APPENDIX A

AIR QUALITY, GREENHOUSE GAS EMISSIONS, & ENERGY SUPPORTING INFORMATION

Esparto A1 Pre Fab LLC Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Esparto A1 Pre Fab LLC
Construction Start Date	10/1/2024
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	35.0
Location	38.696173656997246, -122.01811009446877
County	Yolo
City	Unincorporated
Air District	Yolo/Solano AQMD
Air Basin	Sacramento Valley
TAZ	331
EDFZ	4
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.24

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

General Light Industry	2.17	1000sqft	0.07	2,170	1,000	—	—	—
Parking Lot	7.00	Space	0.36	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.44	1.22	11.4	11.1	0.02	0.53	5.39	5.92	0.49	2.59	3.08	—	1,790	1,790	0.07	0.02	0.02	1,797
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.10	0.09	0.65	0.75	< 0.005	0.03	0.16	0.19	0.03	0.07	0.10	—	118	118	< 0.005	< 0.005	0.02	119
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.02	0.02	0.12	0.14	< 0.005	0.01	0.03	0.04	0.01	0.01	0.02	—	19.6	19.6	< 0.005	< 0.005	< 0.005	19.7

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.44	1.22	11.4	11.1	0.02	0.53	5.39	5.92	0.49	2.59	3.08	—	1,790	1,790	0.07	0.02	0.02	1,797
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.10	0.09	0.65	0.75	< 0.005	0.03	0.16	0.19	0.03	0.07	0.10	—	118	118	< 0.005	< 0.005	0.02	119
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.02	0.02	0.12	0.14	< 0.005	0.01	0.03	0.04	0.01	0.01	0.02	—	19.6	19.6	< 0.005	< 0.005	< 0.005	19.7

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.23	0.21	0.50	1.78	< 0.005	0.02	0.21	0.23	0.02	0.05	0.07	1.46	352	354	0.16	0.01	1.58	363
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.21	0.19	0.52	1.50	< 0.005	0.02	0.21	0.23	0.02	0.05	0.07	1.46	331	333	0.16	0.01	0.59	341
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.20	0.18	0.40	1.39	< 0.005	0.02	0.20	0.22	0.01	0.05	0.07	1.46	314	315	0.16	0.01	1.00	324
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.04	0.03	0.07	0.25	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	0.24	52.0	52.2	0.03	< 0.005	0.17	53.7

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.12	0.11	0.13	1.17	< 0.005	< 0.005	0.21	0.21	< 0.005	0.05	0.06	—	268	268	0.01	0.01	1.02	273
Area	0.07	0.06	< 0.005	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.39	0.39	< 0.005	< 0.005	—	0.39
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	7.78	7.78	< 0.005	< 0.005	—	7.86
Water	—	—	—	—	—	—	—	—	—	—	—	0.01	0.02	0.03	< 0.005	< 0.005	—	0.05
Waste	—	—	—	—	—	—	—	—	—	—	—	1.45	0.00	1.45	0.14	0.00	—	5.07
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.56	0.56
Off-Road	0.05	0.04	0.37	0.52	< 0.005	0.02	—	0.02	0.02	—	0.02	—	76.2	76.2	< 0.005	< 0.005	—	76.5
Total	0.23	0.21	0.50	1.78	< 0.005	0.02	0.21	0.23	0.02	0.05	0.07	1.46	352	354	0.16	0.01	1.58	363
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.11	0.10	0.15	0.98	< 0.005	< 0.005	0.21	0.21	< 0.005	0.05	0.06	—	247	247	0.01	0.01	0.03	251
Area	0.05	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	7.78	7.78	< 0.005	< 0.005	—	7.86
Water	—	—	—	—	—	—	—	—	—	—	—	0.01	0.02	0.03	< 0.005	< 0.005	—	0.05
Waste	—	—	—	—	—	—	—	—	—	—	—	1.45	0.00	1.45	0.14	0.00	—	5.07
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.56	0.56
Off-Road	0.05	0.04	0.37	0.52	< 0.005	0.02	—	0.02	0.02	—	0.02	—	76.2	76.2	< 0.005	< 0.005	—	76.5
Total	0.21	0.19	0.52	1.50	< 0.005	0.02	0.21	0.23	0.02	0.05	0.07	1.46	331	333	0.16	0.01	0.59	341
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.11	0.10	0.14	0.98	< 0.005	< 0.005	0.20	0.21	< 0.005	0.05	0.05	—	252	252	0.01	0.01	0.44	256
Area	0.06	0.06	< 0.005	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.19	0.19	< 0.005	< 0.005	—	0.19
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	7.78	7.78	< 0.005	< 0.005	—	7.86

Water	—	—	—	—	—	—	—	—	—	—	—	0.01	0.02	0.03	< 0.005	< 0.005	—	0.05
Waste	—	—	—	—	—	—	—	—	—	—	—	1.45	0.00	1.45	0.14	0.00	—	5.07
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.56	0.56
Off-Road	0.03	0.03	0.26	0.37	< 0.005	0.01	—	0.01	0.01	—	0.01	—	54.3	54.3	< 0.005	< 0.005	—	54.5
Total	0.20	0.18	0.40	1.39	< 0.005	0.02	0.20	0.22	0.01	0.05	0.07	1.46	314	315	0.16	0.01	1.00	324
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.02	0.02	0.03	0.18	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	41.6	41.6	< 0.005	< 0.005	0.07	42.4
Area	0.01	0.01	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.03	0.03	< 0.005	< 0.005	—	0.03
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1.29	1.29	< 0.005	< 0.005	—	1.30
Water	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.01
Waste	—	—	—	—	—	—	—	—	—	—	—	0.24	0.00	0.24	0.02	0.00	—	0.84
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09
Off-Road	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.99	8.99	< 0.005	< 0.005	—	9.02
Total	0.04	0.03	0.07	0.25	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	0.24	52.0	52.2	0.03	< 0.005	0.17	53.7

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.60	0.50	4.60	5.56	0.01	0.24	—	0.24	0.22	—	0.22	—	858	858	0.03	0.01	—	861

Dust From Material Movement	—	—	—	—	—	—	0.53	0.53	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.8	11.8	< 0.005	< 0.005	—	11.8
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.95	1.95	< 0.005	< 0.005	—	1.95
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.24	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	51.3	51.3	< 0.005	< 0.005	0.01	52.0
Vendor	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	0.00
Hauling	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	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.72	0.72	< 0.005	< 0.005	< 0.005	0.73
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.12	0.12	< 0.005	< 0.005	< 0.005	0.12
Vendor	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	0.00
Hauling	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	0.00

3.3. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.41	1.19	11.4	10.7	0.02	0.53	—	0.53	0.49	—	0.49	—	1,713	1,713	0.07	0.01	—	1,719
Dust From Material Movement	—	—	—	—	—	—	5.31	5.31	—	2.57	2.57	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.31	0.29	< 0.005	0.01	—	0.01	0.01	—	0.01	—	46.9	46.9	< 0.005	< 0.005	—	47.1

Dust From Material Movement	—	—	—	—	—	—	0.15	0.15	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.77	7.77	< 0.005	< 0.005	—	7.80
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.36	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	77.0	77.0	< 0.005	< 0.005	0.01	78.0
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.16	2.16	< 0.005	< 0.005	< 0.005	2.19
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.36	0.36	< 0.005	< 0.005	< 0.005	0.36
Vendor	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	0.00

Hauling	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	0.00

3.5. Paving (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.63	0.53	4.52	5.32	0.01	0.21	—	0.21	0.19	—	0.19	—	823	823	0.03	0.01	—	826
Paving	0.05	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.22	0.26	< 0.005	0.01	—	0.01	0.01	—	0.01	—	40.6	40.6	< 0.005	< 0.005	—	40.7
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.72	6.72	< 0.005	< 0.005	—	6.75
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.08	0.84	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	180	180	< 0.005	0.01	0.02	182
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.09	9.09	< 0.005	< 0.005	0.02	9.22
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.50	1.50	< 0.005	< 0.005	< 0.005	1.53
Vendor	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	0.00
Hauling	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	0.00

3.7. Architectural Coating (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134

Architect Coatings	0.12	0.12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.58	6.58	< 0.005	< 0.005	—	6.61
Architectural Coatings	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.09	1.09	< 0.005	< 0.005	—	1.09
Architectural Coatings	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.3	10.3	< 0.005	< 0.005	< 0.005	10.4
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.52	0.52	< 0.005	< 0.005	< 0.005	0.53
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.09	0.09	< 0.005	< 0.005	< 0.005	0.09
Vendor	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	0.00
Hauling	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	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.12	0.11	0.13	1.17	< 0.005	< 0.005	0.21	0.21	< 0.005	0.05	0.06	—	268	268	0.01	0.01	1.02	273
Parking Lot	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	0.00
Total	0.12	0.11	0.13	1.17	< 0.005	< 0.005	0.21	0.21	< 0.005	0.05	0.06	—	268	268	0.01	0.01	1.02	273
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.11	0.10	0.15	0.98	< 0.005	< 0.005	0.21	0.21	< 0.005	0.05	0.06	—	247	247	0.01	0.01	0.03	251

Parking Lot	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	0.00
Total	0.11	0.10	0.15	0.98	< 0.005	< 0.005	0.21	0.21	< 0.005	0.05	0.06	—	247	247	0.01	0.01	0.03	251
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.02	0.02	0.03	0.18	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	41.6	41.6	< 0.005	< 0.005	0.07	42.4
Parking Lot	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	0.00
Total	0.02	0.02	0.03	0.18	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	41.6	41.6	< 0.005	< 0.005	0.07	42.4

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01	< 0.005	< 0.005	—	0.01
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	7.77	7.77	< 0.005	< 0.005	—	7.85
Total	—	—	—	—	—	—	—	—	—	—	—	—	7.78	7.78	< 0.005	< 0.005	—	7.86
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01	< 0.005	< 0.005	—	0.01

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	7.77	7.77	< 0.005	< 0.005	—	7.85
Total	—	—	—	—	—	—	—	—	—	—	—	—	7.78	7.78	< 0.005	< 0.005	—	7.86
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	1.29	1.29	< 0.005	< 0.005	—	1.30
Total	—	—	—	—	—	—	—	—	—	—	—	—	1.29	1.29	< 0.005	< 0.005	—	1.30

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	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
Parking Lot	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
Total	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	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
Parking Lot	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
Total	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

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	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
Parking Lot	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
Total	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

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.05	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.02	0.02	< 0.005	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.39	0.39	< 0.005	< 0.005	—	0.39
Total	0.07	0.06	< 0.005	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.39	0.39	< 0.005	< 0.005	—	0.39
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.05	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architect Coatings	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.05	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.03	0.03	< 0.005	< 0.005	—	0.03
Total	0.01	0.01	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.03	0.03	< 0.005	< 0.005	—	0.03

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.01	0.02	0.03	< 0.005	< 0.005	—	0.05
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.01	0.02	0.03	< 0.005	< 0.005	—	0.05

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.01	0.02	0.03	< 0.005	< 0.005	—	0.05
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.01	0.02	0.03	< 0.005	< 0.005	—	0.05
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.01
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.01

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	1.45	0.00	1.45	0.14	0.00	—	5.07
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	1.45	0.00	1.45	0.14	0.00	—	5.07

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	1.45	0.00	1.45	0.14	0.00	—	5.07
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	1.45	0.00	1.45	0.14	0.00	—	5.07
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.24	0.00	0.24	0.02	0.00	—	0.84
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.24	0.00	0.24	0.02	0.00	—	0.84

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.56	0.56
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.56	0.56
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.56	0.56
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.56	0.56
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forklifts	0.05	0.04	0.37	0.52	< 0.005	0.02	—	0.02	0.02	—	0.02	—	76.2	76.2	< 0.005	< 0.005	—	76.5
Total	0.05	0.04	0.37	0.52	< 0.005	0.02	—	0.02	0.02	—	0.02	—	76.2	76.2	< 0.005	< 0.005	—	76.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forklifts	0.05	0.04	0.37	0.52	< 0.005	0.02	—	0.02	0.02	—	0.02	—	76.2	76.2	< 0.005	< 0.005	—	76.5
Total	0.05	0.04	0.37	0.52	< 0.005	0.02	—	0.02	0.02	—	0.02	—	76.2	76.2	< 0.005	< 0.005	—	76.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forklifts	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.99	8.99	< 0.005	< 0.005	—	9.02
Total	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.99	8.99	< 0.005	< 0.005	—	9.02

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	10/1/2024	10/7/2024	5.00	5.00	—
Grading	Grading	10/11/2024	10/24/2024	5.00	10.0	—
Paving	Paving	10/25/2024	11/19/2024	5.00	18.0	—
Architectural Coating	Architectural Coating	11/20/2024	12/13/2024	5.00	18.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

Site Preparation	Tractors/Loaders/Backh	Diesel	Average	1.00	8.00	84.0	0.37
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Graders	Diesel	Average	1.00	6.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40
Grading	Tractors/Loaders/Backh oes	Diesel	Average	1.00	7.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Tractors/Loaders/Backh oes	Diesel	Average	1.00	7.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	5.00	14.3	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.80	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	14.3	LDA,LDT1,LDT2
Paving	Vendor	—	8.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT

Architectural Coating	—	—	—	—
Architectural Coating	Worker	1.00	14.3	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.80	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	7.50	14.3	LDA,LDT1,LDT2
Grading	Vendor	—	8.80	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	0.00	1.01	468

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Ton of Debris)	Material Exported (Ton of Debris)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	7.50	0.00	—
Grading	—	—	7.50	0.00	—
Paving	0.00	0.00	0.00	0.00	0.36

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Light Industry	0.00	0%
Parking Lot	0.36	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	204	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Light Industry	20.0	20.0	20.0	7,300	293	293	293	107,116
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	0.00	0.00	952

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Light Industry	20.9	204	0.0330	0.0040	0.00
Parking Lot	13,905	204	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Light Industry	4,000	13,014
Parking Lot	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Light Industry	2.69	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Light Industry	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Forklifts	Diesel	Average	1.00	4.00	82.0	0.20

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	24.6	annual days of extreme heat
Extreme Precipitation	5.35	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth

Wildfire	11.4	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	2	0	0	N/A
Extreme Precipitation	2	0	0	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	2	1	1	3

Extreme Precipitation	2	1	1	3
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	1	1	2
Flooding	1	1	1	2
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	37.6
AQ-PM	6.11
AQ-DPM	3.09
Drinking Water	43.2
Lead Risk Housing	54.0
Pesticides	78.1
Toxic Releases	17.5
Traffic	2.26

Effect Indicators	—
CleanUp Sites	17.1
Groundwater	14.3
Haz Waste Facilities/Generators	16.6
Impaired Water Bodies	58.7
Solid Waste	83.8
Sensitive Population	—
Asthma	41.1
Cardio-vascular	13.2
Low Birth Weights	7.06
Socioeconomic Factor Indicators	—
Education	68.2
Housing	29.2
Linguistic	36.0
Poverty	70.0
Unemployment	32.3

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	33.45309893
Employed	41.16514821
Median HI	48.81303734
Education	—
Bachelor's or higher	38.73989478
High school enrollment	25.75388169

Preschool enrollment	46.65725651
Transportation	—
Auto Access	53.75336841
Active commuting	37.21288336
Social	—
2-parent households	61.34992942
Voting	60.34903118
Neighborhood	—
Alcohol availability	63.64686257
Park access	17.13075837
Retail density	1.308866932
Supermarket access	6.018221481
Tree canopy	67.29115873
Housing	—
Homeownership	64.04465546
Housing habitability	67.53496728
Low-inc homeowner severe housing cost burden	56.52508662
Low-inc renter severe housing cost burden	68.68984987
Uncrowded housing	34.89028615
Health Outcomes	—
Insured adults	48.91569357
Arthritis	0.0
Asthma ER Admissions	80.6
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0

Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	49.2
Cognitively Disabled	66.4
Physically Disabled	18.7
Heart Attack ER Admissions	92.6
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	85.2
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	1.7
SLR Inundation Area	0.0
Children	31.0
Elderly	38.5
English Speaking	38.5
Foreign-born	59.8
Outdoor Workers	4.5
Climate Change Adaptive Capacity	—
Impervious Surface Cover	89.2
Traffic Density	2.0

Traffic Access	23.0
Other Indices	—
Hardship	62.2
Other Decision Support	—
2016 Voting	56.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	23.0
Healthy Places Index Score for Project Location (b)	47.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Data request response March 18, 2024.
Construction: Construction Phases	Data request response March 18, 2024.

Construction: On-Road Fugitive Dust	Data request response March 18, 2024.
Construction: Paving	Data request response March 18, 2024.
Construction: Architectural Coatings	Data request response March 18, 2024.
Construction: Trips and VMT	Data request response March 18, 2024.
Construction: Dust From Material Movement	Data request response March 18, 2024.
Operations: Vehicle Data	Data request response March 18, 2024.
Operations: Road Dust	Site characteristics.
Operations: Energy Use	Data request response March 18, 2024.
Operations: Water and Waste Water	Data request response March 18, 2024.
Operations: Architectural Coatings	Data request response March 18, 2024.

APPENDIX B

BIOLOGICAL RESOURCES PLANNING LEVEL SURVEY & YOLO HCP/NCCP APPLICATION

CAPITOL OFFICE
2401 Capitol Ave, Ste 301
Sacramento, CA 95816
Phone: 916/758-6928
www.vollmarconsulting.com

MEMORANDUM

To: Octavio Hernandez, A1-Pre Fab LLC

Date: 08/04/2022

From: Gabe Saron, V

No. Pages: 17, including attachments

Subject: Results of Planning-Level Survey for A1-Pre Fab Project in Yolo County, CA

Introduction

A1-Pre Fab, LLC plans to construct three structures and a graveled parking area (project) on a 3.77-acre parcel located in the town of Esparto, Yolo County, California. The area of impact associated with the project for which A1-Pre Fab seeks coverage under the Yolo Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) consists of 3.77 acres including: a graded site footprint, structure footprints, a graveled parking area, and a 50-ft project buffer extending to the parcel boundary. The project qualifies for coverage under the Yolo Habitat Conservancy (Conservancy), as it overlaps with covered species habitat and affects fee-paying land cover types.

This memorandum presents the results of a planning-level assessment of the project conducted by Vollmar Natural Lands Consulting (VNLC). Map figures are presented in **Appendix A. Figure 1** depicts the proposed project boundaries, proposed structures and verified land cover types; **Figure 2** depicts covered species habitat within a ¼-mile buffer of the proposed project area; **Figure 3** depicts known species data within 5-miles of the project; and **Figure 4** presents a vicinity map of the project and surrounding area. Representative site photographs are presented in **Appendix B**. An initial project evaluation has not yet been conducted by the Conservancy.

Project Description

Work for this project would be conducted in an area of highly modified natural habitat located within the town of Esparto, California. Access to the project area is granted by a driveway located at 26364 Woodland Avenue. The project would consist of tree removal and grading of a 3.70-acre footprint to facilitate the construction of a graveled parking area three permanent buildings. A 20-ft no-disturbance buffer w d be implemented along a portion of the southern project boundary edge parallel to the east-west s of Woodland Avenue. As the roadway curves north, the ground disturbance w d extend to the parcel boundary. The permanent buildings would consist of a 370’ x 100’ retail building, a 300’ x 100’ fabrication shop, and a 50’ x 40’ maintenance building (**Figure 1, Appendix A**). The fabrication shop and maintenance building would provide a workspace for A1-Pre Fab, LLC.; individual retail spaces within the retail building would be leased to local businesses. After construction, the remaining graded area will be paved with gravel to create a parking area and equipment yard.

Species covered under the HCP/NCCP that could be affected by the project include White-Tailed Kite (*Elanus leucurus;* WTKI, foraging and nesting habitat) and Swainson's Hawk (*Buteo swainsoni*; SWHA, foraging and nesting habitat).

Methods

The survey was conducted by Conservancy-approved biologist Roxanne Foss, VNLC, on July 28, 2022, by walking the entirety of the project boundary. Prior to the site visit, a desktop reconnaissance was conducted using the YHC GeoMapper tool, the California Natural Diversity Database (CNDDB) and other resources to determine sensitive biological resources likely to occur on site. The area was surveyed on foot or scanned with binoculars within a ¼-mile buffer for potential foraging and nesting habitat suitable for use by WTKI and/or SWHA **Appendix A, Figure 2** . Photos were taken of potential habitat that could support sensitive species (**Appendix B**). Special-status habitat areas are shown in **Tables 1** and **2**.

Results

The proposed project area is located in a highly modified natural habitat community in the town of Esparto. There is no designated critical habitat present on the site. The HCP/NCCP land cover types found at this location would be classified as California Annual Grassland Alliance, Semiagricultural/Incidental to Agriculture, and Urban or Built Up. Habitat at this location supports SWHA (foraging and nesting) and WTKI (foraging and nesting). Construction activities will permanently impact 1.14 acres of California annual grassland alliance, 2.14 acres of Semiagricultural/Incidental to Agriculture and 0. acres of Urban or Built Up (**Table 1**).

The site consists of graded dirt and gravel roads, multiple young to mature agricultural and natural trees, and mowed or disced annual grassland vegetation. The mowed grasslands cover approximately 1.14-acre and are dominated by wild oats (*Avena fatua*), with lower cover of foxtail chess (*Bromus madritensis*), foxtail barley (*Hordeum murinum*), smilo grass (*Stipa miliacea*), and white horehound (*Marrubium vulgare*). The site is bisected by a gravel access road leading to a fenced storage yard. Multiple trees that previously occupied this area appear to be recently removed, based on aerial imagery and piles of recently cut tree material. The entire 0.51-acre gravel area was mapped as urban or built up. The remaining area within the site was mapped as Semiagricultural/Incidental to Agriculture. This 2.14-acre area consists of dirt roads, numerous almond (*Prunus dulcis*) trees, many northern California black walnut trees (*Juglans hindsii*), a large pecan (*Carya illinoinensis*) tree, and multiple valley oaks (*Quercus lobata*). The multiple-stemmed walnut trees appear to be mature sprouts from root stock under previous English walnut (*Juglans regia*) grafts. The valley oaks are included in the Semiagricultural/Incidental to Agriculture land cover as they are blended with the nut trees and do not form a distinguishable native stand. Within this cover type, many branches have been cut recently and piles of branches were observed on the site. The understory of this land cover type is characterized by both annual grassland species listed above, as well as a higher cover of ruderal species including yellow starthistle (*Centaurea solstitialis*), mustard (*Hirschfeldia incana*), field bindweed (*Convolvulus arvensis*), prickly lettuce (*Lactuca serriola*), willow lettuce (*Lactuca saligna*), and crane's bill geranium (*Geranium molle*). A dilapidated wood and barbed wire fence runs east-west along a line of almonds.

Suitable foraging habitat for SWHA and WTKI was observed covering 32.12 acres within the ¼-mile project buffer, and consisted of open agricultural fields and grasslands. Suitable nesting habitat was observed covering 8.80 acres within the project buffer, and included lone or grouped stands of mature trees. Suitable foraging and nesting habitat covered 9.88 acres within the ¼-mile buffer and consisted of mature trees in proximity to open grassland and fields. The remaining 143.02 acres of the ¼-mile project buffer was considered not suitable for SWHA and WTKI.

One SWHA was observed flying over the site from north to east. The individual was a light morph but remained high in the sky over the site without foraging or exhibiting any distinguishable nesting behavior. Project implementation will result in permanent impacts to 1.90 acres of SWHA and WTKI foraging habitat, 0.95 acres of nesting habitat, 0.37 acres of foraging and nesting habitat, and the loss of seven potential SWHA nest trees.

Table 1. Project Impacts by Land Cover Types

Land Cover Type	Area within Project Site (Acres)	Total Area of Impacts (Acres)
California annual grassland alliance	1.14	1.14
Semiagricultural/Incidental to Agriculture	2.12	2.12
Urban or built up	0.51	0.51
Grand Total	**3.77**	**3.77**

Table 2. Special-Status Species Habitat Found within Project Area

Species (Buffer)	Habitat Type	Total Habitat within Buffer (Acres)	Total Area of Impacts
SWHA (1/4 mile)	Foraging	32.12	1.90
SWHA (1/4 mile)	Nesting	8.80	0.95
SWHA (1/4 mile)	Foraging and Nesting	9.88	0.37
WTKI (1/4 mile)	Foraging	32.12	1.90
WTKI (1/4 mile)	Nesting	8.80	0.95
WTKI (1/4 mile)	Foraging and Nesting	9.88	0.37

Conclusion

Based on the planning-level survey, suitable habitat exists for two Covered Species within the project area: SWHA and WTKI. Approximately 1.14 acres of Grassland, 2.14 acres Semiagricultural/Incidental to Agriculture, and 0.42 acres of Urban or Built Up will be permanently impacted as a result of project implementation.

The following Yolo HCP/NCCP AMMs are proposed for minimizing impacts to these species:

AMM1, *Establish Resource Protection Buffers*

AMM2, *Design Developments to Minimize Indirect Effects at Urban–Habitat Interfaces*

AMM3, *Confine and Delineate Work Area*

AMM4, *Cover Trenches and Holes during Construction and Maintenance*

AMM5, *Control Fugitive Dust*

AMM6, *Conduct Worker Training*

AMM7, *Control Nighttime Lighting of Project Construction Sites*

AMM8, *Avoid and Minimize Effects of Construction Staging Areas and Temporary Work Areas*

AMM16, *Minimize Take and Adverse Effects on Habitat of Swainson's Hawk and White-Tailed Kite (This AMM does not apply if the construction period is between September 1 and March 14)*

References

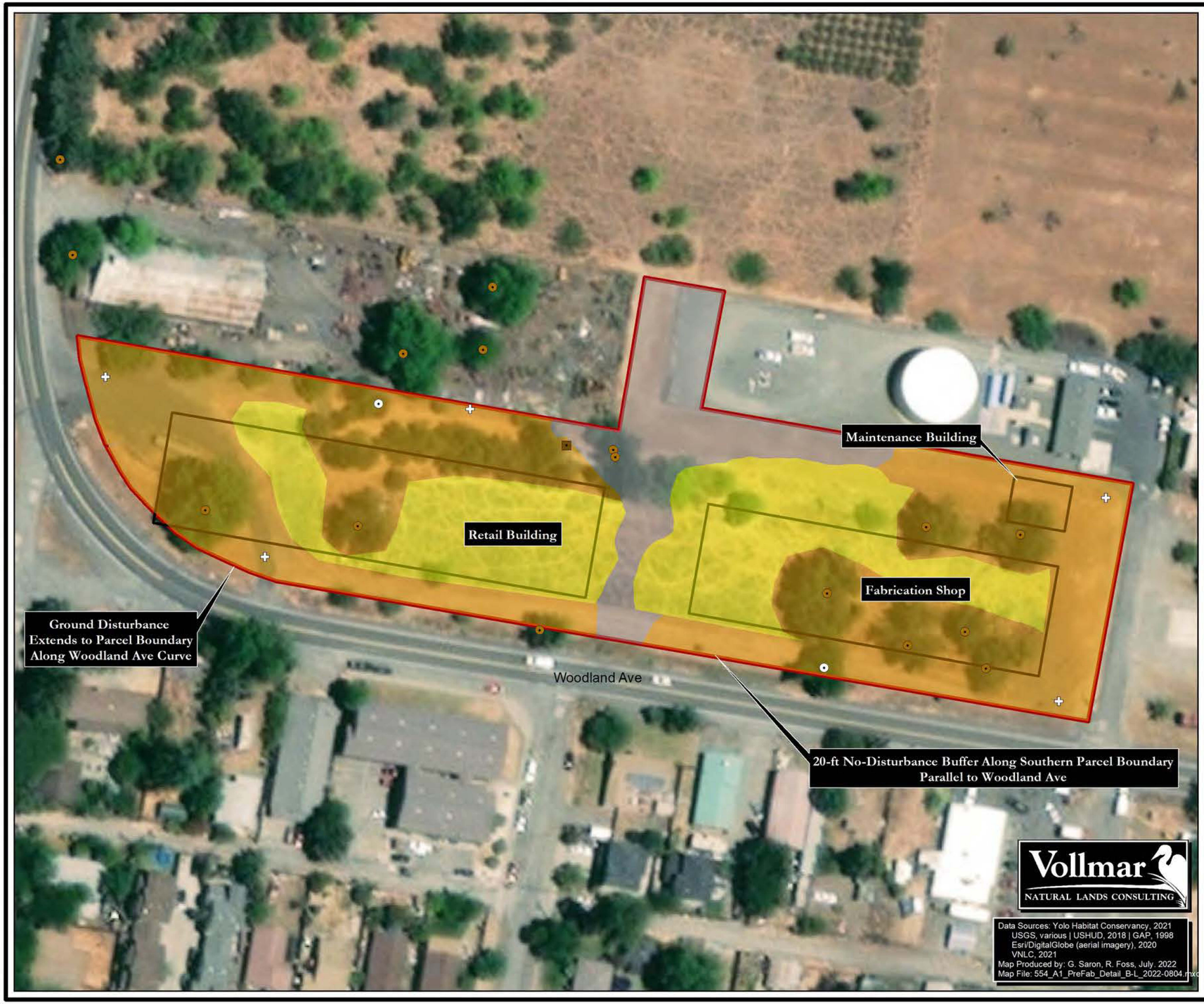
[CDFW] California Department of Fish and Wildlife. 2022. *California Natural Diversity Database*. Biogeographic Information and Observation System (BIOS). Retrieved July 13, 2022 from http://bios.dfg.ca.gov

[YHC] Yolo Habitat Conservancy. 2022. *GeoMapper Tool Online*. Retrieved July 13, 2022 from https://yolo.maps.arcgis.com/apps/webappviewer/index.html?id=3e5da77c78e844f085287e23441a5aa1

APPENDIX A
MAP FIGURES

FIGURE 1
Site Plan and Verified Land Covers

A1-Pre Fab Project
Yolo County, California



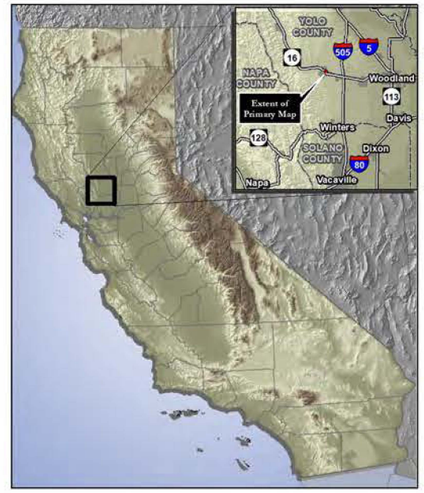
Legend

- Burrows
- Photo Point
- Potential SWHA Tree
- Potential WTKI Tree
- Structure Footprints
- A1-Pre Fab Project Boundary (3.77 acres)*

YHC Land Cover Type

- California annual grassland alliance
- Semiagricultural/Incidental to Agriculture
- Urban or built up

*Boundaries Approximate



Vollmar NATURAL LANDS CONSULTING

Data Sources: Yolo Habitat Conservancy, 2021
USGS, various | USHUD, 2018 | GAP, 1998
Esri/DigitalGlobe (aerial imagery), 2020
VNLC, 2021
Map Produced by: G. Saron, R. Foss, July. 2022
Map File: 554_A1_PreFab_Detail_B-L_2022-0804.mxd

N W E S

1:1,000
(1 in = 83 ft at tabloid layout)

0 10 20 40 Meters

0 40 80 160 Feet

FIGURE 2
Habitats Within 0.25 Mile of the Work Area

A1-Pre Fab Project
Yolo County, California

Legend

- A1-Pre Fab Project Boundary (3.77 ac.)*
- 0.25 Mile SWHA Buffer

Covered Species Habitat

- Potential SWHA Tree
- Potential WTKI Tree

Potential Habitat

- Not Suitable
- SWHA/WTKI Foraging
- SWHA/WTKI Nesting
- SWHA/WTKI Nesting and Foraging

*Boundaries Approximate

Vollmar NATURAL LANDS CONSULTING

Data Sources: Yolo Habitat Conservancy, 2021
USGS, various | USHUD, 2018 | GAP, 1998
Esri/DigitalGlobe (aerial imagery), 2020
VNLC, 2021
Map Produced by:G. Saron, R. Foss, July. 2022
Map File: 554_A1_PreFab_Vic_B-L_2022-0803.mxd

N
W E
S

1:4,000
(1 in = 333 ft at tabloid layout)

0 25 50 100 Meters

0 100 200 400 Feet

Figure 3
Regional Vicinity Biological Resources Map

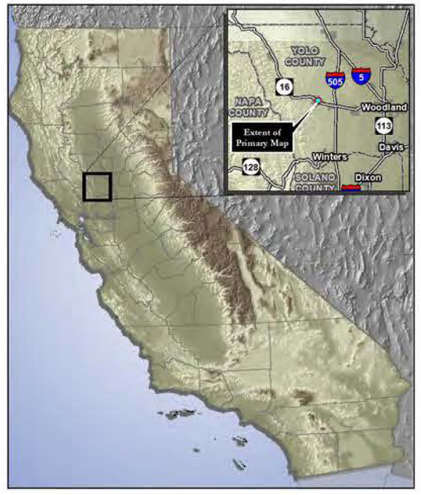
A1-Pre Fab
Yolo County, California

Legend

- Highway
- County Boundary
- A1-Pre Fab Project Boundary
- Special-Status Plants

Special-Status Animals

- Other Special-Status Species
- Swainson's hawk
- burrowing owl
- valley elderberry longhorn beetle



N
W E
S

1:63,380
(1 in = 5,280 ft at tabloid layout)

0 0.5 1 2 Mi
0 1 2 4 Km

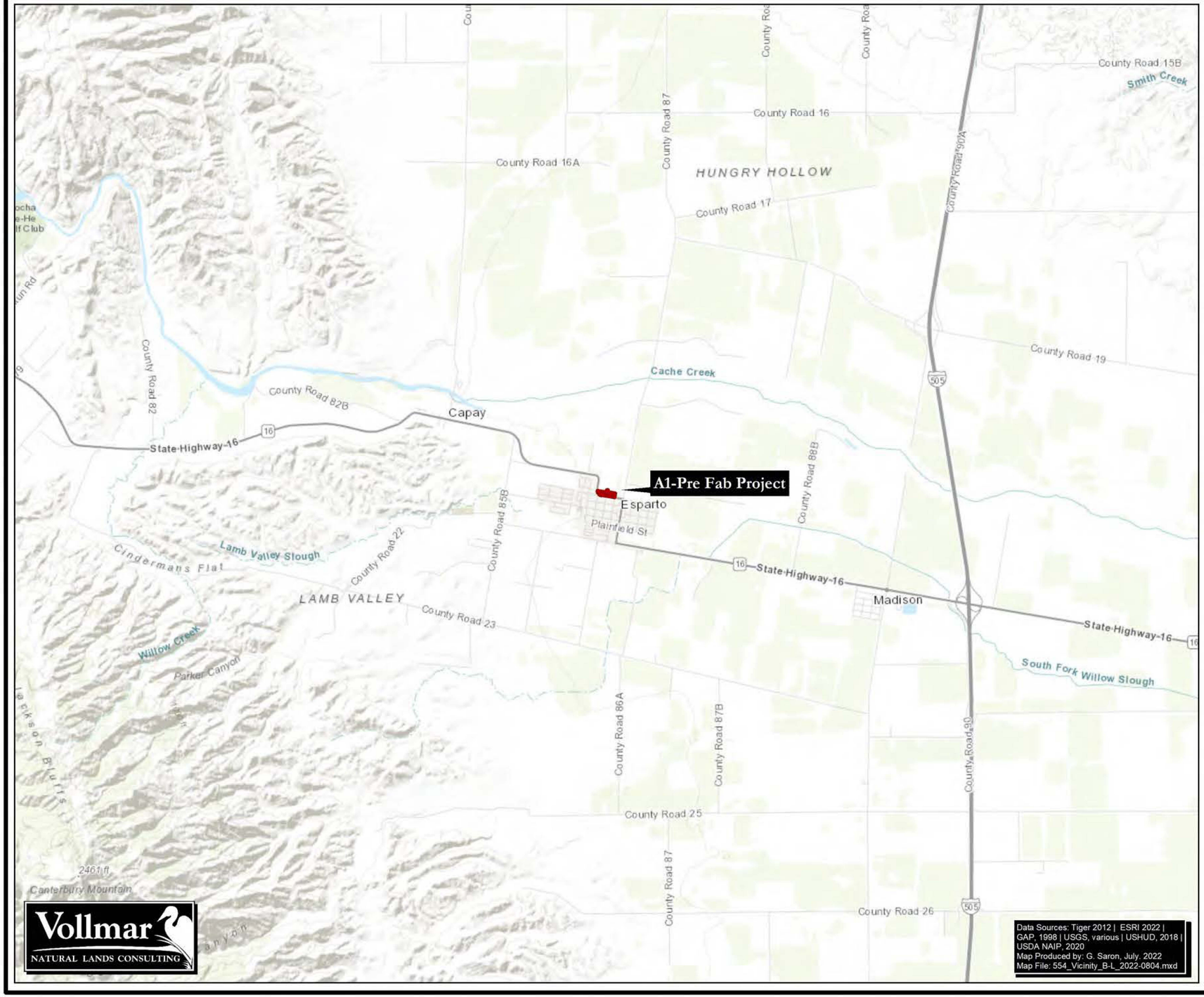
Vollmar
NATURAL LANDS CONSULTING

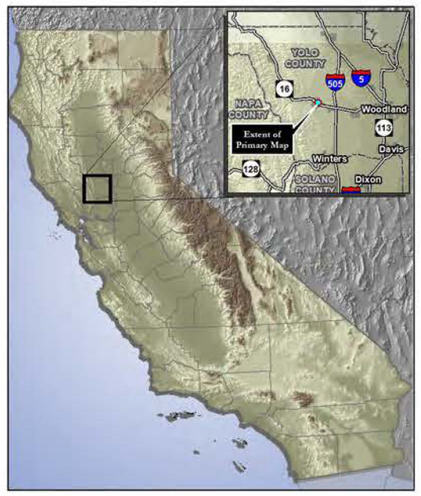
FIGURE 4
Regional Vicinity Map

A1-Pre Fab
Yolo County, California

Legend

A1-Pre Fab Project Boundary





N
W E
S

1:63,380
(1 in = 5,280 ft at tabloid layout)

0 0.5 1 2 Mi
0 1 2 4 Km

Data Sources: Tiger 2012 | ESRI 2022 | GAP, 1998 | USGS, various | USHUD, 2018 | USDA NAIP, 2020
Map Produced by: G. Saron, July. 2022
Map File: 554_Vicinity_B-L_2022-0804.mxd

Vollmar
NATURAL LANDS CONSULTING

APPENDIX B
REPRESENTATIVE SITE PHOTOS

Appendix B: Representative Site Photographs

Photo 1: Semiagricultural/Incidental to Agriculture habitat in the west portion of project site, facing east.

