and appropriate 50 feet setbacks in all directions from these fault locations will be required as shown on Plate 2A.

In the event of a major earthquake, there is a very low potential for rock falls or landslides to impact the site. The site is located outside of the potential flood zone of an upstream disaster (dam failure). The estimated amount of total dynamic settlement that would occur at this site during a major earthquake is estimated at <0.5" and the differential settlement is <0.25" which appears to be acceptable. Expansion potential appears to be moderate at this site. Hydrocollapse potential appears to be low and the regional subsidence potential should not be an issue at this site requiring any special mitigation or requirements.

No other geological assessment or remedial action is recommended.

5.0 *Attachments*

5.1 Location Map- Plate 1, "Location Map" shows the location of the site with relationship to roads and land features.

5.2.1 Plot Plan - Plate 2, "PLOT PLAN" shows the location and lot configuration of the property.

5.2.2 Plate 2A, Geologic Map shows the site geology related to local topography, streets and nearby surficial features. Also includes the location of soil borings, fault trenches, and pits conducted at the site along with the active fault traces observed on-site.

5.2.3 Plate 2B, Geologic Cross-sections – Presents Geolabs 4 cross-sections representing the surface and subsurface geology based on the fault trenching conducted by Geolabs.

5.3.1 Seismic Atlas Map- Plate 3, Shows local geology and faults within the Rio Bravo Ranch & Oil Center Quadrangles near the site.

5.3.2 Plate 3A, Shows the site location in relation to the Alquist-Priolo Earthquake Faults in the area.

5.3.3 Plate 3B, Shows an Earthquake Epicenter Map produced by EQSEARCHWIN presenting the site location and magnitude and distance of earthquake epicenters.

5.4 Depth To Water Map - Plate 4, Shows depth to the unconfined aquifer in the area of the site.

5.5.1 Fault Location Map- Plate 5, Shows the site in relation to the nearest active faults within 100 miles based on the EQFault program.

5.5.2 Plate 5A shows the Regional Faults based on the 2010 Fault Activity Map of California, CDMG, 2010.

5.6.1 DOGGR Oil Well Map - Plate 6, shows the site in relation to the nearest oil wells.

5.6.2 Historical Geologic Maps – Plate 6A, shows geologic maps in the site area from historical geologic investigations.

5.7 Regional Land Subsidence Map, Plate 7, shows the site in relation to areas with significant land subsidence and hydrocompaction.

5.8 Attachment A - Deterministic Site Parameters - EQFAULTWIN data determined for the site for faults within 100 miles. EQSEARCHWIN data concerning the distance and magnitude of earthquakes within 100 miles of the site is attached. OSHPD Seismic Design Summary Report is attached. USGS Unified Hazard Tool results are attached.

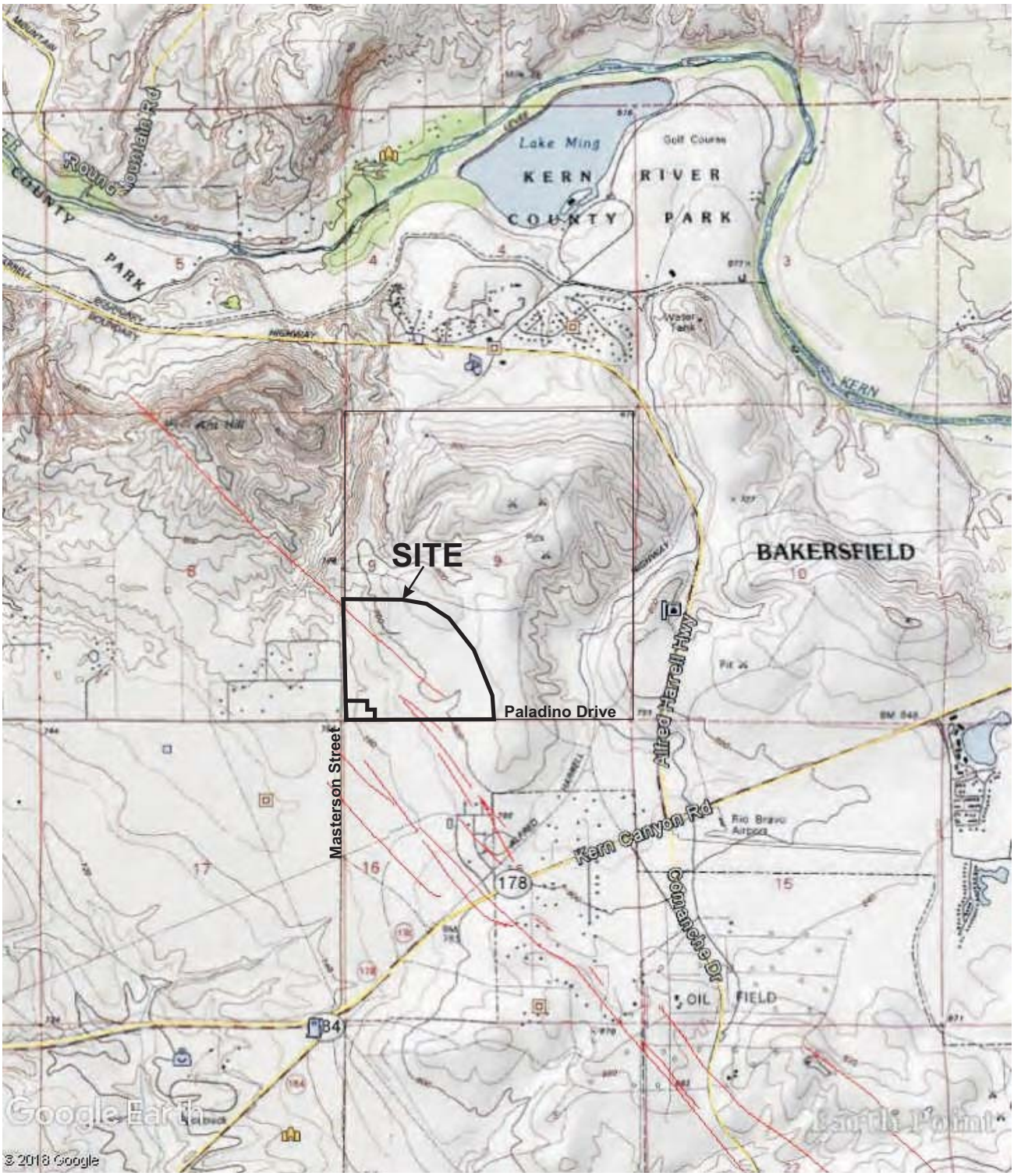
5.9 Attachment B - Presents the Lake Isabella Dam Inundation Map, the Flood Insurance Rate Map and Geolabs Fault Location Report. Unmarked Aerial Photos are also attached.

6.0 *References*

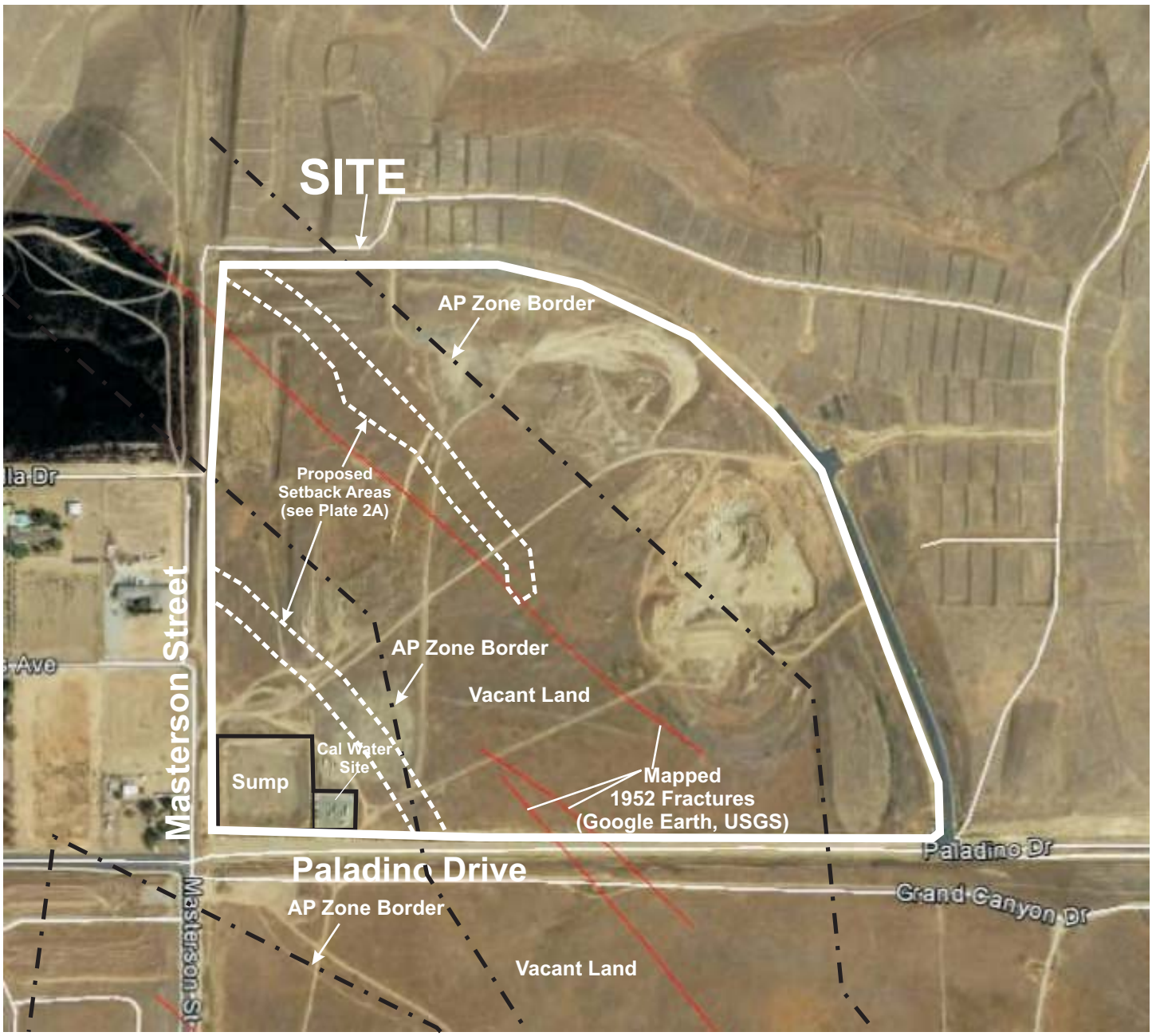
- Water Supply Reports, Kern County Water Agency, Bakersfield, California, 1983 to 2017.
- USGS Quadrangle Maps, Lamont
- Smith, Arthur, California Division of Mines and Geology - Geologic Map of California- Bakersfield Sheet, 1964, Olaf P. Jennings Edition.
- Jennings, Charles and Bryant, William, Fault Activity Map of California, CDMG, 2010.
- U.S. Dept. of Agricultural Soil Surveys, 1942, 1945, 1946.
- EQFaultwin, ver. 3.0, Thomas F. Blake;
- USGS, Design Maps, http://geohazards.usgs.gov/designmaps/us
- EQSEARCHWIN, ver. 3.0, Thomas F. Blake
- LiquefyPro (version 5.9b), CivilTech Software.
- DOGGR, Online Mapping System.
- Blake, Thomas, Empirical Prediction of Earthquake Induced Liquefaction Potential.
- Seismic Hazard Atlas Map, Rio Bravo Ranch & Oil Center Quadrangle, Kern County
- California Fault Parameters, 1996 Draft, California Department of Conservation, Division of Mines and Geology.
- N. Bolton Seed, Kotiji Tokimatsu, A.M., A.S.C.E, Evaluation of Settlement in Sands Due to Earthquake Shaking; Journal of Geotechnical Engineering A.S.C.E. Vol. 113, No. 8, August, 1987.
- City of Bakersfield Safety Element.
- Geolabs – West Lake Village, Fault Location and Activity Assessment Investigation, Lot 38, Tract 6137, Northeast Corner of Paladino Drive and Masterson Street, The Views, City of

Bakersfield, California, dated November 14, 2005

- Geolabs - West Lake Village, Grading Plan Review and Updated Seismic, Foundation, and Retaining Wall Design Criteria, Lot 38, Tract 6137-1, City of Bakersfield, California, dated April 4, 2008
- Bruer, W.G., Earthquake Fissures in Central and Southwestern Kern County, California, 1952.
- Bartow J.A., & Doukas, M.P. (1976), USGS Open File Map 76-592, Geology of the Lamont, Edison, Oil Center and Rio Bravo Ranch Quadrangles.
- Smith, T. C, California Division of Mines and Geology, Fault Evaluation Report FER-145, Faults East of Bakersfield, Kern County, February 6, 1984.
- Park and Smith, and Smith and Gutcher, Various fault investigation in the vicinity of the site, 1975 to 2004.
- Soils Engineering Inc., Preliminary Geologic Hazard Report, The City in the Hills Project, Portions of Sections 18 and 19 and all of Section 17, T29S, R29E, Bakersfield, CA, dated June 28, 2004.



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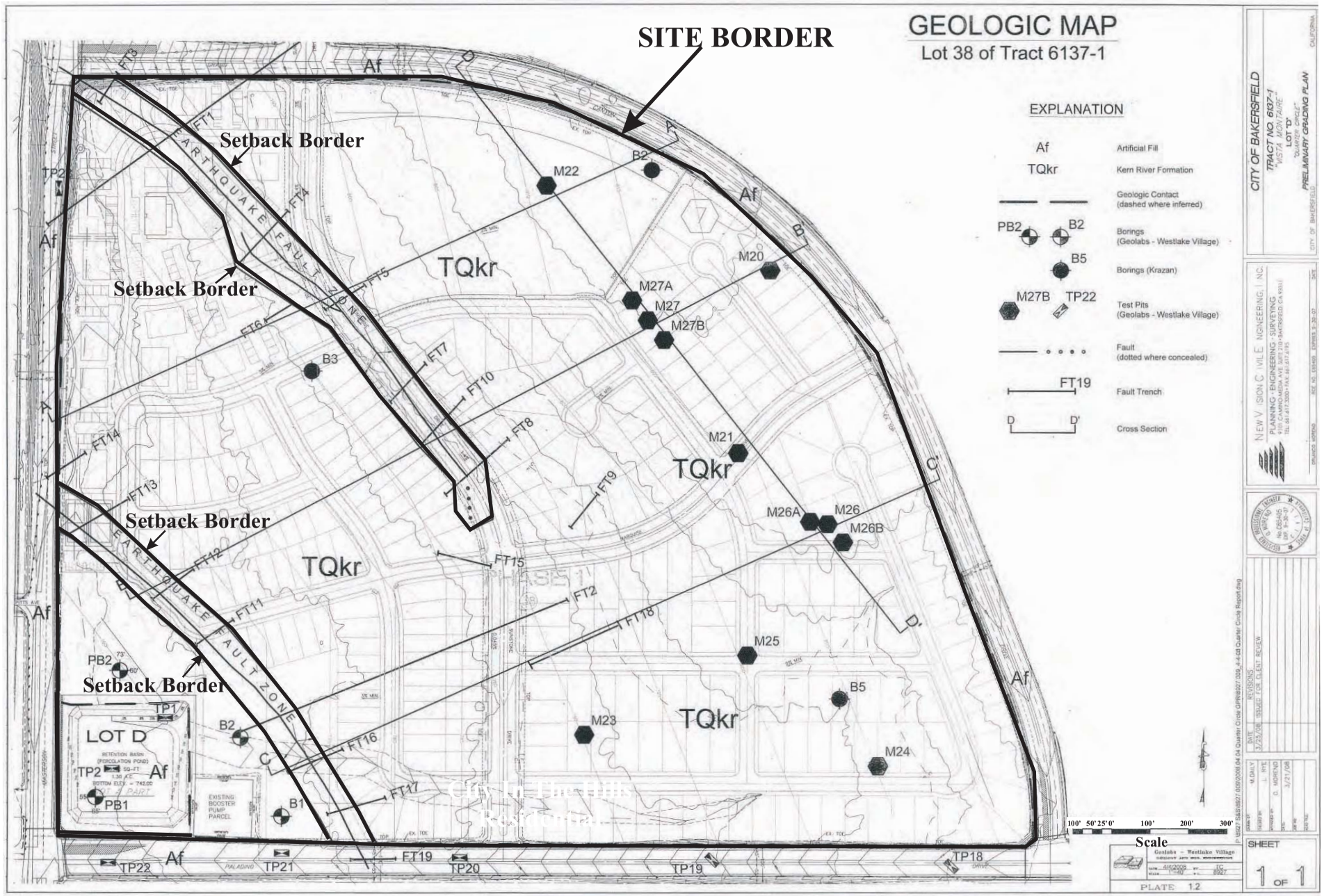
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Bakersfield, CA

PLOT PLAN

PLATE
2

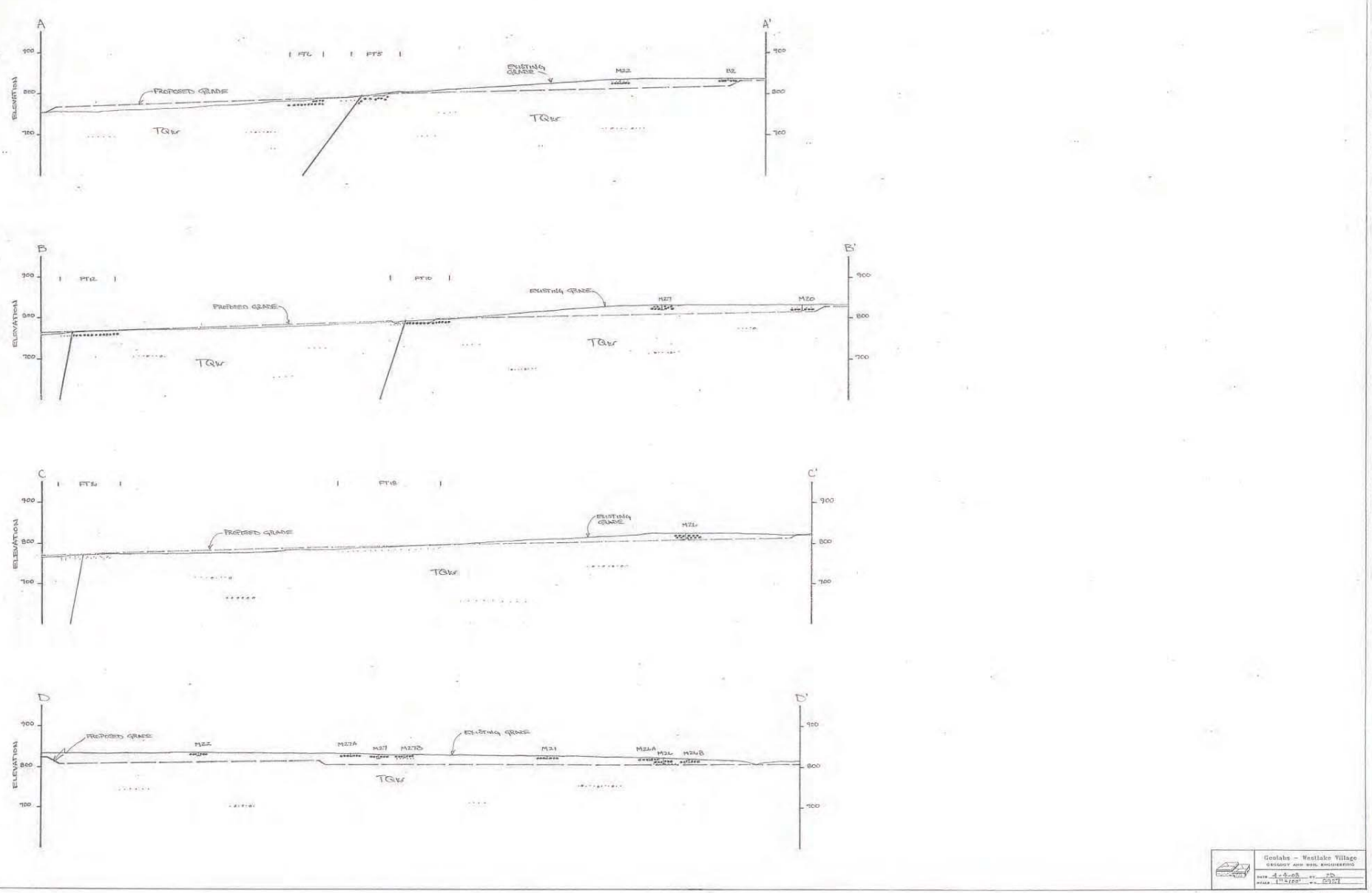


From Geolabs, Grading Plan Review and Updated Seismic, Foundation, and Retaining Wall Design Criteria, dated April 4, 2008

SEI File No. 17222
September 2019

Geologic Map
Lot 38, Tract 6137
Northeast of Paladino Dr. & Masterson St.
Bakersfield, CA

Plate 2A



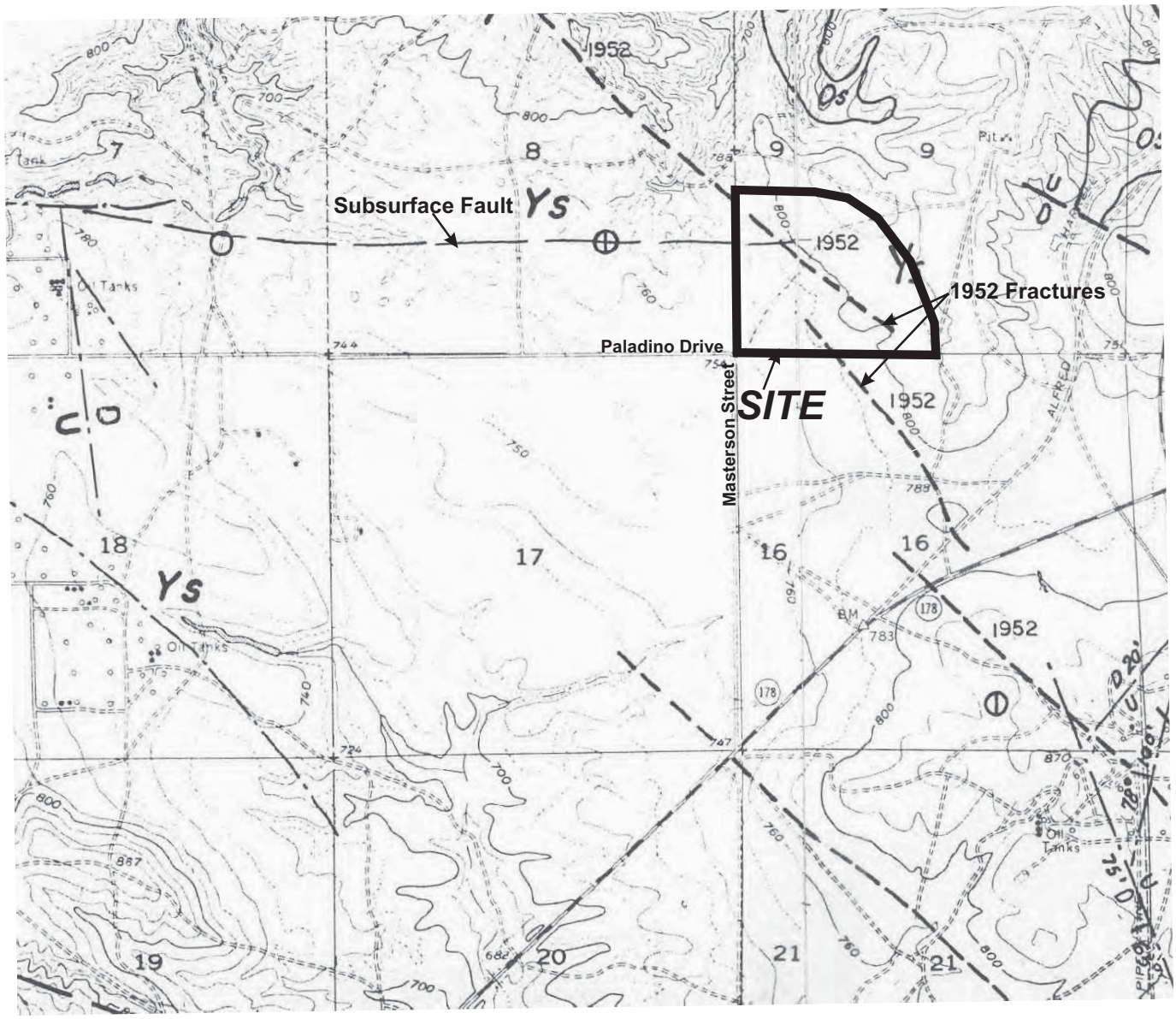
From Geolabs, Grading Plan Review and Updated Seismic, Foundation, and Retaining Wall Design Criteria, dated April 4, 2008

PLATE 2.1

SEI File No. 17222
September 2019

Geologic Cross-Sections
Lot 38, Tract 6137
Northeast of Paladino Dr. & Masterson St.
Bakersfield, CA

Plate 2B



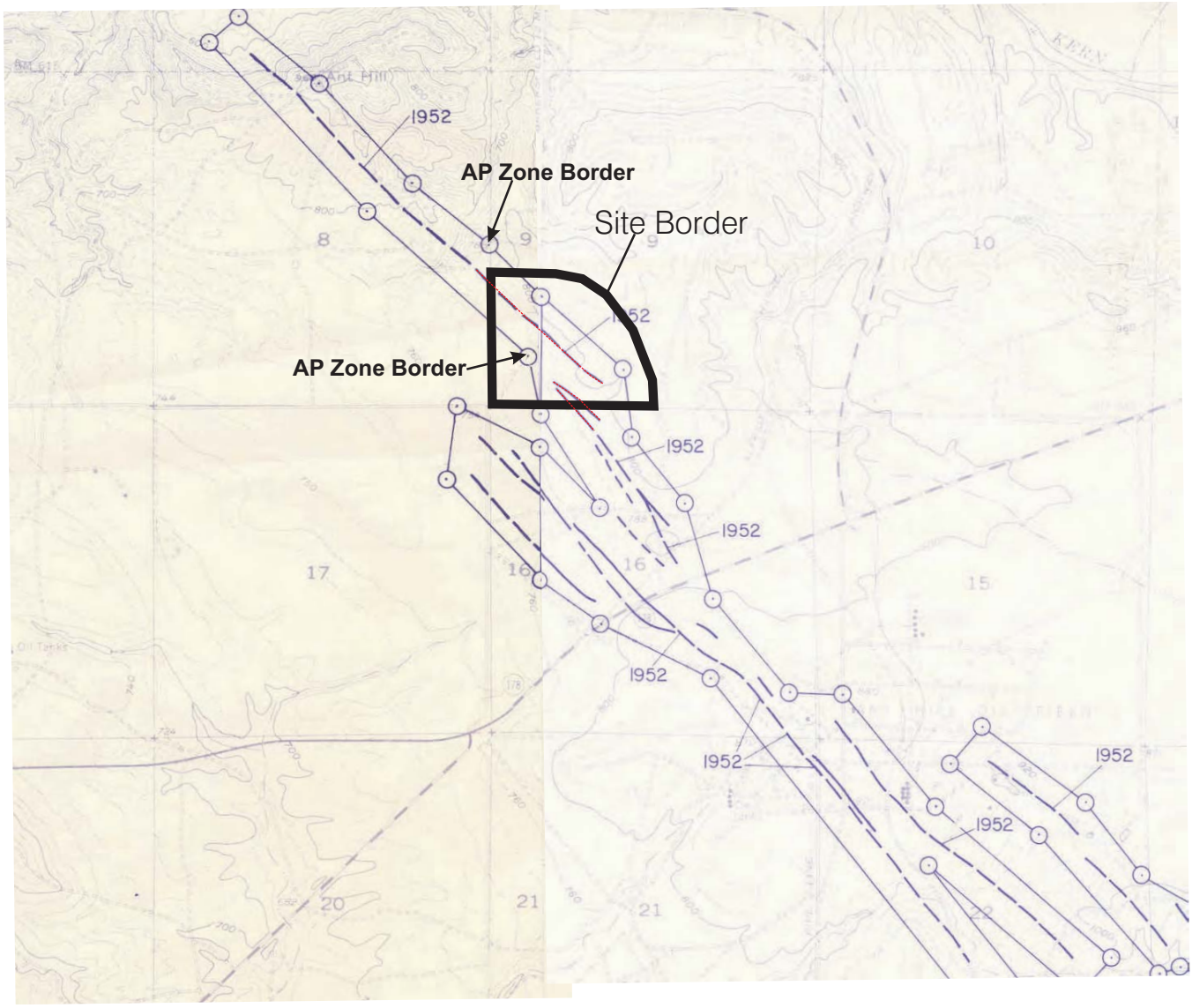
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NE of Paladino Drive and Masterson Street
Bakersfield, CA

