# Appendix A

Air Quality, Greenhouse Gas Emissions, and Energy Modeling

# San Jose Creek Bikeway Report Tables

Construction

**AQ** Estimated Maximum Pounds per day Mass Regional Construction Emissions

| Construction Phase | ROG | NOx | CO | $PM_{10}$ | $PM_{2.5}$ | $SO_2$ |
|---|---|---|---|---|---|---|
| **Regional Emissions** | | | | | | |
| Linear, Grubbing & Land Clearing | 1 | 7 | 14 | 2.6 | 0.8 | 0 |
| Linear, Grading & Excavation | 4 | 27 | 40 | 4.2 | 1.6 | 0 |
| Linear, Drainage, Utilities, & Sub-Grade | 3 | 22 | 32 | 3.8 | 1.3 | 0 |
| Linear, Paving | 1 | 8 | 19 | 2.2 | 0.7 | 0 |
| Maximum Daily | 4 | 27 | 40 | 4.2 | 1.6 | 0 |
| **Mass Emissions Threshold** | **75** | **100** | **550** | **150** | **55** | **150** |
| **Exceed Threshold?** [a] | **No** | **No** | **No** | **No** | **No** | **No** |
| **Localized Emissions** | | | | | | |
| Linear, Grubbing & Land Clearing | N/A | 5 | 5 | 0.4 | 0.2 | N/A |
| Linear, Grading & Excavation | N/A | 27 | 31 | 2.4 | 1.2 | N/A |
| Linear, Drainage, Utilities, & Sub-Grade | N/A | 21 | 23 | 1.9 | 0.9 | N/A |
| Linear, Paving | N/A | 7 | 11 | 0.3 | 0.3 | N/A |
| Maximum Daily | N/A | 27 | 31 | 2.4 | 1.2 | N/A |
| **Localized Significance Threshold** | **N/A** | **103** | **612** | **4.0** | **3.0** | **N/A** |
| **Exceed Threshold?** [a] | **N/A** | **No** | **No** | **No** | **No** | **N/A** |

Assuming no overlapping phases

**GHG** Construction GHGs Emissions

| Construction Phases | MTCO2e |
|---|---|
| Linear, Grubbing & Land Clearing | 69 |
| Linear, Grading & Excavation | 618 |
| Linear, Drainage, Utilities, & Sub-Grade | 490 |
| Linear, Paving | 92 |
| **Total Construction Emissions** | **1,269** |
| **Amortized Construction Emissions** | **42** |

30 years amortization

**Energy** Construction Energy Consumptions

| Construction Phases | MTCO2e | | Gallons of fuel | |
|---|---|---|---|---|
| | Diesel | Gasoline | Diesel | Gasoline |
| Linear, Grubbing & Land Clearing | 36 | 34 | 3,483 | 3,822 |
| Linear, Grading & Excavation | 486 | 132 | 47,645 | 15,000 |
| Linear, Drainage, Utilities, & Sub-Grade | 375 | 115 | 36,730 | 13,099 |
| Linear, Paving | 46 | 46 | 4,493 | 5,245 |
| **Total** | 943 | 326 | **92,351** | **18,343** |

Assume Off-road construction equipment and vendor/haul trucks are all diesel fueled.
All worker vehicles are gasoline fueled.

Climate Registry 2025 MT to kg 1000

Emission factors 8.78 kg $CO_2$ per gallon of gasoline
10.21 kg $CO_2$ per gallon of diese

## Compiled CalEEMod Output

**Max Daily by Phase** **Unit: lbs/day**

| Phase | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10 | PM2.5E | PM2.5D | PM2.5 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Linear, Drainage, Utilities, & Sub-Grade | 2.90861215 | 22.0684018 | 31.7301145 | 0.056023 | 0.829471 | 2.931314 | 3.760784 | 0.763367 | 0.558955 | 1.322322 | 7851.907 |
| Linear, Grading & Excavation | 3.65346694 | 27.3621884 | 40.0076407 | 0.063589 | 1.123494 | 3.088807 | 4.212301 | 1.033461 | 0.567872 | 1.601333 | 8755.928 |
| Linear, Grubbing & Land Clearing | 1.07275261 | 6.78325613 | 13.5826649 | 0.015608 | 0.240455 | 2.357191 | 2.597645 | 0.222426 | 0.538636 | 0.761063 | 3779.663 |
| Linear, Paving | 1.31716768 | 7.85531476 | 19.2611596 | 0.016139 | 0.28147 | 1.878268 | 2.159738 | 0.259136 | 0.442167 | 0.701303 | 3694.252 |

**Onsite Max Daily by Phase** **Unit: lbs/day**

| Phase | Year | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10 | PM2.5E | PM2.5D | PM2.5 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Linear, Drainage, Utilities, & Sub-Grade | 2027 | 2.39260553 | 21.1522666 | 23.32935 | 0.054356 | 0.826295 | 1.034611 | 1.860906 | 0.760191 | 0.111741 | 0.871932 | 5712.129 |
| Linear, Grading & Excavation | 2026 | 3.13654096 | 26.673297 | 30.93278 | 0.063128 | 1.122594 | 1.240873 | 2.363467 | 1.032787 | 0.133989 | 1.166776 | 6761.895 |
| Linear, Grubbing & Land Clearing | 2026 | 0.5430314 | 4.71598977 | 5.309234 | 0.00768 | 0.225353 | 0.209762 | 0.435115 | 0.207325 | 0.022778 | 0.230103 | 736.974 |
| Linear, Paving | 2027 | 0.81804584 | 7.17958375 | 10.78058 | 0.014953 | 0.279171 | 0 | 0.279171 | 0.256837 | 0 | 0.256837 | 1625.054 |

**Construction Emission Summary** **Units: Max Daily: lbs/day, Annual: CO2e MTs, other Tons**

| Temporal Metric | Year | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Annual | 2026 | 0.40111539 | 3.00047248 | 4.356757 | 0.007105 | 0.119665 | 0.380858 | 0.500523 | 0.110112 | 0.072573 | 0.182685 | 915.4121 |
| Annual | 2027 | 0.14086603 | 0.99299537 | 1.657866 | 0.002533 | 0.036324 | 0.159994 | 0.196319 | 0.033433 | 0.032773 | 0.066206 | 354.0505 |
| Max Daily | 2026 | 3.65346694 | 27.3621884 | 40.00764 | 0.063589 | 1.123494 | 3.088807 | 4.212301 | 1.033461 | 0.567872 | 1.601333 | 8757.187 |
| Max Daily | 2027 | 2.81605809 | 20.7105334 | 31.73011 | 0.056017 | 0.765775 | 2.931314 | 3.697088 | 0.704767 | 0.558955 | 1.263721 | 7853.591 |

**Construction Schedule**

| Phase Name | Start Date | End Date | Days Per We | Work Days | Phase Description |
|---|---|---|---|---|---|
| Linear, Grubbing & Land Clearing | 1/1/2026 | 2/25/2026 | 5 | 40 | demolition phase in PD |
| Linear, Grading & Excavation | 2/26/2026 | 10/2/2026 | 5 | 157 | grading phase in PD |
| Linear, Drainage, Utilities, & Sub-Grade | 10/3/2026 | 4/14/2027 | 5 | 138 | construction phase in PD |
| Linear, Paving | 4/15/2027 | 7/1/2027 | 5 | 56 | architectural finishing phase in PD |

**Compiled Annual Onsite Offsite Construction Emissions from CalEEMod Output**

| Phase | Location | Site Location | Year | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Linear, Grubbing & Land Clearing | Off-Road Equipment | Onsite | 2026 | 0.0109 | 0.0943 | 0.1062 | 0.0002 | 0.0045 | | 0.0045 | 0.0041 | | 0.0041 | 13.371 |
| Linear, Grubbing & Land Clearing | Dust From Material Movement | Onsite | 2026 | | | | | | 0.0042 | 0.0042 | | 0.0005 | 0.0005 | |
| Linear, Grubbing & Land Clearing | Worker | Offsite | 2026 | 0.0102 | 0.0133 | 0.1615 | 0 | 0 | 0.0362 | 0.0362 | 0 | 0.0085 | 0.0085 | 33.554 |
| Linear, Grubbing & Land Clearing | Hauling | Offsite | 2026 | 0.0004 | 0.0295 | 0.0111 | 0.0002 | 0.0003 | 0.0063 | 0.0066 | 0.0003 | 0.0017 | 0.002 | 22.195 |
| Linear, Grading & Excavation | Off-Road Equipment | Onsite | 2026 | 0.2462 | 2.0939 | 2.4282 | 0.005 | 0.0881 | | 0.0881 | 0.0811 | | 0.0811 | 481.54 |
| Linear, Grading & Excavation | Dust From Material Movement | Onsite | 2026 | | | | | | 0.0974 | 0.0974 | | 0.0105 | 0.0105 | |
| Linear, Grading & Excavation | Worker | Offsite | 2026 | 0.04 | 0.0521 | 0.6339 | 0 | 0 | 0.1419 | 0.1419 | 0 | 0.0332 | 0.0332 | 131.7 |
| Linear, Grading & Excavation | Vendor | Offsite | 2026 | 7E-05 | 0.0028 | 0.0013 | 2E-05 | 4E-05 | 0.0007 | 0.0007 | 2E-05 | 0.0002 | 0.0002 | 2.32 |
| Linear, Grading & Excavation | Hauling | Offsite | 2026 | 4E-05 | 0.0034 | 0.0013 | 2E-05 | 4E-05 | 0.0007 | 0.0008 | 4E-05 | 0.0002 | 0.0002 | 2.5921 |
| Linear, Drainage, Utilities, & Sub-Grade | Off-Road Equipment | Onsite | 2026 | 0.0769 | 0.6799 | 0.7499 | 0.0017 | 0.0266 | | 0.0266 | 0.0244 | | 0.0244 | 166.56 |
| Linear, Drainage, Utilities, & Sub-Grade | Dust From Material Movement | Onsite | 2026 | | | | | | 0.0333 | 0.0333 | | 0.0036 | 0.0036 | |
| Linear, Drainage, Utilities, & Sub-Grade | Worker | Offsite | 2026 | 0.0164 | 0.0213 | 0.2596 | 0 | 0 | 0.0581 | 0.0581 | 0 | 0.0136 | 0.0136 | 53.926 |
| Linear, Drainage, Utilities, & Sub-Grade | Hauling | Offsite | 2026 | 0.0001 | 0.01 | 0.0037 | 5E-05 | 0.0001 | 0.0021 | 0.0022 | 0.0001 | 0.0006 | 0.0007 | 7.5015 |
| Linear, Drainage, Utilities, & Sub-Grade | Off-Road Equipment | Onsite | 2027 | 0.086 | 0.7358 | 0.862 | 0.002 | 0.0283 | | 0.0283 | 0.0261 | | 0.0261 | 192.44 |
| Linear, Drainage, Utilities, & Sub-Grade | Dust From Material Movement | Onsite | 2027 | | | | | | 0.0384 | 0.0384 | | 0.0042 | 0.0042 | |
| Linear, Drainage, Utilities, & Sub-Grade | Worker | Offsite | 2027 | 0.0181 | 0.0224 | 0.2781 | 0 | 0 | 0.0671 | 0.0671 | 0 | 0.0157 | 0.0157 | 61.082 |
| Linear, Drainage, Utilities, & Sub-Grade | Hauling | Offsite | 2027 | 0.0001 | 0.0111 | 0.0042 | 6E-05 | 0.0001 | 0.0025 | 0.0026 | 0.0001 | 0.0007 | 0.0008 | 8.5021 |
| Linear, Paving | Off-Road Equipment | Onsite | 2027 | 0.0229 | 0.201 | 0.3019 | 0.0004 | 0.0078 | | 0.0078 | 0.0072 | | 0.0072 | 41.278 |
| Linear, Paving | Worker | Offsite | 2027 | 0.0137 | 0.0169 | 0.2097 | 0 | 0 | 0.0506 | 0.0506 | 0 | 0.0119 | 0.0119 | 46.047 |
| Linear, Paving | Hauling | Offsite | 2027 | 6E-05 | 0.0057 | 0.002 | 3E-05 | 6E-05 | 0.0013 | 0.0014 | 6E-05 | 0.0004 | 0.0004 | 4.5967 |

| Phase | CO2e MT by Fuel Type | | |
|---|---|---|---|
| | Diesel | Gasoline | Total |
| Linear, Grubbing & Land Clearing | 35.56616151 | 33.55372 | 69.12 |
| Linear, Grading & Excavation | 486.4542914 | 131.6984 | 618.15 |
| Linear, Drainage, Utilities, & Sub-Grade | 375.0114936 | 115.008 | 490.02 |
| Linear, Paving | 45.87502445 | 46.04673 | 91.922 |
| Total | 942.906971 | 326.3068 | 1269.2 |

Assume worker commute vehicles use gasoline, others diesel

Additional truck data from client

| Landscaping component | Truck load (cy) | # of round trips | # of one-way trips | One-way trip length (mi) | # of one-way trips per day | Total material moved (fugitive dust input) (cy) |
|---|---|---|---|---|---|---|
| soil+amendment | 14 | 34 | 68 | 20 | 1.21429 | **476** |
| plants/trees/shrubs* | 50' semi | 8 | 16 | 60 | 0.28571 | |
| site amenities (bench, lights)* | 50' semi | 4 | 8 | 75 | 0.14286 | |
| | | Total | 92 | **31.73913** | **1.64286** | |

* 50' semi-truck. Trip length were estimated as minimum trip length (provided) times F

F= 1.5

Phase duration (days) Caleemod 56

80,000 lbs per 50' semi

40 tons/truck

1.5 tons/cy soil

# San Jose Creek Bikeway Detailed Report

## Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

3. Construction Emissions Details

3.1. Linear, Grubbing & Land Clearing (2026) - Unmitigated

3.3. Linear, Grading & Excavation (2026) - Unmitigated

3.5. Linear, Drainage, Utilities, & Sub-Grade (2026) - Unmitigated

3.7. Linear, Drainage, Utilities, & Sub-Grade (2027) - Unmitigated

3.9. Linear, Paving (2027) - Unmitigated

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | San Jose Creek Bikeway |
| Construction Start Date | 1/1/2026 |
| Lead Agency | — |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 2.60 |
| Precipitation (days) | 18.8 |
| Location | 34.062036172081704, -117.80022271015261 |
| County | Los Angeles-South Coast |
| City | Pomona |
| Air District | South Coast AQMD |
| Air Basin | South Coast |
| TAZ | 5018 |
| EDFZ | 7 |
| Electric Utility | Southern California Edison |
| Gas Utility | Southern California Gas |
| App Version | 2022.1.1.29 |

## 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 |
|---|---|---|---|---|---|---|---|---|
| Road Construction | 3.50 | Mile | 6.00 | 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, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 4.32 | 3.65 | 27.3 | 40.0 | 0.06 | 1.12 | 3.09 | 4.21 | 1.03 | 0.57 | 1.60 | — | 8,703 | 8,703 | 0.36 | 0.15 | 6.58 | 8,757 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 4.32 | 3.65 | 27.4 | 38.7 | 0.06 | 1.12 | 3.09 | 4.21 | 1.03 | 0.57 | 1.60 | — | 8,604 | 8,604 | 0.36 | 0.26 | 0.23 | 8,652 |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 2.61 | 2.20 | 16.4 | 23.9 | 0.04 | 0.66 | 2.09 | 2.74 | 0.60 | 0.40 | 1.00 | — | 5,488 | 5,488 | 0.23 | 0.11 | 2.18 | 5,529 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.48 | 0.40 | 3.00 | 4.36 | 0.01 | 0.12 | 0.38 | 0.50 | 0.11 | 0.07 | 0.18 | — | 909 | 909 | 0.04 | 0.02 | 0.36 | 915 |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2026 | 4.32 | 3.65 | 27.3 | 40.0 | 0.06 | 1.12 | 3.09 | 4.21 | 1.03 | 0.57 | 1.60 | — | 8,703 | 8,703 | 0.36 | 0.13 | 6.58 | 8,757 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2027 | 3.34 | 2.82 | 20.6 | 31.7 | 0.06 | 0.77 | 2.93 | 3.70 | 0.70 | 0.56 | 1.26 | — | 7,794 | 7,794 | 0.32 | 0.15 | 6.31 | 7,854 |
| Daily - Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2026 | 4.32 | 3.65 | 27.4 | 38.7 | 0.06 | 1.12 | 3.09 | 4.21 | 1.03 | 0.57 | 1.60 | — | 8,604 | 8,604 | 0.36 | 0.26 | 0.23 | 8,652 |
| 2027 | 3.34 | 2.81 | 20.7 | 30.4 | 0.06 | 0.77 | 2.93 | 3.70 | 0.70 | 0.56 | 1.26 | — | 7,698 | 7,698 | 0.27 | 0.15 | 0.16 | 7,750 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2026 | 2.61 | 2.20 | 16.4 | 23.9 | 0.04 | 0.66 | 2.09 | 2.74 | 0.60 | 0.40 | 1.00 | — | 5,488 | 5,488 | 0.23 | 0.11 | 2.18 | 5,529 |
| 2027 | 0.92 | 0.77 | 5.44 | 9.08 | 0.01 | 0.20 | 0.88 | 1.08 | 0.18 | 0.18 | 0.36 | — | 2,122 | 2,122 | 0.07 | 0.05 | 0.96 | 2,138 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2026 | 0.48 | 0.40 | 3.00 | 4.36 | 0.01 | 0.12 | 0.38 | 0.50 | 0.11 | 0.07 | 0.18 | — | 909 | 909 | 0.04 | 0.02 | 0.36 | 915 |
| 2027 | 0.17 | 0.14 | 0.99 | 1.66 | < 0.005 | 0.04 | 0.16 | 0.20 | 0.03 | 0.03 | 0.07 | — | 351 | 351 | 0.01 | 0.01 | 0.16 | 354 |

