INITIAL STUDY and ENVIRONMENTAL CHECKLIST

FOR

ORCHARD CREEK ESTATES

GENERAL PLAN AMENDMENT 22-04, REZONE 22-02,
ANNEXATION 22-01a, AND SUBDIVISION 22-01

December 2023

Lead Agency:
City of Chico

CITY of CHICO

Lead Agency Contact:
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City of Chico Project No. 80116

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I. PROJECT SUMMARY

Project Title: Orchard Creek Estates (GPA 22-04, RZ 22-02, ANX 22-01a, and SUB 22-01)

Lead Agency: City of Chico

Contact: Mike Sawley, Principal Planner
City of Chico
Community Development Department
411 Main Street
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Location: The project site, approximately 20.03 total acres, is located along Henshaw Avenue, Nord Avenue, and W. East Avenue, outside the city limits of Chico in unincorporated Butte County, California. Current addresses include 2516, 2608, and 2676 Nord Avenue, 1181 Henshaw Avenue, and 1110 W. East Avenue (Site; see Figure 1).

Project Parcels: APNs: 042-070-196 and 042-740-020
Annexation Parcels: APNs: 042-070-196, 042-070-197, and 042-740-020

Existing Designations
County of Butte General Plan Land Use Designation: Very Low Density Residential (VLDR)

County of Butte Zoning Designation: Very Low Density Residential (VLDR)

City of Chico General Plan Land Use Designations: Special Planning Area (SPA-4 – Bell Muir)

City of Chico Zoning Designation: SPA (Special Planning Area)

Proposed Designations
City of Chico General Plan Land Use Designation:

- APNs: 042-740-020 and 042-070-196 – Low Density Residential (LDR)
- APN: 042-070-197 – Public Facilities and Services (PFS)

City of Chico Zoning Designations:

- APNs: 042-740-020 and 042-070-196 – Low Density Residential (R1)
- APN: 042-070-197 – Public/Quasi Public Facilities (PQ)

Anticipated Permits and Approvals:

1) City of Chico approval of:
    a. Tentative Map Subdivision
    b. General Plan Amendment
    c. Rezoning
    d. Annexation into the city limits of the City of Chico
2) Butte Local Agency Formation Commission (LAFCo) approval of proposed annexation into the city limits of Chico
3) County of Butte Environmental Health Department approval of:

a. Water Well Construction Permit for the destruction of existing on-site wells
b. On-Site Wastewater Construction Permit for the destruction of existing on-site wastewater treatment (septic) systems

Tribal Cultural Resources: Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?:

On June 6, 2023, City staff sent 13 letters to various tribes received on a list from the Native American Heritage Commission (NAHC), and received a response from the Mechoopda Tribe, which are generally known to be the Most Likely Descendants (MLDs) associated with tribal cultural resources in the Chico area.

City staff (Mike Sawley) met with Mechoopda Tribe Cultural Director Kyle McHenry on August 15, 2023, to discuss the project and its potential for impacting known tribal cultural resources in the area. Mr. McHenry explained that physical artifacts had been found on nearby properties over the years and were recently returned to the Mechoopda by the current property holder. These tribal cultural resources were apparently not formally documented by an archaeologist or historian, and therefore would not likely be indicated by a typical records search.

As a result of this specific knowledge about tribal cultural resources in the area, City staff acknowledges there is a higher level of sensitivity for potential discovery of previously undocumented tribal cultural resources on the subject project site and recommend including the mitigation requested by the Mechoopda Tribe for the ability to monitor all excavation activities within the project by tribal representatives.

City staff sent a follow-up email on August 22, 2023, to memorialize the results of the consultation and received confirmation from the Tribe that the monitoring mitigation captures the desires of the Tribe regarding this project.

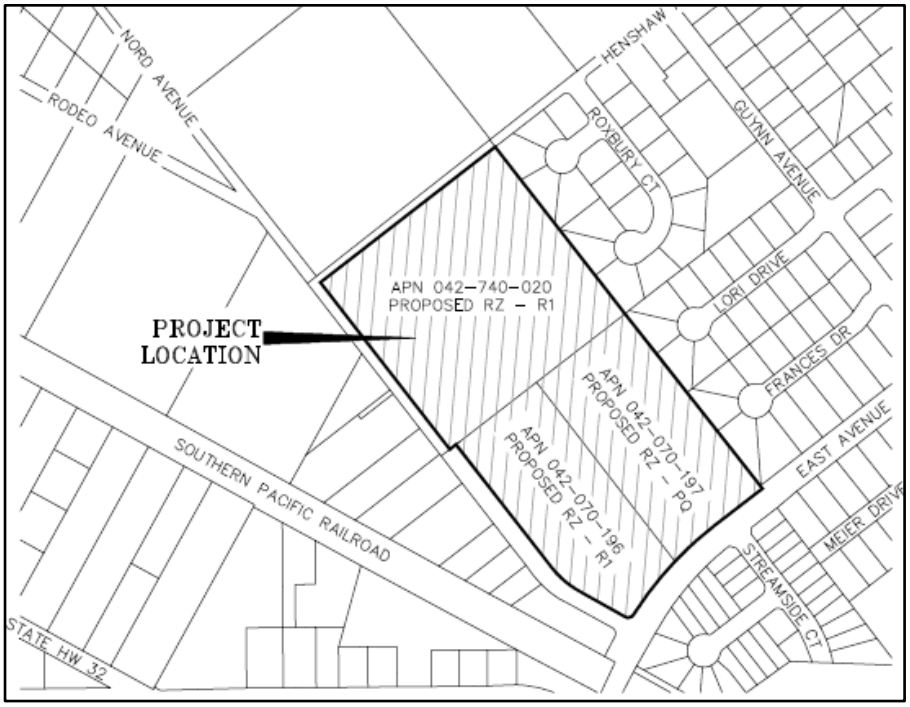


Figure 1. Location Map

II. PROJECT DESCRIPTION

Chuck Tatreau Construction, Inc. (Applicant) is proposing a General Plan Amendment, Rezone, and Annexation for the properties identified as Assessor's Parcel Numbers (APNs): 042-070-196, 042-070-197, and 042-740-020, located at 2516 and 2608 Nord Avenue and 1110 W. East Avenue, outside of the city limits of Chico in unincorporated Butte County, California. The Site is located within the City of Chico's (City) Sphere of Influence. Collectively, the three parcels represent the project site (Site). In addition, the Applicant is proposing a Tentative Map Subdivision for the of the project parcels (APNs: 042-740-020 and 042-070-196), in which the two properties are proposed to be subdivided into 74 individual lots (described further below).

General Plan Amendment

The Applicant is requesting a General Plan Amendment for all project parcels (APNs: 042-070-196, 042-070-197, and 042-740-020) to remove the three properties form the Bell Muir Special Planning Area (SPA) of the City of Chico 2030 General Plan and amend the land use designations. Currently, the Site has a Butte County General Plan 2030 (2019) land use designation of Very Low Density Residential (VLDR) and a Butte County zoning designation of VLDR. According to the Butte County General Plan 2030 (2019), this land use category is designed to provide for areas of single-family residential uses permitting 1 du/ac.

The Site is located within the Bell Muir Special Planning Area (SPA) of the City of Chico 2030 General Plan (2011). Based on mapping provided in Appendix C of the City's General Plan, the western portion of APN: 042-740-020, northern portion of APN: 042-070-196, and northwestern portion of APN: 042-070-197 appear to have a land use designation of Low Density Residential (LDR), which allows between 2.1 and 7 du/ac, with the remaining portions of the Site undefined. As provided in Table 1, below, the following land use designations are proposed for the Site:

Table 1. Existing and Proposed Land Use Designations

Parcel ID	Assessor's Parcel Number (APN)	County of Butte (existing)	City of Chico (existing)	City of Chico (proposed)
1	042-740-020 (Orchard Creek Estates)	Very Low Density Residential (VLDR)	Special Planning Area (SPA)	Low Density Residential (LDR)
2	042-070-196 (Orchard Creek Estates	Very Low Density Residential (VLDR)	Special Planning Area (SPA)	Low Density Residential (LDR)
3	042-070-197 (Chico Masonic Family Center)	Very Low Density Residential (VLDR)	Special Planning Area (SPA)	Public Facilities and Services (PFS)

Sources: County of Butte Data Search Map, n.d.; and City of Chico City Web Map, n.d.

Rezone

As noted above, the Site is located within the Bell Muir Special Planning Area (SPA) of the City of Chico 2030 General Plan and is pre-zoned Special Planning Area (SPA). The project involves rezoning the Site from SPA to the City of Chico zoning designation of Low Density Residential (R1; APNs: 042-740-020 and 042-070-196) and Public/Quasi Public Facilities (PQ; APN: 042-070-197).

Annexation

The project involves annexation of the three (3) project parcels into the city limits of Chico. The Site is currently located within the jurisdiction of the County of Butte. The northernmost project parcel (APN: 042-740-020) is located immediately west and adjacent to the city limits of the City of Chico, with the entirety of the Site located within the City's sphere of influence.

The Chico Masonic Family Center (located on APN: 042-070-197) will continue to be utilized for a variety of community events (including but not limited to weddings, meetings, etc.), and no development is planned for this property.

Tentative Map Subdivision

A seventy-four parcel residential subdivision (known as "Orchard Creek Estates") is proposed on the 5- and 10-acre parcels located at 2516, 2608, and 2676 Nord Avenue and 1181 Henshaw Avenue (APNs: 042-070-196 and 042-740-020), respectively. The proposed subdivision lots would range in size from 5,000 square feet to 13,000 square feet, with an average lot size of 6,400 square feet. The Site is proposed to have a density of 4.8 units per gross acreage, consistent with the Low Density Residential (LDR) land use designation and zoning requested for APNs: 042-740-020 and 042-070-196, which allow residential densities between 2.1 and 7 dwelling units per acre (du/ac).

The layout of the proposed subdivision analyzed in this Initial Study comprises the layout provided on the Tentative Subdivision Map prepared by W. Gilbert Engineering, dated August 15, 2023 (see Figure 2). As designed, three (3) of the proposed lots (Lots 1, 2, and 74) will retain four existing residences, with two of the existing residences situated on Lot 2. A total of 371 trees, mostly English walnut orchard trees, have been identified within the planned subdivision area, 21 of which would be retained around the existing residences to remain (see Figure 2).

Three new streets would be constructed for the subdivision, with one connection on Nord Avenue and two new street connections on Henshaw Avenue. The new streets would result in a modified grid pattern for the project. Proposed street "C" would be a long cul-de-sac which avoids creating a new connection with W. East Avenue, a major arterial where new street connections are discouraged. Frontage improvements would be constructed along both Henshaw and Nord Avenues, along the portions of the Site that abuts these rights-of-way. This 30-foot-wide improvement would consist of new asphalt for a width of 20 feet, a 7-foot-wide planter strip, and a 5-foot-wide sidewalk. Similarly, the internal project roadways would comprise a 36-foot-wide right-of-way, of which 32 feet would be paved. Each side of the street would also have a 7-foot-wide planter strip and a 5-foot-wide sidewalk.

Existing wells and septic systems will be abandoned in accordance with Butte County Environmental Health requirements, and the proposed project will be developed with community utility services.

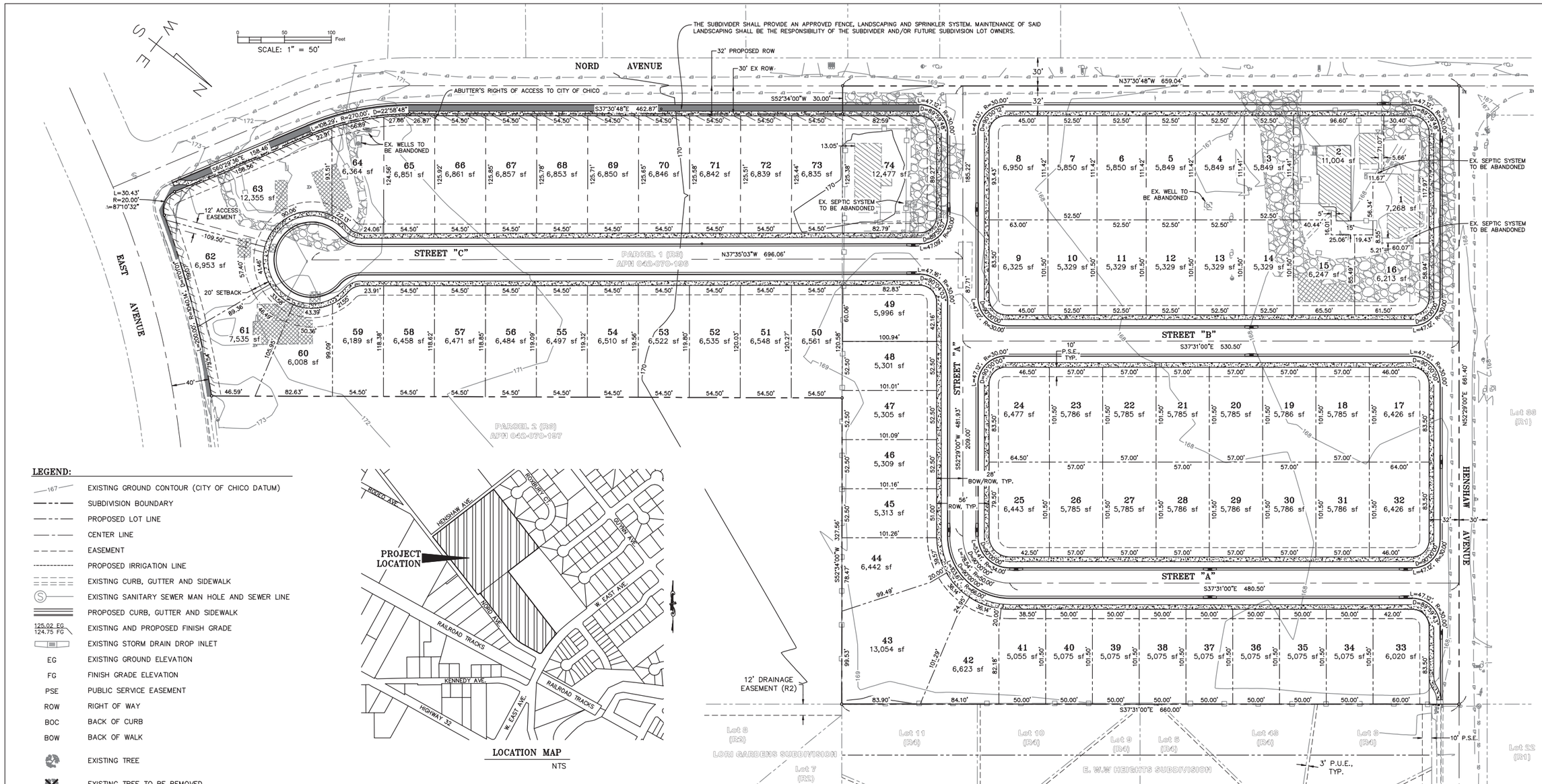
It is anticipated that each undeveloped subdivision lot will be developed with a single-family residence in the future in accordance with the Low Density Residential (R1) zoning designation proposed for the lots, following approval of the entitlements and annexation into the city limits of Chico.

All internal utilities would be placed underground and all new single-family homes within the proposed Orchard Creek Estates subdivision would contain solar collectors and internal sprinkler systems.

III. PROJECT SETTING AND LOCATION

As described above, the Site comprises three (3) Assessor's parcels, including:

- APN: 042-740-020 (Orchard Creek Estates property), comprising 10 acres and located at 2516 and 2608 Nord Avenue and 1110 W. East Avenue;
- APN: 042-070-196 (Orchard Creek Estates property), comprising 5.02 acres, located at 2516 Nord Avenue; and



LOCATION MAP
NTS

LEGEND:

- EXISTING GROUND CONTOUR (CITY OF CHICO DATUM)
- SUBDIVISION BOUNDARY
- PROPOSED LOT LINE
- CENTER LINE
- EASEMENT
- PROPOSED IRRIGATION LINE
- EXISTING CURB, GUTTER AND SIDEWALK
- EXISTING SANITARY SEWER MAN HOLE AND SEWER LINE
- PROPOSED CURB, GUTTER AND SIDEWALK
- 125.02 EG / 124.75 FG — EXISTING AND PROPOSED FINISH GRADE
- EXISTING STORM DRAIN DROP INLET
- EG — EXISTING GROUND ELEVATION
- FG — FINISH GRADE ELEVATION
- PSE — PUBLIC SERVICE EASEMENT
- ROW — RIGHT OF WAY
- BOC — BACK OF CURB
- BOW — BACK OF WALK
- EXISTING TREE
- EXISTING TREE TO BE REMOVED
- EXISTING FENCE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- WV — EXISTING WATER VALVE
- HB — EXISTING HOSE BIB
- EXISTING BUILDING TO REMAIN
- EXISTING GRAVEL DRIVEWAY
- PROPOSED STREET LIGHT
- EXISTING BUILDING TO BE REMOVED
- UTILITY POLE
- GUY WIRE
- ABUTTER'S RIGHTS OF ACCESS TO CITY OF CHICO
- FENCING, LANDSCAPING AND SPRINKLER SYSTEM. SEE NOTE ON MAP.

OWNER:

CHUCK TATREAU CONSTRUCTION
1237 MANGROVE AVENUE
CHICO, CA 95926

SUBDIVIDER:

CHUCK TATREAU CONSTRUCTION
1237 MANGROVE AVENUE
CHICO, CA 95926
(530) 228-7243

ENGINEER:

W. GILBERT ENGINEERING
WESLEY E. GILBERT, R.C.E. 31689
140 YELLOWSTONE DRIVE, SUITE 110
CHICO, CALIFORNIA 95973
(530) 809-1315

ASSESSOR'S PARCEL NUMBER:

042-740-020 & 042-070-196

LAND USE:

PRESENT: AGRICULTURAL
FUTURE: SINGLE FAMILY RESIDENTIAL

ZONING:

PRESENT: SPA
FUTURE: R1

UTILITIES:

SANITARY SEWER: CITY OF CHICO
WATER: CALIFORNIA WATER SERVICE COMPANY
POWER: PACIFIC GAS & ELECTRIC
COMMUNICATIONS: AT&T
CABLE TV: COMCAST
STORM DRAIN: CITY OF CHICO

SUBDIVISION NOTES:

1) PARCEL MAP INFORMATION:
TOTAL ACREAGE (TO CL): 15.454
NET ACREAGE: 13.795
TOTAL NUMBER OF LOTS: 74
UNITS PER GROSS ACRE: 4.79
AVERAGE LOT SIZE: 6,394 SF

2) GRADING WILL CONSIST OF THE CONSTRUCTION OF ROADWAYS AND BUILDINGS PADS. PRELIMINARY FINISH GRADES AND TYPICAL SECTIONS ARE SHOWN ON SHEET 2.

3) THE FINAL SUBDIVISION MAP WILL INCLUDE A 10' WIDE P.S.E. ALONG ALL LOT FRONTAGES AS SHOWN HEREON.

4) SANITARY SEWER SERVICE FOR THE PARCEL MAP WILL COMPLY WITH THE APPLICATION FOR SEWER CONNECTION #_____.

5) THE PARCEL MAP LIES IN FLOOD ZONE "X" AS SHOWN ON FIRM MAP NUMBER 06007C0485E DATED JANUARY 6, 2011.

6) STORM WATER QUANTITY AND QUALITY WILL BE PROVIDED BY STORM WATER LEACH TRENCH SYSTEM IN COMPLIANCE WITH CMC 18.R.08.050 J.TEMPORARY LEACH FIELD TYPE STORM DRAINAGE SYSTEM.

7) EXISTING WELLS AND SEPTIC SYSTEMS TO BE ABANDONED IN ACCORDANCE WITH B.C.E.H.D. PERMIT REQUIREMENTS.

8) THERE ARE NO EXISTING EASEMENTS FOR UTILITIES ON THIS PROPERTY

DESIGN MODIFICATIONS:

1. CUL-DE-SAC LENGTH LONGER THAN 500' (18R.08.020.H)
2. DOUBLE FRONTAGE LOTS WITH ACCESS WAIVERS TO ALL VEHICULAR AND PEDESTRIAN ACCESS RIGHTS TO W. EAST AVE AND NORD AVE. (18R.08.010.D)

RECORD REFERENCES:

(R1) – THIRD SUBDIVISION OF JOHN BIDWELL RANCHO, BOOK 5 OF MAPS, PAGE 8

(R2) – LORI GARDENS SUBDIVISION, BOOK 43 OF MAPS, PAGES 5 AND 6

(R3) – PARCEL MAP, BOOK 128 OF MAPS, PAGES 50 AND 51

(R4) – E. W. HEIGHTS SUBDIVISION, BOOK 142 OF MAPS, PAGES 81 THRU 83

THIS TENTATIVE SUBDIVISION MAP WAS PREPARED BY ME OR UNDER MY DIRECTION.

BY: _____ DATE: 8/15/2023

WESLEY E. GILBERT
R.C.E. 31689
EXPIRES: 12/31/24

REGISTERED PROFESSIONAL ENGINEER — WESLEY E. GILBERT — No. 31689 — EXP. 12/31/24 — CIVIL — STATE OF CALIFORNIA

ORCHARD CREEK ESTATES
VESTING TENTATIVE SUBDIVISION MAP S 22-01
(A PUBLIC STREET SUBDIVISION)

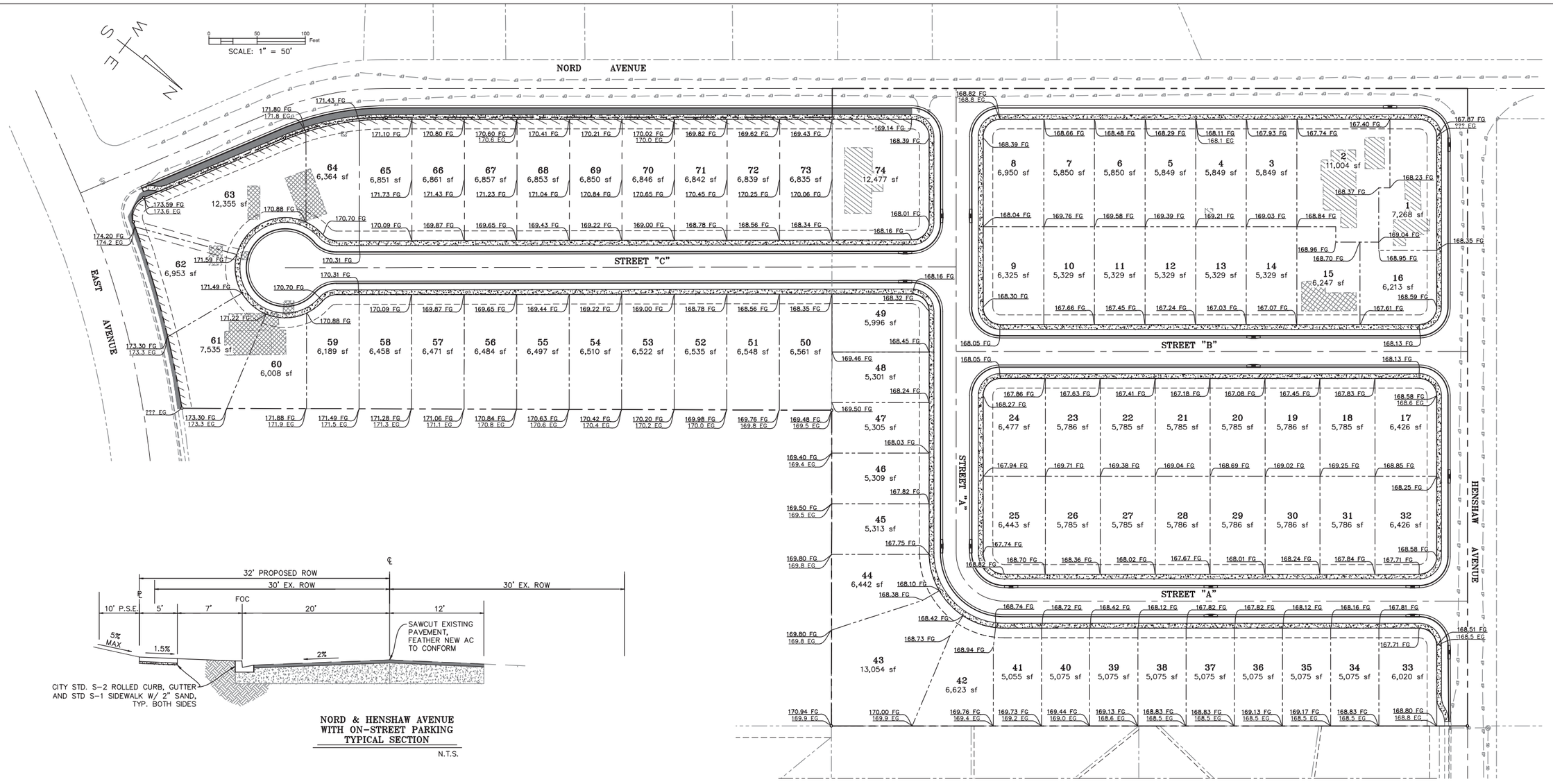
FOR
CHUCK TATREAU CONSTRUCTION, INC.

LOT 34 SHOWN ON THE MAP ENTITLED "THIRD SUBDIVISION OF THE JOHN BIDWELL RANCHO", RECORDED IN BOOK 5 OF MAPS, AT PAGE 8, AND PARCEL 1 AS SHOWN ON THE PARCEL MAP RECORDED IN BOOK 128 OF MAPS, AT PAGES 50 & 51
CITY OF CHICO, COUNTY OF BUTTE STATE OF CALIFORNIA

W. GILBERT ENGINEERING
140 YELLOWSTONE DRIVE, SUITE 110
CHICO, CALIFORNIA 95973
(530) 809-1315

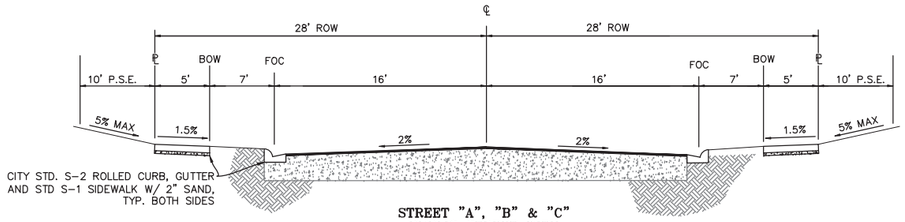
AUGUST 15, 2023

Figure 2



NORD & HENSHAW AVENUE
WITH ON-STREET PARKING
TYPICAL SECTION

N.T.S.



STREET "A", "B" & "C"
PUBLIC STREET WITH
ON-STREET PARKING
TYPICAL SECTION

N.T.S.

ORCHARD CREEK ESTATES
VESTING TENTATIVE SUBDIVISION MAP
S 22-01
(A PUBLIC STREET SUBDIVISION)

FOR
CHUCK TATREAU CONSTRUCTION, INC.

LOT 34 SHOWN ON THE MAP ENTITLED "THIRD SUBDIVISION OF THE JOHN BIDWELL RANCHO", RECORDED IN BOOK 5 OF MAPS, AT PAGE 8, AND PARCEL 1 AS SHOWN ON THE PARCEL MAP RECORDED IN BOOK 128 OF MAPS, AT PAGES 50 & 51 CITY OF CHICO, COUNTY OF BUTTE STATE OF CALIFORNIA

W. GILBERT ENGINEERING
140 YELLOWSTONE DRIVE, SUITE 110
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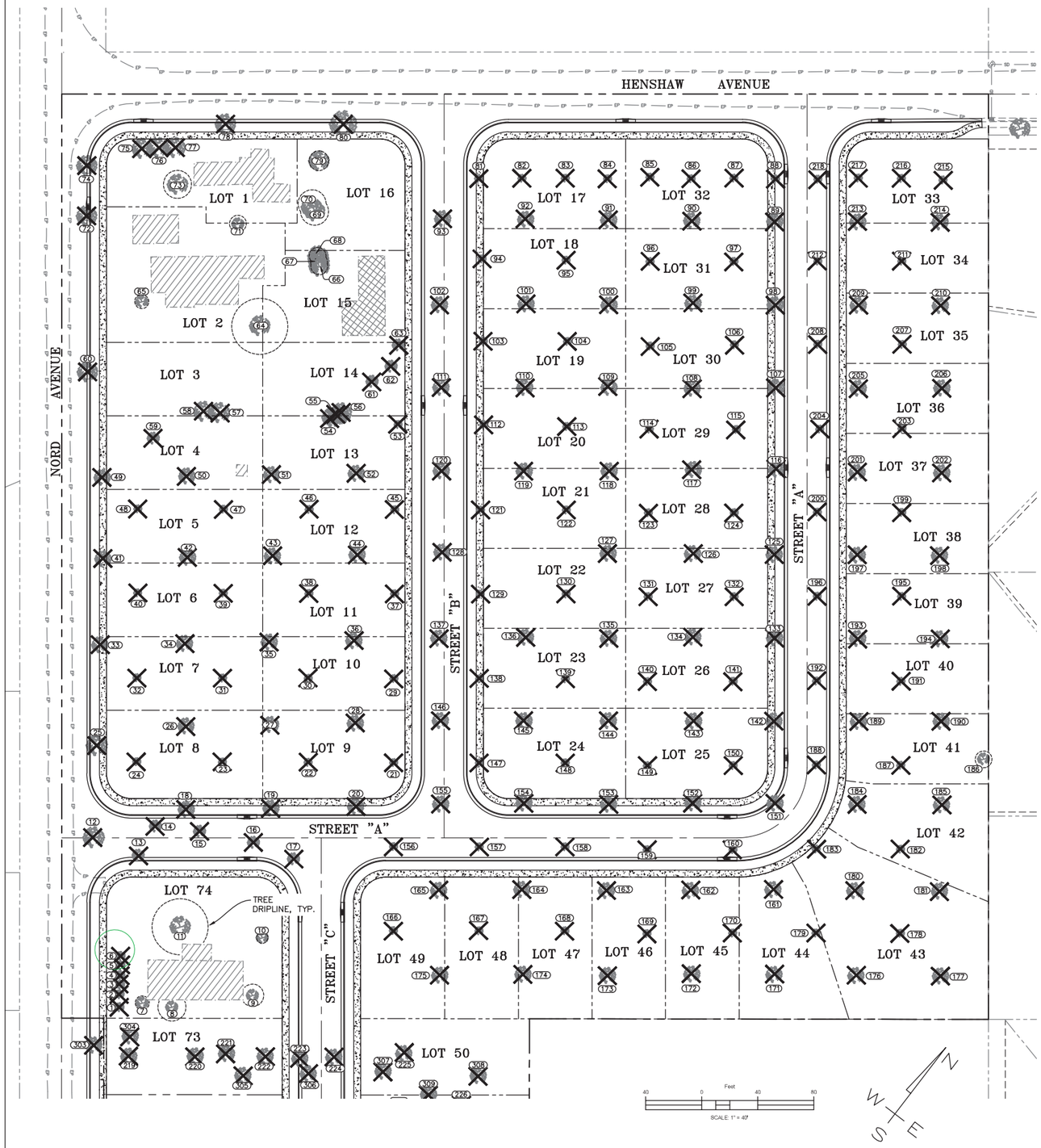
AUGUST 15, 2023