DATE: 9/19
PROJECT: #17222

Seismic Hazard Zone Atlas Map

PLATE
3



From: State of California Special Studies Zones, Rio Bravo Ranch Quadrangle & Oil Center Quadrangle, 1985

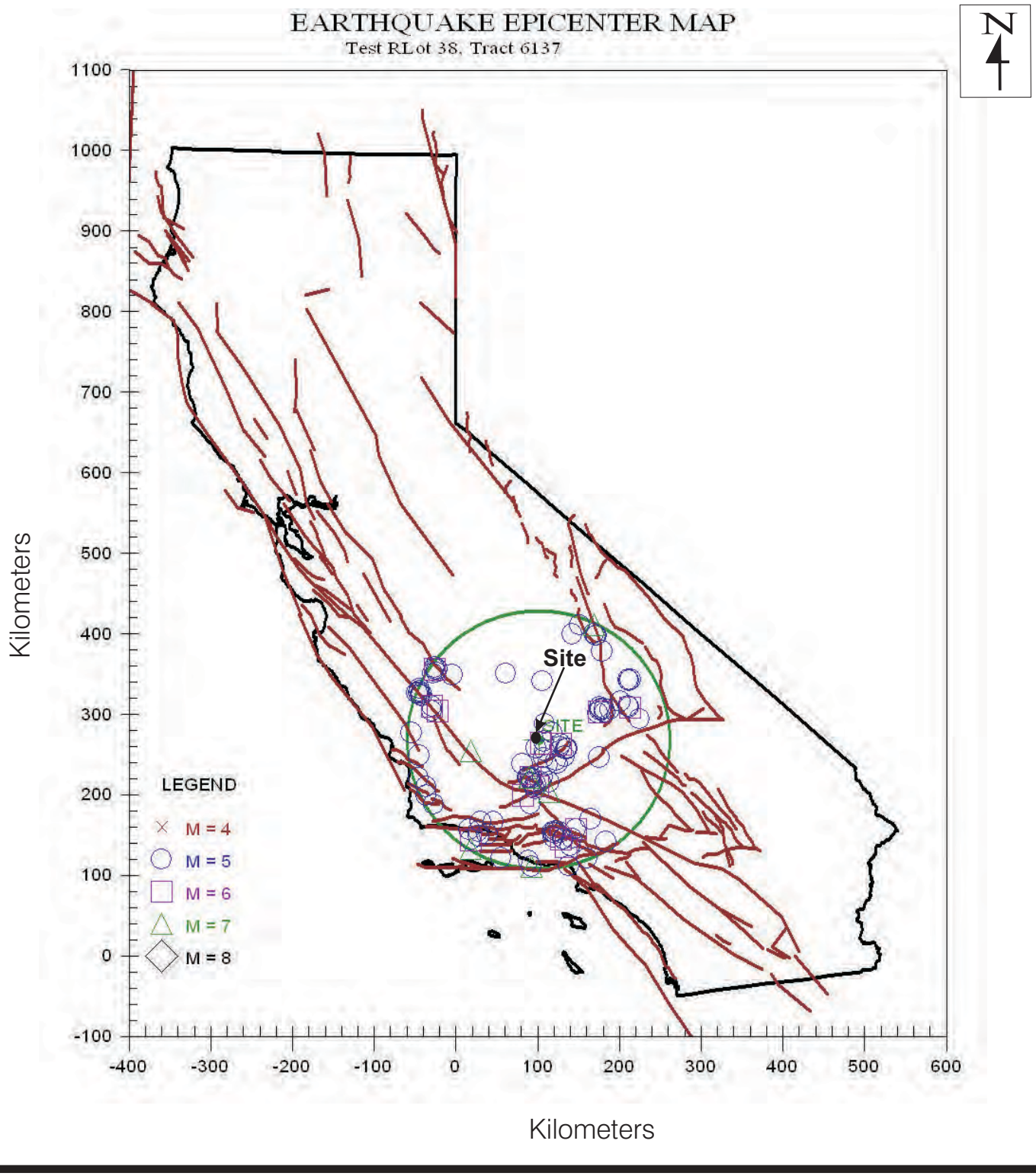
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Alquist-Priolo Special Studies Zone

PLATE
3A



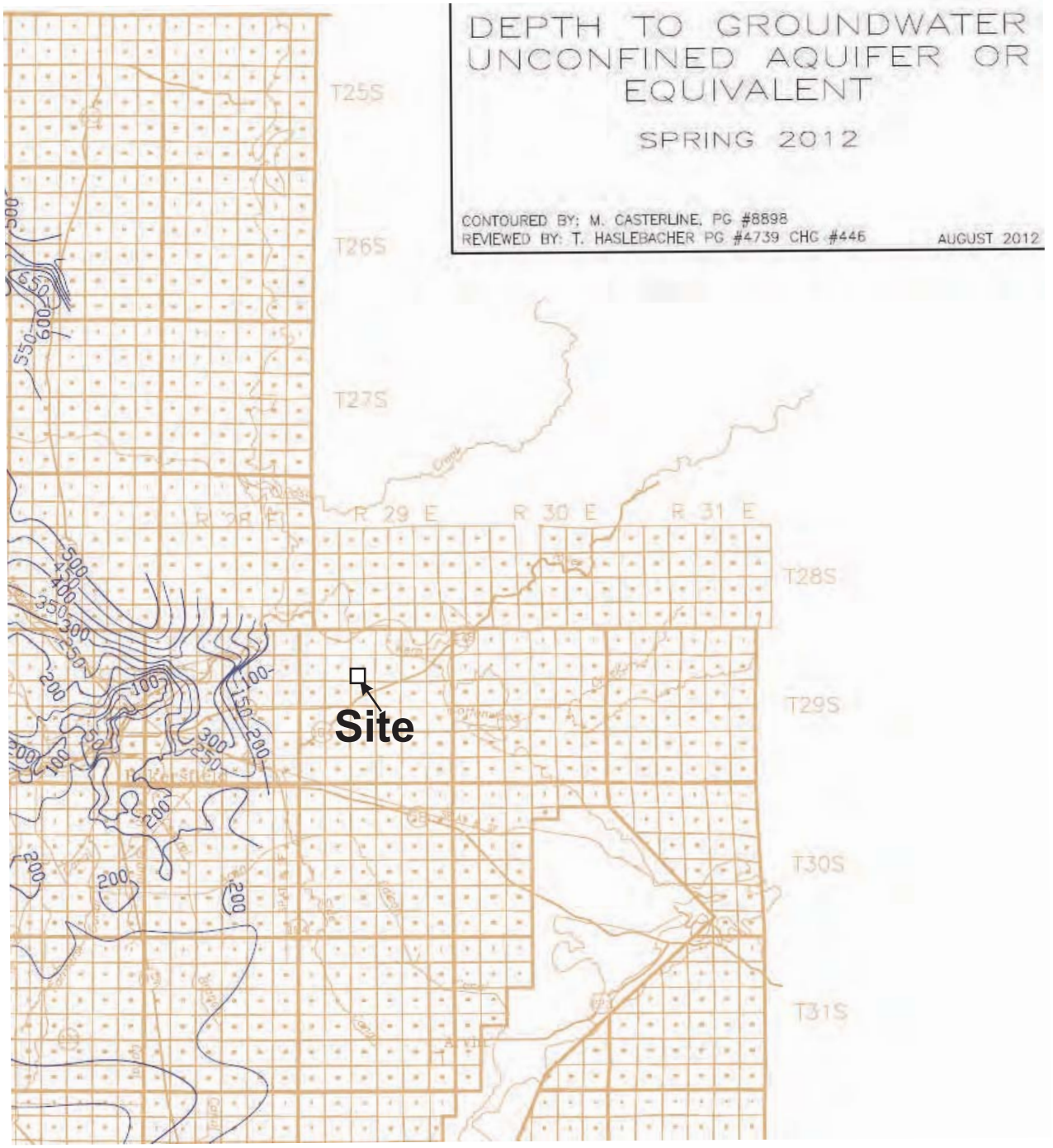
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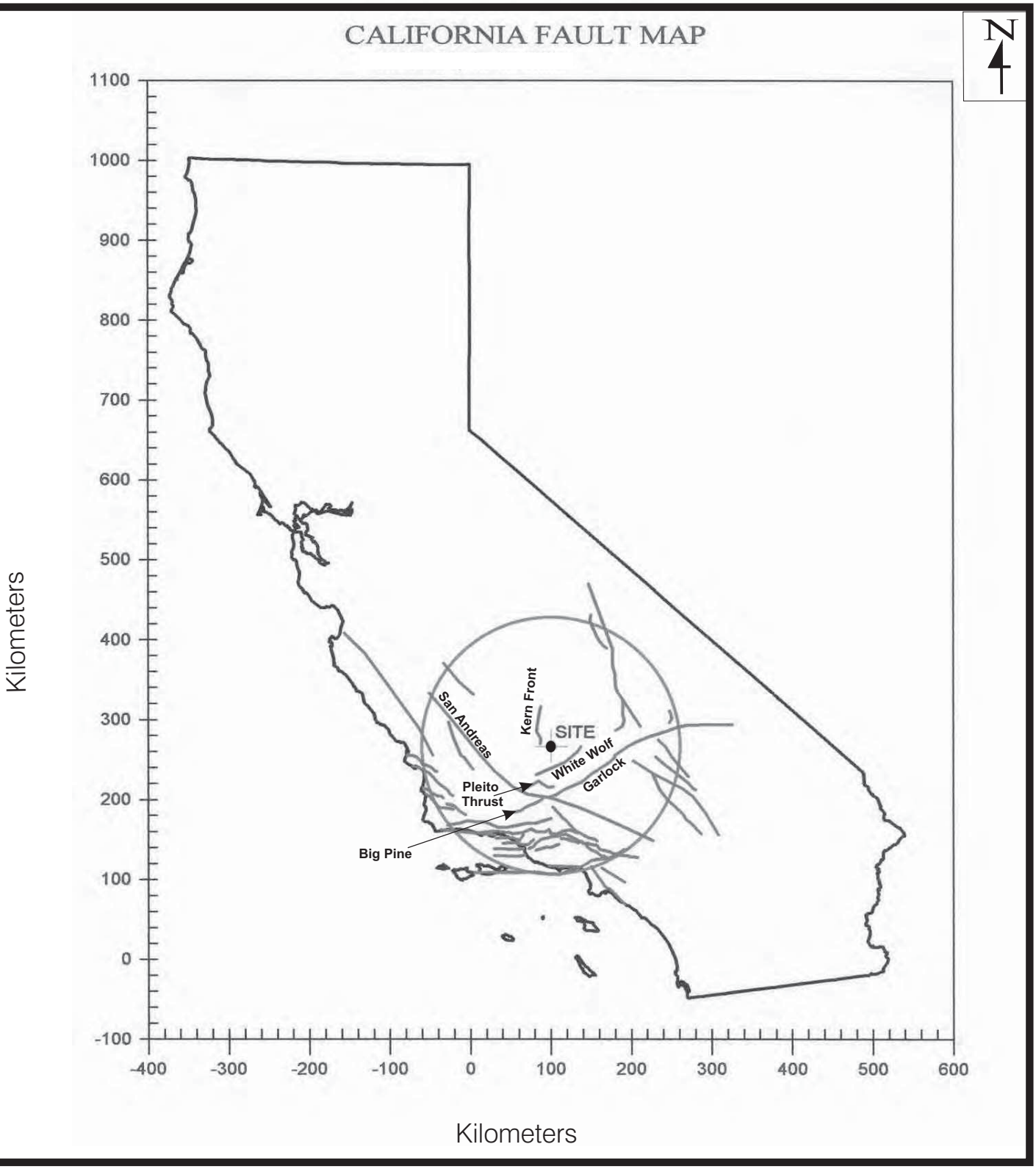
Earthquake Epicenter Map

PLATE
3B

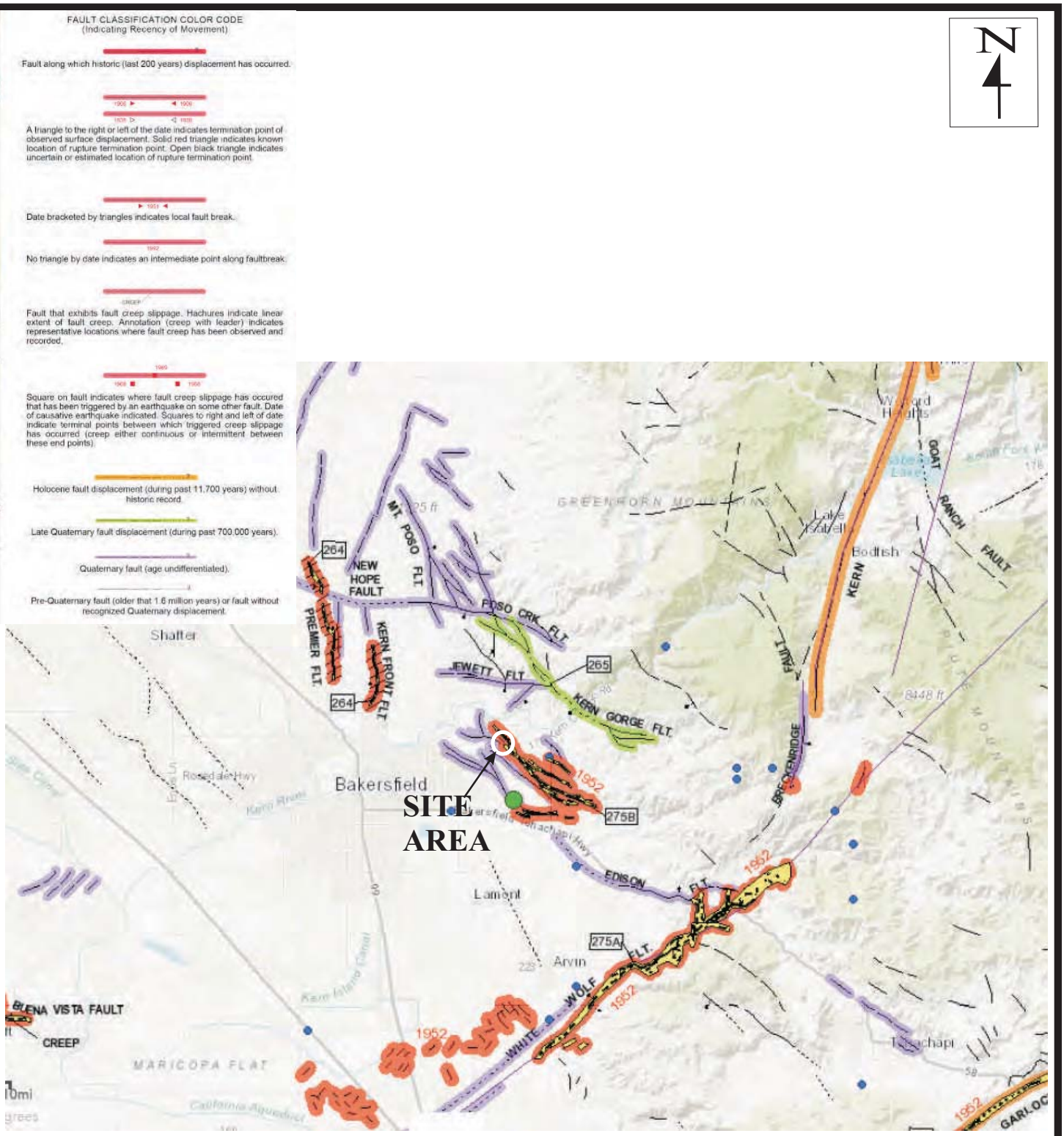


Source: Kern County Water Agency, Water Supply Report 2011

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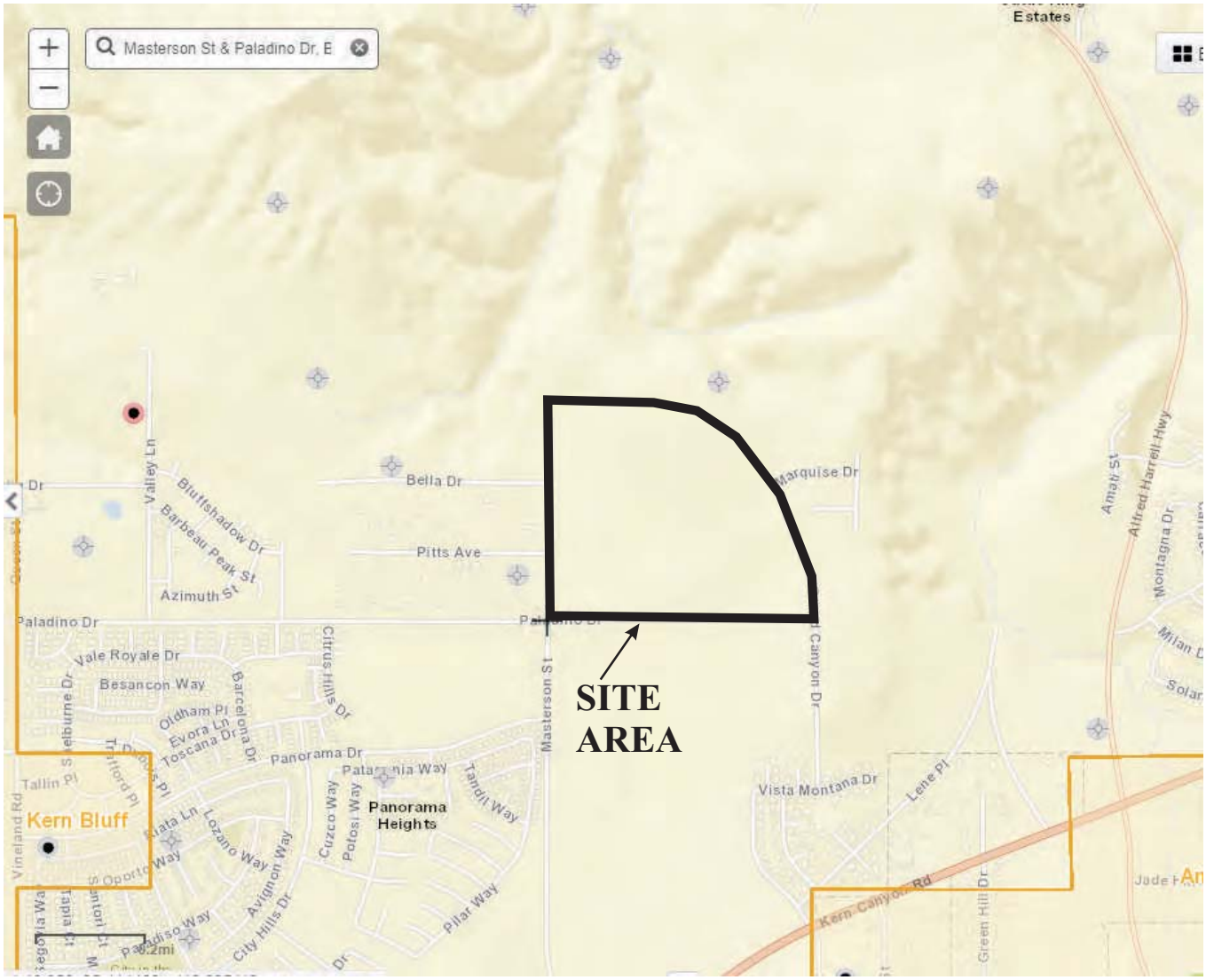


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DATE: 9/19 PROJECT: #17222	Fault Location Map	

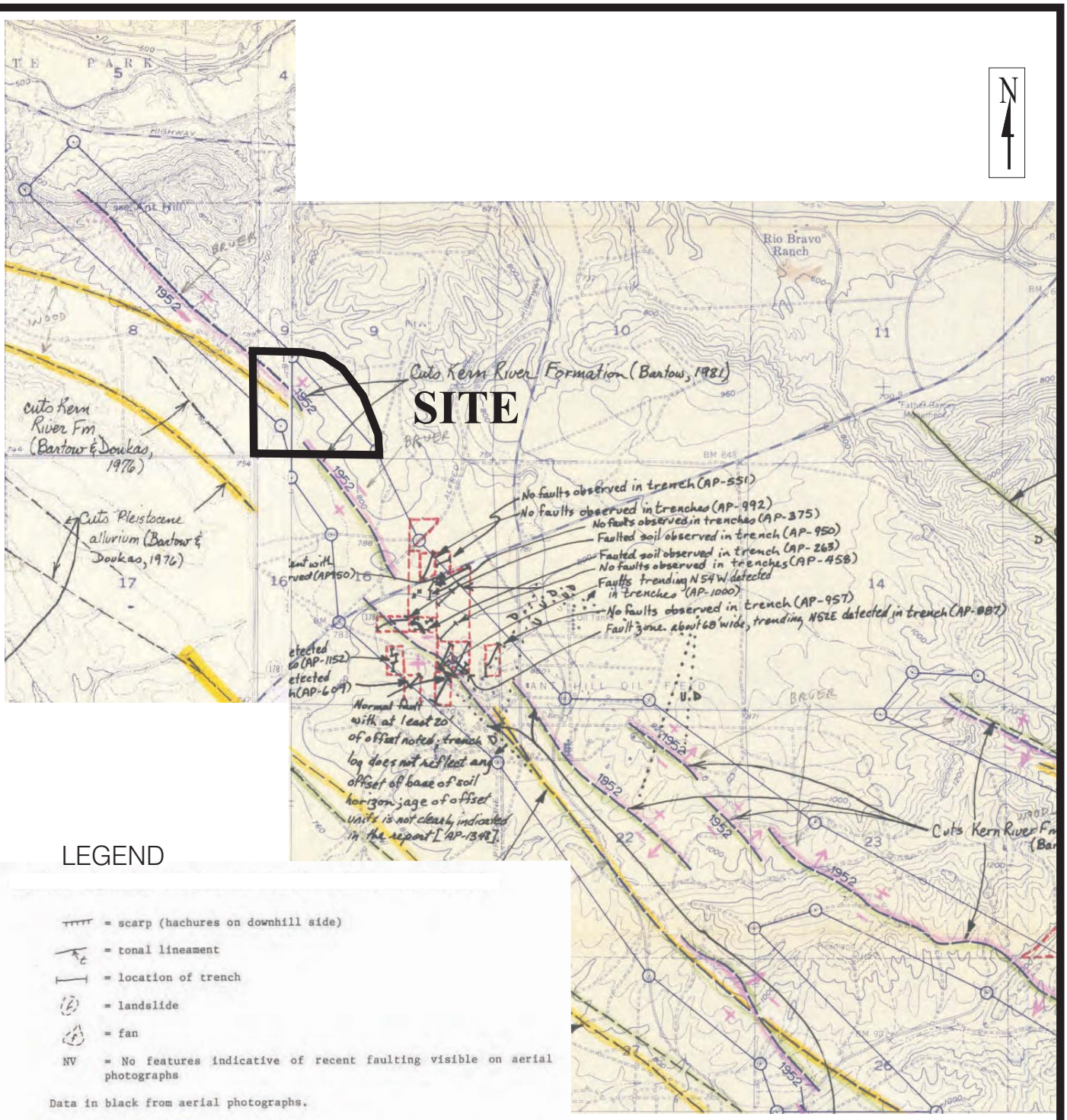


SOURCE: Fault Activity Map of California 2010, CDMG

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LEGEND

= scarp (hachures on downhill side)

= tonal lineament

= location of trench

= landslide

= fan

NV = No features indicative of recent faulting visible on aerial photographs

Data in black from aerial photographs.

Data in red from field observations.

Yellow highlight indicates those features which were probably produced by recent fault movement.

From FER-145, Smith (1984)

Figures 2A & 2B, FER-145, Aerial Photo & Field Data.
Oil Center & Rio Bravo Ranch Quadrangles

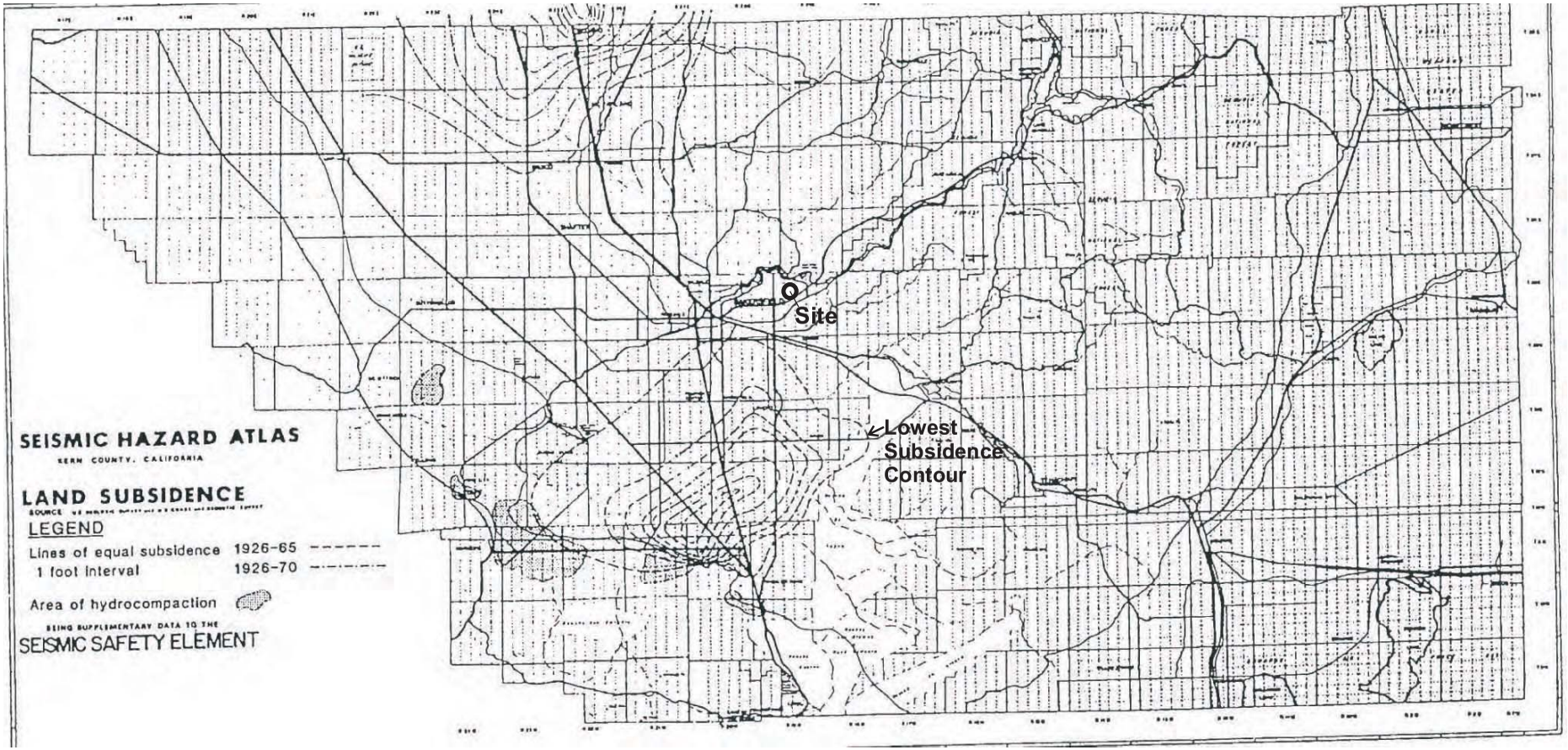
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Historical Geologic Maps

PLATE
6A



Regional Land Subsidence Map

From City of Bakersfield Safety Element (Figure 15)

Plate 7

APPENDIX A

Deterministic Site Parameters-EQFault data, EQSEARCHWIN data, OSHPD Seismic Design Summary Report and USGS Unified Hazard Tool results.