# 3. Construction Emissions Details

## 3.1. Linear, Grubbing & Land Clearing (2026) - 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 | 0.65 | 0.54 | 4.72 | 5.31 | 0.01 | 0.23 | — | 0.23 | 0.21 | — | 0.21 | — | 734 | 734 | 0.03 | 0.01 | — | 737 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dust From Material Movement | — | — | — | — | — | — | 0.21 | 0.21 | — | 0.02 | 0.02 | — | — | — | — | — | — | — |
| 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 | 0.07 | 0.06 | 0.52 | 0.58 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 80.5 | 80.5 | < 0.005 | < 0.005 | — | 80.8 |
| Dust From Material Movement | — | — | — | — | — | — | 0.02 | 0.02 | — | < 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 | 0.01 | 0.09 | 0.11 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 13.3 | 13.3 | < 0.005 | < 0.005 | — | 13.4 |
| 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 | 0.58 | 0.51 | 0.61 | 7.72 | 0.00 | 0.00 | 1.83 | 1.83 | 0.00 | 0.43 | 0.43 | — | 1,798 | 1,798 | 0.08 | 0.07 | 0.17 | 1,820 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 0.08 | 0.02 | 1.46 | 0.56 | 0.01 | 0.02 | 0.32 | 0.33 | 0.02 | 0.09 | 0.10 | — | 1,165 | 1,165 | 0.06 | 0.19 | 0.07 | 1,223 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.06 | 0.06 | 0.07 | 0.89 | 0.00 | 0.00 | 0.20 | 0.20 | 0.00 | 0.05 | 0.05 | — | 200 | 200 | 0.01 | 0.01 | 0.30 | 203 |
| 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 | 0.01 | < 0.005 | 0.16 | 0.06 | < 0.005 | < 0.005 | 0.03 | 0.04 | < 0.005 | 0.01 | 0.01 | — | 128 | 128 | 0.01 | 0.02 | 0.12 | 134 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.16 | 0.00 | 0.00 | 0.04 | 0.04 | 0.00 | 0.01 | 0.01 | — | 33.1 | 33.1 | < 0.005 | < 0.005 | 0.05 | 33.6 |
| 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 | < 0.005 | < 0.005 | 0.03 | 0.01 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 21.1 | 21.1 | < 0.005 | < 0.005 | 0.02 | 22.2 |

## 3.3. Linear, Grading & Excavation (2026) - 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 3.74 | 3.14 | 26.7 | 30.9 | 0.06 | 1.12 | — | 1.12 | 1.03 | — | 1.03 | — | 6,739 | 6,739 | 0.27 | 0.05 | — | 6,762 |
| Dust From Material Movement | — | — | — | — | — | — | 1.24 | 1.24 | — | 0.13 | 0.13 | — | — | — | — | — | — | — |
| 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 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Roa Equipment | 3.74 | 3.14 | 26.7 | 30.9 | 0.06 | 1.12 | — | 1.12 | 1.03 | — | 1.03 | — | 6,739 | 6,739 | 0.27 | 0.05 | — | 6,762 |
| Dust From Material Movement | — | — | — | — | — | — | 1.24 | 1.24 | — | 0.13 | 0.13 | — | — | — | — | — | — | — |
| 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-Roa d Equipm ent | 1.61 | 1.35 | 11.5 | 13.3 | 0.03 | 0.48 | — | 0.48 | 0.44 | — | 0.44 | — | 2,899 | 2,899 | 0.12 | 0.02 | — | 2,909 |
| 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 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Roa d Equipm ent | 0.29 | 0.25 | 2.09 | 2.43 | < 0.005 | 0.09 | — | 0.09 | 0.08 | — | 0.08 | — | 480 | 480 | 0.02 | < 0.005 | — | 482 |
| Dust From Material Movement | — | — | — | — | — | — | 0.10 | 0.10 | — | 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.58 | 0.52 | 0.54 | 9.04 | 0.00 | 0.00 | 1.83 | 1.83 | 0.00 | 0.43 | 0.43 | — | 1,897 | 1,897 | 0.08 | 0.07 | 6.42 | 1,925 |
| Vendor | < 0.005 | < 0.005 | 0.03 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 31.2 | 31.2 | < 0.005 | < 0.005 | 0.08 | 32.6 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 34.7 | 34.7 | < 0.005 | 0.01 | 0.08 | 36.4 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.58 | 0.51 | 0.61 | 7.72 | 0.00 | 0.00 | 1.83 | 1.83 | 0.00 | 0.43 | 0.43 | — | 1,798 | 1,798 | 0.08 | 0.07 | 0.17 | 1,820 |
| Vendor | < 0.005 | < 0.005 | 0.04 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 31.2 | 31.2 | < 0.005 | < 0.005 | < 0.005 | 32.6 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 34.7 | 34.7 | < 0.005 | 0.01 | < 0.005 | 36.4 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.25 | 0.22 | 0.29 | 3.47 | 0.00 | 0.00 | 0.78 | 0.78 | 0.00 | 0.18 | 0.18 | — | 785 | 785 | 0.04 | 0.03 | 1.19 | 795 |
| Vendor | < 0.005 | < 0.005 | 0.02 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 13.4 | 13.4 | < 0.005 | < 0.005 | 0.02 | 14.0 |
| Hauling | < 0.005 | < 0.005 | 0.02 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 14.9 | 14.9 | < 0.005 | < 0.005 | 0.01 | 15.7 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.04 | 0.05 | 0.63 | 0.00 | 0.00 | 0.14 | 0.14 | 0.00 | 0.03 | 0.03 | — | 130 | 130 | 0.01 | < 0.005 | 0.20 | 132 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 2.22 | 2.22 | < 0.005 | < 0.005 | < 0.005 | 2.32 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 2.47 | 2.47 | < 0.005 | < 0.005 | < 0.005 | 2.59 |

## 3.5. Linear, Drainage, Utilities, & Sub-Grade (2026) - 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 | 2.85 | 2.39 | 21.2 | 23.3 | 0.05 | 0.83 | — | 0.83 | 0.76 | — | 0.76 | — | 5,693 | 5,693 | 0.23 | 0.05 | — | 5,712 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dust From Material Movement | — | — | — | — | — | — | 1.03 | 1.03 | — | 0.11 | 0.11 | — | — | — | — | — | — | — |
| 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 | 0.50 | 0.42 | 3.73 | 4.11 | 0.01 | 0.15 | — | 0.15 | 0.13 | — | 0.13 | — | 1,003 | 1,003 | 0.04 | 0.01 | — | 1,006 |
| Dust From Material Movement | — | — | — | — | — | — | 0.18 | 0.18 | — | 0.02 | 0.02 | — | — | — | — | — | — | — |
| 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 | 0.09 | 0.08 | 0.68 | 0.75 | < 0.005 | 0.03 | — | 0.03 | 0.02 | — | 0.02 | — | 166 | 166 | 0.01 | < 0.005 | — | 167 |
| Dust From Material Movement | — | — | — | — | — | — | 0.03 | 0.03 | — | < 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 | 0.58 | 0.51 | 0.61 | 7.72 | 0.00 | 0.00 | 1.83 | 1.83 | 0.00 | 0.43 | 0.43 | — | 1,798 | 1,798 | 0.08 | 0.07 | 0.17 | 1,820 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 0.02 | < 0.005 | 0.31 | 0.12 | < 0.005 | < 0.005 | 0.07 | 0.07 | < 0.005 | 0.02 | 0.02 | — | 245 | 245 | 0.01 | 0.04 | 0.01 | 257 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.10 | 0.09 | 0.12 | 1.42 | 0.00 | 0.00 | 0.32 | 0.32 | 0.00 | 0.07 | 0.07 | — | 321 | 321 | 0.01 | 0.01 | 0.49 | 326 |
| 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 | < 0.005 | < 0.005 | 0.05 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 43.2 | 43.2 | < 0.005 | 0.01 | 0.04 | 45.3 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.02 | 0.02 | 0.02 | 0.26 | 0.00 | 0.00 | 0.06 | 0.06 | 0.00 | 0.01 | 0.01 | — | 53.2 | 53.2 | < 0.005 | < 0.005 | 0.08 | 53.9 |
| 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 | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 7.14 | 7.14 | < 0.005 | < 0.005 | 0.01 | 7.50 |

## 3.7. Linear, Drainage, Utilities, & Sub-Grade (2027) - 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 2.76 | 2.32 | 19.8 | 23.2 | 0.05 | 0.76 | — | 0.76 | 0.70 | — | 0.70 | — | 5,692 | 5,692 | 0.23 | 0.05 | — | 5,711 |
| Dust From Material Movement | — | — | — | — | — | — | 1.03 | 1.03 | — | 0.11 | 0.11 | — | — | — | — | — | — | — |
| 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 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Roa Equipment | 2.76 | 2.32 | 19.8 | 23.2 | 0.05 | 0.76 | — | 0.76 | 0.70 | — | 0.70 | — | 5,692 | 5,692 | 0.23 | 0.05 | — | 5,711 |
| Dust From Material Movement | — | — | — | — | — | — | 1.03 | 1.03 | — | 0.11 | 0.11 | — | — | — | — | — | — | — |
| 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 | 0.56 | 0.47 | 4.03 | 4.72 | 0.01 | 0.16 | — | 0.16 | 0.14 | — | 0.14 | — | 1,158 | 1,158 | 0.05 | 0.01 | — | 1,162 |
| Dust From Material Movement | — | — | — | — | — | — | 0.21 | 0.21 | — | 0.02 | 0.02 | — | — | — | — | — | — | — |
| 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 | 0.10 | 0.09 | 0.74 | 0.86 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 192 | 192 | 0.01 | < 0.005 | — | 192 |
| Dust From Material Movement | — | — | — | — | — | — | 0.04 | 0.04 | — | < 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.56 | 0.50 | 0.48 | 8.41 | 0.00 | 0.00 | 1.83 | 1.83 | 0.00 | 0.43 | 0.43 | — | 1,861 | 1,861 | 0.08 | 0.07 | 5.80 | 1,888 |
| 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 | 0.02 | < 0.005 | 0.28 | 0.11 | < 0.005 | < 0.005 | 0.07 | 0.07 | < 0.005 | 0.02 | 0.02 | — | 240 | 240 | 0.01 | 0.04 | 0.51 | 253 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.56 | 0.49 | 0.60 | 7.13 | 0.00 | 0.00 | 1.83 | 1.83 | 0.00 | 0.43 | 0.43 | — | 1,764 | 1,764 | 0.02 | 0.07 | 0.15 | 1,784 |
| 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 | 0.02 | < 0.005 | 0.30 | 0.11 | < 0.005 | < 0.005 | 0.07 | 0.07 | < 0.005 | 0.02 | 0.02 | — | 240 | 240 | 0.01 | 0.04 | 0.01 | 252 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.11 | 0.10 | 0.12 | 1.52 | 0.00 | 0.00 | 0.37 | 0.37 | 0.00 | 0.09 | 0.09 | — | 364 | 364 | 0.01 | 0.01 | 0.51 | 369 |
| 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 | < 0.005 | < 0.005 | 0.06 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 48.9 | 48.9 | < 0.005 | 0.01 | 0.04 | 51.4 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.02 | 0.02 | 0.02 | 0.28 | 0.00 | 0.00 | 0.07 | 0.07 | 0.00 | 0.02 | 0.02 | — | 60.3 | 60.3 | < 0.005 | < 0.005 | 0.08 | 61.1 |
| 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 | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 8.09 | 8.09 | < 0.005 | < 0.005 | 0.01 | 8.50 |

## 3.9. Linear, Paving (2027) - 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.97 | 0.82 | 7.18 | 10.8 | 0.01 | 0.28 | — | 0.28 | 0.26 | — | 0.26 | — | 1,619 | 1,619 | 0.07 | 0.01 | — | 1,625 |
| 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 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.15 | 0.13 | 1.10 | 1.65 | < 0.005 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 248 | 248 | 0.01 | < 0.005 | — | 249 |
| 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 | 0.03 | 0.02 | 0.20 | 0.30 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 41.1 | 41.1 | < 0.005 | < 0.005 | — | 41.3 |
| 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.56 | 0.50 | 0.48 | 8.41 | 0.00 | 0.00 | 1.83 | 1.83 | 0.00 | 0.43 | 0.43 | — | 1,861 | 1,861 | 0.08 | 0.07 | 5.80 | 1,888 |
| 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 | 0.01 | < 0.005 | 0.19 | 0.07 | < 0.005 | < 0.005 | 0.05 | 0.05 | < 0.005 | 0.01 | 0.02 | — | 172 | 172 | 0.01 | 0.03 | 0.37 | 181 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.09 | 0.07 | 0.09 | 1.15 | 0.00 | 0.00 | 0.28 | 0.28 | 0.00 | 0.06 | 0.06 | — | 275 | 275 | < 0.005 | 0.01 | 0.38 | 278 |
| 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 | < 0.005 | < 0.005 | 0.03 | 0.01 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 26.4 | 26.4 | < 0.005 | < 0.005 | 0.02 | 27.8 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.02 | 0.01 | 0.02 | 0.21 | 0.00 | 0.00 | 0.05 | 0.05 | 0.00 | 0.01 | 0.01 | — | 45.5 | 45.5 | < 0.005 | < 0.005 | 0.06 | 46.0 |
| 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 | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 4.38 | 4.38 | < 0.005 | < 0.005 | < 0.005 | 4.60 |

# 4. Operations Emissions Details

## 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 |
|---|---|---|---|---|---|---|
| Linear, Grubbing & Land Clearing | Linear, Grubbing & Land Clearing | 1/1/2026 | 2/25/2026 | 5.00 | 40.0 | demolition phase in PD |
| Linear, Grading & Excavation | Linear, Grading & Excavation | 2/26/2026 | 10/2/2026 | 5.00 | 157 | grading phase in PD |
| Linear, Drainage, Utilities, & Sub-Grade | Linear, Drainage, Utilities, & Sub-Grade | 10/3/2026 | 4/14/2027 | 5.00 | 138 | construction phase in PD |
| Linear, Paving | Linear, Paving | 4/15/2027 | 7/1/2027 | 5.00 | 56.0 | architectural finishing phase in PD |

## 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 |
|---|---|---|---|---|---|---|---|

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Linear, Grubbing & Land Clearing | Signal Boards | Electric | Average | 7.00 | 8.00 | 6.00 | 0.82 |
| Linear, Grubbing & Land Clearing | Crawler Tractors | Diesel | Average | 1.00 | 8.00 | 87.0 | 0.43 |
| Linear, Grubbing & Land Clearing | Excavators | Diesel | Average | 1.00 | 8.00 | 36.0 | 0.38 |
| Linear, Grubbing & Land Clearing | Concrete/Industrial Saws | Diesel | Average | 1.00 | 8.00 | 33.0 | 0.73 |
| Linear, Grading & Excavation | Excavators | Diesel | Average | 3.00 | 8.00 | 36.0 | 0.38 |
| Linear, Grading & Excavation | Crawler Tractors | Diesel | Average | 1.00 | 8.00 | 87.0 | 0.43 |
| Linear, Grading & Excavation | Graders | Diesel | Average | 1.00 | 8.00 | 148 | 0.41 |
| Linear, Grading & Excavation | Rollers | Diesel | Average | 2.00 | 8.00 | 36.0 | 0.38 |
| Linear, Grading & Excavation | Tractors/Loaders/Backhoes | Diesel | Average | 2.00 | 8.00 | 84.0 | 0.37 |
| Linear, Grading & Excavation | Signal Boards | Electric | Average | 7.00 | 8.00 | 6.00 | 0.82 |
| Linear, Grading & Excavation | Rubber Tired Loaders | Diesel | Average | 1.00 | 8.00 | 150 | 0.36 |
| Linear, Grading & Excavation | Scrapers | Diesel | Average | 2.00 | 8.00 | 423 | 0.48 |
| Linear, Grading & Excavation | Concrete/Industrial Saws | Diesel | Average | 1.00 | 8.00 | 33.0 | 0.73 |
| Linear, Drainage, Utilities, & Sub-Grade | Scrapers | Diesel | Average | 2.00 | 8.00 | 423 | 0.48 |
| Linear, Drainage, Utilities, & Sub-Grade | Rough Terrain Forklifts | Diesel | Average | 1.00 | 8.00 | 96.0 | 0.40 |
| Linear, Drainage, Utilities, & Sub-Grade | Signal Boards | Electric | Average | 7.00 | 8.00 | 6.00 | 0.82 |
| Linear, Drainage, Utilities, & Sub-Grade | Tractors/Loaders/Backhoes | Diesel | Average | 2.00 | 8.00 | 84.0 | 0.37 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Linear, Drainage, Utilities, & Sub-Grade | Graders | Diesel | Average | 1.00 | 8.00 | 148 | 0.41 |
| Linear, Drainage, Utilities, & Sub-Grade | Plate Compactors | Diesel | Average | 1.00 | 8.00 | 8.00 | 0.43 |
| Linear, Drainage, Utilities, & Sub-Grade | Pumps | Diesel | Average | 1.00 | 8.00 | 11.0 | 0.74 |
| Linear, Drainage, Utilities, & Sub-Grade | Air Compressors | Diesel | Average | 1.00 | 8.00 | 37.0 | 0.48 |
| Linear, Drainage, Utilities, & Sub-Grade | Generator Sets | Diesel | Average | 1.00 | 8.00 | 14.0 | 0.74 |
| Linear, Paving | Rollers | Diesel | Average | 3.00 | 8.00 | 36.0 | 0.38 |
| Linear, Paving | Paving Equipment | Diesel | Average | 1.00 | 8.00 | 89.0 | 0.36 |
| Linear, Paving | Pavers | Diesel | Average | 1.00 | 8.00 | 81.0 | 0.42 |
| Linear, Paving | Signal Boards | Electric | Average | 7.00 | 8.00 | 6.00 | 0.82 |
| Linear, Paving | Tractors/Loaders/Backhoes | Diesel | Average | 2.00 | 8.00 | 84.0 | 0.37 |

## 5.3. Construction Vehicles

### 5.3.1. Unmitigated

| Phase Name | Trip Type | One-Way Trips per Day | Miles per Trip | Vehicle Mix |
|---|---|---|---|---|
| Linear, Grubbing & Land Clearing | — | — | — | — |
| Linear, Grubbing & Land Clearing | Worker | 140 | 18.5 | LDA,LDT1,LDT2 |
| Linear, Grubbing & Land Clearing | Vendor | 0.00 | 10.2 | HHDT,MHDT |
| Linear, Grubbing & Land Clearing | Hauling | 17.1 | 20.0 | HHDT |
| Linear, Grubbing & Land Clearing | Onsite truck | — | — | HHDT |
| Linear, Grading & Excavation | — | — | — | — |
| Linear, Grading & Excavation | Worker | 140 | 18.5 | LDA,LDT1,LDT2 |
| Linear, Grading & Excavation | Vendor | 1.00 | 10.2 | HHDT,MHDT |
| Linear, Grading & Excavation | Hauling | 0.51 | 20.0 | HHDT |

| | | | | |
|---|---|---|---|---|
| Linear, Grading & Excavation | Onsite truck | — | — | HHDT |
| Linear, Drainage, Utilities, & Sub-Grade | — | — | — | — |
| Linear, Drainage, Utilities, & Sub-Grade | Worker | 140 | 18.5 | LDA,LDT1,LDT2 |
| Linear, Drainage, Utilities, & Sub-Grade | Vendor | 0.00 | 10.2 | HHDT,MHDT |
| Linear, Drainage, Utilities, & Sub-Grade | Hauling | 3.60 | 20.0 | HHDT |
| Linear, Drainage, Utilities, & Sub-Grade | Onsite truck | — | — | HHDT |
| Linear, Paving | — | — | — | — |
| Linear, Paving | Worker | 140 | 18.5 | LDA,LDT1,LDT2 |
| Linear, Paving | Vendor | 0.00 | 10.2 | HHDT,MHDT |
| Linear, Paving | Hauling | 1.64 | 31.7 | HHDT |
| Linear, Paving | 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) |
|---|---|---|---|---|---|