Figure 2



TREE TABLE*

TREE NO.	TREE SPECIES	TREE DIAMETER	DRIPLINE RADIUS	PROTECT/ REMOVE	DIAMETER SUBJECT TO REPLACEMENT/IN-LIEU FEES
1	SEQUOIA SEMPERVIRENS/REDWOOD	6"	3'	REMOVE	–
2	SEQUOIA SEMPERVIRENS/REDWOOD	6"	3'	REMOVE	–
3	SEQUOIA SEMPERVIRENS/REDWOOD	6"	3'	REMOVE	–
4	SEQUOIA SEMPERVIRENS/REDWOOD	6"	3'	REMOVE	–
5	SEQUOIA SEMPERVIRENS/REDWOOD	6"	3'	REMOVE	–
6	SEQUOIA SEMPERVIRENS/REDWOOD	6"	3'	REMOVE	–
7	PINUS SP./PINE	8"	5'	PROTECT	–
8	PRUNUS SP./STONEFRUIT	27"	10'	PROTECT	–
9	CITRUS LIMON/LEMON	11"	8'	PROTECT	–
10	CITRUS RETICULATA/MANDARIN	6"	4'	PROTECT	–
11	QUERCUS LOBATA/VALLEY OAK	42"	20'	PROTECT	–
12	CARYA ILLINOINENSIS/PECAN	34"	20'	REMOVE	–
13	PYRUS SP./PEAR	12"	8'	REMOVE	–
14	PUNICA GRANATUM/POMEGRANATE	16"	8'	REMOVE	–
15	DIOSPYROS KAKI/HACHIYA PERSIMMON	17"	5'	REMOVE	–
16	ERIOBOTRYA JAPONICA/LOQUAT	16"	7'	REMOVE	–
17	PRUNUS PERSICA/NECTARINE	10"	5'	REMOVE	–
18	PUNICA GRANATUM/POMERGANATE	6"	4'	REMOVE	–
19	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
20	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
21	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
22	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
23	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
24	PUNICA GRANATUM/POMERGANATE	6"	4'	REMOVE	–
25	CARYA ILLINOINENSIS/PECAN	26"	20'	REMOVE	–
26	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
27	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
28	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
29	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
30	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
31	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
32	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
33	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
34	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
35	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
36	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
37	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
38	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
39	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
40	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
41	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
42	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
43	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
44	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
45	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
46	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
47	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
48	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
49	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
50	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
51	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
52	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
53	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
54	DIOSPYROS KAKI/HACHIYA PERSIMMON	29"	12'	REMOVE	–
55	DIOSPYROS KAKI/HACHIYA PERSIMMON	29"	12'	REMOVE	–
56	DIOSPYROS KAKI/HACHIYA PERSIMMON	29"	12'	REMOVE	–
57	WASHINGTONIA FILIFERA/DESERT FAN	30"	12'	REMOVE	30"
58	SEQUOIA SEMPERVIRENS/REDWOOD	18"	9'	REMOVE	18"
59	MALUS SP./APPLE	6"	3'	REMOVE	–
60	JUGLANS HINDSII/BLACK WALNUT	66"	33'	REMOVE	66"
61	MALUS SP./APPLE	21"	8'	REMOVE	–
62	MALUS SP./APPLE	21"	8'	REMOVE	–
63	MALUS SP./APPLE	21"	8'	REMOVE	–
64	PINUS CANARIENSIS/CANARY ISLAND	40"	20'	PROTECT	–
65	PHOTINIA SP./PHOTINIA	11"	5'	PROTECT	–
66	MYRTUS COMMUNIS/COMMON MYRTLE	24"	6'	PROTECT	–
67	MYRTUS COMMUNIS/COMMON MYRTLE	24"	6'	PROTECT	–
68	MYRTUS COMMUNIS/COMMON MYRTLE	24"	6'	PROTECT	–
69	JUNIPERUS SP./JUNIPER	32"	10'	PROTECT	–
70	JUNIPERUS SP./JUNIPER	32"	10'	PROTECT	–
71	ACER SACCHARINUM/SILVER MAPLE	7"	6'	PROTECT	–
72	JUGLANS HINDSII/BLACK WALNUT	70"	33'	REMOVE	70"
73	TRACHYCARPUS FORTUNEI/FAN PALM	24"	10'	PROTECT	–
74	JUGLANS HINDSII/BLACK WALNUT	76"	33'	REMOVE	76"
75	TRACHYCARPUS FORTUNEI/FAN PALM	16"	5'	REMOVE	16"
76	TRACHYCARPUS FORTUNEI/FAN PALM	22"	6'	REMOVE	22"
77	TRACHYCARPUS FORTUNEI/FAN PALM	23"	7'	REMOVE	23"
78	JUGLANS HINDSII/BLACK WALNUT	70"	33'	REMOVE	70"
79	TRACHYCARPUS FORTUNEI/FAN PALM	24"	7'	PROTECT	–
80	JUGLANS HINDSII/BLACK WALNUT	49"	33'	REMOVE	49"
81	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
82	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
83	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
84	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
85	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
86	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
87	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
88	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
89	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
90	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
91	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
92	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
93	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
94	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
95	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
96	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
97	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
98	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
99	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
100	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
101	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
102	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
103	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
104	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
105	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
106	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
107	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
108	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
109	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
110	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
111	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
112	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
113	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
114	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
115	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
116	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
117	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
118	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
119	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
120	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
121	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
122	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
123	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
124	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
125	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
126	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
127	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
128	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
129	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
130	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–

TREE TABLE*

TREE NO.	TREE SPECIES	TREE DIAMETER	DRIPLINE RADIUS	PROTECT/ REMOVE	DIAMETER SUBJECT TO REPLACEMENT/IN-LIEU FEES
131	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
132	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
133	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
134	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
135	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
136	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
137	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
138	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
139	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
140	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
141	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
142	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
143	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
144	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
145	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
146	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
147	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
148	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
149	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
150	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
151	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
152	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
153	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
154	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
155	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
156	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
157	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
158	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
159	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
160	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
161	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
162	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
163	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
164	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
165	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
166	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
167	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
168	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
169	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
170	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
171	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
172	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
173	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
174	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
175	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
176	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
177	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
178	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
179	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
180	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
181	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
182	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
183	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
184	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
185	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
186	ULNUS PARVIFLORA/CHINESE ELM	11"	6'	PROTECT	–
187	JUGLANS HINDSII/BLACK WALNUT	8"	15'	REMOVE	–
188	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
189	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
190	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
191	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
192	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
193	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
194	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
195	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
196	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
197	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
198	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
199	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
200	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
201	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
202	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
203	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
204	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
205	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
206	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
207	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
208	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
209	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
210	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
211	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
212	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
213	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
214	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
215	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
216	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
217	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
218	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–

NOTE:
HARDSCAPE AND UTILITIES SHALL BE MINIMIZED WITHIN DRIPLINES OF TREES AND IN NO CASE CLOSER THAT 20 FEET FROM EXISTING TRUNKS.

ORCHARD CREEK ESTATES
VESTING TENTATIVE SUBDIVISION MAP
S 22-01
(A PUBLIC STREET SUBDIVISION)

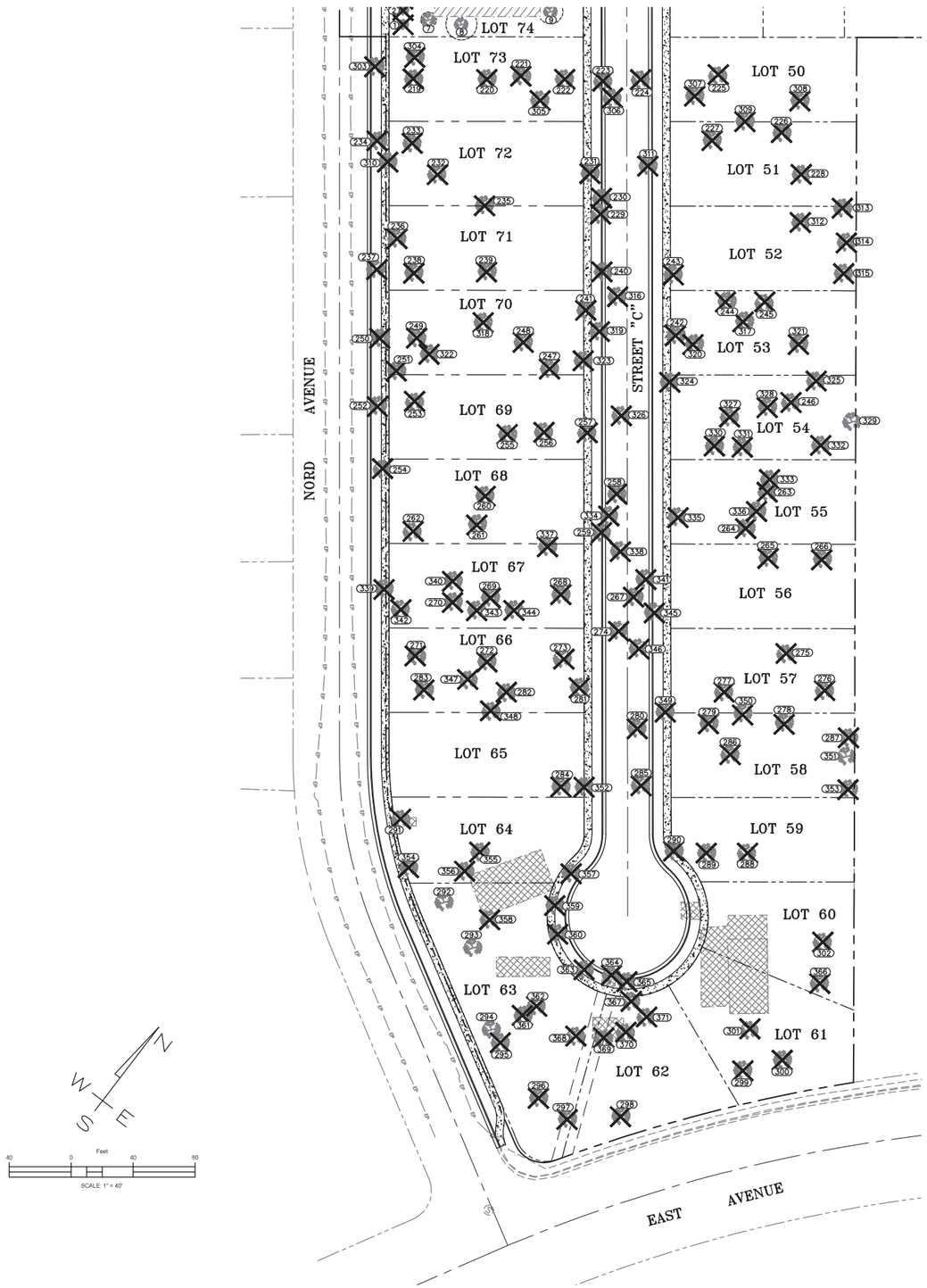
FOR
CHUCK TATREAU CONSTRUCTION, INC.

LOT 34 SHOWN ON THE MAP ENTITLED "THIRD SUBDIVISION OF THE JOHN BIDWELL RANCHO", RECORDED IN BOOK 5 OF MAPS, AT PAGE 8, AND PARCEL 1 AS SHOWN ON THE PARCEL MAP RECORDED IN BOOK 128 OF MAPS, AT PAGES 50 & 51 CITY OF CHICO, COUNTY OF BUTTE STATE OF CALIFORNIA

W. GILBERT ENGINEERING
140 YELLOWSTONE DRIVE, SUITE 110
CHICO, CALIFORNIA 95973
(530) 809-1315

AUGUST 15, 2023

Figure 2



TREE TABLE*

TREE NO.	TREE SPECIES	TREE DIAMETER	DRIPLINE RADIUS	PROTECT/ REMOVE	DIAMETER SUBJECT TO REPLACEMENT/IN-LIEU FEES
219	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
220	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
221	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
222	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
223	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
224	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
225	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
226	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
227	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
228	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
229	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
230	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
231	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
232	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
233	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
234	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
235	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
236	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
237	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
238	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
239	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
240	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
241	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
242	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
243	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
244	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
245	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
246	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
247	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
248	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
249	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
250	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
251	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
252	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
253	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
254	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
255	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
256	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
257	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
258	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
259	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
260	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
261	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
262	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
263	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
264	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
265	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
266	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
267	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
268	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
269	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
270	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
271	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
272	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
273	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
274	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
275	APPLE	–	–	REMOVE	–
276	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
277	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
278	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
279	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
280	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
281	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
282	PLUM	–	–	REMOVE	–
283	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
284	PLUM	–	–	REMOVE	–
285	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
286	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
287	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
288	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
289	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
290	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
291	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
292	SUGAR MAPLE	16"	15'	PROTECT	–
293	PISTACIA CHINENSIS/CHINESE PISTASHE	35"	20'	PROTECT	–
294	LIQUIDAMBAR STYRACIFLUA/SWEETGUM	22"	15'	PROTECT	–
295	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–

TREE TABLE*

TREE NO.	TREE SPECIES	TREE DIAMETER	DRIPLINE RADIUS	PROTECT/ REMOVE	DIAMETER SUBJECT TO REPLACEMENT/IN-LIEU FEES
296	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
297	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
298	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
299	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
300	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
301	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
302	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
303	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
304	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
305	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
306	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
307	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
308	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
309	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
310	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
311	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
312	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
313	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
314	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
315	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
316	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
317	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
318	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
319	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
320	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
321	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
322	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
323	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
324	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
325	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
326	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
327	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
328	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
329	RED PINE	7"	25'	PROTECT	–
330	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
331	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
332	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
333	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
334	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
335	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
336	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
337	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
338	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
339	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
340	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
341	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
342	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
343	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
344	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
345	APPLE	–	–	REMOVE	–
346	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
347	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
348	PLUM	–	–	REMOVE	–
349	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
350	PLUM	–	–	REMOVE	–
351	ULNUS PARVIFLORA/CHINESE ELM	15"	12'	PROTECT	–
352	PLUM	–	–	REMOVE	–
353	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
354	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
355	LIRIODENDRON TULIPIFERA/TULIP TREE	18"	15'	REMOVE	18"
356	LIQUIDAMBAR STYRACIFLUA/SWEETGUM	30"	20'	REMOVE	30"
357	ORANGE	–	–	REMOVE	–
358	LIRIODENDRON TULIPIFERA/TULIP TREE	31"	18'	REMOVE	–
359	JAPANESE CAMELLIA	3"	8'	REMOVE	–
360	JAPANESE MAPLE	7"	18'	REMOVE	–
361	LILY MAGNOLIA	6"	15'	REMOVE	–
362	PEACH	–	–	REMOVE	–
363	ORANGE	–	–	REMOVE	–
364	CHERRY	–	–	REMOVE	–
365	CHERRY	–	–	REMOVE	–
366	JUGLANS REGIA/ENGLISH WALNUT	–	–	REMOVE	–
367	PEAR	–	–	REMOVE	–
368	PEACH	–	–	REMOVE	–
369	APPLE	–	–	REMOVE	–
370	PEACH	–	–	REMOVE	–
371	APPLE	–	–	REMOVE	–

TOTAL INCHES REQUIRING MITIGATION = 488" DIVIDED BY 6 = 81 REPLACEMENT TREES REQUIRED.

NOTE:
HARDSCAPE AND UTILITIES SHALL BE MINIMIZED WITHIN DRIPLINES OF TREES AND IN NO CASE CLOSER THAT 20 FEET FROM EXISTING TRUNKS.

ORCHARD CREEK ESTATES
VESTING TENTATIVE SUBDIVISION MAP
S 22-01
(A PUBLIC STREET SUBDIVISION)

FOR
CHUCK TATREAU CONSTRUCTION, INC.

LOT 34 SHOWN ON THE MAP ENTITLED "THIRD SUBDIVISION OF THE JOHN BIDWELL RANCHO", RECORDED IN BOOK 5 OF MAPS, AT PAGE 8, AND PARCEL 1 AS SHOWN ON THE PARCEL MAP RECORDED IN BOOK 128 OF MAPS, AT PAGES 50 & 51
CITY OF CHICO, COUNTY OF BUTTE STATE OF CALIFORNIA

W. GILBERT ENGINEERING
140 YELLOWSTONE DRIVE, SUITE 110
CHICO, CALIFORNIA 95973
(530) 809-1315

AUGUST 15, 2023

Figure 2

- APN: 042-070-197, a 5.01-acre property located at 1110 W. East Avenue (which comprises the existing Chico Masonic Family Center).

The Orchard Creek Estates properties (APNs: 042-740-020 and 042-070-196), which comprise 15.02 acres, contain five (5) existing single-family residences with existing septic systems, wells, and various outbuildings. Both parcels are predominately planted with mature walnut trees, in addition to landscape trees near the existing residences. The 5.01-acre property located at 1110 W. East Avenue (APN: 042-070-197) comprises the existing Chico Masonic Family Center and associated parking. This property would continue to be utilized for a variety of community events. Surrounding properties include large agricultural parcels with single-family residences (north and west), smaller-lot single-family residences (east), and the Chico Grange Hall (South). The Union Pacific Railroad (UPRR) main line runs north-south, approximately 200 feet west of the project Site.

IV. ENVIRONMENTAL EFFECTS

An environmental checklist follows this section and addresses all potential adverse effects resulting from the proposed project. No significant adverse effects are expected from any of the proposed activities.

V. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a **"Potentially Significant Impact"** or "**Potentially Significant Unless Mitigation Incorporated**" as indicated by the checklists on the following pages.

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

An explanation for all checklist responses is included, and all answers take into account the whole action involved and the following types of impacts: off-site and on-site; cumulative and project-level; indirect and direct; and construction and operational. The explanation of each issue identifies (a) the threshold of significance, if any, used to evaluate each question; and (b) the mitigation measure identified, if any, to reduce the impact to less than significance. All mitigation measures required for the project are provided in the Mitigation and Monitoring Reporting Program (MMP).

In the checklist the following definitions are used:

"**Potentially Significant Impact**" means there is substantial evidence that an effect may be significant.

"**Potentially Significant Unless Mitigation Incorporated**" means the incorporation of one or more mitigation measures can reduce the effect from potentially significant to a less than significant level.

"**Less Than Significant Impact"** means that the effect is less than significant and no mitigation is necessary to reduce the impact to a lesser level.

"**No Impact"** means that the effect does not apply to the proposed project, or clearly will not impact nor be impacted by the proposed project.

DETERMINATION: (To be completed by the Lead Agency 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 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An 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 (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Mike Sawley
Signature

12/13/2023
Date

Mike Sawley, Principal Planner

I. **AESTHETICS**. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

DISCUSSION

The Open Space and Environment Element and the Community Design Element of the City of Chico General Plan (2011) provides goals, policies, and programs related to conservation of natural resources, provision of open space and the urban design of the City. Goals CD-1, CD-3, CD-4, and CD-5 of the Chico General Plan seek to protect and enhance the City's natural attributes such as agriculture, foothills, trees, and creeks which contribute to Chico's overall character and identity.

The Orchard Creek Estates properties (APNs: 042-740-020 and 042-070-196), which comprise 15 acres and five existing single-family residences (four of which will be retained under the project) are predominately planted with mature English and black walnut trees in addition to landscape trees near the existing residences. The 5-acre Chico Masonic Family Center located at 1110 W. East Avenue (APN: 042-070-197) would continue to be utilized for a variety of community events.

The proposed project would result in the development of a residential subdivision consisting of 74 single-family lots, three of which would contain existing homes (Lots 1, 2, and 74). Street trees, as per the City's Urban Forest Management Plan (2023), would be installed at appropriate distances within street parkway strips within the Site. Under the project, lighting would be utilized to provide an attractive, safe, and secure nighttime environment for the proposed Orchard Creek Estates subdivision. All exterior public and private lighting would be directed downward with full shields and International Dark Sky Association-compliant. Lighting would be installed in compliance with City standards identified in Section 19.60.050 (Exterior Lighting) of the City's Municipal Code (2023). Structure lighting would either be placed on each side of the garage or front porch and/or in both locations.

I.a. Less Than Significant Impact. The 2030 Chico General Plan and its Environmental Impact Report (EIR) identify scenic resources within and nearby the City, including the Sierra Nevada Foothills to the east of the City, agricultural landscapes, major creeks (e.g., Mud Creek, Sycamore Creek, Lindo Channel [Sandy Gulch], Big Chico Creek, Little Chico Creek, Butte Creek, Dead Horse Slough, and Comanche Creek), and Bidwell Park. Scenic vistas are available from within Bidwell Park and from publicly accessible roadways including Manzanita Avenue, Vallombrosa Avenue, East 8th Street, Esplanade, Chico Canyon Road, Centennial Avenue, Humboldt Road, Bidwell Avenue, North Park Drive, and South Park Drive.

The proposed project Site is not associated with a City-designated scenic vista in its General Plan or other planning documents. Therefore, the project's impacts to scenic vistas is considered **less than significant**.

I.b. No Impact. The nearest designated California Scenic Highway is California State Route 49, which is approximately 42 miles southeast of Chico and is a north-south state highway that runs through many historic mining communities from the California Gold Rush. The nearest State Route eligible for designation as a California Scenic Highway is a portion of State Route 70, located approximately 15 miles east of Chico in Plumas County. Because there are no state scenic highways in the vicinity, impacts associated with damage to scenic resources within a state scenic highway are considered to have **no impact**.

I.c. Less Than Significant Impact. The Site is developed with several existing single-family residences, mature walnut trees, and landscape trees near the existing residences. Public views of the Site are currently experienced from surrounding roadways, including Nord Avenue to the west, Henshaw Avenue to the north, and W. East Avenue to the south of the Site. Development of the project site consistent with the proposed subdivision and zoning will change the current visual character of the rural agricultural site. The former orchard uses and unimproved roadsides would be replaced by residences, street improvements, fences and ornamental trees. Most existing trees on the site (approximately 350) have been identified for removal, and approximately 20 existing trees near the established residences are planned for retention. Because the Applicant has requested approval to develop the Site pursuant to the Chico Municipal Code (CMC), City regulations would apply to development of the Site. For all trees on the Site that meet the qualifying criteria under CMC Chapter 16.66, the Applicant would be required to pay an in-lieu fee as established by the City's current fee schedule for every six (6) inches in diameter at breast height (DBH) removed.

Converting the walnut orchards to an urban subdivision would change the existing visual character of public views from the adjacent public roads, however, these existing views are not rare or unique in the area or Butte County. Other examples of rural agricultural orchards will remain in the area and elsewhere in Butte County, therefore, potential impacts to scenic resources are considered **less than significant**.

I.d. Less Than Significant Impact. Development of the project site consistent with the proposed subdivision and zoning will result in new sources of light and potential glare, that are typical of urban residential uses, adjacent to existing residential uses. Street lighting would adhere to City standards, and all new exterior residential lighting would be directed downward with adequate shielding, consistent with the City's lighting standards found in CMC 19.60.050 (Exterior Lighting). Although, the project would introduce new light sources to the Site, meeting existing City lighting standards would ensure that new lighting remains **less than significant**.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have **Less Than a Significant Impact** on Aesthetics.

II. **AGRICULTURE AND FORESTRY RESOURCES**. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☒	☐
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 PRC 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 forestland to non-forest use?	☐	☐	☒	☐

DISCUSSION

The Site, identified by Assessor's Parcel Number (APNs): 042-740-020, 042-070-196, and 042-070-197, is currently within the Bell-Muir Special Planning Area (SPA) with a General Plan land use designation of Special Planning Area, according to City of Chico GIS. Additionally, the Site has a land use and zoning designation of Very Low Density Residential (VLDR) per the Butte County GIS. In addition to the proposed subdivision the proposed project includes annexation of the Site into the Chico city limits, as well as a General Plan Amendment and Zone Reclassification to apply land use and zoning designations for Low Density Residential and R1 (Low Density Residential) (APNs: 042-740-020 and 042-070-196) and Public Facilities and Services (PFS) and Public/Quasi Public Facilities (PQ) (APN: 042-070-197), respectively. The proposed subdivision and land use changes are generally consistent with surrounding residential development, located immediately east and south of the Site, across W. East Avenue.

The northern half of the Site is predominately designated "Prime Farmland," and the southern portion of the Site is designated "Urban and Built-Up Land" by the 2020 maps prepared under the Farmland Mapping and Monitoring Program (FMMP) of the California Department of Conservation (DOC, 2022). The Site is not under a Williamson Act contract (Butte-Interactive Maps, n.d.).

II.a. Less Than Significant Impact. The proposed project would convert approximately 8.3 acres of Prime Farmland to non-agricultural uses. Currently, the portion of the Site where the subdivision is proposed is predominately planted with mature walnut trees that are currently not being harvested. However, the portion of the Site planned for residential development is anticipated for development with residential uses under both the County's General Plan and the City's General Plan.

The City of Chico analyzed the potential impacts associated with development of important farmlands that have been planned for annexation and conversion into non-agricultural uses in the Environmental Impact Report (EIR) prepared for the latest General Plan Update (GPU). Specifically, the City of Chico's EIR for the

2030 GPU, prepared in September 2010[1], notes that "development within the General Plan Update proposed SOI would largely avoid substantial loss of important farmlands west of SR 99. However, the proposed General Plan Land Use Diagram (see Figure 3.0-3 in Section 3.0, Project Description), does designate residential and mixed-use land uses in areas within important farmland areas... These areas include the North Chico Special Planning Area (SPA-1), the Bell Muir Special Planning Area (SPA-2), and the Pomona Avenue Opportunity Site (14) for a total conversion of 1,041.73 acres of Prime Farmland and 25.9 acres of Unique Farmland to urban uses. It is important to note that these areas are already identified for some level of urban development…" (GPU EIR p.4.2-18).

Similarly, the Draft EIR prepared for the Butte County 2040 General Plan Update[2] assessed whether implementation of the General Plan would result is significant impacts associated with the conversion of important farmlands to non-agricultural uses. As noted in the 2040 GUP EIR, there are several policies included in the 2040 General Plan that seek to "aim to protect and set limits to Butte County's agricultural lands from conversion to non-agricultural uses"; however, it was determined that the designation of these farmlands of importance for non-agricultural uses in the 2040 General Plan Land Use Map could lead to the conversion of such farmland to non-agricultural uses, regardless of the goals, policies, and actions included in the General Plan (pp. 5.2-23 and -24).

Both jurisdictions found that building out its respective general plan land use diagram would result in significant and unavoidable impacts regarding conversion of prime agricultural land to non-agricultural uses. As such, environmental findings and Statements of Overriding Considerations were adopted by the City of Chico City Council and the County of Butte Board of Supervisors.

As the impacts associated with conversion of important farmland at the subject Site were previously assessed in the City's General Plan Update EIR, project impacts associated with conversion of prime farmland to non-agricultural uses is considered to be **less than significant**.

II.b. No Impact. The subject Site is not currently or planned to be designated or zoned for agriculture use. As noted above, the Site has a Butte County land use and zoning designation of Very Low Density Residential (VLDR). The portion of the Site planned to be subdivided and developed with single-family residences is slated for development and designated for residential use under both the County and City's General Plans. Under the project, proposed land use designation and zoning would be Low Density Residential and R1 (Low Density Residential) (APNs: 042-740-020 and 042-070-196) and Public Facilities and Services (PFS) and Public/Quasi Public Facilities (PQ) (APN: 042-070-197, respectively). Furthermore, the Site is not under a Williamson Act contract nor are surrounding parcels (Butte-Interactive Maps, n.d.). Therefore, regarding conflicts with zoning for agricultural use or a Williamson Act contract, the project would have **no impact**.

II.c. No Impact. The Site is neither designated nor zoned as forest land (as defined in Public Resources Code section 12220(g), timberland (as defined by PRC section 4526), or timberland zoned Timberland Production [as defined by Government Code section 51104(g)] or timberland, but rather designated and zoned for residential use, with Public Facilities and Services (PFS) and Public/Quasi Public Facilities (PQ) proposed for APN: 042-070-197 (Chico Masonic Family Center property). **No impact**.

[1] The Draft Environmental Impact Report for the Chico of Chico 2030 General Plan is available at the following link: https://chico.ca.us/post/draft-eir-chico-2030-general-plan.

[2] The Draft Environmental Impact Report for the Butte County 2040 General Plan is available at the following link: https://www.buttecounty.net/367/Butte-County-General-Plan-2040.

II.d. No Impact. The proposed project would not result in result in the loss of forest land or conversion of forest land to non-forest use as the site. With regard to loss of forest land or conversion of forest land to a non-forest use, the project would have **no impact**.

II.e. Less Than Significant Impact. Although the northern portion of the Site is classified as "Prime Farmland" under the FMMP of the DOC (2022) and the proposed project would convert this land to non-agricultural uses, the project does not include any advance planning or other features that would incentivize or encourage the conversion of additional prime farmland to non-agricultural uses. Since development of the project would not impact other agricultural properties within the vicinity or jeopardize the continued use of such properties for agricultural use, impacts would be **less than significant**.

MITIGATION MEASURES
No mitigation required.

FINDINGS
The proposed project would have a **Less Than Significant Impact** on Agricultural and Forestry Resources.

III. AIR QUALITY. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
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?	☐	☐	☒	☐

DISCUSSION
The Clean Air Act of 1970 (CAA) (as amended 1977 and 1990, 42 U.S.C. 7401 et seq.) established national ambient air quality standards (NAAQS) and generally delegates the enforcement of these standards to the states. In California, the California Air Resources Board (ARB) is responsible for enforcing air pollution regulations. The ARB has, in turn, delegated the responsibility of regulating stationary emission sources to local air agencies. Criteria air pollutants are a group of six common air pollutants [ozone, carbon monoxide (CO), nitrogen dioxide (NO_2) and nitrogen oxides (NO_X), sulfur dioxide (SO_2), particulate matter (PM), and lead] for which the U.S. Environmental Protection Agency (U.S. EPA) has set national ambient air quality standards (NAAQS), and for which California has set California ambient air quality standards (CAAQS). In addition to the criteria air pollutants identified by the U.S. EPA, California adds four state criteria air pollutants (visibility reducing particulates, sulfates, hydrogen sulfide, and vinyl chloride) (EPA, 2018; ARB, 2020).

The project Site is located within the 11-county Northern Sacramento Valley Air Basin (NSVAB), which includes all of Sacramento, Yolo, Yuba, Sutter, Colusa, Glenn, Butte, Tehama, and Shasta counties and parts of Solano and Placer counties. The NSVAB is subject to Butte County Air Quality Management District (BCAQMD) requirements. The BCAQMD is responsible for monitoring and enforcing local, state, and federal air quality

standards in the County of Butte. Air quality standards are set for emissions that may include, but are not limited to, visible emissions, particulate matter, and fugitive dust. The BCAQMD is currently designated as "non-attainment," or in excess of allowable limits, for the State 24-hour PM_{10} standard for breathable particulate matter of 10 microns or less (PM_{10}), State annual $PM_{2.5}$ standard, and State 1- and 8-hour zone standards, as well as "non-attachment" for the State 8-hour ozone standard; however, the BCAQMD is in "attainment," or within allowable limits, with respect to the balance of the criteria pollutants (BCAQMD-Air Quality Standards, n.d.). Because Butte County is in "non-attainment" for ozone, the BCAQMD adopted the 2018 Triennial Update to the Air Quality Attainment Plan to achieve the State ozone standards by identifying the major contributors of ozone and identifying control measures that can be implemented to reduce ambient ozone levels.

Additionally, the City of Chico Climate Action Plan 2021(CAP), prepared by Rincon Consultants, Inc. in 2021, provides specific actions to reduce greenhouse gas emissions to achieve the City's target of carbon neutrality by 2045. Although the CAP's primary goal is the reduction of GHG emissions, the numerous State, regional, and local GHG reduction measures included in the CAP would also help to improve overall air quality.

The proposed project involves a Tentative Map Subdivision that would allow for subdividing two (2) parcels (APNs: 042-740-020 and 042-070-196) for the development of 74-lots. The project also includes a General Plan Amendment and Zone Reclassification to amend the Site's current designations, annexation into the Chico city limits, and construction of internal roadways.

The project and its emission sources are subject to BCAQMD rules and regulations contained in the most recent version of the *Butte County Air Quality Management District Rules and Regulations*. During anticipated future construction at the Site, the contractor would be expected to use heavy construction machinery and temporary air pollutant emissions would be associated with grading, excavation, and construction on the project. However, the project would be required to comply with an array of rules and regulations established by the BCAQMD. These include, but are not limited to the following:

- **Rule 200 – Nuisance**: To protect the public health, Rule 200 prohibits any person from discharging such quantities of air contaminants that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public.
- **Rule 201 – Visible Emissions**: Prohibits individuals from discharging into the atmosphere from any single source of emissions whatsoever any air contaminant whose opacity exceeds certain specified limits.
- **Rule 202 – Particulate Matter Concentration**: Requires a person to take every reasonable precaution not to cause or allow the discharge of particulate matter from being airborne in excess of 0.3 grains per cubic foot of gas.
- **Rule 205 – Fugitive Dust**: Requires a person to take every reasonable precaution not to cause or allow the emissions of fugitive dust from being airborne beyond the property line from which the emission originates; from construction, handling, or storage activity; or any wrecking, excavation, grading, clearing of land, or solid waste disposal operation.
- **Rule 270** – **Wood Burning Devices:** This rule prohibits the sale, supply, or installation, of a used wood burning device in any new or existing interior space unless it is a BCAQMD approved device.

- **Rule 230 – Architectural Coatings**: Sets volatile organic compound limits for coatings that are applied to stationary structures or their appurtenances. The rule also specifies storage and cleanup requirements for these coatings.
- **Rule 231 – Cutback and Emulsified Asphalt:** Asphalt paving operations that may be associated with implementation of the project would be subject to Rule 231. This rule applies to the manufacture and use of cutback asphalt and emulsified asphalt for paving and maintenance operations.
- **Rule 500 – Stationary Source Permit Fees:** The BCAQMD regulates criteria air pollutant emissions from new and modified stationary sources through this rule.

For example, pursuant to these rules all construction equipment would be required to be maintained in good working condition and the contractor would be required to minimize the amount of fugitive dust generated by construction of the project. BCAQMD's thresholds of significance for development project are provided in Table 2, below.