Photo 2: Semiagricultural/Incidental to Agriculture land cover in west portion of project site, facing southeast.

Photo 3: Semiagricultural/Incidental to Agriculture land cover and SWHA suitable nest tree in southern project site, facing northwest.

Photo 4: Semiagricultural/Incidental to Agriculture land cover and SWHA suitable nest tree in southern project site, facing northeast.

Appendix B: Representative Site Photographs

Photo 5: Semiagricultural/Incidental to Agriculture land cover and California annual grassland alliance land cover in southern project site, facing east.

Photo 6: Semiagricultural/Incidental to Agriculture land cover in northern project site, facing east.

Appendix B: Representative Site Photographs

Photo 7: Semiagricultural/Incidental to Agriculture land cover in northern project site, facing west.

Photo 8: Semiagricultural/Incidental to Agriculture a land cover and SWHA suitable nest tree in northeastern corner project site, facing south.

Photo 9: Semiagricultural/Incidental to Agriculture and SWHA suitable nest tree in northeastern corner project site, facing southwest.

Photo 10: Semiagricultural/Incidental to Agriculture land cover and SWHA suitable nest trees in northeastern corner of project site, facing west.

Photo 11: Semiagricultural/Incidental to Agriculture land cover and SWHA suitable nest trees in southeastern corner of project site, facing west.

Photo 12: Semiagricultural/Incidental to Agriculture and California Annual Grassland Alliance land covers and SWHA suitable nest trees in southeastern corner of project site, facing northwest.

Photo 13: Semiagricultural/Incidental to Agriculture land cover and SWHA suitable nest trees in southeastern corner of project site, facing north.

SCREENING FORM

PURPOSE OF THIS FORM

Complete this form to help determine if a project is eligible for Yolo Habitat Conservation Plan/Natural Community Conservation Plan (Yolo HCP/NCCP) coverage, required to comply with the Yolo HCP/NCCP, and/or is exempt from fees or avoidance and minimization measures (AMMs). See Permitting Guide, Chapter 5 for more information and instructions to complete the form. If this form confirms a project qualifies for or requires permit coverage, complete the Application to determine land cover fees and AMMs that may apply to the project and to formally apply for permit coverage. This Screening Form is for informational purposes and is not an application for permit coverage. Once complete, please submit the Screening Form to the appropriate contact at your local planning office.

Regional-scale data related land cover, sensitive natural communities, and covered species habitats in Yolo that can be used to complete this Screening Form is made available through the Yolo HCP/NCCP GeoMapper online mapping tool. The GeoMapper tool is accessible via the Resources tab of the Yolo Habitat Conservancy website: https://www.yolohabitatconservancy.org/resources

BOX A: Is the project a covered activity?		
1 Does your project/activity require a discretionary approval/permit? (e.g., a general plan amendment, rezoning, use permit, variance, or land division)	☒ Yes, my project/activity requires a discretionary approval/permit (if you are not sure, ask the local agency with approval authority, e.g., City or County planning office). *Go to Box A, Item 2.*	☐ No, the approval/permit required for my project/activity is ministerial (e.g., a building permit, certain site/design reviews, certain license approvals) **If this box is checked, there is no need to complete or submit this form.**
2. Does the project fall within the scope of project/activities covered by the Plan? Note: this determination will require approval sign-off by the local agency with approval authority (or Conservancy for Special Participating Entities). Wind and solar projects do not fall within the scope of projects/activities covered by the plan.	☒ Yes. The project is a covered activity. Go to *Box B.* _____ Member Agency Signature if approved	☐ No. The project is not a covered activity. Seek an Incidental Take Permit directly from the state and/or federal agencies. *Go to Box D, Item 2.*

BOX B: What is the project?		
1 Project Name	A1-Pre Fab Project	
2 Project address, location, and total acreage	26364 and 26436 Woodland Avenue, Esparto, CA, 3.77 acres	
3 Assessor parcel number(s) (APNs) and acreage by parcel (not applicable for linear projects)	049-240-024 3.77 acres	
4 Check applicable local agency	☒ Yolo County ☐ City of Davis ☐ City of West Sacramento	☐ City of Winters ☐ City of Woodland ☐ Other _____

BOX C: Is the project exempt from fees or AMMs?	
Use information from a planning level survey to complete the following items. If a planning level survey is not available, applicants may utilize the Yolo Habitat Conservancy GeoMapper tool to generate an Initial Assessment that will provide preliminary information in order to complete the rest of this form. The data presented in the GeoMapper is regional-scale data and is intended for general informational purposes. All HCP/NCCP applicants must have site-specific planning level surveys conducted by a qualified biologist to determine actual land cover and sensitive natural communities and species habitats in and around a project site and include that information in the final application unless the member agency land use planner and Conservancy staff determine and verify that one is not needed.	
1 Does the project consist of an addition to an existing structure or new structure(s) within 50 feet of an existing structure (e.g., a new garage) that results in less than 5,000 square feet of impervious surface?	☐ Yes. *Go to Item 2* ■ No. *Skip to Item 3.* (Attach Initial Assessment, documentation of ground truthing, or planning level survey, when submitting form)
2 Will the project overlap with fresh emergent wetland, valley foothill riparian, and lacustrine or riverine land cover types, as defined in Table 2-1 of the Permitting Guide?	☐ Yes. *Go to Item 3* ☐ No. The project is exempt from fees, but AMMs may apply. *Skip to to Item 6.* (Attach Initial Assessment, documentation of ground truthing, or planning level survey, when submitting form)
3 Is your project on a parcel less than 2.0 acres in size?	☐ Yes. The project is exempt from all fees, but AMMs may apply. *Go to Item 4.* ■ No. *Skip to Item 5.* (Attach Initial Assessment, documentation of ground truthing, or planning level survey, when submitting form)
4 Does the project overlap with covered species habitat? (If a planning level survey has yet to be conducted, contact the Conservancy to request an Initial Assessment)	■ Yes. The project requires permit coverage. *Skip to Box D, Item 1.* ☐ No. The project is exempt from fees, but AMMs may apply. *Skip to to Item 6.* (Attach Initial Assessment, documentation of ground truthing, or planning level survey, when submitting form)
5 Does the project affect any fee-paying land cover types identified in Table 2-1 of the permitting guide? (If a planning level survey has yet to be conducted, the Geomapper may be used)	☐ Yes. The project requires permit coverage. *Go to Box D, Item 1.* (Attach Initial Assessment, documentation of ground truthing, or planning level survey when submitting form) ☐ No. The project is exempt from fees, but AMMs may apply. *Skip to to Item 6.* (Attach Initial Assessment, documentation of ground truthing, or planning level survey, when submitting form)
6 Does the project overlap with any resource protection buffers for sensitive natural communities or covered species habitat, as described in Table 2-2 of the Permitting Guide? (If a planning level survey has yet to be conducted, contact the Conservancy to request an Initial Assessment)	☐ Yes. AMMs may apply to your project. *Go to Item 7.* ☐ No. AMMs do not apply and the project does not qualify for/require permit coverage. *Skip to Box D, Item 2.* (Attach Initial Assessment, documentation of ground truthing, or planning level survey, when submitting form)

7 Can your project be designed so that activities do not occur near sensitive natural communities or covered species habitat as listed in Table 2-2 of the Permitting Guide, or can a qualified biologist demonstrate that the the project avoids effects on these resources?	☐ Yes. *Redesign the project to avoid sensitive natural communities and covered species habitats or provide an evaluation by a qualified biologist to the local agency planning office that demonstrates the project will avoid adverse effects on sensitive natural communities or covered species and their habitat.* The project does not qualify for or require permit coverage if redesigned accordingly. *Go to Box D, Item 2.* ■ No. The project does qualify for or require permit coverage. *Go to Box D, Item 1.*

BOX D: Does project qualify for/require permit coverage?

1 ■ Your project/activity does qualify for/require permit coverage under the Yolo HCP/NCCP.

- Complete *Items in Box E*.
- Submit this form with application fee, if applicable, as soon as possible to the planning office of the local agency with approval authority (see contact information below).

2 ☐ Your project/activity does not qualify for/require permit coverage under the Yolo HCP/NCCP and no application fee is required.

Note: The local agency with approval authority must confirm this conclusion following submittal of project information. Non-covered projects must comply with Federal and State Endangered Species Act requirements if applicable. If a project has the potential to take a federally or state-listed species, the applicant must contact the U.S. Fish and Wildlife Service, National Marine Fisheries Service, and/or the California Department of Fish and Wildlife to determine whether a permit is necessary.

- Complete *Items in Box E.*
- Submit this form to the contact below with the required application fee (see Permitting Guide, Chapter 5 instructions for Box D). A planning level survey prepared by a qualified biologist may be required to verify the absence of sensitive natural communities and covered species habitats or other information in this form, including photos and aerials of the site
- If you are seeking permit coverage for your project as a Special Participating Entity (SPE), submit this form to the Conservancy office prior to completing the Application. SPE permit coverage is not guaranteed and will be authorized on a case-by-case basis by the Conservancy. SPEs must pay the required Application Fee, cover all costs associated with processing the request, and pay an additional SPE-only fee (see Permitting Guide, Chapter 5 instructions for Box D).

  Are you requesting participation as an SPE?: ☐ Yes ☐ No

BOX E: SIGNATURES

■ By checking the box and signing below I certify all information in the application is true and correct to the best of my knowledge.

1 Property owner name and contact information	Name	Octavio Hernandez		
	Phone	(530) 383-5531	Email	a1prefabllc@gmail.com
2 Property owner signature			Date	
3 Project Agent/ Applicant name and contact information	Name			
	Phone		Email	

4 Project Agent/ Applicant signature		Date	

Permissions	
5 Local agency and/or the Conservancy may contact the property owner directly	☐ Yes ☐ No
6 Local agency and/or the Conservancy may contact the project agent/applicant directly	☐ Yes ☐ No

FORM SUBMITTAL INSTRUCTIONS

Submit this form electronically as early in the development planning process as possible (ideally, prior to submittal of land development application) to the applicable local agency below. If the project applicant is seeking HCP/NCCP permit coverage as an SPE, submit the form to the Yolo Habitat Conservancy. Ideally this submittal will occur prior to submittal of land development application, during preliminary project discussions the member agency planning office.

LOCAL AGENCY PLANNING OFFICE CONTACT INFORMATION

Yolo County	City of West Sacramento	City of Davis	City of Woodland	City of Winters
Stephanie Cormier Planning Division Department of Community Services 292 West Beamer Street, Woodland (530) 666-8041	David Tilley Community Development Department 1110 West Capitol Ave., 2nd Floor, West Sacramento (916) 617-4645	Sherri Metzker Community Development & Sustainability 23 Russell Blvd., Suite 2, Davis (530) 757-5610 ext. 7239	Cindy Norris Planning Division 300 First Street, Woodland (530) 661-5911	Dave Dowswell Community Development Department 318 First Street, Winters (530) 794-6714

YOLO HABITAT CONSERVANCY CONTACT INFORMATION

Address: PO Box 2202, Woodland, CA 95776 Phone: 530-666-8150 Email: info@yolohabitatconservancy.org

FOR STAFF USE ONLY				
☐ Covered	Project Planner			
☐ Not covered	Phone Number			
☐ Covered but exempt from fees and AMMs	Email		Date	

APPLICATION

PURPOSE OF THIS FORM

Complete this form to apply for incidental take permit coverage under the Yolo Habitat Conservation Plan/Natural Community Conservation Plan (Yolo HCP/NCCP) and submit electronically to your local planning office. The completion of this form satisfies the minimum requirements for permit coverage. The Yolo Habitat Conservancy ("Conservancy") encourages submittal of a preliminary application to your local planning office to ensure timely and accurate completion. Your local agency planning office also may request additional information to clarify or complete your application. Chapter 6 of the Permitting Guide provides instructions for form completion, available along with additional resourceson the Conservancy's web site under the "Permitting" tab. Please note if an application fee is required (see Screening Form, Box D), you should submit this fee to the Conservancy early in the application process. The Conservancy automatically adjusts mitigation fees by March 15th of each year to reflect current land prices and other expenses. If an applicant does not complete their application and issue payment prior to the fee update, the new fees will apply. The applicant may, however, pay mitigation fees early at the previous year's rate consistent with the Conservancy's Early Payment of Mitigation Fees Policy.

Regional-scale data related land cover, sensitive natural communities, and covered species habitats in Yolo is made available through the Yolo HCP/NCCP GeoMapper online mapping tool. The GeoMapper tool is accessible via the Resources tab of the Yolo Habitat Conservancy website below, although it is intended for informational purposes only, All HCP/NCCP permit applicants must have site-specific planning level surveys by a qualified biologist to determine actual land cover and sensitive natural communities and species habitats in and around a project site to determine the correct amount of land cover mitigation fees and project specific Avoidance and Minimization Measures (AMMs).

https://www.yolohabitatconservancy.org/resources

BOX A: Preliminary/Final Application	
Check one box.	
☒ Preliminary Application (signature not required)	☐ Final Application (complete form and signature required)

BOX B: APPLICATION DETAILS		
1 Project name	A1-Pre Fab Project	
2 Submittal date		
3 Application/project file number(s) (assigned by local agency)		
4 YHC internal tracking #		
5 Local agency with approval authority	☒ Yolo County ☐ City of Davis ☐ City of Woodland ☐ City of West Sacramento ☐ City of Winters ☐ Other _____	☐ Special Participating Entity (SPE) Note: Applicants not subject to approval from the County or cities, or for projects not specifically identified and not specifically excluded as a covered activity under the Plan, should check this box to request permit coverage as an SPE if desired. SPE permit coverage is not guaranteed, are processed by the Conservancy, and must be approved by the Conservancy Board.

BOX C: PROJECT CONTACT			
1 Property Owner			
1.a Property owner name	Octavio Hernandez		
1.b Mailing address	26436 WOODLAND AVENUE		
1.c Phone (home/office)	(530) 383-5531	1.d Phone (Cellular)	
1.e Email	a1prefabllc@gmail.com		
2 Project Agent/Applicant			
2.a Company/organization	A1-Pre Fab, LLC		
2.b Name of primary contact	Octavio Hernandez		
2.c Mailing address	26436 WOODLAND AVENUE		
2.d Phone (office)	(530) 383-5531	2.e Phone (Cellular)	
2.f Email	a1prefabllc@gmail.com		
Permissions			
3 Local agency and/or the Conservancy may contact the property owner directly	☒ Yes ☐ No		
4 Local agency and/or the Conservancy may contact the project agent/applicant directly	☒ Yes ☐ No		

BOX D: PROJECT INFORMATION	
1 Project address and location	26364 and 26436 Woodland Avenue, Esparto, CA 95627
2 Assessor parcel number(s) APNs and acreage by parcel (not applicable for linear projects).	049-240-024, 3.77 acres
3 Total acreage of parcel(s) (not applicable for linear projects spanning multiple parcels)	3.77 acres
4 Using the GeoMapper's Spatially Defined Planning Unit Map, find your proposed project site. Check the Planning Unit in which your project lies.	Yolo County Planning Units ☐ 1 – Little Blue Ridge ☐ 2 – North Blue Ridge ☐ 3 – South Blue Ridge ☐ 4 – Capay Hills ☐ 5 – Dunnigan Hills ☐ 6 – Upper Cache Creek ☐ 7 – Lower Cache Creek ☐ 8 – Upper Putah Creek ☐ 9 – Lower Putah Creek ☐ 10 – Hungry Hollow Basin ☒ 11 – Willow Slough Basin ☐ 12 – Colusa Basin ☐ 13 – Colusa Basin Plains ☐ 14 – North Yolo Basin ☐ 15 – South Yolo Basin ☐ 16 – Yolo Basin Plains ☐ 17 – North Yolo Bypass ☐ 18 – South Yolo Bypass Cities ☐ 19 – City of Woodland ☐ 20 – City of Davis ☐ 21 – City of West Sacramento ☐ 22 – City of Winters

BOX D: PROJECT INFORMATION	
5	■ Provide a project description. Please refer to the Permitting Guide for details to include in the project description. Label as Attachment 1 or indicate in this box the page numbers of the planning level survey where this information can be found. **Page 1 and Appendix A, Fig. 1**
6	■ Provide a legible vicinity map of the project site and surrounding area (PDF). Refer to the Permitting Guide for more information about details to include on the vicinity map. Label as Attachment 2. Rather than a separate PDF, applicant may include the site plan in the planning level survey report. If so, provide page number here: Appendix A, Fig. 4
7	■ Provide a site plan that shows the proposed project site and surrounding area. (PDF and CAD or GIS-compatible). Refer to the Permitting Guide for more information about details to include in the site plan and details regarding the required CAD or GIS-compatible digital information to be attached. Label as Attachment 3. Rather than a separate PDF, applicant may include the site plan in the planning level survey report or other report. If so, attach report or excerpt and provide report name and page number here: P1 and Appendix A Fig. 1

BOX E: NATURAL COMMUNITY AND LAND COVER IMPACTS AND MITIGATION FEES

Complete Items 1-26 below, referring to the Permitting Guide for calculation methods.

- Total fee amount for each land cover type will be auto-generated based on acreage amount (and for recurring temporary impacts, number of years out of the 50-year permit term the impact will occur).
- Temporary impact fee formula = land cover fee x area of temporary effect in acres x (F/50) where F = the number of years in which the activity will occur during the rest of the permit term (until 2069).
- Must include required land cover fee buffer area associated with the project. This is generally 10 feet for linear projects (e.g. roads, utility corridors, pipelines) and 50 feet for all other projects. See Chapter 3 of the Permitting Guide.
- Fees will be updated annually, typically in March.
- Wetland fees are in addition to land cover fees. For project proponents transplanting elderberry shrubs from a non-riparian habitat, a per acre maintenance fee of $19,104 is assessed. The maintenance fee is subject to the annual increase in fees pursuant to existing methodology.
- Submit a planning level survey, including a field-verified land cover map and the name and qualifications of the qualified biologist(s) responsible for preparation of the report. Label as Attachment 4. Mapped areas shown on the site plan (Attachment 3 in Box D, Item 7) should be consistent with the acreages entered below. Include photographs of temporary impact areas. Label photos as Attachment 5.

Land Cover Types	Land Cover Permanently Impacted by Project (in acres)			Land Cover Temporarily Impacted by Project (in acres)	Years of Recurring Temporary Impact	Fees (Auto Generated)				
	Permanent Impact (acres)	Fee Buffer (acres)	TOTAL			Land Cover Fee (per acre)	Wetland Fee (per acre)	Permanent Impact, Land Cover Fee	Temporary Impact, Land Cover Fee	Wetland Fee
1 ☐ Developed (including ruderal with no covered species habitat)[a]			0.0			$0	$0	$ 0.00	$ 0.00	$ 0.00
2 ☐ Ruderal with covered species habitat [a]			0.0			$15,571	$0	$ 0.00	$ 0.00	$ 0.00
3 ☐ Barren, No Covered Species Habitat			0.0			$0	$0	$ 0.00	$ 0.00	$ 0.00
4 ■ Barren, With Covered Species Habitat	0.5		0.5			$15,571	$0	$ 7,941.21	$ 0.00	$ 0.00
5 ☐ Vegetated Corridor with Covered Species Habitat			0.0			$15,571	$0	$ 0.00	$ 0.00	$ 0.00
6 ■ Grassland (all types)	1.1		1.1			$15,571	$0	$17,750.94	$ 0.00	$ 0.00
7 ☐ Alkali Prairie			0.0			$15,571	$0	$ 0.00	$ 0.00	$ 0.00
8 ☐ Fresh Emergent Wetland (all types)			0.00			$15,571	$80,864	$ 0.00	$ 0.00	$ 0.00

BOX E: NATURAL COMMUNITY AND LAND COVER IMPACTS AND MITIGATION FEES

9	☐ Valley Foothill Riparian			0.00			$15,571	$66,560	$ 0.00	$ 0.00	$ 0.00
10	☐ Lacustrine and Riverine			0.00			$15,571	$64,854	$ 0.00	$ 0.00	$ 0.00
11	☐ Cultivated Land (all types)			0.0			$15,571	$0	$ 0.00	$ 0.00	$ 0.00
12	☐ Citrus/Subtropical			0.0			$15,571	$0	$ 0.00	$ 0.00	$ 0.00
13	☐ Deciduous Fruits/Nuts			0.0			$15,571	$0	$ 0.00	$ 0.00	$ 0.00
14	☐ Vineyards			0.0			$15,571	$0	$ 0.00	$ 0.00	$ 0.00
15	☐ Turf Farm			0.0			$15,571	$0	$ 0.00	$ 0.00	$ 0.00
16	☐ Flowers/Nursery/Tree Farms			0.0			$15,571	$0	$ 0.00	$ 0.00	$ 0.00
17	■ Semiag/Incidental to Agriculture	2.1		2.1			$15,571	$0	$ 33,010.52	$ 0.00	$ 0.00
18	☐ Eucalyptus			0.0			$15,571	$0	$ 0.00	$ 0.00	$ 0.00
								TOTAL	58,702.67	0.00	0.00

19	TOTAL LAND COVER IMPACTS AND MITIGATION FEES	$ 58,702.67
20	APPLICATION FEE (The application fee is credited towards the cost of the mitigation fees if the application fee is paid prior to the submittal of the mitigation fee payment . Application fee as of January 1, 2020: $1,981)	$
21	OTHER CREDITS (Advanced fee payment or in lieu fee credit – must be verified by Conservancy). Add Attachment 6	$
22	TOTAL LAND COVER IMPACTS AND MITIGATION FEES DUE (Mitigation fees due are determined at the time of payment unless they were paid in accordance with the Yolo HCP/NCCP Early Payment of Mitigation Fees Policy. See www.yolohabitatconservancy.org for current fee schedule.)	$ 58,702.67

[a] Land cover fees may be applicable if covered species habitat is present.

BOX F: CONDITIONS OF APPROVAL: CONDUCT PLANNING LEVEL SURVEYS

Based on a planning level survey conducted by a qualified biologist using the land cover definitions described in the Permitting Guide in Table 2-1, indicate which sensitive natural communities and covered species are relevant to your project. Indicate below whether suitable covered species habitats are present (Column A) and, where applicable, if there is a need to conduct a more focused survey(s) for covered species (Column B) to confirm presence. Complete species-specific planning level surveys as needed consistent with protocols referenced in Appendix A of the Permitting Guide. Alternatively, covered species presence can be assumed, which would requires adherence to applicable AMMs and implementation of avoidance measures or preconstruction surveys. Attach all species-specific planning level surveys as Attachment 7. Describe, map, and tabulate impacts the project will have on each natural community and each species for which habitat is present. Impact calculations must correspond to the permanent and temporary impact calculations in Box E. Label as Attachment 8. Alternatively, the impact assessment can be incorporated into the planning level survey. Important: Be aware of the timing requirements for conducting a species-specific planning level survey (Table 6-1 in the Permitting Guide) to avoid project delays.

	A. Project Site Conditions Requiring Planning Level Survey	B. Species-Specific Planning Level Survey Results	C. Documentation
Sensitive Natural Communities			
1 Alkali prairie and vernal pool complex	Are vernal pools or alkali seasonal wetlands present within 250 feet of project footprint? ☐ Yes. *Design project to avoid vernal pools or alkali seasonal wetlands by 250 feet or lesser buffer if approved by wildlife agencies (see Permitting Guide Table 2-1). Check Box G, AMMs 9 and 10. Go to Column C.* ☒ No	N/A	Map attached? (Attachment 4) ☐ Yes ☐ No If vernal pools or alkali seasonal wetlands are present on or near the site, provide map showing how project avoids these wetlands.
2 Valley foothill riparian	Is valley foothill riparian present within 100 feet of the project site boundary? ☐ Yes. *Design project to avoid valley foothill riparian by 100 feet or count all portions within 100 feet in the impact acreage (see Permitting Guide Table 2-1). Check Box G, AMMs 9 and 10. Go to Column C and provide map.* ☒ No	N/A	Map attached? (Attachment 4) ☐ Yes ☐ No Provide map showing the valley foothill riparian in relation to the project footprint.
3 Lacustrine and riverine	Are any streams, rivers, lakes, or ponds within 25 feet of project footprint inside urban planning units, or within 100 feet of project footprint outside urban planning units? ☐ Yes. *Design project to avoid these resources by 25 feet inside urban planning units or 100 feet outside urban planning units, or count all portions within these distances in the impact acreage, unless a variance is allowed. Check Box G, AMMs 9 and 10. Go to Column C and provide map.* ☒ No	N/A	Map attached? (Attachment 4) ☐ Yes ☐ No Provide map showing any streams, rivers, lakes, or ponds in relation to the project footprint.

BOX F: CONDITIONS OF APPROVAL: CONDUCT PLANNING LEVEL SURVEYS			
	A. Project Site Conditions Requiring Planning Level Survey	B. Species-Specific Planning Level Survey Results	C. Documentation
Sensitive Natural Communities			
4 Fresh emergent wetlands	Are there any fresh emergent wetlands within 50 feet of project footprint outside urban planning units? ☐ Yes. *Design project to avoid these resources by 50 feet, or count all portions within 50 feet in the impact acreage. Check Box G, AMMs 9 and 10. Go to Column C and provide map). Survey period: May 31–September 30* ☒ No	N/A	Map attached? (Attachment 4) ☐ Yes ☐ No Provide map of fresh emergent wetlands in relation to the project footprint.
Plants			
5 Palmate-bracted bird's beak	Is suitable habitat present within 250 feet of the project site boundary? (see Permitting Guide Table 2-2) ☐ Yes. *Survey for palmate-bracted bird's beak consistent with Permitting Guide Appendix A. Check Box G, AMM 11. Go to Column B. Survey period: May 31–September 30* ☒ No	Is palmate-bracted bird's beak present? ☐ Yes. *Design project to avoid occupied habitat as described in AMM 11. Go to Column C.* ☐ No. *Go to Column C.*	Species-specific planning level survey report attached? (Attachment 7) ☐ Yes ☐ No *Include report of species-specific planning level survey and map of habitat and any plants found in relation to project footprint.*
Invertebrates			
6 Valley elderberry longhorn beetle	Is there presence of elderberry shrubs in the project site or within 100 feet outside of the project site boundary that could be impacted by the project? ☐ Yes. *Identify and map all elderberry shrubs in and within 100 feet of project footprint with stems greater than one inch in diameter at ground level. For mapped shrubs that cannot be avoided, quantify the number of stems greater than one inch in diameter at ground level, and identify any such stems with valley elderberry longhorn beetle exit holes. Check Box G, AMM 12. Go to Column C and provide survey report. Survey period: Year-round* ☒ No	N/A	Species-specific planning level survey report attached? (Attachment 7) ☐ Yes ☐ No

BOX F: CONDITIONS OF APPROVAL: CONDUCT PLANNING LEVEL SURVEYS			
	A. Project Site Conditions Requiring Planning Level Survey	B. Species-Specific Planning Level Survey Results	C. Documentation
Amphibians			
7 California tiger salamander	Is there presence of California tiger salamander aquatic or upland habitat in the project footprint, or aquatic habitat within 500 feet of the project footprint? ☐ Yes. *Check box G, AMM 13. Is the habitat within designated critical habitat for California tiger salamander, as determined using the GeoMapper?* ☐ Yes. Design project to avoid designated critical habitat. ☐ No. *If aquatic habitat cannot be avoided by 500 feet, either conduct surveys as described in the Permitting Guide Appendix A, or assume species presence. Survey period: After rainfall, November 1 to May 15. Go to Column B.* ■ No	Are California tiger salamanders present or assumed to be present in aquatic habitat? ☐ Yes. *If the species is present or assumed to be present, the Yolo HCP/NCCP will not allow any loss of occupied aquatic habitat until at least four new occupied breeding pools are discovered or established and protected in the Plan Area. Contact Yolo Habitat Conservancy. Go to Column C.* ☐ No	Species-specific planning level survey attached? (Attachment 7) ☐ Yes ☐ No
Reptiles			
8 Western Pond Turtle	Is western pond turtle habitat present in the project footprint? ☐ Yes. Check Box G, AMM 14. A qualified biologist is required to evaluate whether there is moderate to high likelihood of western pond turtle presence. *Go to Columns B and C.* ■ No	Moderate to high likelihood of western pond turtle presence? ☐ Yes: Check Box F for western pond turtle preconstruction surveys. ☐ No	Habitat evaluation attached? (Attachment 7) ☐ Yes ☐ No
9 Giant Garter Snake	Is there any giant garter snake habitat (as defined in the Permitting Guide, Table 2-2) within the project footprint? ☐ Yes. *Design project to avoid or minimize impact on giant garter snake habitat to the extent practicable. If habitat cannot be avoided, see AMM 15. Check Box F for giant garter snake Preconstruction surveys, and check Box G, AMM 15.* ■ No	N/A	N/A

BOX F: CONDITIONS OF APPROVAL: CONDUCT PLANNING LEVEL SURVEYS			
	A. Project Site Conditions Requiring Planning Level Survey	B. Species-Specific Planning Level Survey Results	C. Documentation
Birds			
10 Swainson's Hawk and White-tailed Kite	Are there suitable Swainson's hawk or white-tailed kite nest trees within 1,320 feet of the project footprint? ☒ Yes. *If nest trees cannot be avoided by 1,320 feet, check Box F for hawk and kite Preconstruction surveys, and Box G, AMM 16.* ☐ No	N/A	N/A
11 Western yellow-billed cuckoo	Is suitable habitat present within 500 feet of the project site boundary? ☐ Yes. *If there are breeding records for the western yellow-billed cuckoo within ¼ mile of the project site from the previous three years (as determined by GeoMapper), then assume species is present. If there are no breeding records with ¼ mile, then either assume species is present or survey consistent with Chapter 6 of the Permitting Guide. See columns B and C. Check Box F for western yellow-billed cuckoo Preconstruction surveys and Check Box G, AMM 17.* *Survey period: June 1–August 30.* ☒ No	Is western yellow-billed cuckoo present or assumed to be present? ☐ Yes. *If project cannot avoid occupied habitat by 500 feet, avoid take of nesting birds as described in AMM 17.* ☐ No.	Species Survey attached? (Attachment 7) ☐ Yes ☐ No
12 Western Burrowing Owl	Is western burrowing owl habitat present on the project site, or within 500 feet of the project site? ☐ Yes. *Conduct planning level surveys for occupied habitat as described in Permitting Guide Appendix A. Go to Columns B and C. Survey period: February 1–August 31 during the breeding season; September 1–January 31 during nonbreeding season.* ☒ No	Are burrowing owls present? ☐ Yes. *Check Box G, AMM18. If burrows cannot be avoided, consistent with Table 2-3 in the Permitting Guide, Check Box F for western burrowing owl preconstruction surveys.* ☐ No	Species-specific planning level survey attached? (Attachment 7) ☐ Yes ☐ No

BOX F: CONDITIONS OF APPROVAL: CONDUCT PLANNING LEVEL SURVEYS

	A. Project Site Conditions Requiring Planning Level Survey	B. Species-Specific Planning Level Survey Results	C. Documentation
13 Least Bell's Vireo	Is least Bell's vireo habitat present in and within 500 feet of project footprint? ☐ Yes. *Check Box G, AMM 19. Are there nesting records for the species within ¼ mile of the site from the previous three years (determined using the GeoMapper)?* ☐ Yes. *Assume species is present. See Column B.* ☐ No. *Conduct planning level surveys, as described in Permitting Guide Appendix A. See Columns B and C. Survey period: April 1–July 15* ☒ No	Are least Bell's vireo nests present or assumed to be present? ☐ Yes. *Check Box F for least Bell's vireo preconstruction surveys. Avoid take of birds as described in AMM 19.* ☐ No.	Species Survey attached? (Attachment 7) ☐ Yes ☐ No
14 Bank Swallow	Is bank swallow nesting habitat present on the project site, or within 500 feet of the project site? ☐ Yes. *Check Box G, AMM 20. Conduct planning level surveys as described in Permitting Guide Appendix A. Go to Columns B and C. Survey period: March 1–August 15* ☒ No	Are nesting bank swallows present? ☐ Yes. *Check Box F for bank swallow preconstruction surveys. Avoid take of birds as described in AMM 19.* ☐ No.	Species-specific planning level survey attached? (Attachment 7) ☐ Yes ☐ No
15 Tricolored Blackbird	Is tricolored blackbird nesting habitat present on the project site, or within 1,300 feet of the project site? ☐ Yes. *Conduct planning level surveys as described in Permitting Guide Appendix A. Check Box G, AMM 21. Go to Column C. Survey period: March 1–July 30* ☒ No	N/A	Species-specific planning level survey attached? (Attachment 7) ☐ Yes ☐ No

BOX G: CONDITIONS OF APPROVAL: CONDUCT PRE-CONSTRUCTION SURVEYS

Indicate which species in Items 1-7 are relevant to your project. Important: Refer to Chapter 4 of the Permitting Guide for information about survey purpose, the land cover types and site conditions requiring preconstruction surveys, survey area size, and survey timing.

Birds			
1	☒ Swainson's hawk	4	☐ Western burrowing owl
2	☒ White-tailed kite	5	☐ Least-Bell's vireo
3	☐ Western yellow-billed cuckoo		
Reptiles			
6	☐ Giant garter snake	7	☐ Western pond turtle

BOX H: CONDITIONS OF APPROVAL: AVOIDANCE AND MINIMIZATION MEASURES (AMMs)		
Check the avoidance and minimization measures below that apply to your project. Refer to the Permitting Guide for assistance. Describe how you will fulfill the requirements of each required condition. Plan your construction carefully around the translocation or other dates required by the AMMs. Label as Attachment 9.		
1	■	AMM1: *Establish Resource Protection Buffers*
2	■	AMM 2: *Design Developments to Minimize Indirect Effects at Urban-Habitat Interfaces (this AMM does not apply to new development where it is immediately adjacent to existing developed lands*)
3	■	AMM 3: *Confine and Delineate Work Area*
4	■	AMM 4: *Cover Trenches and Holes during Construction and Maintenance*
5	■	AMM 5: *Control Fugitive Dust*
6	■	AMM 6: *Conduct Worker Training*
7	■	AMM 7: *Control Nighttime Lighting of Project Construction Sites*
8	■	AMM 8: *Avoid and Minimize Effects of Construction Staging Areas and Temporary Work Areas*
9	☐	AMM 9: *Establish Resource Protection Buffers around Sensitive Natural Communities*
10	☐	AMM 10: *Avoid and Minimize Effects on Wetlands and Waters*
11	☐	AMM 11: *Minimize Take and Adverse Effects on Palmate-Bracted Bird's Beak*
12	☐	AMM 12: *Minimize Take and Adverse Effects on Habitat of Valley Elderberry Longhorn Beetle*
13	☐	AMM 13: *Minimize Take and Adverse Effects on Habitat of California Tiger Salamander*
14	☐	AMM 14: Minimize Take and Adverse Effects on Habitat of Western Pond Turtle
15	☐	AMM 15: *Minimize Take and Adverse Effects on Habitat of Giant Garter Snake*
16	■	AMM 16: *Minimize Take and Adverse Effects on Habitat of Swainson's Hawk and White-Tailed Kite*
17	☐	AMM 17: *Minimize Take and Adverse Effects on Habitat of Western Yellow-Billed Cuckoo*
18	☐	AMM 18: *Minimize Take and Adverse Effects on Western Burrowing Owl*
19	☐	AMM 19: *Minimize Take and Adverse Effects on Least Bell's Vireo*
20	☐	AMM 20: *Minimize Take and Adverse Effects on Habitat of Bank Swallow*
21	☐	AMM 21: *Minimize Take and Adverse Effects on Habitat of Tricolored Blackbird*

BOX I: ATTACHMENT CHECKLIST
Indicate which attachments are provided below. Note: Attachments must meet the requirements described in Permitting Guide. If these requirements are not met, your application may be delayed.
All Projects
■ Attachment 1. Project Description (Box C). Attach separately or indicate report page #s here: 1 & App. A, Fig 1.
■ Attachment 2. Vicinity map PDF (Box C). Attach separately or indicate report page # here: App. A, Fig. 4
■ Attachment 3. Site Plan (Box C). Attach separately or indicate report page # here: 1 & App. A, Fig. 1 Also include CAD or GIS compatible data.
Projects with Impacts
■ Attachment 4. Planning level survey (Box D)
■ Attachment 5. Photos of temporary impact areas. Attach separately or indicate report page #s here: App. B
☐ Attachment 6. Documentation if land is offered in lieu of fees (Box D, Item 30)
☐ Attachment 7. Species-specific planning level survey(s) (Box E). Attach separately or indicate report page #s here:
■ Attachment 8. Unavoidable impacts on covered species. Attach separately or indicate report page #s here: 2-3

BOX I: ATTACHMENT CHECKLIST

☒ Attachment 9. Description of compliance with avoidance and minimization measures (Box G). Attach separately or indicate report page #s here: 3-4

BOX J: SIGNATURES

☒ By checking the box and signing below I certify all information in the application is true and correct to the best of my knowledge. I also certify I understand the requirements of the AMMs, including dates for elderberry translocation or other dates that may affect construction timing.

1	Property owner name and contact information	Name	Octavio Hernandez		
		Phone	(530) 383-5531	Email	a1prefabllc@gmail.com
2	Property owner signature			Date	
3	Project agent/applicant name and contact information	Name	Octavio Hernandez		
		Phone	(530) 383-5531	Email	a1prefabllc@gmail.com
4	Project agent/applicant signature			Date	

FORM SUBMITTAL INSTRUCTIONS

Submit this form electronically to the applicable contact below. If the project applicant is seeking HCP/NCCP permit coverage as an SPE, submit the form to the Yolo Habitat Conservancy. The signed Final Application and payment of all other Plan fees is required following project approval and prior to formal Yolo HCP/NCCP approval.