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

| Phase Name | Material Imported (Cubic Yards) | Material Exported (Cubic Yards) | Acres Graded (acres) | Material Demolished (sq. ft.) | Acres Paved (acres) |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Linear, Grubbing & Land Clearing | — | 5,480 | 6.00 | 0.00 | — |
| Linear, Grading & Excavation | 345 | 288 | 6.00 | 0.00 | — |
| Linear, Drainage, Utilities, & Sub-Grade | 3,976 | 0.00 | 6.00 | 0.00 | — |

### 5.6.2. Construction Earthmoving Control Strategies

| Control Strategies Applied | Frequency (per day) | PM10 Reduction | PM2.5 Reduction |
|---|---|---|---|
| Water Exposed Area | 2 | 61% | 61% |
| Water Demolished Area | 2 | 36% | 36% |

## 5.7. Construction Paving

| Land Use | Area Paved (acres) | % Asphalt |
|---|---|---|
| Road Construction | 6.00 | 100% |

## 5.8. Construction Electricity Consumption and Emissions Factors

### kWh per Year and Emission Factor (lb/MWh)

| Year | kWh per Year | CO2 | CH4 | N2O |
|---|---|---|---|---|
| 2026 | 616 | 532 | 0.03 | < 0.005 |
| 2027 | 411 | 532 | 0.03 | < 0.005 |

## 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 | 18.2 | annual days of extreme heat |
| Extreme Precipitation | 6.10 | annual days with precipitation above 20 mm |
| Sea Level Rise | — | meters of inundation depth |
| Wildfire | 2.73 | 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 | N/A | N/A | N/A | N/A |
| Sea Level Rise | 1 | 0 | 0 | N/A |
| Wildfire | 1 | 0 | 0 | N/A |
| Flooding | N/A | N/A | N/A | N/A |
| Drought | N/A | N/A | N/A | 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 | N/A | N/A | N/A | N/A |
| Sea Level Rise | 1 | 1 | 1 | 2 |
| Wildfire | 1 | 1 | 1 | 2 |
| Flooding | N/A | N/A | N/A | N/A |
| Drought | N/A | N/A | N/A | N/A |
| 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 | 72.8 |
| AQ-PM | 88.9 |
| AQ-DPM | 44.1 |
| Drinking Water | 98.2 |
| Lead Risk Housing | — |
| Pesticides | 75.8 |
| Toxic Releases | 72.8 |
| Traffic | 94.5 |
| Effect Indicators | — |
| CleanUp Sites | 38.1 |
| Groundwater | 32.8 |
| Haz Waste Facilities/Generators | 67.0 |
| Impaired Water Bodies | 51.2 |
| Solid Waste | 70.4 |
| Sensitive Population | — |
| Asthma | 39.4 |
| Cardio-vascular | 20.8 |
| Low Birth Weights | — |

| | |
|---|---|
| Socioeconomic Factor Indicators | — |
| Education | — |
| Housing | — |
| Linguistic | — |
| Poverty | — |
| Unemployment | 100 |

## 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 | — |
| Employed | — |
| Median HI | — |
| Education | — |
| Bachelor's or higher | — |
| High school enrollment | — |
| Preschool enrollment | — |
| Transportation | — |
| Auto Access | — |
| Active commuting | — |
| Social | — |
| 2-parent households | — |
| Voting | — |
| Neighborhood | — |
| Alcohol availability | — |
| Park access | — |
| Retail density | — |

| | |
|---|---|
| Supermarket access | — |
| Tree canopy | — |
| Housing | — |
| Homeownership | — |
| Housing habitability | — |
| Low-inc homeowner severe housing cost burden | — |
| Low-inc renter severe housing cost burden | — |
| Uncrowded housing | — |
| Health Outcomes | — |
| Insured adults | — |
| Arthritis | 100.0 |
| Asthma ER Admissions | 17.2 |
| High Blood Pressure | 100.0 |
| Cancer (excluding skin) | 99.9 |
| Asthma | 58.2 |
| Coronary Heart Disease | 100.0 |
| Chronic Obstructive Pulmonary Disease | 99.9 |
| Diagnosed Diabetes | 100.0 |
| Life Expectancy at Birth | 0.0 |
| Cognitively Disabled | 99.2 |
| Physically  Disabled | 99.8 |
| Heart Attack ER Admissions | 37.6 |
| Mental Health Not Good | 68.6 |
| Chronic Kidney Disease | 100.0 |
| Obesity | 99.9 |
| Pedestrian Injuries | 0.0 |
| Physical Health Not Good | 99.9 |
| Stroke | 100.0 |

| | |
|---|---|
| Health Risk Behaviors | — |
| Binge Drinking | 0.2 |
| Current Smoker | 78.6 |
| No Leisure Time for Physical Activity | 99.8 |
| Climate Change Exposures | — |
| Wildfire Risk | 35.3 |
| SLR Inundation Area | 0.0 |
| Children | 99.4 |
| Elderly | 99.8 |
| English Speaking | 0.0 |
| Foreign-born | 0.0 |
| Outdoor Workers | 98.2 |
| Climate Change Adaptive Capacity | — |
| Impervious Surface Cover | 90.8 |
| Traffic Density | 0.0 |
| Traffic Access | 52.9 |
| Other Indices | — |
| Hardship | 0.0 |
| Other Decision Support | — |
| 2016 Voting | 0.0 |

## 7.3. Overall Health & Equity Scores

| Metric | Result for Project Census Tract |
|---|---|
| CalEnviroScreen 4.0 Score for Project Location (a) | — |
| Healthy Places Index Score for Project Location (b) | — |
| Project Located in a Designated Disadvantaged Community (Senate Bill 535) | Yes |
| 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 |
|---|---|
| Construction: Construction Phases | Adjusted default workdays to align with an 18-month construction duration, maintaining the same workday proportion ratio. |
| Construction: Dust From Material Movement | per Project Description:" Approximately 288 cubic yards of concrete would be removed and 5,480 cubic yards of unclassified material would be excavated, Approximately 345 cubic yards of unclassified fill would be imported to the project site.", "... a 4-inch paved path made of 5,368 tons of asphalt concrete and a 6-inch path made of 3,976 cubic yards of crushed miscellaneous base..." Landscape material include soil/amendment total 476 cubic yards. |
| Construction: Trips and VMT | Max of 70 workers according to PD. Updated haul trips as weighted average of truck trips for import soil/amendment, plants/trees/shrubs/, and site amenities (bench, lights) during Linear, Paving Phase. |
| Construction: Off-Road Equipment | added concrete saw as provided in PD |

# Appendix B

Biological Letter Report

4337 Sheridan Lane
San Diego, CA, 92120
Phone: 619.972.7932
Phone: 619.972.8714
www.blackhawkenv.com

# San Jose Creek Multi-Use Bikeway Project

# Biological Letter Report

## City of Pomona, Los Angeles County, California

***Prepared for:***

Ascent Environmental, Inc.
15642 Sand Canyon #54491
Irvine, CA 92619
Attn: Chad Beckstrom
Chad.beckstrom@AscentEnvironmental.com

***Prepared by:***

Blackhawk Environmental, Inc.
4337 Sheridan Drive
San Diego, CA 92120
Contact: Hayley Milner
Telephone: 585.739.9864
E-mail: hayley@blackhawkenv.com

**July 1, 2025**

## Table of Contents

***1.0 INTRODUCTION*** ..... ***4***

**1.1 Project Location and Description** ..... **4**

***2.0 METHODS*** ..... ***5***

**2.1 Literature Review** ..... **6**

**2.2 Survey Methods** ..... **7**
2.2.1 Vegetation Mapping ..... 7
2.2.2 Biological Resource Assessment ..... 7

**2.3 Limitations That May Influence Results** ..... **8**

***3.0 REGULATORY SETTING*** ..... ***8***

**3.1 State and Federal Take Authorizations for Listed Species** ..... **8**

**3.2 Federal** ..... **9**
3.2.1 Federal Endangered Species Act (FESA) ..... 9
3.2.2 Migratory Bird Treaty Act (MBTA) ..... 9
3.2.3 Bald and Golden Eagle Protection Act ..... 10
3.2.4 Fish and Wildlife Conservation Act of 1980 ..... 10
3.2.5 Federal Clean Water Act (CWA) ..... 10
3.2.5 Rivers and Harbors Act of 1899 ..... 11

**3.3 State** ..... **11**
3.3.1 State of California Endangered Species Act (CESA) ..... 11
3.3.2 California Environmental Quality Act (CEQA) ..... 12
3.3.3 California Fish & Game Codes 3500 Series ..... 14
3.3.4 Native Plant Protection Act ..... 16
3.3.5 California Lake and Streambed Alteration Program ..... 16
3.3.6 RWQCB Jurisdictional Waters ..... 16

**3.4 Local** ..... **17**
3.4.1 Pomona General Plan Conservation Component ..... 17
3.4.1.2 Stormwater Pollution Control ..... 17
3.4.1.3 City of Pomona Oak Tree Preservation ..... 18
3.4.2 Los Angeles County – Significant Ecological Areas (SEAs) ..... 18

***4.0 RESULTS*** ..... ***19***

**4.1 Environmental Setting** ..... **19**

**4.2 Soils and Hydrologic Features** ..... **20**

**4.3 Vegetation Communities/Land Use Cover Types** ..... **20**
4.3.1 Disturbed (Holland Code 11300) ..... 20
4.3.2 Urban/Developed (Holland Code 12000) ..... 21
4.3.3 Non-vegetated Floodplain or Channel ..... 21

**4.4 Special-Status Species** ..... **21**
4.4.1 Special-Status Plant Species ..... 23
4.4.2 Special-Status Wildlife Species ..... 26

**4.5 Special-Status Vegetation Communities** ..... **32**

**4.6 Riparian Resources and Jurisdictional Resources** ..... **34**

***5.0 PROJECT IMPACTS - THRESHOLDS OF SIGNIFICANCE, DIRECT/INDIRECT IMPACTS & TEMPORARY/ PERMANENT IMPACTS*** ..... ***34***

**5.1 Project Impacts** ..... **35**
5.1.1 Habitat Impacts ..... 35
5.1.2 Species Impacts ..... 35

**5.2 CEQA Thresholds of Significance** ..... **37**
5.2.1 CEQA Threshold Biological Resources- Special-Status Species ..... 37
5.2.2 CEQA Threshold Biological Resources- Sensitive Natural Communities ..... 40
5.2.3 CEQA Threshold Biological Resources- Jurisdictional Waters and Wetlands ..... 40
5.2.4 CEQA Threshold Biological Resources- Wildlife Movement ..... 41
5.2.5 CEQA Threshold Biological Resources- Local Policies and Ordinances ..... 41
5.2.6 CEQA Threshold Biological Resources- Conservation Plans ..... 41

***6.0 MITIGATION PROGRAM*** ..... ***42***

**6.1 Mitigation Measures for Construction Impacts** ..... **42**

***7.0 CONCLUSION*** ..... ***43***

***8.0 REFERENCES*** ..... ***45***

**ATTACHMENTS**

**A** FIGURES
FIGURE 1 – PROJECT VICINITY
FIGURE 2 – SOILS
FIGURE 3 – HYDROLOGY
FIGURE 4 – HISTORICAL SPECIES OCCURRENCES
FIGURE 5 – CRITICAL HABITAT
FIGURE 6 – VEGETATION

**B** REPRESENTATIVE SITE PHOTOGRAPHS
**C** OBSERVED WILDLIFE SPECIES LIST
**D** OBSERVED PLANT SPECIES LIST

# 1.0 INTRODUCTION

Blackhawk Environmental, Inc. (Blackhawk) conducted an assessment of biological resources on behalf of Ascent Environmental, Inc. (Ascent) in support of the proposed San Jose Creek Multi-Use Bikeway Project (Project), in the City of Pomona (City), Los Angeles County, California (Attachment A, Figure 1). The Project originates at the southern entrance to the California State Polytechnic University at Temple Avenue and spans approximately 3.5 miles along the San Jose Creek channel northwest to Interstate-10 and Murchinson Avenue. The Project is situated within an entirely developed area of the City, running along the north and south sides of the San Jose Creek channel (canal). The proposed Project includes development of an approximately 3.5-mile-long multi-use bike and pedestrian greenway, 15 access points (9 at grade street crossings), road improvements at street crossings to support bike use (i.e., curb ramps and bike lanes), way-finding and safety signage, bridge crossings across San Jose Creek, and stormwater runoff reduction and collection drainage system.

The proposed Project falls under the purview of the Pomona General Plan (2014), including the City of Pomona Green Plan (2012) and the City of Pomona's Oak Tree Ordinance, and all applicable State and Federal regulations outlined below in Section 3. The report herein is intended to satisfy the required evaluation of any potentially significant environmental impacts that could result from Project implementation. The biological resource assessment was conducted to identify presence or absence of sensitive natural resources, identify the potential for occurrence (PFO) of special-status plant and wildlife species, and to develop mitigation measures to offset potential direct, indirect, and cumulative impacts to any such resources on and/or adjacent to the proposed Project alignment. Additionally, the Biological Letter Report (BLR) serves to illustrate the baseline conditions for which the determination of impacts and mitigation under the California Environmental Quality Act (CEQA) should be analyzed during the environmental review process.

## *1.1 Project Location and Description*

The Project site is situated along 3.5 miles of the San Jose Creek channel (also known as Thompson Wash) originating at the southern entrance to the California State Polytechnic University at Temple Avenue and terminating at the intersection of Interstate-10 and Murchinson Avenue in the City of Pomona, Los Angeles County, California. The Project is located within Section 27, Township 1 South, Range 9 West, San Bernardino Baseline and Meridian. The Project site is depicted within the U.S. Geological Survey (USGS) *San Dimas, California* 7.5- minute topographic quadrangle (Attachment A, Figure 1). The Project is situated within an almost entirely developed area of the City, with no connectivity to natural areas.

Project implementation will result in approximately 5.44 acres of impacts from installing new asphalt pavement and/or concrete sidewalks along the length of the project, removing existing fence lines, installing road ramps and other upgrades to associated public streets, and planting of landscaped trees and shrubs. As part of the Project, improvement measures will be implemented to the drainage system to prevent backflow at drainage outlets and ponding conditions at the SR-71 undercrossing. This work will include installation of a drop inlet grate, a secondary inlet and a trench drain. Runoff from the drainage system would be directed into the San Jose Creek channel. A dry dock would be temporarily installed within the channel to allow installation of this new drainage system. Additionally, two oak trees

will be removed within the Project area, with several additional oaks that will require trimming or will otherwise be impacted (i.e. digging within the dripline of the canopy) as a result of the Project. The Project falls almost entirely within the existing dirt access roads along the canal. Primary access will be via the following existing cross streets to the canal: W Temple Avenue, Kellogg Drive, Ridgeway Street, Fairplex Drive, Glen Avenue, N Dudley Street, Weber Street, and Murchison Avenue.

The proposed Project is situated within a mostly developed area of the City. The Project is largely surrounded to the north and south by residential and commercial developments, with the exception of agricultural land associated with California State Polytechnical University situated north of the Project on the western end. There is also one middle school, one elementary school, and two parks that occur within the immediate surrounding area of the Project. There is no direct connectivity from the Project limits to any open, natural space. The Project area consists entirely of disturbed habitat or urban/developed land, with the majority of the vegetation consisting of landscaped/ornamentals associated with urban/developed areas or ruderal non-natives associated with disturbed areas.

## 2.0 METHODS

Methods described below focused on determination of potential for occurrence of special-status plant and wildlife species. Species are considered to be special-status, and are therefore subject to analysis in this section, if they meet one or more of the following criteria:

- Plant and animal species listed as endangered (FE), threatened (FT), or candidates (FPE or FPT) for listing under the Federal Endangered Species Act (ESA);
- Plant and animal species listed as endangered (SE), threatened (ST), or candidates (SC) for listing under the California Endangered Species Act (CESA);
- Animals designated as Fully Protected Species (FP), as defined in California Fish and Game Code Sections 3511, 4700, 5050, and 5515;
- Animal species designated as Species of Special Concern (SSC) by the California Department of Fish and Wildlife (CDFW);
- Bat species designated as High Priority (H) by the Western Bat Working Group;
- Plants that are state listed as Rare[1]; or
- Plant species ranked by the California Native Plant Society (CNPS) as having a California Rare Plant Rank (CRPR) of 1 or 2.[2]

Sensitive natural communities are communities that have a limited distribution and are often vulnerable to the environmental effects of projects. CDFW identifies sensitive communities and keeps records of their occurrences in CNDDB. These communities may or may not contain special-status species or their habitats.

- Vegetation communities listed in the CNDDB;
- Communities listed in the Natural Communities List with a rarity rank of S1 (critically imperiled), S2 (imperiled), or S3 (vulnerable).

## *2.1 Literature Review*

Prior to conducting the biological resource assessment, a desktop analysis was completed to evaluate the potential for the Project area and vicinity to contain state and/or federally-listed (threatened or endangered) and/or otherwise special-status plant and animal species. Soil type data from the Natural Resources Conservation Service (NRCS) was reviewed to assist with identifying suitable habitat for special-status species potentially present (USGS 2011; Attachment A, Figure 2). Reviews of the USFWS National Wetlands Inventory (NWI; USFWS 2024b) and the USGS National Hydrography Dataset (NHD; USGS 2024) were conducted to assess any aquatic features within the Survey Area (Attachment A, Figure 3). Information queries were conducted by evaluating species occurrences from CDFW California Natural Diversity Database (CNDDB; CDFW 2024; Attachment A, Figure 4), the United States Fish & Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) database (USFWS 2024a), the National Marine Fisheries Service (NMFS) database (NOAA 2025), the USFWS Critical Habitat Portal (USFWS 2016; Attachment A, Figure 5), and the California Native Plant Society's (CNPS) Rare Plant Inventory (CNPS 2024). A 5-mile radius surrounding the Project site was reviewed in the CNDDB and Critical Habitat Portal. For the CNPS Rare Plant Inventory, the query focused on the *San Dimas, California* topographic quadrangle in which the Project site is located. The results of the literature review were used to focus biological survey efforts for any special-status species perceived to have some potential to occur on and/or adjacent to the Project area.