Table 2. BCAQMD Air Quality Significance Thresholds

Criteria Pollutant and Precursors	Construction Related Average Daily Emissions (lbs/day)	Operation Related Average Daily Emissions (lbs/day)
Reactive organic gases (ROG)	137	25
Nitrogen oxides (NOx)	137	25
Particulate matter (PM_{10})	80	80
Source: Butte County Air Quality Management District (BCAQMD). 2021. California Environmental Quality Act Air Quality Guidelines. Available at: https://bcaqmd.org/wp-content/uploads/CEQA-Handbook-Appendices-2014.pdf.		

Air quality impacts anticipated under full build-out of the project were modeled using the California Emissions Estimator Model (CalEEMod) program and compared to the significant thresholds shown in the table above. The model quantifies direct emissions from construction and operation activities (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. Further, the model identifies standard emissions reduction measures to reduce criteria pollutants and GHG emissions along with calculating the benefits achieved from measures chosen by the user (CalEEMod, n.d.). The CalEEMod results in their entirety are included in Appendix C and assumes default assumptions generated by the program based on the project's characteristics. The proposed uses utilized for the CalEEMod analysis are presented in Table 3, below, and includes a proposed total of 75 new single-family dwellings, four more than proposed by the subdivision:

Table 3. Project Development Assumptions

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	75.00	Dwelling Unit	15.00	135,000.00	215

The analysis assumes the proposed project would break ground in June 2024 and be constructed over a period of approximately one year and 4 months (assuming 5 workdays per week), although the actual construction dates are unknown at this time. It is important to note that project construction would likely halt during the wet, winter months, but would overall take a total of approximately one year and 4 months to complete, based on the default CalEEMod assumptions. The CalEEMod analysis includes basic construction

and operational-level emissions reduction measures that are standard requirements for compliance with BCAQMD regulations and the CAP. Such measures include watering exposed areas twice per day during construction, installing high efficiency lighting and low-flow faucets and fixtures, utilizing only natural gas hearths and low-VOC paints. Since vehicles are known to be a major pollution contributor, producing significant amounts of nitrous oxides (NO_x), carbon monoxide (CO), ozone (O_3), and particulate matter ($PM_{2.5}$ and PM_{10}), vehicle use must also be considered when evaluating potential air quality impacts of a proposed project. As such, the CalEEMod analysis includes a basic construction emissions reduction measure to reduce vehicle speeds on unpaved roads. This basic construction emissions reduction measure would be implemented as part of the project pursuant to the City of Chico Site Planning and General Development Standards: General Property Development (City of Chico, 2023), as mentioned above.

Table 4. Orchard Creek Estates Anticipated Emissions

	Construction-Related			Operational-Related		
Pollutant	Modeled Construction Emissions	Threshold Daily (lbs/day)	Theshold Exceeded?	Modeled Operational Emissions	Daily (lbs/day)	Threshold Exceeded?
Reactive organic gases (ROG)	4.37	137	No	5.38	25	No
Nitrogen oxides (NOx)	8.10	137	No	3.83	25	No
Particulate matter (PM_{10})	1.74	80	No	3.99	80	No

Note: The CalEEMod results are presented in tons per year and were converted to pounds per day to compare against BCAQMD's thresholds of significance.
Source: CalEEMod Model Results, November 15, 2023.

As shown in Table 4, above, the anticipated emissions associated with construction and operation of the project would be below all annual thresholds of significance for reactive organic gases (ROG), nitrogen oxides (NO_x) and particulate matter (PM_{10}).

III.a. Less Than Significant Impact. The Site is located in the NSVAB. Air quality within the NSVAB is regulated by the BCAQMD. Standards for air quality are documented in the Butte County General Plan and the BCAQMD *Rules and Regulations*. The proposed project would emit pollutants into the SVAB during short-term construction and long-term operational activities. As shown in Table 4, above, the anticipated emissions associated with site preparation and operation would be well-below the thresholds of significance identified in the BCAQMD CEQA Guidelines, including nitrogen oxides (NO_x) and particulate matter (PM_{10}) without any emissions reductions measures. As such, the pollutant levels emitted by the project would not conflict with the adopted BCAQMD air quality policies or exceed project-level thresholds of significance and the project impacts to air quality would be **less than significant**.

III.b. Less Than Significant Impact. As noted above, the BCAQMD is currently designated as "non-attainment," or in excess of established criteria, for the State 24-hour PM_{10} standard for breathable particulate matter of 10 microns or less (PM_{10}), State annual $PM_{2.5}$ standard, and State 1- and 8-hour ozone standards, as well as the federal 8-hour ozone standard. The BCAQMD is in "attainment," or established limits, with respect to the balance of the criteria pollutants (BCAQMD-Air Quality Standards, n.d.). Because Butte County is in "non-attainment" for ozone, the BCAQMD adopted the 2018 Triennial Update to the Air Quality Attainment Plan to achieve the State ozone standards by identifying the major contributors of ozone and identifying

control measures that can be implemented to reduce ambient ozone levels. Additionally, as described above, with employment of standard emissions reduction measures during construction and operation of the project, no thresholds of significance would be exceeded. Further, the project would be subject to and designed in accordance with rules and regulations of the BCAQMD. As a result, the project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment and this potential impact is considered **less than significant impact**.

III.c. Less Than Significant Impact. Sensitive receptors are generally considered to be people that have an increased sensitivity to air pollution or environmental contaminants, or places where such people may normally be found. These may include, but are not limited to, preschools and daycare centers, K-12 schools, nursing homes, hospitals, and residential dwelling units. The nearest sensitive receptors to the Site consist of an existing single-family residential neighborhood located immediately east of the Site. The nearest school to the Site is a preschool located approximately 750 feet southwesterly of the Site.

The proposed project would involve site preparation, excavation and construction activities that typically do not involve large amounts or high concentrations of air related pollutants. Excavation and construction activities would result in a temporary increase of odors on-site and to adjacent properties. The proposed project would not expose sensitive receptors (nearby residential developments) to substantial pollutant concentrations that are inconsistent with the surrounding residential uses in the area.

As shown in Table 4, emissions associated with construction and operation of the proposed project would not be anticipated to exceed BCAQMD's thresholds of significance for the three listed pollutants. However, temporary exhaust from construction equipment may, for short periods of time over the approximately 1 year and 9-month construction period, impact residents living near the Site. With required compliance with BCAQMD *Rules and Regulations* and maintaining all equipment in good working condition, potential fugitive dust would be controlled, exhaust emissions would be minimized, and air quality impacts to sensitive receptors would be **less than significant**.

III.d. Less Than Significant Impact. The project would not create substantial emissions (such as odors or dust) adversely affecting a substantial number of people. Temporary odors and dust, typical of construction sites and equipment use, may be generated during the construction phase. In order to reduce potential impacts on nearby sensitive receptors, including residences located immediately east of the Site, the project contractor would be required to comply with BCAQMD standards and regulations and maintain all equipment in good working condition, which would ensure that potential fugitive dust is controlled and exhaust emissions are minimized. In addition, truck idling on-site would also be required to be limited to five minutes or less, pursuant to State law, further reducing potential impacts. Impacts regarding odors affecting a substantial number of people would be **less than significant**.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have a **Less Than Significant Impact** on Air Quality.

IV. BIOLOGICAL RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game 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?	☐	☐	☐	☒

DISCUSSION

The Site is located adjacent to the Chico city limits, within the Bell Muir Special Planning Area (SPA). Appendix C (Special Planning Areas) of the City of Chico 2030 General Plan notes "there are no known threatened or endangered species or sensitive habitats in the (Bell Muir) SPA" in which the Site is located.

The project Site is located approximately 580 feet north of identified freshwater forested/shrub and riverine wetland areas and, pursuant to the U.S. Fish and Wildlife Service's (USFWS) National Wetland Mapper, the Site is not known to contain any historic creeks/streams or wetlands on-site (USFWS, n.d.). The Orchard Creek Estates properties (APNs: 042-740-020 and 042-070-196), totaling 15.02 acres, contain five (5) existing single-family residences (four (4) of which will be retained under the project) with existing septic systems, wells, and various outbuildings along the western portion of the Site. Both parcels are predominately planted with mature walnut trees that are not currently being harvested and are planned for removal, in addition to landscape trees near the existing residences. The Chico Masonic Family Center building with associated parking and landscaping is located within the southeastern portion of the Site. The Site is predominately flat in nature with no indication of wetlands or other sensitive habitats.

The California Department of Fish and Wildlife's (CDFW) Biogeographic Information and Observation System (BIOS), CDFW's Natural Diversity Database (CNDDB), or California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants map any special status plant or wildlife species within the vicinity of the Site or

the Ord Ferry Quad, in which the Site is located (2023). However, as provided by the U.S. Fish and Wildlife Service's (USFWS) Information, Planning, and Consultation (IPaC) System, several wildlife species (22 birds, 2 insects, and 3 crustaceans) have the potential to occur within the vicinity of the Site. The candidate, sensitive, or special status species with the potential to occur on-site, as identified by the USFWS, are listed in Table 6, below. The majority of bird species (21 out of 22) noted in the table below include species protected under the Migratory Bird Treaty Act of 1918 (MBTA) and the Bald and Golden Eagle Protection Act of 1940.

Table 5. Species with the Potential to Occur at or Within Vicinity of the Site

Common Name	Scientific Name
Birds	
Yellow-billed cuckoo	*Coccyzus americanus*
Bald eagle	*Haliaeetus leucocephalus*
Belding's Savannah sparrow	*Passerculus sandwichensis beldingi*
Black tern	*Childonias niger*
Bullock's oriole	*Icterus bullockii*
California gull	*Larus californicus*
California thrasher	*Toxostoma redivivum*
Cassin's finch	*Capodacus cassinii*
Clark's grebe	*Aechmophorus clarkii*
Common yellowthroat	*Geothlypis trichas sinuosa*
Golden eagle	*Aquila chrysaetos*
Lawrence's goldfinch	*Carduelis lawrence*
Long-eared owl	*Asio otus*
Nuttall's woodpecker	*Picoides nuttallii*
Oak titmouse	*Baeolophus inornatus*
Olive-sided flycatcher	*Contopus cooperi*
Short-billed dowitcher	*Limnodromus griseus*
Tricolored blackbird	*Agelaius tricolor*
Western grebe	*Aechmophorus occidentalis*
Willet	*Tringa semipalmata*
Wrentit	*Chamaea fasciata*
Yellow-billed magpie	*Pica nuttalli*
Insects	
Monarch butterfly	*Danaus plexippus*
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*
Crustaceans	
Conservancy fairy shrimp	*Branchinecta conservation*
Vernal pool fairy shrimp	*Branchinecta lynchi*
Vernal pool tadpole shrimp	*Lepidurus packardi*
Source: USFWS, n.d.	

It is important to note that there are no critical habitats identified at the project Site and the Site does not overlap any identified critical habitats of the noted species (USFWS, n.d.), thereby minimizing the potential for these species to be located on-site. Additionally, while three (3) crustaceans were identified with the potential to occur, their habitat (vernal pools) does not occur on-site. The Site is bounded by Henshaw Avenue to the north, single-family residential housing to the east, W. East Avenue to the south, and Nord Avenue to the west. Active industrial lands are located on the western side of the railroad tracks. The Site is currently used for a homestead with mature walnut trees, surrounded by residential and industrial uses. These uses preclude high quality habitat for special status species due to lack of available habitat area, refugia, distance from noise sources, and other factors.

Tree removal would be required to accommodate the proposed development. As indicated in Figure 2, a total of 371 trees have been identified within the planned subdivision area, twenty-one (21) of which would be retained under the project. The trees to be retained are located near and adjacent to the existing residences to remain on-site. Since the undeveloped portion of the Site is primarily comprised planted mature walnut trees, suitable habitat for the majority of the non-bird species listed above is not provided on-site. The trees to be removed may provide nesting habitat for several bird species, including those protected under MBTA and the Bald and Golden Eagle Protection Act. However, the Applicant proposes implementation of the following measures, which would further minimize potential impacts on biological resources, including special status bird species:

1. If construction is proposed during the nesting season (March 1 – August 31), a focused survey for nesting raptors and other migratory birds would be conducted by a qualified biologist within 30 days prior to the commencement of construction, in order to identify any active nests on the proposed project Site and the vicinity of proposed construction.
    a. If no active nests are identified during the survey period, or if construction is initiated during the non-breeding season (September - February), grading and construction may proceed.
    b. However, if active raptors nests are found, an adequate setback would be established around the nest location and construction activities restricted within this no disturbance zone until the qualified biologist has confirmed that any young birds have fledged and are able to function outside the nest location. Required setback distances for the no-disturbance zone would be determined in coordination with CDFW and/or USFWS, and may vary depending on species and sensitivity to disturbance. The no-disturbance zone would be fenced with temporary orange construction fencing.
2. A report of findings would be prepared by the qualified biologist and submitted to the City for review and approval prior to initiation of grading and construction during the nesting season (March - August). The report would either confirm absence of any active nests or confirm establishment of a designated no-disturbance zone for any active nests. Supplemental reports would be submitted to the City for review and approval where no-disturbance zones have been required to allow construction to proceed within these zones after any young birds have fledged.

In addition, since the anticipated residential development would disturb more than one acre of land during construction, the project would be subject to the requirements of General Construction Activity Stormwater Permit (Construction General Permit Order 2009-0009-DWQ), administered by the State Water Resources Control Board (SWRCB), which requires operators of such construction sites to implement stormwater controls and develop a Stormwater Pollution Prevention Plan (SWPPP) identifying specific Best Management Practices (BMPs) to be implemented to minimize the amount of sediment and other pollutants associated with construction sites from being discharged in stormwater runoff. Such BMPs may include straw bales, fiber rolls, and/or silt fencing structures to assure the minimization of erosion resulting from construction and to avoid runoff into sensitive habitat areas, limit ground disturbance to the minimum necessary, and stabilize disturbed soil areas as soon as feasible after construction is completed.

IV.a. Less Than Significant With Mitigation: As provided in Table 5, above, there is the potential for several special status wildlife species to be present at the Site. The majority of the Site (approximately 15 acres) is predominately planted with a mature walnut orchard, with landscape trees near the existing residences. Tree removal would be required to accommodate the proposed development. A total of 371 trees have been identified within the planned subdivision area, 21 of which would be retained under the project. The trees to be retained are located near the existing residences or perimeter. The walnut orchard trees do not provide suitable habitat for the non-bird species or the majority of bird species listed in Table 5. However, the

trees to be removed may provide nesting habitat for several bird species, including those protected under MBTA and the Bald and Golden Eagle Protection Act. As described above, the Applicant proposes several practices that would be implemented under the project to ensure biological resources, including special status birds, are adequately protected. Such practices include performing focused biological studies if construction is proposed to occur during the bird breeding season (March 1 – August 31) and procedures that would be implemented should active nests be identified, including establishing no-disturbance zone(s) and preparing a report of findings to the City. These measures are required pursuant to Mitigation Measure BIO-1 and would ensure that potential impacts to special status species would be **less than significant with mitigation**.

IV.b-c. Less than Significant: The Site is located approximately 580 feet north of identified freshwater forested/shrub and riverine wetland areas associated with Lindo Channel, and does not otherwise contain any creeks/streams or wetlands on-site. Additionally, no critical or potential habitats been identified on-site by the USFWS databases. As discussed above, since the project comprises more than one acre, the project would be subject to the Construction General Permit Order 2009-0009-DWQ, which requires preparation of a SWPPP and implementation of standard BMPs. Such BMPs may include installation of straw bales, fiber rolls, and/or silt fencing structures, limiting ground disturbance to the minimum necessary, and stabilizing disturbed soil areas as soon as feasible after construction is completed, which would aid in assuring the minimization of erosion and avoiding runoff into potential sensitive habitat areas (including the nearby identified wetland areas) during construction of the proposed project. In addition, drainage improvements proposed under the project would include curb, gutter, and sidewalk, as well as storm drain inlets, which would further minimize potential impacts. A **less than significant impact** would occur.

IV.d. Less Than Significant With Mitigation: The proposed project would not impact the movement of any native resident or migratory fish; however, there is the potential for native resident wildlife species to be impacted during tree removal and project construction and operation, including bird species protected under the Endangered Species Act, Migratory Bird Treaty Act of 1918 (MBTA), the Bald and Golden Eagle Protection Act of 1940, or other regulations. As provided by the USFWS's Information for Planning and Consultation (IPaC) database (2023), there is the potential for one (1) bird species listed as Threatened under the Endangered Species Act and twenty-one (21) migratory bird species to be present at the Site, as indicated in Table 5, above.

As previously discussed, out of the total 371 trees identified on-site, approximately 350 trees would be removed from the proposed subdivision area. Suitable mature vegetation occurs on-site that may provide nesting habitat for native and migratory birds. As such, there is the potential for native resident wildlife species, particularly birds, to be impacted by the proposed project. In order to reduce potential impacts, the Applicant proposes to have a qualified biologist perform focused biological studies if construction is proposed to occur during the bird breeding season (March 1 – August 31), in addition to measures that would be implemented should active nests be identified, including establishing no-disturbance zone(s) and preparing a report of findings to the City. These measures are required pursuant to Mitigation Measure BIO-1 and would ensure that potential impacts to resident and migratory avian species would be **less than significant with mitigation**.

IV.e. Less Than Significant: The City of Chico has several policies and regulations pertaining to the protection of biological resources, including tree removal and preservation regulations. Specifically, the Open Space and Environment Element of the City of Chico 2023 General Plan (Chapter 10) contains goals, policies, and actions related to the preservation of biological resources within the community. Chapter 2 (Sustainability) of the City's General Plan also contains a policy (Policy SUS-6.4) related to the planting and maintenance of

trees within the community. Additionally, Chapter 16.66 (Tree Preservation Regulations) of the City of Chico's Municipal Code contains the City's tree removal and preservation requirements. Should the tentative map be approved by the City, the approval would only become effective upon annexation of the Site into the city limits, at which time development would be required to proceed pursuant to the City's rules and regulations. All tree removal that has or may take place after the subdivision application was deemed complete (August 2023) would be subject to the City's Tree Preservation Regulations.

As previously discussed, 350 of the 371 total trees identified on-site would be removed from the proposed subdivision area, with 21 trees to be retained near and adjacent to the existing residences to remain on-site. Under the City's Tree Preservation Regulations (City of Chico Municipal Code Chapter 16.66), trees greater than 18 inches in diameter, in addition to certain species that are greater than 6- and 12-inches DBH, are to be preserved, except for trees that present an immediate hazard to life or property. It is noted that certain tree species are excluded from the preservation requirements.

In addition, the Applicant is required to prepare a tree protection plan to ensure that on-site trees to remain under the project, including their root systems, would be adequately protected from potential hard during demolition, grading, and construction (City of Chico Municipal Code §§16.66.100-110). Furthermore, as described above, the Applicant has committed to several "Good Neighbor Practices" to minimize the project's potential impacts, including conducting focused biological surveys for any construction proposed during the nesting bird season (March 1 – August 31) and procedures if any active nests are identified. As such, the project would not conflict with any local policies or ordinances related to the protection of biological resources and a **less than significant impact** would occur.

IV.f. No Impact: The proposed 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, as there are no such plans applicable to the Site. **No impact**.

MITIGATION MEASURES

BIO-1: The developer shall implement the following measures to minimize potential impacts on biological resources, including special status bird species:

1. If construction is proposed during the nesting season (March 1 – August 31), a focused survey for nesting raptors and other migratory birds shall be conducted by a qualified biologist within 30 days prior to the commencement of construction, in order to identify any active nests on the proposed project Site and the vicinity of proposed construction.
    a. If no active nests are identified during the survey period, or if construction is initiated during the non-breeding season (September - February), grading and construction may proceed.
    b. However, if active raptors nests are found, an adequate setback shall be established around the nest location and construction activities restricted within this no disturbance zone until the qualified biologist has confirmed that any young birds have fledged and are able to function outside the nest location. Required setback distances for the no-disturbance zone shall be determined in coordination with CDFW and/or USFWS, and may vary depending on species and sensitivity to disturbance. The no-disturbance zone would be fenced with temporary orange construction fencing.
2. A report of findings shall be prepared by the qualified biologist and submitted to the City for review and approval prior to initiation of grading and construction during the nesting season (March - August). The report would either confirm absence of any active nests or confirm establishment of a designated no-disturbance zone for any active nests. Supplemental reports would be submitted to the City for review

and approval where no-disturbance zones have been required to allow construction to proceed within these zones after any young birds have fledged.

FINDINGS

The proposed project would have impacts considered **Less Than Significant With Mitigation Incorporated** on Biological Resources.

V. CULTURAL RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource 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 outside of formal cemeteries?	☐	☒	☐	☐

DISCUSSION:

On May 3, 2023, LACO Associates (LACO), on behalf of the Applicant and City of Chico, contacted the Native American Heritage Commission (NAHC) to request a Sacred Lands File (SLF) search and the contact information for the representatives of the Native American tribes associated with the project area, and the Northeast Information Center (NEIC) at California State University, Chico to request a Records Search for the three (3) parcels that comprise the proposed project area.

On May 7, 2023, a response was received from the NEIC, in which it was noted that the project area has been partially surveyed for cultural resources. No archaeological resources have been recorded within the project boundaries, although three (3) resources have been recorded within 1 mile of the Site. It is further noted that the project is located in a region utilized by Konkow populations at the time of Euro-American contact. Indigenous populations used the local region for seasonal and/or permanent settlement, as well as for the gathering of plants, roots, seeds, domestic materials, and hunting seasonal game. Potential impacts to Tribal Cultural Resources is discussed under Section XVIII (Tribal Cultural Resources), below.

Additionally, NEIC notes that historically, Euro-Americans utilized the region for mining and transportation opportunities. NEIC states that the area is archaeologically sensitive and has the potential for the discovery of additional resources.

The Applicant has proposed several "Good Neighbor Practices" to minimize the project's potential impacts, including standard construction protocols to implement in the event that ground disturbance activities uncover previously unknown cultural resources. Specifically: "Applicant acknowledges and agrees that if during ground activities, any bones, pottery fragments or other potential cultural resources are encountered, the applicant or their supervising contractor shall cease all work within the area of the find and notify the Community Development Department at 879-6800. A professional archaeologist who meets the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology and who is familiar with the archaeological record of Butte County, shall be retained by the applicant to evaluate the significance of the find. Community Development Department staff shall notify all local tribes on the consultation list maintained by the State of California Native American Heritage Commission, to provide local

tribes the opportunity to monitor evaluation of the site. Site work shall not resume until the archaeologist conducts sufficient research, testing and analysis of the archaeological evidence to make a determination that the resource is either not cultural in origin or not potentially significant. If a potentially significant resource is encountered, the archaeologist shall prepare a mitigation plan for review and approval by the Community Development Department, including recommendations for total data recovery, Tribal monitoring, disposition protocol, or avoidance, if applicable. All measures determined by the Community Development Director to be appropriate shall be implemented pursuant to the terms of the archaeologist's report. The preceding requirement shall be incorporated into construction contracts and documents to ensure contractor knowledge and responsibility for the proper implementation."

V.a-c. Less Than Significant With Mitigation Incorporated: Although no existing records identify significant cultural resources at the site, including the proposed Good Neighbor Practice of addressing the discovery of unrecorded cultural resources during construction is necessary to avoid potentially significant impacts to previously unrecorded cultural resources. Halting construction work and observing standard protocols for contacting appropriate City staff and arranging for an evaluation of cultural resources in the case of a discovery is a required standard City practice, in addition to being one of the proposed Good Neighbor Practices by the applicant, and is included in **Mitigation Measure CUL-1**. Minimizing the potential damage to previously unknown cultural resources or human remains in the event that such resources are unearthed during construction, as proposed, would reduce potential impacts to historic resources, archaeological resources, and human remains to a level that is **less than significant with mitigation incorporated**.

MITIGATION MEASURES

CUL-1: In the event that grading or other ground disturbance activities uncover any bones, pottery fragments or other potential cultural resources, the developer or their supervising contractor shall cease all work within 100 feet of the area of the find and notify the Community Development Department at 879-6800. A professional archaeologist who meets the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology and who is familiar with the archaeological record of Butte County, shall be retained by the developer to evaluate the significance of the find. Community Development Department staff shall notify the Mechoopda Indian Tribe of Chico Rancheria (Tribe), if the find is determined to be of pre-historic origin. Site work shall not resume until the archaeologist conducts sufficient research, testing and analysis of the archaeological evidence to make a determination that the resource is either not cultural in origin or not potentially significant. If a potentially significant resource is encountered, the archaeologist shall prepare a mitigation plan for review and approval by the Community Development Department, including recommendations for total data recovery, Tribal monitoring, disposition protocol, or avoidance, if applicable. All measures determined by the Community Development Director to be appropriate shall be implemented pursuant to the terms of the archaeologist's report. The preceding requirement shall be incorporated into construction contracts and documents to ensure contractor knowledge and responsibility for the proper implementation.

FINDINGS

The proposed project would have impacts considered **Less Than Significant With Mitigation Incorporated** on Cultural Resources.

VI. ENERGY. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

DISCUSSION

California is one of the lowest per-capita energy users in the United States, ranked 48th in the nation, due to its energy efficiency programs and mild climate (USEIA 2023). Project development involves the construction of a 74-lot residential subdivision with an average lot size of 6,400 square feet. The project would also include the installation of new infrastructure, such as internal roads, water, wastewater, and electrical systems. Future development of single-family dwellings would be serviced by Pacific Gas and Electric Company (PG&E) for electrical and gas services.

The project would result in increased energy demand in the area due to the operation of new homes and infrastructure, which would also result in increased greenhouse gas emissions (discussed in Section VIII (Greenhouse Gas Emissions), further below).However, all new single-family residences would also contain solar collectors, which would minimize each residence's energy demand. The Building Energy Efficiency Standards are designed to ensure new and existing buildings achieve energy efficiency by reducing wasteful, uneconomic, inefficient, or unnecessary consumption of energy and enhance outdoor and indoor environmental quality.

The new buildings would be constructed consistent with the California Building Code, including the Building Energy Efficiency Standards (Title 24 of the California Code of Regulations). Part 6 of Title 24 establishes energy efficiency standards for residential and non-residential buildings constructed in California to reduce energy demand and consumption. Part 6 is updated periodically to incorporate and consider new energy efficiency technologies and methodologies. The current Title 24 standards are the 2022 Title 24 Building Energy Efficiency Standards, which builds upon the previous 2019 standards.

In general, single-family residences built to the 2022 energy efficiency standards are anticipated to use at least 7% less energy (due to energy efficiency measures) than those built before 2019. However, if rooftop solar electricity generation is factored in, new single-family residences are anticipated to use less than one-half of the energy than residences constructed before 2019 (CEC 2018). Nonresidential buildings built to the 2022 standards are anticipated to use at least 30% less energy than those built before 2019 (CEC 2018).

Title 24 also includes Part 11, California's Green Building Standards (CALGreen). CALGreen institutes mandatory minimum environmental performance standards for all new construction of commercial, low-rise residential, high-rise residential, state-owned buildings, schools, and hospitals, as well as certain residential and non-residential additions and alterations. The CALGreen 2022 standards have improved upon the previous 2019 and 2016 CALGreen standards. These updated standards continue to strengthen mandatory reduction measures for indoor water use, outdoor water use, diversion of construction waste from the landfill, enhanced inspection requirements for energy systems, incorporating "EV capable" vehicle spaces to support future charging stations, and using low-pollutant-emitting coatings and finishing materials.

In addition to building code efficiency standards, the State has set fuel efficiency benchmarks for vehicles with internal combustion engines. Adopted in 2002, assembly Bill 1493 required the California Air Resources Board to set greenhouse gas emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles whose primary use is noncommercial personal transportation in the state. In 2012, CARB approved a new emissions-control program for model years 2017 through 2025. These fuel efficiency standards will increase energy efficiency over time as older fleet vehicles are replaced by newer, more fuel-efficient vehicles.

VI.a. Less Than Significant Impact. During both construction and operation of the project, consumption of energy resources would be required for the movement of equipment and materials during construction, as well as for operation of the newly constructed residences (e.g., heating and cooling, cooking, lighting, etc.). Development of the project would result in additional energy consumption, however, that energy consumption would not be wasteful, inefficient or unnecessary. Project construction would not result in wasteful, inefficient, or unnecessary use of energy, in large part due to the temporary nature of construction. Additionally, energy use from operation of the proposed project would be minimized through energy reduction strategies pursuant to Title 24. Adherence to existing regulations would ensure that the project implementation avoids wasteful, inefficient, and/or unnecessary consumption of energy resources, resulting in impacts that are **less than significant**.

VI.b. Less Than Significant Impact. The proposed project will be constructed to the current California Building Energy Efficiency Standards and will therefore be consistent with State and local requirements for efficiency use of energy resources. Therefore, the project would not conflict or obstruct implementation of a state or local plan for renewable energy or energy efficiency and associated impacts would be **less than significant**.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have a **Less Than Significant Impact** on Energy.

VII. GEOLOGY AND SOILS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
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 wastewater 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?	☐	☒	☐	☐

DISCUSSION

As provided in Annex B (City of Chico) of the Butte County Local Hazard Mitigation Plan Update (2019), the City is located at the northeast edge of the Sacramento Valley, one of the richest agricultural areas in the world. The Sierra Nevada mountains are located to the east, with Chico's city limits extending several miles into the foothills. To the west, the Sacramento River is situated five miles from the city limit. Chico lies on the Sacramento Valley floor close to the foothills of the Cascade Range and the Sierra Nevada range with Big Chico Creek being the demarcation line between the Cascade Range (to the north) and the Sierra Nevada range (to the south). The City terrain is on the whole very flat with increasingly hilly terrain beginning at the eastern city limits (2019).

Per the Safety Element of the Chico 2030 General Plan (2017), the City of Chico and the surrounding area are relatively free from significant seismic and geologic hazards. There are no known or inferred active faults within the City (2017). The only known active fault in Butte County is the Cleveland Hills Fault, the site of the August 1975 Oroville Earthquake, which had a magnitude of 5.7. Due to the proximity of the City to the Cleveland Hills Fault, the City can expect low to medium intensity shocks on occasion. In addition, landslide potential is influenced by a number of factors, including geology, water influences, and topography. Landslides have the potential to occur in the foothill portions of the community. Some locations in Chico are known to have expansive soils that swell when water is absorbed and shrink when dried. According to Figure S-3 from the Chico 2023 General Plan the Site is in an area with moderate to highly expansive soils. Expansive

soils have the potential to cause structural damage to foundations and roads if the necessary construction techniques and materials are not used (City of Chico General Plan, 2017). Goal S-3 of the City's General Plan (2017) seeks to protect lives and property from seismic and geologic hazards by enforcing Policy S-3.1 (Potential Structural Damage,) which aims to prevent damage to new structures caused by seismic, geologic, or soils conditions. Further, due to Chico's inland location, the City is not at risk for tsunamis or seiches.

VII.a.i. Less Than Significant Impact. The Site is not located within an earthquake fault zone and the project would not cause substantial adverse effects involving fault rupture (California Department of Conservation 2022). As noted above, the only known active fault in Butte County is the Cleveland Hills fault. The nearest fault is the Monocline Fault, which is approximately 5.86 miles east of the Site. Since the Site is not located within a mapped Alquist-Priolo special studies zone, the potential for surface rupture on the Site from an active fault, within the design life of the on-site residential development, is considered low and this impact would be **less than significant**.

VII.a.ii. Less Than Significant Impact. As noted above, there are no mapped faults or Alquist-Priolo special studies zones traversing the Site. However, since the Site is situated within a seismically active region (California) and, given the proximity of known active faults to the Site, the Site will likely experience low to medium intensity ground shaking during the economic life span of any development on the Site. Any development to occur on-site, including development of the residential subdivision, would be required to comply with the most recent requirements of the California Building Code (CBC), which includes design criteria for seismic loading and other geologic hazards, including design criteria for geologically induced loading that governs sizing of structural members and provide calculation methods to assist in the design process. The CBC includes provisions for buildings to structurally survive an earthquake without collapsing and includes measures such as anchoring to the foundation and structural frame design. There are no aspects of the project that render the proposed new units uniquely susceptible to adverse effects from strong seismic ground shaking and this impact is considered **less than significant**.

VII.a.iii and VII.a.iv. Less Than Significant Impact. As noted above, the Site is mostly flat and distant from known geologic faults, which results in minimal potential for seismic-related ground failure, including liquefaction and landslides. Proper excavation and site preparation, as well as adherence to the latest requirements of the Chico 2030 General Plan, Chico Municipal Code, and CBC, would minimize potential seismic and geological risks, including seismic related ground failure and/or landslides. Impacts in these categories are considered **less than significant**.