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*        *
*  E Q F A U L T  *
*        *
*  Version 3.00  *
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DETERMINISTIC ESTIMATION OF
PEAK ACCELERATION FROM DIGITIZED FAULTS

JOB NUMBER: 17222

DATE: 09-05-2019

JOB NAME: Lot 38, Tract 6137

CALCULATION NAME: Test Run Analysis

FAULT-DATA-FILE NAME: CGSFLTE.DAT

SITE COORDINATES:
SITE LATITUDE: 35.4149
SITE LONGITUDE: 118.8753

SEARCH RADIUS: 100 mi

ATTENUATION RELATION: 3) Boore et al. (1997) Horiz. - NEHRP D (250)
UNCERTAINTY (M=Median, S=Sigma): M Number of Sigmas: 0.0
DISTANCE MEASURE: cd_2drp
SCOND: 0
Basement Depth: 5.00 km Campbell SSR: Campbell SHR:
COMPUTE PEAK HORIZONTAL ACCELERATION

FAULT-DATA FILE USED: CGSFLTE.DAT

MINIMUM DEPTH VALUE (km): 0.0

EQFAULT SUMMARY

DETERMINISTIC SITE PARAMETERS

ABBREVIATED FAULT NAME	APPROXIMATE DISTANCE mi (km)	ESTIMATED MAX. EARTHQUAKE EVENT MAXIMUM EARTHQUAKE MAG.(Mw)	PEAK SITE ACCEL. g	EST. SITE INTENSITY MOD.MERC.
Kern Front	9.3(15.0)	6.3	0.228	IX
WHITE WOLF	16.3(26.2)	7.3	0.259	IX
PLEITO THRUST	29.8(48.0)	7.0	0.140	VIII
GARLOCK (West)	35.4(56.9)	7.3	0.118	VII
SAN ANDREAS - Whole M-1a	41.2(66.3)	8.0	0.152	VIII
SAN ANDREAS - Carrizo M-1c-2	41.2(66.3)	7.4	0.110	VII
SAN ANDREAS - 1857 Rupture M-2a	41.2(66.3)	7.8	0.136	VIII
SAN ANDREAS - Cho-Moj M-1b-1	41.2(66.3)	7.8	0.136	VIII
BIG PINE	41.6(67.0)	6.9	0.084	VII
SAN GABRIEL	48.5(78.0)	7.2	0.088	VII
GARLOCK (East)	48.8(78.5)	7.5	0.102	VII
So. SIERRA NEVADA	50.8(81.7)	7.3	0.108	VII
SAN ANDREAS - Mojave M-1c-3	53.6(86.3)	7.4	0.090	VII
SAN ANDREAS - Cholame M-1c-1	56.2(90.5)	7.3	0.082	VII
SANTA YNEZ (East)	57.2(92.1)	7.1	0.073	VII
SAN CAYETANO	61.8(99.4)	7.0	0.080	VII
SAN JUAN	63.9(102.8)	7.1	0.067	VI
LENWOOD-LOCKHART-OLD WOMAN SPRGS	64.1(103.2)	7.5	0.083	VII
M.RIDGE-ARROYO PARIDA-SANTA ANA	64.3(103.5)	7.2	0.086	VII
LITTLE LAKE	65.7(105.7)	6.9	0.059	VI
HOLSER	67.6(108.8)	6.5	0.057	VI
SANTA SUSANA	67.7(109.0)	6.7	0.063	VI
OAK RIDGE (Onshore)	70.3(113.1)	7.0	0.072	VI
NORTHRIDGE (E. Oak Ridge)	70.4(113.3)	7.0	0.072	VI
NORTH CHANNEL SLOPE	71.8(115.5)	7.4	0.087	VII
SIERRA MADRE (San Fernando)	72.3(116.3)	6.7	0.060	VI
RED MOUNTAIN	72.3(116.4)	7.0	0.070	VI
SIMI-SANTA ROSA	72.6(116.8)	7.0	0.070	VI
GREAT VALLEY 14	72.8(117.2)	6.4	0.051	VI
OWENS VALLEY	73.4(118.2)	7.6	0.078	VII
VENTURA - PITAS POINT	74.1(119.2)	6.9	0.066	VI
SANTA YNEZ (West)	75.1(120.9)	7.1	0.059	VI
OAK RIDGE MID-CHANNEL STRUCTURE	78.4(126.2)	6.6	0.054	VI
VERDUGO	79.2(127.4)	6.9	0.062	VI
GRAVEL HILLS - HARPER LAKE	80.8(130.0)	7.1	0.056	VI
SAN LUIS RANGE (S. Margin)	81.0(130.3)	7.2	0.072	VI
HELENDALE - S. LOCKHARDT	81.2(130.6)	7.3	0.062	VI
SIERRA MADRE	81.6(131.4)	7.2	0.071	VI
CHANNEL IS. THRUST (Eastern)	82.1(132.1)	7.5	0.083	VII
BLACKWATER	82.4(132.6)	7.1	0.055	VI

DETERMINISTIC SITE PARAMETERS

ABBREVIATED FAULT NAME	APPROXIMATE DISTANCE mi (km)	ESTIMATED MAX. EARTHQUAKE EVENT: MAXIMUM EARTHQUAKE MAG.(Mw)	ESTIMATED MAX. EARTHQUAKE EVENT: PEAK SITE ACCEL. g	ESTIMATED MAX. EARTHQUAKE EVENT: EST. SITE INTENSITY MOD.MERC.
SAN ANDREAS - Parkfield	83.5(134.4)	6.5	0.040	V
LOS ALAMOS-W. BASELINE	86.1(138.6)	6.9	0.058	VI
INDEPENDENCE	87.1(140.1)	7.1	0.064	VI
ANACAPA-DUME	87.4(140.7)	7.5	0.079	VII
GREAT VALLEY 13	87.6(140.9)	6.5	0.047	VI
OAK RIDGE(Blind Thrust Offshore)	88.4(142.3)	7.1	0.063	VI
TANK CANYON	89.5(144.1)	6.4	0.043	VI
LIONS HEAD	90.1(145.0)	6.6	0.048	VI
CLAMSHELL-SAWPIT	90.3(145.3)	6.5	0.046	VI
LOS OSOS	91.3(147.0)	7.0	0.059	VI
MALIBU COAST	92.1(148.2)	6.7	0.050	VI
HOLLYWOOD	92.3(148.5)	6.4	0.042	VI
RINCONADA	92.3(148.6)	7.5	0.062	VI
UPPER ELYSIAN PARK BLIND THRUST	93.3(150.2)	6.4	0.042	VI
CASMALIA (Orcutt Frontal Fault)	93.6(150.7)	6.5	0.044	VI
PUENTE HILLS BLIND THRUST	94.1(151.5)	7.1	0.060	VI
RAYMOND	94.6(152.3)	6.5	0.044	VI
SANTA MONICA	95.1(153.1)	6.6	0.046	VI
NEWPORT-INGLEWOOD (L.A.Basin)	98.6(158.7)	7.1	0.048	VI

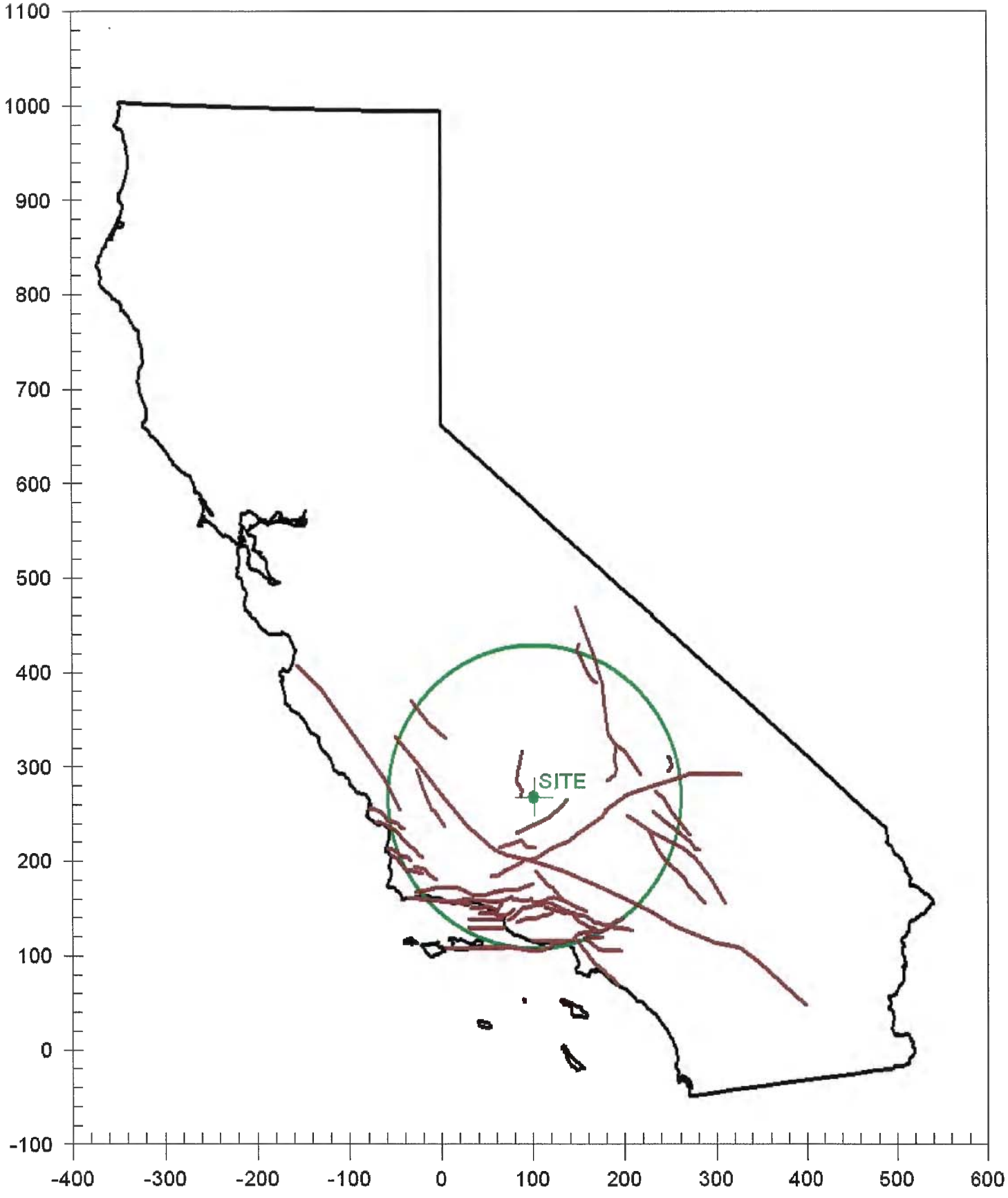
-END OF SEARCH- 59 FAULTS FOUND WITHIN THE SPECIFIED SEARCH RADIUS.

THE Kern Front FAULT IS CLOSEST TO THE SITE.
IT IS ABOUT 9.3 MILES (15.0 km) AWAY.

LARGEST MAXIMUM-EARTHQUAKE SITE ACCELERATION: 0.2588 g

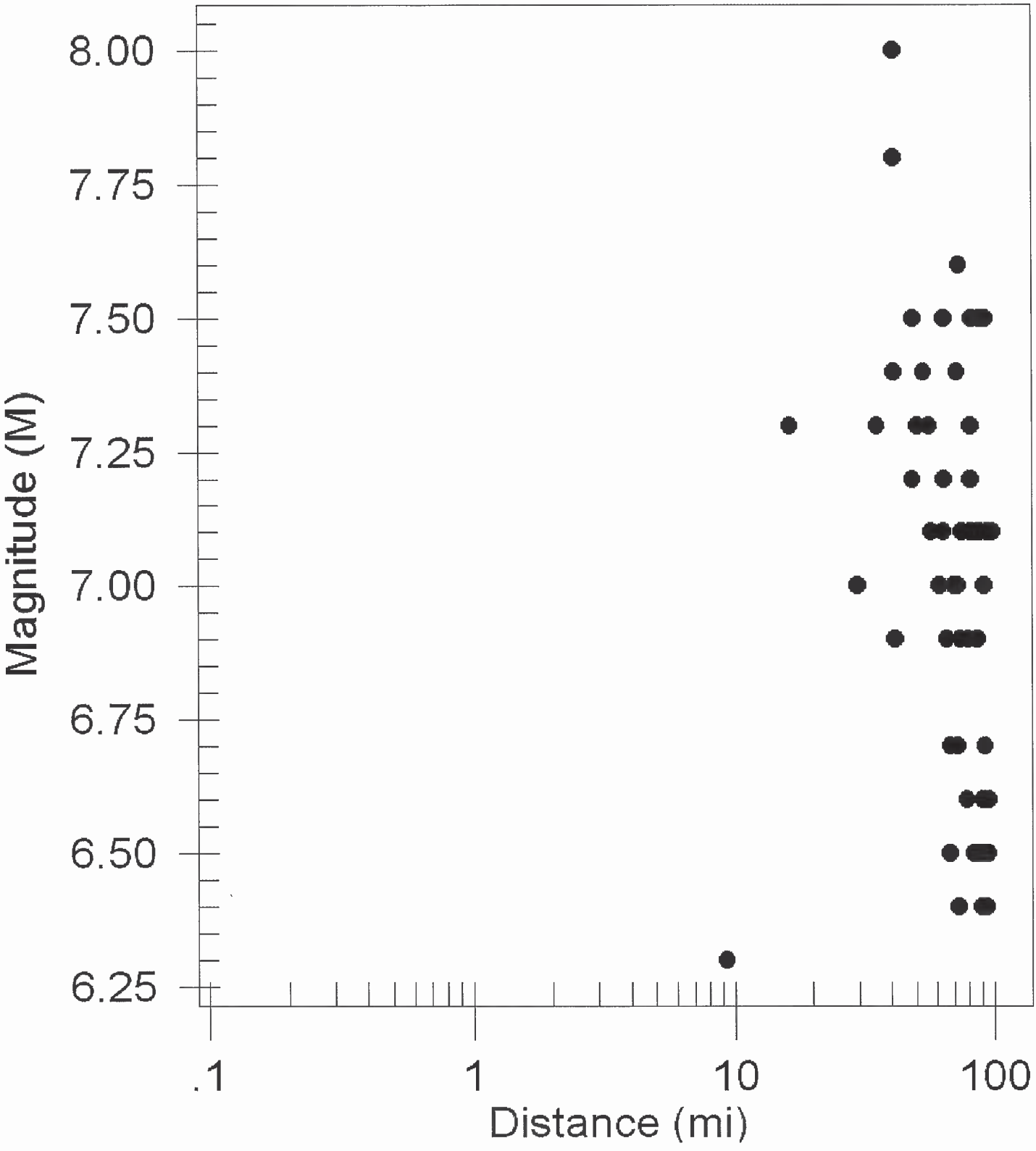
CALIFORNIA FAULT MAP

Lot 38, Tract 6137



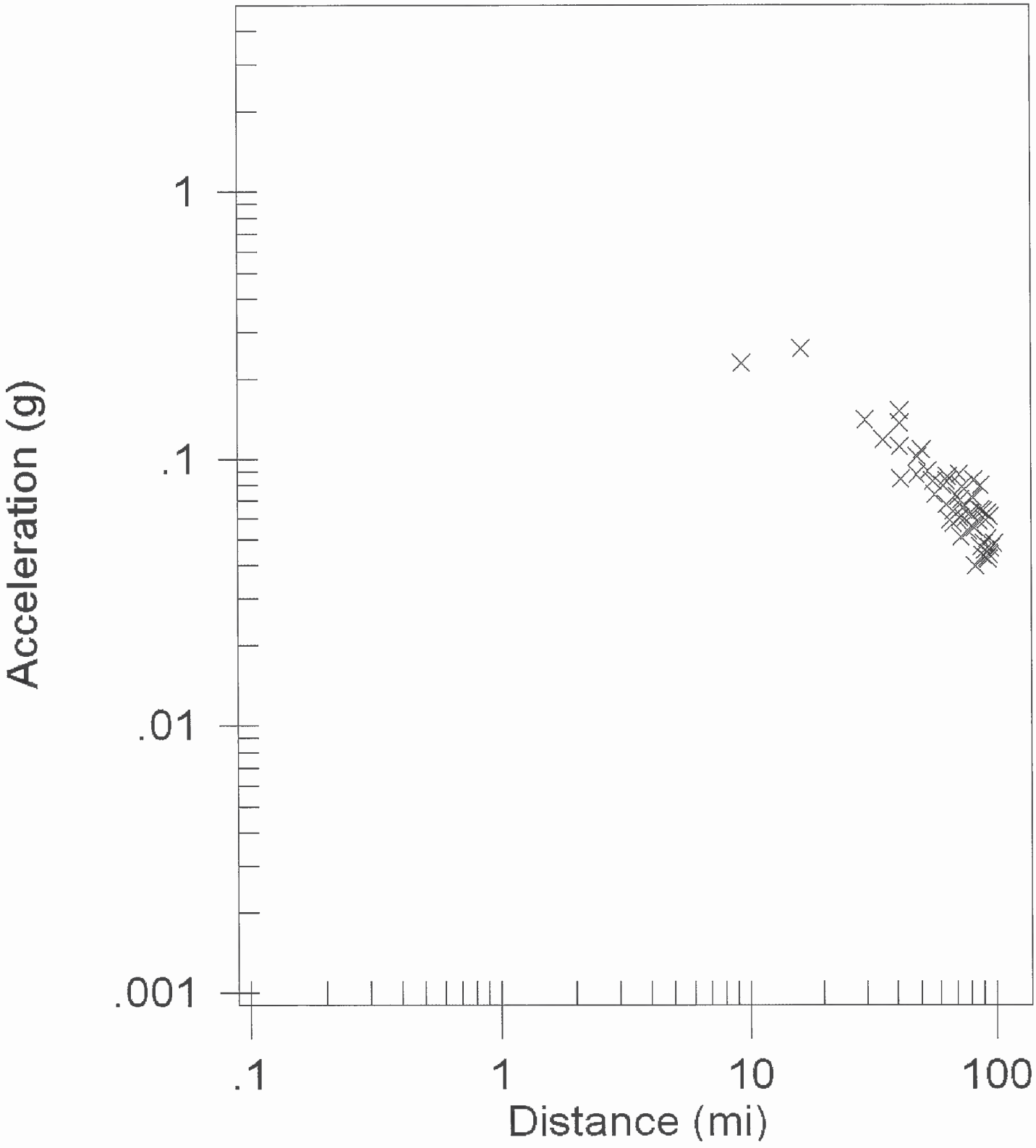
EARTHQUAKE MAGNITUDES & DISTANCES

Lot 38, Tract 6137



MAXIMUM EARTHQUAKES

Lot 38, Tract 6137



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*    E Q S E A R C H     *
*                        *
*     Version 3.00       *
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ESTIMATION OF
PEAK ACCELERATION FROM
CALIFORNIA EARTHQUAKE CATALOGS

JOB NUMBER: 17222

DATE: 09-05-2019

JOB NAME: Test RLot 38, Tract 6137

EARTHQUAKE-CATALOG-FILE NAME: ALLQUAKE.DAT

SITE COORDINATES:
SITE LATITUDE: 35.4149
SITE LONGITUDE: 118.8753

SEARCH DATES:
START DATE: 1800
END DATE: 2010

SEARCH RADIUS:
100.0 mi
160.9 km

ATTENUATION RELATION: 3) Boore et al. (1997) Horiz. - NEHRP D (250)
UNCERTAINTY (M=Median, S=Sigma): M Number of Sigmas: 0.0
ASSUMED SOURCE TYPE: DS [SS=Strike-slip, DS=Reverse-slip, BT=Blind-thrust]
SCOND: 0 Depth Source: A
Basement Depth: 5.00 km Campbell SSR: Campbell SHR:
COMPUTE PEAK HORIZONTAL ACCELERATION

MINIMUM DEPTH VALUE (km): 0.0

EARTHQUAKE SEARCH RESULTS

FILE CODE	LAT. NORTH	LONG. WEST	DATE	TIME (UTC) H M Sec	DEPTH (km)	QUAKE MAG.	SITE ACC. g	SITE MM INT.	APPROX. DISTANCE mi [km]
DMG	35.3830	118.8500	07/29/1952	7 347.0	0.0	6.10	0.391	X	2.6(4.2)
DMG	35.4000	118.8170	07/29/1952	8 146.0	0.0	5.10	0.211	VIII	3.4(5.5)
DMG	35.3330	118.9170	08/22/1952	224124.0	0.0	5.80	0.230	IX	6.1(9.8)
DMG	35.3000	118.8000	12/23/1905	2223 0.0	0.0	5.00	0.118	VII	9.0(14.5)
DMG	35.5000	118.7000	01/06/1905	1430 0.0	0.0	5.00	0.099	VII	11.5(18.5)
DMG	35.6000	118.8000	06/30/1926	1331 0.0	0.0	5.00	0.089	VII	13.5(21.7)
DMG	35.2170	118.8170	07/23/1952	1317 5.0	0.0	5.70	0.124	VII	14.0(22.6)
DMG	35.3330	118.6000	07/31/1952	12 9 9.0	0.0	5.80	0.116	VII	16.5(26.5)
DMG	35.3670	118.5830	07/23/1952	03832.0	0.0	6.10	0.134	VIII	16.8(27.0)
DMG	35.3670	118.5830	07/23/1952	31923.0	0.0	5.00	0.075	VII	16.8(27.0)
DMG	35.1330	118.7670	07/21/1952	194122.0	0.0	5.50	0.085	VII	20.4(32.8)
DMG	35.1830	118.6500	07/21/1952	151358.0	0.0	5.10	0.068	VI	20.4(32.9)
DMG	35.3150	118.5160	07/25/1952	194323.7	11.2	5.70	0.091	VII	21.4(34.4)
DMG	35.3110	118.4990	07/25/1952	1313 8.2	2.8	5.00	0.061	VI	22.4(36.0)
GSP	35.1490	119.1040	05/28/1993	044740.6	21.0	5.20	0.067	VI	22.4(36.1)
DMG	35.3170	118.4940	07/25/1952	19 944.6	5.5	5.70	0.087	VII	22.5(36.2)
DMG	35.1500	118.6330	01/27/1954	141948.0	0.0	5.00	0.060	VI	22.8(36.7)
DMG	35.2330	118.5330	07/21/1952	174244.0	0.0	5.10	0.063	VI	23.0(37.0)
DMG	35.0000	118.8330	07/23/1952	181351.0	0.0	5.20	0.056	VI	28.7(46.3)
DMG	35.0000	118.8330	07/23/1952	75319.0	0.0	5.40	0.062	VI	28.7(46.3)
DMG	35.0000	119.0000	02/16/1919	1557 0.0	0.0	5.00	0.049	VI	29.5(47.5)
DMG	35.0000	119.0000	07/21/1952	12 531.0	0.0	6.40	0.103	VII	29.5(47.5)
DMG	35.0000	119.0170	01/12/1954	233349.0	0.0	5.90	0.078	VII	29.7(47.9)
DMG	35.0000	119.0170	07/21/1952	115214.0	0.0	7.70	0.202	VIII	29.7(47.9)
DMG	35.0000	119.0330	07/21/1952	12 2 0.0	0.0	5.60	0.066	VI	30.0(48.3)
DMG	34.9830	118.9830	05/23/1954	235243.0	0.0	5.10	0.051	VI	30.4(49.0)
DMG	34.9500	118.8670	07/21/1952	121936.0	0.0	5.30	0.054	VI	32.1(51.7)
DMG	34.9410	118.9870	11/15/1961	53855.5	10.7	5.00	0.045	VI	33.3(53.6)
PAS	34.9430	118.7430	06/10/1988	23 643.0	6.8	5.40	0.055	VI	33.4(53.8)
DMG	34.9320	118.9760	03/01/1963	02557.9	13.9	5.00	0.044	VI	33.8(54.4)
T-A	34.9200	118.9200	01/20/1857	0 0 0.0	0.0	5.00	0.044	VI	34.3(55.1)
T-A	34.9200	118.9200	05/23/1857	0 0 0.0	0.0	5.00	0.044	VI	34.3(55.1)
DMG	34.9000	118.9000	10/23/1916	244 0.0	0.0	6.00	0.072	VI	35.6(57.2)
DMG	34.9000	118.9500	08/01/1952	13 430.0	0.0	5.10	0.045	VI	35.8(57.6)
DMG	34.8670	118.9330	09/21/1941	1953 7.2	0.0	5.20	0.045	VI	38.0(61.1)
T-A	34.8300	118.7500	11/27/1852	0 0 0.0	0.0	7.00	0.109	VII	41.0(66.0)
DMG	34.8000	119.1000	09/05/1883	1230 0.0	0.0	6.00	0.061	VI	44.3(71.3)
DMG	36.0800	118.8200	05/29/1915	646 0.0	0.0	5.00	0.035	V	46.0(74.1)
GSP	35.2100	118.0660	07/11/1992	181416.2	10.0	5.70	0.049	VI	47.7(76.8)
DMG	35.7150	118.0740	03/15/1946	14 035.4	0.0	5.30	0.039	V	49.5(79.7)
DMG	34.7000	119.0000	10/23/1916	254 0.0	0.0	5.50	0.043	VI	49.9(80.2)
DMG	35.7250	118.0550	03/15/1946	134935.9	22.0	6.30	0.064	VI	50.8(81.7)
DMG	35.7450	118.0390	03/16/1946	94617.9	0.0	5.10	0.033	V	52.2(84.0)
DMG	35.3000	119.8000	01/09/1857	16 0 0.0	0.0	7.90	0.145	VIII	52.7(84.8)
DMG	35.7780	118.0490	01/28/1961	81246.2	5.5	5.30	0.037	V	52.7(84.9)
DMG	35.7510	118.0290	03/15/1946	215433.4	0.0	5.20	0.035	V	52.9(85.1)
DMG	35.7140	117.9770	03/15/1946	191853.6	0.0	5.40	0.038	V	54.5(87.7)
DMG	35.7530	117.9860	03/15/1946	1321 0.9	0.0	5.20	0.034	V	55.1(88.7)
T-A	36.1700	119.3200	07/25/1868	230 0.0	0.0	5.00	0.029	V	57.8(93.0)
DMG	35.7470	117.9080	03/18/1946	155042.6	4.4	5.30	0.034	V	59.0(94.9)
DMG	35.8310	117.7610	10/19/1961	5 943.9	-2.0	5.20	0.028	V	68.8(110.7)
GSP	34.3940	118.6690	06/26/1995	084028.9	13.0	5.00	0.025	V	71.4(115.0)
GSB	34.3790	118.7110	01/19/1994	210928.6	14.0	5.50	0.032	V	72.1(116.1)