Following the habitat assessment, potentials for special-status species to occur were evaluated based on proximity, connectivity, recency and abundance of known occurrences, availability of suitable habitats[1], historic distributions of the species, elevation range, and existing site conditions. Potential for occurrence (PFO) were generally evaluated based on the following criteria:

- **Present** – The species was observed within the Project area during the survey effort.
- **High Potential** – Historic, database, and/or inventory records indicate that the species has been known to occur within the vicinity of the Project (5 miles), and suitable habitat occurs onsite. The species has a high probability of being found on the site.
- **Moderate Potential** – Historic, database, and/or inventory records indicate that the species has been known to occur within the vicinity of the Project, but low-quality suitable habitat occurs onsite, or; no records occur within the vicinity of the Project, but the Project occurs within the historic range of the species, and moderate to high quality habitat occurs onsite. The species has a moderate probability of being found on the site.
- **Low Potential** – Historic, database, and/or inventory records indicate that the species has not been known to occupy the immediate vicinity of the Project, and low-quality habitat for the species exists onsite, or; records occur within the vicinity of the Project, but the majority of the habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- **Absent** – The species is restricted to habitats not occurring within the Project site or is considered extirpated from the Project area.

[1] Only habitat requirements for the species range in California are listed

## *2.2 Survey Methods*

The biological resource survey was conducted on September 19, 2024, by Blackhawk biologists Hayley Milner, Sarah Toback and Zach Fenske. The survey was conducted on foot and via vehicle from 07:30 to 12:30, under favorable weather conditions of 63°F to 69°F, 1 to 5 mph winds, no precipitation, and 80-50 percent cloud cover.

Onsite and adjacent areas were characterized for their existing conditions and current land uses. In order to analyze the potential for direct and indirect impacts to biological resources, the survey included the proposed Project limits plus an additional 100 feet surrounding the Project (Survey Area). The vegetation communities were identified by dominant species present and mapped directly onto high-resolution aerial imagery for Geographic Information System (GIS) extrapolation (Attachment A, Figure 6). In addition, sensitive resources were evaluated for up to 500 feet surrounding the proposed Project limits.

PFO of special-status plant and animal species resulting from the literature review were assessed in relation to the existing conditions of the Project site and up to 500 feet surrounding the Project site. Elevation ranges for evaluated plant species were taken from the Jepson Manual. Representative photographs were collected to document current conditions of the Project area as well as the general surroundings (Attachment B). All plant and wildlife species observed within the Project area and Survey Buffer were cataloged in field notes and used to compile species lists (Attachments C and D). Wildlife species observations included detections by sight and sound in addition to wildlife sign (scat, tracks, carcasses, nests, middens etc.). The Survey Area was assessed for the presence/absence of potentially jurisdictional waters of the USACE, RWQCB, and CDFW, including vernal pools.

### *2.2.1 Vegetation Mapping*

On September 19, 2024, Blackhawk conducted detailed digital mapping of vegetation communities within the Project area and Survey Buffer. Vegetation communities were described according to vegetation community classifications according to Holland (1986) and Oberbauer (2008) to the extent feasible.

Vegetation community classifications and boundaries were made directly into the geographic information system (GIS) mapping application, "FieldMaps for ArcGIS". GIS software (i.e., ArcGIS) was used to calculate acreages of the features within the Project limits and the entire Survey Area. Biological field notes were prepared to document the dominant and subdominant plant species within each community. Plants were identified by visual observation, and nomenclature for common native plants followed Calflora.

### *2.2.2 Biological Resource Assessment*

Blackhawk biologists Hayley Milner, Sarah Toback and Zach Fenske conducted a biological resource assessment on September 19, 2024. Focused surveys were not conducted for special-status wildlife species; however, wildlife species observed or detected during field surveys by sight, calls, tracks, scat, or other signs were recorded in the field notes of the biologists. Binoculars were used when necessary to assist with wildlife species identification.

PFO of special-status plant and wildlife species resulting from the literature review was assessed in relation to the existing conditions of the Project area plus a 500-foot buffer. The ability to identify wildlife species was limited by seasonal and temporal factors. Nocturnal animals were not observed directly, as the survey was performed during the day. In addition, seasonally migratory species that may be present within the area only at specified periods outside survey timing, or special-status plants outside of their blooming period, may not have been detected. Latin and common names of wildlife species followed the American Ornithologists' Union (2018) and Unitt (2004) for birds; Crother (2012) for amphibians and reptiles.

### *2.3 Limitations That May Influence Results*

These surveys were conducted during the daytime, which usually results in few observations of nocturnal mammals. In addition, many species of reptiles and amphibians are nocturnal, cryptic, or subterranean in their habits and are difficult to observe using standard survey methods. Therefore, conservative estimates regarding the PFOs of certain special-status plant and wildlife species have been considered with appropriate mitigation measures proposed herein.

## 3.0 REGULATORY SETTING

This section is divided into sub-sections that include Federal, State, and Local regulations that apply to the Project as proposed.

### *3.1 State and Federal Take Authorizations for Listed Species*

Federal or state authorizations of impacts to or incidental take of a listed species by a private individual or other private entity would be granted in one of the following ways:

- Section 7 of the FESA stipulates that any federal action that may affect a species listed as threatened or endangered requires a formal consultation with USFWS to ensure that the action is not likely to jeopardize the continued existence of the listed species or result in destruction or adverse modification of designated critical habitat. 16 U.S.C. 1536(a)(2).

- In 1982, the FESA was amended to give private landowners the ability to develop Habitat Conservation Plans (HCP) pursuant to Section 10(a) of the FESA. Upon development of an HCP, the USFWS can issue incidental take permits for listed species where the HCP specifies at minimum, the following: (1) the level of impact that will result from the taking, (2) steps that will minimize and mitigate the impacts, (3) funding necessary to implement the plan, (4) alternative actions to the taking considered by the applicant and the reasons why such alternatives were not chosen, and (5) such other measures that the Secretary of the Interior may require as being necessary or appropriate for the plan.

- Sections 2090-2097 of the California Endangered Species Act (CESA) require that the state lead agency consult with CDFW on projects with potential impacts on state-listed species. These provisions also require CDFW to coordinate consultations with USFWS for actions involving federally listed as well as state- listed species. In certain circumstances, Section 2080.1 of the California Fish and Game Code

allows CDFW to adopt the federal incidental take statement or the 10(a) permit as its own based on its findings that the federal permit adequately protects the species under state law.

## *3.2 Federal*

### *3.2.1 Federal Endangered Species Act (FESA)*

The Federal Endangered Species Act of 1973 (FESA) defines an endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Under provisions of Section 9(a)(1)(B) of the FESA it is unlawful to "take" any listed species. "Take" is defined in Section 3(18) of FESA: "...harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Further, the United States Fish and Wildlife Service (USFWS), through regulation, has interpreted the terms "harm" and "harass" to include certain types of habitat modification that result in injury to, or death of species as forms of "take." These interpretations, however, are generally considered and applied on a case-by-case basis and often vary from species to species. In a case where a property owner seeks permission from a Federal agency for an action that could affect a federally listed plant and animal species, the property owner and agency are required to consult with USFWS. Section 9(a)(2)(b) of the FESA addresses the protections afforded to listed plants.

***Federally-Designated Special-Status Species***

All references to federally protected species in this Report (whether listed, proposed for listing, or candidate) include the most current published status or candidate category to which each species has been assigned by USFWS. Additionally, the USFWS *Birds of Conservation Concern 2008* report was published to identify the migratory and non-migratory bird species (beyond those already federally listed) that represent the highest conservation priorities for USFWS.

For this report, the following acronyms are used for federal special-status species:

- **FE**: Federally listed as Endangered
- **FT**: Federally listed as Threatened
- **FPE**: Federally proposed for listing as Endangered
- **FPT**: Federally proposed for listing as Threatened
- **FC**: Federal Candidate species (Former Category 1 candidates)
- **BCC**: USFWS Birds of Conservation Concern

### *3.2.2 Migratory Bird Treaty Act (MBTA)*

The Migratory Bird Treaty Act (PL 65-186, as amended; 16 USC §§ 703 et seq.) protects most birds, whether or not they migrate. Birds, their nests, eggs, parts, or products may not be killed or possessed. Game birds are listed and protected except where specific seasons, bag limits, and other features govern their hunting. Exceptions are made for some agricultural pests, which require a USFWS permit (yellow-headed, red-winged, bi-colored, tri-colored, Rusty and Brewer's Blackbirds, cowbirds, all grackles, crows and magpies). Some other birds that injure crops in California may be taken under the authority of the County Agricultural Commissioner (meadowlarks, horned larks, golden-crowned sparrows, white- and other

crowned sparrows, goldfinches, house finches, acorn woodpeckers, Lewis' woodpeckers and flickers). Permits may be granted for various non-commercial activities involving migratory birds and some commercial activities involving captive-bred migratory birds.

### *3.2.3 Bald and Golden Eagle Protection Act*

The Bald and Golden Eagle Protection Act (PL 95-616; 16 USC §§ 668 et seq.) provides for protection of the bald and golden eagles by prohibiting taking, possession, and commerce in the birds.

### *3.2.4 Fish and Wildlife Conservation Act of 1980*

The Fish and Wildlife Conservation Act of 1980 (PL 96-366; 16 USC §§2901 et seq.) provides for conservation, protection, restoration and propagation of certain species, including migratory birds threatened with extinction.

### *3.2.5 Federal Clean Water Act (CWA)*

The purpose of the Clean Water Act (CWA) is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into waters of the United States without a permit from the U.S. Army Corps of Engineers (USACE). In addition, Section 401 of the CWA (33 USC 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards. A Water Quality Certification or waiver pursuant to Section 401 is required for Section 404 permit actions and is issued by the Regional Water Quality Control Board.

"Discharges of fill material" are defined as the addition of fill material into waters of the United States including, but not limited to, the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; fill for intake and outfall pipes and subaqueous utility lines [33 CFR §328.2(f)]. The definition of waters of the United States includes rivers, streams, estuaries, the territorial seas, ponds, lakes, mudflats, sandflats, sloughs, wet meadows, and wetlands. Boundaries between jurisdictional waters and uplands are determined in a variety of ways depending on which type of water is present. Methods for delineating wetlands and non- tidal waters are described below.

- Wetlands are defined as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" [33 CFR §328.3(b)]. Presently, to qualify as a wetland, the feature must exhibit three wetland criteria: hydrophytic vegetation, hydric soils, and wetland hydrology existing under the "normal circumstances" for the site.

- The lateral extent of non-tidal waters is determined by delineating the ordinary high- water mark [33 CFR §328.4(c)(1)]. The ordinary high-water mark is defined by USACE as "that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate

means that consider the characteristics of the surrounding areas" [33 CFR §328.3(e)].

### *3.2.5 Rivers and Harbors Act of 1899*

The purpose of Section 408 under the Rivers and Harbors Act of 1899 (RHA) is to ensure the proposed alterations to federally authorized civil works do not compromise integrity or public safety. Section 408 of the RHA prohibits alterations to a USACE Civil Works project, such as levees, dams, or navigational channels, without a permit from USACE.

## *3.3 State*

### *3.3.1 State of California Endangered Species Act (CESA)*

California's Endangered Species Act (CESA) defines an endangered species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that is in danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease." The State defines a threatened species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an Endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as rare on or before January 1, 1985, is a threatened species." Candidate species are defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list." Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike the Federal Endangered Species Act (FESA), CESA does not list invertebrate species.

Article 3, Sections 2080 through 2085, of the CESA addresses the taking of threatened, endangered, or candidate species by stating "No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided." Under the CESA, "take" is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Exceptions authorized by the state to allow "take" require permits or memoranda of understanding and can be authorized for endangered species, threatened species, or candidate species for scientific, educational, or management purposes and for take incidental to otherwise lawful activities. Sections 1901 and 1913 of the California Fish and Game Code provide that notification is required prior to disturbance.

***State-Designated Special-Status Species***

Some mammals and birds are protected by the state as Fully Protected (FP) Mammals or Fully Protected Birds, as described in the California Fish and Game Code, Sections 4700 and 3511, respectively. California Species of Special Concern (SSC) are species designated as vulnerable

to extinction due to declining population levels, limited ranges, and/or continuing threats. This list is primarily a working document for the CDFW's California Natural Diversity Database (CNDDB) project. Informally listed taxa are not protected but warrant consideration in the preparation of biotic assessments. For some species, the CNDDB is only concerned with specific portions of the life history, such as roosts, rookeries, or nest sites.

For this report the following acronyms are used for State special-status species:

- **SE**: State-listed as Endangered
- **ST**: State-listed as Threatened
- **SCE**: State candidate for listing as Endangered
- **SCT**: State candidate for listing as Threatened
- **FP**: State Fully Protected
- **SSC**: Species of Special Concern

***California Rare Plant Rank***

The CNPS is a private plant conservation organization dedicated to the monitoring and protection of special-status species in California. The California Native Plant Society's *California Native Plant Society's Inventory of Rare and Endangered Plants of California* separates plants of interest into five categories. CNPS has compiled an inventory comprised of the information focusing on geographic distribution and qualitative characterization of Rare, Threatened, or Endangered vascular plant species of California. The list serves as the candidate list for listing as threatened and endangered by CDFW.

### *3.3.2 California Environmental Quality Act (CEQA)*

Shortly after the United States federal government passed the National Environmental Policy Act (NEPA), the California Environmental Quality Act (CEQA) was passed in 1970 to institute a statewide policy of environmental protection. CEQA does not directly regulate land uses, but instead requires state and local agencies within California to follow a protocol of analysis and public disclosure of environmental impacts of proposed projects and adopt all feasible measures to mitigate those impacts. CEQA makes environmental protection a mandatory part of every California state and local agency's decision-making process.

***CEQA Thresholds of Significance***

Environmental impacts relative to biological resources are assessed using impact significance threshold criteria, which reflect the policy statement contained in CEQA, Section 21001(c) of the California Public Resources Code. Accordingly, the State Legislature has established it to be the policy of the State of California to:

> *"Prevent the elimination of fish or wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities..."*

Determining whether a project may have a significant effect, or impact, plays a critical role in

the CEQA process. According to CEQA, Section 15064.7 (Thresholds of Significance), each public agency is encouraged to develop and adopt (by ordinance, resolution, rule, or regulation) thresholds of significance that the agency uses in the determination of the significance of environmental effects. A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant. In the development of thresholds of significance for impacts to biological resources CEQA provides guidance primarily in Section 15065, Mandatory Findings of Significance, and the CEQA Guidelines, Attachment G, Environmental Checklist Form. Section 15065(a) states that a project may have a significant effect where:

> *"The project has the potential to: substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or wildlife community, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, ..."*

Therefore, for the purpose of this analysis, impacts to biological resources are considered potentially significant (before considering offsetting mitigation measures) if one or more of the following criteria discussed below would result from implementation of the proposed Project.

***Criteria for Determining Significance Pursuant to CEQA***

Attachment G of the 1998 State CEQA guidelines indicate that a project may be deemed to have a significant effect on the environment if the project is likely to:

> ***a)*** *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.*
>
> ***b)*** *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.*
>
> ***c)*** *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.*
>
> ***d)*** *Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.*
>
> ***e)*** *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.*

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

***CEQA Guidelines Section 15380***

The CEQA requires evaluation of a project's impacts on biological resources and provides guidelines and thresholds for use by lead agencies for evaluating the significance of proposed impacts. Sections 5.1.1 and 5.2.2 below set forth these thresholds and guidelines. Furthermore, pursuant to the CEQA Guidelines Section 15380, CEQA provides protection for non-listed species that could potentially meet the criteria for state listing. For plants, CDFW assigns California Rare Plant Ranks (CRPR) to species categorized as List 1A, 1B, or 2 of the California Native Plant Society (CNPS) *Inventory of Rare and Endangered Plants in California* may meet the criteria for listing and should be considered under CEQA. CDFW also recommends protection of plants, which are regionally important, such as locally rare species, disjunctive populations of more common plants, or plants on the CNPS Lists 3 or 4.

### *3.3.3 California Fish & Game Codes 3500 Series*

California Fish & Game Codes 3500, 3503, 3503.5, 3505, 3511 and 3513 are State regulations that cover resident and non-resident game birds, protected bird nests, protected raptor nests, egrets, ospreys, Fully Protected bird species, and take considerations for Migratory Bird Treaty Act birds.

- **Code 3500:** "(a) Resident game birds are as follows:

(1) Doves of the genus Streptopelia, including, but not limited to, spotted, ringed turtledoves, and Eurasian collared-doves.

(2) California quail and varieties thereof.

(3) Gambel's or desert quail.

(4) Mountain quail and varieties thereof.

(5) Sooty or blue grouse and varieties thereof.

(6) Ruffed grouse.

(7) Sage hens or sage grouse.

(8) Hungarian partridges.

(9) Red-legged partridges including the chukar and other varieties.

(10) Ring-necked pheasants and varieties thereof.

(11) Wild turkeys of the order Galliformes.

(b) Migratory game birds are as follows:

(1) Ducks and geese.

(2) Coots and gallinules.

(3) Jacksnipe.

(4) Western mourning doves.

(5) White-winged doves.

(6) Band-tailed pigeons

(c) Reference in this code to "game birds" means both resident and migratory game birds."

- **Code 3503:** "It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto."
- **Code 3503.5:** "It is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto."
- **Code 3511:** "(a) (1) Except as provided in Section 2081.7 or 2835, fully protected birds or parts thereof may not be taken or possessed at any time. No provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected bird, and no permits or licenses heretofore issued shall have any force or effect for that purpose. However, the department may authorize the taking of those species for necessary scientific research, including efforts to recover fully protected, threatened, or endangered species, and may authorize the live capture and relocation of those species pursuant to a permit for the protection of livestock. Prior to authorizing the take of any of those species, the department shall make an effort to notify all affected and interested parties to solicit information and comments on the proposed authorization. The notification shall be published in the California Regulatory Notice Register and be made available to each person who has notified the department, in writing, of his or her interest in fully protected species and who has provided an e-mail address, if available, or postal address to the department. Affected and interested parties shall have 30 days after notification is published in the California Regulatory Notice Register to provide any relevant information and comments on the proposed authorization.