LOCAL AGENCY PLANNINGOFFICE CONTACT INFORMATION

Yolo County	City of West Sacramento	City of Davis	City of Woodland	City of Winters
Stephanie Cormier Planning Division Department of Community Services 292 West Beamer Street, Woodland (530) 666-8041	David Tilley Community Development Department 1110 West Capitol Ave., 2nd Floor, West Sacramento (916) 617-4645	Sherri Metzker Community Development & Sustainability 23 Russell Blvd., Suite 2, Davis (530) 757-5610 ext. 7239	Cindy Norris Planning Division 300 First Street, Woodland (530) 661-5911	Kirk Skierski Community Development Department 318 First Street, Winters (530) 794-6714

YOLO HABITAT CONSERVANCY CONTACT INFORMATION

Address: PO Box 2202, Woodland, CA 95776 Phone: 530-666-8150 Email: info@yolohabitatconservancy.org

FOR STAFF USE ONLY			
Project planner name		Phone number	
Email		Date	
Covered activity type			
HCP/NCCP Application	☐ Complete ☐ Not complete	☐ Special Participating Entity	

APPENDIX C

SOIL RESOURCE REPORT

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Yolo County, California

ZF #2022-0058

October 13, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map (ZF #2022-0058)

Map Scale: 1:1,480 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Yolo County, California
Survey Area Data: Version 19, Sep 1, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 26, 2022—Apr 25, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (ZF #2022-0058)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
TaA	Tehama loam, 0 to 2 percent slopes, loamy substratum, MLRA 17	2.0	53.6%
Yb	Yolo silty clay loam, 0 to 2 percent slopes, MLRA 17	1.7	46.4%
Totals for Area of Interest		**3.8**	**100.0%**

Map Unit Descriptions (ZF #2022-0058)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the

development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Yolo County, California

TaA—Tehama loam, 0 to 2 percent slopes, loamy substratum, MLRA 17

Map Unit Setting

National map unit symbol: 2srj5
Elevation: 50 to 580 feet
Mean annual precipitation: 19 to 27 inches
Mean annual air temperature: 63 degrees F
Frost-free period: 265 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Tehama and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tehama

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed fine-loamy alluvium derived from sedimentary rock

Typical profile

Ap - 0 to 10 inches: loam
Bt - 10 to 40 inches: clay loam
BCt - 40 to 63 inches: gravelly loam
C - 63 to 75 inches: sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.3 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: C
Ecological site: R017XY905CA - Dry Alluvial Fans and Terraces
Hydric soil rating: No

Minor Components

Yolo
Percent of map unit: 4 percent
Hydric soil rating: No

Brentwood
Percent of map unit: 4 percent
Hydric soil rating: No

Zamora
Percent of map unit: 4 percent
Hydric soil rating: No

Rincon
Percent of map unit: 3 percent
Hydric soil rating: No

Yb—Yolo silty clay loam, 0 to 2 percent slopes, MLRA 17

Map Unit Setting
National map unit symbol: 2w8b1
Elevation: 10 to 420 feet
Mean annual precipitation: 16 to 28 inches
Mean annual air temperature: 61 to 63 degrees F
Frost-free period: 240 to 270 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition
Yolo and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Yolo

Setting
Landform: Alluvial fans
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from igneous, metamorphic and sedimentary rock

Typical profile
Ap - 0 to 9 inches: silty clay loam
A1 - 9 to 18 inches: silty clay loam
A2 - 18 to 28 inches: silty clay loam
Bw1 - 28 to 36 inches: clay loam
Bw2 - 36 to 44 inches: loam
Bw3 - 44 to 60 inches: loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Maximum salinity: Nonsaline (0.3 to 0.5 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 11.1 inches)

Interpretive groups

Land capability classification (irrigated): 1
Land capability classification (nonirrigated): 4c
Hydrologic Soil Group: B
Ecological site: R014XG918CA - Loamy Fan
Hydric soil rating: No

Minor Components

Brentwood

Percent of map unit: 5 percent
Hydric soil rating: No

Reiff

Percent of map unit: 5 percent
Hydric soil rating: No

Sycamore

Percent of map unit: 5 percent
Hydric soil rating: No

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Building Site Development

Building site development interpretations are designed to be used as tools for evaluating soil suitability and identifying soil limitations for various construction purposes. As part of the interpretation process, the rating applies to each soil in its described condition and does not consider present land use. Example interpretations can include corrosion of concrete and steel, shallow excavations, dwellings with and without basements, small commercial buildings, local roads and streets, and lawns and landscaping.

Small Commercial Buildings (ZF #2022-0058)

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification of the soil). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected.

"Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Map Scale: 1:1,480 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 20 40 80 120

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Soil Rating Lines
- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Soil Rating Points
- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Yolo County, California
Survey Area Data: Version 19, Sep 1, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 26, 2022—Apr 25, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Tables—Small Commercial Buildings (ZF #2022-0058)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
TaA	Tehama loam, 0 to 2 percent slopes, loamy substratum, MLRA 17	Somewhat limited	Tehama (85%)	Shrink-swell (0.50)	2.0	53.6%
Yb	Yolo silty clay loam, 0 to 2 percent slopes, MLRA 17	Very limited	Yolo (85%)	Flooding (1.00)	1.7	46.4%
				Shrink-swell (0.08)		
Totals for Area of Interest					**3.8**	**100.0%**

Rating	Acres in AOI	Percent of AOI
Very limited	1.7	46.4%
Somewhat limited	2.0	53.6%
Totals for Area of Interest	**3.8**	**100.0%**

Rating Options—Small Commercial Buildings (ZF #2022-0058)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Nonirrigated Capability Class (ZF #2022-0058)

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include

possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations that show suitability and limitations of groups of soils for rangeland, for woodland, or for engineering purposes.

In the capability system, soils are generally grouped at three levels-capability class, subclass, and unit. Only class and subclass are included in this data set.

Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

Class 1 soils have few limitations that restrict their use.

Class 2 soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Class 3 soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both.

Class 4 soils have very severe limitations that reduce the choice of plants or that require very careful management, or both.

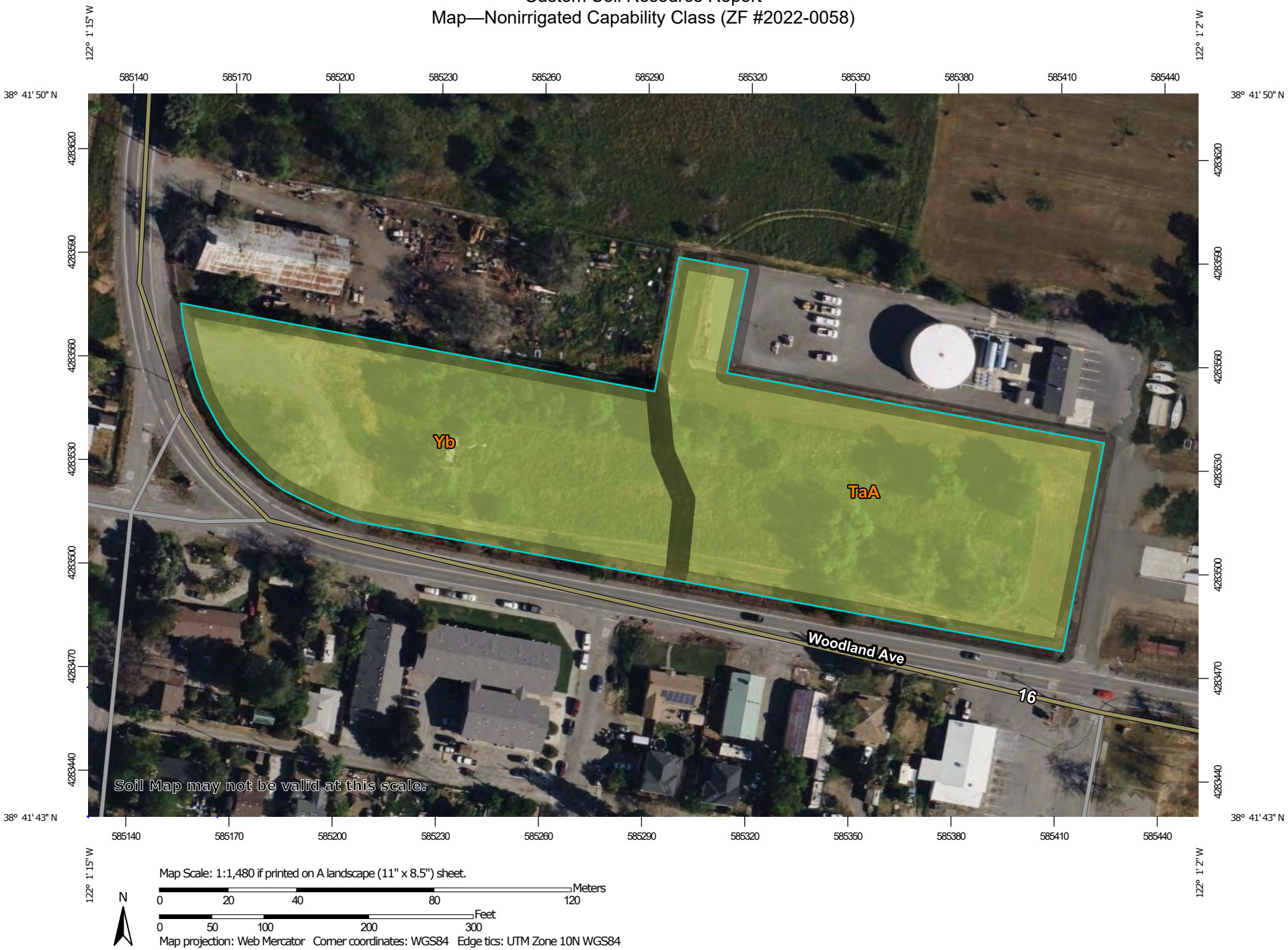
Class 5 soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 6 soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 7 soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.

Class 8 soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

Custom Soil Resource Report
Map—Nonirrigated Capability Class (ZF #2022-0058)



Map Scale: 1:1,480 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- Capability Class - I
- Capability Class - II
- Capability Class - III
- Capability Class - IV
- Capability Class - V
- Capability Class - VI
- Capability Class - VII
- Capability Class - VIII
- Not rated or not available

Soil Rating Lines

- Capability Class - I
- Capability Class - II
- Capability Class - III
- Capability Class - IV
- Capability Class - V
- Capability Class - VI
- Capability Class - VII
- Capability Class - VIII
- Not rated or not available

Soil Rating Points

- Capability Class - I
- Capability Class - II
- Capability Class - III
- Capability Class - IV
- Capability Class - V
- Capability Class - VI
- Capability Class - VII
- Capability Class - VIII
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Yolo County, California
Survey Area Data: Version 19, Sep 1, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 26, 2022—Apr 25, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Nonirrigated Capability Class (ZF #2022-0058)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
TaA	Tehama loam, 0 to 2 percent slopes, loamy substratum, MLRA 17	4	2.0	53.6%
Yb	Yolo silty clay loam, 0 to 2 percent slopes, MLRA 17	4	1.7	46.4%
Totals for Area of Interest			**3.8**	**100.0%**

Rating Options—Nonirrigated Capability Class (ZF #2022-0058)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Physical Properties

Soil Physical Properties are measured or inferred from direct observations in the field or laboratory. Examples of soil physical properties include percent clay, organic matter, saturated hydraulic conductivity, available water capacity, and bulk density.

Surface Texture (ZF #2022-0058)

This displays the representative texture class and modifier of the surface horizon.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, "gravelly."

Custom Soil Resource Report
Map—Surface Texture (ZF #2022-0058)

Map Scale: 1:1,480 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- Loam
- Silty clay loam
- Not rated or not available

Soil Rating Lines

- Loam
- Silty clay loam
- Not rated or not available

Soil Rating Points

- Loam
- Silty clay loam
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Yolo County, California
Survey Area Data: Version 19, Sep 1, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 26, 2022—Apr 25, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Surface Texture (ZF #2022-0058)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
TaA	Tehama loam, 0 to 2 percent slopes, loamy substratum, MLRA 17	Loam	2.0	53.6%
Yb	Yolo silty clay loam, 0 to 2 percent slopes, MLRA 17	Silty clay loam	1.7	46.4%
Totals for Area of Interest			**3.8**	**100.0%**

Rating Options—Surface Texture (ZF #2022-0058)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Layer Options (Horizon Aggregation Method): Surface Layer (Not applicable)

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

Land Classifications

This folder contains a collection of tabular reports that present a variety of soil groupings. The reports (tables) include all selected map units and components for each map unit. Land classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

California Revised Storie Index (CA) (ZF #2022-0058)

The Revised Storie Index is a rating system based on soil properties that govern the potential for soil map unit components to be used for irrigated agriculture in California.

The Revised Storie Index assesses the productivity of a soil from the following four characteristics:

- Factor A: degree of soil profile development

- Factor B: texture of the surface layer

- Factor C: steepness of slope

- Factor X: drainage class, landform, erosion class, flooding and ponding frequency and duration, soil pH, soluble salt content as measured by electrical conductivity, and sodium adsorption ratio

Revised Storie Index numerical ratings have been combined into six classes as follows:

- Grade 1: Excellent (81 to 100)

- Grade 2: Good (61 to 80)

- Grade 3: Fair (41 to 60)

- Grade 4: Poor (21 to 40)

- Grade 5: Very poor (11 to 20)

- Grade 6: Nonagricultural (10 or less)

Reference:

O'Geen, A.T., Southard, S.B., Southard, R.J. 2008. A Revised Storie Index for Use with Digital Soils Information. University of California Division of Agriculture and Natural Resources. Publication 8355. http://anrcatalog.ucanr.edu/pdf/8335.pdf

Report—California Revised Storie Index (CA) (ZF #2022-0058)

California Revised Storie Index (CA)–Yolo County, California			
Map symbol and soil name	Pct. of map unit	California Revised Storie Index (CA)	
		Rating class	Value
TaA—Tehama loam, 0 to 2 percent slopes, loamy substratum, MLRA 17			
Tehama	85	Grade 1 - Excellent	100
Yb—Yolo silty clay loam, 0 to 2 percent slopes, MLRA 17			
Yolo	85	Grade 2 - Good	77

Prime and other Important Farmlands (ZF #2022-0058)

This table lists the map units in the survey area that are considered important farmlands. Important farmlands consist of prime farmland, unique farmland, and farmland of statewide or local importance. This list does not constitute a recommendation for a particular land use.

In an effort to identify the extent and location of important farmlands, the Natural Resources Conservation Service, in cooperation with other interested Federal, State, and local government organizations, has inventoried land that can be used for the production of the Nation's food supply.

Prime farmland is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil quality, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. The water supply is dependable and of adequate quality. Prime farmland is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6

percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

For some of the soils identified in the table as prime farmland, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures.

A recent trend in land use in some areas has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

Unique farmland is land other than prime farmland that is used for the production of specific high-value food and fiber crops, such as citrus, tree nuts, olives, cranberries, and other fruits and vegetables. It has the special combination of soil quality, growing season, moisture supply, temperature, humidity, air drainage, elevation, and aspect needed for the soil to economically produce sustainable high yields of these crops when properly managed. The water supply is dependable and of adequate quality. Nearness to markets is an additional consideration. Unique farmland is not based on national criteria. It commonly is in areas where there is a special microclimate, such as the wine country in California.

In some areas, land that does not meet the criteria for prime or unique farmland is considered to be *farmland of statewide importance* for the production of food, feed, fiber, forage, and oilseed crops. The criteria for defining and delineating farmland of statewide importance are determined by the appropriate State agencies. Generally, this land includes areas of soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some areas may produce as high a yield as prime farmland if conditions are favorable. Farmland of statewide importance may include tracts of land that have been designated for agriculture by State law.

In some areas that are not identified as having national or statewide importance, land is considered to be *farmland of local importance* for the production of food, feed, fiber, forage, and oilseed crops. This farmland is identified by the appropriate local agencies. Farmland of local importance may include tracts of land that have been designated for agriculture by local ordinance.

Report—Prime and other Important Farmlands (ZF #2022-0058)

Prime and other Important Farmlands–Yolo County, California		
Map Symbol	**Map Unit Name**	**Farmland Classification**
TaA	Tehama loam, 0 to 2 percent slopes, loamy substratum, MLRA 17	Prime farmland if irrigated
Yb	Yolo silty clay loam, 0 to 2 percent slopes, MLRA 17	Prime farmland if irrigated

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

APPENDIX D

DRAINAGE/STORMWATER QUALITY SUMMARY

DRAINAGE/STORMWATER QUALITY SUMMARY

PURPOSE: Summarize the drainage design and post-construction stormwater quality control analyses for a use-permit application for the A1 Pre-Fab project (Project), along State Route 16/Woodland Avenue in the town of Esparto, CA, APN 049-240-024-000. Sheet **C001** of the improvement plans, included in **Appendix A, Selected Improvement Plan Sheets**, shows the location and vicinity of the Project.

DRAINAGE CONDITIONS:

Exhibit 1, Drainage Map, Existing Conditions shows the existing drainage conditions of the Project property. The land, currently mostly vacant, with one relatively small existing structure, is covered in grasses and gravel, and generally slopes from southwest to northeast. The shed boundary delineated on the exhibit shows the runoff area tributary to the Project area (see discussion below). The area drains to an existing storm drain inlet on the adjacent property. This existing storm drain system is routed to the Woodland Avenue roadside ditch.

Exhibit 2, Drainage Map, Proposed Conditions shows the project features and the proposed drainage conditions and facilities. This information is shown in more detail on the improvement plans included in **Appendix A, Selected Improvement Plan Sheets**. Onsite rainfall runoff from the developed Project area will drain by storm drains into a detention pond. The detention pond was designed for onsite post-construction stormwater quality treatment, and to mitigate runoff increases resulting from the Project. A pump station will drain the detention basin, and discharge runoff to the existing storm drain system, as under existing conditions, discussed above.

POST-CONSTRUCTION STORMWATER QUALITY:

Stormwater Control Plan

The Stormwater Control Plan is shown on sheet C501 of the improvement plans referenced above (**Appendix A**). The Stormwater Control Plan shows the proposed post-construction stormwater quality control measures, including the proposed source control measures. The treatment control best management practice (BMP) includes a a detention basin facility.

Required Detention Volume

The required treatment volume for the Project was calculated using the Urban Runoff Quality Management Approach. The calculations are shown in **Appendix B, Treatment Volume Calculations.** The required volume is 358 cubic feet.

Provided Detention Volume

The required stormwater treatment volume will be detained by the detention basin and its outlet structure. As shown on the Stormwater Control Plan, sheet C501, referenced above, the structure will not allow outflow of the treatment volume of runoff except slowly through a small orifice in the structure. Runoff volume in excess of the treatment volume will overflow the outlet structure and flow directly out of the detention basin. The overflow grate will be set at elevation 185.7 feet to provide more than the required 358 cubic feet of storage volume for stormwater quality treatment (below the overflow grate elevation in the detention basin).

DETENTION BASIN ANALYSIS:

Model Development:

For sizing the proposed conditions facilities, a hydrodynamic model was developed using the software SewerGEMS, version 2024 (24 00 01 05), by Bentley Systems. One model was developed for existing conditions, and one for proposed conditions, although they are both in the same model file. The model schematic is shown on **Exhibits 3, Model Schematic**.

Hydrology input calculations are included in **Appendix C, Hydrology Input Calculations**. The Soil Conservation Service (SCS) Type II rainfall distribution was used for the 100-year storms. Rainfall losses were estimated using the SCS curve number (CN) method. The SCS unit-hydrograph runoff method was used. **Appendix C** includes calculations for the SCS curve numbers (CNs) and the times of concentration, and the rainfall depths used. The

DRAINAGE/STORMWATER QUALITY SUMMARY

calculations are based on the information shown on the improvement plans, the sheds shown on **Exhibit 1, Drainage Map, Existing Conditions**, and on **Exhibit 2, Drainage Map, Proposed Conditions**, and as footnoted in the tables. The soils in the shed areas are almost entirely USDA soil group C. The rainfall depths were computed based on the Yolo County Drainage Manual (2010). The rainfall depth for a 100-year, 24-hour storm event was calculated to be approximately 5.42 inches, shown in **Appendix C**.

Hydraulic elements modeled used for proposed conditions include the detention basin (pond), a pond outlet structure, pump station, and outfall. The pond element was represented using a stage-area relationship. The pump station was set to 0.25 cfs (110 gpm).

Appendix D, Model Input and Results includes the inputs developed to reflect existing conditions, and developed to reflect proposed conditions shown in **Appendix A, Selected Improvement Plan Sheets**.

Model Results:
The model results are shown in **Appendix D, Model Input and Results**. The model results are summarized below. The discharge from the Project is less for proposed conditions than for existing conditions.

Modeled Peak Discharge (100-Year) from the Project

Condition	Model Element	Flow, cfs
Existing	Shed EX10	1.5
Proposed	Outfall 0-2	0.5

The modeled hydraulic grade line in the pond/detention basin is shown on the pond graph in **Appendix D**. Comparing to the proposed grades of the detention basin shown on sheet C301 in **Appendix A**, the hydraulic grade line (HGL) on the detention basin graph indicates that the maximum modeled water surface elevation (HGL, approximately 186.4 feet) would be contained in the detention basin, with a depth of approximately 3 feet (for the 100-year event).

STORM DRAIN SIZING:

The onsite storm drain is shown on sheet C401 of the improvement plans referenced above (**Appendix A**). The capacity of the storm drain is approximately 2.2 cfs (Manning's equation, 12-inch pipe, slope = 0.005 feet per foot, n = 0.015). This capacity is enough to contain the modeled 100-year runoff of 1.5 cfs from proposed-conditions shed A1-10 (see **Appendix D, Model Input and Results**).

CONCLUSIONS:
The model results show that the peak discharge from the Project will not be increased compared to the existing-conditions peak discharge.

REDUCED PLOT

0 10 20 40
SCALE: 1"=20'

REV.	DATE	DESCRIPTION	BY	APP'D.

DESIGNED BY TCT
DRAWN BY MSW
CHECKED BY TCT

LM LAUGENOUR AND MEIKLE
CIVIL ENGINEERING · LAND SURVEYING · PLANNING
608 COURT STREET, WOODLAND, CALIFORNIA 95695 · PHONE: (530) 662-1755
P.O. BOX 828, WOODLAND, CALIFORNIA 95776 · FAX: (530) 662-4602
BY _____
TODD C. TOMMERAASON
DATE 08/14/2024 P.E. 59277

REGISTERED PROFESSIONAL ENGINEER · TODD C. TOMMERAASON · No. 59277 · CIVIL · STATE OF CALIFORNIA

GRADING AND DRAINAGE PLANS
FOR
A1–PRE FAB, LLC

COUNTY OF YOLO CALIFORNIA

EXHIBIT 1 - DRAINAGE MAP, EXISTING CONDITIONS

SCALE 1"=20'

DATE: 08/14/2024
JOB NO. 4707–1

1

SHEET 1 OF 1

X:\Land Projects\4707-1\dwg\4707-1_SD-DRAINAGE MAP EXIST.dwg

REDUCED PLOT

PROPERTY LINE

EXISTING DRAIN INLET

EXISTING STORM DRAIN

A1–10
0.738 AC

A1–20
0.040 AC

PROPOSED PUMP DETENTION BASIN

PROPOSED PUMP STATION AND 2" FORCE MAIN

PROPERTY LINE

STATE HIGHWAY 16

12" SD

24" SD

LEGEND

- GENERAL RUNOFF DIRECTION
- 83 — EXISTING GROUND ELEVATION CONTOUR (NAVD88)
- ID AREA — MODEL SHED ID AND AREA
- SHED BOUNDARY
- CHANNEL/SWALE/DITCH FLOWLINE
- J-02 — POINT OF ANALYSIS, MODEL NODE
- MODELED RUNOFF STORAGE AREA SYMBOL

0 10 20 40
LM
SCALE: 1"=20'

DESIGNED BY TCT
DRAWN BY MSW
CHECKED BY TCT

REV.	DATE	DESCRIPTION	BY	APP'D.

LM LAUGENOUR AND MEIKLE
CIVIL ENGINEERING · LAND SURVEYING · PLANNING
608 COURT STREET, WOODLAND, CALIFORNIA 95695 · PHONE: (530) 662-1755
P.O. BOX 828, WOODLAND, CALIFORNIA 95776 · FAX: (530) 662-4602

BY _____
TODD C. TOMMERAASON
DATE 08/14/2024 P.E. 59277

REGISTERED PROFESSIONAL ENGINEER · TODD C. TOMMERAASON · No. 59277 · CIVIL · STATE OF CALIFORNIA

GRADING AND DRAINAGE PLANS FOR A1–PRE FAB, LLC

COUNTY OF YOLO CALIFORNIA

EXHIBIT 2 - DRAINAGE MAP, PROPOSED CONDITIONS

SCALE 1"=20'

DATE: 08/14/2024
JOB NO. 4707-1

2

SHEET 1 OF 1

X:\Land Projects\4707-1\dwg\4707-1_SD-DRAINAGE MAP PROP.dwg

EXISTING C

EXHIBIT 3 - MODE

PROPOSED CONDITIONS

A1-10

EX10

O-1

DETENTION-1

W-1

CO-3

CO-4

PMP-1

POS-1

P-2

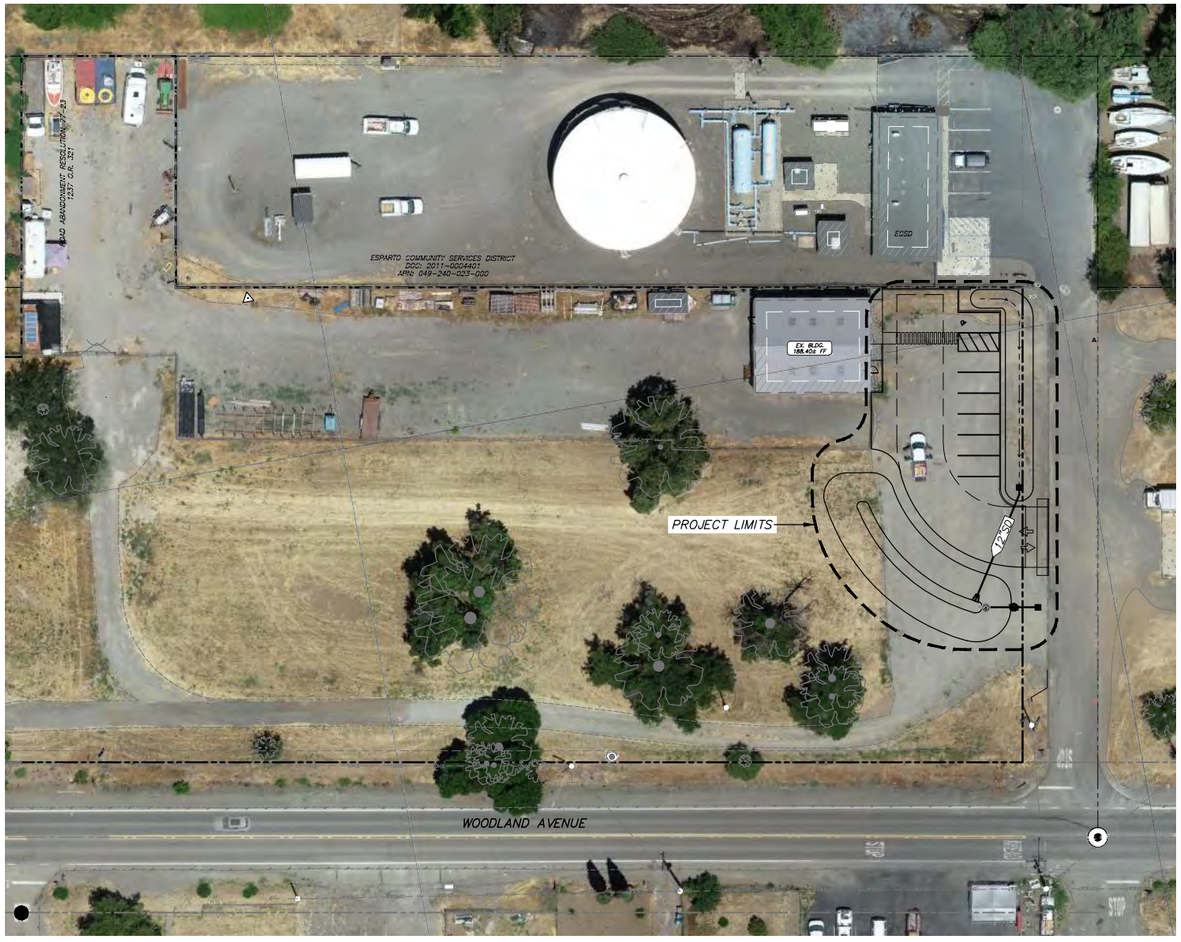
O-2

A1-20

APPENDIX A
SELECTED IMPROVEMENT PLAN SHEETS

GRADING AND DRAINAGE PLANS
FOR
A1–PRE FAB, LLC

TOWN OF ESPARTO — YOLO COUNTY, CA



LEGEND

PROPOSED	EXISTING	
12"SD	12"SD	STORM DRAIN AND MANHOLE
12"PSD		PERFORATED STORM DRAIN
8"SS	8"SS	SANITARY SEWER AND MANHOLE
8"SFM	8"SFM	SANITARY SEWER FORCE MAIN
P	P	SEWER PUMP STATION
		FIRE HYDRANT AND VALVE ASSEMBLY
10"W	10"W	WATER MAIN, VALVE, DOUBLE DETECTOR CHECK VALVE, METER & BLOWOFF VALVE
JT	JT	JOINT UTILITY TRENCH
GAS	GAS	GAS MAIN
(UG)E	(OH)E	ELECTRICAL LINE (UG–UNDERGROUND, OH–OVERHEAD)
(UG)T	(OH)T	TELEPHONE LINE (UG–UNDERGROUND, OH–OVERHEAD)
SL	SL	STREET LIGHT CONDUIT, WIRING & PULL BOX
SL E2	SL	STREET LIGHT SERVICE POINT AT UTILITY CO. BOX
		STREET LIGHT AND POLE
		UTILITY POLE WITH DOWN GUY & ANCHOR
PP, TP, JP	PP, TP, JP	POWER POLE, TELEPHONE POLE, JOINT POLE
x x x x	x x x x	FENCE
		VERTICAL CURB, GUTTER & SIDEWALK WITH DRIVEWAY
		CATCH BASIN OR DRAINAGE INLET
		FLOWLINE OF DITCH OR SWALE
		DIRECTION OF SURFACE DRAINAGE FLOW
		CUT OR FILL SLOPE
		RIGHT OF WAY OR PROPERTY LINE
		STREET CENTERLINE OR BASELINE
		SURVEY MONUMENT
		SIGN
		TREE
		TREE TO BE REMOVED
58.60 FG	##.## × ##.##	EXISTING GROUND SURFACE ELEVATION
58.60 FL		EDGE OF PAVEMENT AND ELEVATION
58.10 TC 58.60 FC		FLOW LINE GRADE
58.60 FC		TOP OF CURB GRADE/ASPHALT GRADE
58.60 TW		FINISHED CONCRETE GRADE
58.10 TC 58.60 FG 57.10 SG		TOP OF WALL GRADE
60.50± TC 60.00± FL 60.50± FC 60.50± AC 60.50± BEW		TOP OF CURB/FINISHED GRADE/SUBGRADE ELEVATION
		MATCH EXISTING GRADE (FIELD VERIFY)
		PUBLIC UTILITY EASEMENT
		ROLL CURB, GUTTER, & SIDEWALK
		GRADING RIDGE

UTILITY REPRESENTATIVES

UTILITY	COMPANY	REPRESENTATIVE	PHONE NUMBER
GAS & ELECTRIC	P.G.&E.	MIKE WILLIAMS	(916) 386–5013
TELEPHONE	AT&T	ZENNON TORRES	(916) 453–7124
CABLE TV	CABLEVIEW COMMUNICATIONS, INC.	DAVE LANGHOUT	(530) 787–4656
WATER, SEWER, AND DRAINAGE	ESPARTO COMMUNITY SERVICES DISTRICT	MEL SMITH	(530) 787–4502
FIRE	ESPARTO FIRE DIST.	BARRY BURNS	(530) 787–3300
USA			(800) 227–2600

VICINITY MAP

REDUCED PLOT

SHEET INDEX

GEOTECHNICAL REPORT

BENCH MARKS

OVERALL SITE PLAN
0 15 30 60
LM
SCALE: 1"=30'

DESIGNED BY TCT
DRAWN BY MSW
CHECKED BY TCT

REV.	DATE	DESCRIPTION	BY	APP'D.

LM LAUGENOUR AND MEIKLE
CIVIL ENGINEERING · LAND SURVEYING · PLANNING
608 COURT STREET, WOODLAND, CALIFORNIA 95695 · PHONE: (530) 662–1755
P.O. BOX 828, WOODLAND, CALIFORNIA 95776 · FAX: (530) 662–4602
BY _____ TODD C. TOMMERAASON
DATE 08/15/2024 P.E. 59277
REGISTERED PROFESSIONAL ENGINEER · TODD C. TOMMERAASON · No. 59277 · CIVIL · STATE OF CALIFORNIA

GRADING AND DRAINAGE PLANS FOR A1–PRE FAB, LLC
COUNTY OF YOLO CALIFORNIA
TITLE SHEET

SCALE 1"=30'
DATE: 08/15/2024
JOB NO. 4707–1

C001
SHEET 1 OF 13

X:\Land Projects\4707–1\dwg\4707–1_C001.dwg

ABBREVIATIONS

AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
ACP	ASBESTOS CEMENT PIPE
ARV	AIR RELEASE VALVE
ASB	AGGREGATE SUBBASE
BC	BEGIN CURVE
BEW	BACK EDGE OF WALK
BM	BENCH MARK
BOC	BACK OF CURB
BOV	BLOW-OFF VALVE
BR	BOTTOM OF ROCK
BVC	BEGIN VERTICAL CURVE
BW	BASE OF WALL
CATV	CABLE TELEVISION
C&G	CURB AND GUTTER
C,G,&SW	CURB, GUTTER AND SIDEWALK
CC	CENTER TO CENTER
CICP	CAST IN PLACE CONCRETE PIPE
CL	CENTERLINE, CONTROL LINE, CHAIN LINK OR CLASS
CO	CLEANOUT
CONC	CONCRETE
CONST	CONSTRUCT
COR	CORNER
CP	CONCRETE PIPE
CR	CURB RETURN
CSP	CORRUGATED STEEL PIPE
DC	DOUBLE CHECK
DCA	DETECTOR CHECK ASSEMBLY
DI	DRAINAGE INLET
DIP	DUCTILE IRON PIPE
DTL	DETAIL
DW	DRIVEWAY
DWG	DRAWING
E	EAST
EC	END CURVE
ELEC	ELECTRIC(AL)
EL, ELEV	ELEVATION
EP	EDGE OF PAVEMENT
EQUIV	EQUIVALENT
EVC	END VERTICAL CURVE
EX, EXIST	EXISTING
EXP JT	EXPANSION JOINT
FB	FLUSHER BRANCH
FC	FINISHED CONCRETE
FDR	FULL DEPTH RECLAMATION
FEW	FRONT EDGE OF WALK
FF, FIN FLR	FINISHED FLOOR
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FOC	FACE OF CURB OR CONCRETE
GB	GRADE BREAK
INTX	INTERSECTION
INV	INVERT
IOD	IRREVOCABLE OFFER OF DEDICATION
IRR	IRRIGATION
JB	JUNCTION BOX
JT	JOINT-USE TRENCH
L	LEFT
LF	LINEAL FEET
LOG	LIP OF GUTTER
LT	LEFT OR LIGHT
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MOC	MIDDLE OF CURVE
MON	MONUMENT
MRC	MINIMUM RELATIVE COMPACTION
MTD	MOUNTED
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
N	NORTH
NG	NATURAL GROUND
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OA	OVERALL
OH	OVERHEAD
PB	PULL BOX
PCC	PORTLAND CEMENT CONCRETE OR POINT OF COMPOUND CURVATURE
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
POC	POINT OF CONNECTION, POINT ON CURVE
PRC	POINT OF REVERSE CURVATURE
PRVC	POINT OF REVERSE VERTICAL CURVATURE
PROJ	PROJECTED
PROP	PROPERTY
PSE	PUBLIC SERVICE EASEMENT
PT	POINT
PUE	PUBLIC UTILITY EASEMENT
PVCP	POLYVINYL CHLORIDE PIPE
PVMT	PAVEMENT
PWD	PUBLIC WORKS DEPARTMENT
R	RADIUS, RADIAL OR RIGHT
RCP	REINFORCED CONCRETE PIPE
REQ'TS	REQUIREMENTS
RET	RETAINING
RP	RADIUS POINT OR REFERENCE POINT
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
RT	RIGHT
R/W	RIGHT-OF-WAY
S	SOUTH OR SLOPE
SCH	SCHEDULE
SD	STORM DRAIN
SDFM	STORM DRAIN FORCE MAIN
SEC	SECTION
SEP	SEPARATION
SIM	SIMILAR
SL	STREET LIGHT
SS	SEWER SERVICE, SANITARY SEWER
STD	STANDARD
SW	SIDEWALK
SYM	SYMMETRICAL
TC	TOP OF CURB OR CONCRETE
TEL	TELEPHONE
TEMP	TEMPORARY
TFOC	TOP FACE OF CURB
TR	TOP OF ROCK
TRAF	TRAFFIC
TRANS	TRANSITION
TS	TOP OF SOIL
TW	TOP OF WALL
TYP	TYPICAL
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
VAR	VARIES OR VARIABLE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
W	WEST
WM	WATER METER OR WATER MAIN
WQF	WATER QUALITY FLOW
WS	WATER SERVICE
XFMR	TRANSFORMER
XING	CROSSING

GENERAL NOTES:

1. STANDARDS AND PLANS

A. UNLESS SHOWN OR SPECIFIED OTHERWISE, ALL CONSTRUCTION AND MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST REVISION OF THE YOLO COUNTY STANDARD SPECIFICATIONS AND DETAILS, WITH THESE PLANS, THE PROJECT SPECIFICATIONS, AND WITH THE LATEST EDITIONS OF THE STATE "CALTRANS" STANDARD SPECIFICATIONS AND STANDARD PLANS, SIGN SPECIFICATION SHEETS AND TRAFFIC MANUAL AND THE LATEST EDITION OF THE CALIFORNIA MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES). THE CONTRACTOR SHALL OBTAIN AND USE ALL APPLICABLE ADDENDUMS.

B. IT IS INTENDED THAT THESE PLANS AND SPECIFICATIONS REQUIRE ALL LABOR AND MATERIALS NECESSARY AND PROPER FOR THE WORK CONTEMPLATED AND THAT THE WORK BE COMPLETED IN ACCORDANCE WITH THEIR TRUE INTENT AND PURPOSE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY REGARDING ANY DISCREPANCIES OR AMBIGUITIES WHICH MAY EXIST IN THE PLANS OR SPECIFICATIONS. THE ENGINEER'S INTERPRETATION OR CORRECTION THEREOF SHALL BE CONCLUSIVE.

C. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE ALL NECESSARY SITE INSPECTIONS AND DETERMINE ALL ITEMS OF WORK NOT SPECIFICALLY SHOWN AS BID ITEMS, OR OTHERWISE INDICATED, PRIOR TO BIDDING. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL ITEMS OF WORK NECESSARY TO PERFORM A COMPLETE AND ACCEPTABLE JOB.

D. WHERE THE PLANS OR SPECIFICATIONS DESCRIBE PORTIONS OF THE WORK IN GENERAL TERMS BUT NOT IN COMPLETE DETAIL, IT IS UNDERSTOOD THAT ONLY THE BEST GENERAL PRACTICE IS TO PREVAIL AND THAT ONLY MATERIALS AND WORKMANSHIP OF THE FIRST QUALITY ARE TO BE USED.

E. THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS AND THE CITY.

F. THE MAP SHOWN ON TITLE SHEET IS FOR GENERAL INFORMATION ONLY AND IS NOT INTENDED TO REPLACE THE DETAILED SHEETS ELSEWHERE IN THIS SET OF PLANS.