VII.b. Less Than Significant Impact. Onsite development would require excavation and groundbreaking activities. All development activities, including future development of approximately 71 single-family homes, would be subject to local and State regulations regarding environmental protections, including Chapter 18R.08.050 *Storm Drainage* of the Chico Municipal Code (Code) and the General Construction Activity Stormwater Permit (Construction General Permit Order 2009-0009-DWQ, also known as the CGP). The CGP requires operators of such construction sites to implement stormwater controls and develop a Stormwater Pollution Prevention Plan (SWPPP) identifying specific Best Management Practices (BMPs) to minimize the amount of sediment and other pollutants associated with construction sites from being discharged in stormwater runoff. These BMPs may include erosion control measures such as limiting construction during the rainy season, limiting ground disturbance to the minimum necessary, and stabilizing disturbed soil areas as soon as feasible after construction is completed, and sediment control measures such as straw bales, fiber rolls, and/or silt fencing structures to reduce the potential for sedimentation of stormwater. Chapter 18R.08.050 *Storm Drainage* of the Chico Municipal Code additionally contains provisions, which require development projects to minimize pollutants in stormwater runoff, in part, through the implementation of BMPs described above. Through compliance with Chapter 18R.08.050 of the Chico Municipal Code and the

CGP, the project would not result in substantial soil erosion or the loss of topsoil and this impact would be **less than significant**.

VII.c. Less Than Significant Impact. As discussed above, the Site is flat and not located near an active fault or unstable geologic unit. As indicated by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service's (NRCS) Web Soil Survey (2019), the soil types underlying the Site include the following:

- Almendra loam, 0 to 1 percent slopes (Soil Type #418; northern portion of Site; approximately 75% of the Site); and
- Vina fine sandy loam, sandy substratum, 0 to 2 percent slopes, MRLA 17 (Soil Type #425; southernmost portion of Site; approximately 25% of the Site) (NRCS, 2019)

Prior to issuance of any grading or building permits, the City would ensure that the proposed project has incorporated appropriate, site-specific construction and design standards per CMC 16R.22 and the California Building Code. As a result, potential future impacts relating to geology and soils are considered to be **less than significant**.

VII.e. Less Than Significant Impact. The project will be served by community water and sanitary sewer systems. The Site is currently developed with five (5) single-family dwellings with associated septic tanks and wells. Under the proposed project, existing wells and septic systems would be abandoned in accordance with Butte County Environmental Health requirements, and the proposed project would be developed with and supported by community utility services. Soil capability for use of septic systems is **less than significant**.

VII.f. Less Than Significant Impact. There are no known paleontological resources or unique geologic features on the subject Site and ground disturbance has already occurred on portions of the Site. Additionally, the Site is not listed within an area identified as containing paleontological resources nor is it located in close proximity to any known paleontological resources. There is no data indicating that there may be a potential for the project to uncover fossils or fossil-bearing deposits during project development, this impact is **less than significant**.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have a **Less Than Significant Impact** on Geology and Soils.

VIII. GREENHOUSE GAS EMISSIONS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions (GHG), 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?	☐	☐	☒	☐

DISCUSSION

The Global Warming Solutions Act of 2006, also known as Assembly Bill (AB) 32, is a State law that establishes a comprehensive program to reduce GHG emissions from all sources throughout the State. AB 32 requires the State to reduce its total GHG emissions to 1990 levels by 2020, a reduction of approximately 15 percent below emissions expected under a "business as usual" scenario. Pursuant to the AB 32 Scoping Plan (last reviewed in 2018), the California Air Resources Board (CARB) must adopt regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. The following major GHGs and groups of GHGs being emitted into the atmosphere are included under AB 32: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3). The 2020 GHG emissions statewide limit set by AB 32, equal to the 1990 level, is 431 million metric tonnes of carbon dioxide equivalent ($MMTCO_2e$) (CARB, 2018). Pursuant to Senate Bill (SB) 32 and Executive Order S-3-05, California has a reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050.

Under AB 32, the California Air Resources Board (CARB) was required to develop a Scoping Plan identifying how California will reduce its GHG emissions to achieve established targets. The Scoping Plan was first approved in 2008 and is required to be updated at least every 5 years (CARB – AB 32 (About), 2022). The *Draft 2022 Scoping Plan Update* was released for public review on May 10, 2022, and was finalized on November 16, 2022. The final *2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan) assesses the State's progress in achieving the 2030 statutory targets, while also presenting a plan for the State to reach carbon neutrality by 2045 or earlier.[3]

Health and Safety Code §38505 identifies seven GHG that the CARB is responsible for monitoring and regulating in order to reduce emissions, including: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and nitrogen trifluoride (NF_3) CO_2 is the primary GHG emitted in California and accounted for 80.2 percent of total GHG emissions in 2020 (CARB – GHG Descriptions, 2022).

CARB, in its *California Greenhouse Gas Emissions for 2000 to 2020* Report (2022), states that GHG emissions within the State of California have generally followed a declining trend since the peak in 2004. In 2020, statewide GHG emissions were 369.2 million metric tons of CO_2 equivalent ($MMTCO_2e$), 35.3 $MMTCO_2e$ lower than 2019 levels and 61.8 $MMTCO_2e$ below the 2020 statewide GHG limit of 431 $MMTCO_2e$. Notably, State GHG emissions dropped below the 2020 GHG limit in 2014 and have remained below since that time. It is noted that the 2019 to 2020 decrease in emissions is likely due in large part to the impacts of the COVID-19 pandemic, and economic recovery from the pandemic may result in emissions increases over the next few

[3] The CARB 2022 Scoping Plan is available for review at: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents.

years (CARB-California, 2022). The transportation sector remains the largest source of GHG emissions in the State, accounting for approximately 38 percent of the State's GHG emissions in 2020. As shown in Table 6 below, the transportation sector remains the largest source of GHG emissions in the State, accounting for approximately 38 percent of the State's GHG emissions in 2020 (CARB-Current, 2022).

Table 6. California's GHG Emissions by Economic Sector in 2020

Economic Sector	Percentage of California's Total GHG Emissions (2020)
Transportation	38%
Industrial	23%
Electricity	16%
Agriculture & Forestry	9%
Residential	8%
Commercial	6%
Total	**100%**

Source: California Air Resources Board (CARB). 2022. Current California GHG Emission Inventory Data. 2000-2020 GHG Inventory (2022 Edition). Available at: https://ww2.arb.ca.gov/ghg-inventory-data.

Construction on-site, including anticipated construction of a single-family residence on each of the proposed lots where existing development will not be retained (71 total), and associated development, would be subject to Part 6 (California Energy Code) of Title 24 of the California Code of Regulations, which contains energy conservation standards applicable to residential and non-residential buildings throughout California. Notably, State law requires the installation of solar for all new residential construction, which would be included under development of the Site. The Building Energy Efficiency Standards are designed to ensure new and existing buildings achieve energy efficiency by reducing wasteful, uneconomic, inefficient, or unnecessary consumption of energy and enhance outdoor and indoor environmental quality.

City of Chico Climate Action Plan

In 2012, the Chico City Council adopted a Climate Action Plan (*2020 Climate Action Plan;* 2020 CAP), which set forth objectives and actions to be undertaken in order to meet the City's emission reduction target. The City's 2020 CAP contained GHG emission reduction targets that exceeded the goals established under the State Global Warming Solutions Act of 2006 (AB 32, Health & Safety Code, Section 38501[a]). The CAP established an overall GHG reduction goal of 25 percent (as opposed to 15 percent) below 2005 base-year emission levels to be achieved by 2020. The City has subsequently tracked progress toward meeting this 25 percent reduction goal by conducting high-level community-wide emissions inventories, consistent with guidance contained in the U.S. *Community Protocol for Accounting & Reporting GHG Emissions,* developed by the International Council for Local Environmental Initiatives.

Development and implementation of the CAP are directed by a number of goals, policies, and actions in the City's General Plan (including SUS-6, SUS-6.1, SUS-6.2, SUS-6.2.1, SUS-6.2.2, SUS-6.2.3, S-1.2, and OS-4.3). Growth and development assumptions used for the CAP are consistent with the level of development anticipated in the General Plan EIR. The actions in the CAP, in most cases, mirror adopted General Plan policies calling for energy efficiency, water conservation, waste minimization and diversion, reduction of vehicle miles traveled, and preservation of open space and sensitive habitat.

To track progress in meeting citywide GHG reduction goal, the City conducted a GHG emissions inventory of community-wide GHG emissions for each year between 2005 and 2017. In April 2020, the City of Chico finalized an update to its GHG inventory and forecast from 1990 to 2045 in order to support the City's CAP Update. The results of the GHG emissions inventories completed for 2005 through 2017 show a strong decreasing trend in Chico's emissions over time. The inventory shows that Chico's mass GHG emissions have

decreased 27 percent overall since 2005, despite a population increase of approximately 27 percent over the same time period, exceeding the 2020 CAP reduction target of 25 percent below 2005 levels by 2020. The overall GHG reduction is the equivalent of taking 9,326 passenger vehicles off the road for one year, or preserving 292 acres of U.S. forest from conversion to cropland. Table 7, below, shows the City's GHG emissions by sector in 2017 (CAP, 2021).

Table 7. City of Chico's GHG Emissions by Emissions Sector in 2017

Economic Sector	2017 GHG Emissions ($MTCO_2e$)	Percentage of Chico's Total GHG Emissions (2017)
Residential Electricity	30,757	6%
Commercial Electricity	32,658	7%
Residential Natural Gas	64,769	14%
Commercial Natural Gas	31,926	7%
Gasoline	181031,	39%
Diesel	101,854	22%
Landfill Waste	23,372	5%
Total	**466,366**	**100%**

Source: City of Chico. 2021. Climate Action Plan Update. Available at: https://chico.ca.us/post/climate-action-plan-update.

Additionally, on a per capita basis, the City's emissions decreased 42 percent between 2005 and 2017 (8.8 MT CO_2e per person in 2005 to 5.07 MT CO_2e per person in 2017; City of Chico, 2020).

Major reductions were seen in the energy and transportation sectors. Reductions in the transportation sector were driven primarily by reductions in diesel and gasoline consumption, whereas reductions in the energy sector were driven entirely by a reduction in emission factors, despite little change in actual electricity usage (City of Chico, 2020).

City of Chico Climate Action Plan Update

The City adopted a CAP Update in 2021 (CAP Update), including a GHG emissions inventory and forecast. The CAP Update is intended to guide the City of Chico towards reducing GHG emissions consistent with the State goal of reducing GHG emissions 40 percent below 1990 levels by 2030 (established by SB 32). By achieving this goal, substantial progress would be made toward meeting the State's long-term goal of carbon neutrality by 2045 (established by EO B-55-18). Under CEQA, local agencies must evaluate the environmental impacts of new development projects, including impacts from GHG emissions associated with construction and operation. Per CEQA Guidelines Section 15183.5(b), a qualified GHG reduction plan must:

- Quantify existing and projected GHG emissions within the plan area.
- Establish a reduction target based on SB 32.
- Identify and analyze sector specific GHG emissions from Plan activities.
- Specify policies and actions (measures) that local jurisdictions will enact and implement over time to achieve a specified reduction target.
- Establish a tool to monitor progress and amend if necessary.
- Adopt in a public process following environmental review.

The CAP Update fulfills these requirements and is therefore a "qualified" GHG reduction plan per CEQA.

The CAP Update adopts a GHG emissions target for 2030, and a long-term GHG emissions goal for 2045. The City's targets are to reduce mass emissions 45% below 1990 levels by 2030 and to achieve carbon neutrality by 2045. The adopted 2030 target therefore exceeds SB 32 by 5% and aligns with the state's long-term GHG reduction goal for 2045. These goals result in quantified emissions targets of 2.76 MT CO2e per capita per year

for year 2030 and 0 MT CO2e capita per year for 2045 (City of Chico 2021). The City's CAP Update uses a per-capita metric to allow for population growth in the City consistent with 2019 "medium scenario" population estimates from BCAG (which includes population re-distribution estimates resulting from the Camp Fire in 2018). In absolute terms, the 2030 target of 2.76 MT CO2e per person is based on citywide GHG emissions of 297,386 MT CO2e.

California Emissions Estimator Model (CalEEMod) Analysis

CalEEMod was utilized to quantify potential criteria pollution and GHG emissions associated with both construction and operation of the proposed project. The model quantifies direct emissions from construction and operation activities (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. Further, the model identifies mitigation measures to reduce criteria pollutants and GHG emissions along with calculating the benefits achieved from measures chosen by the user (n.d.). The CalEEMod modeling outputs are included in Appendix A.

Since the proposed project would be anticipated to result in additional development on-site following approval of the subdivision and associated entitlements, it is anticipated that emissions in the vicinity of the project Site would be anticipated to increase. According to the CalEEMod results for the proposed project and as shown in Table 8, below, construction activities would result in approximately 308.4 metric tons of CO_2e ($MTCO_2e$) in the heaviest construction year (2025), and the project's operational emissions of CO_2 equivalent gasses would be approximately 913 $MTCO_2e$ per year, respectively. It is anticipated that mobile sources would account for approximately 88 percent of the project's anticipated annual operational emissions. The operational GHG emissions anticipated under the project would equate to approximately 0.196 percent of the City of Chico's total GHG emissions recorded in 2017.

Table 8: Construction, Operational, and Mobile Greenhouse Gas Emissions of the Proposed Project

Emission Category	CO_2e Emissions (Metric tons/year) Unmitigated
Construction[1]	**308.38**
Operational	**913.08**
- Area	2.08
- Energy	106.75
- Mobile	804.25

Notes:
CO_2e= Carbon Dioxide Equivalents
[1]= Analysis assumes 2025 is the worst-case year for construction emissions.

Source: CalEEMod Model Results, Appendix A.

VIII.a-b. Less Than Significant Impact. A significant amount of GHG emissions is not anticipated under the proposed project, nor would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. As noted above, construction and operation of the proposed project would result in approximately 913 $MTCO_2e$ per year, respectively, which would account for less than 0.2 percent of the City's total GHG emissions recorded in 2017 and of the State's total GHG emissions recorded in 2020. Mobile sources are anticipated to account for approximately 88 percent of the project's anticipated annual operational emissions, which is noteworthy because many State and federal programs and regulations are aimed at continually improving fuel efficiency and shifting drivers to zero emission vehicles. As described in Section III, Air Quality, above, the project would be required to comply

with BCAQMD standards and regulations and maintain all construction equipment in good working condition, which would minimize GHG emissions associated with the project.

As noted above, the City's CAP Update was adopted in 2021. The CAP Update includes 13 measures aimed at achieving the necessary GHG reductions in Chico, summarized in Table 9, below.

Table 9. City of Chico CAP GHG Reduction Measure Summary

Measure Number	Measure Description
Energy	
E-1	Procure carbon-free electricity for the community through a CCA by 2024 and maintain opt-out rates of 5% for residential and 15% for commercial through 2030 and 2045.
E-2	Eliminate natural gas in all new building construction starting in 2025 to reduce natural gas 6% by 2030 and 16% by 2045 compared to the adjusted forecast.
E-3	Electrify existing residential buildings starting in 2027 to reduce overall natural gas consumption to 100 therms/person by 2030 and 30 therms/person by 2045.
E-4	Increase generation and storage of local renewable energy.
Transportation	
T-1	Improve active transportation infrastructure to achieve greater than 6% bicycle mode share by 2030 and 12% bicycle mode share by 2045.
T-2	Improve EV infrastructure to achieve greater than 23% EV share of car registrations by 2030, and 90% by 2045.
T-3	Improve shared mobility and transit programs and infrastructure.
T-4	Implement parking and curb management procedures that support the mode shift goals of the overall transportation strategy.
T-5	Support implementation of the City's General Plan that promotes sustainable infill development and mixed-use development in new growth areas to reduce vehicle miles traveled (VMT).
Waste	
W-1	Update waste hauler franchise agreements to implement requirements of SB 1383 and achieve 75% reduction below 2014 levels in organic waste to 0.4 tons of waste/person by 2025 and maintain through 2045.
Sequestration	
S-1	Increase carbon sequestration by increasing urban canopy cover at least 10% by 2030 through new greenscaping programs.
S-2	Develop and Implement the Urban Forest Master Plan.
Outreach and Education	
O-1	Conduct a holistic community outreach and education program to optimize CAP implementation.

Source: City of Chico. 2021. Climate Action Plan Update. Available at: https://chico.ca.us/sites/main/files/file-attachments/chico-cap-update_final-draft-complete.pdf?1655413766.

The project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. There are several goals, policies, actions related to air quality and the reduction of GHG emissions included in Chapter 2 (Sustainability Element) of the City of Chico 2023 General Plan. In addition, the City has an adopted Climate Action Plan (CAP), updated in 2021, which identifies programs and actions to reduce GHG emissions within the City and aid the City in achieving its goal

of carbon neutrality by 2045. In accordance with the Governor's Office of Planning and Research's (OPR) General Plan Guidelines and Technical Advisories (2023) and Section 15064(h)(3) of the CEQA Guidelines, projects that are consistent with the CAP, may be found to cause a less than significant impact under CEQA.

For each measure listed in Table 9, above, the CAP Update contains one or more related actions (56 Actions in all). Most of the CAP Update actions pertain to government programs and activities and are not affected by private development projects such as the project analyzed in this document. The following section lists each action that applies to the proposed project assesses whether the proposed project complies with each action:

Action: ***E-2-1: Require new construction to be all-electric.***
Analysis: Per the CAP, this requirement requires the City to adopt a new ordinance which bans the installation of natural gas in new residential and commercial construction by 2025. Future development on the subject Site would be required to adhere to all City requirements at the time of construction, which may include an all-electric requirement, which would be added as a condition of approval in order to implement this action.

Action: ***T-1-1: Implement the Chico Bicycle Master Plan.***
Analysis: No bicycle facility improvements are required of the project pursuant to the Bicycle Master Plan. Development of the project Site would require payment into the City's Development Impact Fee (DIF) fund for constructing citywide bicycle facility improvements consistent with the Chico Bicycle Master Plan.

Action: ***T-1-2: Require shaded and convenient bike parking.***
Analysis: In accordance with Chapter 19.70 of the CMC, bicycle parking is not required for single-family residences that are detached and/or do not share common open space areas. Covered bicycle parking is typically provided with new homes within private garage spaces.

Action: ***T-1-3: Require major road upgrades to include bicycle infrastructure.***
Analysis: No major road upgrades are required or proposed as part of the proposed project. While three new streets would be constructed under the project, their primary purpose is to provide access to the interior of the Site and to each individual parcel, and would also provide connectivity to Nord and Henshaw Avenues. Existing bicycle facilities (Class II bicycle lanes) are located on W. East Avenue.

Action: ***T-1-4: Perform a street/intersection study.***
Analysis: Intersections in close proximity to the Site (W. East Avenue east of Nord Avenue/SR 32 and W. East Avenue west of Guynn Avenue) have been studied multiple times over the years.[4] As previously noted, the project would be required to adhere to all City requirements at the time of construction and payment into the City's DIF fund for citywide street facility improvements.

Action: ***T-2-1: Increase privately owned EV charging infrastructure.***
Analysis: This action requires the City to update its Building Code to require EV capable private garages for new single-family and duplex residential development, 20% EV charging capable spaces and panel capacity for new multi-family residential development, 20% EV charging capable spaces for new commercial development, and at least 1% working EV charging spaces for all new development and major retrofits.

Action: ***T-5-1: Support Infill Growth.***
Analysis: The Site is not considered an infill site, however, approving the proposed project does not conflict with CAP Update direction to support infill growth. The City can both support infill growth pursuant to this Action, and approve projects such as the proposed project to accommodate the additional residential units needed within the City.

[4] The City of Chico provides the results of past turning movement counts and average daily traffic counts over a 24-hour period. Collected data is then utilized by the City's Traffic Engineering Division to evaluate the need for road improvements, traffic signal installations, traffic signal modifications, roadway capacity analysis, and bicycle and pedestrian projects, as well as project future traffic volumes (City-Traffic, n.d.). The City's database can be accessed at the following link: https://chico.ca.us/post/traffic-counts-0.

***Action: S-1-1: Implement Chico's Urban Forest* Revitalization Program.**
Analysis: Tree removal would be required to accommodate the proposed residential development on-site. As previously described above, on-site tree removal would be subject to the City's Tree Preservation Regulations (City of Chico Municipal Code Chapter 16.66), which will result in replacement trees via fee payment for the cumulative tree diameter removed from the project. In addition, the Applicant is required to prepare a tree protection plan to ensure that on-site trees to remain under the project, including their root systems, would be adequately protected from potential hard during demolition, grading, and construction (City of Chico Municipal Code Chapter 16.66). New trees will be planted along the proposed street frontages, consistent with City standards, and additional trees will be planted in the front and rear yards of private residences. The project will be implemented consistent with the Urban Forest Mast Plan.

Action: *S-1-3: Improve Greenspace Management to Maximize Carbon Sequestration.*
Analysis: This policy is directed at greenspace management of public open spaces and public parks by the City. All landscaping will be installed to Water Conservation in Landscaping Act of 2006 (AB 1881) water usage requirements and will be drought tolerant and on drip irrigation systems with timers. As noted above, street trees as approved by the Urban Forest Manager will be installed along new streets.

Action: S-1-4: Require Shade Trees in New Major Developments.
Analysis: Landscaping, including shade trees in the form of street trees and private yard trees, would be provided under the future on-site development. Property owners will have the ability to customize their landscape area with a variety of trees, including species identified in the Urban Forest Management Plan. Street trees will also be subject to approved by the Urban Forest Manager.

There are no elements of the project that would be expected to result in substantial GHG emissions. Additionally, project development would be subject to the City's land use entitlement and building plan check review processes, for which development projects in the City are required to comply with all applicable standards, including the California Building Code and City of Chico regulations. As the proposed project is consistent with the City's General Plan and municipal code, and complies with the applicable actions identified in the City-adopted CAP Update, it is not anticipated to generate GHG emissions that would have a significant impact on the environment or conflict with any planning requirement aimed at reducing GHG emissions. Regarding greenhouse gas emission, project impacts would be **less than significant**.

MITIGATION MEASURES
No mitigation required.

FINDINGS
The proposed project would have a **Less Than Significant Impact** on Greenhouse Gas Emissions.

IX. HAZARDS AND HAZARDOUS MATERIALS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
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 complied pursuant to Government Code Section 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?	☐	☐	☒	☐

DISCUSSION

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency, or has characteristics defined as hazardous by a federal, state, or local agency. Chemical and physical properties such as toxicity, ignitability, corrosiveness, and reactivity cause a substance to be considered hazardous. These properties are defined in the California Code of Regulations (CCR), Title 22, §66261.20-66261.24. A "hazardous waste" includes any hazardous material that is discarded, abandoned, or will be recycled. Therefore, the criteria that render a material hazardous also cause a waste to be classified as hazardous (California Health and Safety Code, §25117).

IX.a-b. Less Than Significant with Mitigation Incorporated. During the construction phase, small quantities of hazardous materials common to equipment maintenance and operation, such as gasoline, diesel fuel, hydraulic fluids, oils, and lubricants may be required. Once constructed, the project would be anticipated to utilize household cleaning supplies, in addition to fuels, lubricants, solvents, pesticides, and fertilizers during routine maintenance. Although, the types and quantities of materials to be used are not expected to pose a significant risk to the public and/or environment and would be managed in accordance with federal, State, and local regulations, in order to assure hazardous materials are not released into the environment, leaks, drips, and spills of hydraulic fluid, oil, or fuel from construction equipment shall be promptly cleaned, per **Mitigation Measure HAZ-1**, below. With the measure in place, this impact would be **less than significant with mitigation incorporated**.

IX.c. Less Than Significant. One existing school is located within one-quarter mile of the Site, approximately 760 feet southwest of the Site, and is the closest school to the Site. Three additional schools, Emma Wilson Elementary School, California State University, Chico, and Chico High School, are located approximately 1.4, 2, and 3 miles southeast of the Site, respectively. It is not anticipated that hazardous materials to be transported to and utilized on-site would be used or stored at the Site in any quantity or application that could impact any schools in the area. Therefore, a **less than significant impact** would occur.

IX.d. No Impact. A records search was conducted using the State Water Resources Control Board's (SWRCB) GeoTracker database (2023) and California Department of Toxic Substances Control's (DTSC) EnviroStor database (2023), in with no listed hazardous materials sites were identified on-site or within 1,000 feet of the project Site. Since the proposed project Site is not included on a list of hazardous materials sites complied pursuant to Government Code Section 65962.5, **no impact** would occur.

IX.e. Less Than Significant Impact. The Site is located approximately 1.59 miles northeast of the Ranchero Airport, a private-use airport, and approximately 3.20 miles southwest of the Chico Municipal Airport, a public-use airport. The Site is located outside of the designated airport safety zones of both airports, as per the Butte County Airport Land Use Compatibility Plan (2017). Therefore, the proposed project would not result in a safety hazard or excessive noise for people residing or working in the proposed project area and a **less than significant** impact would occur.

IX.f. Less Than Significant Impact. As described in Chapter 12 (Safety Element) of the City of Chico 2030 General Plan, both the City of Chico and the County of Butte have adopted Emergency Response Plans, which include prearranged emergency response procedures and mutual aid agreements for emergency assistance. Additionally, as stated in the Safety "the objectives of the emergency plans are to prepare for and coordinate effective responses to emergencies and to provide adequate assistance to other jurisdictions as needed. The plans specify actions to coordinate operations, manage resources, and direct governmental and nongovernmental organization's responsibilities during emergency events" (2011 and amended 2017). Chico's emergency evacuation routes are identified as Highway 99 (located approximately 1.6 miles northeast of the Site) and State Route 32 (located approximately 870 feet southwest of the Site).

The proposed project would not have a significant impact on the adopted Emergency Response Plans, as the portion of the Site planned to be subdivided and developed with single-family residences is slated for development and designated for residential use under both the County and City's General Plans. Additionally, the proposed development would be designed to current standards with suitable road widths and turn radii to accommodate emergency vehicles, and would not impede access to the identified emergency access routes. A **less than significant** impact would occur.

IX.g. Less Than Significant Impact. The Site, mostly developed with orchard uses, is located in close proximity and adjacent to existing development to the east, south and west, with agricultural lands to the north. The Site is mapped as located within an area of no substantial fire hazard under the City's Community Wildfire Protection Plan (2022). As the Site is not currently located within the city limits of Chico, the Site is within the jurisdiction of the Butte County Fire Department. However, while the Chico Fire Department provides fire suppression, emergency medical, rescue, hazardous materials response, public assistance, fire prevention, and life and safety services to the City of Chico, the Department also response to emergencies in the surrounding unincorporated area through the Chico Urban Area Fire and Rescue Agreement (CUAFRA) with Butte County Fire Department, which provides for closest engine response to all emergencies, regardless of jurisdiction (Butte LAFCo, 2018). Upon annexation into the Chico city limits, fire protection and response would

transfer to the Chico Fire Department, which serves over 34 square miles, including the City of Chico. As the Site would be developed in accordance with all current standards and would be adequately served by fire protection services, a **less than significant** impact would occur.

MITIGATION MEASURES

HAZ-1: Leaks, drips, and spills of hydraulic fluid, oil, or fuel from construction equipment shall be promptly cleaned up to prevent environmental contamination, including contamination of waterways. All workers shall be properly trained in the prevention and clean-up of spills of contaminants. Protective measures shall include the following:

1. No discharge of pollutants from vehicle and equipment cleaning shall be allowed into any drainage ditches or watercourses.
2. Spill containment kits shall be properly maintained and located within the vicinity of all operations and fueling of equipment.

FINDINGS

The proposed project would have a **Less Than Significant Impact with Mitigation Incorporated** on Hazards and Hazardous Materials.

X. HYDROLOGY AND WATER QUALITY. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
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 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 off-site?	☐	☐	☒	☐
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?	☐	☐	☒	☐

DISCUSSION

The existing on-site residential development is currently served by on-site wells and septic systems; however, under the project, the existing wells and septic systems would be abandoned in accordance with Butte County Environmental Health requirements, and community utility services would be extended to the Site. The Site will be connected to California Water Service (Cal Water) for community water service, which provides water services to the City of Chico. As noted in 2020 Urban Water Management Plan (UWMP) for the Chico-Hamilton City District (herein referred to as "Chico District"; 2021), Cal Water has provided water utility services in the Chico area since 1926 and supplies water service to approximately 1.8 million Californians through over 481,000 connections. The Chico District operates two public water systems (PWS): the Chico PWS (located in Butte County) and the Hamilton City PWS (located in Glenn County). The Chico District has a population of approximately 109,700 and all water customers are considered urban non-agricultural water users. Water demand within the Chico District was 20,399 acre-feet per year (AFY) on average between 2016 and 2020 (Cal Water-2020, 2021). The Cal Water's 2021 Water Quality Report for the Chico District indicates that water is derived from the groundwater by using 57 wells in Chico to pump an average of 15.9 million gallons of groundwater per day, which is delivered to customers through 401 miles of main, six (6) storage tanks, and eleven (11) booster pumps (2021).

The Chico District pumps groundwater from two groundwater subbasins (the Vina Subbasin [DWR Basin No. 5-021.57] in the Chico PWS, and the Corning Subbasin [DWR Basin No. 5-021.51] in the Hamilton City PWS). Neither basin is considered by the California Department of Water Resources (DWR) to be critically over

drafted. In addition, Butte County has a 27,000 acre-feet per year (AFY) entitlement to California State Water Project (SWP) water. As stated in the UWMP, the groundwater supply is expected to be sufficient to support the Chico District's projected water demand through 2045 (Cal Water-2020, 2021).

As indicated in the Vina Groundwater Sustainability Plan (GSP) for the Vina Subbasin, adopted on December 15, 2021, the Vina Subbasin lies in the eastern central portion of the Sacramento Groundwater Basin. Groundwater flows from the north toward the southwestern corner of the subbasin. The Sacramento River borders the Vina Subbasin on its western side and flows from north to south. The Sacramento River and streams that cross the Vina Subbasin stabilize storage volumes by providing recharge to the Vina Subbasin. Per the Vina GSP, the estimated sustainability yield, or the amount of groundwater that can be withdrawn without causing undesirable results, for the subbasin is 233,000 acre-feet per year (AFY). The total fresh groundwater in storage was estimated at over 16 million acre-feet (MAF). The amount in storage has decreased by approximately 0.07 percent (or approximately 10,000 acre-feet) per year between 2000 and 2018 due to recent dry years and an increase of outflows. Groundwater levels are expected to continue to decline based on projections of current land and water uses. However, it is highly unlikely that the Vina Subbasin will experience conditions under which the volume of stored water poses a concern. In addition, several projects are planned in the Vina Subbasin to offset approximately 10,000 acre-feet per year (2021).

Although currently served by individual on-site septic systems, under the project, community wastewater service would be extended to the Site. Wastewater within the City of Chico is treated by the City of Chico Water Pollution Control Plant (WPCP). Collected wastewater undergoes secondary treatment followed by chlorination and de-chlorination prior to disposal into the Sacramento River. Oxidation ponds are also available for backup. The Chico WPCP has a capacity to treat 12 million gallons per day (MGD) with future expandability to 15 MGD capacity. The City's average dry weather flow is 7.5 MGD (Cal Water-2020, 2021).

As noted in Chapter 9 (Parks, Public Facilities, and Services) of the Chico 2023 General Plan (2011, amended 2017), the storm drainage management within the City and the urban area is provided by a system of developed and undeveloped collection systems operated and maintained by the City and Butte County. The City is not constrained by any formally designated service areas but has established storm drainage basins for the purpose of planning infrastructure. New development is required to install storm drainages infrastructure when necessary. Storm drainage facilities that are located in the unincorporated areas surrounded by the City and in areas immediately adjacent to the City are maintained through County Service Areas. The existing storm drainage system is developed to consist of primarily of drop inlets located along the street system, which transports water to outfall locations located along major creeks including Sycamore, Mud, Comanche, Big Chico, Little Chico Creeks and Lindo Channel (2017).