EARTHQUAKE SEARCH RESULTS

FILE CODE	LAT. NORTH	LONG. WEST	DATE	TIME (UTC) H M Sec	DEPTH (km)	QUAKE MAG.	SITE ACC. g	SITE MM INT.	APPROX. DISTANCE mi [km]
GSP	34.3770	118.6980	01/18/1994	004308.9	11.0	5.20	0.027	V	72.4(116.4)
DMG	34.5000	119.5000	06/29/1926	2321 0.0	0.0	5.50	0.032	V	72.4(116.5)
DMG	34.5000	119.5000	08/05/1930	1125 0.0	0.0	5.00	0.025	V	72.4(116.5)
GSP	35.7760	117.6620	08/17/1995	223959.0	5.0	5.40	0.030	V	72.5(116.7)
DMG	34.5190	118.1980	08/23/1952	10 9 7.1	13.1	5.00	0.024	V	72.8(117.1)
GSP	35.7660	117.6490	01/07/1996	143253.1	5.0	5.20	0.027	V	73.0(117.5)
GSP	34.3780	118.6180	01/19/1994	211144.9	11.0	5.10	0.026	V	73.1(117.6)
GSP	34.3690	118.6720	04/26/1997	103730.7	16.0	5.10	0.026	V	73.1(117.7)
GSB	35.7610	117.6390	09/20/1995	232736.3	5.0	6.10	0.043	VI	73.4(118.1)
DMG	34.4110	118.4010	02/09/1971	141028.0	8.0	5.30	0.028	V	74.3(119.6)
DMG	34.4110	118.4010	02/09/1971	14 1 8.0	8.0	5.80	0.037	V	74.3(119.6)
DMG	34.4110	118.4010	02/09/1971	14 041.8	8.4	6.40	0.050	VI	74.3(119.6)
DMG	34.4110	118.4010	02/09/1971	14 244.0	8.0	5.80	0.037	V	74.3(119.6)
GSP	34.3260	118.6980	01/17/1994	233330.7	9.0	5.60	0.032	V	75.8(122.1)
T-A	34.5000	119.6700	06/01/1893	12 0 0.0	0.0	5.00	0.023	IV	77.5(124.8)
DMG	35.6310	117.5130	09/17/1938	1423 4.1	-2.0	5.00	0.023	IV	78.0(125.5)
GSP	34.3050	118.5790	01/29/1994	112036.0	1.0	5.10	0.024	V	78.4(126.2)
DMG	34.3000	118.6000	04/04/1893	1940 0.0	0.0	6.00	0.039	V	78.5(126.4)
GSB	34.3010	118.5650	01/17/1994	204602.4	9.0	5.20	0.025	V	78.9(127.0)
DMG	34.3080	118.4540	02/09/1971	144346.7	6.2	5.20	0.025	V	80.1(128.8)
DMG	35.7500	120.2500	03/10/1922	112120.0	0.0	6.50	0.050	VI	80.6(129.7)
GSP	36.0750	117.6500	11/27/1996	201724.1	1.0	5.30	0.026	V	82.4(132.6)
GSP	36.0670	117.6380	03/06/1998	054740.3	1.0	5.20	0.025	V	82.7(133.0)
DMG	34.3670	119.5830	07/01/1941	75054.8	0.0	5.90	0.036	V	82.7(133.1)
PAS	36.1510	120.0490	08/04/1985	12 156.0	6.0	5.80	0.034	V	83.1(133.7)
DMG	36.4000	118.0000	07/05/1871	21 6 0.0	0.0	5.20	0.024	V	83.8(134.8)
GSP	36.0760	117.6180	03/07/1998	003646.8	1.0	5.00	0.022	IV	83.9(135.1)
MGI	34.4000	119.7000	03/25/1806	8 0 0.0	0.0	5.00	0.022	IV	84.2(135.5)
GSP	34.2310	118.4750	03/20/1994	212012.3	13.0	5.30	0.025	V	84.8(136.5)
DMG	35.7500	120.3300	08/18/1922	512 0.0	0.0	5.00	0.022	IV	84.9(136.6)
GSP	34.2130	118.5370	01/17/1994	123055.4	18.0	6.70	0.053	VI	85.2(137.1)
DMG	35.8000	120.3300	12/28/1939	121538.0	0.0	5.00	0.021	IV	85.9(138.2)
DMG	35.8000	120.3300	06/08/1934	447 0.0	0.0	6.00	0.036	V	85.9(138.2)
DMG	35.8000	120.3300	06/08/1934	430 0.0	0.0	5.00	0.021	IV	85.9(138.2)
DMG	35.8000	120.3300	06/05/1934	2148 0.0	0.0	5.00	0.021	IV	85.9(138.2)
MGI	36.6000	118.4000	09/04/1868	0 0 0.0	0.0	5.00	0.021	IV	86.0(138.4)
T-A	34.4200	119.8200	00/00/1862	0 0 0.0	0.0	5.70	0.031	V	87.1(140.1)
PAS	34.3470	119.6960	08/13/1978	225453.4	12.8	5.10	0.022	IV	87.2(140.3)
MGI	36.5800	118.0800	07/06/1917	11 1 0.0	0.0	5.70	0.029	V	91.9(147.9)
T-A	36.5800	118.0700	04/18/1872	0 0 0.0	0.0	5.00	0.020	IV	92.2(148.3)
T-A	36.5800	118.0700	08/13/1882	0 0 0.0	0.0	5.00	0.020	IV	92.2(148.3)
MGI	35.2500	120.5000	07/10/1917	043 0.0	0.0	5.30	0.024	IV	92.2(148.4)
MGI	35.2500	120.5000	07/09/1917	2238 0.0	0.0	5.30	0.024	IV	92.2(148.4)
MGI	35.2500	120.5000	07/09/1917	2222 0.0	0.0	5.00	0.020	IV	92.2(148.4)
MGI	35.2500	120.5000	07/10/1917	045 0.0	0.0	5.30	0.024	IV	92.2(148.4)
MGI	36.6000	118.1000	05/17/1872	21 0 0.0	0.0	5.00	0.020	IV	92.6(149.0)
MGI	34.3000	119.8000	07/03/1925	1821 0.0	0.0	5.30	0.024	IV	93.1(149.8)
MGI	34.3000	119.8000	07/03/1925	1638 0.0	0.0	5.30	0.024	IV	93.1(149.8)
DMG	34.3000	119.8000	06/29/1925	144216.0	0.0	6.25	0.039	V	93.1(149.8)
MGI	34.9000	120.4000	03/29/1928	625 0.0	0.0	5.30	0.024	IV	93.1(149.9)
DMG	34.0650	119.0350	02/21/1973	144557.3	8.0	5.90	0.032	V	93.6(150.7)
GSP	34.2620	118.0020	06/28/1991	144354.5	11.0	5.40	0.025	V	93.7(150.8)
PAS	36.1820	120.2680	02/14/1987	72650.8	6.0	5.10	0.021	IV	94.3(151.7)

EARTHQUAKE SEARCH RESULTS

FILE CODE	LAT. NORTH	LONG. WEST	DATE	TIME (UTC) H M Sec	DEPTH (km)	QUAKE MAG.	SITE ACC. g	SITE MM INT.	APPROX. DISTANCE mi [km]
DMG	36.7000	118.3000	08/17/1896	1130 0.0	0.0	5.90	0.032	V	94.4(151.8)
DMG	34.7000	120.3000	01/12/1915	431 0.0	0.0	5.50	0.026	V	94.4(152.0)
DMG	34.7000	120.3000	07/31/1902	920 0.0	0.0	5.50	0.026	V	94.4(152.0)
BRK	36.2200	120.2600	09/09/1983	91614.0	0.0	5.40	0.024	V	95.4(153.5)
DMG	34.1000	119.4000	05/19/1893	035 0.0	0.0	5.50	0.026	V	95.5(153.7)
GSB	35.9170	120.4650	12/20/1994	102747.2	8.0	5.00	0.020	IV	95.7(154.0)
MGI	34.8000	120.4000	12/12/1902	0 0 0.0	0.0	5.70	0.028	V	96.0(154.5)
MGI	35.0000	120.5000	11/19/1927	332 0.0	0.0	5.00	0.020	IV	96.0(154.5)
DMG	36.1700	120.3200	12/27/1926	919 0.0	0.0	5.00	0.020	IV	96.2(154.9)
BRK	36.2200	120.2900	05/02/1983	2346 6.0	0.0	5.60	0.027	V	96.8(155.7)
BRK	36.2200	120.2900	05/02/1983	234239.0	0.0	6.70	0.048	VI	96.8(155.7)
DMG	35.9500	120.4700	11/16/1956	323 9.0	0.0	5.00	0.020	IV	96.8(155.7)
DMG	35.9300	120.4800	12/24/1934	1626 0.0	0.0	5.00	0.020	IV	96.8(155.7)
MGI	35.5000	120.6000	01/01/1830	0 0 0.0	0.0	5.00	0.020	IV	97.2(156.4)
BRK	36.2400	120.2900	05/09/1983	24912.0	0.0	5.20	0.022	IV	97.6(157.0)
DMG	34.0000	119.0000	09/24/1827	4 0 0.0	0.0	7.00	0.056	VI	97.9(157.6)
MGI	34.0000	119.0000	12/14/1912	0 0 0.0	0.0	5.70	0.028	V	97.9(157.6)
DMG	35.9500	120.5000	06/28/1966	42613.4	0.0	5.50	0.025	V	98.3(158.2)
MGI	34.0800	118.2600	07/16/1920	18 8 0.0	0.0	5.00	0.019	IV	98.6(158.6)
DMG	36.7000	118.1000	03/26/1872	1030 0.0	0.0	7.80	0.084	VII	98.7(158.9)
DMG	35.9700	120.5000	06/28/1966	4 856.2	0.0	5.10	0.020	IV	98.8(159.1)
DMG	34.2000	119.8000	12/21/1812	19 0 0.0	0.0	7.00	0.055	VI	98.9(159.2)
DMG	36.0000	120.5000	03/03/1901	745 0.0	0.0	5.50	0.025	V	99.6(160.3)
DMG	36.0000	120.5000	02/02/1881	011 0.0	0.0	5.60	0.026	V	99.6(160.3)
DMG	35.9500	120.5300	06/29/1966	195325.9	0.0	5.00	0.019	IV	99.9(160.7)
MGI	34.0000	118.5000	11/19/1918	2018 0.0	0.0	5.00	0.019	IV	100.0(160.9)
DMG	34.0000	118.5000	08/04/1927	1224 0.0	0.0	5.00	0.019	IV	100.0(160.9)

****

-END OF SEARCH- 133 EARTHQUAKES FOUND WITHIN THE SPECIFIED SEARCH AREA.

TIME PERIOD OF SEARCH: 1800 TO 1999

LENGTH OF SEARCH TIME: 200 years

THE EARTHQUAKE CLOSEST TO THE SITE IS ABOUT 2.6 MILES (4.2 km) AWAY.

LARGEST EARTHQUAKE MAGNITUDE FOUND IN THE SEARCH RADIUS: 7.9

LARGEST EARTHQUAKE SITE ACCELERATION FROM THIS SEARCH: 0.391 g

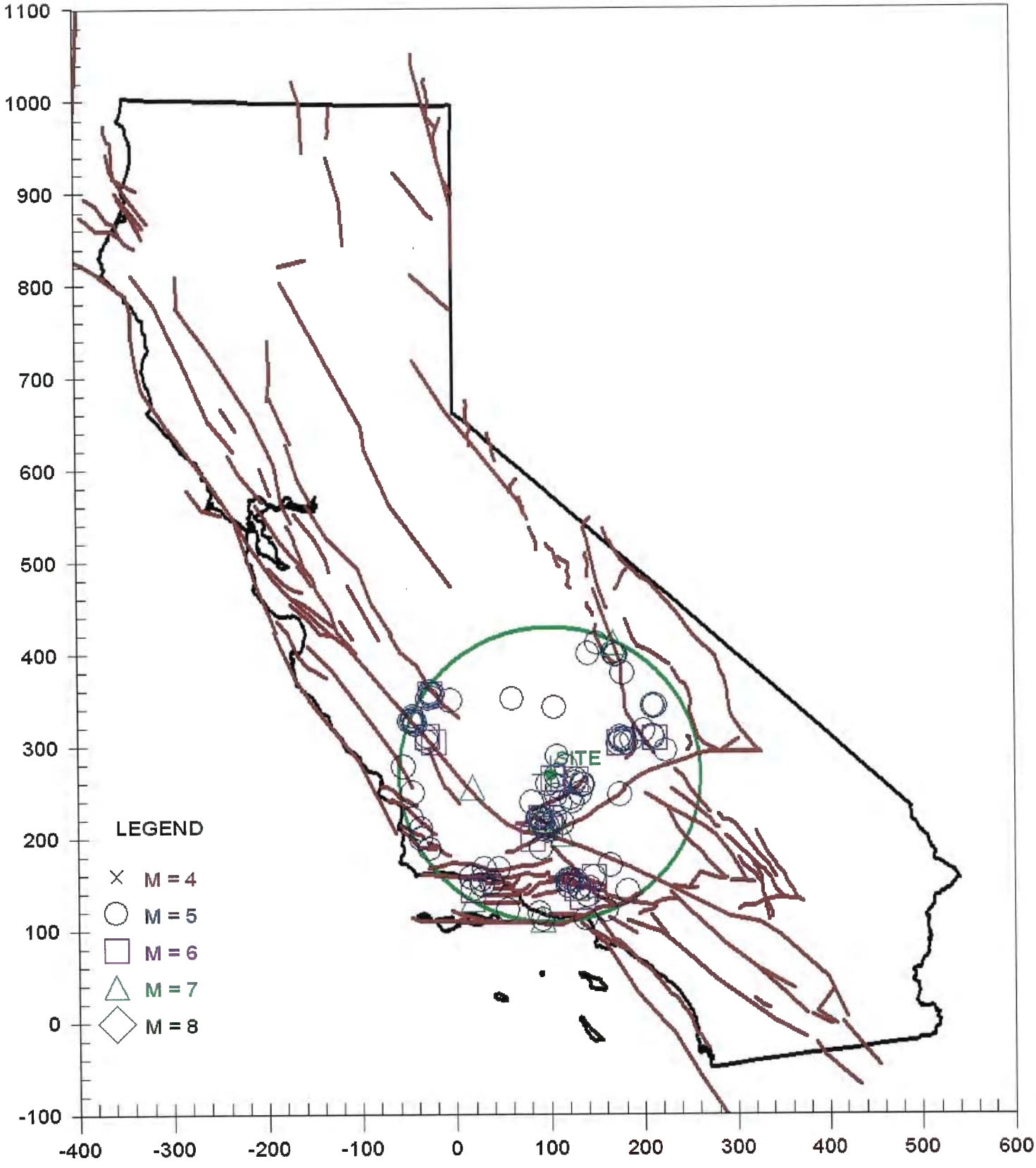
COEFFICIENTS FOR GUTENBERG & RICHTER RECURRENCE RELATION:
a-value= 1.644
b-value= 0.414
beta-value= 0.954

TABLE OF MAGNITUDES AND EXCEEDANCES:

Earthquake Magnitude	Number of Times Exceeded	Cumulative No. / Year
4.0	133	0.66834
4.5	133	0.66834
5.0	133	0.66834
5.5	50	0.25126
6.0	20	0.10050
6.5	9	0.04523
7.0	6	0.03015
7.5	3	0.01508

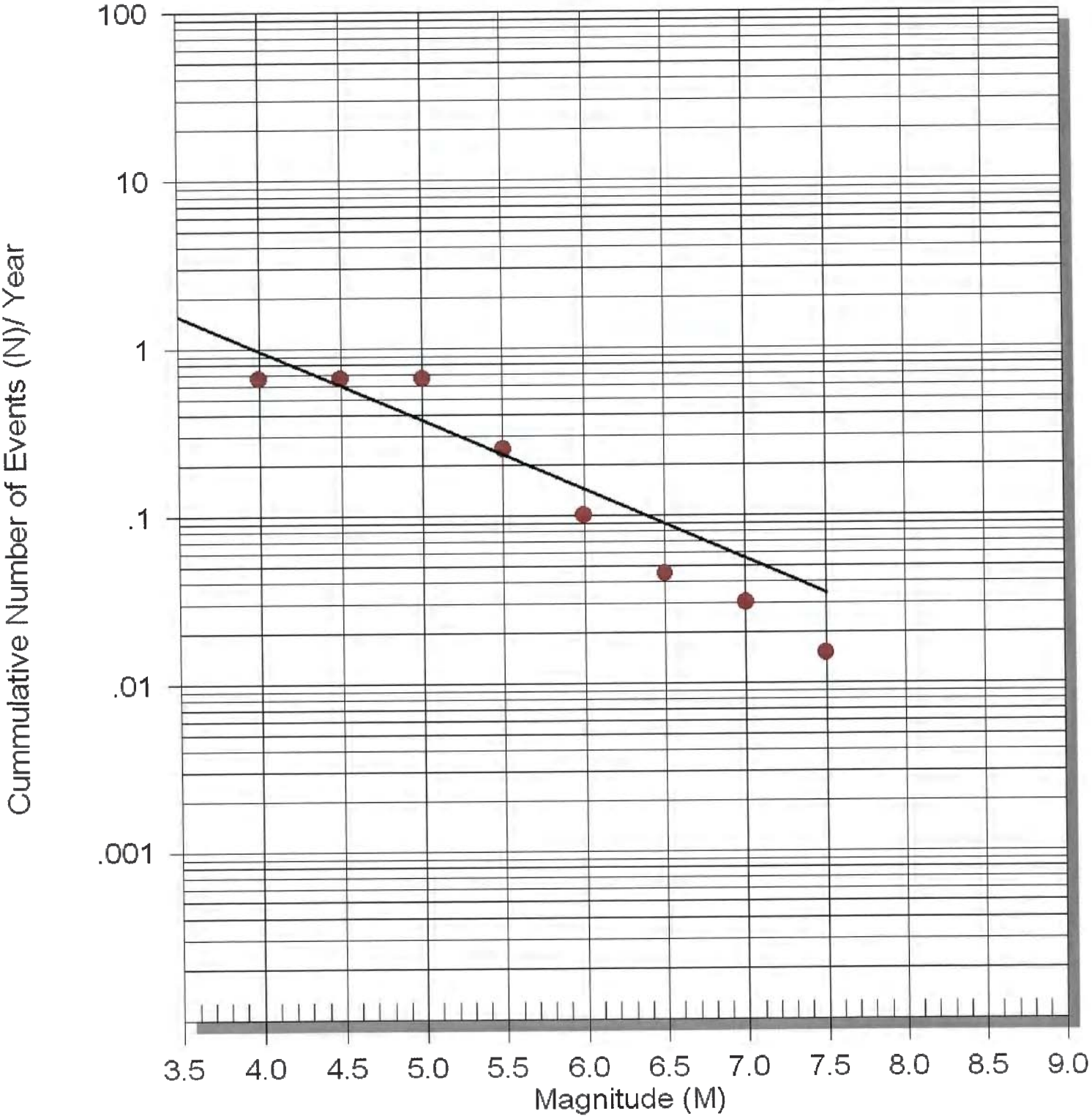
EARTHQUAKE EPICENTER MAP

Test RLot 38, Tract 6137



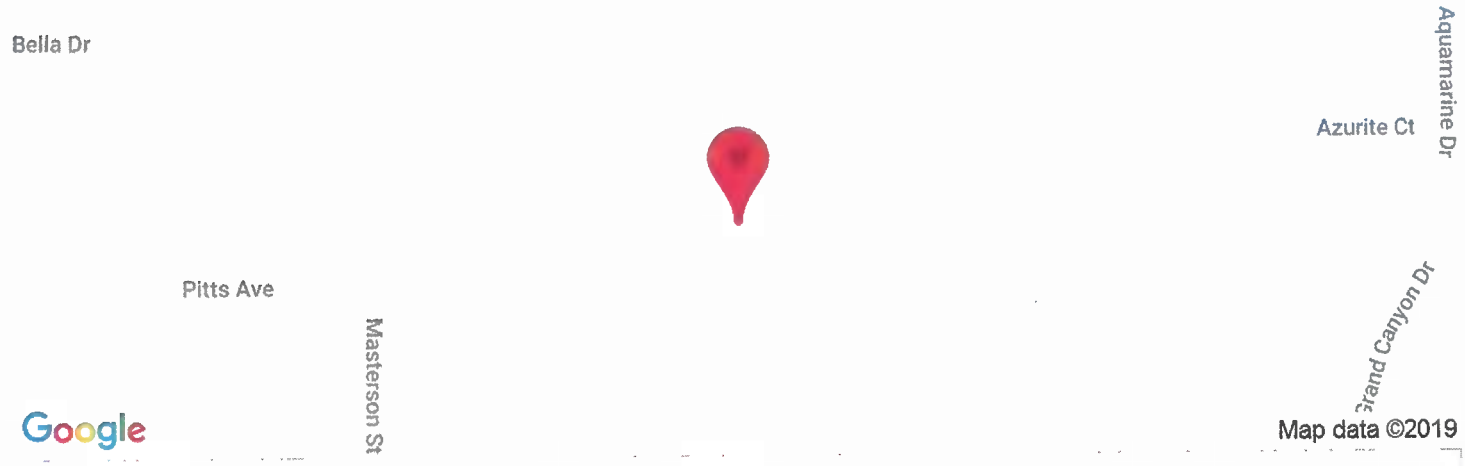
EARTHQUAKE RECURRENCE CURVE

Test RLot 38, Tract 6137



Lot 38, Tract 6137

Latitude, Longitude: 35.4149, -118.8753

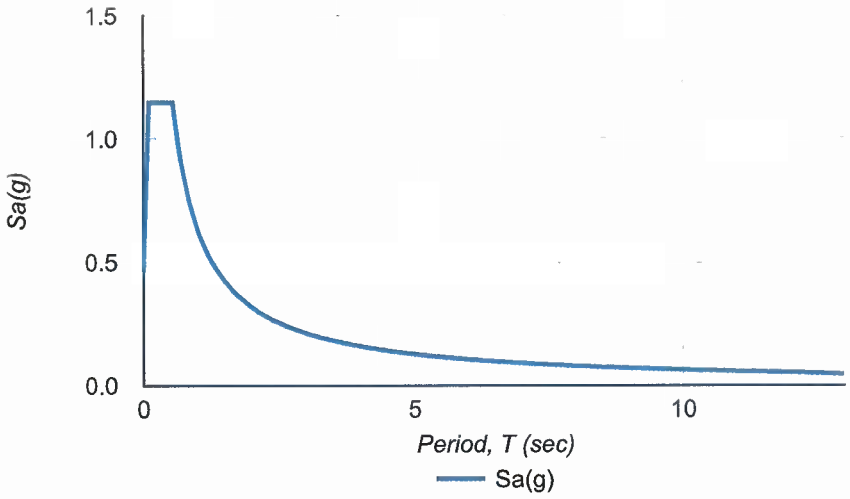


Date	9/6/2019, 2:17:53 PM
Design Code Reference Document	ASCE7-10
Risk Category	II
Site Class	D - Stiff Soil

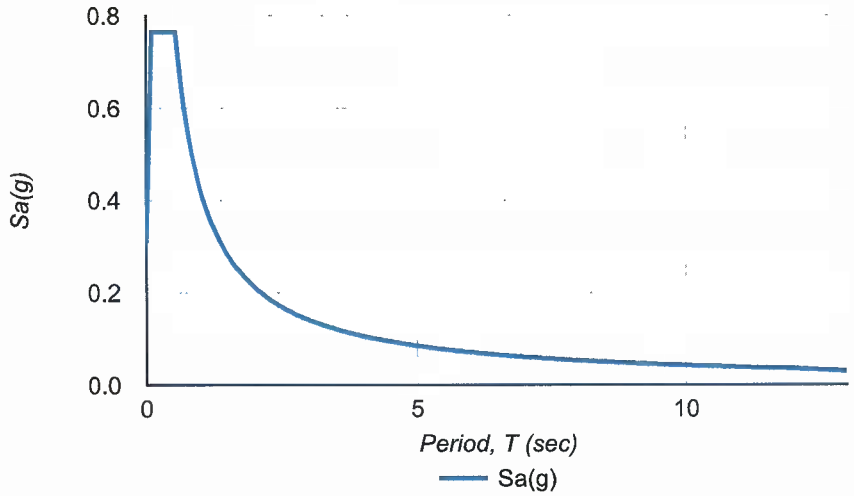
Type	Value	Description
S_S	1.074	MCE_R ground motion. (for 0.2 second period)
S_1	0.39	MCE_R ground motion. (for 1.0s period)
S_{MS}	1.149	Site-modified spectral acceleration value
S_{M1}	0.632	Site-modified spectral acceleration value
S_{DS}	0.766	Numeric seismic design value at 0.2 second SA
S_{D1}	0.421	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	D	Seismic design category
F_a	1.07	Site amplification factor at 0.2 second
F_v	1.62	Site amplification factor at 1.0 second
PGA	0.411	MCE_G peak ground acceleration
F_{PGA}	1.089	Site amplification factor at PGA
PGA_M	0.448	Site modified peak ground acceleration
T_L	12	Long-period transition period in seconds
SsRT	1.074	Probabilistic risk-targeted ground motion. (0.2 second)
SsUH	1.066	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	1.5	Factored deterministic acceleration value. (0.2 second)
S1RT	0.39	Probabilistic risk-targeted ground motion. (1.0 second)
S1UH	0.368	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S1D	0.6	Factored deterministic acceleration value. (1.0 second)
PGAd	0.5	Factored deterministic acceleration value. (Peak Ground Acceleration)
C_{RS}	1.007	Mapped value of the risk coefficient at short periods
C_{R1}	1.06	Mapped value of the risk coefficient at a period of 1 s

MCER Response Spectrum



Design Response Spectrum



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U.S. Geological Survey - Earthquake Hazards Program

Unified Hazard Tool

Please do not use this tool to obtain ground motion parameter values for the design code reference documents covered by the U.S. Seismic Design Maps web tools (e.g., the International Building Code and the ASCE 7 or 41 Standard). The values returned by the two applications are not identical.