  (2) As used in this subdivision, "scientific research" does not include any actions taken as part of specified mitigation for a project, as defined in Section 21065 of the Public Resources Code.

  (3) Legally imported fully protected birds or parts thereof may be possessed under a permit issued by the department.

  (b) The following are fully protected birds:

  (1) American peregrine falcon (*Falco peregrinus anatum*).

  (2) Brown pelican (*Pelican occidentalis*).

  (3) California black rail (*Laterallus jamaicensis coturniculus*).

  (4) California Ridgway's rail (*Rallus longirostris obsoletus*).

(5) California condor (*Gymnogyps californianus*).

(6) California least tern (*Sterna albifrons browni*).

(7) Golden eagle (*Aquila chrysaetos*).

(8) Greater sandhill crane (*Grus Canadensis tabida*).

(9) Light-footed Ridgway's rail (*Rallus longirostris levipes*).

(10) Southern bald eagle (*Haliaeetus leucocephalus leucocephalus*).

(11) Trumpeter swan (*Cygnus buccinator*).

(12) White-tailed kite (*Elanus leucurus*).

(13) Yuma Ridgway's rail (*Rallus longirostris yumanensis*).

- **Code 3513: "**It is unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Treaty Act."

### *3.3.4 Native Plant Protection Act*

The Native Plant Protection Act (NPPA) was enacted in 1977 and allows the California Fish and Game Commission to designate plants as rare or endangered. There are 64 species, subspecies, and varieties of plants that are protected as rare under the NPPA. The NPPA prohibits take of endangered or rare native plants, but includes some exceptions for agricultural and nursery operations, emergencies, and/or with proper notification to the CDFW for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations.

### *3.3.5 California Lake and Streambed Alteration Program*

Sections 1600 through 1616 of the CFG Code require that a Lake and Streambed Alteration Program Notification Package be submitted to CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." CDFW reviews the proposed actions and, if necessary, submits to the applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal on which CDFW and the applicant agree is the Lake and Streambed Alteration Agreement. Often, projects that require a Lake and Streambed Alteration Agreement also require a permit from the Corps under Section 404 of the CWA. In these instances, the conditions of the Section 404 permit and the Lake and Streambed Alteration Agreement may overlap.

### *3.3.6 RWQCB Jurisdictional Waters*

RWQCB is the regional agency responsible for protecting water quality in California. The jurisdiction of this agency includes Waters of the State as mandated by the federal CWA Section 401. When CWA

Section 404 jurisdiction is not present for isolated water, the RWQCB may assert jurisdiction via the California Porter-Cologne Water Quality Control Act. Waters of the State are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state". The Porter-Cologne Water Quality Control Act provides a regulatory framework to provide comprehensive protections for surface and groundwater within the State of California. Waters subject to jurisdiction under the Porter-Cologne Water Quality Control Act require that any discharge that may negatively impact or otherwise affect a Water of the State must coordinate with RWQCB. During coordination, RWQCB may require implementation of mitigation measures or other requirements to protect overall water quality.

## *3.4 Local*

### *3.4.1 Pomona General Plan Conservation Component*

The purpose of the Conservation Component is to provide direction regarding the conservation, development and utilization of natural resources. This Plan was developed to meet the requirements of the California Government Code Section 65302(d) which requires that a General Plan include:

"*A conservation element for the conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, rivers and other waters, harbors, fisheries, wildlife, minerals, and other natural resources. The conservation element shall consider the effect of development within the jurisdiction, as described in the land use element, on natural resources located on public lands, including military installations.*

*The conservation element may also cover: (1) the reclamation of land and waters; (2) prevention and control of the pollution of streams and other waters; (3) regulation of the use of land in stream channels and other areas required for the accomplishment of the conservation plan; (4) prevention, control, and correction of the erosion of soils, beaches, and shores; (5) protection of watersheds; (6) the location, quantity and quality of the rock, sand and gravel resources; and (7) flood control*."

### *3.4.1.2 Stormwater Pollution Control*

Local stormwater pollution control measures are implemented pursuant to the Clean Water Act (CWA), Federal Water Quality Control Act and National Pollutant Discharge Elimination System (NPDES). The Standard Urban Stormwater Mitigation Plan (SUSMP) was developed as part of the Los Angeles Regional Water Quality Control Board's Municipal Stormwater Program. The SUSMP addresses stormwater pollution from certain types of new development and redevelopment. The SUSMP specifies the minimum required BMPs that must be used for a designated project. Additional BMPs may be required on certain targeted categories of projects based on these regulations at the discretion of the City of Pomona. Applicable project applicants are required to incorporate appropriate SUSMP requirements into their development plans.

The City requires that a Stormwater Pollution Prevention Plan (SWPPP) and Monitoring Program Plan be completed for industries that require a NPDES General Industrial Activities Storm Water Permit and for any construction activity in the City requiring a NPDES construction permit. SWPPPs are operator/owner prepared plans that identify BMPs for implementation and monitor the effectiveness of the BMPs. The SWPPP identifies the source control and/or treatment control practices (BMPs) that would significantly

reduce, avoid or mitigate runoff pollutants to the "maximum extent practicable." The Community Plan includes the following applicable measures as they relate to the protection of water resources within the region:

Planning Consideration: The potential environmental impacts of stormwater runoff are a significant concern to Pomona residents. Stormwater runoff can carry pollutants into the watershed, negatively affecting local and regional water quality. Maintenance and improvement of the City's stormwater system to reduce potential impacts to water quality should be a priority.

| | | |
|---|---|---|
| **Goal** | **CON-8** | Proper conveyance and treatment of stormwater and implementation of techniques to reduce pollutants consistent with Federal, State and regional regulations and standards. |
| **Policies** | CON-8.1 | Ensure existing drainage facilities are properly maintained. |
| | CON-8.2 | Ensure all new development and redevelopment projects comply with Federal, State, regional and City regulations and ordinances related to stormwater. |
| | CON-8.3 | Incorporate project-level stormwater mitigation measures to reduce potential impacts to water quality and ensure mitigation measures are adequately monitored. |

#### *3.4.1.3 City of Pomona Oak Tree Preservation*

The City of Pomona's Oak Tree Preservation Ordinance (Section .5809-23 of the Municipal Code) mandates the protection of all healthy mature oak trees on both public and private property. This includes oak trees designated as "specimen trees" under City Council Resolutions No. 62-65 and No. 73-68, as well as any oak trees outside designated Historic Districts and Historic Landmarks that have not been classified as specimen trees and have a trunk diameter greater than eight inches, measured 4.5 feet above the ground (DBH). To address potential impacts on oak trees, Major and Minor Oak Tree Permits must be obtained (Major for removal or relocation, Minor for trimming). Mitigation is required for any oak trees with a DBH greater than eight inches, following the Pomona Tree Preservation Guidelines. Additionally, the City has three designated Historic Districts. Section .5809-13 of the zoning code outlines requirements for these areas, including the necessity of applying for and obtaining a Certificate of Appropriateness before removing any tree larger than 10 inches in diameter or 38 inches in circumference for multi-trunk trees.

*The Project does not fall within any of the designated Historic Districts. Furthermore, all oak trees requiring trimming or removal within the Project site fall within Los Angeles County Flood Control District (LACFCD) or on City-owned property, which are exempt from the requirements of the Oak Tree Preservation Ordinance, as stated in Section .5809-23(E).*

### *3.4.2 Los Angeles County – Significant Ecological Areas (SEAs)*

Through the County of Los Angeles' General Plan, 61 SEAs were established to protect a wide variety of biological communities within the County. If a project falls within a County SEA, a conditional use permit is required for development in order to protect resources contained in SEAs from incompatible development. The County CEQA Thresholds Guide also states that a biological constraints analysis is required to describe in "a general manner the extent, location, and sensitivities of ecological resources found within an SEA".

*The Project does not fall within any SEAs.*

# 4.0 RESULTS

## *4.1 Environmental Setting*

The proposed approximately 3.5-mile-long Project is located in the City of Pomona, Los Angeles County, California (Attachment A, Figure 1). The Project is situated along the San Jose Creek channel, which is a concrete-lined canal, and runs through a completely urbanized portion of Pomona. The Project site originates at the southern entrance to the California State Polytechnic University at Temple Avenue and terminates at the intersection of Interstate-10 and Murchinson Avenue.

Project implementation will result in approximately 5.44 acres of permanent impacts from installing new asphalt pavement and/or concrete sidewalks along the length of the project, removing existing fence lines, installing road ramps and other upgrades to associated public streets, planting of landscaped trees and shrubs, and drainage system improvements at the SR-71 undercrossing. Approximately 600 square feet (sq ft) of temporary impacts would occur from the placement of a dry dock within the concrete channel immediately east of SR-71 to allow for the construction of an inlet to the channel that would prevent ponding conditions in the SR-71 underpass. Additionally, several coast live oak (*Quercus agrifolia*) trees were observed within the Project limits or have canopies/drip lines that fall within the project limits (Attachment A, Figure 7). Two of these oaks will be removed and several others will be trimmed or otherwise impacted as a result of the project. The Project falls almost entirely within the existing dirt access roads along the canal. Primary access will be via the following existing cross streets to the canal: W Temple Avenue, Kellogg Drive, Ridgeway Street, Fairplex Drive, Glen Avenue, N Dudley Street, Weber Street, and Murchison Avenue.

The proposed Project is situated within a mostly developed area of the City. The Project is largely surrounded to the north and south by residential and commercial developments, with the exception of agricultural land associated with California State Polytechnical University situated north of the Project on the western end. There is also one middle school, one elementary school, and two parks that occur within the immediate surrounding area of the Project. There is no direct connectivity from the Project limits to any open, natural space. The Project area consists entirely of disturbed habitat or urban/developed land with the majority of the vegetation consisting of landscaped/ornamentals or ruderal non-natives associated with disturbed areas. The Project does not fall within any SEAs.

## *4.2 Soils and Hydrologic Features*

Two soil series mapped by USDA (2011) occur within the Project limits: Urban land, frequently flooded, 0 to 5 percent slopes (99%), and Urban land- Palmview- Tujunga complex, slopes 0 to 5 percent slopes (1%);

The Project area is located along the north and south sides of the San Jose Creek channel, situated on flat ground and further surrounded by flat, developed land. Several non-jurisdictional concrete stormwater run-off channels occur within the project footprint and flow into the canal. While San Jose Creek is considered a jurisdictional feature, no impacts are proposed to the channel.

Elevations within the Project limits range from approximately 693 feet above mean sea level (amsl) at the western end of the project to 857 feet amsl at the eastern end.

## *4.3 Vegetation Communities/Land Use Cover Types*

A total of three vegetation communities/land use cover types were described and mapped within the Survey Area. The geographical distribution of these communities within the Project limits and Survey Area are depicted on Figure 3. Permanent and temporary impacts are proposed within the Project limits. Vegetation communities/land use cover types and associated acreages are as follows:

**Table 2. Vegetation Communities**

| **Vegetation Community (Holland Code)** | **Project Limits** | | **Survey Area** (Project limits plus 100-foot Survey Buffer; acres) |
|---|---|---|---|
| | **Permanent Impacts** (acres) | **Temporary Impacts** (sq ft) | |
| Disturbed (11300) | 4.41 | 0 | 18.13 |
| Urban/Developed (12000) | 1.03 | 0 | 57.47 |
| Non-vegetated Floodplain or Channel | 0 | 600 | 11.60 |
| **TOTAL** | **5.44 acres** | **600 sq ft** | **87.21 acres** |

Each vegetation community/land use cover type is described in the following sub-sections. A map showing the location and extent of vegetation communities is provided in Figure 6. Representative photographs of each vegetation community within the Project limits are provided in Attachment B.

### *4.3.1 Disturbed (Holland Code 11300)*

Disturbed habitat consists of low-growing, ruderal vegetation or bare ground associated with urban development and anthropogenic disturbance. These areas are regularly maintained and/or disturbed, limiting vegetative growth, particularly native species. Onsite, vegetation within this community is heavily dominated by nonnative species such as compact brome (*Bromus madritensis*), smilo grass (*Stipa*

*miliacea* var. *miliacea*), prickly lettuce (*Lactuca serriola*), and Russian thistle (*Salsola tragus*). Some ruderal native species often associated with disturbed areas, including horseweed (*Erigeron bonariensis*) and telegraph weed (*Heterotheca grandiflora*), also occur within this community. This land cover was mainly associated with the existing dirt access roads running along the north and south sides of the canal.

### *4.3.2 Urban/Developed (Holland Code 12000)*

Developed land is characterized by permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that often require irrigation. This vegetation community typically includes unvegetated or landscaped areas with a variety of ornamental (usually non-native) plants (Oberbauer 2008). Within the Project limits and survey buffer, this vegetation community included existing paved roads and sidewalks, residential and commercial developments, and associated landscaped/ornamental plantings which are nearly or entirely devoid of native vegetation and show significant evidence of intentional, human caused conversion of previously existing natural habitats into development. Landscaped/ornamental vegetation provides a buffer between South Campus Drive and the western portion of the project site and is dominated by planted and maintained California sycamore (*Plantanus racemosa*), coastal wattle (*Acacia cyclops*), Fremont cottonwood (*Populus fremontii*), Siberian elm (*Ulmus parvifolia*), and African fountain grass (*Pennisetum setaceum*). Other areas of landscape/ornamental vegetation occur in private residences, which buffer the majority of the southern canal road and parts of the northern canal road. Species dominating in these areas include Brazilian peppertree (*Schinus terebinthifolia*), blue gum (*Eucalyptus globulus*), cape honeysuckle (*Tecoma capensis*), and great bougainvillea (*Bougainvillea spectabilis*).

### *4.3.3 Non-vegetated Floodplain or Channel*

Non-vegetated floodplain or channel occurs on site as the San Jose Creek (also known as Thompson Wash), which is channelized with concrete embankments within the Survey Area. The Project runs along the north and south sides of the canal, and no permanent impacts to the canal are anticipated. Approximately 600 square feet (sq ft) of temporary impacts would occur from the placement of a dry dock within the concrete channel immediately east of SR-71 to allow for the construction of an inlet to the channel that would prevent ponding conditions in the SR-71 underpass. During the time of the biological reconnaissance survey, no measurable water flow was observed in the canal. Some sections of the canal were observed ponded with water up to a few inches with these areas supporting algae growth. Only one section at the far east end of the canal within the Survey Area was observed to have any vegetation growth. The majority of the canal was dry during the time of the survey, suggesting that water flow is intermittent and likely based off rainfall fed to the canal through roadside drainages.

## *4.4 Special-Status Species*

A total of 11 special-status plant species and 29 special-status wildlife species occurrences were found within a five-mile radius of the Project through the CNDDB, CNPS, and IPaC occurrence record review (Attachment A, Figure 4). The Project does not fall within Critical Habitat for any wildlife or plant species (Attachment A, Figure 5). Special-status species that were evaluated for this Project and associated

PFO of each species are described in Table 3 below. Special-status species that were evaluated for this Project include the following:

**Plants**

- **Chaparral ragwort** (*Senecio aphanactis*)
- **Intermediate mariposa lily** *Calochortus weedii var. intermedius*
- **Many-stemmed dudleya** (*Dudleya multicaulis*)
- **Mesa horkelia** (*Horkelia cuneata var. puberula*)
- **Nevin's barberry** (*Berberis nevinii*)
- **Rigid fringepod** (*Thysanocarpus rigidus*)
- **Salt spring checkerbloom** (*Sidalcea neomexicana*)
- **San Bernardino aster** (*Symphyotrichum defoliatum*)
- **Sanford's arrowhead** *(Sagittaria sanfordii)*
- **Slender-horned spineflower** (*Dodecahema leptoceras*)
- **White rabbit-tobacco** *(Pseudognaphalium leucocephalum*)

**Wildlife**

- **American badger** (*Taxidea taxus*)
- **Arroyo chub** (*Gila orcuttii*)
- **Bald eagle** (*Haliaeetus leucocephalus*)
- **Big free-tailed bat** (*Nyctinomops macrotis*)
- **California black rail** (*Laterallus jamaicensis cotumiculus*)
- **California glassy snake** (*Arizona elegans occidentalis*)
- **Coast range newt** (*Taricha torosa*)
- **Coast horned lizard** (*Phrynosoma blainvillii*)
- **Coastal California gnatcatcher** (*Polioptila californica californica*)
- **Coastal whiptail** (*Aspidoscelis tigris stejnegeri*)
- **Crotch bumblebee** (*Bombus crotchii*)
- **Golden eagle** (*Aquila chrysaetos*)
- **Least Bell's vireo** (*Vireo bellii bellii*)
- **Merlin** (*Falco columbarius*)
- **Monarch butterfly** (*Danaus plexippus*)
- **Pallid bat** (*Antrozous pallidus*)
- **Pocketed free-tailed bat** (*Nyctinomops femorosaccus*)
- **Red-diamond rattlesnake** (*Crotalus ruber*)
- **Santa Ana sucker** (*Catostomus santaanae*)
- **Southern California legless lizard** (*Anniella stebbinsi*)
- **Southern California rufous-crowned sparrow** (*Aimophila ruficeps canescens*)
- **Swaison's hawk** (*Buteo swainsoni*)
- **Tricolored blackbird** (*Agelaius tricolor*)
- **Two-striped gartersnake** (*Thamnophis hammondii*)
- **Western mastiff bat** (*Eumops perotis californicus*)
- **Western pond turtle** (*Actinemys pallida*)
- **Western spadefoot** (*Spea hammondii*)
- **Western yellow bat** (*Lasiurus xanthinus*)
- **Yellow warbler** (*Setophaga petechia brewsteri*)

The CNDDB and/or CNPS also documented California androsace (*Androsace elongata* ssp. *acuta*), Catalina mariposa lily (*Calochortus catalinae*l, Engelmann oak (*Quercus engelmannii*), Plummer's Mariposa Lily (*Calochortus plummerae*), Robinson's peppergrass (*Lepidium virginicum* var. *robinsonii*), southern California black walnut (*Juglans californica*), Western spleenwort (*Asplenium vespertinum*), American bumble bee (*Bombus pensylvanicus*), California diplectronan caddisfly (*Diplectrona californica*), western rigid mussel (*Gonidea angulata*), and the white cuckoo bee (*Neolarra alba*). These species are not addressed herein as they do not meet criteria outlined in Section 2 as sensitive species. Additionally, the hoary bat (*Lasiurus cinereus*) was not evaluated as it is not listed as an animal species designated as a Species of Special Concern (SSC) by the CDFW and/or designated as High Priority (H) by the Western Bat Working Group.