Consistent with the 2011 General Plan (amended 2017) and the City's 2000 Storm Drain Master Plan Integrated Document, new development must incorporate storm water quality and quantity mitigations into their designs. The U.S. Environmental Protection Agency's (EPA) National Pollutant Discharge Elimination System (NPDES) permit program addresses water pollution by regulating point sources that discharge pollutants to waters of the United States. Created in 1972 by the Clean Water Act, the NPDES permit program grants authority to State governments to perform many permitting, administrative, and enforcement aspects of the program. Within California, the NPDES permit program is administered by the State Water Resources Control Board (SWRCB). Construction projects that would disturb more than one acre of land, such as the proposed project, would be subject to the requirements of General Construction Activity Stormwater Permit (Construction General Permit Order 2009-0009-DWQ, also known as the CGP), which requires operators of such construction sites to implement stormwater controls and develop a Stormwater Pollution Prevention Plan (SWPPP) identifying specific BMPs to be implemented to minimize the amount of sediment and other

pollutants associated with construction sites from being discharged in stormwater runoff. Such BMPs may include, for example, straw bales, fiber rolls, and/or silt fencing structures to assure the minimization of erosion resulting from construction and to avoid runoff into sensitive habitat areas (including the unnamed tributary and downstream watercourses), limit ground disturbance to the minimum necessary, and stabilize disturbed soil areas as soon as feasible after construction is completed. Landscaping will be installed to Water Conservation in Landscaping Act of 2006 (AB 1881) water usage requirements and will be drought tolerant and on drip irrigation systems with timers. There will be no plants installed that are on the California Department of Food and Agricultural Noxious Weed list, including fruit trees that can go un-attended and harbor pests. In addition, street trees, selected and approved by an Urban Forester will be installed within the 7-foot-wide landscape strip.

X.a. Less Than Significant Impact. The proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. The proposed on-site subdivision would be constructed in accordance with the most recent standards set by all regulatory agencies, including but not limited to the City and State and local water quality control boards [State Water Resources Control Board (SWRCB) and Central Valley Regional Water Quality Control Board (SVRWQCB)]. Additionally, the project would be subject to the 2022 Construction General Permit (CGP) and Chapter 15.50 of the Chico Municipal Code, which require the preparation and implementation of a SWPPP that specifies erosion and sediment control construction and post-construction BMPs to reduce or eliminate construction-related and operational impacts on receiving water quality. Lastly, the project would adhere to the standard provisions identified in Chapter 7 of the City's Stormwater Resource Protection Plan (2018). A **less than significant** impact would occur.

X.b. Less Than Significant Impact. The project is not anticipated to substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. As described above, per the UWMP, the groundwater supply is expected to be sufficient to support the Chico District's projected water demand through 2045 (Cal Water-2020, 2021), and the 2021 Vina Subbasin GSP identifies projects that will offset groundwater pumping and/or increase recharge to aid in achieving sustainability goals. A **less than significant** impact would occur.

X.c.i. Less Than Significant Impact. The proposed project would allow for the future construction of 71 new single-family homes on the subject properties. Although the existing drainage patterns of the Site would be altered through the addition of newly proposed impervious surfaces and the removal of trees, the project would not result in substantial erosion or siltation on- or off-site, as the project would be subject to the Statewide Construction General Permit (CGP), which requires the preparation and implementation of a SWPPP that specifies erosion and sediment control construction and post-construction BMPs to reduce or eliminate construction-related and operational impacts on receiving water quality. Such BMPs may include straw bales, fiber rolls, and/or silt fencing structures to assure the minimization of erosion resulting from construction and to avoid runoff into sensitive habitat areas, limit ground disturbance to the minimum necessary, and stabilize disturbed soil areas as soon as feasible after construction is completed. Tree removal on the Site will be conducted in compliance with the City's tree ordinance and will be subject to the in-lieu fee payment requirements set forth by Chico Municipal Code (CMC) 16.66 and fee schedule adopted by the City Council. A **less than significant impact** would occur.

X.c.ii. Less Than Significant Impact. The proposed project would not be expected to substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. As previously discussed, the proposed project would increase the amount of impervious surface on-site, as majority of the Site is currently undeveloped. The proposed project includes future construction of 71 new single-family

homes on the proposed 74-lot subdivision. In addition, a 30-foot-wide frontage improvement will be constructed along both Henshaw and Nord Avenues, along the portions of the property that abuts these rights-of-way. The 30-foot-wide improvement will consist of new asphalt for 20-feet, a 7-foot planter strip and a 5-foot sidewalk. The proposed internal project roadways will consist of a total of 36-foot-right-of-way, of which 32-feet will be paved and each street side will have a 7-foot planter strip and a 5-foot sidewalk. However, the project would incorporate landscaped areas and pervious pavement, which would aid in groundwater recharge, infiltration, and retaining water on-site. In addition, the project developer would be required to prepare a SWPPP and implement standard BMPs such as straw bales, fiber rolls, and/or silt fencing structures to assure the minimization of erosion resulting from construction and to avoid runoff into sensitive habitat areas, limit ground disturbance to the minimum necessary, and stabilize disturbed soil areas as soon as feasible after construction is completed. A **less than significant impact** would occur.

X.c.iii. Less Than Significant. The proposed project would not be anticipated to 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. As previously discussed, storm drainage management within the City and the urban area is provided by a system of developed and undeveloped collection systems operated and maintained by the City and Butte County. The City is not constrained by any formally designated service areas but has established storm drainage basins for the purpose of planning infrastructure. Storm drainage facilities that are located in the unincorporated areas surrounded by the City and in areas immediately adjacent to the City are maintained through County Service Areas. The project involves annexing (3) parcels (APNs: 042-070-196, 042-070-197, and 042-740-020) located adjacent to the City of Chico boundary line. The existing storm drainage system is developed to consist of primarily of drop inlets located along the street system, which transports water to outfall locations located along major creeks including Sycamore, Mud, Comanche, Big Chico, Little Chico Creeks and Lindo Channel (Chico 2030 General Plan, 2017). All future development will comply with the City's 2000 Storm Drain Master Plan, and would include storm drain drop inlets and dry leach trenches as necessary along the proposed streets. In addition, construction projects that would disturb more than one acre of land, such as the proposed project, would be subject to the requirements of General Construction Activity Stormwater Permit (Construction General Permit Order 2009-0009-DWQ, also known as the CGP), which requires operators of such construction sites to implement stormwater controls and develop a Stormwater Pollution Prevention Plan (SWPPP) identifying specific BMPs to be implemented to minimize the amount of sediment and other pollutants associated with construction sites from being discharged in stormwater runoff. Such BMPs may include, for example, straw bales, fiber rolls, and/or silt fencing structures to assure the minimization of erosion resulting from construction and to avoid runoff into sensitive habitat areas (including the unnamed tributary and downstream watercourses), limit ground disturbance to the minimum necessary, and stabilize disturbed soil areas as soon as feasible after construction is completed. Therefore, a **less than significant impact** would occur.

X.c.iv. No Impact. The Site is not located in an area prone to flooding or within a designated flood hazard zone, as depicted on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel No. 06007C0485E, effective January 6, 2011. As a result, the project would not impede or redirect flood flows, and **no impact** would occur.

X.d. Less Than Significant Impact. The project Site is located inland, outside of the coastal zone. As shown on the City of Chico Web GIS portal (n.d.), the Site is not located within a tsunami inundation zone, is not located within close proximity to a dam or levee, and is not located within a flood zone. In addition, the Site is not located within close proximity to a body of water. As such, proposed development at the Site would not be

subject to inundation by seiche, tsunami, or mudflow. As a result, the potential for inundation at the Site is considered low and a **less than significant impact** would occur.

X.e. Less Than Significant Impact. The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. As stated above, the Site is located in the Vina Subbasin, which, per the Vina Groundwater Sustainability Plan, adopted on December 15, 2021, which indicates that tit is highly unlikely that the Vina Subbasin will experience conditions under which the volume of stored water poses a concern. Additionally, per Cal Water's 2020 Urban Water Management Plan (UWMP) for the Chico-Hamilton City District, the groundwater supply is expected to be sufficient to support the Chico District's projected water demand through 2045 (2021). There are no components of the project that would be expected to significantly impact water resources. Furthermore, the proposed project would be subject to the requirements of the NPDES Stormwater Program and would be required to comply with a SWPP, which would identify all potential sources of pollution that could affect stormwater discharges from the Site and identify BMPs to prevent significant impacts related to stormwater runoff. A **less than significant impact** would occur.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have a Less Than Significant Impact on Hydrology and Water Quality.

XI. **LAND USE AND PLANNING**. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
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?	☐	☐	☒	☐

XI.a. No Impact. The project borders the existing city limits along East Avenue in an area that contains low and very low residential densities. The boundaries of the Project are self-contained and do not physically divide an established community. Therefore, the project is anticipated to have **no impact**.

XI.b. Less Than Significant Impact. The proposed Project is along the southern boundaries of the Special Planning Area (SPA) for "Bell Muir," which has approximately 250 acres for potential development (398 total gross areas). The General Plan states that SPAs are areas with significant new growth potential and carry a requirement for subsequent planning prior to development. Within this SPA, the City has identified a conceptual mix of Low Density and Open Space zoning designations (Appendix C of 2030 General Plan).

The SPA comprises of residential development on a range of parcel sizes (single acres up to 20 acres in size). The county has the area zoned Very Low Density Residential – 1 acre minimum (VLDR – 1.0). Which permits single family development on 1 acre lots. As such, development is occurring within the boundaries of the SPA, but at county standards. Such as:

County Project Name	Number of Lots	Number of Acres	Density (units/acre)
Harvest Point	18	20	0.9
Neves Subdivision	8	10	0.8
Sanford Manor	10	10	1
Bidwell Grove	9	9.25	0.97

Because the Bell Muir SPA area contains a wide variety of existing residential ownership patterns and other developments are actively occurring, the likelihood of the SPA to be developed as a singular area as sought by the 2030 General Plan is limited. With so many owners, developers are generally unable to obtain sufficient control over the SPA to justify master planning the entire area which includes non-participating owners. The applicant for the proposed project proceeded at their own risk to pursue annexation and subdivision of a portion of the SPA. However, it is conceded that annexing and developing the Site pursuant to City standards as opposed to County standards would be more efficient use of the land which is adjacent to the existing urban boundary.

The proposed request is to amend the General Plan by removing the SPA designation and designating the property Low Density Residential with an R-1 Single Family zoning district, while then annexing the property into the city limits. This action would permit development to occur at City standards, which allows up to 7 units per acre in the R1 Single Family zoning district. The proposed Project consists of 74 single family lots, creating a density of 4.8 units per acre. If the subject property is developed by County standards, a total of 15 units could potentially be accommodated on site or a density of 1 unit per acre.

Development Comparison Table		
	Butte County	**City of Chico**
Development Potential	15 Lots	108 Lots
Permitted Density	1 unit per acre	2.1 to 7 units per acre
Lot Sizes	1 acre minimum	4,500 sq.ft. interior lots 5,500 sq.ft. corner lots
Sanitary Collection	Individual Septic Systems	City Sewer Plant
Water Provider	California Water	California Water

Public Improvements Standards	36-Foot-Wide Roadway with Curb, Gutter and 4-foot Sidewalk	56-Foot-Wide Roadway with 32-Foot-Wide Roadway with Curb, Gutter and 7-foot Landscape strip and 5-foot sidewalk.

By permitting the Project to remove the SPA designation while amending the designation to Low Density Residential with a R-1 Single Family zoning district, the portion of the SPA area becomes consistent with the SPA – Bell Muir graphic found in the 2030 General Plan which indicates the area to be designated Low Density Residential. Further, the proposal is also consistent with the Conceptual Land Use Plan narrative (Appendix C, page C-2), which states:

> *The Bell Muir SPA is unique in that certain areas have already been developed to an extent that makes future development at higher densities or integrating a complete neighborhood approach difficult. Due to the rural nature of the area, planning efforts will focus on single-family residential development where opportunities exist.*
>
> *Planning for Bell Muir will include the strategic provisions on infrastructure (e.g. roads, storm drainage) that will allow for opportunities for single-gamily residential development on the larger undeveloped parcels in the SPA.*

The Project is also consistent with the following General Plan policies:

> Policy LU-2.3 (Sustainable Land Use Pattern) - Ensure sustainable land use patterns in both developed areas of the City and new growth areas.
>
> Action LU-4: Promote compatible infill development.
>
> LU-4.2: Support infill development, redevelopment and rehabilitation projects that are compatible with surrounding properties and neighborhoods.
>
> Action LU-6.1.2 (Amendment to Existing Special Planning Areas) – Require an amendment to the General Plan Land Use Diagram and corresponding conceptual land use plan for any significant change to a Special Planning Area boundary.
>
> Policy SUS-1.1 (General Plan Consistency) – Ensure proposed development projects, policies, and programs are consistent with the General Plan.
>
> Action CIRC-2.1.3 (Multimodal Connections) – Provide connections between and within existing and new neighborhoods for bicycles, pedestrians, and automobiles.
>
> Policy CIRC-2.2 (Circulation Connectivity and Efficiency) – Provide greater street connectivity and efficiency for all transportation modes.
>
> Policy CIRC-4.2 (Continuous Network) – Provide a pedestrian network in existing and new neighborhoods that facilitates convenient and continuous pedestrian travel free from major impediments and obstacles.
>
> Action CD-2.1.1 (Circulation and Access) – As part of project review, integrate a predominately grid-based street pattern into new development to enhance walkability and public health.
>
> Policy CD-2.3 (Corridor Improvements) – Improve corridors traversing the City to enhance their aesthetics and accessibility.
>
> Goal CD-5: Support infill and redevelopment compatible with the surrounding neighborhood.
>
> Goal H.1: Increase equal housing opportunities.

Policy H.1.2: Remove regulatory constraints to equal housing opportunity.

Goal H.3: Promote construction of a wide range of housing types.

Policy H.3.2: Enable sufficient housing construction to meet future needs.

Policy H.3.3: Promote a mix of dwelling types and sizes throughout the City.

Policy H.6.2: Expand homeownership opportunities for first-time homebuyers.

Because the project implements General Plan policies on the whole, while developing the property to City standards the potential impacts resulting from conflicts land use policies are considered **less than significant.**

MITIGATION: None Required.

XII. MINERAL RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
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?	☐	☐	☐	☒

DISCUSSION

The project Site is not located in an area of known rock, aggregate, sand, or other mineral resource deposits of local, regional, or State residents. There are no known mineral resources of significance on the Site that would be made unavailable by the proposed project. Furthermore, the parcel is not utilized for Surface Mining and Reclamation Act (SMARA) activities, nor are any such sites located in the vicinity of the Site (CGS, 2016 and 2022).

XII.a-b. No Impact. The proposed project area does not contain mineral resources that are of value locally, to the region, or to residents. Additionally, the proposed project area is not identified as a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Therefore, the proposed project would not interfere with materials extraction or otherwise cause a short-term or long-term decrease in the availability of mineral resources. No impact would occur.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have **No Impact** on Mineral Resources.

XIII. NOISE. Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of 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?	☐	☐	☐	☒

DISCUSSION

Excessive and chronic exposure to elevated noise levels can result in auditory and nonauditory effects in humans. Auditory effects of noise on people are those relating to temporary or permanent hearing loss induced by noise. Nonauditory effects of exposure to elevated noise levels are those relating to behavioral and physiological effects. The nonauditory behavioral effects of noise on humans are associated primarily with the subjective effects of annoyance, nuisance, and dissatisfaction, which lead to interference with such activities as communications, sleep, and learning.

The degree to which noise results in annoyance and interference with activities is highly subjective and may be influenced by non-acoustic factors. The number and effect of these non-acoustic environmental and physical factors vary, depending on the individual characteristics of the noise environment, including sensitivity, level of activity, location, time of day, and length of exposure. One key aspect to the prediction of human response to new noise environments is the individual level of adaptation to an existing noise environment. The greater the noise level change caused by a new noise source relative to an individual's customary environment, the less tolerant of the new noise source the individual will be. With regard to human perception of increases in sound levels expressed in decibels (dB), a 1 dB change generally is not perceivable, excluding controlled conditions and pure tones. Outside controlled laboratory conditions, the average human ear barely perceives a change of 3 dB. A 5 dB change generally fosters a noticeable change in human response, and an increase of 10 dB is subjectively heard as a doubling of loudness.

As provided in the Noise Element (Chapter 13) of the City of Chico 2030 General Plan), the City has established noise compatibility standards for different land uses for both exterior and interior locations, as provided below:

TABLE N-1
MAXIMUM ALLOWABLE NOISE LEVELS FROM
TRANSPORTATION NOISE SOURCES

Land Use	Outdoor Activity Areas[1] Ldn/CNEL, dB	Interior Spaces	
		Ldn/CNEL, dB	Leq, dB[2]
Residential	65 [3]	45	--
Transient Lodging	--	45	--
Hospitals, Nursing Homes	65 [3]	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls	65 [3]	--	40
Office Buildings	--	--	45
Schools, Libraries, Museums	65 [3]	--	45
Playgrounds, Neighborhood Parks	70	--	--

Notes:
1. Noise standards are to be applied at outdoor activity areas with the greatest exposure to the noise source. When it is not practical to mitigate exterior noise levels at the patios or balconies of multi-family dwellings, a common area or onsite park may be designated as the outdoor activity area. For noise-sensitive land uses that do not include outdoor activity areas, only the interior noise standard shall apply.
2. As determined for a typical worst-case hour during periods of use.
3. Where it is not possible to reduce noise in outdoor activity areas to 65 dB L_{dn}/CNEL or less using all feasible noise reduction measures, an exterior noise level of up to 70 dB L_{dn}/CNEL may be allowed provided that interior noise levels are in compliance with this table.

Development of 71 additional single-family residences on-site would be subject to the exterior and interior noise limits identified in Table N-1, above, and the allowable interior noise levels for habitable rooms, pursuant to Subsection 1207.4, Allowable Interior Noise Levels, of Section 1207, Sound Transmission, of Chapter 12, Interior Environment, of the latest California Building Code (CBC). Per Table N-1, the single-family residences would be required to have a maximum exterior noise level of 65 dB CNEL and an interior noise level of 45 dB CNEL, as measured with exterior windows and doors closed.

Due to the project's close proximity to the nearby Union Pacific Railroad (UPRR) tracks, it is anticipated that elevated noise levels may be possible at this Site. The Site is located approximately 200 feet northeast (at the nearest point) from the existing UPRR tracks. As noted in the Noise Element of the City's General Plan, the railroad tracks are used for both freight transport and Amtrack passenger service, and approximately seventeen (17) freight trains (at speeds of up to 70 mph) and two (2) Amtrack passenger trains utilize this rail line on a daily basis. Noise levels associated with passing trains can reach levels ranging from 96 to 110 dBA L_{max} at 50 feet from the track centerline. However, as shown on Figure N-2 (Noise Contour Map) within the Noise Element, the subject Site appears to be within the 60 dBA noise contour (2011 and amended 2017), which is below the 65 dB noise level limit permitted for residential uses. This indicates that significant noise levels from trains utilizing the nearby tracks are not anticipated at the Site, as the associated sound dissipates before reaching the subject properties.

To reduce potential impacts associated with noise at the Site, the Applicant proposes to fully comply with all requirements of the latest version of the CBC and all City standards, and provide full disclosure of proximity to UPPR tracks in all escrow documents. Additionally, to further reduce and limit noise exposure to future residents, new homes constructed along Henshaw Avenue are proposed to have no more than 30 percent of its front elevation contain windows and doors that may open. Further, the garage doors that face Henshaw Avenue would contain installation, further minimizing potential noise levels at the anticipated residences.

XIII.a. Less Than Significant. The proposed residential development would not be expected to generate noise in excess of what is common for such uses once demolition, site preparation, and construction are complete. The activities and associated construction equipment would be anticipated to cause temporary increases in noise; however, these impacts would only be associated with construction and would be temporary in nature. Sensitive receptors located nearest the Site include single-family residential neighborhoods located immediately east of and adjacent to APNs: 042-740-020 and 042-070-196, as well an additional single-family residential neighborhood located south of APNs: 042-070-196 and 042-070-197, across W. East Avenue (approximately 70 feet away). The construction hours and noise levels will be required to meet the City's requirements under Chapter 9.38 of the CMC, which limits allowable daytime and nighttime noise emission levels at the property line of sensitive uses.

Post-construction, noise associated with operation of the proposed project would be primarily generated through traffic associated with residents traveling to and from the Site, consistent with surrounding uses. Additionally, while the Site is located approximately 200 feet northeast (at the nearest point) from the existing UPRR tracks, the Site is mapped within the 60 dBA noise contour, as depicted on Figure N-2 (Noise Contour Map) within the Noise Element, the subject Site appears to be within the (2011 and amended 2017), which is below the 65 dB noise level limit permitted for residential uses. To reduce potential impacts associated with noise at the Site, the Applicant proposes to provide full disclosure of proximity to UPPR tracks in all escrow documents, ensure no more than 30 percent of front elevations contain windows and doors that may open for new homes constructed along Henshaw Avenue, and insulate any garage doors that face Henshaw Avenue. With adherence to existing noise regulations, potential construction-related and operation-related noise impacts would remain **less than significant**.

XIII.b. Less Than Significant Impact. There are no existing or proposed uses on-site that would result in excessive groundborne vibration or groundborne noise levels. The initial preparation and grading of the Site would require the use of heavy equipment, which would cause temporary groundborne vibration and/or groundborne noise. However, these impacts are associated with construction and would be temporary in nature. No groundborne vibration or groundborne noise would be anticipated during operation of the proposed project, as the project is residential in nature. Additionally, due to the location of the UPRR tracks within approximately 200 feet of the Site (at the nearest point), the Applicant proposes to provide full disclosure of proximity to UPPR tracks in all escrow documents, ensure no more than 30 percent of front elevations contain windows and doors that may open for new homes constructed along Henshaw Avenue, and insulate any garage doors that face Henshaw Avenue. A **less than significant impact** would occur.

XIII.c. No Impact. As previously discussed, the Site is located approximately 1.59 miles northeast of the Ranchero Airport, a private-use airport, and approximately 3.20 miles southwest of the Chico Municipal Airport, a public-use airport. However, as shown on Figure N-2 (Noise Contour Map) of the Noise Element of the Chico General Plan, the Site is located outside of all noise contours around the two airports. Therefore, **no impact** would occur.

MITIGATION MEASURES

None required.

FINDINGS

The proposed project would have a **Less Than Significant Impact** on Noise.

XIV. POPULATION AND HOUSING. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and/or businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐

DISCUSSION

According to the Housing Element of Chico 2030 General Plan (adopted in 2014), the City had a population of 87,671 persons in 2013 and is projected to increase to 133,944 by the year 2035, as shown below.

Table 5: Population Growth, 2010-2013

					Avg. Annual Change	
	2010	2011	2012	2013	Number	Percent
Chico	86,187	86,565	87,106	87,671	412	0.5%
Butte County	220,000	220,465	220,263	221,485	413	0.2%

Source: California Dept. of Finance, 1/1/13

Table 6: Population Forecast, 2010-2035

	2010	2015	2020	2025	2030	2035	Total Increase	Percent Increase	Annual Growth Rate
Chico	88,228	92,678	99,766	110,046	121,407	133,944	45,716	52%	1.7%
Butte County	221,768	236,800	257,266	281,558	306,047	332,459	110,691	50%	1.6%

Source: Butte County Association of Governments, Butte County Long-term Regional Growth Forecasts, 2010-2035

Based on the U.S. Census Bureau Quick Facts, the population of the City of Chico in 2021 was estimated at 102,338 persons, an increase of approximately 0.5 percent since July 1, 2020 (U.S. Census Bureau, Not Dated). In 2021, there were an estimated 44,429 total household units with an average household occupancy rate of 15.6% for housing units with four or more bedrooms (U.S. Census Bureau, 2020). The 71 additional single-family residences proposed on-site would be anticipated to result in a population increase of approximately 170-225 residents at the subject Site. In accordance with Policy LU-2.3 (Sustainable Land Use Pattern) and Policy SUS-1.1 (General Plan Consistency), the proposed project aligns with the policies, goals, and action items found in the City of Chico 2030 General Plan.

XIV.a. Less Than Significant. Under the project, the Applicant is requesting a General Plan Amendment for all project parcels (APNs: 042-070-196, 042-070-197, and 042-740-020) to remove the three properties form the Bell Muir Special Planning Area (SPA) of the City of Chico 2030 General Plan and amend the land use designations. Currently, the Site has a Butte County General Plan 2030 (2019) land use designation of Very Low Density Residential (VLDR) and a Butte County zoning designation of VLDR. According to the Butte County General Plan 2030 (2019), this land use category is designed to provide for areas of single-family residential uses permitting 1 du/ac. If the site would be developed in the County, the site would only yield approximately 15, one-acre estate lots.

Unplanned population growth could occur if the project would generate substantial population growth that was not considered in the General Plan. However, the project would not induce substantial population growth, nor would the added population be unplanned, as the Site is located within the City of Chico's Sphere of Influence (SOI) and the portion of the Site planned to be subdivided and developed with single-family residences is identified for future development under both the County and City's General Plans. Based on Chico's average household size of approximately 2.4 persons, development of the proposed additional 71single-family residences on the subject Site would be anticipated to result in approximately 170-225 additional residents on-site, which equates to approximately 0.2 percent of the City's estimated population in 2021 (U.S. Census Bureau, 2020). While the extension of infrastructure for community water and wastewater services is proposed under the project, as well as development of additional internal roadways, development of the Site for residential use was intended by the City (refer to Section XIX (Utilities and Service Systems), below, for additional discussion). With regard to inducing substantial population growth Project impacts would be **a less than significant**.

XIV.b Less Than Significant. As shown on the Vesting Tentative Subdivision Map (Figure 2), the Site contains five existing single-family residences, four of which will be retained under the project. As designed, three of the proposed lots would retain four existing residences located on-site, with two existing residences to be retained within Lot 2 (see Figure 2). The project also entails the development of 71 additional single-family residences on the Site. As such, the project would not displace a substantial number of existing people or housing, necessitating the construction of replacement housing elsewhere and this impact is **less than significant**.

MITIGATION MEASURES
No mitigation required.

FINDINGS
The proposed project would have a **Less than Significant Impact** on Population and Housing.

XV. PUBLIC SERVICES. Would the project 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:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Fire protection?	☐	☐	☒	☐
b) Police protection?	☐	☐	☒	☐
c) Schools?	☐	☐	☒	☐
d) Parks?	☐	☐	☒	☐
e) Other public facilities?	☐	☐	☒	☐

DISCUSSION

As previously discussed, the project includes a General Plan Amendment, Rezoning, and Annexation of the Site into the city limits of Chico, as well as a 74-lot subdivision of a 15-acre portion of the Site comprising APNs: 042-740-020 and 042-070-196. The subdivision would take access from Nord and Henshaw Avenues via three proposed new public streets. There are no elements of the proposed project that would impact the ability of the City or other local services providers to provide public services to the local community.

XV.a. Less Than Significant. As discussed under Section IX (Hazards and Hazardous Materials) above, the Site is located within a Local Responsibility Area (LRA) for fire protection services, and is currently located within the service boundaries of the Butte County Fire Department. However, the Site is also served by the City of Chico Fire Department, which serves the City of Chico and responds to emergencies in the surrounding unincorporated area through the Chico Urban Area Fire and Rescue Agreement (CUAFRA) with Butte County Fire Department. Additionally, the Site is not located within a high or very high fire hazard severity zone (City – Community Wildfire Protection Plan, 2022).

As noted on the City's website, the Chico Fire Department was established in 1873 and serves a population of approximately 92,500 people and an area of approximately 34 square miles. The Department operates four (4) fire stations across the City, in addition to a Fire Training Center, and over 30 pieces of modern emergency apparatus. The Department includes 60 full-time personnel, 57 of which are uniformed, in addition to eight (8) current active volunteer firefighters (City – Chico Fire-Rescue, n.d.). The nearest stations to the Site include Station 2, located at 182 E. 5th Street, approximately 1.75 miles southeast of the Site, and Station 1, located at 842 Salem Street, approximately 2.70 miles southeast of the Site.

As the project entails the development of 71 additional housing units, public roads, and landscaping, there would be an increase in need for fire protection services at the Site. All proposed roads would be designed to provide sufficient width and turning radii consistent with City standards. Further, all new construction would be required to meet California Fire Code requirements for fire detection and suppression. Additionally, the City coordinates with the Department to ensure that all development is served by adequate fire protection services and all fair share fees are paid. The project would be subject to the Fire Protection Building and Equipment Fee as denoted on the City of Chico Master Fee Schedule, which would be used to pay for new or expanded fire protection facilities or equipment, which would improve the ability of the Department to provide services. Furthermore, the project would be supplied by adequate water supplies (see Section XVIX,

Utilities and Service Systems), which would ensure sufficient water is available for fire protection services. Regarding fire protection services, project impacts would be **less than significant**.

XV.b. Less Than Significant. Currently, the Site is within the service area of the Butte County Sheriff's Office for police protection services. However, upon completion of the requested annexation into the city limits of Chico, police protection services would be provided by the Chico Police Department (CPD). The CPD is located approximately 3.5 miles southeast of the Site at 1460 Humboldt Road. As provided in the CPD's 2021 Annual Report, the Department comprises 104 full-time sworn employees, in addition to 64.5 non-sworn employees. The Patrol Division is noted to be staff with three (3) Lieutenants as Watch Commanders, six (6) Sergeants, forty-eight (48) Police Officers, and seven (7) Community Service Officers, which cover the six (6) assigned beats within the Chico city limits (2021).

As the project entails the development of an additional 71 residences on-site, the project would likely increase the need for police protection services at the Site. However, as previously discussed in Section XIV (Population and Housing), above, development of the Site for residential use is consistent with the City of Chico 2030 General Plan (2011, amended 2017) and the 170-225 additional residents anticipated as a result of the proposed project would equate to approximately 0.2 percent of the City of Chico's current population. The need for increased police services to serve the projected population growth would have been accounted for in the development of the General Plan. Additionally, the City coordinates with the Department to ensure that all development is served by adequate police protection services and all fair share fees are paid. The project would be subject to the Police Protection Building and Equipment Fee as denoted on the City of Chico Master Fee Schedule, which would be used to pay for new or expanded police protection facilities or equipment, which would improve the ability of the Department to provide services. Regarding police services, project impacts would be **less than significant**.

XV.c. Less Than Significant. As previously described, the Site is located in the vicinity of several schools. As discussed in Section XIV (Population and Housing), 175-225 additional residents are anticipated on-site after build-out of the Site. Based on information provided by the U.S. Census Bureau (2022), persons under the age of 18 years (or school-age) represent approximately 19% of the City of Chico's population. As a result, it is expected that of the new residents anticipated on-site, roughly 43 persons would be evenly distributed under 18 years of age. This impact to schools would be **less than significant**.

XV.d. Less Than Significant. The Site is located approximately one mile from a large neighborhood park (Oak Way), and several other parks and recreational facilities within 3 miles of the Site. As the project would ultimately lead to the development of an additional 71 housing units on-site, with corresponding increases in population. However, the project is not anticipated to significantly increase the usage of local parks or recreational facilities such that new facilities would be needed. Each housing unit will require payment of development impact fees, including park facility fees, for the long-term development of new parks as directed by the Chico General Plan. Regarding recreation services, project impacts would be **less than significant**.

XV.e. Less Than Significant. The proposed project would not have a significant impact on other public facilities, as the proposed land uses are conceptually anticipated by both the County and City's General Plans. While population is expected to increase as a result of the proposed project, the relatively small population increase would not constitute unplanned growth that would otherwise significantly increase the usage of other public facilities, such as regional hospitals or libraries, or significantly increase the population of the City of Chico to the extent that new or physically altered public facilities would be required. Regarding other public facilities and services, project impacts would be **less than significant**.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have a **Less Than Significant Impact** on Public Services.

XVI. RECREATION. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐

DISCUSSION

According to the Parks, Public Facilities, and Services Element of the City of Chico General Plan (2011), the City of Chico is responsible for the management, operation, and maintenance of 37 parks, open space, and recreation centers totaling 4,176 acres, within the city limits of Chico. In addition to the General Plan, the Chico City Council has adopted the Bidwell Park Master Management Plan Update (2008) and the Chico Area Recreation and Park District (CARD) has adopted the Park and Recreation Five Year Master Plan Update (2018).

The Site is located in the vicinity of the following neighborhood parks and recreational facilities:

- Oak Way Park, located approximately 0.91 miles southwest of the Site.
- Peterson Park, located approximately 1.23 miles northeast of the Site.
- Hartley Neighborhood Park, located approximately 1.81 miles northeast of the Site.
- DeGarmo Community Park, located approximately 1.9 miles northeast of the Site.
- Bidwell Mansion State Historic Park, located approximately 2.32 miles southeast of the Site.
- Children's Park, located approximately 2.4 miles southeast of the Site.
- Annie's Glen and Camellia Way Picnic Area, located approximately 2.62 miles southeast of the Site.
- One Mile Recreation Area, located approximately 2.73 miles southeast of the Site.

Furthermore, the proposed project would retain the existing community center located on-site, the Chico Masonic Family Center, which would continue to be utilized for a variety of community events (including but not limited to weddings, meetings, etc.).