Input

Edition

Dynamic: Conterminous U.S. 2014 (upd

Spectral Period

Peak Ground Acceleration

Latitude

Decimal degrees

35.4149

Time Horizon

Return period in years

475

Longitude

Decimal degrees, negative values for western longitudes

-118.8753

Site Class

259 m/s (Site class D)

Hazard Curve

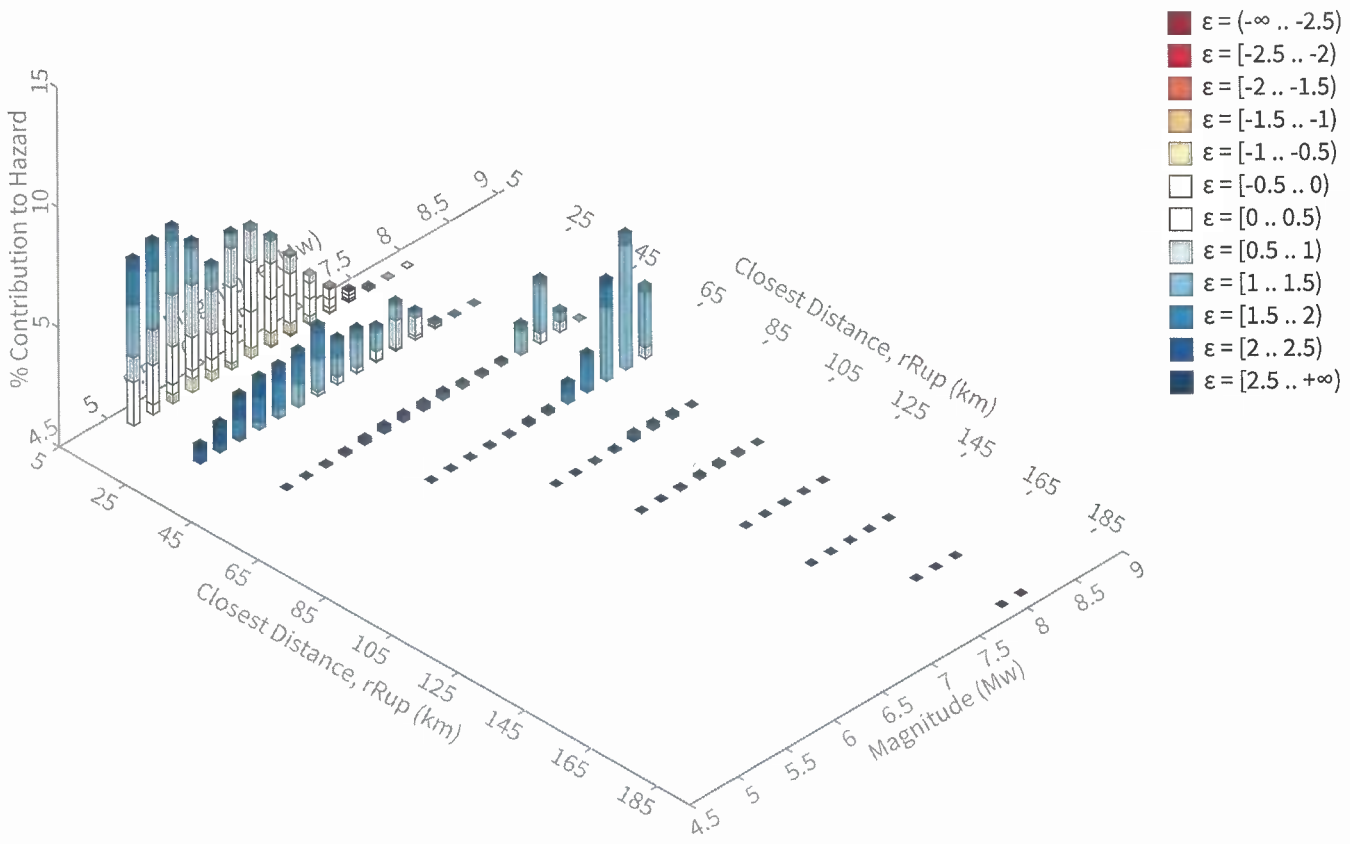
Please select “Edition”, “Location” & “Site Class” above to compute a hazard curve.

Compute Hazard Curve

Deaggregation

Component

Total



Summary statistics for, Deaggregation: Total

Deaggregation targets

Return period: 475 yrs
Exceedance rate: 0.0021052632 yr^{-1}
PGA ground motion: 0.30329463 g

Recovered targets

Return period: 511.41923 yrs
Exceedance rate: 0.001955343 yr^{-1}

Totals

Binned: 100 %
Residual: 0 %
Trace: 0.19 %

Mean (over all sources)

m: 6.41
r: 26.87 km
ε_0: 0.98 σ

Mode (largest m-r bin)

m: 5.5
r: 11.05 km
ε_0: 0.73 σ
Contribution: 7.33 %

Mode (largest m-r-ε_0 bin)

m: 8.1
r: 66.67 km
ε_0: 1.22 σ
Contribution: 5.17 %

Discretization

r: min = 0.0, max = 1000.0, Δ = 20.0 km
m: min = 4.4, max = 9.4, Δ = 0.2
ε: min = -3.0, max = 3.0, Δ = 0.5 σ

Epsilon keys

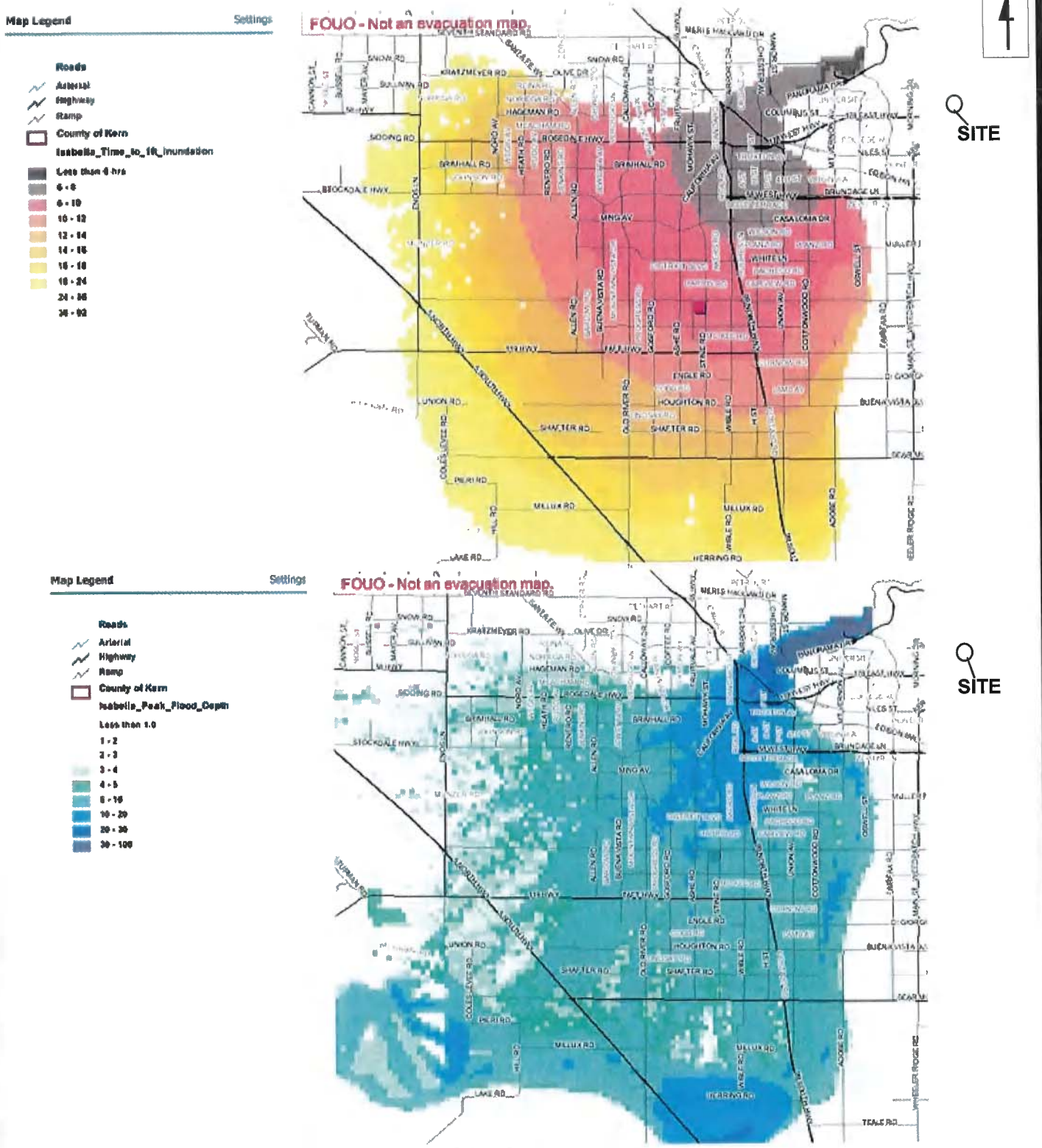
ε0: [-∞ .. -2.5)
ε1: [-2.5 .. -2.0)
ε2: [-2.0 .. -1.5)
ε3: [-1.5 .. -1.0)
ε4: [-1.0 .. -0.5)
ε5: [-0.5 .. 0.0)
ε6: [0.0 .. 0.5)
ε7: [0.5 .. 1.0)
ε8: [1.0 .. 1.5)
ε9: [1.5 .. 2.0)
ε10: [2.0 .. 2.5)
ε11: [2.5 .. +∞]

Deaggregation Contributors

Source Set ↳ Source	Type	r	m	ε_0	lon	lat	az	%
UC33brAvg_FM31 (opt)	Grid							36.75
PointSourceFinite: -118.875, 35.437		5.63	5.63	-0.01	118.875°W	35.437°N	0.00	3.01
PointSourceFinite: -118.875, 35.437		5.63	5.63	-0.01	118.875°W	35.437°N	0.00	3.00
PointSourceFinite: -118.875, 35.518		11.56	5.85	0.67	118.875°W	35.518°N	0.00	2.03
PointSourceFinite: -118.875, 35.518		11.56	5.85	0.67	118.875°W	35.518°N	0.00	2.02
PointSourceFinite: -118.875, 35.482		8.67	5.74	0.39	118.875°W	35.482°N	0.00	1.92
PointSourceFinite: -118.875, 35.482		8.67	5.74	0.39	118.875°W	35.482°N	0.00	1.90
PointSourceFinite: -118.875, 35.545		13.89	5.93	0.86	118.875°W	35.545°N	0.00	1.43
PointSourceFinite: -118.875, 35.545		13.89	5.93	0.86	118.875°W	35.545°N	0.00	1.42
PointSourceFinite: -118.875, 35.500		10.09	5.80	0.53	118.875°W	35.500°N	0.00	1.21
PointSourceFinite: -118.875, 35.500		10.09	5.80	0.53	118.875°W	35.500°N	0.00	1.21
PointSourceFinite: -118.875, 35.527		12.32	5.88	0.73	118.875°W	35.527°N	0.00	1.09
PointSourceFinite: -118.875, 35.527		12.32	5.88	0.73	118.875°W	35.527°N	0.00	1.09
PointSourceFinite: -118.875, 35.599		18.93	6.02	1.23	118.875°W	35.599°N	0.00	1.06
PointSourceFinite: -118.875, 35.599		18.93	6.02	1.23	118.875°W	35.599°N	0.00	1.05
UC33brAvg_FM32 (opt)	Grid							36.72
PointSourceFinite: -118.875, 35.437		5.64	5.63	-0.01	118.875°W	35.437°N	0.00	3.01
PointSourceFinite: -118.875, 35.437		5.64	5.63	-0.01	118.875°W	35.437°N	0.00	3.00
PointSourceFinite: -118.875, 35.518		11.56	5.85	0.67	118.875°W	35.518°N	0.00	2.03
PointSourceFinite: -118.875, 35.518		11.56	5.85	0.67	118.875°W	35.518°N	0.00	2.02
PointSourceFinite: -118.875, 35.482		8.67	5.74	0.39	118.875°W	35.482°N	0.00	1.91
PointSourceFinite: -118.875, 35.482		8.67	5.74	0.39	118.875°W	35.482°N	0.00	1.90
PointSourceFinite: -118.875, 35.545		13.89	5.92	0.86	118.875°W	35.545°N	0.00	1.43
PointSourceFinite: -118.875, 35.545		13.89	5.92	0.86	118.875°W	35.545°N	0.00	1.42
PointSourceFinite: -118.875, 35.500		10.09	5.80	0.53	118.875°W	35.500°N	0.00	1.21
PointSourceFinite: -118.875, 35.500		10.09	5.80	0.53	118.875°W	35.500°N	0.00	1.21
PointSourceFinite: -118.875, 35.527		12.32	5.88	0.73	118.875°W	35.527°N	0.00	1.09
PointSourceFinite: -118.875, 35.527		12.32	5.88	0.73	118.875°W	35.527°N	0.00	1.09
PointSourceFinite: -118.875, 35.599		18.93	6.02	1.23	118.875°W	35.599°N	0.00	1.06
PointSourceFinite: -118.875, 35.599		18.93	6.02	1.23	118.875°W	35.599°N	0.00	1.05
UC33brAvg_FM31	System							13.31
San Andreas (Big Bend) [5]		66.63	8.04	1.34	119.005°W	34.825°N	190.23	6.90
White Wolf [4]		26.61	7.05	0.98	118.727°W	35.209°N	149.57	1.36
Garlock (West) [4]		56.97	7.84	1.34	118.640°W	34.940°N	157.88	1.30
Pleito [2]		49.44	7.89	1.11	119.049°W	34.994°N	198.67	1.02
UC33brAvg_FM32	System							13.22
San Andreas (Big Bend) [5]		66.63	8.04	1.34	119.005°W	34.825°N	190.23	6.86
White Wolf [4]		26.61	7.03	0.99	118.727°W	35.209°N	149.57	1.36
Garlock (West) [4]		56.97	7.84	1.34	118.640°W	34.940°N	157.88	1.29

Appendix B

Lake Isabella Dam Inundation Map, the Flood Insurance Rate Map, Geolabs Fault Location Report (2004), and Unmarked Aerial Photos (1952, 1956, 1975, 1981 and 1990) in Pocket,



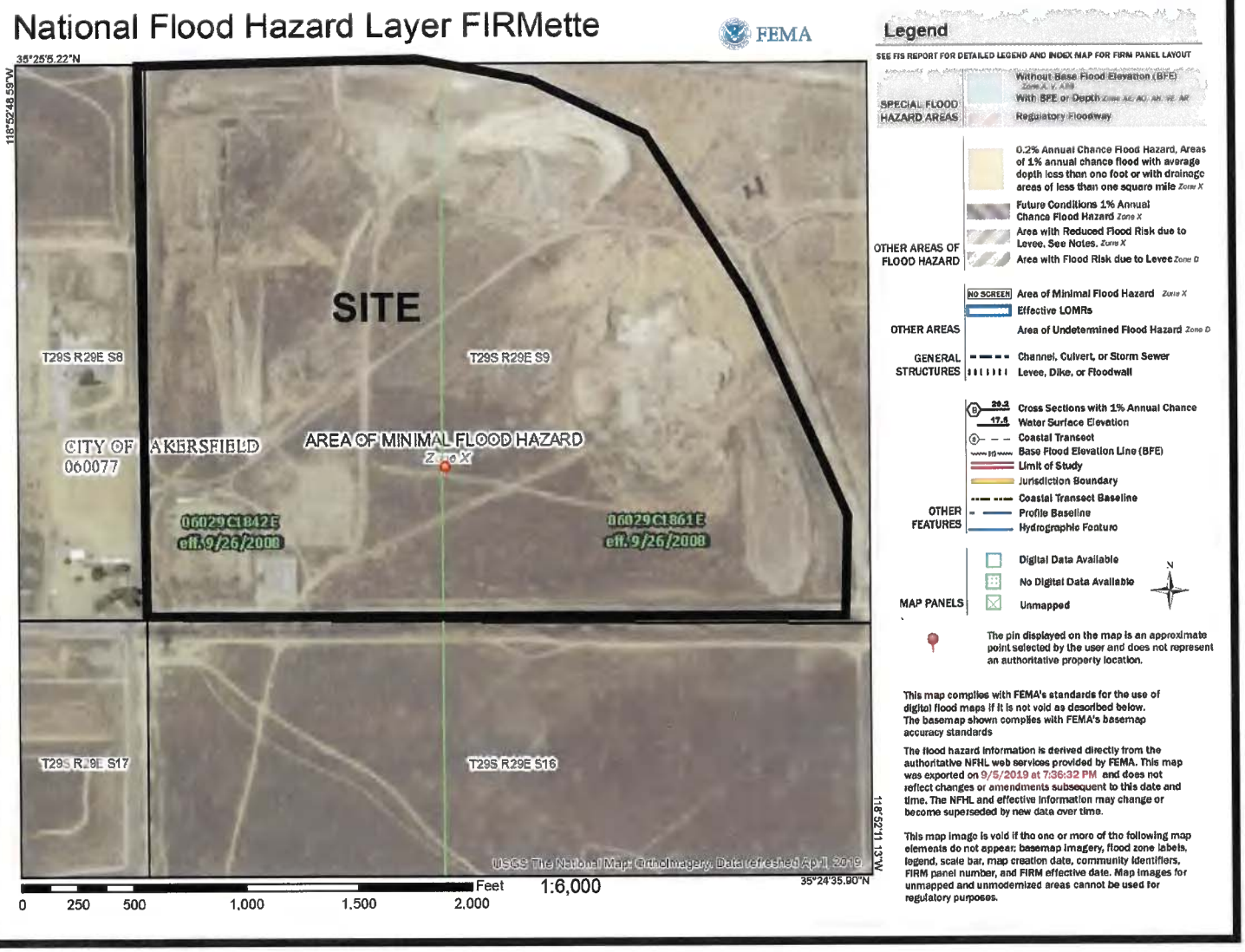
Source: Kern County Map Info System, US Army Corps of Engineers Preliminary Flood Results

SOILS ENGINEERING, INC.
4400 Yeager Way
Bakersfield, CA 93313
(661) 831 - 5100

DATE: 9/19
PROJECT: #17222

Lot 38, Tract 6137
NE of Paladino Drive and Masterson Street
Bakersfield, CA

Lake Isabella Dam Inundation Map



SOILS ENGINEERING, INC.
4400 Yeager Way
Bakersfield, CA 93313
(661) 831 - 5100

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Lot 38, Tract 6137
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Bakersfield, CA

FEMA Map

GEOLABS-WESTLAKE VILLAGE
Foundation and Soils Engineering, Geology
31119 Via Colinas, Suite 502 • Westlake Village, CA 91362
Voice: (818) 889-2562 (805) 495-2197
Fax: (818) 889-2995 (805) 379-2603
a dba of
R & R Services
Corporation

November 14, 2005
W.O. 8927

S & S Homes of the Central Coast, Inc.
1350 East Grand Avenue
Arroyo Grande, California 93420

Attention: Mr. Dan Pike

SUBJECT: Fault Location and Activity Assessment Investigation, Lot 38, Tract 6137, Northeast Corner of Paladino Drive and Masterson Street, The Views, City of Bakersfield, California

References: Geolabs-Westlake Village, February 24, 2005; Grading Plan Review Report (Scale 1"=40'), Phases 1-3 (122 Lots Including Paladino Drive, Solitaire Drive, and a Portion of Masterson Street), Tract 6137, The Views, City of Bakersfield, California

…, November 1, 2004; Percolation Testing, Proposed Retention Basin Northeast of the Intersection of Masterson Street and Paladino Drive, Phases 1-3, Tentative Tract 6137, The Views, City of Bakersfield, California

Krazan & Associates, Inc., October 6, 2000; Exploratory Borings with Soil Classification, Proposed Subdivision Development, Section 9, Highway 178 and Alfred Harrell Highway, Bakersfield, California

…, June 28, 2000; Phase I Environmental Site Assessment, Proposed Development Property, Township 29 South, Range 29 East, Section 9, Bakersfield, California

Smith, T.C., February 6, 1984; Faults East of Bakersfield, Kern County: CDMG Fault Evaluation Report FER-145

Bartow J.A., 1981; Geologic map of the Rio Bravo quadrangle, California: U.S. Geological Survey Open File Report 81-152, scale 1:24,000

Mr. Pike:

As requested, we present herein our findings and recommendations with respect to our fault location and activity assessment investigation on the subject property. The scope of work for this report included the following: excavating and logging 19 exploratory trenches at selected locations

(totaling about 4,350 feet in length), a review of available, pertinent published and unpublished data in our files, a geological analysis of the assembled data, and preparation of this report.

A grading plan (scale 1" = 200') prepared by New Vision Engineering serves as the base for the enclosed Location Map (Plate 1). The locations of the exploratory trenches are illustrated on Plate 1, the graphic logs (scale 1"=5') are presented on Plates FT1.1 through FT19, and the lithologic descriptions for each log are shown on Figures L1 through L19.

BACKGROUND

The July 21, 1952 Arvin-Tehachapi earthquake (M=7.5), which has been attributed to the northeast-southwest trending White Wolf fault (about 8-10 miles southeast of the project site), also produced surface rupture along several northwest-southeast trending faults that lie along the westerly front of the Sierra Nevada Range. Traces of these faults cross the subject property and, indeed, surface rupture was observed on the site after the 1952 Arvin-Tehachapi events. Observers noted up to about six inches of vertical displacement on the traces crossing the subject property. While the White Wolf fault is known to be a reverse fault (easterly side up relative to the westerly side) associated with a compressional tectonic regime, the style of movement on these features appeared to be typical of normal faulting associated with an extensional tectonic regime, with the northerly side moving up relative to the southerly side.

Due to the fact that the faults on the site produced historic surface rupture, they were assigned Active status under the Alquist-Priolo Act (SB5) and have been zoned in accordance with the provisions of the Act. The limits of the State-mandated Earthquake Fault Zone (A-P Zone) are included on Plate 1. Under the guidelines of the Seismic Safety Element to the City of Bakersfield General Plan and the City's Building and Construction Code, developments within a State-mandated Earthquake Fault Zone must include a study to determine the presence of Active faulting.

GENERALIZED GEOLOGIC SETTING

The site geology was discussed in detail in our previous report (dated 2-25-05). It is summarized below for the reader's convenience.

Lithology

Two geologic units were encountered in our subsurface investigation; a thin mantle of colluvium/topsoil overlying bedrock assigned to the Kern River Formation. The colluvial deposits are likely of latest Pleistocene- to Recent-age and are composed of clayey to silty sand with occasional gravelly sequences.

The Plio-Pleistocene-age Kern River Formation is, here, composed of various admixtures of poorly sorted clayey to silty sandstone, pebbly sandstone, and sandy conglomerate. The conglomerate clasts were primarily granitics and metamorphics and were generally of a rounded texture. Significant accumulations of carbonates (caliche) also occur in the upper portions of the unit and as rind coatings on the conglomerate clasts. These fluvial sediments probably represent floodplain and over-bank deposits from an ancestral Kern River which carried the bulk of the sediments from the southern-most Sierra Nevada during the last several glaciations. Many scour-and-fill features are evident as well.

Geologic Structure

The general structure in the Kern River Formation is essentially homoclinal with the strata gently inclined to the south, roughly paralleling the ground surface. Localized warping of the strata was observed adjacent to the faults.

FINDINGS

Two "Master Trenches", FT-1 and FT-2, were excavated so as to provide a continuous exposure completely across the A-P Zone. Two separate and distinct faults were observed therein. The most northerly fault (Fault A) was encountered in fault trench FT-1 between Stations 5+10 and

5+30, while the southernmost fault (Fault B) was observed in fault trench FT-2 between Stations 6+70 and 6+80. These faults represent different traces, but both were trending between N40W and N50W and were essentially vertical features with a normal sense of displacement. Seventeen additional, supplementary trenches were then excavated in order to trace the above faults across the project area.

A minor splay of Fault A was encountered in fault trench FT-4 at about Station 1+50 and because of its somewhat more north-south trend, fault trench FT-6 was excavated in an attempt to intercept it. No faulting was observed in FT-6, so it was interpreted as joining Fault A in the vicinity of fault trench FT-5.

The amount of throw on the northernmost fault (Fault A) appears to diminish toward the southeast and the fault actually dies out southeasterly of fault trench FT-8. It was not encountered in trenches FT-2, FT-9, FT-15, or FT-18. The total vertical displacement on Fault A exceeded the depth of trench FT-1 (about 12 feet), while at trench FT-8 (Station 1+30) the vertical throw appears to be only about 6"-12". We observed in trench FT-8, especially, that the lateral throw may exceed the vertical component, as can be seen by the unequal thickness of the Unit 4 conglomerate across the fault.

The southernmost fault exhibited vertical displacements that exceeded the depth of all of the trenches (10'-12') in which it was observed (FT-2, 11-14, 16, 17, and 19). The possibility of a substantial lateral component of throw on this fault cannot be ruled out.

CONCLUSIONS AND RECOMMENDATIONS

Our conclusions and recommendations with respect to the design of the development on Lot 38 of Tract 6137 are presented below for your consideration.

Clearly defined and sufficiently Active faults traverse portions of Lot 38 as shown on Plate 1. As required by the City of Bakersfield, we have recommended a Structural Setback with a width

of fifty (50) feet on each of the faults (Plate 1), within which no structures for human habitation may be placed. The setback zones may be used for parks, open space, streets, and front and rear yards.

CLOSURE

This geological report has been prepared in accordance with generally accepted engineering practices at this time and location. No other warranties, either express or implied, are made as to the professional advice provided under the terms of our agreement and included in this report.

Thank you for this opportunity to be of service. Please do not hesitate to contact the undersigned, if you have any questions regarding this report.