2. EXISTING UTILITIES AND COORDINATION OF WORK

A. THE TYPES, LOCATIONS, SIZES AND/OR DEPTHS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE IMPROVEMENT PLANS WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE TYPES, EXTENT, SIZES, LOCATIONS AND DEPTHS OF SUCH UNDERGROUND UTILITIES. LAUGENOUR AND MEIKLE ASSUMES NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF ITS DELINEATION OF SUCH UNDERGROUND UTILITIES, NOR FOR THE EXISTENCE OF OTHER BURIED OBJECTS OR UTILITIES WHICH MAY BE ENCOUNTERED BUT WHICH ARE NOT SHOWN ON THESE DRAWINGS.

B. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO ANY EXCAVATION. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE UTILITY COMPANIES INVOLVED AND REQUESTING A VISUAL VERIFICATION OF THE LOCATIONS OF THEIR UNDERGROUND FACILITIES. THE INSPECTOR AND THE ENGINEER SHALL BE NOTIFIED BY THE CONTRACTOR OF THE SCHEDULED TIME AND PLACE OF SUCH VISUAL VERIFICATION TO ENABLE THEM TO HAVE REPRESENTATIVES PRESENT. IF IN THE OPINION OF THE INSPECTOR A CONFLICT EXISTS, THEN THE ENGINEER SHALL: (1) MAKE ANY NEEDED GRADE AND/OR ALIGNMENT ADJUSTMENTS AND REVISE THE PLANS ACCORDINGLY; AND/OR (2) CONTACT THE UTILITY PARTY RESPONSIBLE FOR THE RELOCATION OF THE CONFLICTING FACILITY.

C. YOLO COUNTY IS A MEMBER OF THE UNDERGROUND SERVICE ALERT (U.S.A.) ONE-CALL PROGRAM. THE CONTRACTOR OR ANY SUBCONTRACTOR FOR THIS CONTRACT SHALL NOTIFY MEMBERS OF U.S.A. 48 HOURS IN ADVANCE OF PERFORMING EXCAVATION WORK BY CALLING THE TOLL-FREE NUMBER 1-800-642-2444. EXCAVATION IS DEFINED AS BEING MORE THAN 18 INCHES IN DEPTH BELOW THE EXISTING SURFACE.

D. UTILITY COMPANIES ARE PREPARING TO RELOCATE EXISTING FACILITIES AND/OR CONSTRUCT NEW FACILITIES WITHIN PORTIONS OF THE WORK AREA. THE CONTRACTOR SHALL COORDINATE ALL HIS WORK WITH PROJECT RELATED WORK TO BE PERFORMED BY UTILITY COMPANIES (INCLUDING GAS, ELECTRIC, TELEPHONE AND CABLE TV) AND BY OTHER PROJECT CONTRACTORS INCLUDING BUILDING, PLUMBING, LANDSCAPING, ELECTRIC AND FIRE PROTECTION. THE CONTRACTOR SHALL AFFORD THESE UTILITY COMPANIES AND CONTRACTORS REASONABLE OPPORTUNITY FOR THE EXECUTION OF THEIR WORK AND SHALL COORDINATE HIS WORK WITH THEIRS. IN THE EVENT OF DELAYS OR CHANGES IN THE WORK BEYOND THE CONTROL OF THE CONTRACTOR, TIME EXTENSIONS AND NECESSARY CHANGES SHALL BE MADE AS PROVIDED IN THE CONTRACT.

E. ANY EXISTING UNDERGROUND UTILITY (INCLUDING PIPELINES) WHICH IS TO BE EXTENDED, WHICH IS THE CONNECTION POINT FOR NEW UNDERGROUND UTILITIES, OR WHICH NEW FACILITIES CROSS, SHALL BE EXPOSED BY THE CONTRACTOR PRIOR TO CONSTRUCTION STAKING FOR PLACEMENT OF THE NEW UTILITIES. COST OF SUCH EXCAVATION AND SUBSEQUENT BACKFILL SHALL BE INCLUDED IN THE PRICES PAID FOR THE VARIOUS ITEMS OF WORK. THE ELEVATIONS AND LOCATIONS OF THE EXISTING UTILITIES WILL BE CHECKED FOR POSSIBLE CONFLICTS WITH PLANS BY THE PUBLIC WORKS INSPECTOR AND THE ENGINEER. IF IN THE OPINION OF THE INSPECTOR A CONFLICT EXISTS, THEN THE ENGINEER SHALL: (1) MAKE ANY NEEDED GRADE AND/OR ALIGNMENT ADJUSTMENTS AND REVISE THE PLANS ACCORDINGLY; AND/OR (2) CONTACT THE UTILITY PARTY RESPONSIBLE FOR THE RELOCATION OF THE CONFLICTING FACILITY.

3. CONSTRUCTION STAKING

A. CONSTRUCTION STAKING SHALL BE FURNISHED BY THE CONTRACTOR. THE CONTRACTOR WILL BE PROVIDED WITH AN AUTOCAD FILE THAT WILL CONTAIN CONTROL POINTS FROM THE ORIGINAL SURVEY THAT CAN BE UTILIZED TO ASSIST IN THE CONSTRUCTION STAKING OF THE IMPROVEMENTS AFTER SIGNING A DISCLAIMER STATEMENT FROM THE ENGINEER. THE CONTRACTOR SHALL MAKE OR FURNISH ALL SURVEYS AND SET ALL CONSTRUCTION STAKES NECESSARY FOR THE COMPLETION OF THE WORK.

B. THESE IMPROVEMENT PLANS HAVE BEEN PREPARED WITH THE INTENT THAT LAUGENOUR AND MEIKLE WILL BE PERFORMING THE CONSTRUCTION STAKING FOR THE COMPLETE PROJECT. IF, HOWEVER, ANOTHER ENGINEER AND/OR SURVEY FIRM SHOULD BE EMPLOYED TO USE THESE PLANS FOR THE PURPOSE OF CONSTRUCTION STAKING, NOTICE IS HEREBY GIVEN THAT LAUGENOUR AND MEIKLE WILL NOT ASSUME ANY RESPONSIBILITY FOR ANY ERRORS OR OMISSIONS WHICH MIGHT OCCUR AND WHICH COULD HAVE BEEN AVOIDED, CORRECTED OR MITIGATED IF LAUGENOUR AND MEIKLE HAD PERFORMED THE CONSTRUCTION STAKING WORK.

4. FIELD VERIFICATION

WHERE NEW IMPROVEMENTS (CURB, GUTTER, SIDEWALK, PAVEMENT, ASPHALT, UTILITIES, ETC.) ARE DESIGNATED TO MATCH GRADE (±) AT EXISTING IMPROVEMENTS, THE CONTRACTOR'S SURVEYOR SHALL VERIFY THE MATCH POINT GRADES, REPORT ANY DISCREPANCIES AND ADJUST GRADES TO MATCH EXISTING.

5. CONFLICTS

THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO PERFORMING ANY CORRECTIVE ACTION REQUIRED DUE TO UNFORESEEN CONFLICTS IN THE IMPROVEMENT PLANS OR DUE TO POSSIBLE STAKING ERRORS. THE ENGINEER ASSUMES NO LIABILITY FOR THE COST OR DESIGN OF ANY MODIFICATION PERFORMED WITHOUT SUCH NOTIFICATION, AND ALSO ASSUMES NO LIABILITY FOR STAKING PROVIDED BY OTHERS.

6. CONTROL POINTS AND SURVEY MONUMENTS

A. CERTAIN CONTROL POINTS HAVE BEEN SET BY THE ENGINEER, OR ITS REPRESENTATIVE, WHICH ARE CRITICAL TO THE CONSTRUCTION STAKING OF THE PROJECT. THESE POINTS WILL BE DESIGNATED ON THE IMPROVEMENT PLANS. THE CONSTRUCTION SHALL NOT DISTURB THE CONTROL POINTS IN ANY MANNER. IF IT BECOMES NECESSARY TO REMOVE SAID CONTROL POINTS DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE LICENSED SURVEYOR RESPONSIBLE FOR CONSTRUCTION STAKING AND SHALL REMOVE AND REPLACE AS NOTED BELOW.

B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND REPLACEMENT OF ALL EXISTING SURVEY MONUMENTS OF RECORDS AND OTHER CONTROL MARKERS DURING CONSTRUCTION. ALL MONUMENTS OR MARKERS DESTROYED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. WHEN THE LOCATION OF AN EXISTING MONUMENT CONFLICTS WITH PROPOSED WORK, THE CONTRACTOR SHALL HAVE A LICENSED LAND SURVEYOR REFERENCE THE MONUMENT PRIOR TO REMOVAL. AFTER THE MONUMENT HAS BEEN REFERENCED THE CONTRACTOR MAY REMOVE THE MONUMENT AND LATER HAVE IT REPLACED BY A LICENSED LAND SURVEYOR WHO SHALL FILE A CORNER RECORD WITH THE COUNTY.

7. OBSTRUCTIONS

A. THE CONTRACTOR SHALL REMOVE ALL OBSTRUCTIONS, BOTH ABOVE GROUND AND UNDERGROUND, EXCEPT AS NOTED IN ITEM 2 ABOVE, AS NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS. WHEN FEASIBLE SUCH WORK SHALL BE COMPLETED PRIOR TO GRADING.

B. ALL UNSUITABLE AND SURPLUS MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE UNLESS SPECIFIED OTHERWISE.

C. TREE AND STUMP REMOVAL SHALL INCLUDE REMOVAL OF THE MAJOR ROOT SYSTEM TO THE SATISFACTION OF THE CITY ENGINEER. SUCH REMOVAL SHALL BE PERFORMED WITHOUT DAMAGE TO ADJACENT TREES THAT ARE TO BE PRESERVED. STUMP REMOVAL WITHIN THE DRIP LINE OF A TREE TO BE PRESERVED SHALL BE BY GRINDING METHOD, TO A DEPTH OF 0.5 FEET BELOW ADJACENT GRADE.

D. ALL WATER WELLS AND SEPTIC TANK SYSTEMS FOUND ON THE SITE SHALL BE DESTROYED IN ACCORDANCE WITH COUNTY HEALTH DEPARTMENT STANDARDS AND PERMITS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ALL SUCH LOCATIONS PRIOR TO COMMENCING WORK IN THESE AREAS.

8. PUBLIC SAFETY AND TRAFFIC CONTROL

A. CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL CURRENTLY APPLICABLE SAFETY LAWS OF ALL JURISDICTIONAL BODIES. THE CONTRACTOR IS DIRECTED TO CONTACT THE STATE INDUSTRIAL RELATIONS DEPARTMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL BARRICADES, SAFETY DEVICES, AND CONTROL OF TRAFFIC WITHIN AND AROUND THE CONSTRUCTION AREA. FOR ALL TRENCH EXCAVATIONS 5 FEET OR MORE IN DEPTH, THE CONTRACTOR SHALL OBTAIN A PERMIT FROM THE DIVISION OF INDUSTRIAL SAFETY PRIOR TO BEGINNING ANY EXCAVATION.

B. PUBLIC SAFETY AND TRAFFIC CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH THE CALTRANS TRAFFIC MANUAL (SEE CHAPTER 5, MANUAL OF TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS) AND AS DIRECTED BY THE CITY ENGINEER. ANY LANE CLOSURES (VEHICLE OR BICYCLE) SHALL BE APPROVED BY THE CITY ENGINEER. SAFE VEHICULAR AND PEDESTRIAN ACCESS SHALL BE PROVIDED AT ALL TIMES DURING CONSTRUCTION.

C. THE CONTRACTOR SHALL MAINTAIN CONTINUOUS TEMPORARY CHANNELIZING DEVICES, AND FLAGGING OR FLASHING DEVICES AS NEEDED, SPACED AT INTERVALS NOT TO EXCEED 50 FEET, WHENEVER THE WORK AREA IS ADJACENT TO AN EXISTING TRAFFIC LANE AND THERE IS A PAVEMENT CUT, TRENCH OR DITCH WHICH IS OVER 2 INCHES IN DEPTH. IF THE CUT, TRENCH OR DITCH IS MORE THAN 10 FEET FROM A TRAFFIC LANE, THEN THE SPACING MAY BE GREATER, PROVIDED THAT IT DOES NOT EXCEED 200 FEET.

D. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

E. IN THE EVENT THAT ANY STREET OR PORTION OF ANY STREET WILL BE CLOSED TO EMERGENCY TRAFFIC, THE CONTRACTOR SHALL NOTIFY YOLO COUNTY DISPATCH AT (530)666-8900 IMMEDIATELY PRIOR TO CLOSURE AND IMMEDIATELY AFTER REOPENING OF SAID STREET OR STREET PORTION.

9. PERMITS, LICENSES AND REGULATIONS

A. PERMITS AND LICENSES OF A TEMPORARY NATURE AND NECESSARY FOR THE PROSECUTION OF THE WORK SHALL BE SECURED AND PAID FOR BY THE CONTRACTOR. PERMITS, LICENSES AND EASEMENTS FOR PERMANENT STRUCTURES OR PERMANENT CHANGES IN EXISTING FACILITIES SHALL BE SECURED AND PAID FOR BY THE OWNER UNLESS OTHERWISE SPECIFIED.

B. THE CONTRACTOR SHALL NOTIFY THE CITY AT LEAST 48 HOURS PRIOR TO THE INTENT TO COMMENCE WORK.

C. ALL WATER WELLS AND SEPTIC TANK SYSTEMS FOUND ON THE SITE SHALL BE DESTROYED IN ACCORDANCE WITH COUNTY HEALTH DEPARTMENT STANDARDS. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS FROM THE COUNTY.

D. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES AND REGULATIONS BEARING ON THE CONDUCT OF THE WORK AS SHOWN ON THE PLANS AND DESCRIBED IN THE SPECIFICATIONS. HE SHALL PROMPTLY NOTIFY THE ENGINEER IN WRITING OF ANY SPECIFICATION AT VARIANCE THEREWITH AND ANY NECESSARY CHANGES SHALL BE ADJUSTED AS PROVIDED IN THE CONTRACT FOR CHANGES IN THE WORK. IF THE CONTRACTOR PERFORMS ANY WORK CONTRARY TO SUCH LAWS, ORDINANCES, RULES AND REGULATIONS HE SHALL BEAR ALL COSTS ARISING THEREFROM.

10. STATIONING AND DIMENSIONING

ALL STATIONS REFER TO DISTANCES ALONG STREET CENTER LINE UNLESS INDICATED OTHERWISE. ALL STATIONS OFF CENTER LINE ARE PERPENDICULAR TO OR RADIALLY OPPOSITE CENTER LINE STATIONS. STREET FRONTAGE PROPERTY LINES COINCIDE WITH BACK EDGE OF WALK ALIGNMENT UNLESS INDICATED OTHERWISE. UNLESS NOTED OTHERWISE, DIMENSIONS TO CURBS REFER TO TOP FACE OF CURB AND DIMENSIONS TO BUILDINGS REFER TO FACE OF EXTERIOR WALL.

11. EARTHWORK

A. ALL EARTHWORK ACTIVITIES, INCLUDING EXCAVATION, GRADING, SCARIFYING, MOISTURIZING, FILL PLACEMENT, COMPACTION, LIME TREATMENT, ETC., SHALL BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED IN THE PROJECT GEOTECHNICAL ENGINEERING REPORT (SEE TITLE SHEET) AND IN CONFORMANCE WITH THE CITY STANDARD SPECIFICATIONS AND WITH THE GRADING PLAN.

B. THE GEOTECHNICAL ENGINEER SHALL OBSERVE THE GRADING ACTIVITIES AND PERFORM COMPACTION TESTING FOR THIS PROJECT. THE CONTRACTOR SHALL PROVIDE AT LEAST 24 HOURS NOTICE TO THE GEOTECHNICAL ENGINEER OF THE NEED FOR OBSERVATION AND TESTING SERVICES. THE PROJECT OWNER WILL PAY FOR THE COST OF PROVIDING THESE SERVICES; HOWEVER, IF SAMPLES OF MATERIALS ARE SUBMITTED WHICH FAIL TO PASS THE SPECIFIED TESTS OR IF WORK IS PERFORMED WHICH FAILS TO MEET THESE SPECIFICATIONS, THE CONTRACTOR SHALL PAY FOR ALL SUBSEQUENT RE-TESTS AND RE-INSPECTIONS.

C. EARTHWORK SHALL INCLUDE ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO CONSTRUCT THE SITE TO THE GRADES SHOWN. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE DISPOSAL OF EXCESS EXCAVATED MATERIAL OR FOR THE IMPORT OF MATERIAL. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN ADVANCE OF ANY CHANGES HE MAY DEEM NECESSARY TO OBTAIN BALANCED CUT-FILL GRADING.

D. ALL CUT SLOPES SHALL BE ROUNDED AT THE "BREAK" SO THAT THEY BLEND WITH THE NATURAL GROUND CONTOUR.

E. THE CONTRACTOR SHALL APPLY EITHER WATER FOR THE ALLEVIATION OR PREVENTION OF DUST NUISANCE AS DIRECTED BY THE ENGINEER.

F. EXCAVATION AND EMBANKMENT SIDE SLOPES SHOWN ON THE PLANS AS A RATIO, E.G. 4:1, REFER TO THE RATIO OF HORIZONTAL TO VERTICAL DISTANCES. "MINIMUM" SLOPE MEANS "NOT FLATTER THAN", AND "MAXIMUM" SLOPE MEANS "NOT STEEPER THAN". ALL EMBANKMENT AND EXCAVATION SLOPES SHALL BE 4:1 UNLESS NOTED OTHERWISE.

G. TO ACCOMMODATE TRENCH SPOIL, THE CONTRACTOR'S GRADING SHALL INCLUDE UNDERCUTTING OF STREETS AS APPROPRIATE, OR SOME OTHER METHOD APPROVED BY THE ENGINEER.

H. ALL SECTIONS AND DETAILS SHOWN IN THESE PLANS ARE SOLELY INTENDED TO BE REPRESENTATIVE OF THE GRADING AND DRAINAGE DESIGN FOR THE PROJECT. IN NO WAY ARE THEY INTENDED TO REFLECT THE ACTUAL CONSTRUCTION ELEMENTS OF THE FENCING, WALLS, TRASH ENCLOSURE, ETC., UNLESS SPECIFICALLY CALLED OUT AS "CONSTRUCT" OR "PLACE" IN THESE PLANS.

I. ALLOWABLE SUBGRADE GRADING TOLERANCE IS PLUS OR MINUS 0.04' OF THE ELEVATIONS SHOWN HEREON FOR BUILDING PAD, PAVING, OR CONCRETE AREAS. FINAL SURFACE TOLERANCE IS PLUS OR MINUS 0.02'. ADA AREAS SHALL BE IN FULL COMPLIANCE AND SHALL NOT EXCEED MAXIMUM SLOPE REQUIREMENTS.

J. EROSION CONTROL MEASURES SHALL BE IMPLEMENTED DURING PROJECT CONSTRUCTION. COMPLY WITH EROSION AND SEDIMENTATION CONTROL PLAN, BMP AND YOLO COUNTY STANDARDS.

K. IF GRADING AND DRAINAGE CONSTRUCTION IS NOT COMPLETE DURING THE PERIOD FROM SEPTEMBER 1 TO MAY 15, THEN THE CONTRACTOR SHALL:

i. PROVIDE EROSION PROTECTION ON SLOPES THAT ARE 10:1 OR STEEPER AND IN SWALES THAT ARE 2% OR STEEPER.

ii. GRADE GUTTER SAG POINTS TO DRAIN.

iii. PROVIDE SILT CATCHMENTS TO PREVENT SEDIMENTATION IN EXISTING STORM DRAIN SYSTEMS.

iv. CLEAN DOWNSTREAM PIPES AS DIRECTED BY THE CITY ENGINEER.

v. CLEAN AND MAINTAIN ALL STREETS AND SIDEWALKS AS DIRECTED BY THE CITY ENGINEER.

L. SUBGRADE PREPARATION FOR ALL PAVEMENT SECTIONS AND FOR CURB, GUTTER AND SIDEWALK SHALL INCLUDE COMPACTION IN AT LEAST THE TOP 6 INCHES SHOULD BE UNIFORMLY COMPACTED TO AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY AT A MOISTURE CONTENT OF AT LEAST TWO PERCENTAGE (2%) POINTS ABOVE THE OPTIMUM MOISTURE CONTENT.

M. ALL STREET ELEVATIONS SHOWN ARE FOR TOP OF CURB (TC) UNLESS OTHERWISE SPECIFIED.

N. THE TOP 8 INCHES (MINIMUM) OF ALL LANDSCAPED AREAS SHALL BE CLEAN SOIL.

O. CLEARING, GRUBBING AND PREPARING IMPROVEMENT AREAS:

i. ALL RUBBLE AND RUBBISH AND OTHER ITEMS ENCOUNTERED DURING SITE WORK AND DEEMED UNACCEPTABLE BY THE GEOTECHNICAL ENGINEER, SHALL BE REMOVED AND DISPOSED OF SO AS TO LEAVE THE DISTURBED AREAS WITH A NEAT AND FINISHED APPEARANCE, FREE FROM UNSIGHTLY DEBRIS. EXCAVATIONS AND DEPRESSIONS RESULTING FROM THE REMOVAL OF SUCH ITEMS, AS WELL AS EXISTING EXCAVATIONS OR LOOSE SOIL DEPOSITS, AS DETERMINED BY THE GEOTECHNICAL ENGINEER, SHALL BE CLEANED OUT TO FIRM, UNDISTURBED SOIL AND BACKFILLED WITH SUITABLE MATERIALS IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.

ii. THE SURFACES RECEIVING FILL SHALL BE STRIPPED OF VEGETATION OR THEY SHALL BE THOROUGHLY DISCED PROVIDED THAT A COMPACTABLE MIXTURE OF SOIL CONTAINING MINOR AMOUNTS OF VEGETATION CAN BE ATTAINED WHICH IS FREE OF CLUMPS, LAYERS OR POCKETS OF VEGETATION. IF PROPER COMPACTION OF THE DISTURBED SURFACE SOILS CANNOT BE ACHIEVED, THOSE MATERIALS SHALL BE EXCAVATED, TO A DEPTH SATISFACTORY TO THE GEOTECHNICAL ENGINEER, SO THAT A FIRM BASE FOR SUPPORT OF ENGINEERED FILL CAN BE ATTAINED.

iii. ALL LOOSE AND/OR SATURATED MATERIALS SHALL BE OVER-EXCAVATED TO FIRM SOIL, AS DETERMINED BY THE GEOTECHNICAL ENGINEER, AND THE RESULTING EXCAVATIONS SHALL BE BACKFILLED WITH SUITABLE MATERIALS IN ACCORDANCE WITH THESE SPECIFICATIONS.

iv. THE SURFACES UPON WHICH FILL IS TO BE PLACED SHALL BE PLOWED OR SCARIFIED TO A DEPTH OF AT LEAST 12 INCHES, UNTIL THE SURFACE IS FREE FROM RUTS, MOUNDS OR OTHER UNEVEN FEATURES WHICH WOULD TEND TO PREVENT UNIFORM COMPACTION BY THE SELECTED EQUIPMENT.

v. WHEN THE MOISTURE CONTENT OF THE SUBGRADE IS LESS THAN TWO PERCENTAGE POINTS (2%) ABOVE THE OPTIMUM, AS DEFINED BY THE ASTM D1557-91 COMPACTION TEST, WATER SHALL BE ADDED UNTIL THE PROPER MOISTURE CONTENT IS ACHIEVED.

vi. WHEN THE MOISTURE CONTENT OF THE SUBGRADE IS TOO HIGH TO PERMIT THE SPECIFIED COMPACTION TO BE ACHIEVED, THE SUBGRADE SHALL BE AERATED BY BLADING OR OTHER METHODS UNTIL THE MOISTURE CONTENT IS SATISFACTORY FOR COMPACTION.

vii. AFTER THE FOUNDATIONS FOR FILL HAVE BEEN CLEARED, MOISTURE CONDITIONED, AND PLOWED OR SCARIFIED, THEY SHALL BE RECOMPACTED IN PLACE TO A DEPTH OF AT LEAST 12 INCHES TO A MINIMUM OF 90 PERCENT OF THE ASTM D1557-91 MAXIMUM DRY DENSITY.

viii. ANY UNSUITABLE MATERIAL ENCOUNTERED BELOW THE SUBGRADE SHALL BE BROUGHT TO THE ATTENTION OF AND REMOVED AT THE DIRECTION OF THE ENGINEER. UNSUITABLE MATERIAL IS DEFINED AS MATERIAL THE ENGINEER DETERMINES TO BE:

- OF SUCH UNSTABLE NATURE AS TO BE INCAPABLE OF BEING COMPACTED TO SPECIFIED DENSITY USING ORDINARY METHODS AT OPTIMUM MOISTURE CONTENT; OR
- TOO WET TO BE PROPERLY COMPACTED AND CIRCUMSTANCES PREVENT SUITABLE IN-PLACE DRYING PRIOR TO INCORPORATION INTO THE WORK; OR
- OTHERWISE UNSUITABLE FOR THE PLANNED USE.

ix. THE PRESENCE OF EXCESSIVE MOISTURE IN A MATERIAL IS NOT, BY ITSELF, SUFFICIENT CAUSE FOR DETERMINING THAT THE MATERIAL IS UNSUITABLE.

x. THE CONTRACTOR SHALL USE EXTRA CARE IN EXCAVATING UNSUITABLE MATERIAL SO AS NOT TO AGGRAVATE THE CONDITION. IF, IN THE OPINION OF THE GEOTECHNICAL ENGINEER, THE CONTRACTOR'S METHODS FOR EXCAVATING ARE INCREASING THE AMOUNT OF UNSUITABLE MATERIAL REQUIRED TO BE EXCAVATED, THE GEOTECHNICAL ENGINEER WILL REQUIRE THE CONTRACTOR TO TAKE THE NECESSARY STEPS TO CORRECT THE CONDITION.

xi. BACKFILL TO REPLACE THE REMOVED UNSUITABLE MATERIAL SHALL BE CL. II AB COMPACTED TO 90% MRC.

xii. REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL, INCLUDING THE ADDITIONAL EXCAVATION GREATER THAN THAT REQUIRED FOR PREPARATION OF SUBGRADE, AND SUBSEQUENT BACKFILLING SHALL BE COMPUTED AND PAID FOR AT THE CONTRACT UNIT PRICE BID PER CUBIC YARD OF UNSUITABLE SUBGRADE MATERIAL REMOVAL, DISPOSAL AND BACKFILL. THE QUANTITY SHOWN FOR THIS ITEM IN THE PROPOSAL SHALL BE CONSIDERED AS APPROXIMATE AND IS INDICATED FOR BID COMPARISON ONLY, AND NO GUARANTEE IS MADE OR IMPLIED THAT THE QUANTITY SHOWN WILL NOT BE REDUCED OR INCREASED OR DELETED AS MAY BE REQUIRED BY THE ENGINEER.

P. CONSTRUCTION OF UNTREATED SUBGRADES:

i. THE SELECTED SOIL FILL MATERIAL SHALL BE PLACED IN LAYERS WHICH, WHEN COMPACTED, DO NOT EXCEED 6 INCHES IN THICKNESS. EACH LAYER SHALL BE SPREAD EVENLY AND SHALL BE THOROUGHLY MIXED DURING THE SPREADING TO PROMOTE UNIFORMITY OF MATERIAL IN EACH LAYER.

ii. WHEN THE MOISTURE CONTENT OF THE FILL MATERIAL IS LESS THAN OPTIMUM MOISTURE, AS DEFINED BY THE ASTM D1557-91 COMPACTION TEST, WATER SHALL BE ADDED UNTIL THE PROPER MOISTURE CONTENT IS ACHIEVED.

iii. WHEN THE MOISTURE CONTENT OF THE FILL MATERIAL IS TOO HIGH TO PERMIT THE SPECIFIED DEGREE OF COMPACTION TO BE ACHIEVED, THE FILL MATERIAL SHALL BE AERATED BY BLADING OR OTHER METHODS UNTIL THE MOISTURE CONTENT IS SATISFACTORY.

iv. AFTER EACH LAYER HAS BEEN PLACED, MIXED AND SPREAD EVENLY, IT SHALL BE THOROUGHLY COMPACTED TO NOT LESS THAN 90 PERCENT OF MAXIMUM DRY DENSITY AS DETERMINED BY THE ASTM D1557-91 COMPACTION TEST. COMPACTION SHALL BE UNDERTAKEN WITH EQUIPMENT CAPABLE OF ACHIEVING THE SPECIFIED DENSITY AND SHALL BE ACCOMPLISHED WHILE THE FILL MATERIAL IS AT THE REQUIRED MOISTURE CONTENT. EACH LAYER SHALL BE COMPACTED OVER ITS ENTIRE AREA UNTIL THE DESIRED DENSITY HAS BEEN OBTAINED.

v. THE FILL OPERATIONS SHALL BE CONTINUED UNTIL THE FILLS HAVE BEEN BROUGHT TO THE SLOPES AND GRADES SHOWN ON THE DRAWINGS.

Q. THE UPPER 12 INCHES OF ANY UNTREATED FINAL SUBGRADES SHALL BE UNIFORMLY COMPACTED TO AT LEAST 90% OF THE ASTM D1557-91 MAXIMUM DRY DENSITY REGARDLESS OF WHETHER FINAL SUBGRADE ELEVATION IS ATTAINED BY FILLING, EXCAVATION OR LEFT AT EXISTING GRADE.

R. SOIL WITHIN 1' OF THE BACK OF CURBS OR SIDEWALK SHALL BE COMPACTED TO 95% MRC FOR THE FULL DEPTH OF THE CURB.

S. IF ANY IMPORT MATERIAL IS REQUIRED, IT SHALL BE APPROVED BY THE SOILS ENGINEER PRIOR TO HAULING IT TO THE SITE.

T. SUBGRADE SOILS BENEATH SLAB-ON-GRADE FLOORS SHALL BE IN A SATURATED CONDITION WHEN SLAB CONCRETE IS PLACED, AS REQUIRED BY THE GEOTECHNICAL REPORT.

12. CONCRETE CONSTRUCTION

A. PEDESTRIAN RAMPS SHALL BE CONSTRUCTED AT THE LOCATIONS INDICATED ON THESE PLANS. PEDESTRIAN RAMP AND WALK CONSTRUCTION SHALL COMPLY WITH THE STATE ACCESSIBILITY STANDARDS.

B. ALL CURB RETURNS SHALL BE VERTICAL CURB AND GUTTER.

C. AS SOON AS THE SURFACE OF THE GUTTER HAS SET SUFFICIENTLY TO PERMIT THE INTRODUCTION OF A SHALLOW STREAM OF WATER WITHOUT CAUSING DAMAGE TO THE GUTTER SURFACE, SAME SHALL BE APPLIED AND ALL FLOWLINE IRREGULARITIES SHALL BE CORRECTED BEFORE THE CONCRETE SURFACE HAS TAKEN INITIAL SET.

D. CONCRETE CONSTRUCTION SHALL COMPLY WITH CALTRANS STANDARD SPECIFICATION SECTIONS 73, 90 AND 52, UNLESS SPECIFIED OTHERWISE.

E. PRIOR TO PLACEMENT OF CONCRETE, SOIL SUBGRADE SHALL BE MOISTURE CONDITIONED TO AN OVER-OPTIMUM MOISTURE CONTENT. COORDINATE WITH GEOTECHNICAL ENGINEER.

F. PRIOR TO CONCRETE CONSTRUCTION THE CONTRACTOR SHALL SUBMIT FOR OWNER'S APPROVAL A COPY OF THE JOINT PLAN, DETAILING THE TYPES AND LOCATIONS OF CONSTRUCTION, CONTROL AND EXPANSION JOINTS.

G. CONCRETE CONSTRUCTION, INCLUDING SUBGRADE PREPARATION, SHALL CONFORM TO THE PROJECT GEOTECHNICAL REPORT.

H. REFER TO "EARTHWORK" NOTE FOR SUBGRADE PREPARATION REQUIREMENTS. COMPACTED SUBGRADE SHALL EXTEND TO 1 MINIMUM FOOT BEYOND THE BACK OF CURB OR SIDEWALK.

I. THE GRADES SHOWN ON THE PLANS FOR SIDEWALKS OR ANY GRADES RELATING TO THE SIDEWALKS ARE INTENDED TO INDICATE THE FOLLOWING MAXIMUM SLOPES:

- CROSS-SLOPE PERPENDICULAR TO THE DIRECTION OF TRAVEL: 2.00% (50:1)
- SLOPE PARALLEL TO THE DIRECTION OF TRAVEL: 5.00% (20:1)
- THE GRADES SHOWN ON PLANS ARE INTENDED TO BE USED AS A GUIDE ONLY.

i. PRIOR TO SETTING FORMS, THE CONTRACTOR SHALL CONFIRM THAT THE GRADES INDICATED WILL RESULT IN SLOPES CONSISTENT WITH THE ABOVE CRITERIA. SHOULD ANY DISCREPANCY APPEAR TO EXIST, THE CONTRACTOR SHALL ADJUST THE GRADES TO CONFORM TO THE ABOVE CRITERIA AND SHALL INFORM THE ENGINEER OF SUCH CHANGES.

ii. PRIOR TO PLACING CONCRETE THE CONTRACTOR SHALL CHECK THE LEVEL OF THE FORMS TO CONFIRM THAT THE AS-BUILT CONCRETE SLOPES WILL CONFORM TO THE ABOVE CRITERIA AND HE SHALL PLACE THE CONCRETE ACCORDINGLY. IT IS RECOMMENDED THAT CONSTRUCTION TOLERANCES USED BY THE CONTRACTOR RESULT IN SLOPES SLIGHTLY FLATTER THAN THE ABOVE CRITERIA, NOT STEEPER; YET THE CONCRETE SURFACES MUST PROPERLY DRAIN. THE ABOVE CRITERIA AND THE SLOPES SUGGESTED BY THE GRADES INDICATED ON THE PLANS ARE INTENDED TO REPRESENT MAXIMUM SLOPES.

L. SIDEWALKS ARE TO BE SET FLUSH WITH THE TOP OF ABUTTING CURBS UNLESS NOTED OTHERWISE.

M. PCC PAVING SHALL BE CALTRANS CLASS "A" CONCRETE, AND SHALL BE CONSTRUCTED IN CONFORMANCE WITH CALTRANS STANDARD SPECIFICATIONS SECTION 90. REGULATE WATER CONTENT OF MIX SO THAT MAXIMUM PENETRATION DOES NOT EXCEED 1.5 INCHES. PAVEMENT SLABS TO BE DOWELED AT ALL JOINTS. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL SUBMIT FOR OWNER'S APPROVAL A COPY OF THE JOINT PLAN, DETAILING THE TYPES AND LOCATIONS OF CONSTRUCTION, CONTROL AND EXPANSION JOINTS.

N. SITE CONCRETE

i. CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI-318.

ii. POPORTLAND CEMENT SHALL COMPLY WITH ASTM C150 TYPE II (25% OF PORTLAND CEMENT SHALL BE REPLACED WITH COAL FLY ASH COMPLYING WITH ASTM C618).

iii. CONCRETE FOR EXTERIOR FLAT WORK ON GRADE SHALL HAVE MINIMUM STRENGTH = 3,500 PSI @ 28 DAYS AND MAXIMUM WATER-CEMENT RATIO = 0.50.

iv. MAXIMUM AGGREGATE SIZE SHALL BE 1".

v. CONCRETE MIX SHALL CONTAIN A MINIMUM OF 5 SACKS PER YARD.

vi. 7-DAY MINIMUM WET CURING TIME.

vii. A MECHANICAL VIBRATOR SHALL BE USED TO VIBRATE CONCRETE INTO PLACE.

viii. FORM REMOVAL AT 2 DAYS MINIMUM.

ix. REINFORCEMENT REQUIREMENTS:

- ALL DEFORMED BARS SHALL BE A-615 GRADE 60.
- LAP SPLICES SHALL BE 45 BAR DIAMETERS.

x. MINIMUM CONCRETE COVER OF REINFORCING SHALL BE 3" FOR CONCRETE CAST AGAINST EARTH, 2" FOR CONCRETE EXPOSED TO WEATHER.

REDUCED PLOT

DESIGNED BY TCT	REV.	DATE	DESCRIPTION	BY	APP'D.
DRAWN BY MSW					
CHECKED BY TCT					

LM LAUGENOUR AND MEIKLE
CIVIL ENGINEERING · LAND SURVEYING · PLANNING
608 COURT STREET, WOODLAND, CALIFORNIA 95695 · PHONE: (530) 662-1755
P.O. BOX 828, WOODLAND, CALIFORNIA 95776 · FAX: (530) 662-4602
BY
TODD C. TOMMERAASON
DATE 08/15/2024 P.E. 59277
REGISTERED PROFESSIONAL ENGINEER · TODD C. TOMMERAASON · No. 59277 · CIVIL · STATE OF CALIFORNIA

GRADING AND DRAINAGE PLANS
FOR
A1-PRE FAB, LLC

COUNTY OF YOLO CALIFORNIA

ABBREVIATIONS & GENERAL NOTES

SCALE NONE

DATE: 08/15/2024
JOB NO. 4707-1

C002

SHEET 2 OF 13

X:\Land Projects\4707-1\dwg\4707-1_C002.dwg

GENERAL NOTES:

13. PAVING

A. ALL ASPHALT CONCRETE SHALL CONFORM TO CALTRANS PERFORMANCE GRADED (PG) SYSTEM MEETING PG 64-10 FOR INLAND VALLEY AREAS. ASPHALTIC CONCRETE SHALL BE PLACED IN 3" MAXIMUM LIFTS. USE 3/4 INCH MAXIMUM, MEDIUM AGGREGATE. ALL PAVING WITHIN CITY R/W SHALL CONFORM TO CITY STANDARDS. ALL AGGREGATE BASE SHALL BE CALTRANS CLASS 2, 3/4 INCH MAXIMUM; OMIT PENETRATION TREATMENT. AGGREGATE SUBBASE SHALL BE CALTRANS CLASS 2. RELATIVE COMPACTION OF BASE AND SUBBASE MATERIALS SHALL NOT BE LESS THAN 95%.

B. ALL EXISTING PAVEMENT TO BE JOINED TO NEW PAVEMENT SHALL BE SAW CUT TO A NEAT, STRAIGHT LINE A MINIMUM OF ONE (1) FOOT FROM THE EXISTING EDGE OF PAVEMENT OR FIRM STABLE SURFACE AS DEFINED WITH FIELD INSPECTION. THE EXPOSED EDGE SHALL BE TACKED WITH ASPHALTIC EMULSION PRIOR TO PAVING. THE EXISTING BASE ROCK AND PAVEMENT SHALL BE REMOVED TO THE FULL DEPTH OF THE NEW SECTION.