XVI.a-b. Less Than Significant. It is anticipated that 71 additional housing units would be developed on-site as a result of the proposed subdivision, which would be anticipated to add approximately 175-225 additional residents to the subject Site. As a result of this small increase in population, use of existing park and recreational facilities would also be anticipated to marginally increase, but not to such a level as to create the need for new or larger park or recreational facilities. Regardless, each housing unit will require payment of development impact fees, including park facility fees to fund future park facilities and this impact would remain **less than significant**.

MITIGATION MEASURES
No mitigation required.

FINDINGS
The proposed project would have a **Less Than Significant Impact** on Recreation.

XVII. TRANSPORTATION. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Conflict or be inconsistent with CEQA Guidelines section 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?	☐	☐	☒	☐

DISCUSSION
On September 27, 2013, Governor Jerry Brown signed Senate Bill (SB) 743 into law, initiating an update to the CEQA Guidelines to change how lead agencies evaluate transportation impacts under CEQA, with the goal to better measure the actual transportation-related environmental impacts of a given project. Traditionally, transportation impacts had been evaluated by using Level of Service (LOS) analysis. As of July 1, 2020, lead agencies are required to analyze the transportation impacts of new projects using vehicle miles traveled (VMT), instead of LOS. According to the *SB 743 Frequently Asked Questions* provided by the Governor's Office of Planning and Research (OPR), VMT measures how much actual automobile travel (i.e., additional miles driven) a proposed project would create on California roads.

If the project adds excessive car travel onto the roads, the project may cause a significant transportation impact. VMT analysis is intended to promote the state's goals of reducing greenhouse gas emissions and traffic-related air pollution, promoting the development of a multimodal transportation system, and providing clean, efficient access to destinations (OPR, 2020). As of the date of this Initial Study, the City has not yet adopted thresholds for VMT impacts. Therefore, this analysis applies a threshold based on guidance provided in OPR's Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018), which identifies that a reduction in vehicle travel that is 15% or more below existing baseline conditions may indicate a less than significant transportation impact. A 15% reduction in VMT is shown in the Technical Advisory to both be achievable and supported by evidence connecting this level of reduction to the State's long-term emissions goals. The use of VMT is a proxy for carbon dioxide equivalents (CO_2e). Therefore, the utility of VMT for the transportation analysis depends on the relationship between vehicle emissions of CO_2e and VMT.

In coordination with the Butte County Association of Governments (BCAG), and Fehr and Peers (transportation engineers), a VMT screening tool has been developed to assess if a project would need a detailed evaluation of VMT increases, or if additional VMT resulting from a project would likely be 15% lower than the regional baseline VMT, therefore warranting a conclusion that VMT impacts are less than significant.

The average VMT for the regional baseline is 15 vehicle miles traveled per day, and the 85th percentile representing the significance threshold is 12.8 VMT.

The Site is located in close proximity to both State Route 32 (located approximately 870 feet southwest of the Site) and Highway 99 (located approximately 1.6 miles northeast of the Site). Under the project, three (3) new streets will be constructed. A new road will run east to west, with access from Nord Avenue, and will also run north to south and connect to Henshaw Avenue (Street "A"). A second road (Street "B") will run north to south, offering connection to Street "A" and Henshaw Avenue. A third road (Street "C") will run north to south and will connect to Street "A". Street "C" will also include a cul-de-sac in the southernmost portion of the Site and will not connect through to W. East Avenue. All proposed streets will connect within the boundaries of the project. The Chico Masonic Family Center property (APN: 042-070-197) will continue to be accessed from W. East Avenue.

Currently, within the vicinity of the Site, pedestrian and bicycle facilities (sidewalk and Class II bicycle lanes) are located along the Site's W. East Avenue frontage; however, there are no existing sidewalks or established bicycle paths or lanes along Nord or Henshaw Avenues. Under the project, frontage improvements would be constructed along both Nord and Henshaw Avenues, along the portions of the Site that abuts these rights-of-way. This 30-foot-wide improvement would consist of new asphalt for a width of 20 feet, a 7-foot-wide planter strip, and a 5-foot-wide sidewalk. Similarly, the internal project roadways would comprise a 36-foot-wide right-of-way, of which 32 feet would be paved. Each side of the street would also have a 7-foot-wide planter strip and a 5-foot-wide sidewalk.

Transit service is available within Chico and is provided by Butte Regional Transit (B-Line). There are two existing bus stops adjacent to and within close proximity of the Site, located along Route 3 (Nord/East), which runs Monday through Saturday (Butte Regional Transit, 2019). The nearest stop is located adjacent to the Site's southern boundary along W. East Avenue, with an additional stop located approximately 330 feet southeast of the Site along the east side of W. East Avenue, across the railroad tracks near Kennedy Avenue.

XVII.a. Less Than Significant. The proposed project would not conflict with a plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian paths. It is expected that construction of the project would result in a slight increase in traffic to and from the Site, as construction workers arrive and leave the Site at the beginning and end of the day, in addition to minor interruption of traffic on W. East Avenue, Nord Avenue, and/or Henshaw Avenue when heavy equipment necessary for project construction is brought to and removed from the Site. However, once construction is complete, the construction workers and equipment would no longer be required at the Site. Upon build-out of the Site, traffic trips would be associated with residents and visitors traveling to and from the Site.

The temporary traffic increases during construction and vehicle and pedestrian increases during operation of the project are not anticipated to significantly impact the capacity of the street system or the overall effectiveness of the circulation system, as the proposed subdivision is consistent with surrounding development and is conceptually designated for residential use under both the County and City's General Plans. Additionally, the project is not anticipated to substantially impact alternative transportation facilities, such as transit, bicycle, or pedestrian facilities, as a substantial increase in use of alternative transportation facilities is not anticipated. However, pedestrian improvements are proposed within the interior of the subdivision and along Nord and Henshaw Avenues, offering increased connectivity and pedestrian safety within the vicinity of the Site. The project's location near existing transit stops and sidewalks would allow for alternative means of travel to and from the Site.

The roadway and sidewalk improvements proposed under the project will be evaluated by the City and inspected following construction to ensure compliance with all standards and requirements. Impacts related to project conflicts with a transportation program, plan, policy or ordinance would be **less than significant**.

XVII.b. Less Than Significant. CEQA Guidelines Section 15064.3, subdivision (b) indicates that land use projects would have a significant impact if the project results in vehicle miles traveled (VMT) exceeding an applicable threshold of significance, but that projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant impact.

As noted above, in coordination with the Butte County Association of Governments (BCAG) and Fehr and Peers (transportation engineers), a VMT screening tool has been developed to assess if a project would need a detailed evaluation of VMT increases, or if additional VMT resulting from a project would likely be 15% lower than the regional baseline VMT, therefore warranting a conclusion that VMT impacts are less than significant. The average VMT for the regional baseline is 15 vehicle miles traveled per day, and the 85th percentile representing the significance threshold is 12.8 VMT.

Under the proposed project, VMT would be attributed to workers, residents, and visitors traveling to and from the Site. As discussed under Section XIV (Population and Housing), above, the 71 additional single-family residences proposed on-site would be anticipated to result in a population increase of approximately 170-225 residents at the subject Site. According to the VMT screening tool, the project is likely to result in an average daily distance of 11.7 vehicle miles traveled, which is 22% lower than the regional average of 15 vehicle miles traveled, and below the significance threshold of 12.8 vehicle miles traveled. Therefore, project impacts to VMT would be consistent with CEQA Guidelines Section 15064.3, subdivision (b), and VMT impacts would be **less than significant**.

XVII.c. Less Than Significant. The proposed project is designed to meet City standards for roadway designs and would not substantially increase hazards due to design features or incompatible uses. The project would be required to comply with all standards, including, but not limited to, site access, roadway width, and turning radii. As previously discussed, the proposed project includes both roadway and frontage improvements, with three new interior roadways proposed, connecting the proposed development to Nord and Henshaw Avenues. All proposed roads would be designed to provide sufficient width and turning radii consistent with Chico Municipal Code Chapter 18R.08 (Design Criteria). With adherence to applicable street design standards and requirements the project would not increase hazards due to a geometric design feature and this impact would be **less than significant**.

XVII.d. Less Than Significant. The proposed project is designed to meet the City's subdivision design standards and would not result in inadequate emergency access. The street design on the vesting tentative subdivision map provides a high degree of connectivity and adequate emergency access. As such, a **less than significant impact**.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have a **Less Than Significant Impact** on Transportation.

XVIII. TRIBAL CULTURAL RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) 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:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code §5020.1(k)?	☐	☒	☐	☐
ii) 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 Resources Code §5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

DISCUSSION

The project area is located in a boundary region utilized by the Northwestern Maidu, or Konkow tribe members at the time of initial contact with European Americans. Konkow populations used the local region for seasonal and/or permanent settlement, as well as for the gathering of plants, roots, seeds, domestic materials, and hunting seasonal game. Ethnographic information indicates that at the time of contact, Konkow were organized into village communities of approximately 150–400 individuals. Villages were usually located on higher ridges or knolls overlooking more permanent creeks and rivers, which provided views of the surrounding landscape and gave protection from high water during floods. Fourteen such village communities were identified in the Butte County area, one of which is Chico or Michupta. The Mechoopda Indian Tribe of Chico Rancheria (Tribe) is active today.

XVIII.a.i and XVIII.a.ii. Less Than Significant with Mitigation Incorporated. On June 3, 2023, a response was received from the NAHC, which indicated that the results of the Sacred Lands File (SLF) search were negative. Included with the letter was a Native American contact list of tribes who may have knowledge of cultural resources in the project area. A total of thirteen (13) tribal contacts are included on the contact list.

On June 6, 2023, City staff sent 13 letters to various tribes received on a list from the Native American Heritage Commission (NAHC), and received a response from the Mechoopda Tribe, which are generally known to be the Most Likely Descendants associated with tribal cultural resources in the Chico area.

City staff (Principal Planner, Mike Sawley) met with Mechoopda Tribe Cultural Director Kyle McHenry on August 15, 2023, to discuss the project and its potential for impacting known Tribal Cultural Resources (TCRs) in the area. Mr. McHenry explained that physical artifacts had been found on nearby properties over the years and were recently returned to the Mechoopda by the current property holder. These tribal cultural resources were apparently not formally documented by an archaeologist or historian, and therefore would

not likely be indicated by a typical records search. As a result of this specific knowledge about tribal cultural resources in the area, City staff acknowledges there is a higher level of sensitivity for potential discovery of previously undocumented tribal cultural resources on the subject project site and recommend including the mitigation requested by the Mechoopda Tribe for the ability to monitor all excavation activities within the project by tribal representatives. City staff sent a follow-up email on August 22, 2023, to memorialize the results of the consultation and received confirmation from the Tribe that the monitoring mitigation captures the desires of the Tribe regarding this project.

Although no TCRs have been documented or identified on the Site, including Mitigation Measures TRIBE-1 and CUL-1 (as set forth under Section V, Cultural Resources, above) will reduce the potential for significant impacts to unknown TCRs to a level that is **less than significant with mitigation incorporated**.

MITIGATION MEASURES

TRIBE-1: Prior to the start of grading operations for the project the project developer or their representative shall provide reasonable notice and site access to the Mechoopda Indian Tribe of Chico Rancheria (Tribe) for a tribal monitor to be present during ground disturbing activities with the potential to encounter cultural resources of Native American origin or association. If archaeological resources (i.e., sites, features, or artifacts) are exposed during construction activities, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, in coordination with the tribal monitor if prehistoric in nature, can evaluate the significance of the find and determine whether or not additional study is warranted. Depending upon the nature of the find, the archaeologist and tribal monitor (if a resource is prehistoric in age) may simply record the find to appropriate standards (thereby addressing any data potential) and allow work to continue. If the archaeologist determines the discovery to be potentially significant under CEQA or the tribal monitor identifies a potential Tribal Cultural Resource (TCR), additional efforts such as preparation of a treatment plan, testing, and/or data recovery may be warranted prior to allowing construction to proceed in this area. All management strategies recommended by the archaeologist and/or Tribe must be approved by the City of Chico Community Development Director. The developer shall then adhere to the management strategies approved by the City. Ground-disturbing activities may resume once the management strategies have been implemented to the satisfaction of the City's Community Development Director and the qualified archaeologist.

Also see Mitigation Measure **CUL-1** in Section V, Cultural Resources.

FINDINGS

With the inclusion of Mitigation Measures TRIBE-1 and CUL-1, the proposed project would have Less Than Significant Impact with Mitigation Incorporated on Tribal Cultural Resources.

XVIX. UTILITIES AND SERVICE SYSTEMS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater 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 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) 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?	☐	☐	☒	☐

DISCUSSION

The existing on-site residential development is currently served by on-site wells and septic systems; however, under the project, the existing wells and septic systems would be abandoned in accordance with Butte County Environmental Health requirements, and community utility services would be extended to the Site. The Site will be connected to California Water Service (Cal Water) for community water service, which provides water services to the City of Chico. Although currently served by individual on-site septic systems, under the project, community wastewater service would be extended to the Site. Wastewater within the City of Chico is treated by the City of Chico Water Pollution Control Plant (WPCP). There are two (2) solid waste hauling companies which provide weekly curb-side residential and commercial garbage and recycling collection within the City of Chico, including North Valley Waste Management and Recology. Electricity and gas for the Site would be provided by Pacific Gas and Electric Company (PG&E).

Water Service

As noted above, and as provided in the Chico 2020 Water Quality Report prepared by Cal Water (2021), the water distributer has been providing water utility services to the City of Chico since 1926. To meet the needs of the City of Chico, 57 wells are used to pump an average of 16.9 million gallons of groundwater per day, which is delivered to customers through 401 miles of main, six storage tanks, and 11 booster pumps.

As stated in the City of Chico General Plan (2017), Cal Water maintains two primary management plans for the Chico area water system. The Urban Water Management Plan (UWMP), adopted in 2020, provides an overview of Cal Water and the Chico area water system, establishes policies and programs concerning water delivery and treatment, as well as water conversation and management practices. The Water Supply and Facilities Master Plan (2020) guides the growth and development of their water delivery system to meet

the community's future needs. The Plan indicates the Chico District water supply is expected to be sufficient to support the area's projected water demand through 2045. According to the UWMP (2020), Cal Water expects that, under all hydrologic conditions, the groundwater supply for the Chico District will fully meet future demands. Table 6-9 from the UWMP (2020), below, shows the projected water supply is expected to increase in volume within the next two decades.

Table 6-9. Water Supplies – Projected (DWR Table 6-9)

Water Supply	Additional Detail on Water Supply	Projected Water Supply									
		2025		2030		2035		2040		2045	
		Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)
Groundwater (not desalinated)	Vina Subbasin (Chico PWS)	23,027		24,158		25,217		25,744		26,119	
Groundwater (not desalinated)	Corning Subbasin (Hamilton City PWS)	349		354		354		354		355	
	Total	23,376		24,511		25,571		26,098		26,474	

NOTES:
(a) Volumes are in units of AF.
(b) The Vina Subbasin and Corning Subbasin are not adjudicated, and the projected groundwater supply volumes are not intended to and do not determine, limit or represent Cal Water's water rights or maximum pumping volumes. Any determination of Cal Water's water rights, as an overlying owner, appropriator, municipal water purveyor or otherwise, is beyond the scope of this report and the UWMP statutes and regulations.

Wastewater Service

The City of Chico WPCP provides treatment to the City's wastewater and discharges effluent to the Sacramento River. The WPCP is a regional-serving, gravity fed facility located southwest of the City. In addition, the facility is a secondary treatment facility with a current treatment capacity of 12 million gallons per day (mgd). The WPCP utilizes alternative power, including a photovoltaic solar array installation which provides approximately 35 percent of the facilities total power demand. A significant portion of the facilities power is also provided by the WCPS's cogeneration facility. According to the City of Chico Sanitary Sewer Master Plan Update (SSMP) (2017), the collection system consist of sewer mains, trunk sewers, lift stations, and flow diversions that collect and convey wastewater to the City's WPCP, which is located west of the City on Chico River Road. The City's existing sanitary sewer collection is comprised of roughly 266 miles of gravity collection system pipes up to 66-inches in diameter.

The WPCP has an average dry weather (ADW) (low) flow of approximately 6.9 mgd and an average peak wet weather flow (PWWF) wet weather (high) flow of approximately 20.5 mgd. Future improvements to the sanitary sewer collection systems identified in the City's SSMP are projected to increase the ADW from 6.9 mgd to 13.9 mgd and increase the PWWF from 20.5 mgd to 35.3 mgd. Improvements to the existing system will provide sufficient capacity to mitigate existing issues in the City and to convey increased flows resulting from future growth. Future development will require the construction to serve new users. All improvements to the existing sanitary sewer system collection are anticipated to be completed in 2030.

The City of Chico and Butte County adopted the Nitrate Action Plan (1985), to address high levels of nitrates in portions of groundwater under the City that resulted from the wide-spread use of septic tanks within the urban area. In addition, the City of Chico adopted the Chico Urban Area Nitrate Compliance Plan (NCP) to

provide utility infrastructure policies, as well as outline a plan to expedite the connection of septic tank users to the city sewer system. Future development will be serviced by the WPCP.

Storm Drainage System

As noted in Chapter 9 (Parks, Public Facilities, and Services Element) of the City of Chico General Plan (2017), storm drainage management within the City and the urban area is provided by a system of developed and undeveloped collection systems operated and maintained by the City and Butte County. The City is not constrained by any formally designated service areas but has established storm drainage basins for the purpose of planning and infrastructure. In areas of the City that are not developed with storm drainage collection; unpaved shoulders, roadside swales and natural occurring drainages help control runoff (2017).

The proposed project would also construct on-site and off-site improvements consisting of landscaping, curb and gutter, and street improvements, which would increase impermeable surfaces. Future development would require an approved Storm Water Pollution Prevention Plan (SWPPP) from the California Water Quality Control Board. Best Management Practices (BMPs) that include drainage controls, such as detention ponds, dikes, filter berms, and down drains to prevent runoff, and utilizing plastic covering to prevent erosion shall also be implemented. Implementation of BMPs would reduce pollutants in stormwater and urban runoff from the project site. The proposed storm drainage system and BMPs must be designed to the satisfaction of the City's Public Works Director and in conformance with all applicable permits and regulations. The project applicant/developer would be required to provide all necessary onsite infrastructure. With adherence to federal, state, and local regulations, the project would have a less than significant impact on requiring the construction of new facilities or expansion of existing storm drainage facilities.

Solid Waste Service

As noted above, North Valley Waste Management and Recology provide weekly curb-side residential and commercial garbage and recycling collection within the City of Chico. Solid waste generated in the city is disposed of 7 miles southeast of the City, at the Neal Road Landfill, which is operated and owned by Butte County. The Neal Road Landfill has a total permitted capacity of approximately 25 million cubic yards of solid waste and has a tentative closure date of 2035.

Green yard waste is hauled to the City's Compost Facility near the Chico Municipal Airport or Neal Road Landfill. The City also collects leaves placed in the streets by City residents annually from mid-October to mid-January. The City estimates between 40,000 to 45,000 cubic yards of leaves are collected annually from residents.

Hazardous materials used in household products are available to be dropped off by City of Chico residents at the Butte Regional Household Hazardous Waste Collection Facility, located near the Chico Municipal Airport.

Electric Power and Natural Gas

As noted in the Energy Section, proposed development of 71 single-family dwellings will be serviced by Pacific Gas and Electric Company (PG&E) for electrical and gas services. According to the City of Chico Regional Climate Action Plan (CAP), the City of Chico utilizes 133 therms of natural gas per household, per year (City of Chico, CAP). To reduce the amount of natural used per household, the City adopted Measure E-3 identified in the City's CAP, which aims to electrify existing residential buildings starting in 2027 to reduce overall residential natural gas consumption to 100 therms/person by 2030 and 30 therms/person by 2045 (City of Chico CAP, 2021).

XVIX.a. Less Than Significant Impact. Under the project, the existing on-site wells and septic systems would be abandoned in accordance with Butte County Environmental Health requirements, and community utility services would be extended to the Site. While both on- and off-site improvements would be required for the project, the respective utility providers and installers would be required to implement applicable BMPs to reduce the potential for impacts, including but not limited to erosion during construction, to occur. As such, a **less than significant impact** would occur.

XVIX.b. Less Than Significant Impact. As stated above, the proposed project includes a 74-lot residential subdivision and the development of 71 new single-family dwellings. Water for the Site would be provided by Cal Water. Based on current water supply and demand identified in the 2020 Urban Water Management Plan (UWMP), it is anticipated that sufficient water supplies would be available to support the Chico District's projected water demand through 2045. A Water Supply Reliability Assessment was conducted as part of the UWMP, which concluded that the Chico District expects that available supplies of water to be sufficient to meet projected demands in all hydrologic conditions, including a five-year drought period, and considering the impacts of climate change. The project site is located within the existing service area of Cal Water and is surrounded by existing development that is currently connected to existing Cal Water water lines. No additional improvements are needed to water lines or facilities to serve the proposed Project. Standard connection fees would address any incremental impacts of the proposed project. Therefore, the proposed project would have sufficient water supplies available to serve the project and reasonably foreseeable during normal, dry and multiple dry years, and a **less than significant impact** would occur.

XVIX.c. Less Than Significant Impact. Wastewater on the Site is currently serviced by existing on-site septic systems. The project includes decommissioning the existing septic systems and the development of a 74-lot residential subdivision, with community wastewater service to be extended to the Site. Future development in the proposed subdivision includes construction of 71 single-family dwellings. As discussed above, wastewater generated by the project would be treated at the City of Chico WPCP. As the portion of the Site planned to be subdivided and developed with single-family residences is slated for development and designated for residential use under both the County and City's General Plans, and, as described above, improvements are proposed at the Chico WPCP to ensure anticipated future growth can be adequately supported. Therefore, impacts to wastewater treatment facilities would be **less than significant**.

XVIX.d. Less Than Significant Impact. Solid waste collection service would continue to be provided by North Valley Waste Management and Recology, which provide weekly curb-side residential and commercial garbage and recycling collection within the City of Chico. Solid waste is anticipated as a result of project implementation; however, the project does not include any components that would generate excessive waste and the existing landfills have sufficient permitted capacity to accommodate the project's solid waste disposal needs. In addition, North Valley Waste Management was issued a franchise to provide residential solid waste and recycling services within the Chico city limits. Within the franchise agreement, Waste Management is required to implement Recyclable Materials and Organic Waste diversion from the landfill of 32% by January 2021, and 35% by 2024. Waste Management will also develop a specific annual Waste Diversion and Sustainability Work Plan, which includes steps to increase diversion and outreach for waste reduction. Waste Management is contracted to provide resources to support waste diversion and sustainability programs. Project impacts related to solid waste generation would be **less than significant**.

XVIX.e. Less Than Significant Impact. This proposed project will conform to all applicable management and reduction statutes and regulations related to solid waste disposal. The development would comply with the adopted policies related to solid waste, and would comply with all applicable federal, state, and local

statutes and regulations pertaining to disposal of solid waste, including recycling. Therefore, the proposed project would have a **less than significant impact** on solid waste regulations.

MITIGATION MEASURES
No mitigation required.

FINDINGS
The proposed project would have a **Less Than Significant Impact** on Utilities and Service Systems.

XX. WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) 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 challenges?	☐	☐	☐	☒

DISCUSSION
The Site is located within a Local Responsibility Area (LRA) for fire protection services, and is currently located within the service boundaries of the Butte County Fire Department. However, the Site is also served by the City of Chico Fire Department, which serves the City of Chico and responds to emergencies in the surrounding unincorporated area through the Chico Urban Area Fire and Rescue Agreement (CUAFRA) with Butte County Fire Department. Additionally, the Site is not located within a high or very high fire hazard severity zone (City – Community Wildfire Protection Plan, 2022). The Fire Hazard Severity Zone Map illustrates that a portion of northeast Chico is designated as a very high fire hazard severity zone (VHFHSZ) while the remaining area of Chico, including the Site, is designated as non-VHFHSZ (CalFire Butte County Fire Hazard Severity Zones Map, 2022). The Chico Fire Department has four operational fire stations throughout the City, with Station 2, located at 182 E. 5th Street, approximately 1.75 miles southeast of the Site, and Station 1, located at 842 Salem Street, approximately 2.70 miles southeast of the Site. The Department is currently comprised of 60 full-time firefighters (57 uniformed), and 8 active volunteer firefighters (City – Chico Fire-Rescue, n.d.). The CFD is equipped with a rapid response vehicle for medical emergencies, Type 3 engines for vegetation fires, and specialized equipment for the Butte County Interagency HazMat Team which responds to major hazardous materials incidents (City-Fire Stations and Apparatus, n.d.). According to the Chico Community Wildfire Protection Plan (CWPP), there are 4,311 fire hydrants located throughout the City and no wildfires have caused significant home losses withing the core urban area of the City in the past century.

XX.a. Less Than Significant Impact. The City of Chico General Plan-designated emergency evacuations routes are State Route 99 and State Route 32, the latter of which is located approximately 870 feet southwest of the Site. During construction, construction vehicles and equipment would be anticipated to access the Site via Nord Avenue and Henshaw Avenue, from W. East Avenue. Should diversion routes or street closures be necessary, they would be only temporary in nature, as equipment is brought to or removed from the Site. As such, the proposed project would not significantly impair emergency evacuation. Additionally, Site development would be consistent with the latest versions of the California Building Code and the California Fire Code, as well as the City of Chico General Plan (including Safety Element), Chico Municipal Code, and any other related regulations that would be required for construction of the project. A **less than significant impact** would occur.

XX.b. Less Than Significant Impact. Under the proposed project, it is not anticipated that wildfire risks would be exacerbated due to slope, prevailing winds, and other factors, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. The Site is relatively flat. The 15.02-acre portion of the Site planned to be subdivided (APNs: 042-740-020 and 042-070-196) predominately contains mature walnut trees from a former orchard use. A total of 371 trees have been identified within the planned subdivision area, most of which would be removed under the project. Potential wildfire impacts due to prevailing winds or other factors would be limited as construction would be required to meet or exceed the standards prescribed in the California Building Code (CBC) to ensure fire hazards and similar risks are minimized. The project would not otherwise expose people to heightened pollutant concentrations from wildfire or exacerbate wildfire risks. This is considered a **less than significant impact**.

XX.c. Less Than Significant Impact. As the proposed project entails the development of 74 single-family housing units, internal roads, and landscaping, the project would require the installation or maintenance of infrastructure, such as roads, power lines, and other utilities. The project will be sufficiently served by water utilities, as described in Section XIX (Utilities and Service Systems), above, and is within the service boundaries of the Chico Fire Department. Project design has accounted for proper road width and turn radius needs for emergency vehicles, as required by the California Fire Code and Chico Municipal Code. Given the size and location of the project and the proposed use, the proposed project will not trigger the need for any installation of fire-related utilities (e.g., emergency water supplies), fire roads, fire breaks, or other facilities that would exacerbate fire risk or emergency response needs or cause temporary or ongoing impacts to the environment. Furthermore, all internal utilities on the Site would be installed below ground, minimizing potential ignition and related fire risk, and all contractors would implement standard Best Management Practices (BMPs) and take proper precautions to ensure fire risk is minimized during installation and maintenance of associated infrastructure. Impacts associated with installation or maintenance of fire infrastructure are considered **less than significant**.

XX.d. Less Than Significant Impact. The proposed project would not expose people or structures to significant wildfire risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage challenges, as the area of development is relatively flat in nature and is not significantly developed. Additionally, there is no evidence on-site of recent wildfires at the Site or in the immediate vicinity. With regard to post-fire risks, the project would have **no impact**.

MITIGATION MEASURES

No mitigation required.

FINDINGS

The proposed project would have a **Less Than Significant Impact** on Wildfire.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE.	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☒	☐	☐

XXI.a. Less Than Significant With Mitigation Incorporated. The project does not 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. The Site does not provide habitat for any fish species, nor does the Site support any notable plant or animal communities. Existing trees on-site would need to be removed (350 trees in total) to accommodate the proposed development. Since the trees may provide nesting and roosting habitat for several special status bird and bat species, the Applicant proposes to incorporate measures to ensure biological resources, including special status birds, are avoided or adequately protected. Such measures include performing focused biological studies if construction is proposed to occur during the bird breeding season (March 1 – August 31) and measures that would be implemented should active nests be identified, including establishing no-disturbance zone(s) and preparing a report of findings to the City. Further, for any trees to be removed from the Site that meet the requirements identified under §16.66.050 of the City of Chico Municipal Code, the Applicant would be required to replant one (1) tree on-site for every six (6) inches DBH removed, or may pay an in-lieu fee as established by the City's current fee schedule.

Additionally, there are no important examples of California pre-history located on-site. While the Site contains existing development, none are known to be eligible for listing on the California Register of Historical Resources (CRHR). However, there is the potential for unrecorded archaeological and Native American resources and/or human remains to be located on-site. CEQA Guidelines §§15064.5(d) and (f) and PRC §5097.98 provide proper protocol in the event of inadvertent discovery of archaeological or paleontological resources, or human remains on-site during project construction, and required compliance with these protocols provided in Mitigation Measures CUL-1 and TRIBE-1 would ensure impacts would be **less than significant with mitigation incorporated**.

XXI.b. Less Than Significant Impact. No significant cumulative impacts have been identified as a result of the proposed project. The analysis included in this Initial Study found that all potential impacts associated with the project are less than significant or are reduced to a less-than-significant level with mitigation incorporated. As such, individual impacts from the project would not significantly contribute to cumulative impacts in the area. A **less than significant impact** would occur.

XXI.c. Less Than Significant Impact. The proposed project would not generate any potential direct or indirect environmental effect that would have a substantial adverse impact on human beings including, but not limited to, exposure to geologic hazards, air quality, water quality, traffic hazards, noise, and fire hazards. With mitigation incorporated, all potential impacts associated with construction and operation of the project would be reduced to a level that is **less than significant with mitigation incorporated**.

MITIGATION MEASURES

Refer to Mitigation Measures BIO-1, CUL-1, HAZ-1, and TRIBE-1, above.

FINDINGS

The proposed project would have a **Less Than Significant Impact with Mitigation Incorporated** on Mandatory Findings of Significance.

VI. REFERENCES

Butte County Air Quality Management District (BCAQMD). Not Dated. *Air Quality Standards and Air Pollutants.* Accessed May 26, 2023. Available at: https://bcaqmd.org/planning/air-quality-standards-air-pollutants/.

Butte County Air Quality Management District (BCAQMD). Not Dated. CEQA (California Environmental Quality Act). *2014 CEQA Air Quality Handbook.* Accessed May 26, 2023. Available at: https://bcaqmd.org/planning/air-quality-planning-ceqa-and-climate-change/.

Butte County Air Quality Management District. Adopted December 2021. *Triennial Air Quality Attainment Plan*. Accessed May 24, 2023. Available at: https://bcaqmd.org/planning/

Butte County Airport Land Use Commission. November 15, 2017. *Butte County Airport Land Use Compatibility Plan – Chico Municipal, Oroville Municipal, Paradise and Ranchero Airports.* Accessed April 28, 2023. Available at: https://www.buttecounty.net/541/Airport-Land-Use-Commission-ALUC.

Butte Local Agency Formation Commission (LAFCo). Adopted October 10, 2018. *City of Chico Municipal Service Review and Sphere of Influence Plan.* Accessed April 28, 2023. Available at: https://www.buttelafco.org/chico.

Butte Regional Transit (B-Line). 2019. *Schedules.* Accessed May 23, 2022. Available at: http://www.blinetransit.com/Schedules/index.html.

California Air Resources Board (CARB). 2022. AB 32 Climate Change Scoping Plan. *About.* Accessed March 28, 2023. Available at: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/about.

California Air Resources Board (CARB). October 26, 2022. *California Greenhouse Gas Emissions for 2000 to 2020 – Trends of Emissions and Other Indicators*. Accessed March 28, 2023. Available at: https://ww2.arb.ca.gov/sites/default/files/classic/cc/inventory/2000-2020_ghg_inventory_trends.pdf.

California Air Resources Board (CARB). 2022. Current California GHG Emission Inventory Data. *2000-2020 GHG Inventory (2022 Edition)*. Accessed March 28, 2023. Available at: https://ww2.arb.ca.gov/ghg-inventory-data.

California Air Resources Board (CARB). 2022. California Greenhouse Gas Emission Inventory Program. *GHG Descriptions & Sources in California.* Accessed March 28, 2023. Available at: https://ww2.arb.ca.gov/ghg-descriptions-sources.

California Department of Conservation. 2022. *California Important Farmland Finder*. Accessed March 22, 2023. Available at: https://maps.conservation.ca.gov/dlrp/ciff/.

California Department of Toxic Substances Control (DTSC). 2023. *EnviroStor.* Accessed April 28, 2023. Available at: https://www.envirostor.dtsc.ca.gov/public/.

California Department of Transportation. 2018. California State Scenic Highway System Map. Accessed April 21, 2023. Available at: https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa.