Respectfully submitted,
GEOLABS-WESTLAKE VILLAGE

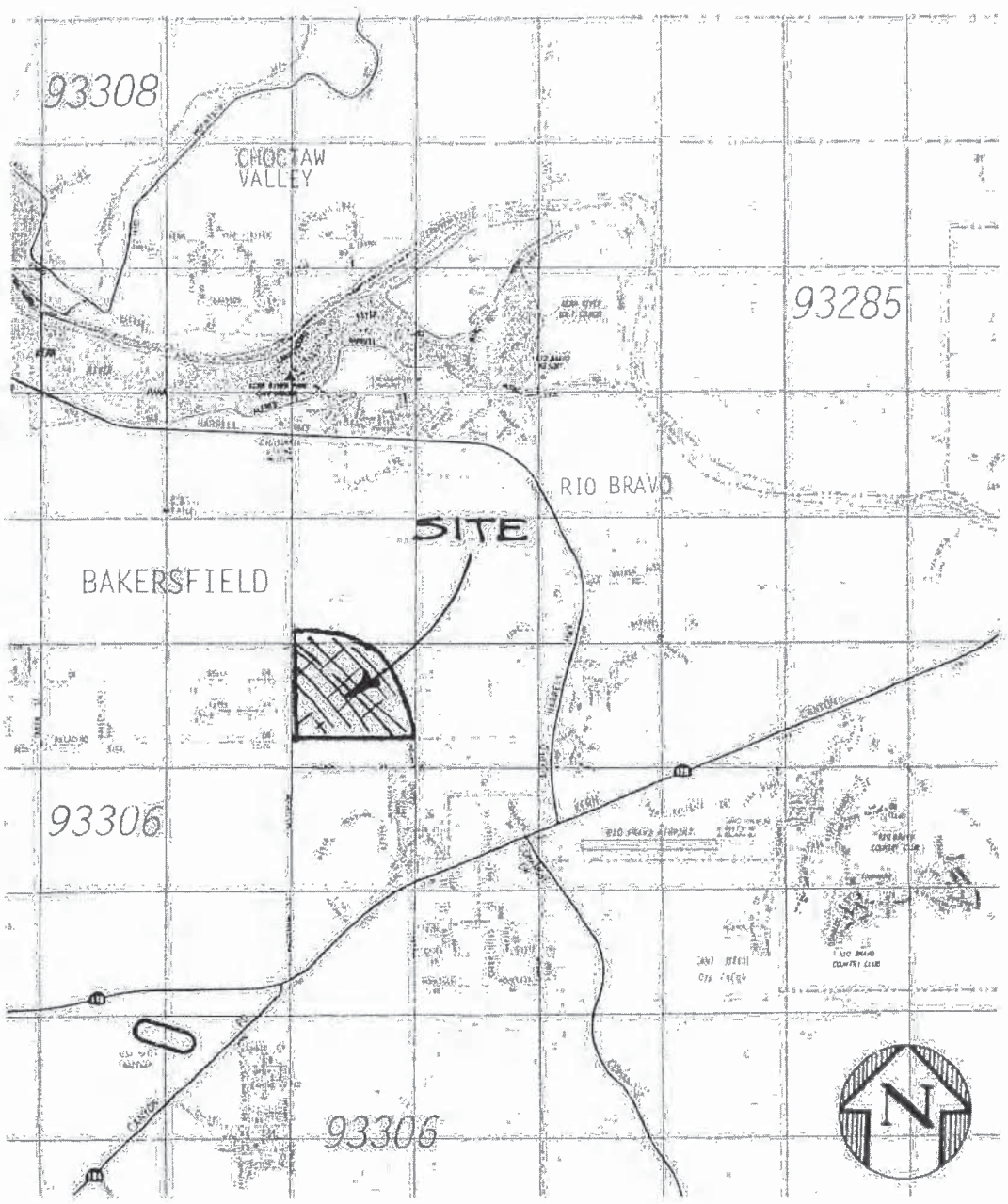
Charles A. Swift
EG 948

Ronald Z. Shmerling
CEG 1047
RCE 35444

Enclosures:

Site Location	Figure 1
Location Map	Plate 1 (in pocket)
Trench Logs	Plates FT1.1 thru FT19
Legend for Trench Logs	Figure 2
Lithologic Descriptions	Plates L1 thru L19

XC: (6) Addressee



SITE LOCATION

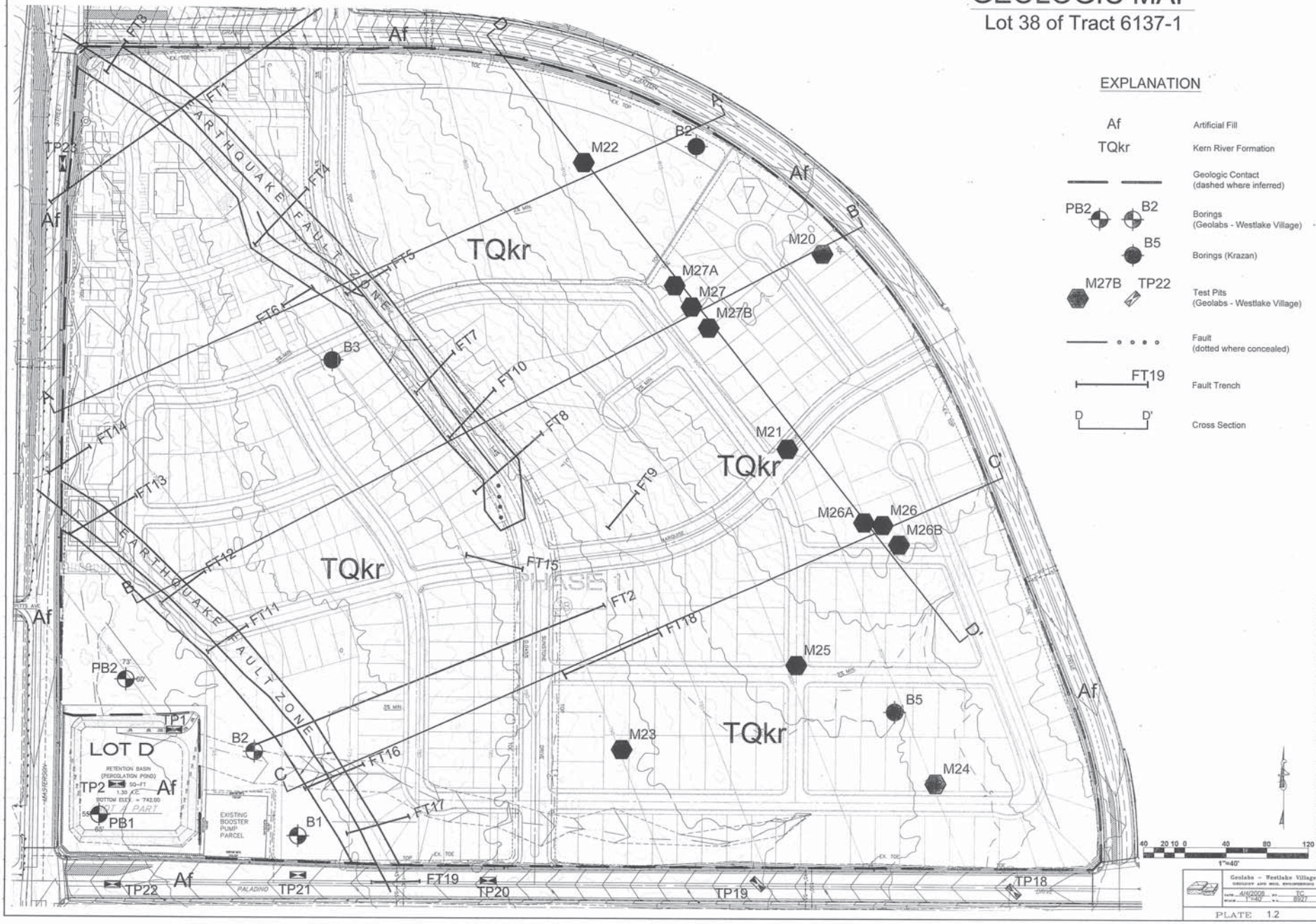
Geolabs-Westlake Village
GEOLOGY AND SOIL ENGINEERING

DATE _____ BY CS
SCALE N.A. W.O. 6927

Plate 1.1

GEOLOGIC MAP

Lot 38 of Tract 6137-1



EXPLANATION

Af	Artificial Fill
TQkr	Kern River Formation
	Geologic Contact (dashed where inferred)
PB2, B2	Borings (Geolabs - Westlake Village)
B5	Borings (Krazan)
M27B, TP22	Test Pits (Geolabs - Westlake Village)
	Fault (dotted where concealed)
FT19	Fault Trench
D — D'	Cross Section

1"=40'

Geolabs – Westlake Village
4/4/2008 TC
1"=40' 8927

PLATE 1.2

CITY OF BAKERSFIELD
TRACT NO. 6137-1
"VISTA MONTAÑE"
LOT "D"
"QUARTER CIRCLE"
PRELIMINARY GRADING PLAN
CITY OF BAKERSFIELD CALIFORNIA

NEW VISION CIVIL ENGINEERING, INC.
PLANNING · ENGINEERING · SURVEYING
TEL: 661 617 3000 • FAX: 661 617 3175

REGISTERED PROFESSIONAL ENGINEER
No. C65405
EXP. 9-30-07
CIVIL
STATE OF CALIFORNIA

DATE	REVISIONS
3/25/08	ISSUED FOR CLIENT REVIEW

DESIGNED BY M. DAILY
DRAWN BY L. RYE
CHECKED BY O. MORENO
DATE 3/21/08
JOB NO.
SCALE

SHEET 1 OF 1

P:\8927 SAS\8927.009\2008 04 04 Quarter Circle GPR\8927.009_4-4-08 Quarter Circle Report.dwg

Soils Engineering Inc.

March 4, 2020 SEI File: 19-17222

S and S Homes of the Central Coast
532 Camino Mercado
Arroyo Grande, CA 93420

Attention: Ms. Adrienne Ankerstrom

Subject: **2020 Update: Seismic Values**
Tract 6137, Lot 38
Bakersfield, California

Reference: *Geologic Hazard Study for Lot 38, Tract 6137*
Section 9, T29S, R29E
Bakersfield, Kern County, CA
(Soils Engineering, Inc. File 17222 dated September 9, 2019)

Dear Ms. Adrienne Ankerstrom;

At your request, Soils Engineering, Inc. (SEI) has prepared the attached an update of Seismic Design Values for the above referenced Geological Hazard Study per the new 2019 California Building Code (CBC). No other changes to this report are necessary to comply with the 2019 CBC.

We appreciate the opportunity to provide our services. Please, contact our office with any questions.

Respectfully submitted,
SOILS ENGINEERING, INC.

Robert J. Becker, PG, CEG, QSD/QSP
Environmental & Geologic Manager

CERTIFIED ENGINEERING GEOLOGIST
ROBERT J. BECKER
No. 2238
Exp. Date 2/28/21
STATE OF CALIFORNIA

PROFESSIONAL GEOLOGIST
ROBERT J. BECKER
No. 5076
REN 2/28/21
STATE OF CALIFORNIA

Attachment: Updated Seismic Design Values Table

4400 YEAGER WAY
BAKERSFIELD, CA 93313-2019
Phone: (661) 831-5100
Fax: (661) 831-2111
info@soilsengineering.com
www.soilsengineering.com

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SEISMIC DESIGN VALUES

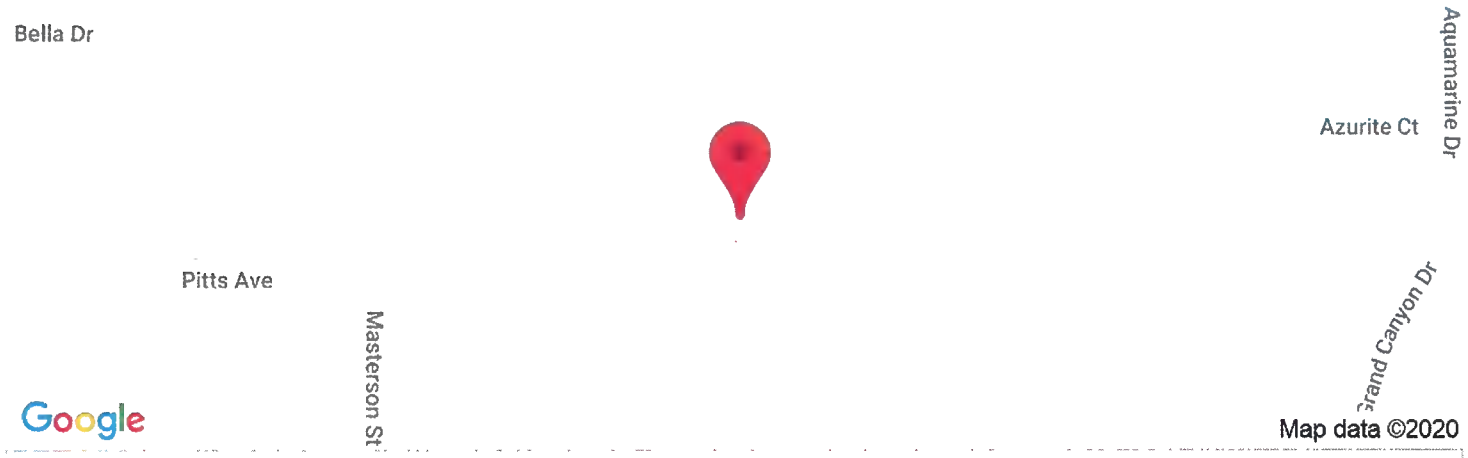
The seismic design values presented in the table below are based on the 2019 California Building Code (CBC). The Site Class for the proposed project was determined using standard penetration test data obtained at the site.

SEISMIC DESIGN CRITERIA		VALUE	SOURCE
Risk Category		II	2019 CBC Table 1604.5 or 1604*A*.5
Site Class		D	2019 CBC § 1613.2.2 or 1613*A*.2.2; ASCE 7-16 Table. 20.3-1; Site Specific Soils Report
Mapped MCE_R Spectral Response Acceleration, short period	S_S	0.923g	SEAOC-OSHPD software; 2019 CBC Figure 1613.2.1(1)
Mapped MCE_R Spectral Response Acceleration, at 1-sec. Period	S_1	0.328g	SEAOC-OSHPD software; 2019 CBC Figure 1613.2.1(2)
Site Coefficient	F_a	1.131	SEAOC- OSHPD software; 2019 CBC Table 1613.2.3(1) or 1613*A*.2.3(1)
Site Coefficient	F_v*	1.973*	2019 CBC Table 1613.2.3(2) or 1613*A*.2.3(2)
Adjusted MCE_R Spectral Response Acceleration, short period, $F_a * S_s$	S_{MS}	1.044g	SEAOC- OSHPD software; 2019 CBC §1613.2.3 or 1613*A*.2.3
Adjusted MCER Spectral Response Acceleration, 1-sec. period, $Fv * S_1$	S_{M1}*	0.647*	2019 CBC §1613.2.3 or 1613A.2.3
Design Spectral Response Acceleration, short period, $2/3 * S_{MS}$	S_{DS}	0.696g	SEAOC- OSHPD software; 2019 CBC §1613.2.4 or 1613A.2.4
Design Spectral Response Acceleration, 1-sec. period, $2/3 * S_{MI}$	S_{D1}*	0.432*	2019 CBC §1613.2.4 or 1613A.2.4
Peak Ground Acceleration for Max. Considered Earthquake (MCE_G)	PGA	0.398g	SEAOC- OSHPD software; ASCE 7-16 Fig 22-9
Adjusted PGA; $F_{PGA} = 1.202$, F_{PGA}* PGA=	PGA_M	0.478g	SEAOC- OSHPD software; ASCE 7-16 §11.8.3.2
Mapped Risk Coefficient at 0.2 second Spectral Response Period	C_{RS}	0.925	SEAOC- OSHPD software; ASCE 7-16 Figure 22-18A
Mapped Risk Coefficient at 1 second Spectral Response Period	C_{R1}	0.923	SEAOC- OSHPD software; ASCE 7-16 Figure 22-19A
Seismic Design Category, short period		D	2019 CBC §1613.2.5
Seismic Design Category, 1second period		D*	2019 CBC §1613.2.5
MCE_R = Maximum Considered Earthquake (risk targeted) MCE_G = Maximum Considered Earthquake (geometric mean)			
** The project Structural Engineer shall confirm that a ground motion hazard analysis is not required in accordance with ASCE7-16 §11.4.8/Exception 2. The values tabulated above for S_{M1}, S_{D1}, and the Seismic Design Category/1-second period are based on the site coefficient, F_v, which was interpolated from 2019 CBC Table 1613.2.3(2) or 1613A.2.3(2). Where the above referenced Exception 2 does not apply, the values for F_v, S_{M1}, S_{D1}, and for the Seismic Design Category/1-second period may not be applicable for the site.*			

©2020 SOILS ENGINEERING, INC.

Lot 38, Tract 6137

Latitude, Longitude: 35.4149, -118.8753



Date	3/4/2020, 11:34:09 AM
Design Code Reference Document	ASCE7-16
Risk Category	II
Site Class	D - Stiff Soil

Type	Value	Description
S_S	0.923	MCE_R ground motion. (for 0.2 second period)
S_1	0.328	MCE_R ground motion. (for 1.0s period)
S_{MS}	1.044	Site-modified spectral acceleration value
S_{M1}	null -See Section 11.4.8 0.328	Site-modified spectral acceleration value
S_{DS}	0.696	Numeric seismic design value at 0.2 second SA
S_{D1}	null -See Section 11.4.8	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	null -See Section 11.4.8 D	Seismic design category
F_a	1.131	Site amplification factor at 0.2 second
F_v	null -See Section 11.4.8 1.973	Site amplification factor at 1.0 second
PGA	0.398	MCE_G peak ground acceleration
F_{PGA}	1.202	Site amplification factor at PGA
PGA_M	0.478	Site modified peak ground acceleration
T_L	12	Long-period transition period in seconds
SsRT	0.923	Probabilistic risk-targeted ground motion. (0.2 second)
SsUH	0.998	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	1.5	Factored deterministic acceleration value. (0.2 second)
S1RT	0.328	Probabilistic risk-targeted ground motion. (1.0 second)
S1UH	0.355	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S1D	0.6	Factored deterministic acceleration value. (1.0 second)
PGAd	0.5	Factored deterministic acceleration value. (Peak Ground Acceleration)
C_{RS}	0.925	Mapped value of the risk coefficient at short periods
C_{R1}	0.923	Mapped value of the risk coefficient at a period of 1 s

WZI INC.

March 6, 2020

Ms. Pam Denney
General Counsel
S&S Homes of the Central Coast, Inc.
532 Camino Mercado
Arroyo Grande, California 93420

Re: ***Peer Review of SEI Geological Hazards Report, September 2019***
Lot 38, Tract 6137, Bakersfield, California
Updated: Seismic Values letter of March 4, 2020

Dear Ms. Denny:

At the request of S&S Homes WZI has conducted a peer review of the *Geological Hazards Report for Lot 38, Tract 6137* that was prepared in September 2019 and the *2020 Update: Seismic Values* letter of March 4, 2020 prepared by Soils Engineering, Inc. (SEI) of Bakersfield.

It is our opinion that, with the addition of the *2020 Updated: Seismic Values* letter of March 4, 2020, the *Geological Hazards Report for Lot 38, Tract 6137* is in accordance with the requirements of the 2019 California Building Code.

If you have any questions, please do not hesitate to call me at (661) 326-1112.

Very Truly Yours,

CERTIFIED ENGINEERING GEOLOGIST
JAMES ALLEN WAGGONER
No. 1818
Exp 3/31/21
STATE OF CA

Allen Waggoner
Senior Professional Geologist

Registered Professional Geologist
State of California No. 5719
Expiration Date: 3/31/21

Certified Engineering Geologist
State of California No. 1818
Expiration Date: 3/31/21

1717 28th Street Bakersfield, California 93301 (661) 326-1112 FAX: (661) 326-0191

From: Sally
To: Courtney Camps
Subject: Written comment for Vesting Tentative Tract Map 7431
Date: Thursday, August 10, 2023 1:43:26 PM

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Hello, I am currently a home owner in the current Vista Montaire community. I recently received an Intent to Adopt a Negative Declaration and Notice of Public Hearing for Vesting Tentative Tract 7431. I would like to voice a concern I have with this tract.

When we were being sold this home, no mention of this tract was made to us. The agent, who at the time worked for S&S Homes, only mentioned that our community was going to grow northwest of my home. Our home has beautiful views that over look Grand Canyon, Paladino and Masterson. This was a selling point for the home. The builder also being aware of this view, constructed a black aluminum see through fence that maximizes the views. Because of this, the lot had a lot premium that we paid. This type of fence can be found along the current lots that face Grand Canyon, within the Vista Montaire Community. This type of fence does not provide any privacy. At the time of purchase, my family was concerned of privacy. However, we settled on purchasing the home due to the views it afforded us and no homes being located behind us. The closest home not in our community, is located at Masterson/Paladino. This proposed tract, will essentially place 299 homes in our backyard. My family will no longer have the view that we paid for and will also have no privacy from the new homes and traffic.

It seems unfair that we paid for a view that the builder knew was not going to last. They should have used a different fence to line the permitter of the community if they knew the lot across from our community would be eventually built out. They sold us a view that had an expiration date, without telling us there was an expiration date.

I understand the homes will help generate revenue for the city and will provide a great quality of life for the owners that decided to purchase in our community. I'm all for that. I would like to see Bakersfield grow and improve. I am just asking to preserve some of the view that we fell in love with, while affording my family privacy when we are in our home.

With all this in mind, I would like to see the builder, at their complete expense, change the aluminum see through fence that currently lines Grand Canyon Ave. A fence that I believe would provide privacy while still giving residences that live along Grand Canyon a view, would be a combination of cinderblock wall and see through fence. The fence as it stands is currently 6 feet tall. A fence that had a 3ft base of cinderblock and 3 feet of some type of see through fence that does not obstruct the view would be a great solution. This would provide privacy for the current Vista Montaire Community and future residents that live on Grand Canyon and beyond.

I understand this is not a small ask and requires significant money from the builder to be accomplished. However, I believe this is an oversight by the builder and should have been taken into consideration when Vista Montaire as a whole, was being planned out. It is mistake that should be rectified by the builder.

I hope this concern is seen and taken into account with the planning of this new tract. I would like to see the new fence installed prior to phase 1 of this new proposed tract. This would show the builder values the current Vista Montaire Community.

I thank you for your time.

ATTACHMENT A

DRAFT

RESOLUTION NO. _____

RESOLUTION OF THE BAKERSFIELD PLANNING COMMISSION TO ADOPT A MITIGATED NEGATIVE DECLARATION AND APPROVE VESTING TENTATIVE TRACT MAP 7431 (PHASED) LOCATED AT THE NORTHEAST CORNER OF PALADINO DRIVE AND MASTERSON STREET.

WHEREAS, McIntosh and Associates representing Vista Montaire, LLC (property owner), filed an application with the City of Bakersfield Planning Department requesting a Vesting Tentative Tract Map 7431 (Phased) (the "Project"), consisting of 299 lots on 95.21 acres for single family residential development, as shown on attached Exhibit "C", located at the northeast corner of Paladino Drive and Masterson Street as shown on attached Exhibit "B"; and

WHEREAS, the application was deemed complete on July 19, 2023; and

WHEREAS, an initial study was conducted that determined the Project would not have a significant effect on the environment, and a Mitigated Negative Declaration was prepared in accordance with California Environmental Quality Act (CEQA); and

WHEREAS, the Secretary of the Planning Commission, did set, Thursday, September 21, 2023, at 5:30 p.m. in the Council Chambers of City Hall, 1501 Truxtun Avenue, Bakersfield, California, as the time and place for a public hearing before the Planning Commission to consider the proposed Mitigated Negative Declaration and the Project, and notice of the public hearing was given in the manner provided in Title 16 of the Bakersfield Municipal Code; and

WHEREAS, the laws and regulations relating to CEQA and the City of Bakersfield's CEQA Implementation Procedures have been duly followed by city staff and the Planning Commission; and

WHEREAS, the City of Bakersfield Planning Department (1715 Chester Avenue, Bakersfield, California) is the custodian of all documents and other materials upon which the environmental determination is based; and

WHEREAS, the facts presented in the staff report, environmental review, and special studies (if any), and evidence received both in writing and by verbal testimony at the above referenced public hearing support the following findings:

1. All required public notices have been given. Hearing notices regarding the Project were mailed to property owners within 300 feet of the Project area and published in the *Bakersfield Californian*, a local newspaper of general circulation, 20 days prior to the hearing.

2. Staff determined that the proposed activity is a project, and an initial study was prepared for the project Vesting Tentative Tract Map 7431 (Phased) and a Mitigated Negative Declaration was prepared and duly noticed for a public review between August 7, 2023 and September 5, 2023.

3. A Mitigated Negative Declaration for the Project is the appropriate environmental document to accompany its approval. In accordance with the State CEQA Guidelines, staff prepared an initial study and indicated that because mitigation measures relating to cultural resources, seismic, geohazard resources and traffic have been incorporated into the Project, the Project will have a less than significant impact on the physical environment.

4. Urban services are available for the proposed development. The Project is within an area to be served by all necessary utilities and waste disposal systems. Improvements proposed as part of the Project will deliver utilities to the individual lots or parcels to be created.

5. The application, together with the provisions for its design and improvement, is consistent with the Metropolitan Bakersfield General Plan. (Subdivision Map Act Section 66473.5) The proposed density and intensity of development are consistent with the LR (Low Density Residential) land use classification on the property. Proposed road improvements are consistent with the Circulation Element. The overall design of the project, as conditioned, is consistent with the goals and policies of all elements of the General Plan.

6. Mineral right owners' signatures may be waived on the final map pursuant to Bakersfield Municipal Code Section 16.20.060 A.1. The applicant has provided evidence with the Project application that it is appropriate to waive mineral right owners' signatures because in accordance with BMC Section 16.20.060 A.1., the party's right of surface entry has been by recorded document prior to recordation of any final map.

7. In accordance with BMC 16.28.170 H, Paladino Drive, Grand Canyon Drive and Masterson Street function as major streets as shown on the Project, therefore the abutting double frontage lots are reasonable due to controlling factors as traffic, safety, appearance, and setback, and are approved with construction of a 6-foot-high masonry wall separating the residential lots and the major streets.

8. The conditions of approval are necessary for orderly development and to provide for the public health, welfare, and safety.

NOW, THEREFORE, **BE IT RESOLVED** by the Planning Commission of the City of Bakersfield as follows:

1. The recitals above are true and correct and incorporated herein by this reference.

2. The Mitigated Negative Declaration is hereby approved.

3. Vesting Tentative Tract Map 7431 is hereby approved with conditions of approval and mitigation measures shown on Exhibit "A".

I HEREBY CERTIFY that the foregoing Resolution was passed and adopted by the Planning Commission of the City of Bakersfield at a regular meeting thereof held on September 21, 2023, on a motion by Commissioner _____and seconded by Commissioner _____, by the following vote.

AYES:
NOES:
ABSENT:

APPROVED

Zachary Bashirtash, CHAIR
City of Bakersfield Planning Commission

Exhibits (attached):

Exhibit A: Conditions of Approval
Exhibit A-1: Geohazard – Plate 2A
Exhibit B: Location Map
Exhibit C: Vesting Tentative Tract Map 7431 (Phased)

By CCamps\S:\05_Land Division\7431\1PC Docs\Draft\7431_Resolution.docx

EXHIBIT "A"
VESTING TENTATIVE TRACT MAP 7431
CONDITIONS OF APPROVAL

NOTE to Subdivider/Applicant: It is <u>important</u> that you review and comply with requirements and deadlines listed in the "FOR YOUR INFORMATION" packet that is provided separately. This packet contains existing ordinance requirements, policies, and departmental operating procedures as they may apply to this subdivision.

<u>PUBLIC WORKS</u>

1. In a letter dated June 22, 2023, the applicant requested deviations from the following ordinance and policy requirements:
   1.1. Title 16.28.170.H – Request Double frontage lots as follows: Lots 16-40 of Phase 1, Lots 53-55 of Phase 2, Lots 15-31 of Phase 3 & Lots 5-18 of Phase 4. <u>Recommendation:</u> **APPROVE**
   1.2. Title 16.28.170.I – Request walls along side yards adjacent to Arterial Streets as follows: Lots 42, 43, 55 & 57 of Phase 2. <u>Recommendation:</u> **APPROVE**
   1.3. Title 16.28.170.P – Request reversed corner/key lots as follows: Lots 11, 12, 29, 30, 32, 33, 44, 45, 55, 57, 61, 67, 68, 74, & 83 of Phase 2, Lots 1, 2, 12 & 14 of Phase 3, and Lots 48-50 & 56 of Phase 4. <u>Recommendation:</u> **APPROVE**
   1.4. Title 16.28.160.A – Request for block length exceeding 1000 feet. <u>Recommendation:</u> **APPROVE**
   1.5. Section 5.4.2.1b – Request 490 foot radius on local street Fossil Creek Drive. <u>Recommendation:</u> **APPROVE**

2. Approval of this tentative map does not indicate approval of grading, drainage lines and appurtenant facilities shown, or any variations from ordinance, standard, and policy requirements which have neither been requested nor specifically approved.