A TACK COAT SHALL BE APPLIED TO ALL VERTICAL SURFACES OF EXISTING PAVEMENT, CURBS, GUTTERS AND CONSTRUCTION JOINTS IN THE SURFACING AGAINST WHICH ADDITIONAL MATERIAL IS TO BE PLACED, TO A PAVEMENT TO BE SURFACED, AND TO OTHER SURFACES DESIGNATED BY THE ENGINEER.

C. NO PAVEMENT WORK SHALL OCCUR WITHIN THE STREET RIGHT-OF-WAY PRIOR TO COMPLETION OF UTILITY POLE RELOCATION OR REMOVAL. THE CONTRACTOR SHALL COORDINATE WITH ALL OTHER WORK TO ENSURE THAT ALL UNDERGROUND UTILITIES ARE INSTALLED PRIOR TO PAVING.

D. NO SAND SEAL IS REQUIRED.

E. ASPHALT PLANING SHALL BE PERFORMED BY A GRINDING-PROCESS, COLD PLANING MACHINE WHICH SHALL HAVE A MINIMUM CUTTING WIDTH OF 72-INCHES AND SHALL BE OPERATED SO AS NOT TO PRODUCE FUMES OR SMOKE. THE COLD PLANING MACHINE SHALL BE CAPABLE OF PLANING THE PAVEMENT WITHOUT REQUIRING THE USE OF A HEATING DEVICE TO SOFTEN THE PAVEMENT DURING OR PRIOR TO THE PLANING OPERATION. THE CONTRACTOR SHALL MAINTAIN ALL CUTTING TEETH TO INSURE A UNIFORM AND CLEAN CUT.

IN ALL CASES, THE CROSS-SECTIONAL PLANED SURFACE SHALL NOT VARY BY MORE THAN 1/4-INCH WHEN COMPARED TO A STRAIGHT EDGE. THE OUTSIDE LINES OF THE PLANED AREA SHALL BE NEAT AND UNIFORM AND THE REMAINING ROAD SURFACE SHALL NOT BE DAMAGED IN ANY WAY. WHERE THE COLD PLANING MACHINE LEAVES A "SLIVER" OF UNGROUNDED PAVEMENT AT THE LIP OF GUTTER, THAT "SLIVER" SHALL BE REMOVED BY HAND PRIOR TO PLACEMENT OF THE NEW ASPHALT CONCRETE.

STREETS TO BE OVERLAID SHALL BE COLD PLANED TO THE DEPTH BELOW THE EXISTING LIP OF GUTTER SPECIFIED ON THE PLANS AND TAPERED TO ZERO AT 6 FEET FROM THE LIP OF GUTTER. BOTH ENDS OF THE STREETS TO BE OVERLAID AND SIDE STREETS SHALL ALSO BE COLD PLANED AS SHOWN ON THE PLANS (CONFORM PLANING). THE CONFORM PLANING SHALL BE MADE IN A STRAIGHT LINE PERPENDICULAR TO THE CENTER LINE OF THE STREET. ALL EXISTING ASPHALT ON CONCRETE GUTTERS ADJACENT TO PLANING SHALL ALSO BE REMOVED.

PAVEMENT FAILURE REPAIR WORK SHALL CONSIST OF GRINDING OUT EXISTING ASPHALT CONCRETE PAVEMENT AND REPLACING THE ASPHALT CONCRETE AS INDICATED ON THE PLANS. PAVEMENT REPAIRS WILL HAVE DIMENSIONS IN 6-FOOT INCREMENTS OF WIDTH TO ACCOMMODATE USE OF COLD PLANING MACHINE.

THE CONTRACTOR SHALL IMMEDIATELY REMOVE ALL PLANED MATERIAL FROM THE WORK SITE AND DISPOSE OF THE MATERIAL. THE REMOVAL CREW SHALL REMOVE ALL PLANED MATERIAL AND SWEEP CLEAN ALL PLANED AND ADJACENT SURFACES WHILE REMAINING WITHIN 100 FEET OF THE PLANER.

WHERE TRANSVERSE JOINTS ARE PLANED IN THE PAVEMENT AT CONFORM LINES, NO DROP-OFF SHALL REMAIN BETWEEN THE EXISTING PAVEMENT AND THE PLANED AREA WHEN THE PAVEMENT IS OPENED TO PUBLIC TRAFFIC. IF NEW ASPHALT CONCRETE HAS NOT BEEN PLACED TO THE LEVEL OF EXISTING PAVEMENT BEFORE THE PAVEMENT IS TO BE OPENED TO THE PUBLIC, A TEMPORARY PAVING RAMP SHALL BE PLACED TO THE LEVEL OF THE EXISTING PAVEMENT AND TAPERED ON A SLOPE OF 18:1 OR FLATTER TO THE LEVEL OF THE PLANED AREA. TEMPORARY RAMPS SHALL REMAIN IN PLACE NO LONGER THAN 7 DAYS.

ASPHALT CONCRETE FOR RAMPS SHALL BE COMMERCIAL QUALITY AND MAY BE SPREAD AND COMPACTED BY ANY METHOD THAT WILL PRODUCE A SMOOTH TRANSITION IN THE RIDING SURFACE. ASPHALT CONCRETE RAMPS SHALL BE COMPLETELY REMOVED, INCLUDING REMOVING ALL LOOSE MATERIAL FROM THE UNDERLYING SURFACE, BEFORE PLACING THE PERMANENT SURFACING. KRAFT PAPER, OR OTHER APPROVED BOND BREAKER, MAY BE PLACED UNDER THE TEMPORARY RAMPS TO FACILITATE THE REMOVAL OF THE RAMPS.

F. AC LIFT THICKNESS PER SECTION 39, CALTRANS STANDARD SPECIFICATIONS.

G. WHENEVER PAVEMENT IS BROKEN OR CUT IN THE INSTALLATION OF THE WORK COVERED BY THESE PLANS, THE PAVEMENT SHALL BE REPLACED, AFTER PROPER BACKFILLING, WITH PAVEMENT MATERIALS EQUAL TO OR BETTER THAN THE MATERIALS USED IN THE ORIGINAL PAVING. THE FINISHED PAVEMENT SHALL BE SUBJECT TO THE APPROVAL OF THE CITY ENGINEER OR CALTRANS, WHERE APPLICABLE.

H. ALL TRAFFIC DETECTOR LOOPS SHALL BE INSTALLED PRIOR TO PLACEMENT OF THE TOP LIFT OF AC PAVING. THERE SHALL BE NO CUTS IN THE TOP LIFT OF AC.

I. REFER TO GEOTECHNICAL REPORT FOR USE OF PULVERIZED CONCRETE AND ASPHALT PAVEMENT AS SUBBASE MATERIAL.

J. THE CONTRACTOR SHALL COORDINATE WITH ALL OTHER WORK TO ENSURE THAT ALL UNDERGROUND UTILITIES ARE INSTALLED PRIOR TO PAVING.

K. BETWEEN THE PLAN SPECIFIED GRADE CONTROL POINTS AND LINES, THE FINISHED PAVING SURFACE SHALL HAVE A UNIFORM SLOPE FROM SURFACE DRAINAGE HIGH POINTS AND RIDGE LINES TO GUTTERS AND DRAINAGE INLETS.

L. REFER TO "EARTHWORK" NOTES FOR SUBGRADE PREPARATION REQUIREMENTS.

M. WHEN NEW PAVING IS COMPLETED, IT SHALL BE SUBJECTED TO A FLOOD TEST SHOWING THE SURFACE FREE OF STANDING WATER OR PUDDLES. SHOULD ANY PUDDLING OCCUR, REPAVE IN SUCH A MANNER AS TO CORRECT THE PROBLEM. METHOD OF REPAVING SHALL BE SUBJECT TO THE ENGINEER'S APPROVAL.

13. LANSCAPING

A. FINISHED GRADE SHOWN ON CIVIL PLANS IS TOP OF FINISHED LANDSCAPE MATERIAL. ALL LANDSCAPE AREAS SHALL BE GRADED TO ACCOMMODATE THICKNESS OF LANDSCAPE MATERIALS SUCH THAT TOP OF LANDSCAPE MATERIALS DOES NOT BLOCK DRAINAGE.

B. AREAS WHERE LANDSCAPE IS ADJACENT TO HARDSCAPE, FINISHED GRADE OF LANDSCAPE MATERIAL SHALL BE DEPRESSED A MINIMUM OF 1" OR AS SHOWN ON PLANS.

C. ENGINEER SHALL VERIFY GRADING PRIOR TO PLACEMENT OF LANDSCAPE MATERIALS.

15. PIPELINES

A. ALL GRAVITY FLOW PIPELINES TO BE LAID UPGRADE FROM THE LOWEST POINT STARTING AT THE END OF EXISTING IMPROVEMENTS.

B. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 24 HOURS PRIOR TO BACKFILLING OF ANY PIPE WHICH STUBS TO A FUTURE PHASE OF CONSTRUCTION FOR INVERT VERIFICATION. TOLERANCE SHALL BE IN ACCORDANCE WITH CITY STANDARD SPECIFICATIONS.

C. UNLESS NOTED OTHERWISE, SITE PIPELINE LIMIT OF WORK AT BUILDING UTILITY POINT OF CONNECTION SHALL BE 5-FEET OUTSIDE THE BUILDING EXTERIOR WALL.

16. ADJUSTING EXISTING UTILITIES

A. THE CONTRACTOR SHALL ADJUST AND/OR RECONSTRUCT TO GRADE ALL EXISTING UTILITY STRUCTURES, INCLUDING VAULTS, BOXES AND MANHOLE FRAME AND COVER SETS, VALVE BOXES AND MONUMENT BOXES, WITHIN THE WORK AREA UNLESS NOTED OTHERWISE.

B. ALL MANHOLE FRAME AND COVER SETS, WATER VALVE BOXES AND MONUMENT BOXES WITHIN THE WORK AREA THAT DO NOT MEET CURRENT CITY REQUIREMENTS SHALL BE REMOVED AND REPLACED TO CONFORM TO CITY STANDARDS. THE CONTRACTOR SHALL COORDINATE THIS WORK WITH THE CITY INSPECTOR AND WITH THE ENGINEER.

17. SANITARY SEWER SYSTEM

A. UNLESS SPECIFIED OTHERWISE, ALL SEWER SERVICES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY STANDARDS.

B. ALL SEWER SERVICES SHALL BE MARKED WITH A 2" X 2" STAKE AT THE END OF EACH SERVICE AND A 2 INCH HIGH "S" STAMPED IN THE TOP OF THE CURB.

C. ALL SEWER MAINS AND SERVICES SHALL BE AIR TESTED TO THE SATISFACTION OF THE ENGINEER AFTER AGGREGATE BASE PLACEMENT IS COMPLETED. SEWER PLUGS TO BE WING NUT TYPE, F-2 TEST OR APPROVED EQUIVALENT. MAINS SHALL BE BALLED AND FLUSHED PER CITY STANDARDS. PRIOR TO STARTING THE CLEANING OPERATION, A FINE MESH WIRE SCREEN SHALL BE PLACED AT THE EXTREME DOWNSTREAM MANHOLE TO PREVENT DEBRIS FROM ENTERING THE EXISTING CITY SEWER SYSTEM.

D. TV INSPECTION OF SEWERS, INCLUDING VIDEO RECORDINGS, SHALL BE PROVIDED BY THE CONTRACTOR. TV INSPECTION SHALL INCLUDE MAINS, SERVICES AND CLEANOUTS.

E. EACH STUB END PIPE SHALL BE PLUGGED WITH A PREFABRICATED, WATERTIGHT PLUG. PLUG SHALL BE GLADDING-MCBEAN SPEED-SEAL CLAY STOPPER OR MISSION CLAY PRODUCTS STD. BAND-SEAL COUPLING WITH PLASTIC SHEAR RING AND ABS STOPPER. "POLYCAP" AND "SPEED-CAP" STOPPERS ARE NOT ACCEPTABLE.

F. BUILDING SEWER CLEANOUTS SHALL BE LOCATED AND INSTALLED IN ACCORD WITH THE UNIFORM PLUMBING CODE AND SHALL BE EXTENDED TO GRADE.

G. ALL GRAVITY SEWER PIPE WITHIN PUBLIC RIGHT OF WAY SHALL CONFORM WITH CITY STANDARDS.

H. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL SEWER LATERAL LOCATIONS WITH THE DESIGN ENGINEER PRIOR TO CONSTRUCTION.

18. STORM DRAIN SYSTEM

A. THE CONTRACTOR SHALL MAINTAIN ALL EXISTING DRAINAGE FACILITIES WITHIN THE CONSTRUCTION AREA UNTIL THE DRAINAGE IMPROVEMENTS ARE IN PLACE AND FUNCTIONING AND ACCEPTED BY THE CITY.

B. UNLESS NOTED OTHERWISE, ALL STORM DRAIN PIPE SHALL BE PRECAST REINFORCED CONCRETE PIPE, CAST-IN-PLACE CONCRETE PIPE (CIPP), PVC, OR HIGH DENSITY POLYETHYLENE PIPE (HDPE). ALL STORM DRAIN WITHIN PUBLIC RIGHT OF WAY SHALL CONFORM WITH CITY STANDARDS.

C. EACH STUB END PIPE SHALL BE PLUGGED WITH A PREFABRICATED, WATERTIGHT PLUG.

D. THE WALLS OF D.I.'S AND OF MANHOLES FUNCTIONING AS D.I.'S SHALL BE PERFORATED WITH 4 – 2 INCH DIAMETER HOLES PER WALL AT THE LEVEL OF THE BOTTOM OF THE AB UNDER THE ADJOINING PAVEMENT TO ALLOW FOR THE ESCAPE OF ANY WATER THAT MAY BUILD UP AROUND THE INLET.

E. CONTRACTOR SHALL MARK ALL NEW AND EXISTING STORM DRAIN INLETS WITH APPROVED POLLUTION PREVENTION MESSAGES. SPECIFIC PLACEMENT OF MARKERS WILL BE AS DIRECTED BY THE CITY INSPECTOR.

F. STORM DRAIN MANHOLES SHALL BE CONSTRUCTED PER YOLO COUNTY STANDARD DETAILS FOR PIPES SMALLER THAN 30" IN DIAMETER, AND PER YOLO COUNTY STANDARD DETAILS FOR PIPE 30" IN DIAMETER AND GREATER.

19. WATER SYSTEM

A. UNLESS SPECIFIED OTHERWISE, ALL WATER SERVICES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY STANDARDS.

B. WATER LINE INSTALLATION SHALL ACCOMMODATE GRAVITY FLOW PIPELINES INCLUDING SEWER SERVICES AND SHALL MAINTAIN A MINIMUM COVER OF 4 FEET FROM FINISHED GRADE WITHIN THE PUBLIC RIGHT OF WAY AND 3 FEET IN ALL OTHER AREAS.

C. FIRE HYDRANT INSTALLATION SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY STANDARDS.

D. REDUCED PRESSURE BACK FLOW PREVENTION DEVICES FOR EACH LANDSCAPE IRRIGATION WATER SERVICE WILL BE INSTALLED BY THE LANDSCAPE IRRIGATION CONTRACTOR.

E. THE WATER DISTRIBUTION SYSTEM SHALL CONFORM TO THE CITY SPECIFIC PROVISIONS. PVC WATER MAIN FOR FIRE SYSTEM SHALL BE C900, CL 235. ALL T-BOLTS ON MECHANICAL JOINT FITTINGS AND MACHINE BOLTS ON FLANGE FITTINGS SHALL BE COATED WITH MASTIC AND WRAPPED IN 8 MIL PLASTIC. T-BOLTS, MACHINE BOLTS AND ALL THREAD RODS UNDER BUILDING SLABS SHALL BE STAINLESS STEEL WITH THE FITTING WRAPPED IN 8 MIL PLASTIC.

F. PROVIDE EXTERIOR CONTROL VALVES FOR EACH SPRINKLER SYSTEM (WALL MOUNTED P.I.V OR STANDARD P.I.V. PER FIRE PROTECTION PLANS.)

G. ALL ON-SITE FIRE MAINS SHALL BE PVC CLASS 235 C-900.

20. EXISTING SIGNS

A. THE PROTECTION AND MAINTENANCE OF EXISTING SIGNS AND THE REMOVAL, PROTECTION, STORAGE AND RESETTING OF CITY TRAFFIC SIGNS THAT ARE AFFECTED BY THE WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AS DIRECTED BY THE CITY ENGINEER. PRIVATE SIGNS, TRAFFIC SIGNS, AND TRAFFIC CONTROL FACILITIES EXISTING WITHIN THE LIMITS OF THE PROJECT SHALL NOT BE MOVED EXCEPT AS NECESSARY TO PREVENT THEM FROM BEING DAMAGED BY CONSTRUCTION OPERATIONS. WHEN A SIGN NEEDS TO BE REMOVED BECAUSE IT INTERFERES WITH THE CONTRACTOR'S WORK, IT SHALL BE DONE IN ONE OF THE FOLLOWING DESCRIBED MANNERS:

STOP SIGNS SHALL BE MAINTAINED IN THEIR EXISTING POSITIONS. ANY STOP SIGN WHICH MUST BE MOVED FROM ITS EXISTING POSITION AND REINSTALLED IN A NEW POSITION, MUST BE APPROVED BY THE CITY ENGINEER BEFORE SAID STOP SIGN IS MOVED.

TRAFFIC SIGNS AND TRAFFIC CONTROL FACILITIES, OTHER THAN STOP SIGNS, NECESSARY FOR THE CONTROL OF TRAFFIC DURING THE PROJECT SHALL BE MAINTAINED IN PLACE IN AN UPRIGHT POSITION AND LOCATED SO AS TO PROPERLY CONTROL TRAFFIC. WHENEVER IT IS NECESSARY TO REMOVE THEM FROM THEIR PERMANENT LOCATION DUE TO CONSTRUCTION WORK, THEY SHALL BE REINSTALLED IN THEIR PERMANENT LOCATION AT THE EARLIEST POSSIBLE TIME. CONTROL OF TRAFFIC DURING THE TIME WHICH THE SIGNS ARE TEMPORARILY REMOVED SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

B. WHENEVER IT IS NECESSARY TO REMOVE A PRIVATELY OWNED SIGN OR A PUBLIC INFORMATION SIGN, ITS TEMPORARY RELOCATION AND ITS FINAL POSITIONING SHALL BE COORDINATED WITH THE SIGN OWNER AND, IF LOCATED WITHIN THE PUBLIC RIGHT-OF-WAY, WITH THE CITY ENGINEER.

21. MAILBOXES

MAILBOXES AND NEWSPAPER TUBES WHICH ARE AFFECTED BY THE CONSTRUCTION SHALL BE REMOVED, TEMPORARILY RELOCATED AND FINALLY RESET. ALL MAILBOXES SHALL BE MAINTAINED IN AN UPRIGHT POSITION ADJACENT TO THE CONSTRUCTION AREA BETWEEN THE TIME THE MAILBOX IS REMOVED AND RESET IN ITS FINAL LOCATION. MAILBOXES SHALL BE RESET IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE LOCAL POSTMASTER; SUCH WORK SHALL BE COORDINATED WITH MAILBOX OWNERS.

22. PRESERVATION OF PROPERTY

TREES AND SHRUBBERY THAT ARE NOT TO BE REMOVED, AND POLE LINES, FENCES, SIGNS, SURVEY MARKERS AND MONUMENTS, BUILDINGS AND STRUCTURES, CONDUITS, PIPELINES, ALL STREET FACILITIES, AND ANY OTHER IMPROVEMENTS OR FACILITIES WITHIN OR ADJACENT TO THE STREET OR CONSTRUCTION AREA SHALL BE PROTECTED FROM INJURY OR DAMAGE, AND UPON ORDER BY THE CITY ENGINEER, THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN SAFEGUARDS SUCH AS PROTECTIVE FENCING OR OTHER SUITABLE BARRIERS APPROVED BY THE CITY ENGINEER TO PROTECT SUCH OBJECTS FROM INJURY OR DAMAGE. IF SUCH OBJECTS ARE INJURED OR DAMAGED BY REASON OF THE CONTRACTOR'S OPERATIONS, THEY SHALL BE REPLACED OR RESTORED AT THE CONTRACTOR'S EXPENSE. THE FACILITIES SHALL BE REPLACED OR RESTORED TO A CONDITION AS GOOD AS WHEN THE CONTRACTOR ENTERED UPON THE WORK, OR AS GOOD AS REQUIRED BY THE SPECIFICATION ACCOMPANYING THE CONTRACT, IF ANY SUCH OBJECTS ARE A PART OF THE WORK BEING PERFORMED UNDER CONTRACT. THE CITY ENGINEER MAY MAKE OR CAUSE TO BE MADE SUCH TEMPORARY REPAIRS AS ARE NECESSARY TO RESTORE TO SERVICE ANY DAMAGED FACILITY. THE COST OF SUCH REPAIRS SHALL BE BORNE BY THE CONTRACTOR.

23. RECORD DRAWINGS

A. "RECORD DRAWINGS" IS DEFINED AS BEING THOSE DRAWINGS MAINTAINED BY THE CONTRACTOR TO SHOW THE CONSTRUCTION OF A PARTICULAR STRUCTURE OR WORK AS ACTUALLY COMPLETED UNDER THE CONTRACT. "RECORD DRAWINGS" SHALL BE SYNONYMOUS WITH "AS-BUILT DRAWINGS", AS REQUIRED BY THE ENGINEER, THE CONTRACTOR SHALL PROVIDE THE ENGINEER ACCURATE INFORMATION TO BE USED IN THE PREPARATION OF PERMANENT RECORD DRAWINGS. FOR THIS PURPOSE, THE CONTRACTOR SHALL RECORD ON ONE SET OF CONTRACT DRAWING PRINTS ALL CHANGES FROM INSTALLATIONS ORIGINALLY INDICATED, AND RECORD FINAL LOCATIONS OF UNDERGROUND LINES BY DEPTH FROM FINISH GRADE AND BY ACCURATE HORIZONTAL OFFSET DISTANCES TO PERMANENT SURFACE IMPROVEMENTS SUCH AS BUILDINGS, CURBS OR EDGES OF WALKS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL AS-BUILT INFORMATION PREPARED BY SUBCONTRACTORS IS INCLUDED IN HIS RECORD DRAWINGS.

B. THE CONTRACTOR SHALL MAINTAIN AT LEAST ONE COMPLETE SET OF UPDATED "RECORD DRAWING" IMPROVEMENT PLAN PRINTS. THESE PRINTS SHALL BE READILY AVAILABLE TO THE CITY AND TO THE ENGINEER. UPON COMPLETION OF THE PROJECT, AND PRIOR TO FINAL PAYMENT, THESE RECORD DRAWING PRINTS SHALL BE SUBMITTED TO THE ENGINEER.

24. INSURANCE

CONTRACTOR SHALL MAINTAIN SUCH INSURANCE AS WILL PROTECT IT FROM CLAIMS UNDER WORKERS' COMPENSATION ACTS AND FROM CLAIMS FOR DAMAGES BECAUSE OF BODILY INJURY, INCLUDING DEATH, OR INJURY TO PROPERTY WHICH MAY ARISE FROM AND DURING THE OPERATION OF THIS CONTRACT. INSURANCE COVERAGE SHALL INCLUDE PROVISION OR ENDORSEMENT NAMING THE OWNER, THE ENGINEER AND HIS CONSULTANTS, AND EACH OF THEIR OFFICERS, EMPLOYEES AND AGENTS, EACH AS ADDITIONAL INSURED IN REGARDS TO LIABILITY ARISING OUT OF THE PERFORMANCE OF ANY WORK UNDER THE CONTRACT. A CERTIFICATE OF SUCH INSURANCE SHALL BE FURNISHED TO THE OWNER PRIOR TO COMMENCEMENT OF ANY WORK.

REDUCED PLOT

	REV.	DATE	DESCRIPTION	BY	APP'D.
DESIGNED BY TCT					
DRAWN BY MSW					
CHECKED BY TCT					

LM LAUGENOUR AND MEIKLE
CIVIL ENGINEERING · LAND SURVEYING · PLANNING
608 COURT STREET, WOODLAND, CALIFORNIA 95695 · PHONE: (530) 662-1755
P.O. BOX 828, WOODLAND, CALIFORNIA 95776 · FAX: (530) 662-4602

BY _____
TODD C. TOMMERAASON
DATE 08/15/2024 P.E. 59277

REGISTERED PROFESSIONAL ENGINEER · TODD C. TOMMERAASON · No. 59277 · CIVIL · STATE OF CALIFORNIA

GRADING AND DRAINAGE PLANS
FOR
A1-PRE FAB, LLC

COUNTY OF YOLO CALIFORNIA

GENERAL NOTES

SCALE
NONE

DATE: 08/15/2024
JOB NO. 4707-1

C003

SHEET 3 OF 13

X:\Land Projects\4707-1\dwg\4707-1_C003.dwg

REDUCED PLOT

GENERAL NOTES:

A. CONTRACTOR SHALL POTHOLE AND VERIFY DEPTHS AND LOCATIONS OF EXISTING UTILITIES AS FIRST ITEM OF WORK, AND NOTIFY ENGINEER OF ANY CONFLICTS.

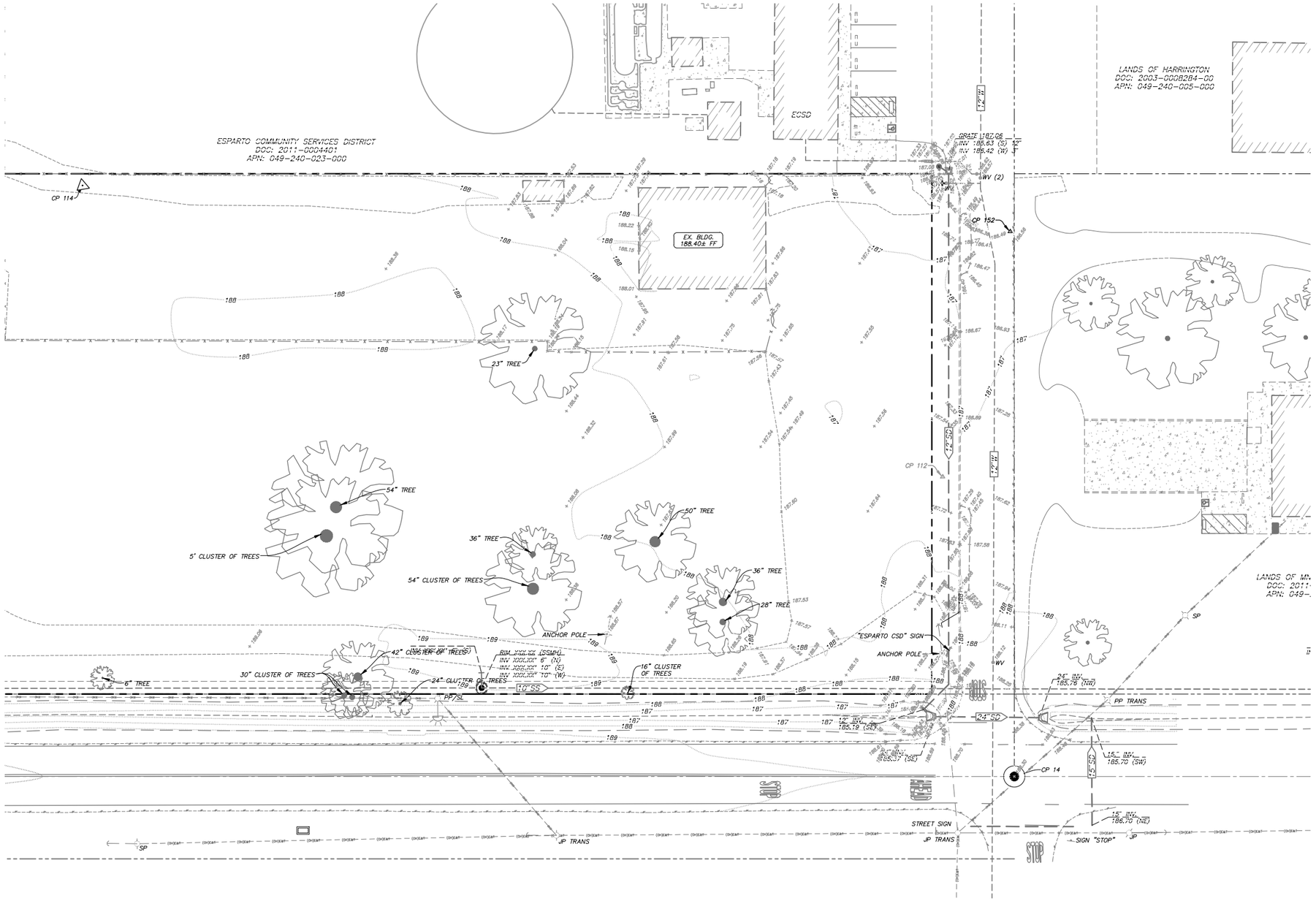
B. CONTRACTOR SHALL COORDINATE UTILITY SHUTOFFS AND TERMINATIONS WITH UTILITY COMPANIES. CONTRACTOR SHALL PROVIDE PROOF OF SHUTOFFS PRIOR TO BEGINNING WORK.

C. THE CONTRACTOR SHALL REMOVE ALL OBSTRUCTIONS, BOTH ABOVE AND BELOW GROUND AS REQUIRED FOR THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS. WHEN FEASIBLE SUCH WORK SHALL BE COMPLETED PRIOR TO GRADING.

D. ALL UNSUITABLE AND SURPLUS MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE UNLESS SPECIFIED OTHERWISE.

E. WHERE EXISTING LANDSCAPE AREAS ARE DISTURBED, REPLACE IN KIND OR EXTEND AS REQUIRED TO MATCH EXISTING.

F. THE CONTRACTOR SHALL ADJUST ALL EXISTING MANHOLES, VAULTS, AND VALVE BOXES WITHIN THE WORK AREA TO GRADE, EVEN THOSE THAT MAY NOT SPECIFICALLY BE NOTED. ALL DAMAGED BOXES SHALL BE REPLACED WITH NEW BOXES.



0 10 20 40
SCALE: 1"=20'

DESIGNED BY TCT	REV.	DATE	DESCRIPTION	BY	APP'D.
DRAWN BY MSW					
CHECKED BY TCT					

LM LAUGENOUR AND MEIKLE
CIVIL ENGINEERING · LAND SURVEYING · PLANNING
608 COURT STREET, WOODLAND, CALIFORNIA 95695 · PHONE: (530) 662-1755
P.O. BOX 828, WOODLAND, CALIFORNIA 95776 · FAX: (530) 662-4602

BY _____
BRYAN P. BONINO
DATE 08/15/2024 L.S. 7521

LICENSED LAND SURVEYOR BRYAN P. BONINO L.S. 7521 STATE OF CALIFORNIA

GRADING AND DRAINAGE PLANS FOR A1-PRE FAB, LLC

COUNTY OF YOLO CALIFORNIA

TOPOGRAPHIC SURVEY & DEMOLITION PLAN

SCALE 1"=20'

DATE: 08/15/2024
JOB NO. 4707-1

C101

SHEET 4 OF 13

X:\Land Projects\4707-1\dwg\4707-1_C101.dwg

REDUCED PLOT

GENERAL NOTES:

A. SEE ARCHITECTURAL PLANS FOR PARKING DETAILS AND COUNTS.

B. 4" WIDE WHITE STANDARD PAINTED PARKING STALL STRIPES (TYPICAL). VERIFY WITH ARCHITECTURAL SITE PLAN. SEE ARCHITECTURAL PLAN FOR FIRE LANE MARKINGS. FIELD VERIFY FIRE LANES WITH FIRE MARSHALL PRIOR TO SIGNING AND STRIPING.

C. SEE ARCHITECTURAL PLANS FOR ACCESSIBLE PARKING STALL AND SIGNAGE DETAILS.

D. PCC SLABS SHOULD BE CONSTRUCTED WITH THICKENED EDGES. THE THICKENED EDGES SHOULD BE CONSTRUCTED AND TAPERED OVER A MINIMUM DISTANCE OF 48 INCHES IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 330R DESIGN DETAILS. REINFORCING FOR CRACK CONTROL, IF DESIRED, SHOULD CONSIST OF AT LEAST NO. 4 REINFORCING BARS PLACED ON MAXIMUM 12-INCH CENTERS EACH WAY THROUGH THE SLAB. REINFORCEMENT MUST BE LOCATED AT THE MID-SLAB DEPTH TO BE EFFECTIVE. JOINT SPACING AND DETAILS SHOULD BE DETERMINED BY THE PROJECT ENGINEER AND SHOULD CONFORM WITH CURRENT PCA OR ACI GUIDELINES.

0 10 20 40
LM
SCALE: 1"=20'

DESIGNED BY TCT
DRAWN BY MSW
CHECKED BY TCT

REV.	DATE	DESCRIPTION	BY	APP'D.

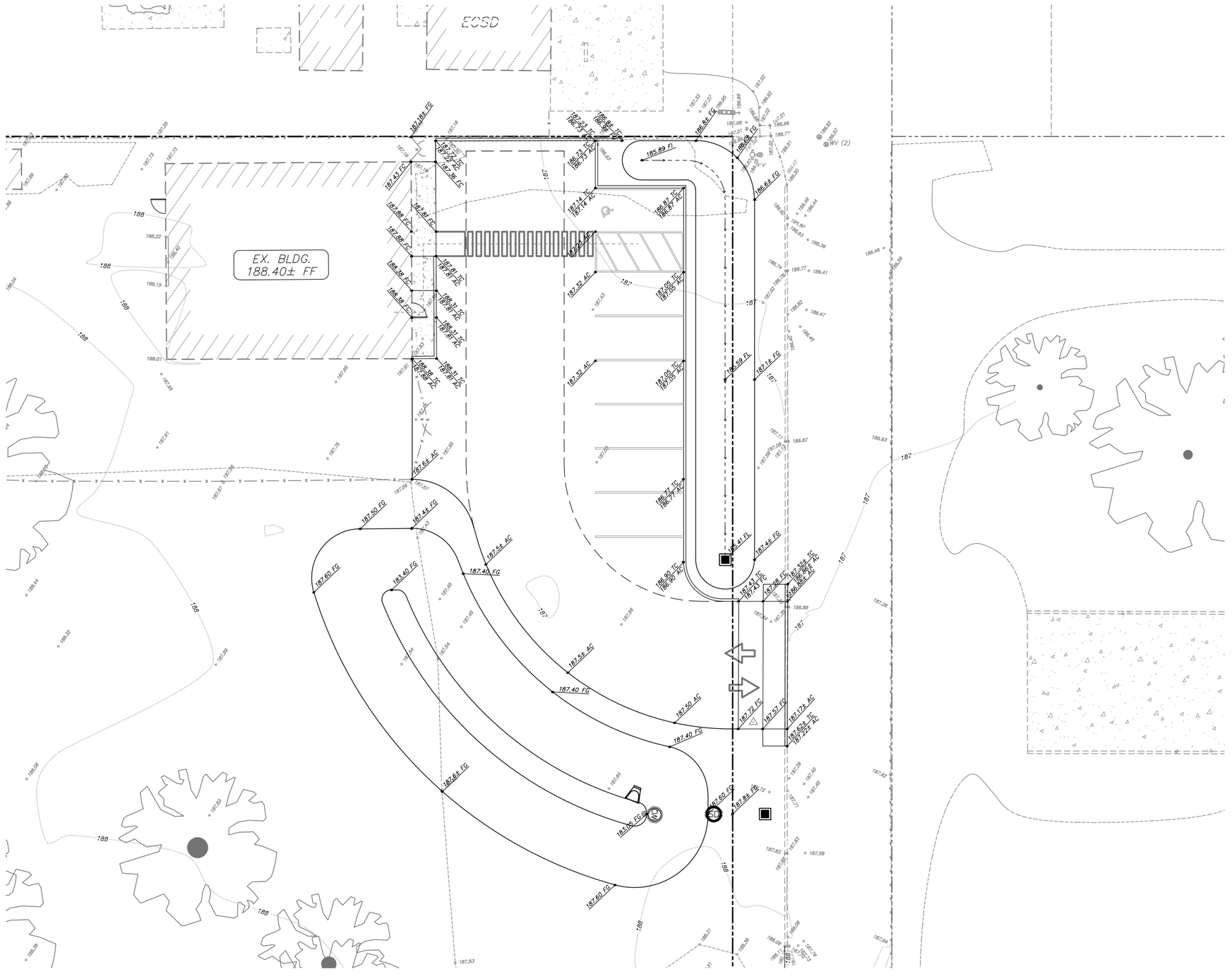
LM LAUGENOUR AND MEIKLE
CIVIL ENGINEERING · LAND SURVEYING · PLANNING
608 COURT STREET, WOODLAND, CALIFORNIA 95695 · PHONE: (530) 662-1755
P.O. BOX 828, WOODLAND, CALIFORNIA 95776 · FAX: (530) 662-4602
BY _____ TODD C. TOMMERAASON
DATE 08/15/2024 P.E. 59277
REGISTERED PROFESSIONAL ENGINEER · TODD C. TOMMERAASON · No. 59277 · CIVIL · STATE OF CALIFORNIA

GRADING AND DRAINAGE PLANS
FOR
A1-PRE FAB, LLC
COUNTY OF YOLO CALIFORNIA
CIVIL SITE PLAN

SCALE 1"=20'
DATE: 08/15/2024
JOB NO. 4707-1

C201
SHEET 5 OF 13

X:\Land Projects\4707-1\dwg\4707-1_C201.dwg



GENERAL GRADING NOTES:

A. ALL EARTHWORK ACTIVITIES, INCLUDING EXCAVATION, GRADING, SCARIFYING, MOISTURIZING, FILL PLACEMENT, COMPACTION, ETC., SHALL BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED IN THE PROJECT GEOTECHNICAL ENGINEERING REPORT AND IN CONFORMANCE WITH THE CITY STANDARD SPECIFICATIONS, CALIFORNIA BUILDING CODE (C.B.C.), AND WITH THE GRADING PLAN.

B. THE GEOTECHNICAL ENGINEER SHALL OBSERVE THE GRADING ACTIVITIES AND PERFORM COMPACTION TESTING FOR THIS PROJECT. THE CONTRACTOR SHALL PROVIDE AT LEAST 24 HOURS NOTICE TO THE GEOTECHNICAL ENGINEER OF THE NEED FOR OBSERVATION AND TESTING SERVICES. THE PROJECT OWNER WILL PAY FOR THE COST OF PROVIDING THESE SERVICES; HOWEVER, IF SAMPLES OF MATERIALS ARE SUBMITTED WHICH FAIL TO PASS THE SPECIFIED TESTS OR IF WORK IS PERFORMED WHICH FAILS TO MEET THESE SPECIFICATIONS, THE CONTRACTOR SHALL PAY FOR ALL SUBSEQUENT RE-TESTS AND RE-INSPECTIONS.

C. EARTHWORK SHALL INCLUDE ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO CONSTRUCT THE SITE TO THE GRADES SHOWN. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE DISPOSAL OF EXCESS EXCAVATION OR FOR THE IMPORT OF MATERIAL.