California Energy Commission. Adopted October 7, 2015. *Clean Energy and Pollution Reduction Act – SB 350*. Accessed May 1, 2023. Available at: https://www.energy.ca.gov/rules-and-regulations/energy-suppliers-reporting/clean-energy-and-pollution-reduction-act-sb-350#:~:text=The%20Clean%20Energy%20and%20Pollution,below%201990%20levels%20by%202050.

California Geological Survey (CGS). 2016. Division of Mine Reclamation, California Department of Conservation. *Mines Online.* Accessed April 28, 2023. Available at: https://maps.conservation.ca.gov/mol/index.html.

California Geological Survey (CGS). 2022. DOC Maps: Mines and Mineral Resources. *Mineral Land Classification.* Accessed April 28, 2023. Available at: https://maps.conservation.ca.gov/mineralresources/.

California Water Service (Cal Water). Adopted June 2021. *2020 Urban Water Management Plan*. Accessed May 8, 2023. Available at: https://www.calwater.com/conservation/uwmp2020/.

California Water Service (Cal Water). 2021. *Chico 2021 Water Quality Report*. Accessed April 3, 2023. Available at: https://www.calwater.com/ccrs/ch-ch-2021/.

Chico Area Recreation and Park District. 2018. *Park and Recreation Master Plan Update*. Accessed March 22, 2023. Available at: https://www.chicorec.com/five-year-master-plan.

City of Chico. 2008. *Bidwell Park Master Management Plan*. Accessed March 22, 2023. Available at: https://chico.ca.us/post/bidwell-park-master-management-plan.

City of Chico. Not Dated. *Chico 2030 General Plan.* Available at: https://chico.ca.us/post/chico-2030-general-plan.

City of Chico. Not Dated. *Chico Fire-Rescue.* Accessed April 28, 2023. Available at: https://chico.ca.us/operations.

City of Chico. Not Dated. *Chico Police Department 2021 Annual Report.* Accessed April 4, 2023. Available at: https://chico.ca.us/police-department.

City of Chico. 2022. *City of Chico Community Wildfire Protection Plan*. Accessed April 3, 2023. Available at: https://chico.ca.us/wildfireprotectionplan.

City of Chico. 2009. *City of Chico Design Guidelines Manual*. Accessed April 2, 2023. Available at: https://chico.ca.us/general-plan-other-planning-documents.

City of Chico. Adopted September 2010. *City of Chico Draft Environmental Impact Report for 2030 General Plan Update*. Available at: https://chico.ca.us/general-plan-other-planning-documents.

City of Chico. Not Dated. *City of Chico Municipal Code.* Available at: https://chico.ca.us/city-charter-municipal-code.

City of Chico. February 2023. *City of Chico Urban Forest Master Plan*. Accessed April 2, 2023. Available at: https://chico.ca.us/post/final-urban-forest-master-plan-available-below.

City of Chico. 2021. *Climate Action Plan Update.* Accessed April 27, 2023. Available at: https://chico.ca.us/sites/main/files/file-attachments/chico-cap-update_final-draft-complete.pdf?1655413766.

City of Chico. October 2019. *County of Butte Local Hazard Mitigation Plan Update – Annex B: City of Chico.* Accessed April 4, 2023. Available at: https://chico.ca.us/sites/main/files/file-attachments/local_hazard_mitigation_plan.pdf.

City of Chico. Not Dated. *Fire Stations and Apparatus.* Accessed March 22, 2023. Available at: https://chico.ca.us/post/fire-stations-and-apparatus.

City of Chico. Not Dated. Geographic Information Systems (GIS). *City Web Maps*. Accessed March 22, 2023. Available at: https://chico.maps.arcgis.com/apps/webappviewer/index.html?id=be75c6805dcd4288b597b01b31e704c9.

City of Chico. Updated July 2019. *Sewer System Management Plan*. Accessed May 3, 2023. Available at: https://chico.ca.us/post/sewers-collection-system-maintenance.

City of Chico. Adopted August 2018. *Storm Water Resource Plan*. Accessed April 29, 2023. Available at: https://chico.ca.us/post/storm-water-resource-plan.

City of Chico. Updated July 2019. *Urban Area Nitrate Compliance Plan*. Accessed April 17, 2023. Available at: https://chico.ca.us/pod/chico-urban-area-nitrate-compliance-plan.

County of Butte. No Date. Interactive Maps. *Butte County GIS Portal*. Accessed March 22, 2023. Available at: https://gisportal.buttecounty.net/portal/apps/webappviewer/index.html?id=e8ee08e0672d48c8862fd3233e394027.

County of Butte. 2015. *Williamson Act Parcels 2015/2016*. Accessed March 22, 2023. Available at: https://www.buttecounty.net/DocumentCenter/View/2890.

State of California. Adopted 2019. *California Green Building Standards Code*. Accessed April 20, 2023. Available at: https://codes.iccsafe.org/content/CAGBSC2019/title-page.

State of California and the Department of Forestry and Fire Protection (CalFire). 2022. Butte County Fire Hazard Severity Zones Map, Chico. Accessed March 23, 2023. Available at: https://osfm.fire.ca.gov/media/5770/chico.pdf.

State Water Resources Control Board (SWRCB). 2023. *GeoTracker*. Accessed April 28, 2023. Available at: https://geotracker.waterboards.ca.gov/.

United States Census Bureau. Not Dated. *QuickFacts - City of Chico, California*. Accessed March 22, 2023. Available at: https://www.census.gov/quickfacts/chicocitycalifornia.

United States Census Bureau. 2020. *2020 Decennial Census - Chico City, California*. Accessed March 23, 2023. Available at: https://data.census.gov/profile?g=160XX00US0613014.

United States Department of Agriculture, Natural Resources Conservation Service (NRCS). Last updated July 31, 2019. *Web Soil Survey.* Accessed May 26, 2023. Available at: https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm.

Vina Groundwater Sustainability Agency and Rock Creek Reclamation District. Adopted December 2021. *Vina Groundwater Subbasin Groundwater Sustainability Plan*. Accessed May 10, 2023. Available at: https://www.vinagsa.org/read-the-groundwater-sustainability-plan-gsp.

APPENDIX A

California Emissions Estimator Model (CalEEMod) Results

Orchard Creek Estates - Butte County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Orchard Creek Estates

Butte County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	75.00	Dwelling Unit	15.00	135,000.00	215

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	71
Climate Zone	3			**Operational Year**	2026
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 - Project is 15 ac

Woodstoves - No fireplaces or woodstoves.

Consumer Products - Update using 2012 CARB almanac data

Area Coating - Res interior 50 typical.

Solid Waste - Per Butte County, membrane captures >90% methane.

Area Mitigation - 50 typical

Fleet Mix - Adjusted Heavy trucks (HHD) down due this being a residential project, added to light duty autos

Construction Phase -

Architectural Coating - 50 g/L is typical for residential interior paint.

Orchard Creek Estates - Butte County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Interior	150.00	50.00
tblAreaCoating	Area_EF_Parking	150	0
tblAreaCoating	Area_EF_Residential_Interior	150	50
tblConsumerProducts	ROG_EF	2.14E-05	1.82E-05
tblFireplaces	FireplaceWoodMass	5,158.40	0.00
tblFireplaces	NumberGas	32.25	0.00
tblFireplaces	NumberNoFireplace	13.50	0.00
tblFireplaces	NumberWood	29.25	0.00
tblFleetMix	HHD	0.02	5.9080e-003
tblFleetMix	LDA	0.50	0.51
tblLandUse	LotAcreage	24.35	15.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	LandfillCaptureGasEnergyRecovery	0.00	90.00
tblSolidWaste	LandfillCaptureGasFlare	94.00	4.00
tblWoodstoves	NumberCatalytic	6.75	0.00
tblWoodstoves	NumberNoncatalytic	6.75	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

Orchard Creek Estates - Butte County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated 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					
2024	0.1589	1.4784	1.5061	2.9800e-003	0.2542	0.0643	0.3185	0.1102	0.0598	0.1699	0.0000	261.0612	261.0612	0.0670	1.8700e-003	263.2931
2025	0.7983	1.4567	1.9309	3.5000e-003	0.0321	0.0601	0.0922	8.7400e-003	0.0565	0.0652	0.0000	305.6199	305.6199	0.0640	3.8900e-003	308.3798
Maximum	**0.7983**	**1.4784**	**1.9309**	**3.5000e-003**	**0.2542**	**0.0643**	**0.3185**	**0.1102**	**0.0598**	**0.1699**	**0.0000**	**305.6199**	**305.6199**	**0.0670**	**3.8900e-003**	**308.3798**

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					
2024	0.1589	1.4784	1.5061	2.9800e-003	0.2542	0.0643	0.3185	0.1102	0.0598	0.1699	0.0000	261.0609	261.0609	0.0670	1.8700e-003	263.2928
2025	0.7983	1.4567	1.9309	3.5000e-003	0.0321	0.0601	0.0922	8.7400e-003	0.0565	0.0652	0.0000	305.6196	305.6196	0.0640	3.8900e-003	308.3795
Maximum	**0.7983**	**1.4784**	**1.9309**	**3.5000e-003**	**0.2542**	**0.0643**	**0.3185**	**0.1102**	**0.0598**	**0.1699**	**0.0000**	**305.6196**	**305.6196**	**0.0670**	**3.8900e-003**	**308.3795**

Orchard Creek Estates - Butte County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	**6-1-2024**	**8-31-2024**	0.9626	0.9626
2	**9-1-2024**	**11-30-2024**	0.5088	0.5088
3	**12-1-2024**	**2-28-2025**	0.4804	0.4804
4	**3-1-2025**	**5-31-2025**	0.4777	0.4777
5	**6-1-2025**	**8-31-2025**	0.4772	0.4772
6	**9-1-2025**	**9-30-2025**	0.1556	0.1556
		Highest	0.9626	0.9626

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	tons/yr										MT/yr					
Area	0.5285	6.4100e-003	0.5564	3.0000e-005		3.0900e-003	3.0900e-003		3.0900e-003	3.0900e-003	0.0000	0.9097	0.9097	8.7000e-004	0.0000	0.9314
Energy	9.7200e-003	0.0831	0.0354	5.3000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	151.5387	151.5387	0.0108	2.8500e-003	152.6576
Mobile	0.4442	0.6106	3.7662	6.8500e-003	0.7122	7.1500e-003	0.7194	0.1907	6.7200e-003	0.1974	0.0000	650.8295	650.8295	0.0453	0.0341	662.1258
Waste						0.0000	0.0000		0.0000	0.0000	14.8945	0.0000	14.8945	0.9285	0.0000	38.1076
Water						0.0000	0.0000		0.0000	0.0000	1.5503	3.4441	4.9943	0.1598	3.8300e-003	10.1295
Total	**0.9823**	**0.7001**	**4.3579**	**7.4100e-003**	**0.7122**	**0.0170**	**0.7292**	**0.1907**	**0.0165**	**0.2072**	**16.4448**	**806.7219**	**823.1666**	**1.1452**	**0.0408**	**863.9519**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.5285	6.4100e-003	0.5564	3.0000e-005		3.0900e-003	3.0900e-003		3.0900e-003	3.0900e-003	0.0000	0.9097	0.9097	8.7000e-004	0.0000	0.9314
Energy	9.7200e-003	0.0831	0.0354	5.3000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	151.5387	151.5387	0.0108	2.8500e-003	152.6576
Mobile	0.4442	0.6106	3.7662	6.8500e-003	0.7122	7.1500e-003	0.7194	0.1907	6.7200e-003	0.1974	0.0000	650.8295	650.8295	0.0453	0.0341	662.1258
Waste						0.0000	0.0000		0.0000	0.0000	14.8945	0.0000	14.8945	0.9285	0.0000	38.1076
Water						0.0000	0.0000		0.0000	0.0000	1.5503	3.4441	4.9943	0.1598	3.8300e-003	10.1295
Total	**0.9823**	**0.7001**	**4.3579**	**7.4100e-003**	**0.7122**	**0.0170**	**0.7292**	**0.1907**	**0.0165**	**0.2072**	**16.4448**	**806.7219**	**823.1666**	**1.1452**	**0.0408**	**863.9519**

	ROG	NOx	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	Demolition	Demolition	6/1/2024	6/28/2024	5	20	
2	Site Preparation	Site Preparation	6/29/2024	7/12/2024	5	10	
3	Grading	Grading	7/13/2024	8/23/2024	5	30	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Building Construction	Building Construction	8/24/2024	10/17/2025	5	300	
5	Paving	Paving	10/18/2025	11/14/2025	5	20	
6	Architectural Coating	Architectural Coating	11/15/2025	12/12/2025	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 90

Acres of Paving: 0

Residential Indoor: 273,375; Residential Outdoor: 91,125; 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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	2	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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
Demolition	6	15.00	0.00	0.00	11.10	10.50	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	11.10	10.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	11.10	10.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	27.00	8.00	0.00	11.10	10.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	11.10	10.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	11.10	10.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 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	0.0224	0.2088	0.1971	3.9000e-004		9.6000e-003	9.6000e-003		8.9200e-003	8.9200e-003	0.0000	33.9961	33.9961	9.5100e-003	0.0000	34.2338
Total	**0.0224**	**0.2088**	**0.1971**	**3.9000e-004**		**9.6000e-003**	**9.6000e-003**		**8.9200e-003**	**8.9200e-003**	**0.0000**	**33.9961**	**33.9961**	**9.5100e-003**	**0.0000**	**34.2338**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 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	5.5000e-004	3.8000e-004	4.3300e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9962	0.9962	3.0000e-005	3.0000e-005	1.0064
Total	**5.5000e-004**	**3.8000e-004**	**4.3300e-003**	**1.0000e-005**	**1.2100e-003**	**1.0000e-005**	**1.2200e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.9962**	**0.9962**	**3.0000e-005**	**3.0000e-005**	**1.0064**

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	0.0224	0.2088	0.1971	3.9000e-004		9.6000e-003	9.6000e-003		8.9200e-003	8.9200e-003	0.0000	33.9960	33.9960	9.5100e-003	0.0000	34.2338
Total	**0.0224**	**0.2088**	**0.1971**	**3.9000e-004**		**9.6000e-003**	**9.6000e-003**		**8.9200e-003**	**8.9200e-003**	**0.0000**	**33.9960**	**33.9960**	**9.5100e-003**	**0.0000**	**34.2338**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 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	5.5000e-004	3.8000e-004	4.3300e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9962	0.9962	3.0000e-005	3.0000e-005	1.0064
Total	**5.5000e-004**	**3.8000e-004**	**4.3300e-003**	**1.0000e-005**	**1.2100e-003**	**1.0000e-005**	**1.2200e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.9962**	**0.9962**	**3.0000e-005**	**3.0000e-005**	**1.0064**

3.3 Site Preparation - 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					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1359	0.0917	1.9000e-004		6.1500e-003	6.1500e-003		5.6600e-003	5.6600e-003	0.0000	16.7285	16.7285	5.4100e-003	0.0000	16.8638
Total	**0.0133**	**0.1359**	**0.0917**	**1.9000e-004**	**0.0983**	**6.1500e-003**	**0.1044**	**0.0505**	**5.6600e-003**	**0.0562**	**0.0000**	**16.7285**	**16.7285**	**5.4100e-003**	**0.0000**	**16.8638**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 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	3.3000e-004	2.3000e-004	2.6000e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5977	0.5977	2.0000e-005	2.0000e-005	0.6038
Total	**3.3000e-004**	**2.3000e-004**	**2.6000e-003**	**1.0000e-005**	**7.3000e-004**	**0.0000**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.5977**	**0.5977**	**2.0000e-005**	**2.0000e-005**	**0.6038**

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					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1359	0.0917	1.9000e-004		6.1500e-003	6.1500e-003		5.6500e-003	5.6500e-003	0.0000	16.7285	16.7285	5.4100e-003	0.0000	16.8638
Total	**0.0133**	**0.1359**	**0.0917**	**1.9000e-004**	**0.0983**	**6.1500e-003**	**0.1044**	**0.0505**	**5.6500e-003**	**0.0562**	**0.0000**	**16.7285**	**16.7285**	**5.4100e-003**	**0.0000**	**16.8638**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 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	3.3000e-004	2.3000e-004	2.6000e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5977	0.5977	2.0000e-005	2.0000e-005	0.6038
Total	**3.3000e-004**	**2.3000e-004**	**2.6000e-003**	**1.0000e-005**	**7.3000e-004**	**0.0000**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.5977**	**0.5977**	**2.0000e-005**	**2.0000e-005**	**0.6038**

3.4 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					0.1381	0.0000	0.1381	0.0548	0.0000	0.0548	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0483	0.4857	0.4158	9.3000e-004		0.0200	0.0200		0.0184	0.0184	0.0000	81.7793	81.7793	0.0265	0.0000	82.4405
Total	**0.0483**	**0.4857**	**0.4158**	**9.3000e-004**	**0.1381**	**0.0200**	**0.1581**	**0.0548**	**0.0184**	**0.0732**	**0.0000**	**81.7793**	**81.7793**	**0.0265**	**0.0000**	**82.4405**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 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	1.1000e-003	7.6000e-004	8.6700e-003	2.0000e-005	2.4300e-003	1.0000e-005	2.4400e-003	6.5000e-004	1.0000e-005	6.6000e-004	0.0000	1.9924	1.9924	7.0000e-005	6.0000e-005	2.0128
Total	**1.1000e-003**	**7.6000e-004**	**8.6700e-003**	**2.0000e-005**	**2.4300e-003**	**1.0000e-005**	**2.4400e-003**	**6.5000e-004**	**1.0000e-005**	**6.6000e-004**	**0.0000**	**1.9924**	**1.9924**	**7.0000e-005**	**6.0000e-005**	**2.0128**

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					0.1381	0.0000	0.1381	0.0548	0.0000	0.0548	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0483	0.4857	0.4158	9.3000e-004		0.0200	0.0200		0.0184	0.0184	0.0000	81.7792	81.7792	0.0265	0.0000	82.4404
Total	**0.0483**	**0.4857**	**0.4158**	**9.3000e-004**	**0.1381**	**0.0200**	**0.1581**	**0.0548**	**0.0184**	**0.0732**	**0.0000**	**81.7792**	**81.7792**	**0.0265**	**0.0000**	**82.4404**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 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	1.1000e-003	7.6000e-004	8.6700e-003	2.0000e-005	2.4300e-003	1.0000e-005	2.4400e-003	6.5000e-004	1.0000e-005	6.6000e-004	0.0000	1.9924	1.9924	7.0000e-005	6.0000e-005	2.0128
Total	**1.1000e-003**	**7.6000e-004**	**8.6700e-003**	**2.0000e-005**	**2.4300e-003**	**1.0000e-005**	**2.4400e-003**	**6.5000e-004**	**1.0000e-005**	**6.6000e-004**	**0.0000**	**1.9924**	**1.9924**	**7.0000e-005**	**6.0000e-005**	**2.0128**

3.5 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	0.0677	0.6184	0.7437	1.2400e-003		0.0282	0.0282		0.0265	0.0265	0.0000	106.6506	106.6506	0.0252	0.0000	107.2811
Total	**0.0677**	**0.6184**	**0.7437**	**1.2400e-003**		**0.0282**	**0.0282**		**0.0265**	**0.0265**	**0.0000**	**106.6506**	**106.6506**	**0.0252**	**0.0000**	**107.2811**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 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	6.1000e-004	0.0251	6.3100e-003	1.1000e-004	3.4600e-003	1.8000e-004	3.6400e-003	1.0000e-003	1.7000e-004	1.1700e-003	0.0000	10.0720	10.0720	3.0000e-005	1.4900e-003	10.5180
Worker	4.5700e-003	3.1500e-003	0.0359	9.0000e-005	0.0100	6.0000e-005	0.0101	2.6700e-003	5.0000e-005	2.7300e-003	0.0000	8.2485	8.2485	2.8000e-004	2.6000e-004	8.3329
Total	**5.1800e-003**	**0.0283**	**0.0422**	**2.0000e-004**	**0.0135**	**2.4000e-004**	**0.0137**	**3.6700e-003**	**2.2000e-004**	**3.9000e-003**	**0.0000**	**18.3205**	**18.3205**	**3.1000e-004**	**1.7500e-003**	**18.8509**

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	0.0677	0.6184	0.7437	1.2400e-003		0.0282	0.0282		0.0265	0.0265	0.0000	106.6505	106.6505	0.0252	0.0000	107.2810
Total	**0.0677**	**0.6184**	**0.7437**	**1.2400e-003**		**0.0282**	**0.0282**		**0.0265**	**0.0265**	**0.0000**	**106.6505**	**106.6505**	**0.0252**	**0.0000**	**107.2810**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.1000e-004	0.0251	6.3100e-003	1.1000e-004	3.4600e-003	1.8000e-004	3.6400e-003	1.0000e-003	1.7000e-004	1.1700e-003	0.0000	10.0720	10.0720	3.0000e-005	1.4900e-003	10.5180
Worker	4.5700e-003	3.1500e-003	0.0359	9.0000e-005	0.0100	6.0000e-005	0.0101	2.6700e-003	5.0000e-005	2.7300e-003	0.0000	8.2485	8.2485	2.8000e-004	2.6000e-004	8.3329
Total	**5.1800e-003**	**0.0283**	**0.0422**	**2.0000e-004**	**0.0135**	**2.4000e-004**	**0.0137**	**3.6700e-003**	**2.2000e-004**	**3.9000e-003**	**0.0000**	**18.3205**	**18.3205**	**3.1000e-004**	**1.7500e-003**	**18.8509**

3.5 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	0.1422	1.2969	1.6728	2.8000e-003		0.0549	0.0549		0.0516	0.0516	0.0000	241.1962	241.1962	0.0567	0.0000	242.6137
Total	**0.1422**	**1.2969**	**1.6728**	**2.8000e-003**		**0.0549**	**0.0549**		**0.0516**	**0.0516**	**0.0000**	**241.1962**	**241.1962**	**0.0567**	**0.0000**	**242.6137**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 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	1.3200e-003	0.0558	0.0139	2.3000e-004	7.8200e-003	3.9000e-004	8.2100e-003	2.2600e-003	3.7000e-004	2.6400e-003	0.0000	22.3528	22.3528	6.0000e-005	3.3100e-003	23.3407
Worker	9.6300e-003	6.3500e-003	0.0750	1.9000e-004	0.0227	1.2000e-004	0.0228	6.0400e-003	1.1000e-004	6.1600e-003	0.0000	18.2020	18.2020	5.7000e-004	5.4000e-004	18.3785
Total	**0.0110**	**0.0622**	**0.0889**	**4.2000e-004**	**0.0305**	**5.1000e-004**	**0.0310**	**8.3000e-003**	**4.8000e-004**	**8.8000e-003**	**0.0000**	**40.5548**	**40.5548**	**6.3000e-004**	**3.8500e-003**	**41.7192**

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	0.1422	1.2969	1.6728	2.8000e-003		0.0549	0.0549		0.0516	0.0516	0.0000	241.1959	241.1959	0.0567	0.0000	242.6134
Total	**0.1422**	**1.2969**	**1.6728**	**2.8000e-003**		**0.0549**	**0.0549**		**0.0516**	**0.0516**	**0.0000**	**241.1959**	**241.1959**	**0.0567**	**0.0000**	**242.6134**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 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	1.3200e-003	0.0558	0.0139	2.3000e-004	7.8200e-003	3.9000e-004	8.2100e-003	2.2600e-003	3.7000e-004	2.6400e-003	0.0000	22.3528	22.3528	6.0000e-005	3.3100e-003	23.3407
Worker	9.6300e-003	6.3500e-003	0.0750	1.9000e-004	0.0227	1.2000e-004	0.0228	6.0400e-003	1.1000e-004	6.1600e-003	0.0000	18.2020	18.2020	5.7000e-004	5.4000e-004	18.3785
Total	**0.0110**	**0.0622**	**0.0889**	**4.2000e-004**	**0.0305**	**5.1000e-004**	**0.0310**	**8.3000e-003**	**4.8000e-004**	**8.8000e-003**	**0.0000**	**40.5548**	**40.5548**	**6.3000e-004**	**3.8500e-003**	**41.7192**

3.6 Paving - 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	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0193	20.0193	6.4700e-003	0.0000	20.1811
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.1500e-003**	**0.0858**	**0.1458**	**2.3000e-004**		**4.1900e-003**	**4.1900e-003**		**3.8500e-003**	**3.8500e-003**	**0.0000**	**20.0193**	**20.0193**	**6.4700e-003**	**0.0000**	**20.1811**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 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	0.0000	0.0000	0.0000	0.0000	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	5.1000e-004	3.4000e-004	4.0100e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9723	0.9723	3.0000e-005	3.0000e-005	0.9818
Total	**5.1000e-004**	**3.4000e-004**	**4.0100e-003**	**1.0000e-005**	**1.2100e-003**	**1.0000e-005**	**1.2200e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.9723**	**0.9723**	**3.0000e-005**	**3.0000e-005**	**0.9818**

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	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0192	20.0192	6.4700e-003	0.0000	20.1811
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.1500e-003**	**0.0858**	**0.1458**	**2.3000e-004**		**4.1900e-003**	**4.1900e-003**		**3.8500e-003**	**3.8500e-003**	**0.0000**	**20.0192**	**20.0192**	**6.4700e-003**	**0.0000**	**20.1811**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 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	0.0000	0.0000	0.0000	0.0000	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	5.1000e-004	3.4000e-004	4.0100e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9723	0.9723	3.0000e-005	3.0000e-005	0.9818
Total	**5.1000e-004**	**3.4000e-004**	**4.0100e-003**	**1.0000e-005**	**1.2100e-003**	**1.0000e-005**	**1.2200e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.9723**	**0.9723**	**3.0000e-005**	**3.0000e-005**	**0.9818**

3.7 Architectural Coating - 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					
Archit. Coating	0.6336					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7100e-003	0.0115	0.0181	3.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5567
Total	**0.6353**	**0.0115**	**0.0181**	**3.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.4000e-004**	**0.0000**	**2.5567**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 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	0.0000	0.0000	0.0000	0.0000	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	1.7000e-004	1.1000e-004	1.3400e-003	0.0000	4.0000e-004	0.0000	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3241	0.3241	1.0000e-005	1.0000e-005	0.3273
Total	**1.7000e-004**	**1.1000e-004**	**1.3400e-003**	**0.0000**	**4.0000e-004**	**0.0000**	**4.1000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3241**	**0.3241**	**1.0000e-005**	**1.0000e-005**	**0.3273**

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	0.6336					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7100e-003	0.0115	0.0181	3.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5567
Total	**0.6353**	**0.0115**	**0.0181**	**3.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.4000e-004**	**0.0000**	**2.5567**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 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	0.0000	0.0000	0.0000	0.0000	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	1.7000e-004	1.1000e-004	1.3400e-003	0.0000	4.0000e-004	0.0000	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3241	0.3241	1.0000e-005	1.0000e-005	0.3273
Total	**1.7000e-004**	**1.1000e-004**	**1.3400e-003**	**0.0000**	**4.0000e-004**	**0.0000**	**4.1000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3241**	**0.3241**	**1.0000e-005**	**1.0000e-005**	**0.3273**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	tons/yr										MT/yr					
Mitigated	0.4442	0.6106	3.7662	6.8500e-003	0.7122	7.1500e-003	0.7194	0.1907	6.7200e-003	0.1974	0.0000	650.8295	650.8295	0.0453	0.0341	662.1258
Unmitigated	0.4442	0.6106	3.7662	6.8500e-003	0.7122	7.1500e-003	0.7194	0.1907	6.7200e-003	0.1974	0.0000	650.8295	650.8295	0.0453	0.0341	662.1258

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	708.00	715.50	641.25	1,934,744	1,934,744
Total	708.00	715.50	641.25	1,934,744	1,934,744

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
Single Family Housing	11.10	4.90	8.00	35.00	17.00	48.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.513715	0.054648	0.185256	0.140437	0.041036	0.008223	0.010879	0.005908	0.000716	0.000409	0.032995	0.001089	0.004690

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	55.3336	55.3336	8.9500e-003	1.0900e-003	55.8807
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	55.3336	55.3336	8.9500e-003	1.0900e-003	55.8807
NaturalGas Mitigated	9.7200e-003	0.0831	0.0354	5.3000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	96.2051	96.2051	1.8400e-003	1.7600e-003	96.7768
NaturalGas Unmitigated	9.7200e-003	0.0831	0.0354	5.3000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	96.2051	96.2051	1.8400e-003	1.7600e-003	96.7768

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Single Family Housing	1.80282e+006	9.7200e-003	0.0831	0.0354	5.3000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	96.2051	96.2051	1.8400e-003	1.7600e-003	96.7768
Total		**9.7200e-003**	**0.0831**	**0.0354**	**5.3000e-004**		**6.7200e-003**	**6.7200e-003**		**6.7200e-003**	**6.7200e-003**	**0.0000**	**96.2051**	**96.2051**	**1.8400e-003**	**1.7600e-003**	**96.7768**

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					
Single Family Housing	1.80282e+006	9.7200e-003	0.0831	0.0354	5.3000e-004		6.7200e-003	6.7200e-003		6.7200e-003	6.7200e-003	0.0000	96.2051	96.2051	1.8400e-003	1.7600e-003	96.7768
Total		**9.7200e-003**	**0.0831**	**0.0354**	**5.3000e-004**		**6.7200e-003**	**6.7200e-003**		**6.7200e-003**	**6.7200e-003**	**0.0000**	**96.2051**	**96.2051**	**1.8400e-003**	**1.7600e-003**	**96.7768**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	598047	55.3336	8.9500e-003	1.0900e-003	55.8807
Total		**55.3336**	**8.9500e-003**	**1.0900e-003**	**55.8807**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	598047	55.3336	8.9500e-003	1.0900e-003	55.8807
Total		**55.3336**	**8.9500e-003**	**1.0900e-003**	**55.8807**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.5285	6.4100e-003	0.5564	3.0000e-005		3.0900e-003	3.0900e-003		3.0900e-003	3.0900e-003	0.0000	0.9097	0.9097	8.7000e-004	0.0000	0.9314
Unmitigated	0.5285	6.4100e-003	0.5564	3.0000e-005		3.0900e-003	3.0900e-003		3.0900e-003	3.0900e-003	0.0000	0.9097	0.9097	8.7000e-004	0.0000	0.9314

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	0.0634					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4484					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0167	6.4100e-003	0.5564	3.0000e-005		3.0900e-003	3.0900e-003		3.0900e-003	3.0900e-003	0.0000	0.9097	0.9097	8.7000e-004	0.0000	0.9314
Total	**0.5285**	**6.4100e-003**	**0.5564**	**3.0000e-005**		**3.0900e-003**	**3.0900e-003**		**3.0900e-003**	**3.0900e-003**	**0.0000**	**0.9097**	**0.9097**	**8.7000e-004**	**0.0000**	**0.9314**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.0634					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4484					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0167	6.4100e-003	0.5564	3.0000e-005		3.0900e-003	3.0900e-003		3.0900e-003	3.0900e-003	0.0000	0.9097	0.9097	8.7000e-004	0.0000	0.9314
Total	**0.5285**	**6.4100e-003**	**0.5564**	**3.0000e-005**		**3.0900e-003**	**3.0900e-003**		**3.0900e-003**	**3.0900e-003**	**0.0000**	**0.9097**	**0.9097**	**8.7000e-004**	**0.0000**	**0.9314**

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 Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4.9943	0.1598	3.8300e-003	10.1295
Unmitigated	4.9943	0.1598	3.8300e-003	10.1295

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	4.88655 / 3.08065	4.9943	0.1598	3.8300e-003	10.1295
Total		**4.9943**	**0.1598**	**3.8300e-003**	**10.1295**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	4.88655 / 3.08065	4.9943	0.1598	3.8300e-003	10.1295
Total		**4.9943**	**0.1598**	**3.8300e-003**	**10.1295**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	14.8945	0.9285	0.0000	38.1076
Unmitigated	14.8945	0.9285	0.0000	38.1076

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	77.4	14.8945	0.9285	0.0000	38.1076
Total		**14.8945**	**0.9285**	**0.0000**	**38.1076**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	77.4	14.8945	0.9285	0.0000	38.1076
Total		**14.8945**	**0.9285**	**0.0000**	**38.1076**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Orchard Creek Estates

Butte County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	75.00	Dwelling Unit	15.00	135,000.00	215

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	71
Climate Zone	3			**Operational Year**	2026
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 - Project is 15 ac

Woodstoves - No fireplaces or woodstoves.

Consumer Products - Update using 2012 CARB almanac data

Area Coating - Res interior 50 typical.

Solid Waste - Per Butte County, membrane captures >90% methane.