3. Prior to grading plan review submit the following for review and approval:
   3.1. A drainage study for the entire subdivision, or a revision to the approved study.
   3.2. A sewer study to include providing service to the entire subdivision, including the future park, and showing what surrounding areas may be served by the main line extensions.
   3.3. If the tract is discharging storm water to a canal, a channel, or the Kern River: In order to meet the requirements of the City of Bakersfield's NPDES permit, and to prevent the introduction of sediments from construction or from storm events to the waters of the US, all storm water systems that ultimately convey drainage to the river or a canal shall have a mechanical device in the storm drain system to remove or minimize the introduction of oil, grease, trash, and sediments. This device shall be reviewed and approved by the City Engineer and shall provide the greatest benefit to the storm drain system with the least maintenance cost.

4. The following conditions must be reflected in the design of the improvement plans:
    4.1. Final plan check fees shall be submitted with the first plan check submission.
    4.2. Per Resolution 108-2023 the area within the Tract shall implement and comply with the "complete streets" policy. Complete streets will require pedestrian and bicycle access to the Tract from existing sidewalks and bike lanes. If there is a gap less than ¼ mile then construction of asphalt sidewalks and bike lanes to the tract will be required.
    4.3. Install traffic signal interconnect conduit and pull rope for the frontage in all arterials and collectors. Install conduit and pull ropes in future traffic signal locations.
    4.4. In addition to other paving requirements, on and off-site road improvements may be required from any collector or arterial street to provide left turn and right turn channelization into each street (or access point) within the subdivision (or development), where warranted and as directed by the City Engineer. Said channelization shall be developed to provide necessary transitions and deceleration lanes to meet the current CalTrans standards for the design speed of the roadway in question.
    4.5. Off-site pavement and striping construction will be required to transition from the proposed/ultimate on-site improvements to the existing conditions at the time construction commences. Transitions must be designed in accordance with City Standards and/or the Caltrans Highway Design Manual. If existing conditions change during the period of time between street improvement plan approval and construction commencement, the street improvement plans must be revised and approved by the City Engineer.
    4.6. The storm drain system will need to adhere to current City of Bakersfield standards. Per City of Bakersfield Standard 3.5.3, no cross gutter will be allowed to be used within 300 feet of a storm drain system, unless specifically allowed by the City Engineer.

5. The subdivider shall either construct the equivalent full width landscaped median island in Masterson St for the site's frontage or pay $100 per Linear Feet (their proportionate share of the cost for the future construction of the median). Median islands shall be designed by the first tract or development to be approved on a side.

6. The subdivider is responsible for implementing the following:
    6.1. Right turn deceleration lanes are required on arterials at all streets and access points if the 85th percentile speed is less than 45 mph and the peak hour turning volumes is over 200, or if the 85th percentile speed is 45 mph or greater and the peak hour turning volumes is over 25.
    6.2. Expanded intersections are required at all intersections with collectors and arterials.
    6.3. The phasing map as submitted may be unbalanced with respect to the required improvements along the tract frontages. Therefore, to promote orderly development, each phase shall be responsible for an equal dollar amount of frontage improvement. Prior to recordation of each final map for any phase that does not construct its share of the improvements, the difference between the cost of the frontage improvements constructed and

the phase share shall be placed into an escrow account. The money deposited in this account would be for the use of the developer of any future phase responsible for more than its share of improvements. The final per lot share will be based upon an approved engineer's estimate. In lieu of the use of an escrow account, the developer may choose to construct with each phase its proportionate share of the frontage improvements, with approval of the City Engineer.

6.4. The following conditions are based upon the premise that filing of Final Maps will occur in the order shown on the map with Phase 1 first, then Phase 2, etc. If recordation does not occur in that normal progression, then, prior to recordation of each final map, the City Engineer shall determine the extent of improvements to be done with that particular phase.

6.4.1. The following shall occur with Phase 1:

6.4.1.1. Construct the sidewalk along the North side of Paladino per Arterial standards, from Masterson to Grand Canyon Dr.

6.4.1.2. Construct the landscaping and block wall along Paladino, from Masterson St to the Phase 1/3 boundary.

6.4.1.3. Construct the block wall around the remainder of the sump.

6.4.2. The following shall occur with Phase 2:

6.4.2.1. Construct Masterson St ½ width to City arterial standards, from Paladino Dr to Grand Canyon Dr.

6.4.2.2. Construct Grand Canyon Dr ½ width to City collector standards, from Masterson St to the phase 4 boundary, including the park frontage.

6.4.3. The following shall occur with Phase 3:

6.4.3.1. Construct Grand Canyon Dr ½ width to City collector standards, from Paladino Dr to the Phase 3/4 boundary.

6.4.3.2. Construct a temporary asphalt sidewalk, from the phase 3/4 boundary to the park site, if the park site has been developed

6.4.4. The following shall occur with Phase 4:

6.4.4.1. Construct Grand Canyon Dr ½ width to City collector standards, from the phase 3/4 boundary to the phase westerly phase 4 boundary.

If the number of phases or the boundaries of the phases are changed, the developer must submit to the City Engineer an exhibit showing the number and configuration of the proposed phases. The City Engineer will review the exhibit and determine the order and extent of improvements to be constructed with each new phase. The improvement plans may require revision to conform to the new conditions.

6.5. The subdivider is responsible for verifying that existing streets within the boundary of the tract are constructed to city standards and he will reconstruct streets within the boundary if not to standard.

6.6. Where streets do not have curb and gutter, construct a minimum section of 36 feet wide consisting of 2-12' lanes, 2-4' paved shoulders and 2 additional feet per side of either AC or other dust proof surface.

6.7. The use of interim, non-standard drainage retention areas shall be in accordance with the drainage policy adopted by letter dated January 24, 1997, and update letter dated October 20, 2000.
6.8. In order to preserve the permeability of the sump and to prevent the introduction of sediments from construction or from storm events, Best Management Practices for complying with the requirements of the Clean Water Act are required.
6.9. All lots with sumps and water well facilities will have wall and landscaping to the appropriate street standards, at the building setback with landscaping as approved by the Public Works and Parks Directors. Public access to public sumps for maintenance shall be provided by public streets unless otherwise approved.
6.10. Drainage basins shall be reviewed and approved by both the Public Works Department and the Water Resources Department.
6.11. Prior to acceptance of the sump, the following items shall be required:
6.11.1. Current Boring Logs
6.11.2. 7-day percolation test
6.11.3. Adequate access to the sump, to the satisfaction of the Water Department
6.11.4. A current drainage study
6.11.5. Block Walls shall be constructed per current City Standards
6.11.6. Approval of the outlet structures and locations.
6.12. Install blue markers in the street at the fire hydrants per the Fire Department requirements.

7. The following must be reflected in the final map design:
7.1. A waiver of direct access shall be required for all lots abutting any arterials and collectors.

8. Prior to the recordation of the first final map within this project site, subdivider shall make written notification to the City Engineer of any public improvements required to be financed or constructed outside the boundaries of the tentative map(i.e., "offsite improvements"), as defined in BMC 16.16.080(E), and the cost of such offsite improvements. The notice shall include an engineer's estimate or other documentation as required by the City Engineer that outlines by line item the specific offsite improvements for purposes of verifying extension of time eligibility pursuant to Government Code Section 66452.6(a). The written notification and documentation are subject to approval by the City Engineer or his/her designee.

9. Prior to recording the first final map:
9.1. The City Council must have taken final action for inclusion of this tract within the Consolidated Maintenance District.
9.2. The developer is required to construct an improvement which is on the facilities list for the Metropolitan Bakersfield Transportation Impact Fee Masterson St. The developer shall receive credit against his traffic impact fees for constructing this project. The developer must submit an appraisal, to be approved by the City Engineer, verifying the cost of the right-of-way to be

acquired. This credit is not available until the improvement has been constructed by the developer and accepted for maintenance by the City. Any building permit issued prior to this acceptance shall pay the full impact fee.

9.3. If it becomes necessary to obtain any off site right of way and if the subdivider is unable to obtain the required right of way, then he shall pay to the City the up-front costs for eminent domain proceedings and enter into an agreement and post security for the purchase and improvement of said right of way.

10. Prior to recording each final map:
    10.1. All facilities within the boundaries of this subdivision identified by the approved drainage study shall be constructed in accordance with the plans approved by the City Engineer, and all easements required shall be provided.
    10.2. The subdivider shall submit an enforceable, recordable document approved by the City Attorney to be recorded concurrently with the Final Map which will prohibit occupancy of any lot until all improvements have been completed by the subdivider and accepted by the City.
    10.3. The subdivider shall submit an enforceable, recordable document approved by the City Attorney to be recorded concurrently with the Final Map containing information with respect to the addition of this subdivision to the consolidated maintenance district. Said covenant shall also contain information pertaining to the maximum anticipated annual cost per single family dwelling for the maintenance of landscaping associated with this tract. Said covenant shall be provided to each new property owner through escrow proceedings. If the parcel is already within a consolidated maintenance district, the owner shall update the maintenance district documents, including a Proposition 218 Ballot and Covenant, which shall be signed and notarized.

11. Prior to Notice of Completion:
    11.1. The storm drain system, including the sump, shall be inspected and any debris removed.

12. This subdivision is located within the Breckenridge Planned Drainage area per Resolution 136-05 and is subject to fees. Pay such fees prior to building permit issuance.

<u>FIRE SAFETY DIVISION</u>

13. Pipeline Easements.
    13.1Concurrently with recordation of any phase that includes the pipeline easements or portions thereof, subdivider shall show the easements on the final map with a notation that structures including accessory buildings, habitable portion of a structure, garage, deck/patio, swimming pools or unoccupied

permanent structure, are prohibited within the setback and record a corresponding covenant.

13.2 Prior to or concurrently with recordation of any phase that includes the pipeline easements or portions thereof, subdivider shall show on the final map that no habitable portion of a structure, garage, deck/patio, swimming pools or unoccupied permanent structure may be built within 50 feet of a gas main, or transmission line, or refined liquid product line with 36 inches of cover and record a corresponding covenant.

13.3 No structure may be within 40 feet of a hazardous liquids pipeline bearing refined product, within 48 inches or more of cover. If a pipeline meets these criteria, the 40-foot setback line shall be shown in the final map and a corresponding covenant shall be recorded prior to or concurrently with recordation of any phase that is affected.

13.4 No habitable portion of a structure may be built within thirty (30) feet of a crude oil pipeline operating at twenty percent (20%) or greater of its design strength.

13.5 Prior to or concurrently with recordation of any phase within 250 feet of the pipeline easements, subdivider shall record a covenant disclosing the location of the pipelines on all lots of this subdivision within 250 feet of the pipelines.

American Petroleum Institute Standards and Guidelines for property development

14. Fire Apparatus Access Roads and Hydrants

14.1 When fire protection, including fire apparatus access roads and water supplies for protection, is required to be installed, such shall be installed and made serviceable prior to any building permit issuance and throughout the time of construction.

14.2 Dead-End fire apparatus access roads in excess of 150 feet shall be provided with width and turnaround provisions in accordance with Table D103.4

(*California Fire Code*)

Table D103.4

Requirments for Dead-End Fire Apparatus Access Roads

Length (Feet)	Width (Feet)	Turnaround Required
0-150	20	None required
151-500	20	120-foot Hammerhead, 60-foot "Y" or 96-foot diameter cul-de-sac
501-750	26	120-foot Hammerhead, 60-foot "Y" or 96-foot diameter cul-de-sac
Over 750	Special Approval Required	

14.3 Fire Apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus weighing at least 75,000 pounds and shall be surfaced with the first lift of asphalt to provide all-weather driving capabilities.

RECREATION AND PARKS

15. Prior to recordation of each final map, the subdivider shall pay an in-lieu fee based on a park land dedication requirement of 2.5 acres per 1000 population in accordance with Chapter 15.80 of the Bakersfield Municipal Code. If the number of dwelling units increases or decreases upon recordation of a final map(s), the park land requirement will change accordingly. Refer to BMC Chapter 15.80 and the Planning Information Sheet regarding calculation and payment of in-lieu fee. In accordance with Government Code Section 66020 (d), you are hereby notified that the 90-day period in which you may protest the imposition of this fee has begun.

    BMC Chapter 15.80 requires the Planning Commission to determine if a subdivider is to dedicate park land, pay an in-lieu fee, reserve park land or a combination of these in order to satisfy the City's park land ordinance subject to Government Code Section 66020(d). Staff is recommending this condition in accordance with BMC Chapter 15.80.

16. Subdivider shall be responsible for improving streets adjacent to the park site to City standards.

    Orderly development.

17. Prior to recordation of final map, the subdivider shall construct a 7-foot masonry wall along the park boundary adjacent to residential lots as shown on the tentative tract. Wall to be measured from the highest adjacent grade.

    Orderly development

18. Subdivider shall provide utility services to the park site, including electrical, water line, sewer lateral and storm drain. Confirm with City for required sizes.

    Orderly development

19. Subdivider shall provide detailed grading cross-sections for park-site for perimeter boundaries.

    Orderly development

20. Subdivider shall provide an acceptable leveled surface grade of park site approved by grading plan. Park site shall not be used for dump site of exported fill from grading operations.

    Orderly development

21. Final park site shall be clear of debris and any deleterious materials.

Orderly development

CITY ATTORNEY

22. In consideration by the City of Bakersfield for land use entitlements, including but not limited to related environmental approvals related to or arising from this project, the applicant, and/or property owner and/or subdivider ("Applicant" herein) agrees to indemnify, defend, and hold harmless the City of Bakersfield, its officers, agents, employees, departments, commissioners and boards ("City" herein) against any and all liability, claims, actions, causes of action or demands whatsoever against them, or any of them, before administrative or judicial tribunals of any kind whatsoever, in any way arising from, the terms and provisions of this application, including without limitation any CEQA approval or any related development approvals or conditions whether imposed by the City, or not, except for CITY's sole active negligence or willful misconduct.

    This indemnification condition does not prevent the Applicant from challenging any decision by the City related to this project and the obligations of this condition apply regardless of whether any other permits or entitlements are issued.

    The City will promptly notify Applicant of any such claim, action or proceeding, falling under this condition within thirty (30) days of actually receiving such claim. The City, in its sole discretion, shall be allowed to choose the attorney or outside law firm to defend the City at the sole cost and expense of the Applicant and the City is not obligated to use any law firm or attorney chosen by another entity or party.

PLANNING

23. This subdivision shall comply with all provisions of the Bakersfield Municipal Code, and applicable resolutions, policies and standards in effect at the time the application for the subdivision map was deemed complete per Government Code Section 66474.2.

24. The subdivision shall be recorded in no more than 5 phases. Phases shall be identified numerically and not alphabetically.

    Orderly development

25. Prior to recordation of each final map, subdivider shall submit a "will serve" or "water availability" letter or other documentation acceptable to the Planning Director from the water purveyor stating the purveyor will provide water service to the phase to be recorded.

    Required for orderly development and provide for the public health, welfare and safety by ensuring water service to the subdivision at the time of final map recordation because the water purveyor has included an expiration date in the initial "will serve" letter.

26. In the event a previously undocumented well is uncovered or discovered on the project site, the subdivider is responsible to contact the Department of Conservation's Division of Geologic Energy Management (CalGEM). The subdivider is responsible for any remedial operations on the well required by CalGEM. Subdivider shall also be subject to provisions of BMC Section 15.66.080 (B.)

    Police power based on public health, welfare and safety.

27. Mineral Rights: Prior to recordation of the first final map, the following shall apply:

    a. Subdivider shall submit written evidence that waiver(s) of surface entry has been obtained from 100% of the mineral right interest(s) for the entire area of this tract. Written evidence shall be submitted to the Planning Director in the form of a recorded document such as a grant deed or other instrument approved by the City Attorney. The proposed lots shown underlying the drill site shall be allowed to record subject all other conditions of approval of the tentative map.

    Required to verify compliance with BMC Section 16.20.060 A. and orderly development.

28. Prior to recordation of Phase 2, subdivider shall construct a masonry wall and landscaping that match the subdivision's perimeter wall along Masterson Street and Grand Canyon Drive adjacent to these side yards:

    - Phase 2, Lots 42, 43, 55 and 57

    Orderly development

29. Prior to recordation of Phase 1, subdivider shall construct a minimum six (6) foot high masonry wall between the residential lots abutting the Cal Water Booster Pump lot. Wall shall be measured from highest adjacent side.

    Police power based on public health, welfare and safety.

30. Prior to recordation of a phase containing the Alquist-Priolo (Seismic) zone, subdivider shall record a covenant on a lot within the Alquist-Priolo (Seismic) zone to a) disclose a portion of the lot has been identified as an Alquist-Priolo (Seismic) area and b) all habitable structures are prohibited within areas identified as Alquist-Priolo (Seismic) zones.

    Police power based on public health, welfare and safety.

Cultural Resources Impact Mitigation Measures:

31. During construction, if cultural resources are encountered during construction or ground disturbance activities, all work shall immediately cease, and the area cordoned off until

a qualified cultural resource specialist can evaluate the find and make recommendations. Project is subject to any recommendations of the qualified specialist.

32. During construction, if human remains are discovered, further ground disturbance shall be prohibited pursuant to California Health and Safety Code Section 7050.5. and Public Resources Code Sections 5097.94, 5097.98 and 5097.99.

Geology and Soils Impact Mitigation Measures:

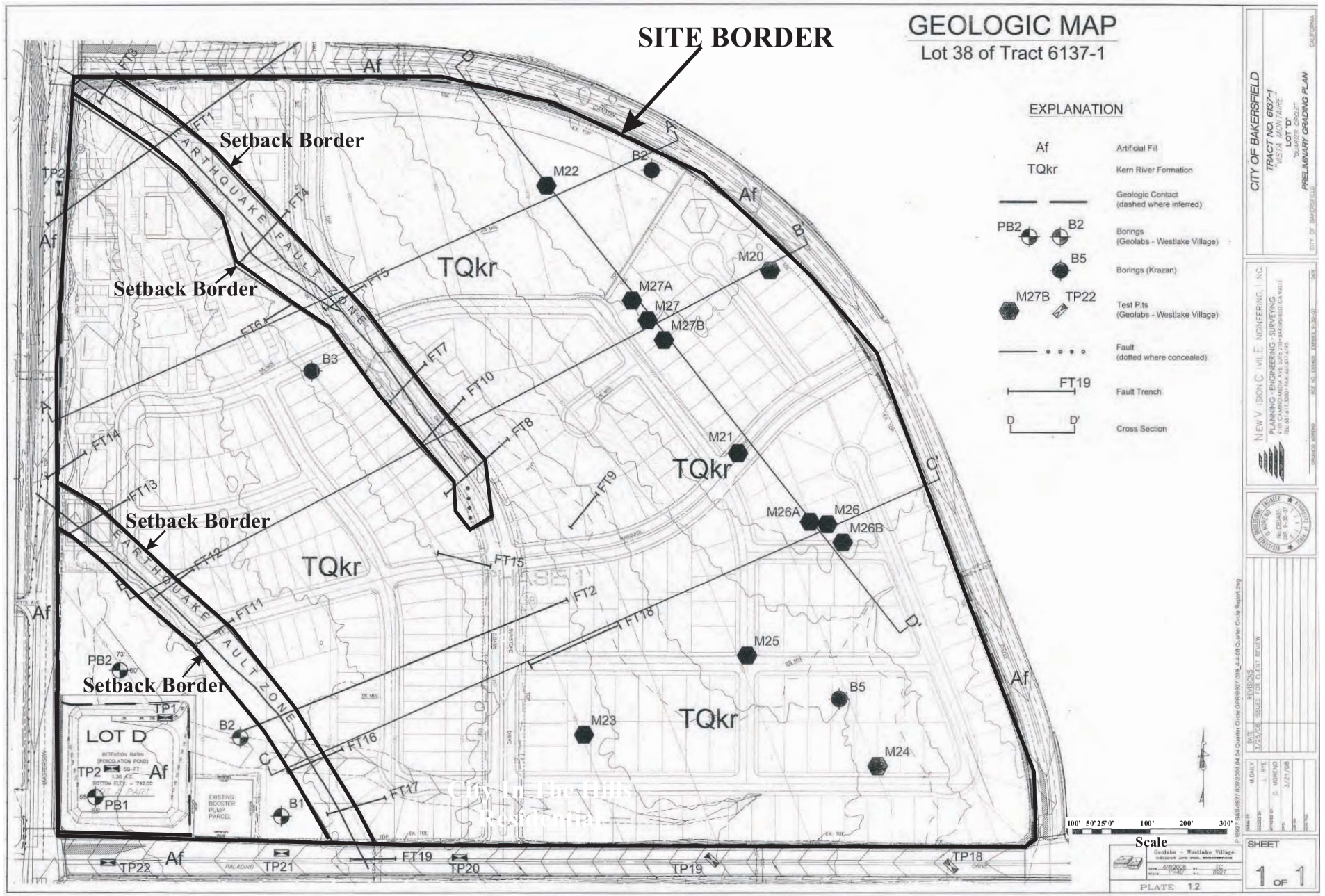
33. Development of the project site shall comply with the setback of a minimum of 50-feet from each of the two faults identified on Plates 2 and 2A of "Geological Hazard Report for Lot 38, Tract 6137 (SEI, 2019)" (attached) where no structures for human habitation may be located.

34. If structures for human occupancy are proposed for other areas within the fault zones and outside the areas studied by this report, additional geological investigation needs to be conducted.

Traffic/Circulation Impact Mitigation Measures:

35. Prior to issuance of building permits, the applicant/developer shall pay the Regional Transportation Impact Fee Program.

36. Prior to issuance of building permits and if necessary, as determined by the City Engineer, the applicant/developer shall obtain a street permit or get approved a Traffic Control Plan from the City Public Works Department.



From Geolabs, Grading Plan Review and Updated Seismic, Foundation, and Retaining Wall Design Criteria, dated April 4, 2008

SEI File No. 17222
September 2019

Geologic Map
Lot 38, Tract 6137
Northeast of Paladino Dr. & Masterson St.
Bakersfield, CA

Plate 2A

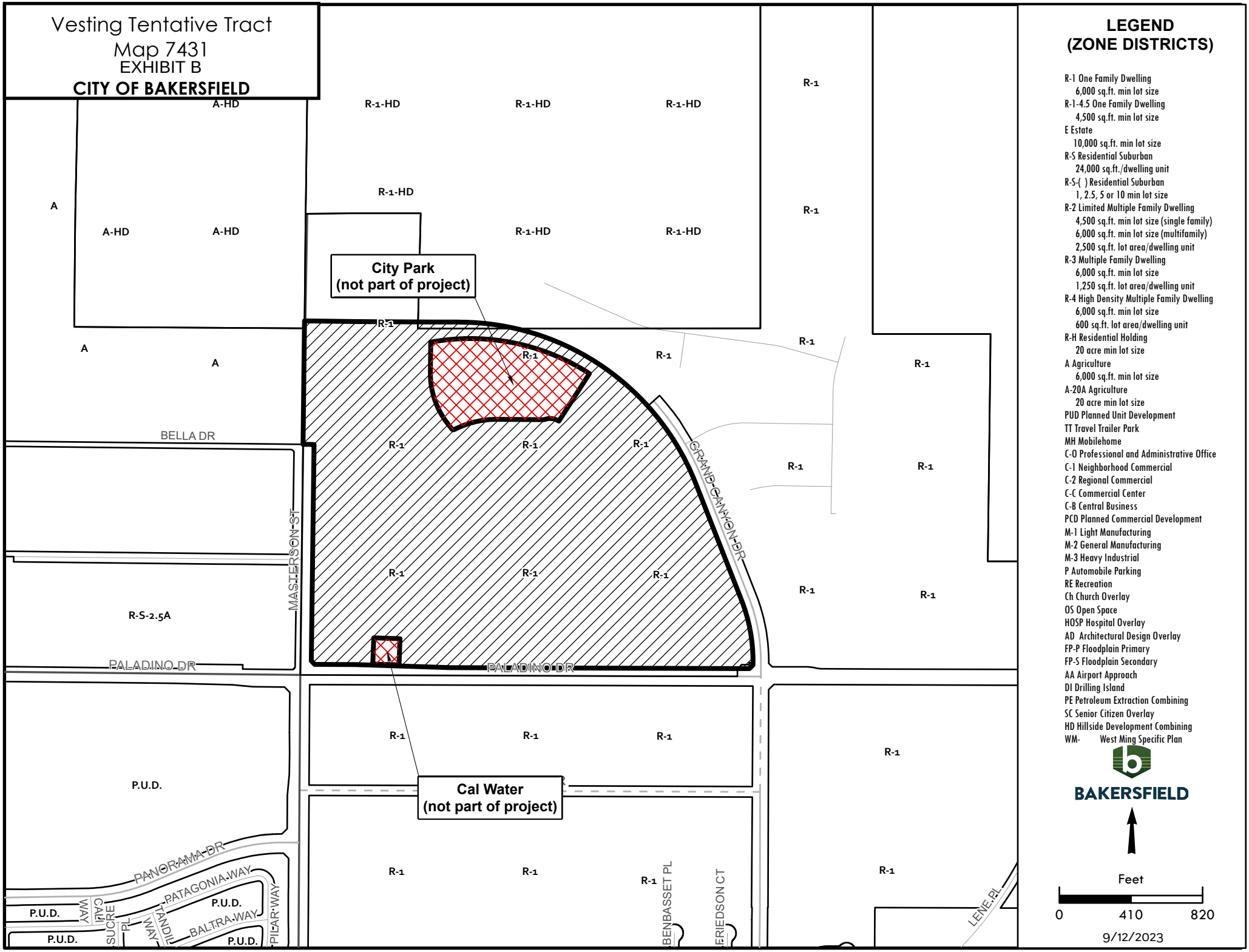

Vesting Tentative Tract
Map 7431
EXHIBIT B
CITY OF BAKERSFIELD
City Park
(not part of project)
Cal Water
(not part of project)
BELLA DR
PALADINO DR
PALADINO DR
MASTERSON ST
GRAND CANYON DR
PANORAMA DR
PATAGONIA WAY
BALTRA WAY
PILAR WAY
BENBASSET PL
FRIEDSON CT
LENE PL
A
A-HD
R-1-HD
R-1
R-S-2.5A
P.U.D.
LEGEND
(ZONE DISTRICTS)
R-1 One Family Dwelling
6,000 sq.ft. min lot size
R-1-4.5 One Family Dwelling
4,500 sq.ft. min lot size
E Estate
10,000 sq.ft. min lot size
R-S Residential Suburban
24,000 sq.ft./dwelling unit
R-S-( ) Residential Suburban
1, 2.5, 5 or 10 min lot size
R-2 Limited Multiple Family Dwelling
4,500 sq.ft. min lot size (single family)
6,000 sq.ft. min lot size (multifamily)
2,500 sq.ft. lot area/dwelling unit
R-3 Multiple Family Dwelling
6,000 sq.ft. min lot size
1,250 sq.ft. lot area/dwelling unit
R-4 High Density Multiple Family Dwelling
6,000 sq.ft. min lot size
600 sq.ft. lot area/dwelling unit
R-H Residential Holding
20 acre min lot size
A Agriculture
6,000 sq.ft. min lot size
A-20A Agriculture
20 acre min lot size
PUD Planned Unit Development
TT Travel Trailer Park
MH Mobilehome
C-O Professional and Administrative Office
C-1 Neighborhood Commercial
C-2 Regional Commercial
C-C Commercial Center
C-B Central Business
PCD Planned Commercial Development
M-1 Light Manufacturing
M-2 General Manufacturing
M-3 Heavy Industrial
P Automobile Parking
RE Recreation
Ch Church Overlay
OS Open Space
HOSP Hospital Overlay
AD Architectural Design Overlay
FP-P Floodplain Primary
FP-S Floodplain Secondary
AA Airport Approach
DI Drilling Island
PE Petroleum Extraction Combining
SC Senior Citizen Overlay
HD Hillside Development Combining
WM- West Ming Specific Plan
BAKERSFIELD
Feet
0
410
820
9/12/2023

EXHIBIT C

VESTING TENTATIVE TRACT No. 7431

BEING A SUBDIVISION OF PARCEL 1 OF PARCEL MAP NO. 12334,
PARCEL MAP BOOK 62, PAGES 135–142;
ALSO BEING A PORTION OF THE SOUTHWEST QUARTER OF SECTION 9, TOWNSHIP 29 SOUTH, RANGE 29 EAST, M.D.M.,
IN THE CITY OF BAKERSFIELD, COUNTY OF KERN, STATE OF CALIFORNIA.
CONTAINING 299 RESIDENTIAL LOTS, 9 LANDSCAPE LOTS, 1 SUMP LOT AND 1 EXISTING DRAINAGE BASIN
95.21 ACRES

PROPERTY OWNER/SUBDIVIDER:
VISTA MONTAIRE LLC,
532 CAMINO MERCADO,
ARROYO GRANDE, CA 93420
CONTACT: JANET AXELSEN
PHONE: (805) 481–4033

ENGINEER:
McINTOSH & ASSOCIATES
10800 STOCKDALE HWY., SUITE 103
BAKERSFIELD, CA 93311
CONTACT: SAM WALKER
PHONE: (661) 834–4814

STATISTICS:

A.P.N.:	386–050–47, 54, 59 & 62
SITE ACREAGE:	95.21 ACRES (GROSS)
NET DENSITY:	62.70 BUILDABLE ACRES (NET) 299 BUILDABLE LOTS (6,000 SF MIN.) 4.77 D.U. PER ACRE
ZONING:	R–1, R–1–HD
LAND USE:	
EXISTING:	VACANT
PROPOSED:	SINGLE FAMILY RESIDENTIAL
UTILITIES:	
CABLE:	AT&T FIBER, SPECTRUM AND EARTHLINK FIBER
ELECTRIC:	P.G. & E.
GAS:	P.G. & E.
SEWER:	CITY OF BAKERSFIELD
TELEPHONE	AT&T AND SPECTRUM
WATER:	CALIFORNIA WATER SERVICE
SCHOOL DISTRICT:	BAKERSFIELD CITY SCHOOL DISTRICT
SCHOOL:	FLETCHER ELEMENTARY SCHOOL CATO MIDDLE SCHOOL HIGHLAND HIGH SCHOOL

FLOOD ZONE: X
FIRM PANEL NO.: 06029CC1861E

PHASING:
THE NUMBERING OF THE PHASES ARE FOR IDENTIFICATION PURPOSES AND DO NOT NECESSARILY IMPLY THE ORDER OF DEVELOPMENT. THIS TRACT WILL BE DEVELOPED IN UP TO 4 PHASES.