D. TO ACCOMMODATE TRENCH AND FOUNDATION SPOILS, THE CONTRACTOR'S GRADING SHALL INCLUDE UNDERCUTTING OF PAVED AREAS AS APPROPRIATE, OR SOME OTHER METHOD APPROVED BY THE ENGINEER. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE DISPOSAL OF EXCESS EXCAVATION OR FOR THE IMPORT OF MATERIAL.

E. CONTRACTOR SHALL OVEREXCAVATE LANDSCAPE AREAS TO ACCOMMODATE SITE STRIPPINGS. STRIPPINGS ARE NOT ALLOWED IN PAVING OR BUILDING AREAS.

F. ALL CUT SLOPES SHALL BE ROUNDED AT THE "BREAK" SO THAT THEY BLEND WITH THE NATURAL GROUND CONTOUR.

G. INSTALL 12" CURB OPENING PER DETAIL 8, SHEET C701 AT LOCATIONS NOTED AS "GAP" ON GRADING PLAN.

GRADING NOTES:

B1. THERE ARE NO PLANNED PERMANENT GRADING SPOILS AREAS PLANNED FOR THE SITE.

B2. ALL TEMPORARY GRADING SPOILS AREAS REQUIRED FOR THE CONSTRUCTION OF THE SITE SHALL BE MAINTAINED UTILIZING BMP'S WHICH WILL BE REQUIRED WITH THE PROJECT SWPPP.

REDUCED PLOT

DESIGNED BY TCT
DRAWN BY MSW
CHECKED BY TCT

REV.	DATE	DESCRIPTION	BY	APP'D.

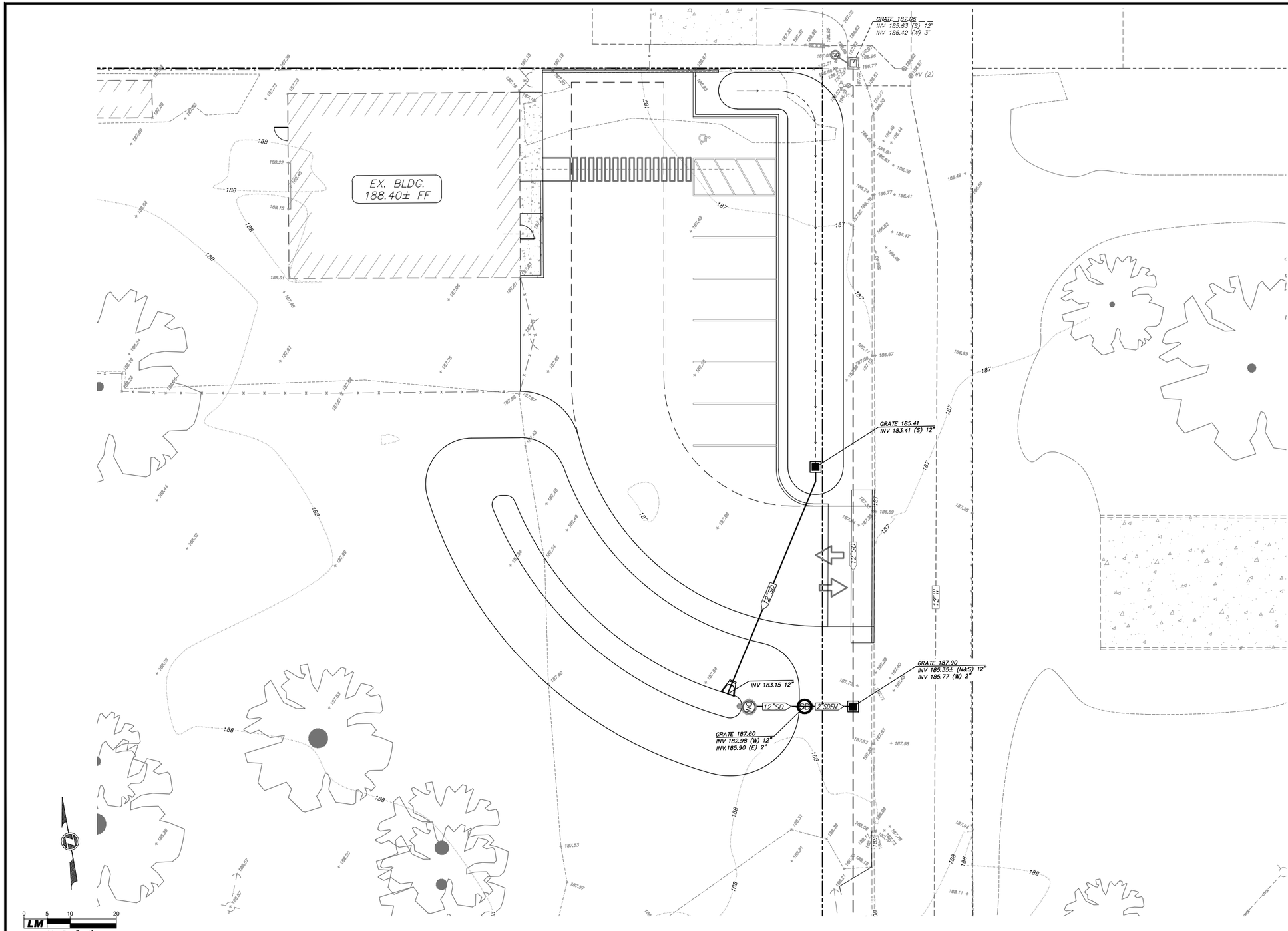
LM LAUGENOUR AND MEIKLE
CIVIL ENGINEERING · LAND SURVEYING · PLANNING
608 COURT STREET, WOODLAND, CALIFORNIA 95695 · PHONE: (530) 662-1755
P.O. BOX 828, WOODLAND, CALIFORNIA 95776 · FAX: (530) 662-4602
BY TODD C. TOMMERAASON
DATE 08/15/2024 P.E. 59277
REGISTERED PROFESSIONAL ENGINEER · TODD C. TOMMERAASON · No. 59277 · CIVIL · STATE OF CALIFORNIA

GRADING AND DRAINAGE PLANS FOR
A1-PRE FAB, LLC
COUNTY OF YOLO CALIFORNIA
GRADING PLAN

SCALE 1"=10'
DATE: 08/15/2024
JOB NO. 4707-1

C301
SHEET 6 OF 13

X:\Land Projects\4707-1\dwg\4707-1_C301.dwg



GENERAL UTILITY NOTES:

A. POTHOLE & VERIFY EXISTING SEWER/STORM DRAIN AS FIRST ITEM OF WORK AND VERIFY INVERT ELEVATIONS WITH ENGINEER PRIOR TO BEGINNING WORK. CAUTION!!! EXISTING UTILITIES. CAUTION!!

B. MAINTAIN 6" MIN. CLEAR SPACE BETWEEN ON-SITE PIPES, EXCEPT AS NOTED. AT ALL LOCATIONS WHERE WATER MAIN CROSSES BELOW SEWER AND STORM DRAIN LINES, CENTER PIPE LENGTH SO THAT JOINTS ARE 10' FROM THE CENTERLINE OF THE STORM DRAIN OR SEWER MAIN (TYPICAL).

C. ELECTRICAL AND GAS LAYOUT TO BE VERIFIED WITH PG&E. SEE ELECTRICAL & MECHANICAL PLANS FOR EXACT LOCATION.

D. CONTRACTOR SHALL PROVIDE CONNECTION DETAIL SUBMITTAL FOR DOWN SPOUT CONNECTIONS TO UNDERGROUND STORM DRAIN SYSTEM PRIOR TO BEGINNING ANY STORM DRAIN INSTALLATION WORK INCLUDING ANY REQUIRED FOOTING PENETRATIONS. CONTRACTOR SHALL REVIEW/VERIFY BUILDING CONNECTION LOCATIONS RELATED TO POTENTIAL FOOTING/FOUNDATION OR OTHER CONFLICTS THAT MAY OCCUR. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE CONNECTIONS FOR ALL BUILDING DOWN SPOUTS TO THE UNDERGROUND STORM DRAIN SYSTEM UNLESS NOTED OTHERWISE. ROUTING OF THE STORM DRAIN PIPE TO DOWN SPOUTS ARE SHOWN FOR GENERAL LOCATION ONLY AND MAY NEED TO BE ADJUSTED DEPENDING ON THE CONTRACTOR'S ACTUAL METHODS OF CONSTRUCTION AND TIMING RELATED TO BUILDING AND SITE CONSTRUCTION.

E. ALL FIRE HYDRANTS, PIV/FDC'S SHALL BE INSTALLED SO AS NOT TO BE BLOCKED BY PARKING STALLS, LOADING ZONES, LANDSCAPING, ETC.

F. ALL FIRE HYDRANTS SHALL HAVE AN 18-INCH CLEARANCE FROM THE CENTER OF THE 4-1/2" DISCHARGE TO FINISHED GRADE LEVEL.

G. ALL FIRE HYDRANTS SHALL BE INSTALLED WITH BREAK-OFF BOLTS AND/OR BREAK-OFF SPOOLS.

H. ALL FIRE HYDRANTS SHALL BE EQUIPPED WITH A 3'X3' MINIMUM CONCRETE PAD AROUND THEM PER NFPA 24, 2019 EDITION. EXTEND PAD AS SHOWN ON PLANS TO BACK OF CURB.

I. CONTRACTOR SHALL MODIFY DRAIN INLETS WITHIN VEHICULAR TRAFFIC AREA PER DETAIL __, SHEET ____ FOR SUBGRADE DRAINAGE.

J. IF CONTRACTOR IS ORDERING PRECAST DRAINAGE INLETS, CONTRACTOR SHALL SUBMIT AN INSTALLATION MATRIX FOR EACH INLET WITH ALL INVERTS AND GRATES SHOWN FOR ENGINEERS APPROVAL PRIOR TO ORDERING.

K. INSTALL THRUST BLOCK AT ALL WATER FITTINGS PER COUNTY OF YOLO STANDARD DRAWING #8-3, (▼ - TYPICAL).

L. INSTALL WATER VALVES PER COUNTY OF YOLO STANDARD DRAWING #8-5. ALL PLASTIC WATER MAINS SHALL HAVE TRACER WIRE PER COUNTY OF YOLO STANDARD DRAWING #8-4.

M. REMOVE AND REPLACE EXISTING CURB GUTTER AND SIDEWALK AS NECESSARY TO INSTALL NEW UTILITIES. REPLACE PER COUNTY OF YOLO STANDARD DRAWING #4-19.

REDUCED PLOT

DESIGNED BY TCT					
DRAWN BY MSW					
CHECKED BY TCT					
	REV.	DATE	DESCRIPTION	BY	APP'D.

LM LAUGENOUR AND MEIKLE
CIVIL ENGINEERING · LAND SURVEYING · PLANNING
608 COURT STREET, WOODLAND, CALIFORNIA 95695 · PHONE: (530) 662-1755
P.O. BOX 828, WOODLAND, CALIFORNIA 95776 · FAX: (530) 662-4602

BY _____
TODD C. TOMMERAASON
DATE 08/15/2024 P.E. 59277

REGISTERED PROFESSIONAL ENGINEER · TODD C. TOMMERAASON · No. 59277 · CIVIL · STATE OF CALIFORNIA

GRADING AND DRAINAGE PLANS
FOR
A1-PRE FAB, LLC

COUNTY OF YOLO CALIFORNIA

UTILITIES PLAN

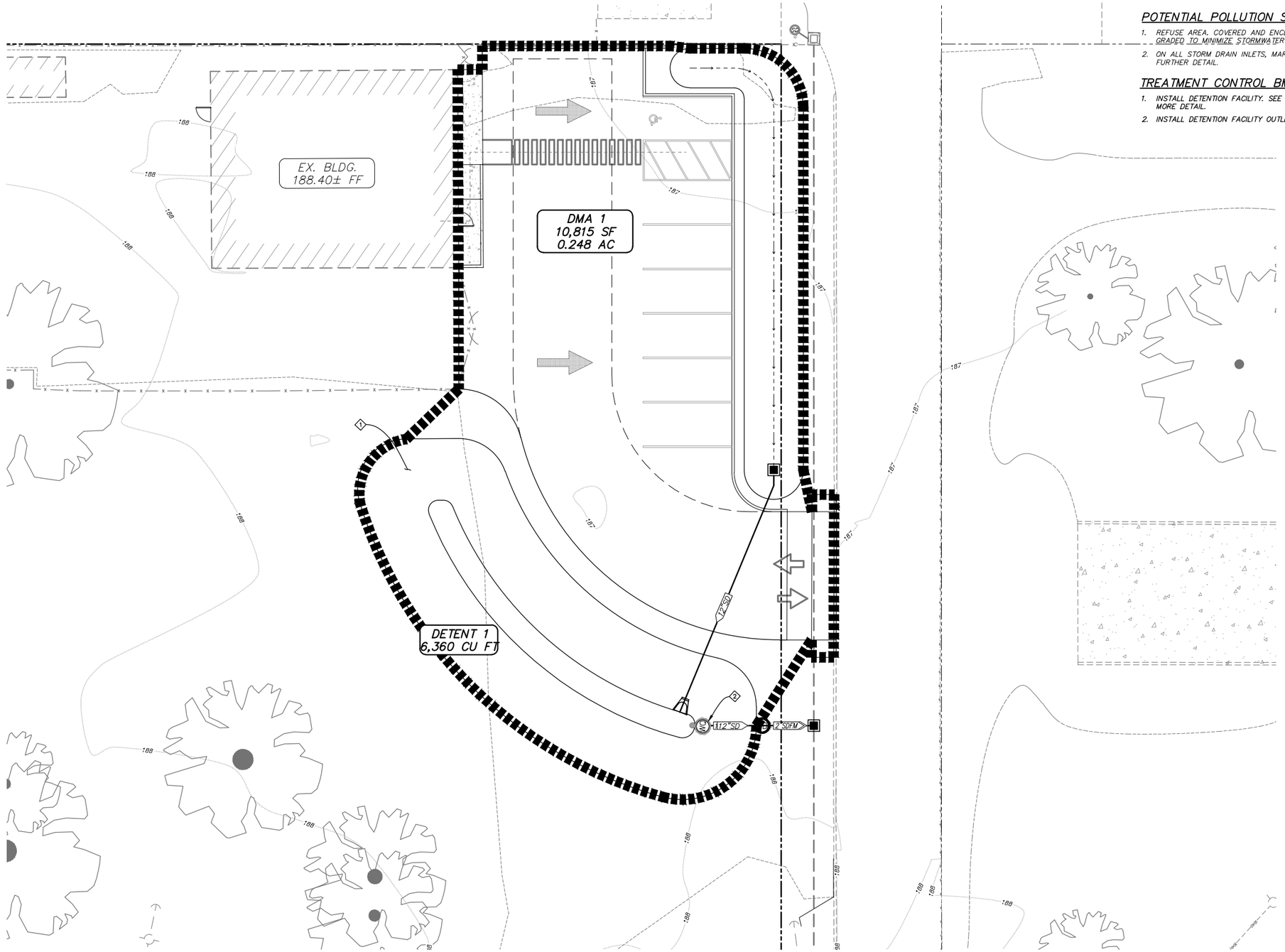
SCALE 1"=10'

DATE: 08/15/2024
JOB NO. 4707-1

C401

SHEET 7 OF 13

X:\Land Projects\4707-1\dwg\4707-1_C401.dwg



POTENTIAL POLLUTION SOURCES AND CONTROL MEASURES ⬡:

1. REFUSE AREA. COVERED AND ENCLOSED FOR DUMPSTERS. SEE ARCHITECTURAL PLANS FOR FURTHER DETAIL. GRADED TO MINIMIZE STORMWATER RUN-ON AND RUNOFF. SEE GRADING PLAN FOR FURTHER DETAIL.
2. ON ALL STORM DRAIN INLETS, MARK WITH WORDS "NO DUMPING! FLOWS TO CREEK". SEE UTILITY PLAN FOR FURTHER DETAIL.

TREATMENT CONTROL BMP'S ◇:

1. INSTALL DETENTION FACILITY. SEE GRADING PLAN, SITE PLAN, UTILITY PLAN, AND LANDSCAPING PLAN FOR MORE DETAIL.
2. INSTALL DETENTION FACILITY OUTLET STRUCTURE PER DETAIL 1 ON SHEET C502.

LEGEND

DMA	DRAINAGE MANAGEMENT AREA
BMP	BEST MANAGEMENT PRACTICE
DMA 1 1,000 SF	WATER QUALITY AREA NAME AND SQUARE FOOTAGE
▮▮▮▮▮	WATER QUALITY AREA BOUNDARY
BMP 1 1,000 CF	BEST MANAGEMENT PRACTICE NAME AND CUBIC FEET
➡	GENERAL DIRECTION OF RUNOFF

REDUCED PLOT

DESIGNED BY TCT
DRAWN BY MSW
CHECKED BY TCT

REV.	DATE	DESCRIPTION	BY	APP'D.

LM LAUGENOUR AND MEIKLE
CIVIL ENGINEERING · LAND SURVEYING · PLANNING
608 COURT STREET, WOODLAND, CALIFORNIA 95695 · PHONE: (530) 662-1755
P.O. BOX 828, WOODLAND, CALIFORNIA 95776 · FAX: (530) 662-4602

BY _____
TODD C. TOMMERAASON
DATE 08/15/2024 P.E. 59277

REGISTERED PROFESSIONAL ENGINEER · TODD C. TOMMERAASON · No. 59277 · CIVIL · STATE OF CALIFORNIA

GRADING AND DRAINAGE PLANS
FOR
A1-PRE FAB, LLC

COUNTY OF YOLO CALIFORNIA

STORMWATER CONTROL PLAN

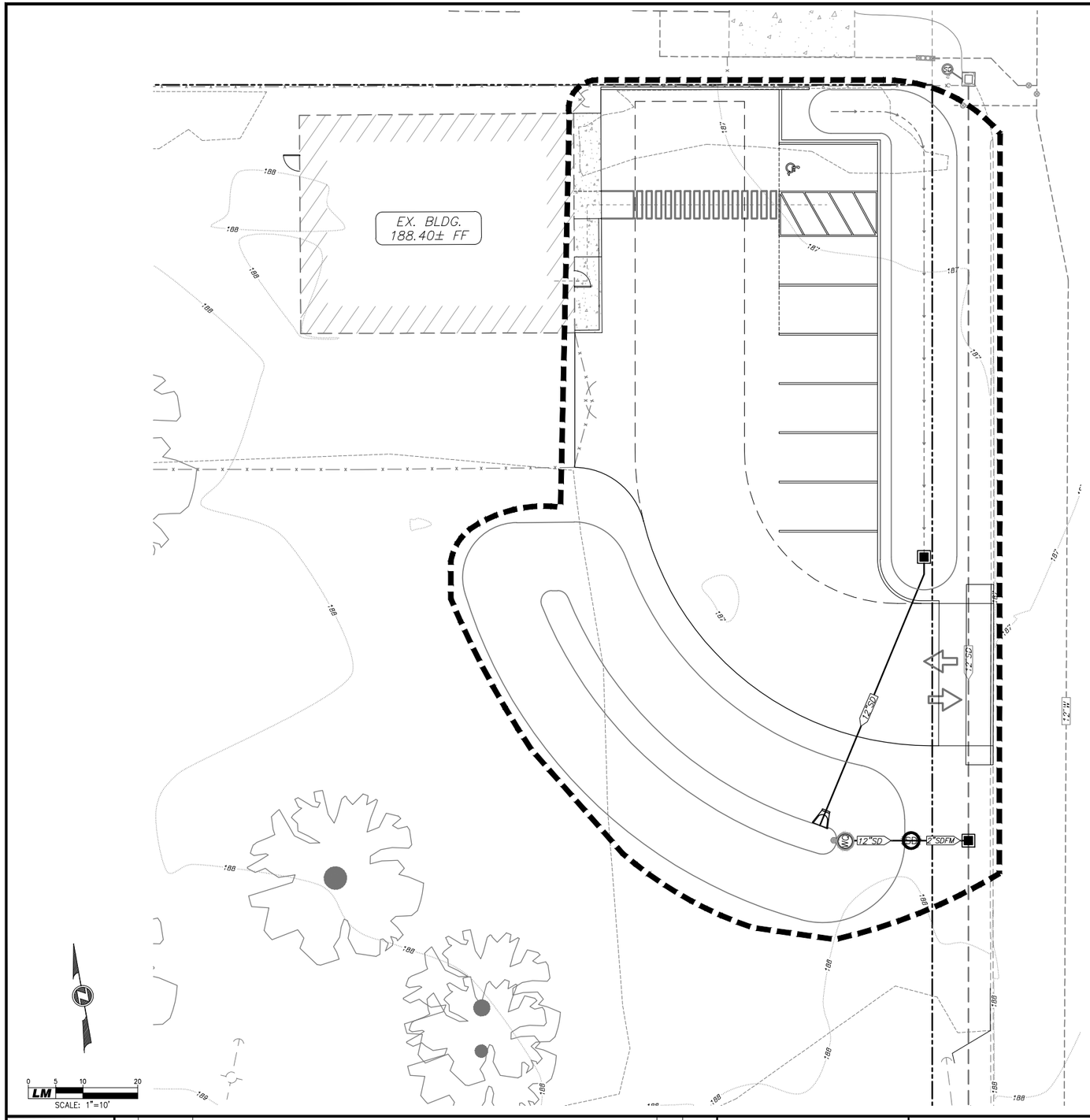
SCALE 1"=10'

DATE: 08/15/2024
JOB NO. 4707-1

C501

SHEET 8 OF 13

X:\Land Projects\4707-1\dwg\4707-1_C501.dwg



EROSION CONTROL NOTES:

1. ALL WORK SHALL CONFORM TO THE CURRENT COUNTY OF YOLO STANDARD SPECIFICATIONS AND CASQA BMP STANDARDS.
2. THESE PLANS AND SWPPP HAVE BEEN PREPARED WITH THE INTENT THAT LAUGENOUR AND MEIKLE (AS THE QSD) WILL BE HIRED TO PERFORM THE QSP INSPECTIONS DURING THE COMPLETE PROJECT. IF, HOWEVER, ANOTHER QSP IS EMPLOYED TO USE THESE PLANS AND SWPPP FOR THE PURPOSES OF COMPLYING WITH THE CALIFORNIA GENERAL PERMIT, THE SELECTED QSP SHALL NOTIFY THE QSD OF ANY PROPOSED CHANGES AND COPY ALL REPORTS GENERATED DURING INSPECTIONS. NOTICE IS GIVEN THAT LAUGENOUR AND MEIKLE WILL NOT ASSUME ANY RESPONSIBILITY FOR ANY ERRORS OR OMISSIONS WHICH MIGHT OCCUR AND WHICH COULD HAVE BEEN AVOIDED, CORRECTED OR MITIGATED IF LAUGENOUR AND MEIKLE HAD PERFORMED THE QSP INSPECTIONS.
3. IF AREAS OUTSIDE OF THE SHOWN LIMITS ARE DISTURBED, CONTRACTOR SHALL NOTIFY THE QSP AND QSD TO UPDATE THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS AND WITHIN THE SWPPP. ALL SOILS THAT ARE DISTURBED, INCLUDING AREAS OUTSIDE OF THE SHOWN LIMITS OF DISTURBANCE SHALL BE STABILIZED BY HYDROSEEDING, LANDSCAPING OR OTHER APPROVED METHOD WITHIN 14 DAYS OF NON-USE OR PRIOR TO PROJECT COMPLETION WHICHEVER OCCURS FIRST.
4. CONTRACTOR MUST ENSURE THAT THE CONSTRUCTION SITE IS PREPARED PRIOR TO THE ONSET OF ANY STORM. CONTRACTOR SHALL HAVE ALL EROSION AND SEDIMENT CONTROL MEASURES IN PLACE PRIOR TO ANY CONSTRUCTION ACTIVITIES.
5. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED. CHANGES TO THIS EROSION AND SEDIMENT CONTROL PLAN SHALL BE MADE TO MEET FIELD CONDITIONS ONLY WITH THE APPROVAL OF OR AT THE DIRECTION OF A REPRESENTATIVE OF THE DEPARTMENT OF UTILITIES.
6. THIS PLAN MAY NOT COVER ALL THE SITUATIONS THAT ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS. VARIATIONS MAY BE MADE TO THE PLAN IN THE FIELD SUBJECT TO THE APPROVAL OF OR AT THE DIRECTION OF A REPRESENTATIVE OF THE DEPARTMENT OF UTILITIES.
7. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED BEFORE AND AFTER ALL STORMS TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
8. CONTRACTOR SHALL MAINTAIN A LOG AT THE SITE OF ALL INSPECTIONS OR MAINTENANCE OF BMP'S, AS WELL AS, ANY CORRECTIVE CHANGES TO THE BMP'S OR EROSION AND SEDIMENT CONTROL PLAN.
9. IN AREAS WHERE SOIL IS EXPOSED, PROMPT REPLANTING WITH NATIVE COMPATIBLE, DROUGHT-RESISTANT VEGETATION SHALL BE PERFORMED. NO AREAS WILL BE LEFT EXPOSED OVER THE WINTER SEASON.
10. THE CONTRACTOR SHALL INSTALL THE STABILIZED CONSTRUCTION ENTRANCE PRIOR TO COMMENCEMENT OF GRADING. LOCATION OF THE ENTRANCE MAY BE ADJUSTED BY THE CONTRACTOR TO FACILITATE GRADING OPERATIONS. ALL CONSTRUCTION TRAFFIC ENTERING THE PAVED ROAD MUST CROSS THE STABILIZED CONSTRUCTION ENTRANCE. THE STABILIZED CONSTRUCTION ENTRANCE SHALL REMAIN IN PLACE UNTIL THE ROAD BASE ROCK COURSE IS COMPLETED.
11. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE SWEPT AT THE END OF EACH WORKING DAY OR AS NECESSARY.
12. CONTRACTOR SHALL PLACE INLET FILTER BAGS AROUND ALL NEW DRAINAGE STRUCTURE OPENINGS IMMEDIATELY AFTER THE STRUCTURE OPENING IS CONSTRUCTED. THESE INLET FILTER BAGS SHALL BE MAINTAINED AND REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED. STRAW BALES OR GRAVEL BAGS SHALL BE PLACED AROUND ALL EXISTING DRAINAGE INLETS IN THE VICINITY OF PROJECT SITE.
13. CONTRACTOR SHALL PLACE SILT FENCING OR FILTER ROLL ALONG THE PERIMETER OF PROJECT SITE.
14. GRADING SHALL NOT OCCUR WHEN WIND SPEEDS EXCEED 20 MPH OVER A ONE (1) HOUR PERIOD.
15. **CONTRACTOR SHALL IMPLEMENT HOUSEKEEPING PRACTICES AS FOLLOWS:**

A. **SOLID WASTE MANAGEMENT:**
PROVIDE DESIGNATED WASTE COLLECTION AREAS AND CONTAINERS. ARRANGE FOR REGULAR REMOVAL AND DISPOSAL. CLEAR SITE OF TRASH INCLUDING ORGANIC DEBRIS, PACKAGING MATERIALS, SCRAP OR SURPLUS BUILDING MATERIALS AND DOMESTIC WASTE DAILY.

B. **MATERIAL DELIVERY AND STORAGE:**
PROVIDE A DESIGNATED MATERIAL STORAGE AREA WITH SECONDARY CONTAINMENT SUCH AS BERMING. STORE MATERIAL ON PALLETS AND PROVIDE COVERING FOR SOLUBLE MATERIALS. RELOCATE STORAGE AREA INTO BUILDING SHELL WHEN POSSIBLE. INSPECT AREA WEEKLY.

C. **CONCRETE WASTE:**
PROVIDE A DESIGNATED AREA FOR A TEMPORARY PIT TO BE USED FOR CONCRETE TRUCK WASH-OUT. DISPOSE OF HARDENED CONCRETE OFFSITE. AT NO TIME SHALL A CONCRETE TRUCK DUMP ITS WASTE AND CLEAN ITS TRUCK INTO THE CITY STORM DRAINS VIA CURB AND GUTTER. INSPECT DAILY TO CONTROL RUNOFF, AND WEEKLY FOR REMOVAL OF HARDENED CONCRETE.

D. **PAINT AND PAINTING SUPPLIES:**
PROVIDE INSTRUCTION TO EMPLOYEES AND SUBCONTRACTORS REGARDING REDUCTION OF POLLUTANTS INCLUDING MATERIAL STORAGE, USE, AND CLEAN UP. INSPECT SITE WEEKLY FOR EVIDENCE OF IMPROPER DISPOSAL.

E. **VEHICLE FUELING, MAINTENANCE AND CLEANING:**
PROVIDE A DESIGNATED FUELING AREA WITH SECONDARY CONTAINMENT SUCH AS BERMING. DO NOT ALLOW MOBILE FUELING OF EQUIPMENT. PROVIDE EQUIPMENT WITH DRIP PANS. RESTRICT ONSITE MAINTENANCE AND CLEANING OF EQUIPMENT TO A MINIMUM. INSPECT AREA WEEKLY.

F. **HAZARDOUS WASTE MANAGEMENT:**
PREVENT THE DISCHARGE OF POLLUTANTS FROM HAZARDOUS WASTES TO THE DRAINAGE SYSTEM THROUGH PROPER MATERIAL USE, WASTE DISPOSAL AND TRAINING OF EMPLOYEES. HAZARDOUS WASTE PRODUCTS COMMONLY FOUND ON-SITE INCLUDE BUT ARE NOT LIMITED TO PAINTS & SOLVENTS, PETROLEUM PRODUCTS, FERTILIZERS, HERBICIDES & PESTICIDES, SOIL STABILIZATION PRODUCTS, ASPHALT PRODUCTS AND CONCRETE CURING PRODUCTS.

WDID#:

TOTAL DISTURBED AREA: XXX ACRES

LEGEND:

- STORM DRAIN INLET PROTECTION PER CASQA SE-10
- LIMIT OF CLEARING AND GRADING
- DRAINAGE FLOW
- STABILIZED CONSTRUCTION ENTRANCE PER CASQA TC-1
- CONCRETE WASHOUT PIT MATERIAL PER CASQA WM-8 WITH POSTED SIGNS
- FIBER ROLL PER CASQA SE-5
- PLANNED STAGING, MATERIAL AND WASTE STORAGE AREA AND SOLID WASTE STORAGE AREA PER CASQA WM-1 TO WM-5
- TP-1 — SAMPLING TEST POINT
- SSD # — SITE STORMWATER DISCHARGE LOCATION

SITE BMP's

CASQA FACT SHEET	BMP NAME	REQUIRED
EC-1	SCHEDULING	✓
EC-2	PRESERVATION OF EXISTING VEGETATION	✓
EC-3	HYDRAULIC MULCH	
EC-4	HYDROSEEDING	✓
EC-5	SOIL BINDERS	
EC-6	STRAW MULCH	
EC-7	GEOTEXTILES AND MATS	
EC-8	WOOD MULCHING	
EC-9	EARTH DIKES AND DRAINAGE SWALES	
EC-10	VELOCITY DISSIPATION DEVICES	
EC-11	SLOPE DRAINS	
EC-12	STREAMBANK STABILIZATION	
EC-14	COMPOST BLANKET	
EC-15	SOIL PREPARATION/ROUGHENING	✓
EC-16	NON-VEGETATIVE STABILIZATION	
WE-1	WIND EROSION CONTROL	✓
SE-1	SILT FENCE	
SE-2	SEDIMENT BASIN	
SE-3	SEDIMENT TRAP	
SE-4	CHECK DAMS	
SE-5	FIBER ROLLS	✓
SE-6	GRAVEL BAG BERM	✓
SE-7	STREET SWEEPING AND VACUUMING	✓
SE-8	SANDBAG BARRIER	
SE-9	STRAW BALE BARRIER	
SE-10	STORM DRAIN INLET PROTECTION	✓
SE-11	ACTIVE TREATMENT SYSTEM (ATS)	
SE-12	TEMPORARY SILT DIKE	
SE-13	COMPOST SOCKS AND BERMS	
SE-14	BIOFILTER BAGS	
TC-1	STABILIZED CONSTRUCTION ENTRANCE/EXIT	✓
TC-2	STABILIZED CONSTRUCTION ROADWAY	
TC-3	ENTRANCE/OUTLET TIRE WASH	
NS-1	WATER CONSERVATION PRACTICES	✓
NS-2	DEWATERING OPERATIONS	✓
NS-3	PAVING AND GRINDING OPERATIONS	✓
NS-4	TEMPORARY STREAM CROSSING	
NS-5	CLEAR WATER DIVERSION	
NS-6	ILLICIT CONNECTION/DISCHARGE	✓
NS-7	POTABLE WATER/IRRIGATION	
NS-8	VEHICLE AND EQUIPMENT CLEANING	
NS-9	VEHICLE AND EQUIPMENT FUELING	✓
NS-10	VEHICLE & EQUIPMENT MAINTENANCE	✓
NS-11	PILE DRIVING OPERATIONS	
NS-12	CONCRETE CURING	✓
NS-13	CONCRETE FINISHING	✓
NS-14	MATERIAL OVER WATER	
NS-15	DEMOLITION ADJACENT TO WATER	
NS-16	TEMPORARY BATCH PLANTS	
WM-1	MATERIAL DELIVERY AND STORAGE	✓
WM-2	MATERIAL USE	✓
WM-3	STOCKPILE MANAGEMENT	✓
WM-4	SPILL PREVENTION AND CONTROL	✓
WM-5	SOLID WASTE MANAGEMENT	✓
WM-6	HAZARDOUS WASTE MANAGEMENT	✓
WM-7	CONTAMINATED SOIL MANAGEMENT	
WM-8	CONCRETE WASTE MANAGEMENT	✓
WM-9	SANITARY/SEPTIC WASTE MANAGEMENT	✓
WM-10	LIQUID WASTE MANAGEMENT	

REDUCED PLOT

DESIGNED BY TCT
DRAWN BY MSW
CHECKED BY TCT

REV.	DATE	DESCRIPTION	BY	APP'D.

LM LAUGENOUR AND MEIKLE
CIVIL ENGINEERING · LAND SURVEYING · PLANNING
608 COURT STREET, WOODLAND, CALIFORNIA 95695 · PHONE: (530) 662-1755
P.O. BOX 828, WOODLAND, CALIFORNIA 95776 · FAX: (530) 662-4602

BY _____
TODD C. TOMMERAASON
DATE 08/15/2024 P.E. 59277

REGISTERED PROFESSIONAL ENGINEER — TODD C. TOMMERAASON — No. 59277 — CIVIL — STATE OF CALIFORNIA

GRADING AND DRAINAGE PLANS FOR A1-PRE FAB, LLC

COUNTY OF YOLO CALIFORNIA

EROSION & SEDIMENTATION CONTROL PLAN

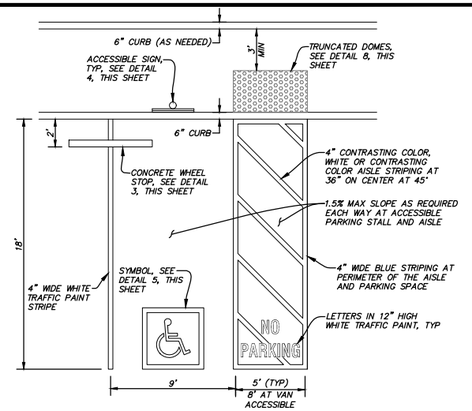
SCALE 1"=10'

DATE: 08/15/2024
JOB NO. 4707-1

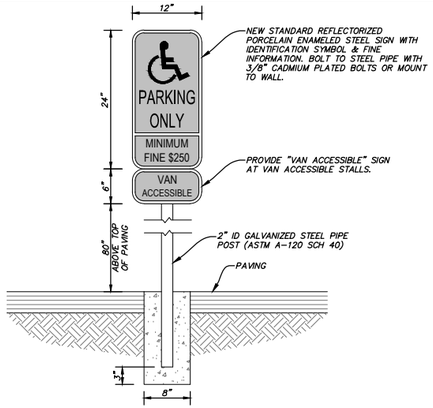
C601

SHEET 9 OF 13

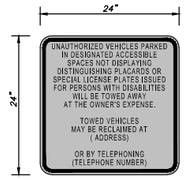
X:\Land Projects\4707-1\dwg\4707-1_C601.dwg



1 ACCESSIBLE PARKING
NTS

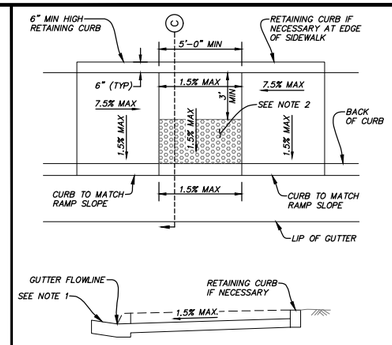


4 ACCESSIBLE PARKING SIGN
NTS



NOTES:
1. ADDRESS AND TELEPHONE NUMBER SHALL BE PROVIDED BY OWNER.
2. BOTTOM OF SIGN SHALL BE INSTALLED 60" ABOVE GRADE.

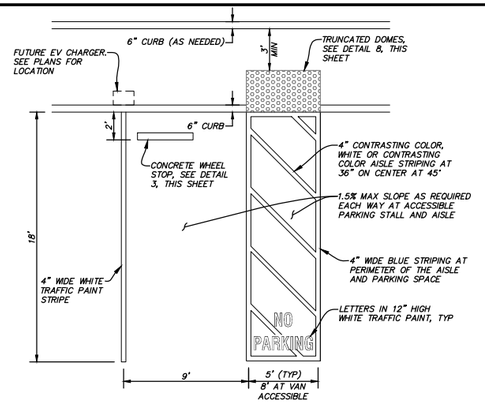
7 R100B SIGN
NTS



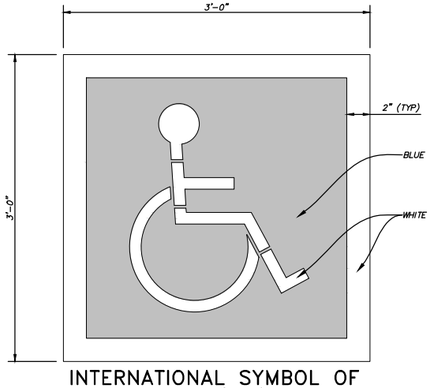
NOTES:
1. COUNTER SLOPES OF ADJOINING GUTTERS AND ROAD SURFACES IMMEDIATELY ADJACENT TO AND WITHIN 24 INCHES OF THE CURB RAMP SHALL NOT BE STEEPER THAN 1V:25H (4.0%). GUTTER PAN SLOPE SHALL NOT EXCEED 1" OF DEPTH FOR EACH 2'-0" OF WIDTH.
2. THE DETECTABLE WARNING SURFACE WILL BE A RECTANGLE AS SHOWN AT THE BACK OF CURB, UNLESS MODIFIED IN THE PROJECT PLANS. CURB RAMPS SHALL HAVE A DETECTABLE WARNING SURFACE THAT EXTENDS THE FULL WIDTH AND 3'-0" DEPTH OF THE RAMP. DETECTABLE WARNING SURFACES SHALL EXTEND THE FULL WIDTH OF THE RAMP EXCEPT A MAXIMUM GAP OF 1 INCH IS ALLOWED ON EACH SIDE OF THE RAMP. DETECTABLE WARNING SURFACES SHALL CONFORM TO THE REQUIREMENTS IN THE STANDARD SPECIFICATIONS. SEE DETAIL 8, THIS SHEET.
3. SEE CBC SECTIONS 11B.406 AND 11B.705.