Area Mitigation - 50 typical

Fleet Mix - Adjusted Heavy trucks (HHD) down due this being a residential project, added to light duty autos

Construction Phase -

Architectural Coating - 50 g/L is typical for residential interior paint.

Orchard Creek Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Interior	150.00	50.00
tblAreaCoating	Area_EF_Parking	150	0
tblAreaCoating	Area_EF_Residential_Interior	150	50
tblConsumerProducts	ROG_EF	2.14E-05	1.82E-05
tblFireplaces	FireplaceWoodMass	5,158.40	0.00
tblFireplaces	NumberGas	32.25	0.00
tblFireplaces	NumberNoFireplace	13.50	0.00
tblFireplaces	NumberWood	29.25	0.00
tblFleetMix	HHD	0.02	5.9080e-003
tblFleetMix	LDA	0.50	0.51
tblLandUse	LotAcreage	24.35	15.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	LandfillCaptureGasEnergyRecovery	0.00	90.00
tblSolidWaste	LandfillCaptureGasFlare	94.00	4.00
tblWoodstoves	NumberCatalytic	6.75	0.00
tblWoodstoves	NumberNoncatalytic	6.75	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

Orchard Creek Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated 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					
2024	3.3064	32.4235	28.4121	0.0636	19.8090	1.3363	21.0392	10.1428	1.2294	11.2745	0.0000	6,170.8426	6,170.8426	1.9485	0.0417	6,220.8547
2025	63.5461	13.0335	17.0746	0.0312	0.3059	0.5325	0.8384	0.0829	0.5009	0.5838	0.0000	3,005.4625	3,005.4625	0.7170	0.0405	3,032.7176
Maximum	**63.5461**	**32.4235**	**28.4121**	**0.0636**	**19.8090**	**1.3363**	**21.0392**	**10.1428**	**1.2294**	**11.2745**	**0.0000**	**6,170.8426**	**6,170.8426**	**1.9485**	**0.0417**	**6,220.8547**

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					
2024	3.3064	32.4235	28.4121	0.0636	19.8090	1.3363	21.0392	10.1428	1.2294	11.2745	0.0000	6,170.8426	6,170.8426	1.9485	0.0417	6,220.8547
2025	63.5461	13.0335	17.0746	0.0312	0.3059	0.5325	0.8384	0.0829	0.5009	0.5838	0.0000	3,005.4625	3,005.4625	0.7170	0.0405	3,032.7176
Maximum	**63.5461**	**32.4235**	**28.4121**	**0.0636**	**19.8090**	**1.3363**	**21.0392**	**10.1428**	**1.2294**	**11.2745**	**0.0000**	**6,170.8426**	**6,170.8426**	**1.9485**	**0.0417**	**6,220.8547**

Orchard Creek Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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

Orchard Creek Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	2.9898	0.0712	6.1817	3.3000e-004		0.0343	0.0343		0.0343	0.0343	0.0000	11.1414	11.1414	0.0107	0.0000	11.4082
Energy	0.0533	0.4552	0.1937	2.9100e-003		0.0368	0.0368		0.0368	0.0368		581.0850	581.0850	0.0111	0.0107	584.5381
Mobile	3.1341	3.1676	23.0252	0.0414	4.1775	0.0402	4.2177	1.1146	0.0378	1.1524		4,336.7115	4,336.7115	0.2679	0.2028	4,403.8376
Total	**6.1771**	**3.6939**	**29.4006**	**0.0446**	**4.1775**	**0.1113**	**4.2888**	**1.1146**	**0.1089**	**1.2235**	**0.0000**	**4,928.9380**	**4,928.9380**	**0.2897**	**0.2134**	**4,999.7839**

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	2.9898	0.0712	6.1817	3.3000e-004		0.0343	0.0343		0.0343	0.0343	0.0000	11.1414	11.1414	0.0107	0.0000	11.4082
Energy	0.0533	0.4552	0.1937	2.9100e-003		0.0368	0.0368		0.0368	0.0368		581.0850	581.0850	0.0111	0.0107	584.5381
Mobile	3.1341	3.1676	23.0252	0.0414	4.1775	0.0402	4.2177	1.1146	0.0378	1.1524		4,336.7115	4,336.7115	0.2679	0.2028	4,403.8376
Total	**6.1771**	**3.6939**	**29.4006**	**0.0446**	**4.1775**	**0.1113**	**4.2888**	**1.1146**	**0.1089**	**1.2235**	**0.0000**	**4,928.9380**	**4,928.9380**	**0.2897**	**0.2134**	**4,999.7839**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	Demolition	Demolition	6/1/2024	6/28/2024	5	20	
2	Site Preparation	Site Preparation	6/29/2024	7/12/2024	5	10	
3	Grading	Grading	7/13/2024	8/23/2024	5	30	
4	Building Construction	Building Construction	8/24/2024	10/17/2025	5	300	
5	Paving	Paving	10/18/2025	11/14/2025	5	20	
6	Architectural Coating	Architectural Coating	11/15/2025	12/12/2025	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 90

Acres of Paving: 0

Residential Indoor: 273,375; Residential Outdoor: 91,125; 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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	2	8.00	158	0.38

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
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
Demolition	6	15.00	0.00	0.00	11.10	10.50	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	11.10	10.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	11.10	10.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	27.00	8.00	0.00	11.10	10.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	11.10	10.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	11.10	10.50	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 Applied

3.2 Demolition - 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	2.2437	20.8781	19.7073	0.0388		0.9602	0.9602		0.8922	0.8922		3,747.4228	3,747.4228	1.0485		3,773.6345
Total	**2.2437**	**20.8781**	**19.7073**	**0.0388**		**0.9602**	**0.9602**		**0.8922**	**0.8922**		**3,747.4228**	**3,747.4228**	**1.0485**		**3,773.6345**

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	0.0662	0.0349	0.5169	1.1700e-003	0.1266	6.9000e-004	0.1273	0.0336	6.4000e-004	0.0342		120.8205	120.8205	3.6000e-003	3.2700e-003	121.8857
Total	**0.0662**	**0.0349**	**0.5169**	**1.1700e-003**	**0.1266**	**6.9000e-004**	**0.1273**	**0.0336**	**6.4000e-004**	**0.0342**		**120.8205**	**120.8205**	**3.6000e-003**	**3.2700e-003**	**121.8857**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 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	2.2437	20.8781	19.7073	0.0388		0.9602	0.9602		0.8922	0.8922	0.0000	3,747.4228	3,747.4228	1.0485		3,773.6345
Total	**2.2437**	**20.8781**	**19.7073**	**0.0388**		**0.9602**	**0.9602**		**0.8922**	**0.8922**	**0.0000**	**3,747.4228**	**3,747.4228**	**1.0485**		**3,773.6345**

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	0.0662	0.0349	0.5169	1.1700e-003	0.1266	6.9000e-004	0.1273	0.0336	6.4000e-004	0.0342		120.8205	120.8205	3.6000e-003	3.2700e-003	121.8857
Total	**0.0662**	**0.0349**	**0.5169**	**1.1700e-003**	**0.1266**	**6.9000e-004**	**0.1273**	**0.0336**	**6.4000e-004**	**0.0342**		**120.8205**	**120.8205**	**3.6000e-003**	**3.2700e-003**	**121.8857**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294		1.1310	1.1310		3,688.0100	3,688.0100	1.1928		3,717.8294
Total	**2.6609**	**27.1760**	**18.3356**	**0.0381**	**19.6570**	**1.2294**	**20.8864**	**10.1025**	**1.1310**	**11.2335**		**3,688.0100**	**3,688.0100**	**1.1928**		**3,717.8294**

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	0.0794	0.0419	0.6203	1.4100e-003	0.1520	8.3000e-004	0.1528	0.0403	7.7000e-004	0.0411		144.9846	144.9846	4.3200e-003	3.9300e-003	146.2628
Total	**0.0794**	**0.0419**	**0.6203**	**1.4100e-003**	**0.1520**	**8.3000e-004**	**0.1528**	**0.0403**	**7.7000e-004**	**0.0411**		**144.9846**	**144.9846**	**4.3200e-003**	**3.9300e-003**	**146.2628**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294		1.1310	1.1310	0.0000	3,688.0100	3,688.0100	1.1928		3,717.8294
Total	**2.6609**	**27.1760**	**18.3356**	**0.0381**	**19.6570**	**1.2294**	**20.8864**	**10.1025**	**1.1310**	**11.2335**	**0.0000**	**3,688.0100**	**3,688.0100**	**1.1928**		**3,717.8294**

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	0.0794	0.0419	0.6203	1.4100e-003	0.1520	8.3000e-004	0.1528	0.0403	7.7000e-004	0.0411		144.9846	144.9846	4.3200e-003	3.9300e-003	146.2628
Total	**0.0794**	**0.0419**	**0.6203**	**1.4100e-003**	**0.1520**	**8.3000e-004**	**0.1528**	**0.0403**	**7.7000e-004**	**0.0411**		**144.9846**	**144.9846**	**4.3200e-003**	**3.9300e-003**	**146.2628**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 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	0.0882	0.0465	0.6893	1.5600e-003	0.1689	9.3000e-004	0.1698	0.0448	8.5000e-004	0.0456		161.0940	161.0940	4.8000e-003	4.3600e-003	162.5142
Total	**0.0882**	**0.0465**	**0.6893**	**1.5600e-003**	**0.1689**	**9.3000e-004**	**0.1698**	**0.0448**	**8.5000e-004**	**0.0456**		**161.0940**	**161.0940**	**4.8000e-003**	**4.3600e-003**	**162.5142**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 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					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	0.0000	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**	**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	0.0882	0.0465	0.6893	1.5600e-003	0.1689	9.3000e-004	0.1698	0.0448	8.5000e-004	0.0456		161.0940	161.0940	4.8000e-003	4.3600e-003	162.5142
Total	**0.0882**	**0.0465**	**0.6893**	**1.5600e-003**	**0.1689**	**9.3000e-004**	**0.1698**	**0.0448**	**8.5000e-004**	**0.0456**		**161.0940**	**161.0940**	**4.8000e-003**	**4.3600e-003**	**162.5142**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 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	0.0136	0.5168	0.1356	2.2900e-003	0.0779	3.8200e-003	0.0817	0.0224	3.6500e-003	0.0261		241.2115	241.2115	7.0000e-004	0.0358	251.8848
Worker	0.1191	0.0628	0.9305	2.1100e-003	0.2280	1.2500e-003	0.2292	0.0605	1.1500e-003	0.0616		217.4768	217.4768	6.4800e-003	5.8900e-003	219.3942
Total	**0.1328**	**0.5795**	**1.0661**	**4.4000e-003**	**0.3059**	**5.0700e-003**	**0.3109**	**0.0829**	**4.8000e-003**	**0.0877**		**458.6883**	**458.6883**	**7.1800e-003**	**0.0417**	**471.2790**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 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	0.0136	0.5168	0.1356	2.2900e-003	0.0779	3.8200e-003	0.0817	0.0224	3.6500e-003	0.0261		241.2115	241.2115	7.0000e-004	0.0358	251.8848
Worker	0.1191	0.0628	0.9305	2.1100e-003	0.2280	1.2500e-003	0.2292	0.0605	1.1500e-003	0.0616		217.4768	217.4768	6.4800e-003	5.8900e-003	219.3942
Total	**0.1328**	**0.5795**	**1.0661**	**4.4000e-003**	**0.3059**	**5.0700e-003**	**0.3109**	**0.0829**	**4.8000e-003**	**0.0877**		**458.6883**	**458.6883**	**7.1800e-003**	**0.0417**	**471.2790**

Orchard Creek Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 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	0.0131	0.5078	0.1317	2.2400e-003	0.0779	3.7500e-003	0.0817	0.0224	3.5900e-003	0.0260		236.7740	236.7740	6.6000e-004	0.0350	247.2325
Worker	0.1109	0.0560	0.8582	2.0400e-003	0.2280	1.1900e-003	0.2291	0.0605	1.0900e-003	0.0616		212.2142	212.2142	5.8300e-003	5.4600e-003	213.9871
Total	**0.1241**	**0.5638**	**0.9899**	**4.2800e-003**	**0.3059**	**4.9400e-003**	**0.3108**	**0.0829**	**4.6800e-003**	**0.0876**		**448.9882**	**448.9882**	**6.4900e-003**	**0.0405**	**461.2196**

Orchard Creek Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 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	0.0131	0.5078	0.1317	2.2400e-003	0.0779	3.7500e-003	0.0817	0.0224	3.5900e-003	0.0260		236.7740	236.7740	6.6000e-004	0.0350	247.2325
Worker	0.1109	0.0560	0.8582	2.0400e-003	0.2280	1.1900e-003	0.2291	0.0605	1.0900e-003	0.0616		212.2142	212.2142	5.8300e-003	5.4600e-003	213.9871
Total	**0.1241**	**0.5638**	**0.9899**	**4.2800e-003**	**0.3059**	**4.9400e-003**	**0.3108**	**0.0829**	**4.6800e-003**	**0.0876**		**448.9882**	**448.9882**	**6.4900e-003**	**0.0405**	**461.2196**

Orchard Creek Estates - Butte County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	0.0616	0.0311	0.4768	1.1300e-003	0.1266	6.6000e-004	0.1273	0.0336	6.1000e-004	0.0342		117.8968	117.8968	3.2400e-003	3.0300e-003	118.8817
Total	**0.0616**	**0.0311**	**0.4768**	**1.1300e-003**	**0.1266**	**6.6000e-004**	**0.1273**	**0.0336**	**6.1000e-004**	**0.0342**		**117.8968**	**117.8968**	**3.2400e-003**	**3.0300e-003**	**118.8817**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	0.0616	0.0311	0.4768	1.1300e-003	0.1266	6.6000e-004	0.1273	0.0336	6.1000e-004	0.0342		117.8968	117.8968	3.2400e-003	3.0300e-003	118.8817
Total	**0.0616**	**0.0311**	**0.4768**	**1.1300e-003**	**0.1266**	**6.6000e-004**	**0.1273**	**0.0336**	**6.1000e-004**	**0.0342**		**117.8968**	**117.8968**	**3.2400e-003**	**3.0300e-003**	**118.8817**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 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					
Archit. Coating	63.3547					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**63.5255**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	0.0205	0.0104	0.1589	3.8000e-004	0.0422	2.2000e-004	0.0424	0.0112	2.0000e-004	0.0114		39.2989	39.2989	1.0800e-003	1.0100e-003	39.6272
Total	**0.0205**	**0.0104**	**0.1589**	**3.8000e-004**	**0.0422**	**2.2000e-004**	**0.0424**	**0.0112**	**2.0000e-004**	**0.0114**		**39.2989**	**39.2989**	**1.0800e-003**	**1.0100e-003**	**39.6272**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 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					
Archit. Coating	63.3547					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**63.5255**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	0.0205	0.0104	0.1589	3.8000e-004	0.0422	2.2000e-004	0.0424	0.0112	2.0000e-004	0.0114		39.2989	39.2989	1.0800e-003	1.0100e-003	39.6272
Total	**0.0205**	**0.0104**	**0.1589**	**3.8000e-004**	**0.0422**	**2.2000e-004**	**0.0424**	**0.0112**	**2.0000e-004**	**0.0114**		**39.2989**	**39.2989**	**1.0800e-003**	**1.0100e-003**	**39.6272**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	3.1341	3.1676	23.0252	0.0414	4.1775	0.0402	4.2177	1.1146	0.0378	1.1524		4,336.7115	4,336.7115	0.2679	0.2028	4,403.8376
Unmitigated	3.1341	3.1676	23.0252	0.0414	4.1775	0.0402	4.2177	1.1146	0.0378	1.1524		4,336.7115	4,336.7115	0.2679	0.2028	4,403.8376

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	708.00	715.50	641.25	1,934,744	1,934,744
Total	708.00	715.50	641.25	1,934,744	1,934,744

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
Single Family Housing	11.10	4.90	8.00	35.00	17.00	48.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.513715	0.054648	0.185256	0.140437	0.041036	0.008223	0.010879	0.005908	0.000716	0.000409	0.032995	0.001089	0.004690

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0533	0.4552	0.1937	2.9100e-003		0.0368	0.0368		0.0368	0.0368		581.0850	581.0850	0.0111	0.0107	584.5381
NaturalGas Unmitigated	0.0533	0.4552	0.1937	2.9100e-003		0.0368	0.0368		0.0368	0.0368		581.0850	581.0850	0.0111	0.0107	584.5381

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					
Single Family Housing	4939.22	0.0533	0.4552	0.1937	2.9100e-003		0.0368	0.0368		0.0368	0.0368		581.0850	581.0850	0.0111	0.0107	584.5381
Total		**0.0533**	**0.4552**	**0.1937**	**2.9100e-003**		**0.0368**	**0.0368**		**0.0368**	**0.0368**		**581.0850**	**581.0850**	**0.0111**	**0.0107**	**584.5381**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	4.93922	0.0533	0.4552	0.1937	2.9100e-003		0.0368	0.0368		0.0368	0.0368		581.0850	581.0850	0.0111	0.0107	584.5381
Total		**0.0533**	**0.4552**	**0.1937**	**2.9100e-003**		**0.0368**	**0.0368**		**0.0368**	**0.0368**		**581.0850**	**581.0850**	**0.0111**	**0.0107**	**584.5381**

6.0 Area Detail

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	2.9898	0.0712	6.1817	3.3000e-004		0.0343	0.0343		0.0343	0.0343	0.0000	11.1414	11.1414	0.0107	0.0000	11.4082
Unmitigated	2.9898	0.0712	6.1817	3.3000e-004		0.0343	0.0343		0.0343	0.0343	0.0000	11.1414	11.1414	0.0107	0.0000	11.4082

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.3472					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.4570					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1856	0.0712	6.1817	3.3000e-004		0.0343	0.0343		0.0343	0.0343		11.1414	11.1414	0.0107		11.4082
Total	**2.9898**	**0.0712**	**6.1817**	**3.3000e-004**		**0.0343**	**0.0343**		**0.0343**	**0.0343**	**0.0000**	**11.1414**	**11.1414**	**0.0107**	**0.0000**	**11.4082**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.3472					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.4570					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1856	0.0712	6.1817	3.3000e-004		0.0343	0.0343		0.0343	0.0343		11.1414	11.1414	0.0107		11.4082
Total	**2.9898**	**0.0712**	**6.1817**	**3.3000e-004**		**0.0343**	**0.0343**		**0.0343**	**0.0343**	**0.0000**	**11.1414**	**11.1414**	**0.0107**	**0.0000**	**11.4082**

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 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

APPENDIX B

Tree Health Assessment

gallaway
ENTERPRISES

117 Meyers Street • Suite 120 • Chico CA 95928 • 530-332-9909

October 5, 2022

W.G. Civil Engineers, Inc.
Attn.: Wesley Gilbert
140 Yellowstone Drive, Suite 110
Chico CA, 95973

Re: Tree Health Assessment for the Orchard Creek Estates Tentative Parcel Map Project – Chico, Butte County, California.

Mr. Gilbert,

As requested, Gallaway Enterprises conducted a Tree Health Assessment for the Orchard Creek Estates Tentative Parcel Map (TPM) Project (Project) on August 1, 2022. Please find enclosed a summary of the results of the assessment conducted.

Project Location

The Project site is currently composed of one parcel (APN 042-740-020) located at 1181 Henshaw Avenue, Chico, Butte County, California. Proposed within the Project site is a parcel subdivision and submittal of a TPM to the City of Chico (City).

Environmental Setting

The Project site is accessed via Nord Avenue along the western boundary and Henshaw Avenue along the northern boundary and is surrounded by residential developments and orchard land. Residential buildings occur in the northwestern and southwestern corners of the Project site and an English walnut (*Juglans regia*) orchard occurs within the remainder of the site. A variety of non-native landscape/fruit trees occur around the various residential structures on the site. The Project site is highly disturbed from human use.

Survey Method

The location of all trees within the Project site was surveyed by W. Gilbert Engineering. The location of all the trees recorded by the Engineer is depicted in **Attachment A**. Gallaway Enterprises' ISA Certified Arborist Elena Gregg conducted a Tree Health Assessment on August 1, 2022 within the Project site. As required by the City Tree Preservation Regulations (Chapter 16.66 of the City's Code of Ordinances), all trees present within the Project site with a diameter at breast height (DBH) of 6 inches or greater must be identified. However, English walnut trees are not are not considered regulated trees by the City, therefore, the location of these trees within the Project site have been mapped, but a health assessment was not performed on any of these trees. Gallaway Enterprises conducted a health assessment for all other tree species with a DBH of 6 inches or greater within the Project site. A level 2 basic visual

assessment (per ISA's ANSI A300 Part 9 and companion BMP guidelines) of each tree was conducted from the ground by walking completely around the tree, if feasible, and looking at the site, trunk, trunk collar, and branches. Following this visual assessment, each inventoried tree was assigned a health rating of 1 to 5, with 1 being poor and 5 being excellent. Dead trees were not assessed or mapped. The health ratings were based on the following standards:

1: These trees have major defects that could result in the tree or portions of the tree (e.g. branches) to be unstable or to fail. The defect is typically extensive decay or cavity located within the trunk or numerous dead/decayed branches.

2: These are generally sound trees but often have prominent leans, trunk elongation, or general branching defects. Other potential health detractors include excessive deadwood from competition with other trees.

3: These are average trees; generally in good health and without prominent defects in their branching pattern and overall structure. These trees also have adequate growing room and are not overgrown with mistletoe, poison oak or ivy.

4: These trees are above average, with good branch form. The trees are not overcrowded or light-starved and have plenty of room to grow. These trees often look much like a "3" except they are larger, older, and better established in the tree stand.

5: These trees are considered excellent in all aspects: form, branching, and structure.

Results of the Tree Health Assessment

A total of 218 trees were surveyed by the Engineer (**Attachment A**). Of these 218 trees, 8 are undersized trees (#1-6 are undersized coast redwood (*Sequoia sempervirens*) trees and #18 and #24 are undersized pomegranate (*Punica granatum*) trees), 170 are English walnut trees (#19-23, #26-53, #81-185 and #187-218) and 40 were assessed (#7-17, #25, #54-80 and #186) within the Project site. The trees assessed included 7 common landscape trees that are native to California including valley oak (*Quercus lobata*), black walnut (*Juglans hindsii*), and coast redwood (*Sequoia sempervirens*) and 33 other non-native fruit and landscape tree species. A table listing each tree surveyed within the Project site and its assessed health rating is provided as **Attachment B**.

The average health rating of the trees present on the site was 2.6 and the average singe trunk DBH was 34.6 inches. This low average health rating is likely due to historic human impacts to the trees and the presence of a number of over-mature trees that are starting to naturally show signs of decline.

A level 2 basic visual assessment from ground level was conducted; however, visual signs of decline may not have been outwardly evident or evident from the ground surface. As such, the accuracy of the heath rating is limited by the visual appearance of the trees at the time of the survey. An Arborist's Disclaimer Statement is provided as **Attachment C**.

Recommendations

If any trees with a health rating of 1 are located within striking distance of any proposed structure or existing structure proposed for retention, these trees are recommended for removal in order to

eliminate potential hazards. If feasible, it is recommended that all trees with a health rating of 3 or greater be retained within the Project site due to their aesthetics and usefulness to wildlife. If trees with a health rating of 2 are retained, these trees are recommended to be pruned of any dead branches or vines growing in their canopy. The removal of any trees on the Project site must be conducted in compliance with the City's tree ordinance. Per the City's Tree Preservation Regulations English walnut, Chinese elm, pecan, and fruit trees including apple, persimmon, nectarine, pear and mandarin trees, are not considered regulated trees. However, mitigation for removal of any trees 6 inches or greater within the Project site will be determined though consultation with the City.

When working within close proximity of trees to be protected, activities should comply with the City's guidelines for protecting trees during construction (Section 16.66.100-110 of the Municipal Code) and Tree Preservation Measures (Section 19.68.060 of the Municipal Code). If any of the trees present within the Project site are proposed for preservation, care should be taken to avoid any construction related activities including stockpiling of equipment or materials within the dripline of the tree canopy. Preserved trees in close proximity to structures or walkways should be regularly monitored by a qualified arborist following construction activities for signs of stress or failure.

Should you have any questions or need any additional information on managing trees during construction, please do not hesitate to contact me at (530) 332-9909 or elena@gallawayenterprises.com.

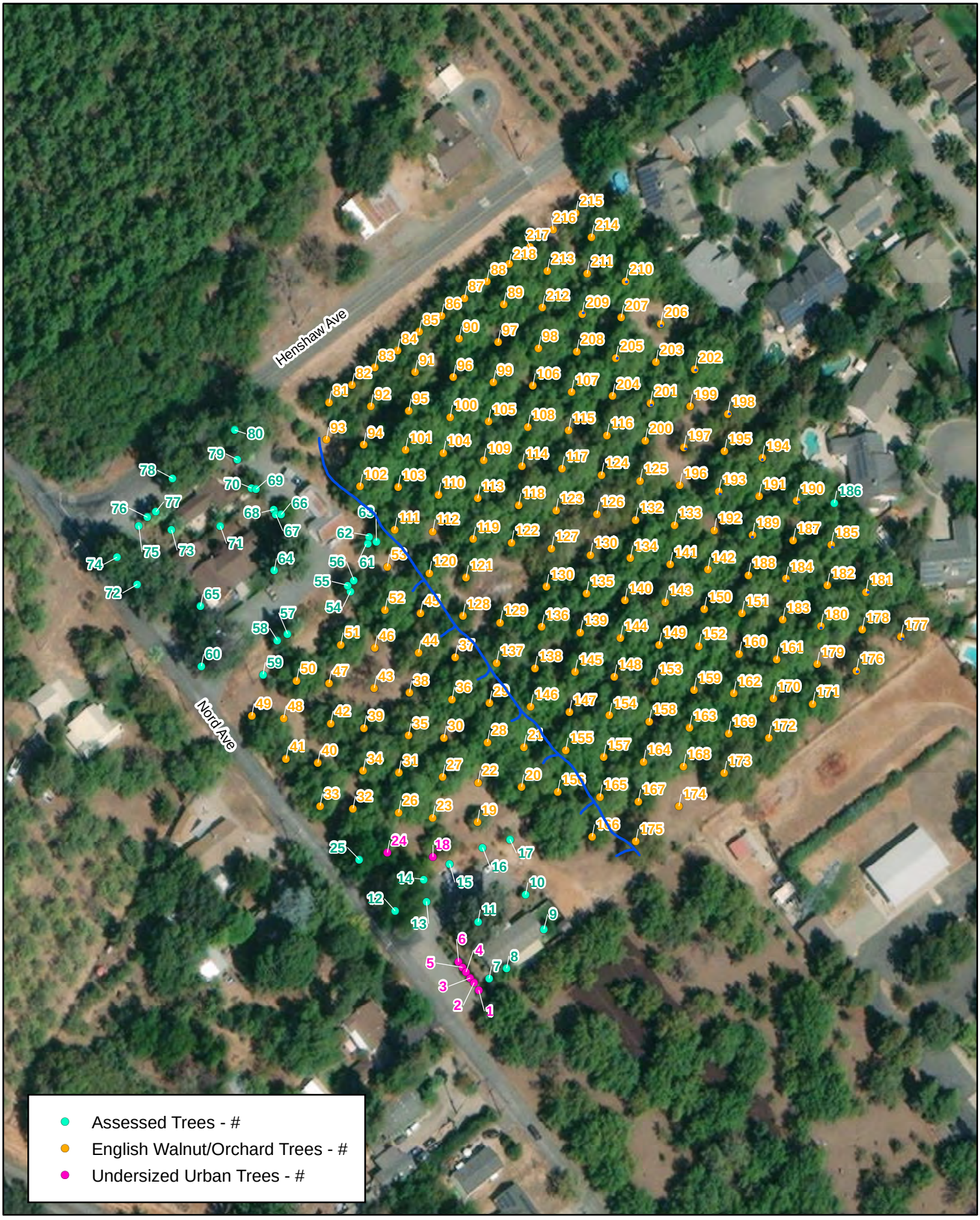
Sincerely,

Elena Gregg, ISA Certified Arborist (WE-8033A)
Gallaway Enterprises

Attachment A: Tree Location Map
Attachment B: Tree Table
Attachment C: Arborist's Disclaimer

Attachment A

Tree Location Map



NORTH

1:1,600

0 50 100 Feet

Data Sources: ESRI, W. Gilbert Engineering, Maxar 09/17/2021

Orchard Creek Estates
Tree Assessment
Attachment A

gallaway ENTERPRISES

GE: #22-108 Map Date: 10/04/2022

Attachment B

Tree Table

Tree #	Species Common Name	Scientific Name	dbh1	dbh2	dbh3	dbh4	dbh5	Combined DBH	Health (1-5)	Comments
7	Pine	*Pinus* sp.	8					8	3	average
8	Stonefruit	*Prunus* sp.	10	10	7			27	2	some decay present
9	Lemon	*Citrus limon*	7	4				11	3	average
10	Mandarin	*Citrus reticulata*	6					6	3	average
11	Valley Oak	*Quercus lobata*	42					42	5	excellent
12	Pecan	*Carya illinoinensis*	34					34	5	excellent
13	Pear	*Pyrus* sp.	6	6				12	3	average
14	Pomegranate	*Punica granatum*	6	4	3	3		16	3	average
15	Fuyu persimmon	*Diospyros kaki*	9	8				17	3	average
16	Loquat	*Eriobotrya japonica*	8	8				16	2	some decay present
17	Nectarine	*Prunus persica*	6	4				10	3	average
25	Pecan	*Carya illinoinensis*	26					26	3	ants present, poor branching
54-56	Hachiya persimmon	*Diospyros kaki*	11	10	8			29	3	average
57	Desert fan palm	*Washingtonia filifera*	30					30	4	above average
58	Coast redwood	*Sequoia sempervirens*	18					18	3	average
59	Apple	*Malus* sp.	6					6	1	extensive dead/decay
60	Black Walnut	*Juglans hindsii*	66					66	2	lots of dead branches
61-63	Apple	*Malus* sp.	8	7	6			21	2	lots of dead branches
64	Canary Island pine	*Pinus canariensis*	40					40	2	lean, some dead and broken branches
65	Photinia	*Photinia* sp.	6	5				11	2	some decay present
66-68	Common myrtle	*Myrtus communis*	9	6	5	4		24	3	average
69-70	Juniper	*Juniperus* sp.	17	15				32	3	average
71	Silver Maple	*Acer saccharinum*	7					7	3	average
72	Black Walnut	*Juglans hindsii*	70					70	4	above average
73	Fan palm	*Trachycarpus fortunei*	24					24	3	average
74	Black Walnut	*Juglans hindsii*	76					76	1	hazardous branches with decay
75	Fan palm	*Trachycarpus fortunei*	16					16	2	lots of dead leaves
76	Fan palm	*Trachycarpus fortunei*	22					22	3	average
77	Fan palm	*Trachycarpus fortunei*	23					23	3	average
78	Black Walnut	*Juglans hindsii*	70					70	3	some decay in trunk
79	Fan palm	*Trachycarpus fortunei*	24					24	3	average
80	Black Walnut	*Juglans hindsii*	49					49	2	cavity at base and decay in branches
186	Chinese elm	*Ulnus parviflora*	7	4				11	3	growing between wood fence and wire fence

Attachment C

Arborist's Disclaimer

Arborist Disclaimer Statement

Arborists are tree specialists who use their education, knowledge, training, experience, and research to examine trees and woodlands. Arborists recommend measures to enhance the beauty and health of trees and forests, while attempting to reduce the hazards of living near them. A tree health assessment merely assesses the health of a tree and does not include a tree risk assessment. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice. If a client would like a tree risk assessment conducted, the client should seek an ISA Certified Arborist with a Tree Risk Assessment Qualification (TRAQ).

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms subject to attack by disease, insects, fungi and other forces of nature. There are some inherent risks with trees that cannot be predicted with any degree of certainty, even by a skilled and experienced arborist. Arborists cannot predict acts of nature including, without limitation, storms of sufficient strength, which can cause even a healthy tree to fail. Any entity who develops land and builds structures with a tree in the vicinity should be aware and inform future residents of the risks of living with trees and this arborists disclaimer.

Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise remedial treatments cannot be guaranteed 100%.

Treatment, pruning, and removal of trees may involve considerations beyond the scope of the arborist's services, such as Project site boundaries, Project site ownership, disputes between neighbors and other issues. Consulting arborists cannot take such considerations into account unless complete and accurate information is disclosed to the arborist by the client. An arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided.

Neither this author nor Gallaway Enterprises has assumed any responsibility for liability associated with the trees on or adjacent to this project site, their future demise and/or any damage, which may result therefrom. To live near trees is to accept some degree of risk.

Elena Gregg
ISA Certified Arborist WE-8033A
Gallaway Enterprises