### *4.4.1 Special-Status Plant Species*

The literature search resulted in 11 special-status plant species within a five-mile radius of the Project limits. The habitat assessment determined that none of the special-status plant species have any potential to occur within the Project area due to a lack of suitable habitat(s) and microhabitat(s) within the Survey Area. Therefore, a focused rare plant survey was not necessary and impacts to special-status plant species are not anticipated.

**Table 2. Special-Status Plant Species Potentially Occurring Within the Project Site**

| Species Name | Status | Habitat Requirements/ Blooming Period | Potential for Occurrence |
|---|---|---|---|
| chaparral ragwort (*Senecio aphanactis*) | Federal ESA: None<br>State CESA: None<br>CRPR: **2B.2** | Annual herb found in alkaline chaparral, cismontane woodland, and coastal sage scrub habitats.<br><br>Blooms: Jan-May<br>Elevation: 15-800 m (50-2,625 ft) | **Absent** due to a lack of suitable habitat. In addition, the only CNDDB record within 5 miles is from 1932. |
| intermediate mariposa lily (*Calochortus weedii var. intermedius*) | Federal ESA: None<br>State CESA: None<br>CRPR: **1B.2** | Perennial bulbiferous herb prefers rocky, calcareous soils. Found in chaparral, coastal scrub and valley and foothill grasslands.<br><br>Blooms: May-Jul<br>Elevation: 105-855 m (345-2,805 ft) | **Absent** due to a lack of suitable habitat. Furthermore, as a perennial herb, this species likely would have been observed during the survey if present. |
| many-stemmed dudleya (*Dudleya multicaulis*) | Federal ESA: None<br>State CESA: None<br>CRPR: **1B.2** | Perennial herb found in clay soils in chaparral, coastal scrub and valley and foothill grassland communities.<br><br>Blooms: Apr-Jul<br>Elevation: 15-790 m (50-2,590 ft) | **Absent** due to a lack of suitable habitat. Furthermore, as a perennial herb, this species likely would have been observed during the survey if present. |

| | | | |
|---|---|---|---|
| mesa horkelia (*Horkelia cuneata var. puberula*) | Federal ESA: None<br>State CESA: None<br>CRPR: **1B.1** | Sparsely hairy, matted perennial forb that occurs in dry, sandy or gravelly areas within coastal chaparral, coastal scrub and cismontane woodlands. Prefers gravelly or sandy habitats.<br><br>Blooms: Feb-Jul<br>Elevation: 70-810 m (230-2,660 ft) | **Absent** due to a lack of suitable habitat and soils. Furthermore, as a perennial herb, this species likely would have been observed during the survey if present. |
| Nevin's barberry (*Berberis nevinii*) | Federal ESA: **FE**<br>State CESA: **SE**<br>CRPR: **1B.1** | Perennial, evergreen, holly-leafed, multi-trunked shrub found in chaparral, foothill woodland, washes and coastal sage scrub habitats. Prefers sandy to gravelly soils.<br><br>Blooms: Mar-Jun<br>Elevation: 70-825 m (230-2,705 ft) | **Absent** due to a lack of suitable habitat and soils. Furthermore, as a perennial shrub, this species would have been observed during the survey if present. |
| rigid fringepod (*Thysanocarpus rigidus*) | Federal ESA: None<br>State CESA: None<br>CRPR: **1B.2** | An annual herb preferring dry, rocky slopes found within pinyon and juniper woodland.<br><br>Blooms: Feb-May<br>Elevation: 600-2,200 m (1,970-7,220 ft) | **Absent** due to a lack of suitable habitat. In addition, the only CNDDB record within 5 miles is over 100 years old. |
| Salt spring checkerbloom (*Sidalcea neomexicana*) | Federal ESA: None<br>State CESA: None<br>CRPR: **2B.2** | A perennial herb preferring playas with alkaline or mesic soils in chaparral, coastal scrub, lower montane coniferous or Mojavean desert scrub communities.<br><br>Elevation: 0-1390 m (50-5,020 ft)<br>Blooms: Mar-Jun | **Absent** due to a lack of suitable habitat. In addition, the two CNDDB records within 5 miles are over 100 years old. Furthermore, as a perennial herb, this species likely would have been observed during the survey if present. |
| San Bernardino aster (*Symphyotrichum defoliatum*) | Federal ESA: None<br>State CESA: None<br>CRPR: **1B.2** | A perennial rhizomatous herb Usually found near ditches, streams or springs in cismontane woodland, coastal scrub, lower montane coniferous forest, meadow and seep, marsh and swamp and valley and foothill grassland communities (vernally mesic).<br><br>Blooms: Jul-Nov | **Absent** due to a lack of suitable habitat. In addition, the two CNDDB records within 5 miles are over 100 years old. Furthermore, as a perennial herb, this species likely would have been observed during the survey if present. |

| | | | |
|---|---|---|---|
| | | Elevation: 2-2040 m (5-6,695 ft) | |
| Sanford's arrowhead (*Sagittaria sanfordii)* | Federal ESA: None<br>State CESA: None<br>CRPR: **1B.2** | A perennial rhizomatous herb endemic to California typically found in shallow freshwater (i.e., marshes and swamps).<br><br>Blooms: May-Oct<br>Elevation: <650 m (<2,135 ft) | **Absent** due to a lack of suitable habitat. Furthermore, as a perennial herb, this species likely would have been observed during the survey if present. |
| Slender-horned spineflower (*Dodecahema leptoceras*) | Federal ESA: FE<br>State CESA: SE<br>CRPR: 1B.1 | Annual herb found in sandy soil in association with mature alluvial scrub. In the Vail Lake area this species is also associated with gravel soils of Temecula arkose deposits in association with open chamise chaparral. The ideal habitat appears to be a terrace or bench that receives over-bank deposits every 50 to 100 years.<br><br>Blooms: Apr-Jun<br>Elevation: -200-760 m | **Absent** due to a lack of suitable habitat. |
| White rabbit-tobacco *(Pseudognaphalium leucocephalum*) | Federal ESA: None<br>State CESA: None<br>CRPR: **2B.2** | Biennial or short-lived perennial herb found in chaparral, cismontane woodland, coastal sage scrub, and riparian woodland habitats, often associated with sandy or gravelly benches, dry stream bottoms and canyon bottoms.<br><br>Blooms: Jul-Nov<br>Elevation: <2,100 m (<6,890 ft | **Absent** due to a lack of suitable habitat. |

**Key to Table 2**

**Federal**
FE – Federally Endangered
FC – Federal Candidate

**State**
SE – State Endangered
ST – State Threatened

**CNPS**
List 1B – Plants rare, threatened, or endangered in California and elsewhere.
List 2B – Plants rare, threatened, or endangered in California, but more common elsewhere.

California (over 80% occurrences threatened)

**Threat Code extension**

.1 – Seriously endangered in California (over 80% occurrences threatened)

.2 – Fairly endangered in California (20-80% occurrences threatened)

### *4.4.2 Special-Status Wildlife Species*

The literature search documented 29 special-status wildlife species within a five-mile radius of the Project limits. This total includes two fish, seven reptilian, two amphibian, two insect, ten avian, and six mammalian species. Seven of these species were found to have a low to moderate potential for occurrence. Pallid bat and pocketed free-tailed bat were determined to have low potential for occurrence due to the presence of bridges and buildings within the Survey Area, providing marginally suitable roosting habitat. Monarch butterfly has a low potential to forage on flowering plants within and adjacent to the Survey Area, but the Survey Area lacks breeding host plants and is outside the known overwintering roost sites for this species. Crotch's bumblebee has a low potential to occur due to the presence of some flowering non-natives associated with disturbed habitat and landscaped/ornamental areas, which provide marginally suitable nectar sources for this species. Southern California legless lizard was determined to have moderate potential for occurrence due to the presence of suitable suburban gardens within the Survey Buffer. Western yellow bat has a moderate potential to occur due to the presence of palm trees throughout the Survey Area that provide suitable roosting habitat. Lastly, yellow warbler has a moderate potential to occur in the shrubby thickets along portions of the flood control channel. The remaining 22 wildlife species evaluated were determined to be absent (Table 3).

Each of these species, along with their listing statuses, relative abundances, habitat associations, and general locations within the Project area and Survey Buffer, are described in Table 3 below. Wildlife species that were presumed absent, as described in Table 3 are not discussed further in this report. There were no narrow endemic, federal or state-listed wildlife species observed within the Survey Area.

**Table 3. Special-Status Wildlife Species Potentially Occurring Within the Project Site**

| Species Name | Status | Habitat Requirements | Potential for Occurrence |
|---|---|---|---|
| American badger (*Taxidea taxus*) | Federal ESA: None<br>State CESA: None<br>Other: **CDFW-SSC** | Found in a variety of open habitats including grasslands, alluvial fans, scrubs, fallow agricultural lands, and deserts where rodent prey is ample in flat terrain to moderate slopes. | **Absent** due to a lack of suitable open habitats including grasslands, alluvial fans, alluvial scrub, agricultural land, and deserts. |
| arroyo chub (*Gila orcuttii*) | Federal ESA: None<br>State CESA: None<br>Other: **CDFW-SSC** | Found in small, cool, shallow, permanent streams in water ranging in depth from a few centimeters to a meter or more. Preferred substrates are generally coarse and consist of gravel, rubble, and boulders with growths of filamentous algae, but occasionally they are found on sand/mud substrates. | **Absent** due to a lack of suitable aquatic habitat. |

| | | | |
|---|---|---|---|
| bald eagle (*Haliaeetus leucocephalus*) | Federal ESA: Delisted<br>State CESA: None<br>Other: **USFWS-Non-BCC – Vulnerable**<br>**CDFW- FP** | Occurs primarily at or near seacoasts, rivers, swamps, and large lakes within such areas with an adequate food base, perching areas, and nesting sites. | **Absent** due to a lack of suitable nesting and foraging habitat. |
| big free-tailed bat (*Nyctinomops macrotis*) | Federal ESA: None<br>State CESA: None<br>Other: **CDFW-SSC** | Occurs in a variety of habitat types, including coastal sage scrub, pine-oak woodlands, and rocky canyon lands. Forages on a variety of insects in flight. | **Absent** due to a lack of suitable roosting habitat including rock crevices and caves. |
| California black rail (*Laterallus jamaicensis cotumiculus*) | Federal ESA: None<br>State CESA: **ST**<br>Other: **USFWS-BCC**<br>**CDFW-FP** | Occurs in fresh, brackish and pickleweed-dominated salt marshes along the California coast, along the lower Colorado River and around the Salton Sea. | **Absent** due to a lack of suitable salt marsh habitat. |
| California glossy snake (*Arizona elegans occidentalis*) | Federal ESA: None<br>State CESA: None<br>Other: **CDFW-SSC** | This nocturnal species inhabits a variety of grassland, sage scrub, dry wash and chaparral habitats from sea level to over 7,000 feet in elevation. Tends to prefer sandy, loose soils. It remains in its burrow by day. | **Absent** due to a lack of suitable grassland, sage scrub, dry wash, and chaparral habitats with sandy, loose soils. |
| coast range newt (*Taricha torosa*) | Federal ESA: None<br>State CESA: None<br>Other: **CDFW-SSC** | Found in chaparral, oak woodland, and grassland habitats no further than one to two miles from a water source that is required for breeding, egg-laying, and larval development. Breeding occurs in ponds, reservoirs, and pools of low gradient streams. | **Absent** due to a lack of suitable chaparral, oak woodland, and grassland habitats with nearby aquatic breeding habitats. |
| coastal California gnatcatcher (*Polioptila californica californica*) | Federal ESA: **FT**<br>State CESA: None<br>Other: **CDFW-SSC** | This resident southern California species is strongly associated with coastal sage scrub communities but will also utilize other habitats where coastal sage scrub species forms some component. It prefers a gap rate of about 25% between mature shrubs from three to five feet tall. | **Absent** due to a lack of suitable habitat. |
| coast horned lizard (*Phrynosoma blainvillii*) | Federal ESA: None<br>State CESA: None<br>Other: **CDFW-SSC** | Inhabits open areas of sandy soil and low vegetation in valleys, foothills and semiarid mountains. Found in grasslands, coniferous forests, woodlands, and chaparral, with open areas and patches of loose soil. Often found in lowlands along sandy washes with scattered shrubs and along dirt roads. Often associated with the presence of native harvester ants. | **Absent** due to a lack of suitable habitat with sandy soils and low vegetation. |

| | | | |
|---|---|---|---|
| coastal whiptail (*Aspidoscelis tigris stejnegeri*) | Federal ESA: None<br>State CESA: None<br>Other: **CDFW-SSC** | Prefers open scrub, chaparral, and woodland habitats with open areas for basking and native ants as a prey base. | **Absent** due to a lack of suitable scrub, chaparral, and woodland habitats. |
| Crotch bumble bee (*Bombus crotchii*) | Federal ESA: None<br>State CESA: **CE**<br>Other: None | Inhabits open grassland and scrub habitats. Food plants include *Asclepias, Chaenactis, Lupinus, Medicago, Phacelia and Salvia.* Nests are often located underground in abandoned rodent nests, or above ground in tufts of grass, old bird nests, rock piles, or cavities in dead trees. | **Low potential** to occur due to the presence of some flowering non-natives associated with disturbed habitat and landscaped/ ornamental areas. However, the lack of suitable undisturbed soils and rodent burrows for ground nesting, a lack of various natives flowering over differing times of the year, an overall lack of flowering plant density within the Survey Area, and a lack of direct connectivity to native habitats preferred by this species provides low-quality habitat for this species. |
| golden eagle (*Aquila chrysaetos*) | Federal ESA: None<br>State CESA: None<br>Other: **USFWS-Non-BCC - Vulnerable**<br>**CDFW-FP** | In southern California, occupies grasslands, brushlands, deserts, oak savannas, open coniferous forests, and montane valleys. Typically nests on rock outcrops and ledges. | **Absent** due to a lack of suitable grassland, brushland, desert, oak savannas, open coniferous forest, and montane valley habitats. |
| least Bell's vireo (*Vireo bellii pusillus*) | Federal ESA: **FE**<br>State CESA: **SE**<br>Other: None | Occupies riverine riparian habitats that typically feature dense cover within 1-2 meters of the ground and a dense, stratified canopy. It inhabits low, dense riparian growth along water or along dry parts of intermittent streams. Primarily associated with willows and mule fat. | **Absent** due to a lack of suitable riparian habitat. |
| merlin (*Falco columbarius*) | Federal ESA: None<br>State CESA: None<br>Other: **CDFW-WL** | Open conifer woodland, prairie groves; in migration, also foothills, marshes, open country. Generally, breeds in semi-open terrain having | **Absent** due to a lack of suitable conifer woodland, prairie, marsh, and open |

| | | | |
|---|---|---|---|
| | | trees for nest sites and open areas for hunting. Habitat varies from coniferous forest in north and on northwest coast to isolated deciduous groves and suburban yards on prairies. May winter in more open areas, such as grasslands, coastal marshes. | country habitats. |
| monarch butterfly (*Danaus plexippus*; California overwintering population) | Federal ESA: **Candidate** State CESA: None Other: None | At overwintering sites, monarchs require high humidity, fresh water, and an absence of freezing temperatures or high winds. They are found at sites consisting of roost trees, in which monarchs cluster, surrounded by a larger grove or windrow of trees. Trees most commonly used for roosting include Monterey pine, Monterey cypress blue gum eucalyptus, red gum eucalyptus, western sycamore, and coast live oak. This species is still observed passing through many habitat types of the region, including both urban and natural lands on the coastal strand. | **Low potential** to occur due to the lack of host plant (milkweed) identified in the project area. The project area is not within a known overwintering site. However, flowering plants within and adjacent to the project site may provide marginally suitable foraging habitat for this species. |
| pallid bat (*Antrozous pallidus*) | Federal ESA: None State CESA: None Other: **CDFW-SSC** | Forages within a number of habitat types, frequently by pursuing insects while walking on the ground. Most commonly associated with arid open scrub or grassland and gentle terrain with scattered rocky outcrops. Can also be found in higher elevation coniferous forests on steep terrain. Often occurs on oak- and sycamore-lined flood plain terraces at low elevations in the inland valleys. Uses some agricultural areas for foraging. Roosts in man-made structures, rock and sandstone crevices and caves, under tree bark, and in rodent burrows or crevices in the ground. | **Low potential** to occur due to the presence of marginally suitable bridges for roosting within the project area. However, the only CNDDB record within 5 miles is from 1951. |
| pocketed free-tailed bat (*Nyctinomops femorosaccus*) | Federal ESA: None State CESA: None Other: **CDFW-SSC** | Colonial species that roosts primarily in crevices in steep rugged cliffs, high rocky outcrops and slopes; it is readily found in abandoned quarries. May also roost in buildings, caves, and under roof tiles. It has been found in a wide variety of plant associations, including riparian, oak woodland, coniferous forest, open meadow and | **Low potential** to occur due to the presence of marginally suitable bridges and buildings for roosting within the project area. However, the only CNDDB record within |

| | | | |
|---|---|---|---|
| | | grassland, and coastal and desert scrublands, including over scrubby ridges, reservoirs, ponds, wetlands, and artificial lights. | 5 miles is from 1985. |
| red-diamond rattlesnake (*Crotalus ruber*) | Federal ESA: None<br>State CESA: None<br>Other: **CDFW-SSC** | Inhabits arid scrub, coastal chaparral, oak and pine woodlands, rocky grassland, cultivated areas. On the desert slopes of the mountains, it ranges into rocky desert flats. | **Absent** due to a lack of suitable scrub, chaparral, woodland, rocky grassland, and cultivated habitats. |
| Santa Ana sucker (*Catostomus santaanae*) | Federal ESA: **FT**<br>State CESA: None<br>Other: None | Small, cool, shallow, permanent streams in water ranging in depth from a few centimeters to a meter or more (Smith 1966). Preferred substrates are generally coarse and consist of gravel, rubble, and boulders with growths of filamentous algae (Smith 1966; Moyle 1976a), but occasionally they are found on sand/mud substrates (Moyle et al. 1995). | **Absent** due to a lack of suitable aquatic habitat. |
| southern California legless lizard (*Anniella stebbinsi*) | Federal ESA: None<br>State CESA: None<br>Other: **CDFW-SSC** | Occurs in moist, loose soils with some plant cover in coastal sand dunes, suburban gardens, chaparral, pine-oak woodlands, stream terraces with sycamores, cottonwoods, or oaks, oak woodlands, Joshua/juniper woodland, mixed conifer forest, desert scrub, sandy washes, and alluvial fans. | **Moderate potential** due to the presence of marginally suitable habitat within suburban gardens in the Project site and adjacent areas. There are multiple CNDDB records within 5 miles of the Project site. |
| southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) | Federal ESA: None<br>State CESA: None<br>Other: **CDFW-WL** | Found in coastal lowlands and foothills in sage scrub, open or burned chaparral, and grassland with scattered shrubs. Typical habitat is fairly steep south-facing slopes with about 50% cover of low shrubs. Sage scrub on gentle rolling hillsides is even more favorable but now greatly reduced and fragmented. | **Absent** due to a lack of suitable sage scrub, grassland, and chaparral habitats. |
| Swainson's hawk (*Buteo swainsoni*) | Federal ESA: None<br>State CESA: **ST**<br>Other: **USFWS-BCC** | Prefers open habitats including plains, dry grasslands, agricultural fields, and ranchlands with nearby stands of trees for nesting sites. | **Absent** due to a lack of suitable plains, grasslands, agricultural, and ranchland habitats. |