SECTION C

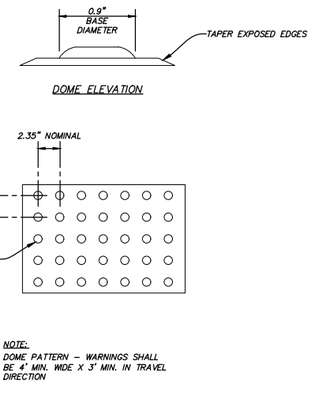
10 CASE C CURB RAMP
NTS



2 FUTURE ACCESSIBLE EVC PARKING
NTS

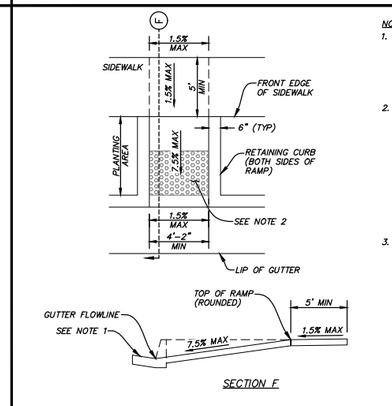


INTERNATIONAL SYMBOL OF ACCESSIBILITY (ISA) MARKING
5 NTS



NOTE:
DOME PATTERN – WARNINGS SHALL BE 4' MIN. WIDE X 3' MIN. IN TRAVEL DIRECTION

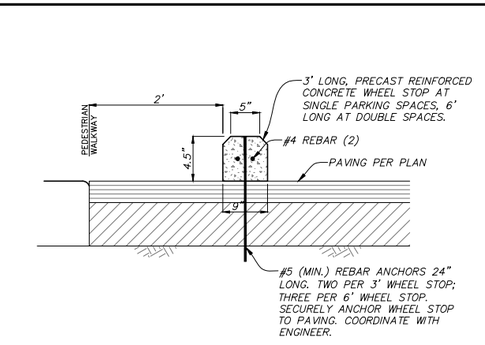
8 TRUNCATED DOMES
NTS



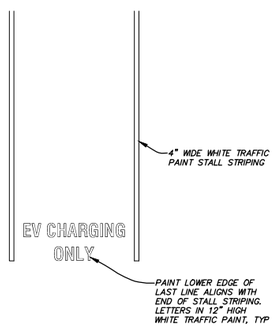
NOTES:
1. COUNTER SLOPES OF ADJOINING GUTTERS AND ROAD SURFACES IMMEDIATELY ADJACENT TO AND WITHIN 24 INCHES OF THE CURB RAMP SHALL NOT BE STEEPER THAN 1V:25H (4.0%). GUTTER PAN SLOPE SHALL NOT EXCEED 1" OF DEPTH FOR EACH 2'-0" OF WIDTH.
2. THE DETECTABLE WARNING SURFACE WILL BE A RECTANGLE AS SHOWN AT THE BACK OF CURB, UNLESS MODIFIED IN THE PROJECT PLANS. CURB RAMPS SHALL HAVE A DETECTABLE WARNING SURFACE THAT EXTENDS THE FULL WIDTH AND 3'-0" DEPTH OF THE RAMP. DETECTABLE WARNING SURFACES SHALL EXTEND THE FULL WIDTH OF THE RAMP EXCEPT A MAXIMUM GAP OF 1 INCH IS ALLOWED ON EACH SIDE OF THE RAMP. DETECTABLE WARNING SURFACES SHALL CONFORM TO THE REQUIREMENTS IN THE STANDARD SPECIFICATIONS. SEE DETAIL 8, THIS SHEET.
3. SEE CBC SECTIONS 11B.406 AND 11B.705.

SECTION F

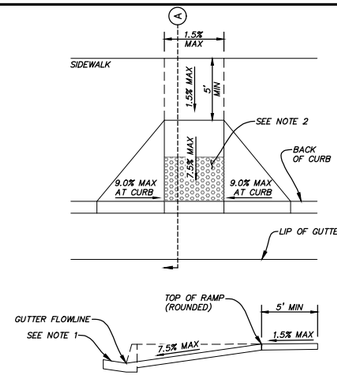
11 CASE F CURB RAMP
NTS



3 WHEEL STOP
NTS



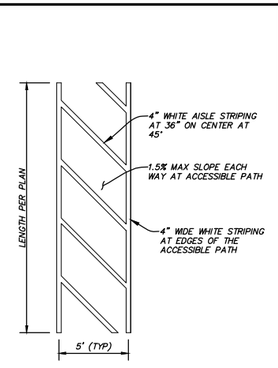
ELECTRIC VEHICLE CHARGING STATION SPACE
6 NTS



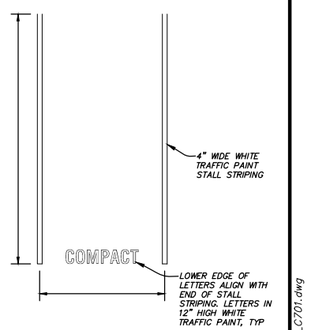
NOTES:
1. COUNTER SLOPES OF ADJOINING GUTTERS AND ROAD SURFACES IMMEDIATELY ADJACENT TO AND WITHIN 24 INCHES OF THE CURB RAMP SHALL NOT BE STEEPER THAN 1V:25H (4.0%). GUTTER PAN SLOPE SHALL NOT EXCEED 1" OF DEPTH FOR EACH 2'-0" OF WIDTH.
2. THE DETECTABLE WARNING SURFACE WILL BE A RECTANGLE AS SHOWN AT THE BACK OF CURB, UNLESS MODIFIED IN THE PROJECT PLANS. CURB RAMPS SHALL HAVE A DETECTABLE WARNING SURFACE THAT EXTENDS THE FULL WIDTH AND 3'-0" DEPTH OF THE RAMP. DETECTABLE WARNING SURFACES SHALL EXTEND THE FULL WIDTH OF THE RAMP EXCEPT A MAXIMUM GAP OF 1 INCH IS ALLOWED ON EACH SIDE OF THE RAMP. DETECTABLE WARNING SURFACES SHALL CONFORM TO THE REQUIREMENTS IN THE STANDARD SPECIFICATIONS. SEE DETAIL 8, THIS SHEET.
3. SEE CBC SECTIONS 11B.406 AND 11B.705.

SECTION A

9 CASE A CURB RAMP
NTS



ACCESSIBLE PATH MARKINGS
12 NTS



COMPACT STALL MARKINGS
13 NTS

REDUCED PLOT

REV.	DATE	DESCRIPTION	BY	APP'D.

DESIGNED BY TCT
DRAWN BY MSW
CHECKED BY TCT

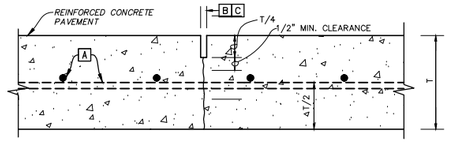
LM LAUGENOUR AND MEIKLE
CIVIL ENGINEERING · LAND SURVEYING · PLANNING
608 COURT STREET, WOODLAND, CALIFORNIA 95695 · PHONE: (530) 662-1755
P.O. BOX 828, WOODLAND, CALIFORNIA 95776 · FAX: (530) 662-4602
BY TODD C. TOMMERAASON
DATE 08/15/2024 P.E. 59277
REGISTERED PROFESSIONAL ENGINEER · TODD C. TOMMERAASON · No. 59277 · CIVIL · STATE OF CALIFORNIA

GRADING AND DRAINAGE PLANS FOR
A1-PRE FAB, LLC
COUNTY OF YOLO CALIFORNIA
DETAILS

SCALE NONE
DATE: 08/15/2024
JOB NO. 4707-1

C701
SHEET 10 OF 13

X:\Land Projects\4707-1\dwg\4707-1_C701.dwg



NOTES

A DISTRIBUTED STEEL REINFORCEMENT PER PLAN.

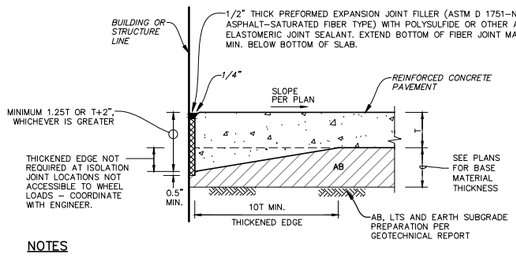
B TOOLED GROOVE WITH 1/4" RADIUS OR 1/8" WIDE SAW CUT (SHOWN).

C 12' MAX. JOINT SPACING IN EACH DIRECTION. PRIOR TO CONCRETE CONSTRUCTION THE CONTRACTOR SHALL SUBMIT FOR OWNER APPROVAL A COPY OF THE JOINTING PLAN, DETAILING THE TYPES AND LOCATIONS OF PROPOSED CONSTRUCTION, EXPANSION, CONTRACTION AND ISOLATION JOINTS.

D WHERE PAVING WILL BE SUBJECTED TO HARD WHEEL EQUIPMENT USE, IT IS RECOMMENDED TO FILL ALL JOINTS WITH AN EPOXY JOINT FILLER–COORDINATE WITH THE OWNER.

1 PCC PAVING CONTRACTION (CRACK CONTROL) JOINT

NTS

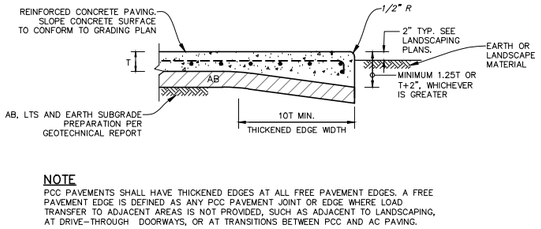


NOTES

1. PLACE ISOLATION JOINTS AT BUILDINGS, UTILITY STRUCTURES SUCH AS MANHOLES, DRAINAGE INLETS, AND FOOTINGS, AND OTHER MISCELLANEOUS STRUCTURES.
2. FOR JOINTS AROUND COLUMNS, POSTS, ETC. USE TYPICAL DIAMOND–SHAPED JOINT CONFIGURATION AND COORDINATE WITH STRUCTURAL PLANS AND WITH CONTRACTOR–PREPARED AND OWNER–APPROVED PAVEMENT JOINTING PLAN.

4 PCC PAVING ISOLATION JOINT

NTS

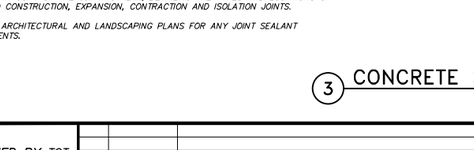


NOTE

PCC PAVEMENTS SHALL HAVE THICKENED EDGES AT ALL FREE PAVEMENT EDGES. A FREE PAVEMENT EDGE IS DEFINED AS ANY PCC PAVEMENT JOINT OR EDGE WHERE LOAD TRANSFER TO ADJACENT AREAS IS NOT PROVIDED, SUCH AS ADJACENT TO LANDSCAPING, AT DRIVE–THROUGH DOORWAYS, OR AT TRANSITIONS BETWEEN PCC AND AC PAVING.

6 PCC PAVING THICKENED EDGE ADJOINING LANDSCAPING

NTS



NOTES

A DISTRIBUTED STEEL REINFORCEMENT PER PLAN.

B AT CONTRACTOR'S OPTION, SLAB REINFORCEMENT MAY RUN CONTINUOUS THROUGH JOINT 24" MIN. IN LIEN OF DOWELS.

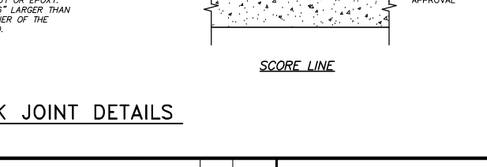
C #6 REBAR DOWELS, 16" MINIMUM LENGTH, AT 16" MAX. SPACING, PROPERLY SUPPORTED AND ALIGNED AT MID–SLAB DEPTH TO PREVENT DISLOCATION BY CONCRETE PLACEMENT OPERATIONS.

E WHEN JOINING EXISTING CONCRETE, DRILL AND BOND DOWEL INTO EXISTING CONCRETE WITH GROUT. THE DRILLED HOLE SHALL BE 1/8" TO 3/16" LARGER THAN THE DOWEL DIAMETER. ROUNDING THE CORNER OF THE EXISTING CONCRETE EDGE IS NOT REQUIRED.

D PRIOR TO CONCRETE CONSTRUCTION THE CONTRACTOR SHALL SUBMIT FOR OWNER APPROVAL A COPY OF THE JOINTING PLAN, DETAILING THE TYPES AND LOCATIONS OF PROPOSED CONSTRUCTION, EXPANSION, CONTRACTION AND ISOLATION JOINTS.

2 PCC PAVING CONSTRUCTION JOINT

NTS



NOTES

A DISTRIBUTED STEEL REINFORCEMENT PER PLAN.

B INSTALL JOINT SEALANT PER MANUFACTURER'S RECOMMENDATIONS FOR THE JOINT WIDTH AND SEALANT INSTALLATION. SEALANT SHALL BE COLD–POUR, SINGLE COMPONENT, SELF–LEVELING SILICONE OR POLYSULFIDE, WITH COLOR TO MATCH PAVEMENT. COORDINATE WITH OWNER. SEALANT TO BE RECESSED BELOW PAVEMENT SURFACE.

C DISCONTINUE DISTRIBUTED STEEL REINFORCEMENT AT EXPANSION JOINTS.

D 0.75" MIN. DIAMETER FOR 5" ≤ T ≤ 6.5" AND 1" MINIMUM DIAMETER FOR T > 6.5", 16" MINIMUM LENGTH, EPOXY–COATED, SMOOTH (FREE OF BURRS AND DEFORMATIONS), ROUND STEEL BAR (ASTM A615) DOWELS AT 12" MAX. SPACING, PROPERLY SUPPORTED AND ALIGNED AT MID–SLAB DEPTH TO PREVENT DISLOCATION BY CONCRETE PLACEMENT OPERATIONS. AT LEAST HALF OF EACH DOWEL SHALL BE COATED WITH A BOND BREAKING SUBSTANCE (5 MIL MAX. THICKNESS). PLASTIC DOWEL SLEEVES MAY BE USED INSTEAD OF A COATING. DOWELS SHALL BE SECURELY AND ACCURATELY ALIGNED PARALLEL TO THE SLAB SURFACE AND TO THE CENTERLINE OF THE SLAB. MAX. TOLERANCE IS 1/4" PER DOWEL LENGTH IN THE HORIZONTAL, VERTICAL OR COMBINED ALIGNMENT.

E 60'–90'. JOINT SPACING IN EACH DIRECTION. INSTALL JOINTS AT POINTS OF TANGENCY, AT ENDS OF DRIVEWAYS, ETC. PRIOR TO CONCRETE CONSTRUCTION THE CONTRACTOR SHALL SUBMIT FOR OWNER APPROVAL A COPY OF THE JOINTING PLAN, DETAILING THE TYPES AND LOCATIONS OF PROPOSED EXPANSION, CONSTRUCTION, CONTRACTION AND ISOLATION JOINTS, AND JOINT SEALANT.

F 1/2" THICK PREFORMED EXPANSION JOINT FILLER (ASTM D 1751–NONEXTRUDING, ASPHALT–SATURATED FIBER TYPE) WITH APPROVED JOINT SEALANT.

5 PCC PAVING EXPANSION JOINT

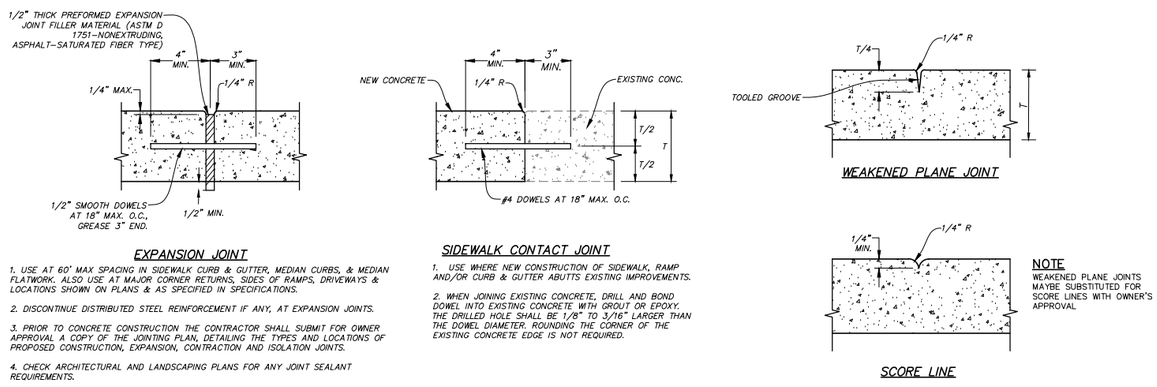
NTS

NOTE

PCC PAVEMENTS SHALL HAVE THICKENED EDGES AT ALL FREE PAVEMENT EDGES. A FREE PAVEMENT EDGE IS DEFINED AS ANY PCC PAVEMENT JOINT OR EDGE WHERE LOAD TRANSFER TO ADJACENT AREAS IS NOT PROVIDED, SUCH AS ADJACENT TO LANDSCAPING, AT DRIVE–THROUGH DOORWAYS, OR AT TRANSITIONS BETWEEN PCC AND AC PAVING.

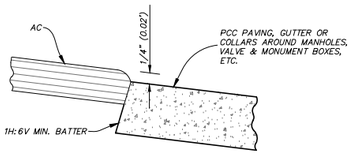
7 PCC PAVING THICKENED EDGE ADJOINING AC PAVING

NTS



3 CONCRETE SIDEWALK JOINT DETAILS

NTS



8 AC PAVEMENT EDGE AT CONCRETE

NTS

REDUCED PLOT

REV.	DATE	DESCRIPTION	BY	APP'D.

DESIGNED BY TCT
DRAWN BY MSW
CHECKED BY TCT

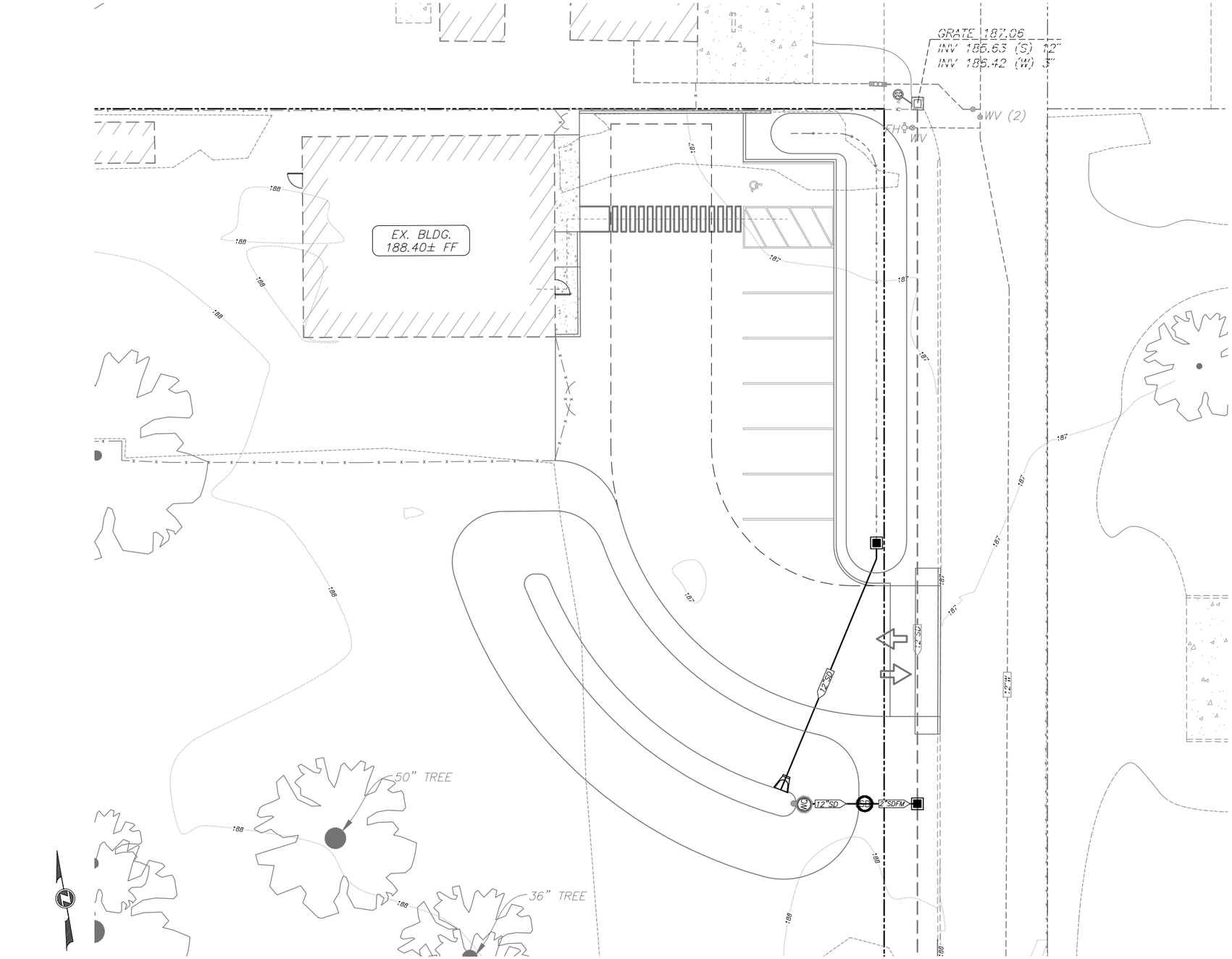
LAUGENOUR AND MEIKLE
CIVIL ENGINEERING · LAND SURVEYING · PLANNING
608 COURT STREET, WOODLAND, CALIFORNIA 95695 · PHONE: (530) 662–1755
P.O. BOX 828, WOODLAND, CALIFORNIA 95776 · FAX: (530) 662–4602
BY TODD C. TOMMERAASON
DATE 08/15/2024 P.E. 59277
REGISTERED PROFESSIONAL ENGINEER · TODD C. TOMMERAASON · No. 59277 · CIVIL · STATE OF CALIFORNIA

GRADING AND DRAINAGE PLANS FOR
A1–PRE FAB, LLC
COUNTY OF YOLO CALIFORNIA
DETAILS

SCALE NONE
DATE: 08/15/2024
JOB NO. 4707–1

C702
SHEET 11 OF 13

X:\Land Projects\4707–1\dwg\4707–1_C702.dwg



REDUCED PLOT

GENERAL NOTES:

A. FIRE LANES SHALL BE A MINIMUM OF 20 FEET CLEAR WIDTH AND 13 ½ FEET CLEAR HEIGHT.

B. SEE SHEETS C401 AND C402 FOR WATER MAIN, FIRE MAIN, APPURTENANCES, WATER CONNECTIONS, AND CONSTRUCTION SPECIFICATIONS.

C. FINAL FIRE ACCESS LANE AFTER CONSTRUCTION.

D. NO GATES SHALL BE INSTALLED ACROSS THE PROPOSED FIRE ACCESS LANES WITHIN THE LIMITS OF PROJECT IMPROVEMENTS.

E. CURBS ALONG FIRE LANE SHALL BE PAINTED RED AND CLEARLY MARKED WITH THE WORDS "NO PARKING FIRE LANE", WHICH ARE CLEARLY VISIBLE FROM A VEHICLE, TYPICAL. (▬▬▬▬▬▬)

F. LOCAL FIRE MARSHALL TO CONFIRM LOCATIONS FOR NO PARKING.

CONSTRUCTION NOTES ⬡:

1. EXISTING FIRE HYDRANTS SHALL PROVIDE FIRE FIGHTING WATER DURING CONSTRUCTION.
2. KNOX BOX LOCATIONS.

FIRE PROTECTION NOTES:

A. ALL UNDERGROUND FIRE PROTECTION SHALL BE INSTALLED, TESTED, AND MAINTAINED PER NFPA 24, 2022 EDITION.

B. ALL FIRE HYDRANTS, PIV/FDC'S SHALL BE INSTALLED SO AS NOT TO BE BLOCKED BY PARKING STALLS, LOADING ZONES, LANDSCAPING, ETC.

C. ALL FIRE HYDRANTS SHALL HAVE AN 18–INCH CLEARANCE FROM THE CENTER OF THE 4–1/2" DISCHARGE TO FINISHED GRADE LEVEL.

D. ALL FIRE HYDRANTS SHALL HAVE A BLUE DOT REFLECTOR INSTALLED 12–INCHES OFF CENTERLINE IN FRONT OF ALL FIRE HYDRANTS ON THE HYDRANT SIDE.

E. ALL FIRE HYDRANTS SHALL BE INSTALLED WITH BREAK–OFF BOLTS AND/OR BREAK–OFF SPOOLS.

F. ALL FIRE HYDRANTS SHALL BE EQUIPPED WITH A 3'X3' MINIMUM CONCRETE PAD AROUND THEM PER NFPA 24, 2022 EDITION. EXTEND PAD AS SHOWN ON PLANS TO BACK OF CURB.

G. INSTALL THRUST BLOCK AT ALL WATER FITTINGS PER CITY OF WEST SACRAMENTO STANDARD DETAIL #519 (▽ – TYPICAL).

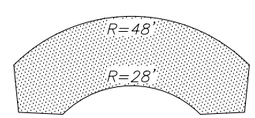
H. INSTALL WATER VALVES PER CITY OF WEST SACRAMENTO STANDARD DETAIL #513. ALL PLASTIC WATER MAINS SHALL HAVE TRACER WIRE PER DETAIL #513.

PROJECT SPECIFIC NOTES:

A. BUILDING IS SPRINKLERED WITH: ESFR (12) 16.8K @ 52 PSI SYSTEM

B. TYPE OF CONSTRUCTION: TYPE III B CONCRETE TILT

C. TYPE OF ROOF: HYBRID OPEN WEB STEEL GIRDERS & TRUSSES; ROOF SHEATHING PLYWOOD/OSB



1 28' MIN. TURNING RADIUS IN FIRE LANE
NTS

X:\Land Projects\4707-1\dwg\4707-1_C901.dwg

DESIGNED BY TCT				
DRAWN BY MSW				
CHECKED BY TCT				
REV.	DATE	DESCRIPTION	BY	APP'D.

LM LAUGENOUR AND MEIKLE
CIVIL ENGINEERING · LAND SURVEYING · PLANNING
608 COURT STREET, WOODLAND, CALIFORNIA 95695 · PHONE: (530) 662–1755
P.O. BOX 828, WOODLAND, CALIFORNIA 95776 · FAX: (530) 662–4602
BY _____
TODD C. TOMMERAASON
DATE 08/15/2024 P.E. 59277

REGISTERED PROFESSIONAL ENGINEER · TODD C. TOMMERAASON · No. 59277 · CIVIL · STATE OF CALIFORNIA

GRADING AND DRAINAGE PLANS
FOR
A1–PRE FAB, LLC
COUNTY OF YOLO CALIFORNIA

FIRE PLAN

SCALE 1"=10'
DATE: 08/15/2024
JOB NO. 4707–1

C901
SHEET 13 OF 13

APPENDIX B
TREATMENT VOLUME CALCULATIONS

Two Options for Calculating the Design Volume for the Volumetric BMPs

For projects in the Central Valley from Shasta County to Fresno County

Perform the following steps and enter the requested data. Print this page and include with the project's submittal.

Name of the DMA: DMA 1

Step 1: **Enter the size of the Drainage Management Area (DMA):** 10,815 *Square Feet*

Step 2: **Enter the total percentage of impervious area in the DMA:** 54 *% impervious*

i = 0.54 *This is the impervious coefficient (i) used for the Urban Runoff Quality Management approach*

Enter the number of existing or planned trees in the DMA:

Evergreen: Deciduous:

Total Tree Credit: 0.0 ft^3

Step 3: **Specify the project location:**

Mileage:	Redding to Sacramento	150 miles	
	Sacramento to Fresno	160 miles	
	Is the project north or south of Sacramento?		North *Select One*
	What is the distance from Sacramento?		5 *Enter miles*
	Percent of distance from Sacramento to	Redding	3.3%

Step 4: **Specify the composite (average) runoff coefficient for the DMA:**

Enter average runoff coefficient for the DMA: 0.60 *Enter decimal coefficient (Refer to the coefficient tab)*

C = 0.368 *This is the average c using the Urban Run Management approa impervious area.*

This is your volumetric design value for the DMA based on the site location and average runoff coefficient.

DMA's Unit Basin Storage Volume (inches): **0.44**

P6 = 0.55 inches *See the P6 Table tab*

Basis for the Calculations (Refer to the attached CASQA Rain Graphs):

Weather Stations	Runoff Coefficients 0.25	0.50	0.75	1.00
Redding	*0.22*	*0.44*	*0.66*	*0.88*
Sacramento	*0.18*	*0.36*	*0.54*	*0.72*
Fresno	*0.12*	*0.24*	*0.37*	*0.49*
Project Location	**0.18**	**0.36**	**0.54**	**0.73**

Unit Basin Storage Volumes (inches) using 80% runoff capture with 48-hour draw down times

Regression constant for 48-hour draw down (a) = 1.963 *Per the CASQA BMP for the Urban Runoff Management Approa*

Step 5: **Select one of the two optional calculations of the required BMP capture volume for the DMA:**

Using the CASQA BMP Handbook Approach:

Required Capture Volume:
392 cubic feet
2,934 gallons
0.009 acre-feet

Don't use this one *Specify selection*

Using the Urban Runoff Quality Management Approach:

Required Capture Volume:
358 cubic feet
2,679 gallons
0.008 acre-feet

Use this one *Specify selection*

Maximum Detention Volume (Po) = 0.397 inches =(a)(P6)(C)

APPENDIX C
HYDROLOGY INPUT CALCULATIONS

PROJECT: A1 Pre-Fab
PROJECT #: 4707-1
LOCATION: Esparto, CA
FILE:

DATE: 7-Aug-24
CALC BY: BRD
CHECKED BY:
SHEETS:

LAUGENOUR AND MEIKLE
CIVIL ENGINEERS
608 COURT STREET
WOODLAND, CA 95695

Purpose: Calculate precipitation-loss curve numbers.

Table 1. Site Land Uses and Runoff Curve Numbers

			Impervious Coverage				Pervious Coverage 1				Pervious Coverage 2				Pervious Coverage 3				
Condition	Shed	Total Area (ac)	Equivalent Use[1]	Area (ac)	% Coverage	CN	Equivalent Use[1]	Area (ac)	% Coverage	CN	Equivalent Use[1]	Area (ac)	% Coverage	CN	Equivalent Use[1]	Area (ac)	% Coverage	CN	Weighted CN
Existing	EX10	0.778	Paved Areas	0.023	3.0	98	Native Grasses, Soil C	0.413	53.1	79	Gravel, Soil C	0.342	43.9	89					84.0
Proposed	A1-10	0.738	Paved Areas	0.152	20.6	98	Lawn Areas, Soil C	0.098	13.3	79	Native Grasses, Soil C	0.383	51.9	79	Gravel, Soil C	0.105	14.2	79	82.9
	A1-20	0.040	Paved Areas	0.007	16.5	98	Lawn Areas, Soil C	0.000	0.0	79	Gravel, Soil C	0.033	83.5	89					90.5

[1]Most similar land use listed Table 10 of the Yolo County Hydrolgoy Manual, and from NRCS TR-55 Manual, Table 2-2.

PROJECT: A1 Pre-Fab
PROJECT #: 4707-1
LOCATION: Esparto, CA
FILE:

DATE: 7-Aug-24
CALC BY: BRD
CHECKED BY:
SHEETS:

LAUGENOUR AND MEIKLE
CIVIL ENGINEERS
608 COURT STREET
WOODLAND, CA 95695

Purpose: Calculate times of concentration for sheds.

Table 2. Time of Concentration Calculations

		Sheet Flow					Shallow Flow				Channel/Pipe Flow						Total	
Condition	Shed	L, ft	S, ft/ft	n[a]	P2	t_{sheet}, min.[b]	L, ft	S, ft/ft	V, ft/s[c]	$t_{shallow}$, min.[d]	L, ft	S, ft/ft	Pipe Diameter (in)	n	V, ft/s[e]	t_{pipe}, min.[f]	t_c, min[g]	**t_c, hr[g]**
Existing	EX10	200	0.0071	0.40	2.69	61.6	80	0.0071	1.4	1	0	0.0025	18	0.015	2.57	0.0	62.6	1.04
Proposed	A1-10	180	0.0083	0.40	2.69	53.2	170	0.0118	1.8	2.0	50	0.0470	12	0.015	8.51	0.1	55.3	0.92
	A1-20	12	0.0250	0.10	2.69	1.3	190	0.0053	1.2	3.0	0	0.0025	12	0.015	1.96	0.0	4.3	0.07

(a) Manning roughness coefficient selected from Table 13 of the Yolo County City/County Drainage Manual.

(b) $t_{sheet} = 0.007(nL)^{0.8}/((P_2)^{0.5}(S)^{0.4})$, where t_{sheet} = travel time (hr), n = Manning's roughness, L = flow length (ft), P_2 = 2-year, 24-hr rainfall depth (2.69 in. at this site), and S = slope of hydraulic grade line (land slope, ft/ft).
Value in column was converted to minutes. Maximum L = 300 feet. Reference: HEC-HMS Technical Reference Manual, March 2000.
N-value based on land use and Table 13 of the Yolo County Drainage Manual, 2010.

(c) $V = 16.1345(S)^{0.5}$, where V = average velocity (ft/s) for unpaved shallow flow, and S = slope of hydraulic grade line (water course slope, ft/ft).
Reference: HEC-HMS Technical Reference Manual, March 2000.

(d) $t_{shallow}$ = L/V x unit conversion.

(e) V = pipe flow velocity, estimated using Mannings equation for pipe flowing full: $V = 1.49/n*R^{0.67}*S^{0.50}$
R= hydraulic radius, D/4 for full pipe flow, ft
n= Mannings "n", design value=0.015
Reference: Page 24, Pipe Flow Equation of the Putah Creek/Dry Creek Subbasins Drainage Report, Wood Rodgers, August 2005.

(f) t_{pipe} = L/V x unit conversion.

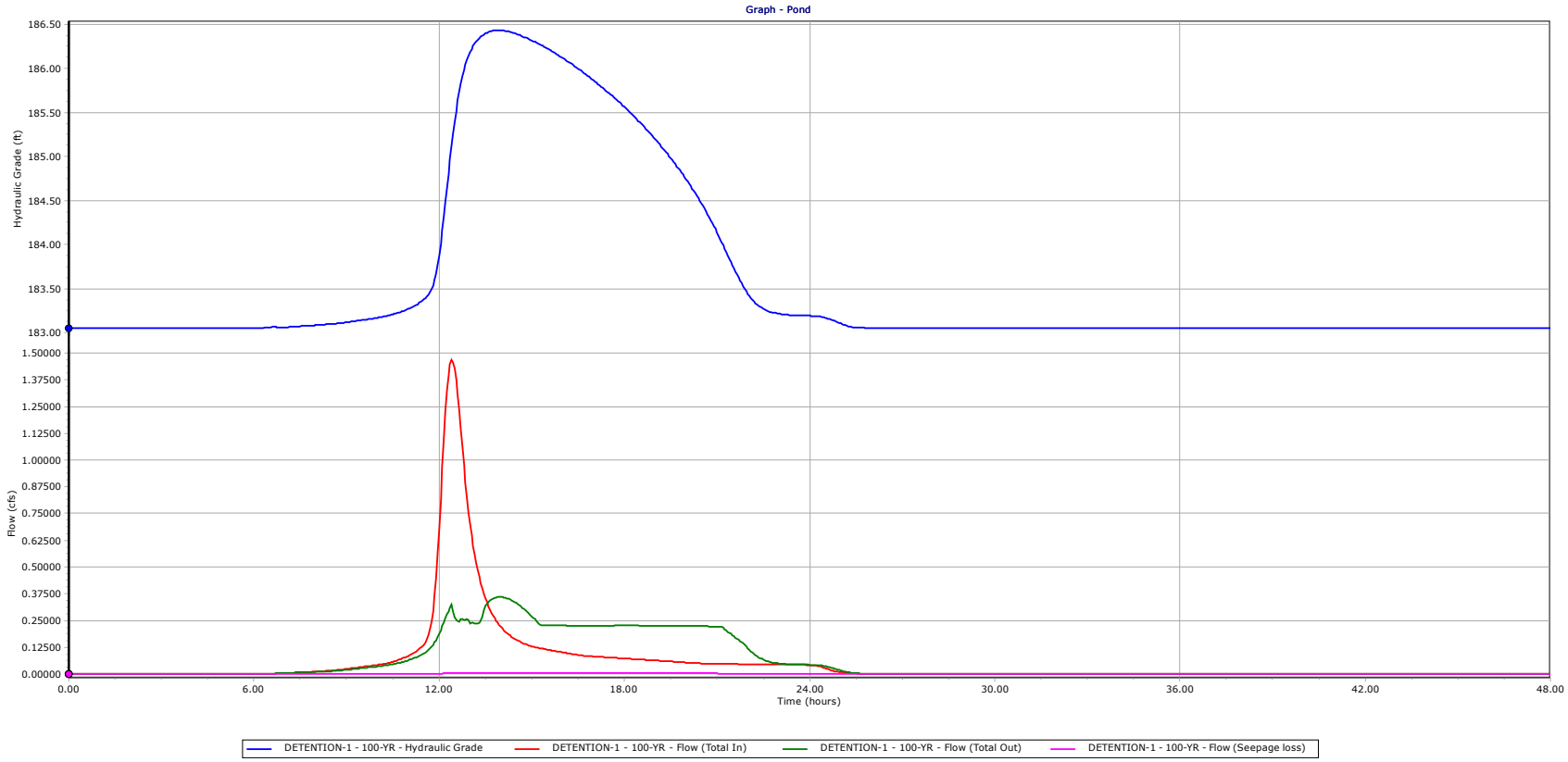
(g) t_c = Time of Concentration = $t_{sheet} + t_{shallow} + t_{pipe}$.