GENERAL NOTES:

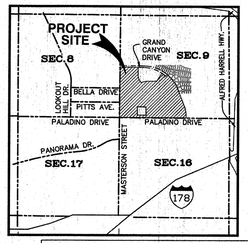
A. ALL ROAD IMPROVEMENTS AND DRAINAGE IN THIS SUBDIVISION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS ESTABLISHED BY THE CITY OF BAKERSFIELD.
B. IT IS ANTICIPATED THAT THE GRADING OF THIS TRACT WILL BE WITHIN THE AMOUNTS OUTLINED WITHIN SECTION 16.16.030(0) OF THE MUNICIPAL CODE.
C. THIS TRACT SHALL FOLLOW THE "COMPLETE STREET" POLICY PER RESOLUTION 035–13. STREET NAME SIGNS SHALL BE INSTALLED PER C.O.B. STD. T–1.
D. A 10' PUBLIC UTILITY EASEMENT (P.U.E.) IS PROPOSED AND IS LOCATED ON ALL FRONT AND SIDE YARDS ADJACENT TO INTERNAL STREETS.
E. ALL RETURN RADII ARE 20' UNLESS OTHERWISE NOTED. ALL CUL–DE–SAC AND KNUCKLE RETURN RADII ARE 25' UNLESS OTHERWISE NOTED.
F. ALL KNUCKLE RADIUS ARE 92' UNLESS OTHERWISE NOTED.
G. PAVEMENT STRUCTURES SHALL BE BASED ON SOILS REPORT DURING THE DESIGN PROCESS.
H. VESTING TENTATIVE TRACT 7413 IS LOCATED WITHIN BRECKENRIDGE PDA PER RESOLUTION 136–05.
I. FOR THE PURPOSE OF SUBMITTING THIS TENTATIVE MAP SUBDIVISION APPLICATION, THE CITY IS NEUTRAL TO THE SUBDIVIDER'S PROPOSAL TO RECONFIGURE THE EXISTING PARK SITE. A RECOMMENDATION WILL BE PROVIDED TO THE PLANNING COMMISSION FOR THEIR CONSIDERATION AT A PUBLIC HEARING.
J. NOTE TO PLANNING DEPARTMENT
RE: ALTERNATE STREET NAMES
THE FOLLOWING STREET NAMES ARE PROVIDED AS SUBSTITUTIONARY ALTERNATES. PLEASE CONSIDER THESE NAMES IN THE ORDER THEY ARE HEREBY SUBMITTED TO REPLACE NAMES ON THE MAP THAT MAY NOT BE ACCEPTABLE.
1. BLACK PEARL 2. TURQUOISE 3. EMERALD

MONUMENT LEGEND:

MON A CONC. MON. WITH BRASS CAP STAMPED "REPLACED 11/29/95", IN HWY WELL, FOR SW CORNER SEC. 9–29/29, PER TRACT MAP NO. 6137, BK. 58 OF MAPS, PGS. 157–161, K.C.R.
MON B CONC. MON. WITH BRASS CAP STAMPED "LS 7214", IN HWY WELL, PER RECORD OF SURVEY NO. 3910, BK. 33 OF RECORD OF SURVEYS, PG. 23. K.C.R.
MON C 5/8" REBAR WITH CAP, STAMPED "LS 7214", PER TRACT MAP NO. 6137 PHASE 2, BK. 65 OF MAPS, PGS. 79–85, K.C.R.
MON D 5/8" REBAR WITH CAP, STAMPED "LS 7214", PER PARCEL MAP NO. 12334, BK. 62 OF PARCEL MAPS, PGS. 135–142, K.C.R.
MON E NAIL AND TAG IN CONCRETE, STAMPED "LS 7214", IN LIEU OF A REBAR PER PARCEL MAP 12334, BK. 62 OF PARCEL MAPS, PGS. 135–142, K.C.R., ACCEPTED AS THE NORTHWEST CORNER OF THE BOOSTER PUMP PARCEL AS SHOWN ON PARCEL MAP 12334.
MON F REBAR AND CAP STAMPED "LS 7214" PER TRACT MAP NO. 6137 PHASE 2, M.B. 65, PG. 79.

EASEMENT LEGEND:

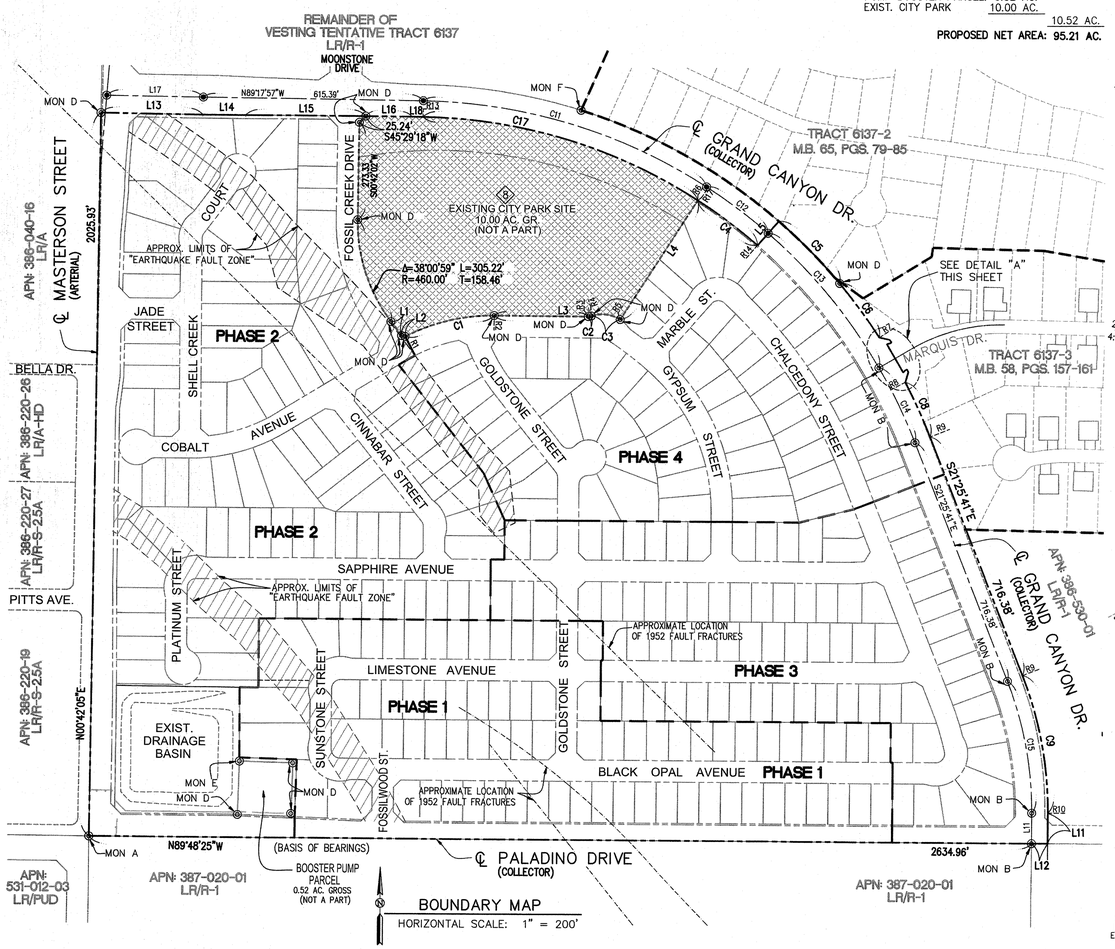
1. STREET RIGHT–OF–WAY DEED TO CITY OF BAKERSFIELD, RECORDED JUNE 8, 2018 PER DOCUMENT NO. 218071568, O.R.
2. SEWER LINE EASEMENT TO CITY OF BAKERSFIELD RECORDED MARCH 21, 1994 IN BOOK 7005, PAGE 2431, O.R.
3. ACCESS EASEMENT TO CALIFORNIA WATER SERVICE COMPANY, RECORDED AUGUST 22, 2005 PER DOCUMENT NO. 0205226495, O.R.
4. SLOPE AND DRAINAGE EASEMENT TO CALIFORNIA WATER SERVICE COMPANY, RECORDED AUGUST 22, 2005 PER DOCUMENT NO. 0205226500, O.R.
5. STORM DRAIN EASEMENT TO CITY OF BAKERSFIELD, RECORDED JANUARY 18, 2006 PER DOCUMENT NO. 0206013555, O.R.
6. STREET RIGHT–OF–WAY DEED TO CITY OF BAKERSFIELD, RECORDED NOVEMBER 13, 2006 PER DOCUMENT NOS. 0206281012.
7. 30' WIDE EASEMENT IN FAVOR OF SOUTHERN CALIFORNIA EDISON PER BOOK 161, PAGE 352, O.R.
8. GRANT DEED TO THE CITY OF BAKERSFIELD FOR PARK SITE, PARK STAGING, ACCESS ROAD EASEMENTS, HIKING TRAIL EASEMENT, RECORDED MARCH 17, 2008 PER DOCUMENT NO. 0208040416 AND RE–RECORDED MAY 30, 2013 PER DOCUMENT NO. 0213075862, O.R.
9. PUBLIC UTILITY EASEMENT TO PACIFIC GAS AND ELECTRIC COMPANY, RECORDED APRIL 16, 2018 PER DOCUMENT NO. 218044799, O.R. (APPROXIMATE LOCATION)
10. 55' PUBLIC ROAD EASEMENT PER BOOK 4957, PAGE 159, O.R.
11. 55' PUE EASEMENT GRANTED TO PACIFIC TELEPHONE AND TELEGRAPH COMPANY THE RIGHT TO CONSTRUCT AND INSTALL COMMUNICATION FACILITIES, AND THE RIGHT TO MAINTAIN, INSPECT, REPAIR, REPLACE, REMOVE, USE, OPERATE AND PATROL SAID FACILITIES RECORDED AUGUST 17, 1955 PER BOOK 2475, PAGE 34, O.R. (EXACT LOCATION CAN NOT BE ASCERTAINED)
12. STREET RIGHT–OF–WAY DEED TO CITY OF BAKERSFIELD, RECORDED NOVEMBER 13, 2006 PER DOCUMENT NOS. 0206281013.



CURVE TABLE				
NO.	LENGTH	RADIUS	TANGENT	DELTA
C1	258.23'	530.00'	131.73'	27°54'56"
C2	8.69'	25.00'	4.39'	19°55'16"
C3	84.22'	92.00'	45.32'	52°27'06"
C4	209.70'	1455.00'	105.03'	08°15'27"
C5	243.32'	1545.00'	121.91'	09°01'25"
C6	187.35'	1545.00'	93.79'	06°56'53"
C7	13.63'	32.00'	6.92'	24°23'56"
C8	168.02'	1545.00'	84.09'	06°13'52"
C9	394.92'	1045.00'	199.59'	21°37'32"
C10	13.63'	32.00'	6.92'	24°23'54"
C11	838.70'	1500.02'	430.63'	32°02'08"
C12	216.18'	1500.00'	108.28'	08°15'28"
C13	488.77'	1500.00'	246.57'	18°40'11"
C14	233.12'	1500.00'	116.80'	08°54'17"
C15	377.44'	1000.00'	190.99'	21°37'32"

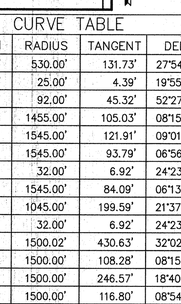
LINE TABLE			LINE TABLE		
LINE	BEARING	LENGTH	LINE	BEARING	LENGTH
L1	S37°18'57"E	49.27'	L10	S16°40'09"W	30.11'
L2	S77°11'57"E	10.39'	L11	S00°11'52"W	85.14'
L3	S89°33'28"E	262.90'	L12	S89°48'25"W	45.00'
L4	N32°44'16"E	398.60'	L13	S89°17'58"E	285.25'
L5	S40°59'55"W	90.00'	L14	S89°41'28"E	120.00'
L6	N77°20'22"W	30.14'	L15	S89°41'29"E	335.89'
L7	S30°20'07"E	8.84'	L16	N89°41'29"W	129.31'
L8	S30°20'07"E	91.72'	L17	N89°17'58"W	270.00'
L9	S30°20'07"E	8.84'	L18	S89°17'58"E	30.76'

RADIAL TABLE		RADIAL TABLE	
RAD	DIRECTION	RAD	DIRECTION
R1	S27°28'24"E	R11	S30°18'52"E
R2	N00°26'32"E	R12	N30°19'12"W
R3	N00°26'39"E	R13	S00°42'02"W
R4	S19°28'37"E	R14	N40°59'55"E
R5	N32°58'29"E	R15	S05°54'56"E
R6	N32°44'10"E	R16	N54°43'06"W
R7	N56°58'12"E	R17	N32°44'28"E
R8	N62°20'27"E	R18	S30°18'52"E
R9	N68°34'19"E	R19	N30°19'12"W
R10	S89°48'09"E		



BOUNDARY MAP
HORIZONTAL SCALE: 1" = 200'

EXISTING AREA:	105.73 AC.
LESS:	
PUMP BOOSTER PARCEL:	0.52 AC.
EXIST. CITY PARK	10.00 AC.
	10.52 AC.
PROPOSED NET AREA:	**95.21 AC.**



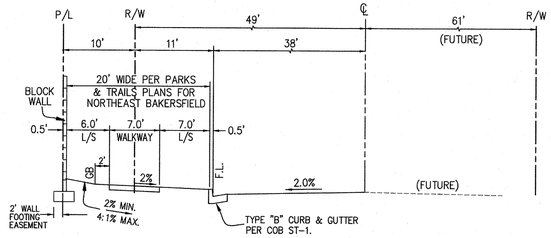
LEGEND:

ABBREVIATIONS

SF	SQUARE FEET
D.U.	DWELLING UNIT
AC.	ACRES
M1	SEE MONUMENT LEGEND
ST	STREET
L.S.	LANDSCAPE
◉	MONUMENT TO BE SET
◎	FOUND MONUMENT AS DESCRIBED
┼	EXISTING STREET NAME SIGN
Ⓢ	EXISTING SEWER MANHOLE
ⓒ	EXISTING SEWER CLEANOUT
Ⓓ	EXISTING STORM DRAIN MANHOLE

LEGEND (CONT'D.):

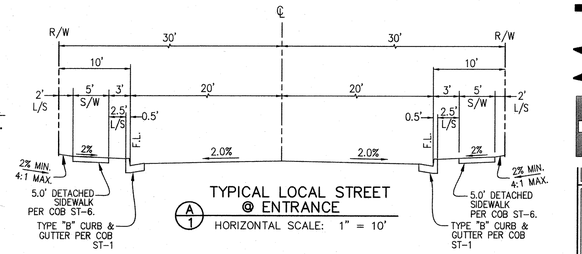
OH	EXISTING OVERHEAD POWER LINE
S	EXISTING SEWER LINE
D	EXISTING STORM DRAIN LINE
W	EXISTING WATER LINE
T	EXISTING TELEPHONE LINE
G	EXISTING GAS LINE
E	EXISTING UTILITY TRENCH
	EXISTING EDGE OF PAVEMENT
X	EXISTING CHAIN LINK FENCE
×777.4	EXISTING SPOT ELEVATION
778	EXISTING GROUND CONTOUR
D	PROPOSED STORM DRAIN
	PHASE LINE
	TRACT BOUNDARY
0.20% (MIN)	DIRECTION DRAINAGE AND APPROXIMATE GRADE
	WAIVER OF DIRECT ACCESS DEDICATED PER FINAL MAP
	PROPOSED CATCH BASIN
Ⓓ	PROPOSED DRAIN MANHOLE
	EXISTING CITY PARK BOUNDARY
3	SEE EASEMENT LEGEND
	EXISTING CITY PARK SITE (10.0 AC.)



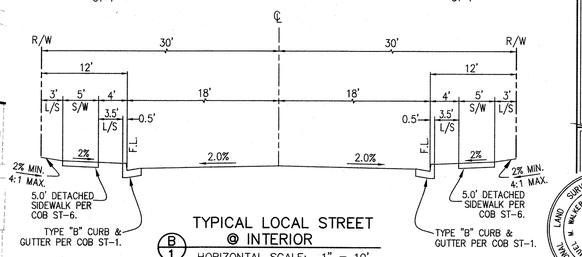
F/1 GRAND CANYON DRIVE
HORIZONTAL SCALE: 1" = 10'

PHASE LOTS:

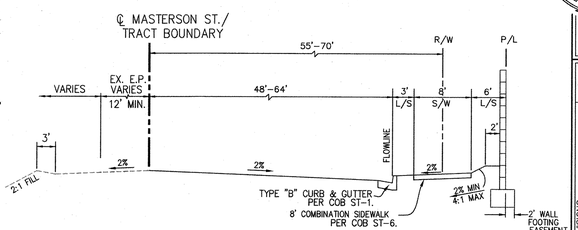
PHASE	NO. LOTS	BUILDABLE ACRES	D.U. PER ACRES	L.S. LOT	EX. DRAINAGE BASIN LOT	SUMP LOT	NOT A PART	
							EX. CALWATER PARCEL	CITY PARK
1	74	13.24	5.59	2	–	–	–	–
2	83	22.72	3.65	4	1	1	1	–
3	78	13.02	5.99	2	–	–	–	–
4	64	13.72	4.66	1	–	–	–	1
TOTAL	**299**	**62.70**	**4.77**	**9**	**1**	**1**	**1**	**1**



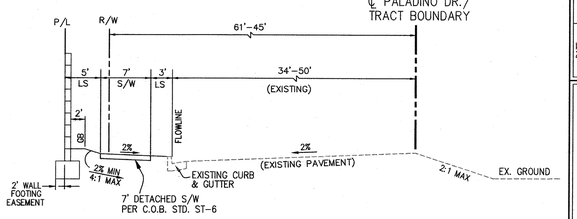
A/1 TYPICAL LOCAL STREET @ ENTRANCE
HORIZONTAL SCALE: 1" = 10'



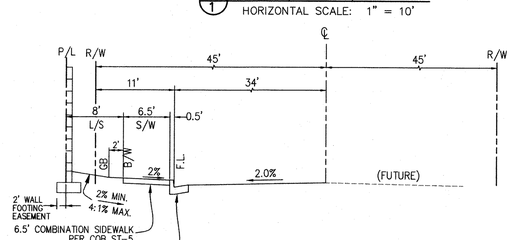
B/1 TYPICAL LOCAL STREET @ INTERIOR
HORIZONTAL SCALE: 1" = 10'



C/1 MASTERSON STREET
(ARTERIAL)
HORIZONTAL SCALE: 1" = 10'



D/1 PALADINO DRIVE
(COLLECTOR)
HORIZONTAL SCALE: 1" = 10'



E/1 GRAND CANYON DRIVE
HORIZONTAL SCALE: 1" = 10'

NOTE: ALL STREET PAVEMENT STRUCTURES SHALL BE BASED ON SOILS REPORT.

811 Know what's below. Call before you dig.

CITY RECORDS NO:

McINTOSH & ASSOCIATES
NEW GEN ENGINEERING GROUP
10800 STOCKDALE HWY, STE. 103
BAKERSFIELD, CALIFORNIA 93311
(661) 834 – 4814 ©2023
JOB NO: 22054.00
DATE: 6/22/23
DRAWN BY: SLU
ISSUED FOR:
REVISIONS
BY:
DATE:

PROFESSIONAL LAND SURVEYOR SAMUEL M. WALKER JR. No. 7525 STATE OF CALIFORNIA
DATE: 11 Dec 2023

VEST. TENT. TR. NO. 7431
POR. OF THE SW QTR. OF SEC. 9, T.29S., R.29E., M.D.M.
COVER SHEET

AutoCAD FILE: 22054T01

SHEET 1 OF 2 SHEETS

EXHIBIT C

VESTING TENTATIVE TRACT No. 7431

BEING A SUBDIVISION OF PARCEL 1 OF PARCEL MAP NO. 12334, PARCEL MAP BOOK 62, PAGES 135–142; ALSO BEING A PORTION OF THE SOUTHWEST QUARTER OF SECTION 9, TOWNSHIP 29 SOUTH, RANGE 29 EAST, M.D.M., IN THE CITY OF BAKERSFIELD, COUNTY OF KERN, STATE OF CALIFORNIA.

NOTE:
1. FOR BOUNDARY DIMENSIONS, PLEASE REFER TO SHEET 1.

PHASE LOTS:

PHASE	NO. LOTS	BUILDABLE ACRES	D.U. PER ACRES	L.S. LOT	EX. DRAINAGE BASIN LOT	SUMP LOT	NOT A PART: EX. CALWATER PARCEL	NOT A PART: CITY PARK
1	74	13.24	5.59	2	–	–	–	–
2	83	22.72	3.65	4	1	1	1	–
3	78	13.02	5.99	2	–	–	–	–
4	64	13.72	4.66	1	–	–	–	1
TOTAL	**299**	**62.70**	**4.77**	**9**	**1**	**1**	**1**	**1**

EXISTING CITY PARK AREA (10.0 AC.)
EXISTING CITY PARK BOUNDARY

SEE SHEET 1
EXISTING CITY PARK SITE
SEE SHEET 1 FOR DETAILS
(NOT A PART)

REMAINDER OF VEST. TENT. TRACT 6137 OS-S & LR/R-1 & R-1-HD

MOONSTONE DR.

℄ GRAND CANYON DRIVE (COLLECTOR)

TRACT 6137-2 M.B. 65, PGS. 79-85

TRACT 6137-3 M.B. 58, PGS. 157-161

APN: 386-040-16 LR/A-HD

APN: 386-220-26 LR/A-HD

APN: 386-220-27 LR/R-S-25A

APN: 386-220-19 LR/R-S-25A

APN: 386-530-01 LR/R-1

APN: 387-020-01 LR/R-1

APN: 531-012-03 LR/PUD

℄ MASTERSON STREET (ARTERIAL)

℄ PALADINO DRIVE (COLLECTOR)

FOSSIL CREEK DRIVE

SHELL CREEK COURT

JADE STREET

BELLA DR.

COBALT AVENUE

CINNABAR STREET

SAPPHIRE AVENUE

PITTS AVE.

PLATINUM STREET

LIMESTONE AVENUE

BLACK OPAL AVENUE

GOLDSTONE STREET

SUNSTONE STREET

FOSSILWOOD ST.

MARBLE ST.

GYPSUM STREET

CHALCEDONY AVENUE

MARQUIS DR.

PHASE 1

PHASE 2

PHASE 3

PHASE 4

LOT A 4802 SF SUMP LOT

EX. DRAINAGE BASIN 2.82 AC. GR. (PRIVATELY MAINTAINED)

BOOSTER PUMP PARCEL 0.52 AC GR. (NOT A PART)

APPROXIMATE LOCATION OF 1952 FAULT FRACTURES

APPROX. LIMITS OF EARTHQUAKE FAULT ZONE

20' DRAIN EASEMENT

EX. CURB AND GUTTER (NO SIDEWALK)

EX. HOUSE

SEE DETAIL "A" ON SHEET 1

SCALE: 1" = 100'

100 50 0 100 200

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McINTOSH & ASSOCIATES
NEW GEN ENGINEERING GROUP
10800 STOCKDALE HWY, STE 103
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PROFESSIONAL LAND SURVEYOR W. WALKER JR. No. 7575 STATE OF CALIFORNIA
DATE:

REVISIONS
BY:
DATE:

VEST. TENT. TR. NO. 7431
SOUTHWEST QUARTER OF SEC. 9, T.29S., R.29E.
TENTATIVE MAP

AutoCAD FILE: 22054TT02

SHEET 2 OF 2 SHEETS