| | | | |
|---|---|---|---|
| tricolored blackbird (*Agelaius tricolor*) | Federal ESA: None<br>State CESA: **ST**<br>Other: **USFWS-BCC**<br>**CDFW-SSC** | Nests in colonies and prefers freshwater marshes dominated by cattails or bulrushes and occasionally in willows, blackberries, thistles and nettles. Breeding habitat now includes diverse upland and agricultural areas. Small breeding colonies in southern California occur at lakes, reservoirs, and parks surrounded by urban development. Adults from such colonies may forage in nearby undeveloped uplands. | **Absent** due to a lack of suitable nesting habitat consisting of freshwater marshes, lakes, and reservoirs. |
| two-striped gartersnake (*Thamnophis hammondii*) | Federal ESA: None<br>State CESA: None<br>Other: **CDFW-SSC** | Generally found around pools, creeks, cattle tanks, and other water sources, often in rocky areas, in oak woodland, chaparral, brushland, and coniferous forest. | **Absent** due to a lack of suitable aquatic habitats as well as a lack of chaparral, brushland, and coniferous forest habitats. |
| western mastiff bat (*Eumops perotis californicus*) | Federal ESA: None<br>State CESA: None<br>Other: **CDFW-SSC** | Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban. Roosts in crevices in cliff faces, high buildings, trees, and tunnels. When roosting in rock crevices, it needs vertical faces to drop off to take flight. Nursery roosts described as tight rock crevices at least 35 inches deep and two inches wide, or crevices in buildings. Suitable habitat consists of extensive open areas with abundant roost locations provided by crevices in rock outcrops and buildings. Is known to forage over 25 miles away from its roost site (Zeiner et al 1988). | **Absent** due to a lack of suitable open habitat for foraging and a lack of cliff faces, high buildings, and tunnels for roosting. In addition, the three CNDDB records within 5 miles of the Project site are over 50 years old. |
| western pond turtle (*Actinemys pallida*) | Federal ESA: None<br>State CESA: None<br>Other: **CDFW- SSC** | Found in ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches, with abundant vegetation, and either rocky or muddy bottoms, in woodland, forest, and grassland. In streams, prefers pools to shallower areas. Logs, rocks, cattail mats, and exposed banks are required for basking. May enter brackish water and even seawater. Estivates during summer droughts by burying itself in mud. | **Absent** due to a lack of suitable aquatic habitat. |

| | | | |
|---|---|---|---|
| western spadefoot (*Spea hammondii*) | Federal ESA: None<br>State CESA: None<br>Other: **CDFW-SSC** | Prefers open areas with sandy or gravelly soils, in a variety of habitats including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Breeding sites include vernal pools and other temporary rain pools, cattle tanks, and occasionally in pools of intermittent streams. Typically, the pools are turbid with little or no cover. | **Absent** due to a lack of suitable aquatic habitat for breeding with adjacent upland habitats for aestivation. |
| western yellow bat (*Lasiurus xanthinus*) | Federal: None<br>State: None<br>Other: **CDFW-SSC** | Forages over water and among trees in coastal, foothill, and desert riparian areas, and in suburban neighborhoods. Roosts are commonly in palm trees, and occasionally in cottonwood trees or yuccas, often near surface water in open grassy areas or scrub habitat. | **Moderate potential** due to the presence of suitable palm trees for roosting and suburban areas for foraging. However, there is only one CNDDB record within 5 miles and it is from 1985. |
| yellow warbler (*Setophaga petechia brewsteri*) | Federal ESA: None<br>State CESA: None<br>Other: **USFWS-BCC**<br>**CDFW-SSC** | Breeds in shrubby thickets and woods, particularly along watercourses and in wetlands. | **Moderate potential** due to the presence of shrubby thickets along portions of the flood control channel. There are two recent CNDDB records within 5 miles of the Project site. |

**Key to Table 3**

**Federal**
FE – Federally Endangered
FT – Federally Threatened
USFWS BCC – Bird of Conservation Concern

**State**
SE – State Endangered
ST – State Threatened
CE – Candidate Endangered

**CDFW**
SSC – California Species of Special Concern
FP – California Fully-Protected Species
WL – California Watch List

## *4.5 Special-Status Vegetation Communities*

A total of five CDFW special-status vegetation community (natural communities) occurrences were found within a five-mile radius of the Project limits through the CNDDB review (Figure 4). These include the following:

**Vegetation Communities**

- California Walnut Woodland
- Riversidian Alluvial Fan Sage Scrub
- Southern Coast Live Oak Riparian Forest
- Southern Sycamore Alder Riparian Woodland
- Walnut Forest

None of the five special-status vegetation communities were documented within the Survey Buffer: Furthermore, the Project limits and Survey Buffer are entirely surrounded by developed or agricultural land with no connectivity to natural communities. All other vegetation communities within the Project Survey Area are not considered to be special-status according to USFWS or CDFW. Therefore, no impacts to state or federally designated special-status vegetation communities would occur.

### *4.6 Riparian Resources and Jurisdictional Resources*

The literature review identified potential jurisdictional resources within the Survey Area, but outside of proposed Project permanent impact areas (Attachment A, Figure 3). The Project runs along the San Jose Creek channel, which is a jurisdictional canal considered a non-wetland of the U.S., and also falls within the jurisdiction of CDFW and RWQCB. This channel was historically a natural waterway, but has been anthropogenically altered and channelized. Portions of this flow-way have been undergrounded within the portion of the Survey Area. The on-site biological survey confirmed that the entire span of this feature, adjacent to the Project, is a concrete lined channel, lacking the ecological components to support wetlands or riparian habitat. The Project does not propose any permanent impacts to any jurisdictional features, however, approximately 600 square feet (sq ft) of temporary impacts are proposed within the concrete channel. No additional riparian resources or jurisdictional waterways were documented within the proposed impact areas of the Project, and due to the limited temporary impacts to the canal, impacts to riparian resources would not result from development of the proposed Project.

## 5.0 PROJECT IMPACTS - THRESHOLDS OF SIGNIFICANCE, DIRECT/INDIRECT IMPACTS & TEMPORARY/ PERMANENT IMPACTS

This section of the report includes a discussion of the potential direct, indirect, and cumulative impacts to onsite special-status biological resources that may result upon the construction and implementation of the Project. Direct impacts include those involving the loss, alteration, and/or disturbance of plant communities, and consequently, the flora and fauna of the affected area. Direct impacts also include the destruction of individual plants and/or wildlife. Direct impacts may adversely affect regional populations of certain species, or result in isolated populations, reducing genetic diversity and range wide population stability: conversely, direct impacts may also have intended or unintended positive effects in some cases.

Indirect impacts include a variety of effects related to areas or habitats that are not directly removed by Project development, such as loss of foraging habitat, increased ambient noise, artificial light, introduced predators (e.g., domestic cats, dogs, and other non-native animals), competition with exotic plants and animals, increased human presence and associated disturbances (e.g., trash, green waste, physical intrusion). Indirect impacts may include long and/or short-term daily activities associated with Project build-out, such as increased traffic, permanent barriers or fences, buildings, exotic seed-bearing ornamental plantings, irrigated landscapes, and human presence, among others. These types of impacts are known as edge effects and over time, may result in some encroachment on native plants by exotic plants, altered behavioral wildlife patterns, reduced wildlife diversity, and decreased wildlife abundance in habitats adjacent to a given project site. Furthermore, as is the case with direct impacts, indirect impacts may also have intended or unintended positive effects for certain species.

The foreseeable potential for significant adverse effects, either directly or indirectly through habitat modification or conversion, on any special-status vegetation community, plant species or wildlife species, or that could occur as a result of the development of this Project is discussed within this section.

## *5.1 Project Impacts*

This section provides definitions and discussion of the various Project-related impacts that are anticipated to occur.

### *5.1.1 Habitat Impacts*

Construction of the proposed Project will result in permanent impacts associated with the construction of a new pedestrian and bikeway along San Jose Creek. Permanent impacts to disturbed habitat and already developed land will result from installing new asphalt pavement and/or concrete sidewalks along the length of the project, removing existing fence lines, installing road ramps and other upgrades to associated public streets. Planting of landscaped trees and shrubs will also occur within disturbed and previously developed areas of the Project site. During construction, approximately 600 square feet (sq ft) of temporary impacts are proposed within the concrete channel for a dry dock installation. No sensitive habitat impacts are anticipated as a result of Project activities. Therefore, no habitat mitigation is required for habitat loss.

Several coast live oak trees will be removed or otherwise impacted through trimming and/or digging within the drip line of the oaks. Since these oak trees occur on LACFCD or City property, they are exempt from the City of Pomona Tree Preservation Ordinance permit requirements and mitigation.

The estimated acreages of proposed impacts resulting from construction are provided in Table 1. These impacts would include permanent impacts to 4.41 acres of Disturbed Habitat and 1.03 acres of Urban/Developed land, and 600 sq ft temporary impacts to non-vegetated floodplain or channel. None of the habitats that would be impacted by the Project are considered sensitive natural communities by CDFW or USFWS.

### *5.1.2 Species Impacts*

***Short-term (Temporary) Construction-Related Direct & Indirect Impacts***

Absent Mitigation measures recommended in Section 6, potential short-term direct impacts to special-status biological resources may occur as a result of construction of the proposed Project. These impacts could include wildlife entrapment, killed or injured wildlife, and unauthorized grading or vegetation removal. These activities have the potential to occur for any number of reasons, including lack or absence of Project design staking, inadequate or unmaintained demarcation of proposed impacts areas, misinterpretation of Project designs, and human error in operating equipment. Dependent on construction methodology, impacts resulting from wildlife entrapment may occur within Project limits where excavations remain open and un-sealed for extended periods. Wildlife injuries and mortalities have the potential to occur as a result of any of the previously discussed reasons but are also an inherent risk when working in proximity to undisturbed areas during activities such as initial vegetation clearing and ground disturbance.

The Survey Area provides suitable nesting habitat for a variety of native avian species associated with Disturbed Habitat and landscaped/ornamental vegetation associated with Urban/Developed habitat. Suitable nesting habitat for raptor species identified during the survey consisted of moderate to tall

native and ornamental trees surrounding the project vicinity. Landscaped/ornamental vegetation and non-native and/or ruderal vegetation associated with disturbed areas within the Project limits and Survey Buffer also provides suitable habitat for ground nesting birds and those that nest in shrubs or trees, as well as nectaring sources for Crotch's bumblebee or monarch butterfly. Implementation of the proposed Project has the potential to indirectly or directly impact nesting birds if active nests are present within the Project limits and vicinity during construction. The proposed Project also has the potential to directly or indirectly impact Crotch's bumblebee or monarch butterfly through direct take of the species and/or destruction of nectar sources. The Survey Area also includes suitable roosting habitat for several bat species within infrastructure, including freeway overpasses and buildings, as well as ornamental trees, including palms. Impacts to these roosting structures are not anticipated as a result of the Project.

Potential indirect impacts as a result of construction of the proposed Project also include non-stormwater discharges resulting from spills or leaks, attracting predators, stormwater discharges, dust, noise and lighting. Operations and maintenance are a component of the Project, including long-term landscape maintenance and as-needed maintenance of the bikeway. No temporary laydown areas are proposed for the project, though 600 sq ft of temporary impacts to the concrete-lined channel are anticipated. Without implementation of mitigation measures, impacts as a result of the proposed Project could include non-stormwater discharges resulting from spills or leaks and stormwater discharges from sediment laden runoff into adjacent water systems. Without proper implementation of a best management practices and/or a SWPPP there may be a potential for short-term urban discharge. These impacts are considered to be less than significant by implementation of recommended mitigation measures outlined in Section 7 and with implementation of requirements of the Standard Urban Stormwater Mitigation Plan.

Direct impacts to special-status wildlife species and migratory birds may occur as a result of direct impacts to individuals, including individuals, nests or roosts, which may occur during vegetation, soil and debris removal. Absent mitigation, Project-related impacts to special-status species and migratory birds is potentially significant.

Direct, short-term impacts are anticipated to occur to potentially jurisdictional waters during the temporary installation of a dry dock during construction at the inlet to the concrete-lined channel. San Jose Creek is likely subject to regulation by USACE, Los Angeles RWQCB and/or CDFW and therefore temporary impacts may require a 401, 404, 408 and/or 1602 permit. Since only a small area of temporary impacts to the concrete-lined channel is proposed and with the implementation of required permits, substantial adverse direct and indirect impacts are not anticipated to occur.

***Long-term (Permanent) Direct Impacts***

Direct impacts associated with the long-term development of the Project would be entirely within existing disturbed habitat or previously developed areas. There is no anticipated loss of native habitat, therefore, no mitigation or restoration is required. Since 100 percent of the Project's permanent impacts will be to disturbed habitat or urban/developed areas, long term impacts are not anticipated. Furthermore, the Project is mostly surrounded by urban/developed areas or agricultural land and therefore does not pose a significant impact to the ecological balance of the region

The Project will result in a loss of two oak trees and trimming of several additional oak trees. Since these

oak trees occur on LACFCD or City property, they are exempt from the Pomona Tree Ordinance permit requirements and mitigation. The loss of these individuals is not considered to have significant adverse permanent impacts.

***Long-term (Permanent) Indirect Impacts***

Potential for impacts to species occupying adjacent urban/developed habitat from increased noise and light associated the proposed permanent structures is not anticipated. Noise and light levels are expected to be consistent with ambient levels that currently exist along the San Jose Creek currently. Considering these factors, it is fair to presume that any native wildlife species occupying adjacent lands have become accustomed to a similar level of anthropogenic disturbance and therefore these impacts are not considered to be significant.

Other long-term indirect impacts as result of the proposed Project could include stormwater discharges from sediment laden runoff into municipal storm drain systems. Without proper stormwater management systems incorporated in the construction design, consistent with state and local requirements, there is a potential for long term urban discharge. The Project construction design includes permanent on-site stormwater management systems and therefore long-term indirect impacts from stormwater discharge are considered less than significant.

## *5.2 CEQA Thresholds of Significance*

This section is divided into sub-sections that include direct and indirect impacts analysis for each threshold under CEQA.

### *5.2.1 CEQA Threshold Biological Resources- Special-Status Species*

*a). Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?*

The proposed Project has the potential for indirect and direct impacts to special-status wildlife species detailed in Table 3. The biological resource assessment determined that absent mitigation measures outlined in Section 6 below, there is potential for direct and indirect impacts to special-status wildlife species and their associated habitats.

The biological resource assessment evaluated the Project area and Survey Buffer for sensitive wildlife documented to occur within the vicinity and determined that seven special-status wildlife species have a low to moderate potential to occur (Table 3). Additionally, there is potential for migratory birds to occur within the Project area, which are considered a protected wildlife species.

The biological resource assessment determined that two oak trees, which are considered sensitive under The City of Pomona Oak Tree Preservation Ordinance, occur within the Project limits and will require removal, while several others will require trimming. Since these oak trees occur on LACFCD or City property, the Project is exempt from permit and mitigation requirements. The assessment determined that there is no potential for any other special-status plant species to occur within the Project limits and

Survey Buffer.

***Biological Resources Impact 1 – Temporary Indirect Impacts to Special-Status Species and Migratory Birds***

*Special-Status Plants*

The biological resource assessment determined that several oak trees, which are considered sensitive under The City of Pomona Oak Tree Preservation Ordinance, occur within the Survey Area and will require removal and/or trimming, though temporary indirect impacts are not anticipated. The assessment also determined that there is no potential for any other special-status plant species to occur within the Project limits and Survey Buffer, therefore temporary indirect impacts to any special-status plant species are not anticipated as a result of Project implementation.

*Special-Status Wildlife*

Seven special-status wildlife species were determined to have low to moderate potential to occur within the Project limits and Survey Buffer. Pallid bat and pocketed free-tailed bat were determined to have low potential for occurrence due to the presence of bridges and buildings within the Project limits and Survey Buffer, providing marginally suitable roosting habitat. Monarch butterfly has a low potential to forage on flowering plants within and adjacent to the Project area and Survey Buffer, but the Project area and Survey Buffer lack the breeding host plant and is outside the known overwintering roost sites for this species. Crotch's bumblebee has a low potential to occur due to the presence of flowering non-natives associated with disturbed habitat and landscaped/ornamental areas, which provide moderately suitable nectar sources for this species. Southern California legless lizard was determined to have moderate potential for occurrence due to the presence of suitable suburban gardens within the Survey Buffer. Western yellow bat has a moderate potential to occur due to the presence of palm trees throughout the Project area and Survey Buffer that provide suitable roosting habitat. Lastly, yellow warbler has a moderate potential to occur in the shrubby thickets along portions of the flood control channel. All other special-status species evaluated for the Project are presumed absent. There were no narrow endemic, federal or state-listed wildlife species observed within the Project area and Survey Buffer. No other special-status species were identified as potentially present on the Project site. For the purposes of CEQA, species determined to have low potential or to be absent from the site do not require further study or mitigation.