Y Intercept=	-0.0974
Slope=	0.1212
PRISM=	21.62
CV=	0.3721
n=	0.3721

	T_i=	0.003472	0.006944	0.010417	0.020833	0.041667	0.083333	0.125	0.25	0.4875	1	2	3	4	5	6	8	10	15	20	30	60	365
K_j	**PERIOD**	**5M**	**10M**	**15M**	**30M**	**1H**	**2H**	**3H**	**6H**	**12H**	**24H**	**2D**	**3D**	**4D**	**5D**	**6D**	**8D**	**10D**	**15D**	**20D**	**30D**	**60D**	**YEAR**
0.180	**2-YR**	0.33	0.42	0.49	0.64	0.83	1.07	1.24	1.61	2.06	2.69	3.48	4.05	4.51	4.90	5.24	5.84	6.34	7.37	8.21	9.54	12.35	24.18
0.745	**5-YR**	0.39	0.51	0.59	0.76	0.99	1.28	1.49	1.92	2.47	3.22	4.17	4.85	5.40	5.86	6.28	6.99	7.59	8.83	9.82	11.42	14.79	28.95
1.341	**10-YR**	0.46	0.60	0.69	0.90	1.16	1.50	1.74	2.26	2.89	3.78	4.89	5.69	6.33	6.88	7.37	8.20	8.91	10.36	11.53	13.41	17.35	33.97
2.066	**25-YR**	0.54	0.70	0.82	1.06	1.37	1.77	2.06	2.66	3.42	4.46	5.78	6.72	7.47	8.12	8.69	9.67	10.51	12.22	13.60	15.82	20.48	40.09
2.420	**50-YR**	0.58	0.75	0.88	1.14	1.47	1.90	2.21	2.86	3.67	4.79	6.21	7.22	8.03	8.73	9.34	10.39	11.29	13.13	14.62	17.00	22.00	43.07
3.087	**100-YR**	0.66	0.85	0.99	1.28	1.66	2.15	2.50	3.24	4.15	5.42	7.02	8.16	9.08	9.87	10.56	11.75	12.77	14.85	16.53	19.22	24.87	48.70
3.575	**200-YR**	0.71	0.93	1.08	1.39	1.80	2.33	2.71	3.51	4.50	5.88	7.61	8.85	9.85	10.70	11.45	12.75	13.85	16.10	17.92	20.84	26.98	52.81
4.300	**500-YR**	0.80	1.03	1.20	1.55	2.01	2.60	3.03	3.92	5.02	6.56	8.49	9.87	10.99	11.94	12.78	14.22	15.45	17.97	20.00	23.26	30.10	58.93
4.673	**1,000-YR**	0.84	1.09	1.26	1.64	2.12	2.74	3.19	4.13	5.29	6.91	8.94	10.40	11.57	12.58	13.46	14.98	16.28	18.93	21.07	24.50	31.70	62.07
6.185	**10,000-YR**	1.01	1.31	1.52	1.97	2.55	3.30	3.84	4.97	6.38	8.33	10.78	12.54	13.95	15.16	16.22	18.06	19.62	22.82	25.39	29.53	38.22	74.82

APPENDIX D
MODEL INPUT AND RESULTS

Detention Basin Model Results for the 100-Year Event



FlexTable: Catchment Table

Current Time: 0.00 hours

ID	Label	Outflow Element	Area (User Defined) (ft^2)	Loss Method	Unit Hydrograph Method	Time of Concentration (hours)	SCS CN (Composite)	Flow (Maximum) (cfs)
36	EX10	O-1	33,890	SCS CN	SCS Unit Hydrograph	1.040	84.0	1.46188
37	A1-10	DETENTION-1	32,147	SCS CN	SCS Unit Hydrograph	0.920	82.9	1.47169
55	A1-20	O-2	1,742	SCS CN	SCS Unit Hydrograph	0.083	90.5	0.25335

FlexTable: Outfall Table

Current Time: 0.00 hours

ID	Label	Elevation (Ground) (ft)	Set Rim to Ground Elevation?	Elevation (Invert) (ft)	Elevation (Rim) (ft)	Boundary Condition Type	Flow (Total In Maximum) (cfs)	Hydraulic Grade (Maximum) (ft)
35	O-2	187.00	True	185.77	187.00	Normal	0.47913	185.94
53	O-1	187.00	True	185.20	187.00	Free Outfall	(N/A)	(N/A)

Storm Data Detailed Report: 100-YR

Element Details			
ID	31	Notes	
Label	100-YR		

100-YR, 24-HR, TYPE II			
Label	100-YR, 24-HR, TYPE II	End Time	24.000 hours
Return Event	100 years	Depth	5.4200 in
Start Time	0.000 hours	Storm Event Depth Type	Cumulative
Increment	0.100 hours		

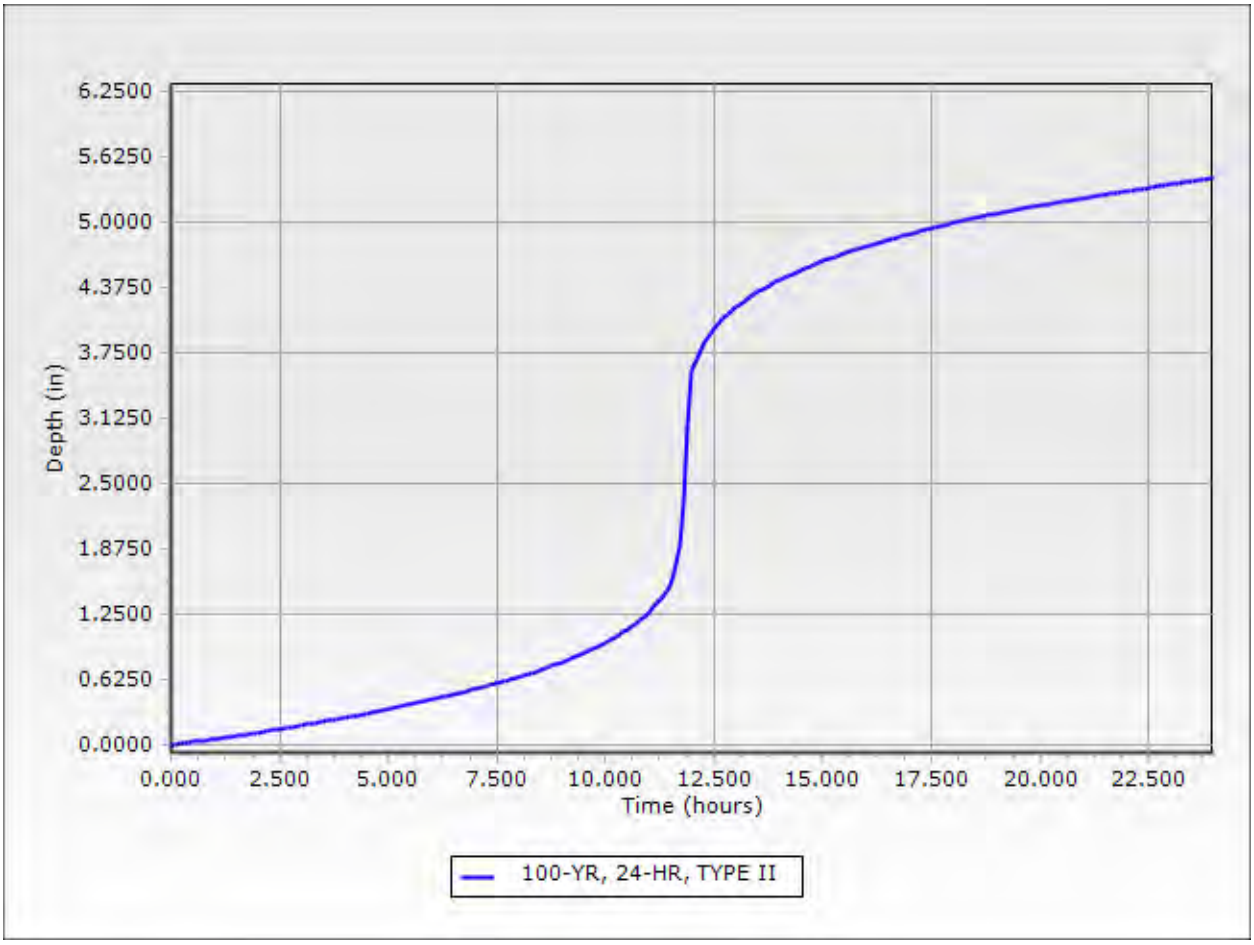
100-YR, 24-HR, TYPE II

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0000	0.0055	0.0109	0.0165	0.0221
0.500	0.0278	0.0335	0.0393	0.0451	0.0510
1.000	0.0569	0.0629	0.0689	0.0751	0.0812
1.500	0.0874	0.0937	0.1000	0.1063	0.1128
2.000	0.1192	0.1258	0.1324	0.1390	0.1457
2.500	0.1525	0.1592	0.1661	0.1730	0.1800
3.000	0.1870	0.1941	0.2012	0.2084	0.2156
3.500	0.2229	0.2302	0.2377	0.2451	0.2526
4.000	0.2602	0.2678	0.2756	0.2834	0.2914
4.500	0.2995	0.3076	0.3159	0.3243	0.3328
5.000	0.3415	0.3502	0.3590	0.3680	0.3770
5.500	0.3862	0.3954	0.4048	0.4143	0.4239
6.000	0.4336	0.4434	0.4533	0.4634	0.4735
6.500	0.4837	0.4941	0.5045	0.5151	0.5258
7.000	0.5366	0.5475	0.5585	0.5696	0.5808
7.500	0.5921	0.6036	0.6151	0.6268	0.6385
8.000	0.6504	0.6626	0.6753	0.6886	0.7024
8.500	0.7168	0.7317	0.7471	0.7631	0.7797
9.000	0.7967	0.8141	0.8314	0.8488	0.8661
9.500	0.8835	0.9012	0.9199	0.9394	0.9598
10.000	0.9810	1.0034	1.0270	1.0519	1.0781
10.500	1.1057	1.1349	1.1664	1.2000	1.2358
11.000	1.2737	1.3153	1.3622	1.4142	1.4714
11.500	1.5339	1.6631	1.9206	2.3349	3.0778
12.000	3.5935	3.6962	3.7866	3.8647	3.9304
12.500	3.9837	4.0294	4.0724	4.1125	4.1498
13.000	4.1842	4.2165	4.2473	4.2766	4.3043
13.500	4.3306	4.3555	4.3794	4.4021	4.4238
14.000	4.4444	4.4643	4.4837	4.5029	4.5216
14.500	4.5400	4.5579	4.5755	4.5927	4.6095
15.000	4.6260	4.6421	4.6577	4.6731	4.6880
15.500	4.7026	4.7167	4.7305	4.7439	4.7570
16.000	4.7696	4.7820	4.7943	4.8064	4.8184
16.500	4.8302	4.8420	4.8536	4.8650	4.8763
17.000	4.8875	4.8985	4.9094	4.9202	4.9308
17.500	4.9414	4.9517	4.9620	4.9720	4.9820

Storm Data Detailed Report: 100-YR

100-YR, 24-HR, TYPE II

Time (hours)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
18.000	4.9918	5.0015	5.0111	5.0205	5.0298
18.500	5.0389	5.0479	5.0568	5.0655	5.0741
19.000	5.0826	5.0910	5.0991	5.1072	5.1151
19.500	5.1229	5.1306	5.1381	5.1455	5.1527
20.000	5.1598	5.1669	5.1739	5.1809	5.1878
20.500	5.1947	5.2016	5.2085	5.2153	5.2222
21.000	5.2289	5.2357	5.2424	5.2492	5.2558
21.500	5.2625	5.2691	5.2757	5.2823	5.2888
22.000	5.2953	5.3018	5.3083	5.3147	5.3211
22.500	5.3275	5.3339	5.3402	5.3465	5.3528
23.000	5.3590	5.3653	5.3714	5.3776	5.3837
23.500	5.3899	5.3959	5.4020	5.4080	5.4140
24.000	5.4201	(N/A)	(N/A)	(N/A)	(N/A)



APPENDIX E

NOISE APPENDIX

Noise Appendix

Noise Measurement Locations Figure

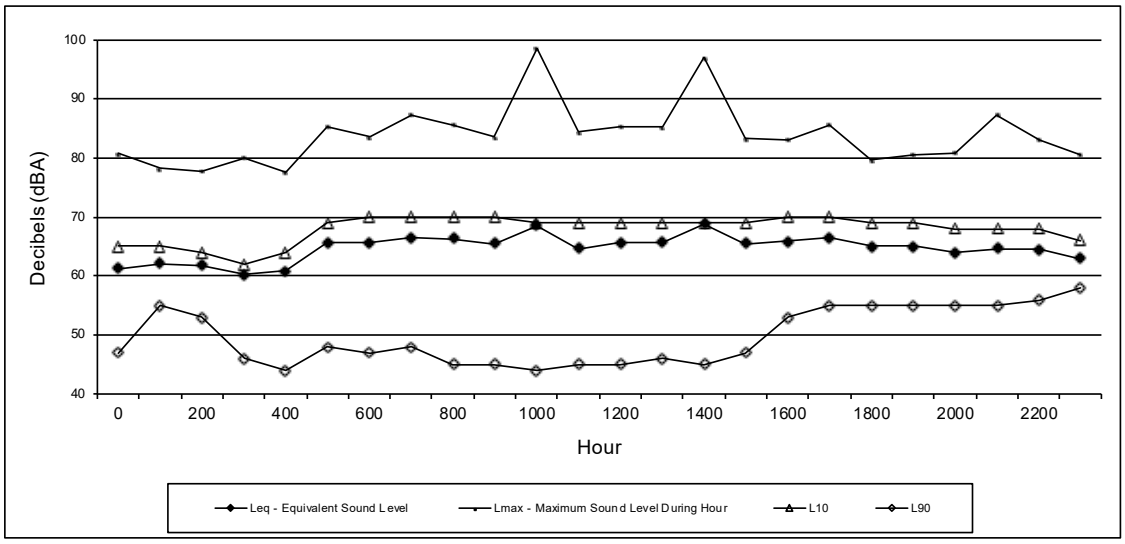
Long Term Noise Measurement Graphs for Site 1

RCH GROUP
planning & environmental consulting

NOISE MEASUREMENT LOCATIONS

RCH GROUP planning & environmental consulting

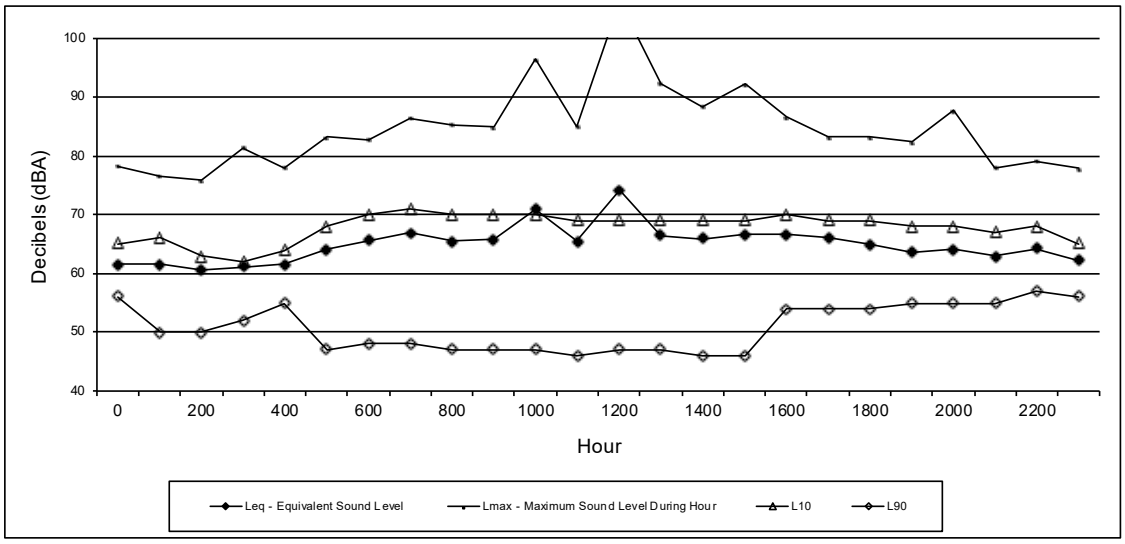
Source: RCH Group and Google Earth, 2024.



Site 1: Approximately 30 feet north of centerline of SR 16
Tuesday June 11, 2024

Hour	Leq - Equivalent Sound Level	Lmax - Maximum Sound Level During Hour	L10	L90
0	61	81	65	47
100	62	78	65	55
200	62	78	64	53
300	60	80	62	46
400	61	78	64	44
500	66	85	69	48
600	66	84	70	47
700	67	87	70	48
800	66	86	70	45
900	66	84	70	45
1000	69	99	69	44
1100	65	84	69	45
1200	66	85	69	45
1300	66	85	69	46
1400	69	97	69	45
1500	66	83	69	47
1600	66	83	70	53
1700	66	86	70	55
1800	65	80	69	55
1900	65	81	69	55
2000	64	81	68	55
2100	65	87	68	55
2200	65	83	68	56
2300	63	81	66	58

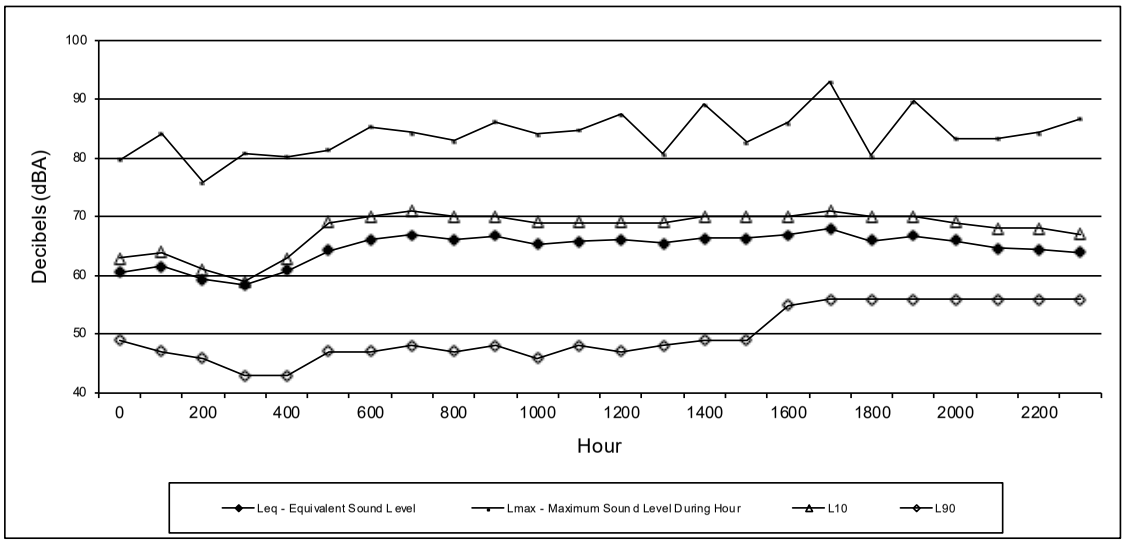
CNEL 70



Site 1: Approximately 30 feet north of centerline of SR 16
Wednesday June 12, 2024

Hour	Leq - Equivalent Sound Level	Lmax - Maximum Sound Level During Hour	L10	L90
0	62	78	65	56
100	62	77	66	50
200	61	76	63	50
300	61	81	62	52
400	62	78	64	55
500	64	83	68	47
600	66	83	70	48
700	67	87	71	48
800	66	85	70	47
900	66	85	70	47
1000	71	97	70	47
1100	66	85	69	46
1200	74	106	69	47
1300	67	92	69	47
1400	66	88	69	46
1500	67	92	69	46
1600	67	87	70	54
1700	66	83	69	54
1800	65	83	69	54
1900	64	82	68	55
2000	64	88	68	55
2100	63	78	67	55
2200	64	79	68	57
2300	62	78	65	56

CNEL: 71



Site 1: Approximately 30 feet north of centerline of SR 16
Thursday June 13, 2024

Hour	Leq - Equivalent Sound Level	Lmax - Maximum Sound Level During Hour	L10	L90
0	61	80	63	49
100	62	84	64	47
200	59	76	61	46
300	58	81	59	43
400	61	80	63	43
500	64	81	69	47
600	66	85	70	47
700	67	84	71	48
800	66	83	70	47
900	67	86	70	48
1000	65	84	69	46
1100	66	85	69	48
1200	66	87	69	47
1300	66	81	69	48
1400	66	89	70	49
1500	66	83	70	49
1600	67	86	70	55
1700	68	93	71	56
1800	66	80	70	56
1900	67	90	70	56
2000	66	83	69	56
2100	65	83	68	56
2200	64	84	68	56
2300	64	87	67	56

CNEL: 70

APPENDIX F

TRIP GENERATION AND VMT ANALYSIS

Abrams Associates
TRAFFIC ENGINEERING, INC.

February 16, 2024

Dan Jones
RCH Group
11060 White Rock Road, #150-A
Rancho Cordova, CA 95670

Re: Trip Generation and VMT Analysis for the Proposed A1 Pre-Fab Project in the Esparto Community of Yolo County

Dear Dan,

This letter was prepared to provide information on the project trip generation and vehicle miles traveled (VMT) for the proposed A1 Pre-Fab Project in the unincorporated Esparto area of Yolo County. **Figure 1** shows the location of the project and the surrounding roadway network. The project is expected to include a 30,000 square foot light industrial building. The site is currently vacant, with the exception of a 2,020 square foot storage building.

PROJECT TRIP GENERATION FORECASTS

As noted above, the proposed project would consist of a 30,000 square foot light industrial building. The resulting trip generation calculations are shown in **Table 1**. They are based on the trip generation rates for Light Industrial Uses (ITE Land Use Code 110) from the Institute of Transportation Engineer's (ITE) Trip Generation Manual, 11th Edition. As shown in **Table 1**, the proposed project is forecast to generate approximately 93 trips per day with about 16 trips during the AM peak hour and 15 trips during the PM peak hour.

Table 1
Project Trip Generation Based on ITE Rates

Land Use	ITE Code	Size	ADT	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Light Industrial (trips per employee)	110		3.10	0.44	0.09	0.53	0.11	0.38	0.49
Project Trip Generation		*30 employees*	*93*	*13*	*3*	*16*	*4*	*11*	*15*

Source: ITE Trip Generation, 11th Edition, September, 2021.

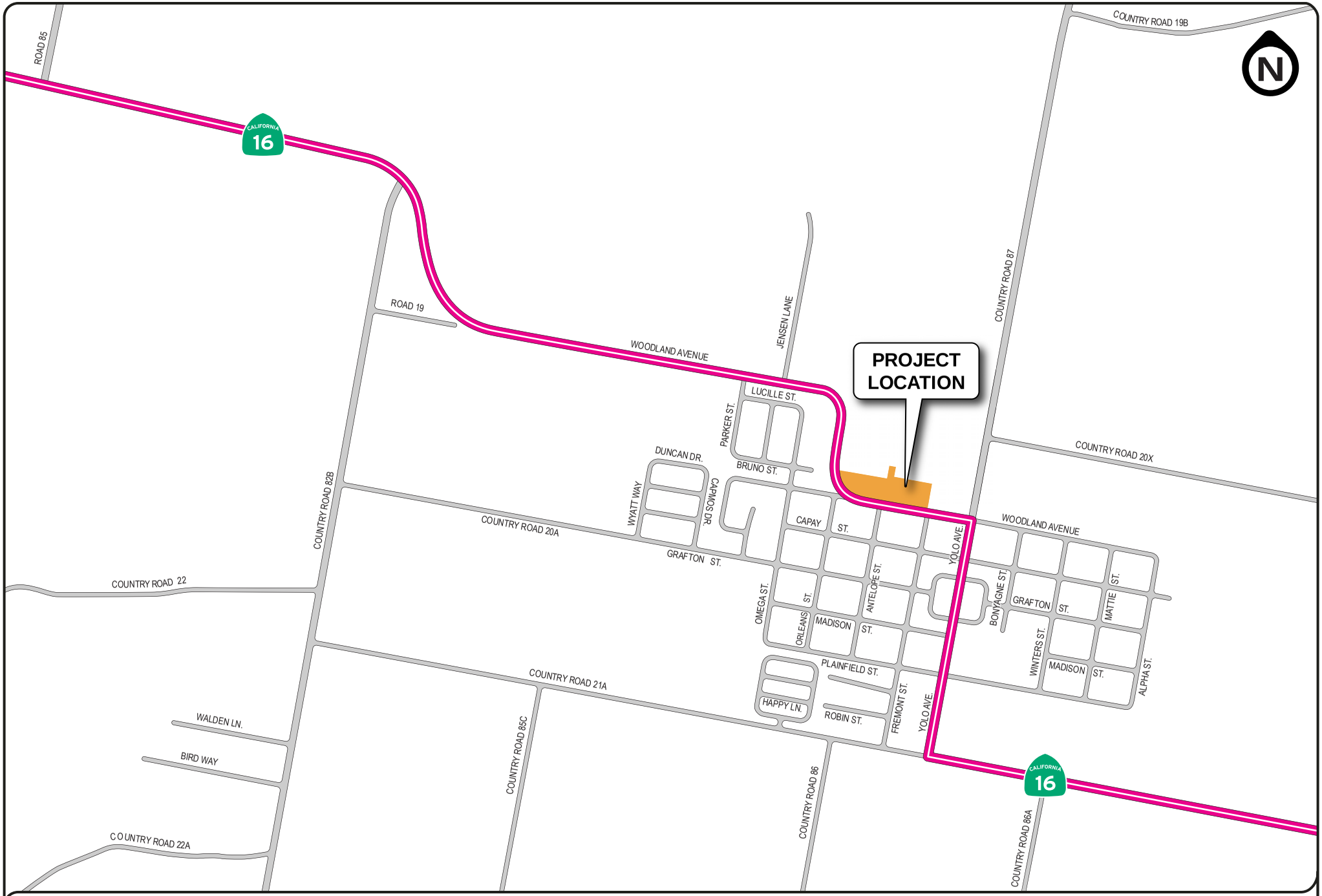


FIGURE 1 | PROJECT LOCATION
TRANSPORTATION ANALYSIS
A1 Pre-Fab Esparto
Yolo County

Abrams Associates
TRAFFIC ENGINEERING, INC.

REVIEW OF VEHICLE MILES TRAVELED

One performance measure that can be used to quantify the transportation impacts of a project is vehicle miles traveled (VMT). This preliminary review addresses the extent of the VMT-related transportation impacts caused by the Project. The State has adopted new transportation analysis guidelines that specify vehicle miles traveled as the new metric for evaluating transportation impacts, and therefore a project's effect on automobile delay shall no longer constitute a significant impact. VMT is typically estimated using an area-wide travel demand model from a regional transportation agency that calculates VMT based on the number of vehicles multiplied by the distance traveled by each vehicle originating from or driving to a certain area. VMT is a particularly useful metric for evaluating the impacts of growth on greenhouse gas (GHG) emissions because it can be used to estimate fuel consumption by motor vehicles. Increases in VMT cause proportional increases in greenhouse gas emissions and air pollution.

The Office of Planning and Research (OPR) released their final proposed Guidelines in a Technical Advisory on Evaluating Transportation Impacts in CEQA, dated December 2018, which went into effect on July 1, 2020. Yolo County has not adopted specific VMT thresholds or guidelines so this review is based on OPR guidance. The guidelines for VMT screening specify the following about small projects: "*Absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy (SCS) or general plan, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact*". As shown above in **Table 1,** the proposed project could qualify for the screening criteria covering small projects since it is forecast to generate an increase in traffic of about 93 trips per day. It is our understanding the proposed project is also consistent with the Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS). Therefore, subject to County approval, this project would be considered a small project that would have a less than significant impact on the VMT in the area.

In summary, the letter includes forecasts of the project trip generation and a review of potential VMT impacts, which are both subject to County review and approval. Please don't hesitate to contact me if you have any questions about this information or need anything else at this stage.

Sincerely,

Stephen C. Abrams
President
Abrams Associates
T.E. License No. 1852

APPENDIX G

TREATMENT PROTOCOL FOR HANDLING HUMAN REMAINS AND CULTURAL ITEMS AFFILIATED WITH THE YOCHA DEHE WINTUN NATION

YOCHA DEHE
CULTURAL RESOURCES

Treatment Protocol for Handling Human Remains and Cultural Items Affiliated with the Yocha Dehe Wintun Nation

The purpose of this Protocol is to formalize procedures for the treatment of Native American human remains, grave goods, ceremonial items, and items of cultural patrimony, in the event that any are found in conjunction with development, including archaeological studies, excavation, geotechnical investigations, grading, and any ground disturbing activity. This Protocol also formalizes procedures for Tribal monitoring during archaeological studies, grading, and ground-disturbing activities.

I. Cultural Affiliation

The Yocha Dehe Wintun Nation ("Tribe") traditionally occupied lands in Yolo, Solano, Lake, Colusa and Napa Counties. The Tribe has designated its Cultural Resources Committee ("Committee") to act on the Tribe's behalf with respect to the provisions of this Protocol. Any human remains which are found in conjunction with Projects on lands culturally-affiliated with the Tribe shall be treated in accordance with Section III of this Protocol. Any other cultural resources shall be treated in accordance with Section IV of this Protocol.

II. Inadvertent Discovery of Native American Human Remains

Whenever Native American human remains are found during the course of a Project, the determination of Most Likely Descendant ("MLD") under California Public Resources Code Section 5097.98 will be made by the Native American Heritage Commission ("NAHC") upon notification to the NAHC of the discovery of said remains at a Project site. If the location of the site and the history and prehistory of the area is culturally-affiliated with the Tribe, the NAHC contacts the Tribe; a Tribal member will be designated by the Tribe to consult with the landowner and/or project proponents.

Should the NAHC determine that a member of an Indian tribe other than Yocha Dehe Wintun Nation is the MLD, and the Tribe is in agreement with this determination, the terms of this Protocol relating to the treatment of such Native American human remains shall not be applicable; however, that situation is very unlikely.

III. Treatment of Native American Remains

In the event that Native American human remains are found during development of a Project and the Tribe or a member of the Tribe is determined to be MLD pursuant to Section II of this Protocol, the following provisions shall apply. The Medical Examiner shall immediately be notified, ground disturbing activities in that location shall cease and the Tribe shall be allowed, pursuant to California Public Resources Code Section 5097.98(a), to (1) inspect the site

of the discovery and (2) make determinations as to how the human remains and grave goods should be treated and disposed of with appropriate dignity.

The Tribe shall complete its inspection and make its MLD recommendation within forty-eight (48) hours of getting access to the site. The Tribe shall have the final determination as to the disposition and treatment of human remains and grave goods. Said determination may include avoidance of the human remains, reburial on-site, or reburial on tribal or other lands that will not be disturbed in the future.

The Tribe may wish to rebury said human remains and grave goods or ceremonial and cultural items on or near the site of their discovery, in an area which will not be subject to future disturbances over a prolonged period of time. Reburial of human remains shall be accomplished in compliance with the California Public Resources Code Sections 5097.98(a) and (b).

The term "human remains" encompasses more than human bones because the Tribe's traditions call for the burial of associated cultural items with the deceased (funerary objects), and/or the ceremonial burning of Native American human remains, funerary objects, grave goods and animals. Ashes, soils and other remnants of these burning ceremonies, as well as associated funerary objects and unassociated funerary objects buried with or found near the Native American remains are to be treated in the same manner as bones or bone fragments that remain intact.

IV. Non-Disclosure of Location of Reburials

Unless otherwise required by law, the site of any reburial of Native American human remains shall not be disclosed and will not be governed by public disclosure requirements of the California Public Records Act, Cal. Govt. Code § 6250 et seq. The Medical Examiner shall withhold public disclosure of information related to such reburial pursuant to the specific exemption set forth in California Government Code Section 6254(r). The Tribe will require that the location for reburial is recorded with the California Historic Resources Inventory System ("CHRIS") on a form that is acceptable to the CHRIS center. The Tribe may also suggest that the landowner enter into an agreement regarding the confidentiality of site information that will run with title on the property.

V. Treatment of Cultural Resources

Treatment of all cultural items, including ceremonial items and archeological items will reflect the religious beliefs, customs, and practices of the Tribe. All cultural items, including ceremonial items and archeological items, which may be found at a Project site should be turned over to the Tribe for appropriate treatment, unless otherwise ordered by a court or agency of competent jurisdiction. The Project Proponent should waive any and all claims to ownership of

Tribal ceremonial and cultural items, including archeological items, which may be found on a Project site in favor of the Tribe. If any intermediary, (for example, an archaeologist retained by the Project Proponent) is necessary, said entity or individual shall not possess those items for longer than is reasonably necessary, as determined solely by the Tribe.

VI. Inadvertent Discoveries

If additional significant sites or sites not identified as significant in a Project environmental review process, but later determined to be significant, are located within a Project impact area, such sites will be subjected to further archeological and cultural significance evaluation by the Project Proponent, the Lead Agency, and the Tribe to determine if additional mitigation measures are necessary to treat sites in a culturally appropriate manner consistent with CEQA requirements for mitigation of impacts to cultural resources. If there are human remains present that have been identified as Native American, all work will cease for a period of up to 30 days in accordance with Federal Law.

VIII. Work Statement for Tribal Monitors

The description of work for Tribal monitors of the grading and ground disturbing operations at the development site is attached hereto as Addendum I and incorporated herein by reference.

YOCHA DEHE
CULTURAL RESOURCES

ADDENDUM I

Yocha Dehe Wintun Nation
Tribal Monitors
Description of Work and Treatment Protocol

I. Preferred Treatment

The preferred protocol upon the discovery of Native American human remains is to (1) secure the area, (2) cover any exposed human remains or other cultural items, and (3) avoid further disturbances in the area.

II. Comportment

All parties to the action are strongly advised to treat the remains with appropriate dignity, as provided in Public Resource Code Section 5097.98. We further recommend that all parties to the action treat tribal representatives and the event itself with appropriate respect. For example, jokes and antics pertaining to the remains or other inappropriate behavior are ill advised.

III. Excavation Methods

If, after the Yocha Dehe Tribal representative has been granted access to the site and it is determined that avoidance is not feasible, an examination of the human remains will be conducted to confirm they are human and to determine the position, posture, and orientation of the remains. At this point, we recommend the following procedures:

(A) Tools. All excavation in the vicinity of the human remains will be conducted using fine hand tools and fine brushes to sweep loose dirt free from the exposure.

(B) Extent of Exposure. In order to determine the nature and extent of the grave and its contents, controlled excavation should extend to a full buffer zone around the perimeter of the remains.

(C) Perimeter Balk. To initiate the exposure, a perimeter balk (especially, a shallow trench) should be excavated, representing a reasonable buffer a minimum of 10 cm around the maximum extent of the known skeletal remains, with attention to counter-intuitive discoveries or unanticipated finds relating to this or other remains. The dirt from the perimeter balk should be bucketed, distinctly labeled, and screened for cultural materials.

(D) Exposure Methods. Excavation should then proceed inward from the walls of the balk as well as downward from the surface of the exposure. Loose dirt should be scooped out and brushed off into a dustpan or other collective device. Considerable care should be

given to ensure that human remains are not further impacted by the process of excavation.

(E) Provenience. Buckets, collection bags, notes, and tags should be fully labeled per provenience, and a distinction should be made between samples collected from: (1) **Perimeter Balk** (described above), (2) **Exposure** (dirt removed in exposing the exterior/burial plan and associations, and (3) **Matrix** (dirt from the interstices between bones or associations). Thus, each burial may have three bags, "Burial 1 Perimeter Balk," "Burial 1 Exposure Balk," "Burial 1 Matrix."

Please note the provisions below with respect to handling and conveyance of records and samples.

(F) Records. The following records should be compiled in the field: (1) a detailed scale drawing of the burial, including the provenience of and full for all human remains, associated artifacts, and the configuration of all associated phenomena such as burial pits, evidence for preinterment grave pit burning, soil variability, and intrusive disturbance, (2) complete a formal burial record using the consultants proprietary form or other standard form providing information on site #, unit or other proveniences, level depth, depth and location of the burial from a fixed datum, workers, date(s), artifact list, skeletal inventory, and other pertinent observations, (3) crew chief and worker field notes that may supplement or supercede information contained in the burial recording form, and (4) photographs, including either or standard photography or high-quality (400-500 DPI or 10 MP recommended) digital imaging.

(G) Stipulations for Acquisition and Use of Imagery. Photographs and images may be used only for showing location or configuration of questionable formation or for the position of the skeleton. They are not to be duplicated for publication unless a written release is obtained from the Tribe.

(H) Association. Association between the remains and other cultural materials should be determined in the field in consultation with an authorized Tribal representative, and may be amended per laboratory findings. Records of provenience and sample labels should be adequate to determine association or degree of likelihood of association of human remains and other cultural materials.

(I) Samples. For each burial, all **Perimeter Balk** soil is to be 1/8"-screened. All **Exposure** soil is to be 1/8"-screened, and a minimum of one 5-gallon bucket of excavated but unscreened Exposure soil is to be collected, placed in a plastic garbage bag in the bucket. All **Matrix** soil is to be carefully excavated, screened as appropriate, and then collected in plastic bags placed in 5-gallon buckets.

(J) Human remains are not to be cleaned in the field.

(K) Blessings. Prior to any physical action related to human remains, a designated tribal representative will conduct prayers and blessings over the remains. The archaeological consultant will be responsible for insuring that individuals and tools involved in the action are available for traditional blessings and prayers, as necessary.

IV. Lab Procedures

No laboratory studies are permitted without consultation with the tribe. Lab methods are determined on a project-specific basis in consultation with Yocha Dehe Wintun Nation representatives. The following procedures are recommended:

(A) Responsibility. The primary archaeological consultant will be responsible for insuring that all lab procedures follow stipulations made by the Tribe.

(B) Blessings. Prior to any laboratory activities related to the remains, a designated tribal representative will conduct prayers and blessings over the remains. The archaeological consultant will be responsible for insuring that individuals and tools involved in the action are available for traditional blessings and prayers, as necessary.

(C) Physical Proximity of Associations. To the extent possible, all remains, associations, samples, and original records are to be kept together throughout the laboratory process. In particular, **Matrix** dirt is to be kept in buckets and will accompany the remains to the lab. The primary archaeological consultant will be responsible for copying all field records and images, and insuring that the original notes and records accompany the remains throughout the process.

(*E) Additional Lab Finds*. Laboratory study should be done making every effort to identify unanticipated finds or materials missed in the field, such as objects encased in dirt or human remains misidentified as faunal remains in the field. In the event of discovery of additional remains, materials, and other associations the tribal representatives are to be contacted immediately.

V. Re-internment without Further Disturbance

No laboratory studies are permitted on human remains and funerary objects. The preferred treatment preference for exhumed Native American human remains is reburial in an area not subject to further disturbance. Any objects associated with remains will be reinterred with the remains.

YOCHA DEHE
CULTURAL RESOURCES

VI. Curation of Recovered Materials

Should all, or a sample, of any archaeological materials collected during the data recovery activities – with the exception of Human Remains – need to be curated, an inventory and location information of the curation facility shall be given to tribe for our records.