Temporary indirect impacts to special-status wildlife species and birds protected under the MBTA that were determined to have potential for occurrence within the Study area (Table 3) may occur as a result of increased noise, lighting, construction dust, increased predator pressure, and loss of foraging habitat. Furthermore, several special status wildlife species, known to occur within the region, could occupy areas beyond the Study Area. Therefore, temporary indirect impacts to special-status wildlife species may result in stormwater discharges of sediment laden water to downstream drainages that has the potential to modify and/or degrade downstream special-status wildlife habitat located outside of the Project limits and Study Area. Other potential indirect impacts as a result of Project implementation may also include non-stormwater discharges resulting from spills or leaks that could pollute adjacent habitat. With implementation of Mitigation Measures BIO-1, BIO-2 and BIO-3 discussed in Section 6 and implementation of a Stormwater Pollution Prevention Plan (SWPPP), dust control measures, and best maintenance practices required under the Project's National Pollutant Discharge Elimination System

(NPDES) permit, potential long-term indirect impacts to special-status species listed above would be reduced to less than significant. Therefore, temporary indirect impacts to special-status wildlife species would be less than significant.

***Biological Resources Impact 2 – Temporary Direct Impacts to Special-Status Species and Migratory Birds***

*Special-Status Plants*

The biological resource assessment determined that several oak trees, which are considered sensitive under The City of Pomona Oak Tree Preservation Ordinance, will require trimming. Since these oak trees occur on LACFCD or City property, the Project is exempt from permit and mitigation requirements. It is suggested that proper trimming techniques that follow the ANSI A300 standards are followed to ensure temporary direct impacts to these oaks are less than significant. The assessment determined that there is no potential for any other special-status plant species to occur within the Project area and Survey Buffer, therefore temporary direct impacts to additional special-status plant species are not anticipated as a result of Project implementation.

*Special-Status Wildlife*

Direct impacts to southern California legless lizard, western yellow bat, Crotch's bumblebee, monarch butterfly, yellow warbler, and migratory birds may occur as a result of direct impacts to individuals, nests or roosts, which may occur during vegetation, tree, soil and debris removal or trimming. Absent mitigation measures, Project-related impacts to southern California legless lizard, western yellow bat, Crotch's bumblebee, monarch butterfly, yellow warbler, and migratory birds are potentially significant; however, with implementation of BIO-, BIO-2, and BIO-3 impacts are likely to be less than significant.

***Biological Resources Impact 3 – Long-Term Indirect Impacts to Special-Status Species and Habitats***

*Special-Status Plants*

Long-term indirect impacts from removal and/or trimming of oaks within the Survey Area are not anticipated to be significant. Given that the Project area does not contain any additional special-status plant species, Project implementation will not result in the loss of any portion of a special-status plant population, thereby preventing any potential indirect impact to range wide plant populations. Therefore, long-term indirect impacts to special-status plant species are not anticipated.

*Special-Status Wildlife*

Potential for long-term indirect impacts to species occupying adjacent habitat from increased noise and light associated with Project construction is not anticipated. Once the proposed bike path is constructed, noise and light levels are expected to be consistent with ambient levels that currently exist in the Project area. Considering these factors, it is fair to presume that any native wildlife species, including special-status species, occupying adjacent lands have become accustomed to a similar level of anthropogenic disturbance and therefore these impacts are not considered to be significant.

### *5.2.2 CEQA Threshold Biological Resources- Sensitive Natural Communities*

*b). Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS?*

***Biological Resources Impact 4 - Temporary Impacts to Sensitive Natural Communities***

Section 5.1.2 details temporary and permanent impacts to natural vegetation communities. None of the vegetation communities identified within the Project impact limits are considered sensitive by CDFW or USFWS.

The estimated acreages of proposed impacts resulting from construction are provided in Table 2. No sensitive natural communities occur within the Project limits or the Survey Area, therefore the Project would not result in significant impacts.

***Biological Resources Impact 5 - Permanent Impacts to Sensitive Natural Communities***

The Project would result in permanent impacts to 4.41 acres of Disturbed Habitat and 1.03 acres of Urban/Developed land. Since no sensitive natural communities occur within the Survey Area, the Project would not result in significant impacts.

***Biological Resources Impact 6 - Indirect Impacts to Riparian and Wetland Communities***

No riparian or wetland communities occur within the Survey Area, however, there is the potential for indirect impacts to occur to downstream wetlands from sedimentation and/or pollution entering the canal. However, with implementation of the NPDES permit requirements, impacts are considered less than significant.

***Biological Resources Impact 7 – Direct Impacts to Riparian and Wetland Communities***

No riparian or wetland communities occur within the Survey Area. Therefore, no significant direct impacts are expected to occur.

### *5.2.3 CEQA Threshold Biological Resources- Jurisdictional Waters and Wetlands*

*c) Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

A concrete-lined portion of San Jose Creek flows adjacent to the Project's permanent impact areas, with only a small area (600 sq ft) of temporary impacts anticipated within the concrete channel. San Jose Creek is likely subject to regulation by USACE, Los Angeles RWQCB and/or CDFW and therefore temporary impacts may require a 401, 404, 408 and/or 1602 permit. Since only a small area of temporary impacts to potential jurisdictional waters or wetlands are proposed, substantial adverse effects are not anticipated to occur.

### *5.2.4 CEQA Threshold Biological Resources- Wildlife Movement*

*d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

Wildlife corridors are linear features that function to connect at least two significant habitat areas or larger core areas. Wildlife corridors typically apply to mammals and reptiles, as aquatic wildlife generally rely on waterways for dispersal and avian species are able to fly between habitat patches by crossing developed areas. The Project is located within a region that is largely surrounded by the urban development of Pomona. Although San Jose Creek is present within the Survey Area, the canal has been concrete-lined and altered. Flowing water to support movement of aquatic species was not observed during the biological resources assessment, however, during times of seasonal flow the canal could provide movement of aquatic species. The project will not impede, restrict or modify channel flows and, therefore, impacts to aquatic species corridors are not expected. Given the urban nature of the Project site and surrounding area, short- and long-term impacts to wildlife movement are not expected.

### *5.2.5 CEQA Threshold Biological Resources- Local Policies and Ordinances*

*e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

The City of Pomona's Oak Tree Preservation Ordinance (Section .5809-23 of the Municipal Code) mandates the protection of all healthy, mature oak trees that are larger than eight inches in diameter. Several coast live oak trees are present within the Survey Area; two are anticipated to be removed within the Project limits and several others located within the Survey Buffer will be impacted through trimming and/or digging within the oak's drip line. Since all oak trees within the Survey Area fall on LACFCD or City property, the Project is exempt from the City of Pomona Oak Tree Preservation permit requirements and mitigation.

The Project does not fall within any SEAs.

### *5.2.6 CEQA Threshold Biological Resources- Conservation Plans*

*f) Would the project conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state HCP?*

The Project does not fall within an adopted HCP, NCCP, or other approved local, regional, or state HCP. Therefore, no impacts are anticipated.

# 6.0 MITIGATION PROGRAM

## *6.1 Mitigation Measures for Construction Impacts*

**BIO-1: Delineation of Project limits**

The boundaries of proposed Project limits will be clearly delineated with stakes, fencing or other conspicuous boundary markings, which will be maintained until the completion of construction activities, to prevent the unauthorized impact of habitat outside of the Project limits discussed in this report. All employees shall be instructed that their activities, vehicles, equipment and construction materials are restricted to the proposed Project footprint.

**BIO-2: Conduct Vegetation Clearing/Initial Grading Outside of the Bird Nesting Season OR Conduct Pre-Construction Nesting Bird Surveys**

To avoid impacts to nesting birds, special status birds and/or raptors the following will be implemented:

- Conduct vegetation removal and initial ground disturbance activities outside of the bird breeding season (February 15 – September 15).
- If vegetation removal or initial grading occurs during the breeding season, nesting bird surveys will be conducted by a qualified biologist for nesting raptors and migratory birds within the Project area plus an additional 100-foot survey buffer (for passerines) and 300-foot buffer (for raptors) within 3 days of construction. If nests of listed birds, migratory birds, raptors, or other sensitive species are documented, active nests will be avoided, and a nest buffer will be designated around each nest. Nest buffers will be determined at the discretion of the qualified biologist based on the location and species occupying the nest. Species that are not covered by the MBTA (such as European starling, house sparrow, Eurasian collared dove, etc.) will not require a nest buffer. The perimeter of this nest buffer will be clearly demarcated, and all construction activities will be prohibited within the delineated area until a qualified biologist has determined that the nest has either successfully fledged, been depredated, or failed due to other causes. Construction activities may proceed within the non-disturbance buffer if a qualified biologist is present to monitor active nests and determines that construction activities are not causing indirect or direct disturbance to a nest.

**BIO-3: Biological Monitoring During Vegetation Clearing**

To avoid impacts to special status species, a biologist (biological monitor) experienced with identification of the sensitive and common biological resources in the region shall be present to monitor all vegetation clearing activities, regardless of the time of year such activities are scheduled to begin. The biological monitor shall perform biological clearance sweeps at the start of each workday that vegetation clearing activities take place. The biological monitor shall be present on a full-time basis during the vegetation-clearing activities to ensure the activities do not affect sensitive biological resources and to move or redirect wildlife out of harm's way as necessary. The monitor will be responsible for communicating regularly with the Project Proponent and onsite contractor on non-compliance issues and ways to ensure that impacts to sensitive biological resources will be avoided to the fullest extent possible in accordance with the appropriate Project agreements and permits, as

applicable. Biological monitoring shall take place until the Proposed Project area has been completely cleared of any vegetation. The biological monitor shall keep a record of monitoring activities in a log that contains representative photographs of the work activities monitored and any sensitive biological resources incidentally encountered during Project activities.

## 7.0 CONCLUSION

Seven special-status wildlife species were determined to have low to moderate potential to occur within the Project limits and Survey Buffer: pallid bat, pocketed free-tailed bat, monarch butterfly, Crotch's bumblebee, southern California legless lizard, western yellow bat, and yellow warbler. No special-status species were observed within the Project limits and Survey Buffer.

Of the 11 special-status plant specifies identified during the literature review, all were determined to be absent based on lack of suitable habitat and substrates within the Project limits and Survey Buffer. Coast live oaks, which are considered sensitive under the City of Pomona Oak Tree Preservation Ordinance, occur on-site, however, the oaks occur on LACFCD or City property and are therefore exempt from permit and mitigation requires for oak tree impacts.

Absent recommended mitigation measures outlined herein, the proposed Project impacts have the potential to be significant on special-status wildlife species and jurisdictional resources.

To the maximum extent practicable, avoidance of impacts to special-status species and nesting birds/raptors will be achieved per the MBTA, FESA, and CESA. Indirect effects to biological resources during and following construction are anticipated to be less than significant due to proposed minimization measures. Significant impacts to wildlife corridors are not anticipated as a result of the proposed Project. Additionally, cumulative impacts are anticipated to be less than significant due to the limited extent of disturbance.

Temporary impacts proposed to the concrete-line channel is likely subject to regulation by USACE, Los Angeles RWQCB and/or CDFW and therefore the Project may require a 401, 404, 408 and/or 1602 permit. Since only a small area of temporary impacts to potential jurisdictional waters or wetlands are proposed, substantial adverse effects are not anticipated to occur.

Proposed mitigation will include implementation of mitigation measures which include delineation of Project limits, conducting vegetation clearing and initial ground disturbance outside of the bird nesting season if feasible, conducting pre-construction nesting bird surveys if construction occurs during the breeding season, and conducting biological monitoring during vegetation trimming/removal.

By adhering to the mitigation measures proposed herein, no direct or indirect adverse impacts would occur to the Project site or any threatened, endangered, or otherwise special-status plant or wildlife species. Additionally, no cumulative impacts are expected to occur. Every effort to avoid impacting special-status species and nesting birds and raptors will be implemented, including compliance with the MBTA and California Fish and Game Code Sections of the 3500 series.

*I hereby certify that the statements furnished above present the data and information required for this biological survey results report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.*

Hayley Milner
Staff Biologist

## 8.0 REFERENCES

Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors
2012 The Jepson Manual: Vascular Plants of California, Second Edition. University of California Press, Berkeley, California.

Calflora
2022 Information on California plants for education, research and conservation. [web application]. Berkeley, California: The Calflora Database [a non-profit organization]. Available: http://www.calflora.org/.

California Department of Fish and Wildlife (CDFW)
2008 CEQA Guidelines. Statutes and Guidelines for Implementation of the California Environmental Quality Act as amended.

2024 California Natural Diversity Database (CNDDB). RareFind Version 3.1.0. Database Query for the *San Dinmas*, California, USGS 7.5-minute quadrangle. Wildlife and Habitat Data Analysis Branch. Accessed February 2024.

California Native Plant Society (CNPS)
2024 Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society. Sacramento, CA. Accessed June 2020 from: http://www.cnps.org/inventory.

City of Pomona
2014 City of Pomona: Pomona General Plan Update, Corridors Specific Plan, Active Transportation Plan and Green Plan. Volume I: Final Environmental Impact Report. Accessed February 2024.

Holland, Robert F.
1986 Preliminary Descriptions of the Terrestrial Natural Communities of California. State of California, the Resources Agency. Department of Fish and Game.

Oberbauer, T., Kelly, M. and J. Buegge
2008 Draft Vegetation Communities of San Diego County. Based on "Preliminary Descriptions of the Terrestrial Natural Communities of California." Holland.

National Oceanic and Atmospheric Administration (NOAA)
2025 National Marine Fisheries Service (NMFS) Critical Habitat Mapper. https://www.arcgis.com/apps/webappviewer/index.html?id=68d8df16b39c48fe9f60640692d0e318. Accessed January 2025.

Peterson, R. T., DiGiorgio, M., & Peterson, R. T.
2010 Peterson field guide to birds of Western North America.

Sawyer, J.O., T. Keeler-Wolf, J.M. Evens

2009 A Manual of California Vegetation, Second Edition. California Native Plant Society. Sacramento, California.

U.S. Army Corps of Engineers (USACE)
1987 Corps of Engineers Wetlands Delineation Manual. Environmental Laboratory U.S. Army Corps of Engineers, Waterways Experiment Station, Wetlands Research Program Technical Report Y-87-1. Vicksburg, Mississippi.

2008 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*, ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

United States Department of Agriculture (USDA))
2011 Soil Survey Staff, Natural Resources Conservation Service (NRCS), United States Department of Agriculture. Web Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov/. Accessed February 2024.

United States Fish and Wildlife Service (USFWS)
2024a Information for Planning and Consultation (IPaC). https://ipac.ecosphere.fws.gov.

2016 U.S. FWS Threatened & Endangered Species Active Critical Habitat Report. https://ecos.fws.gov/ecp/report/table/critical-habitat.html. Accessed February 2024.

2024b National Wetlands Inventory (NWI). https://www.fws.gov/wetlands/.

United States Geological Survey (USGS)
2011 7.5-minute topographic quadrangle map for *San Dimas*, California.

2024 National Hydrography Dataset (NHD). https://www.usgs.gov/national-hydrography/national-hydrography-dataset.

# ATTACHMENT A

Figures

Blackhawk Environmental

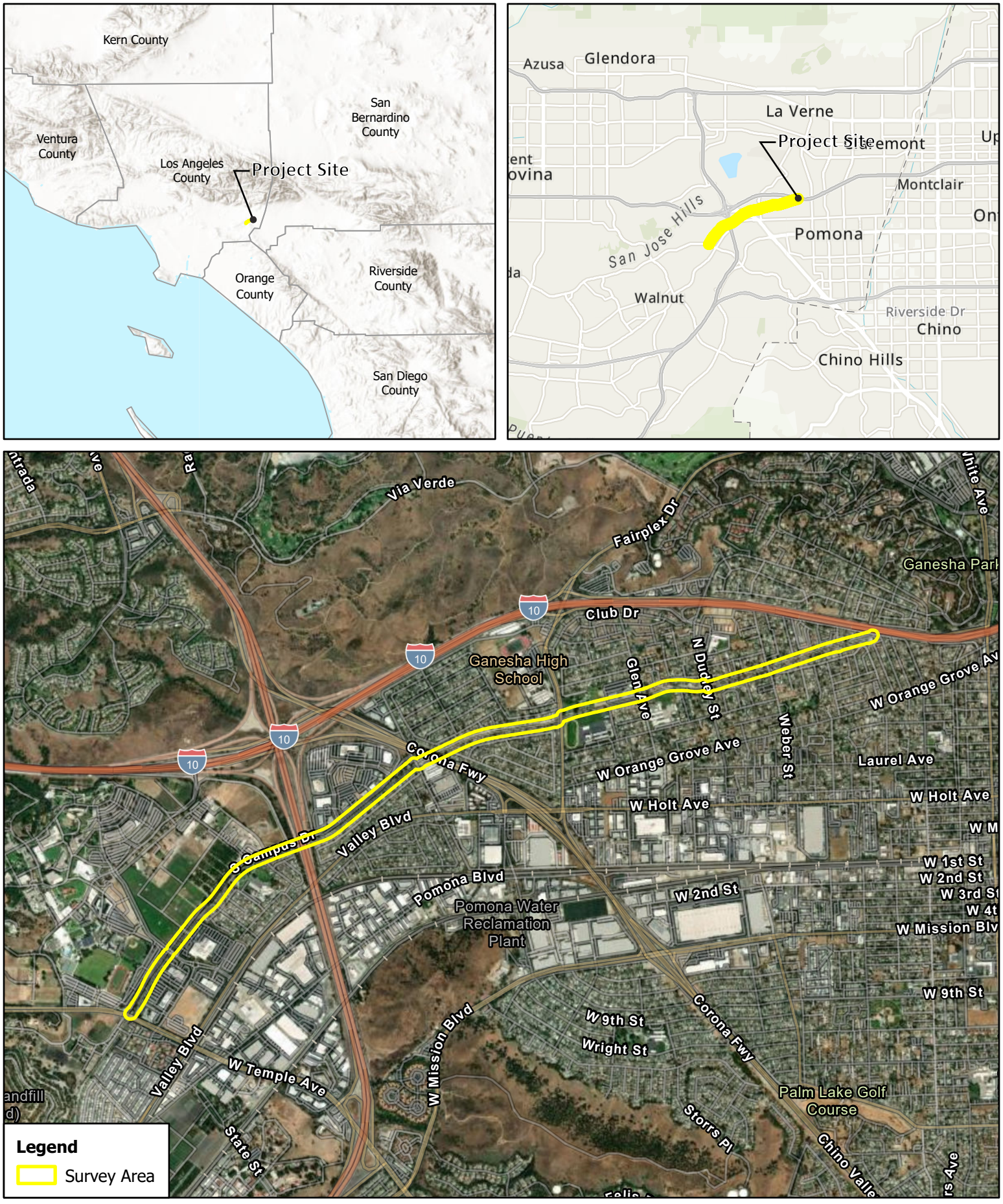



**Figure 1**

## Project Vicinity and Location

San Jose Creek Multi-Use Bikeway Project

Blackhawk Environmental

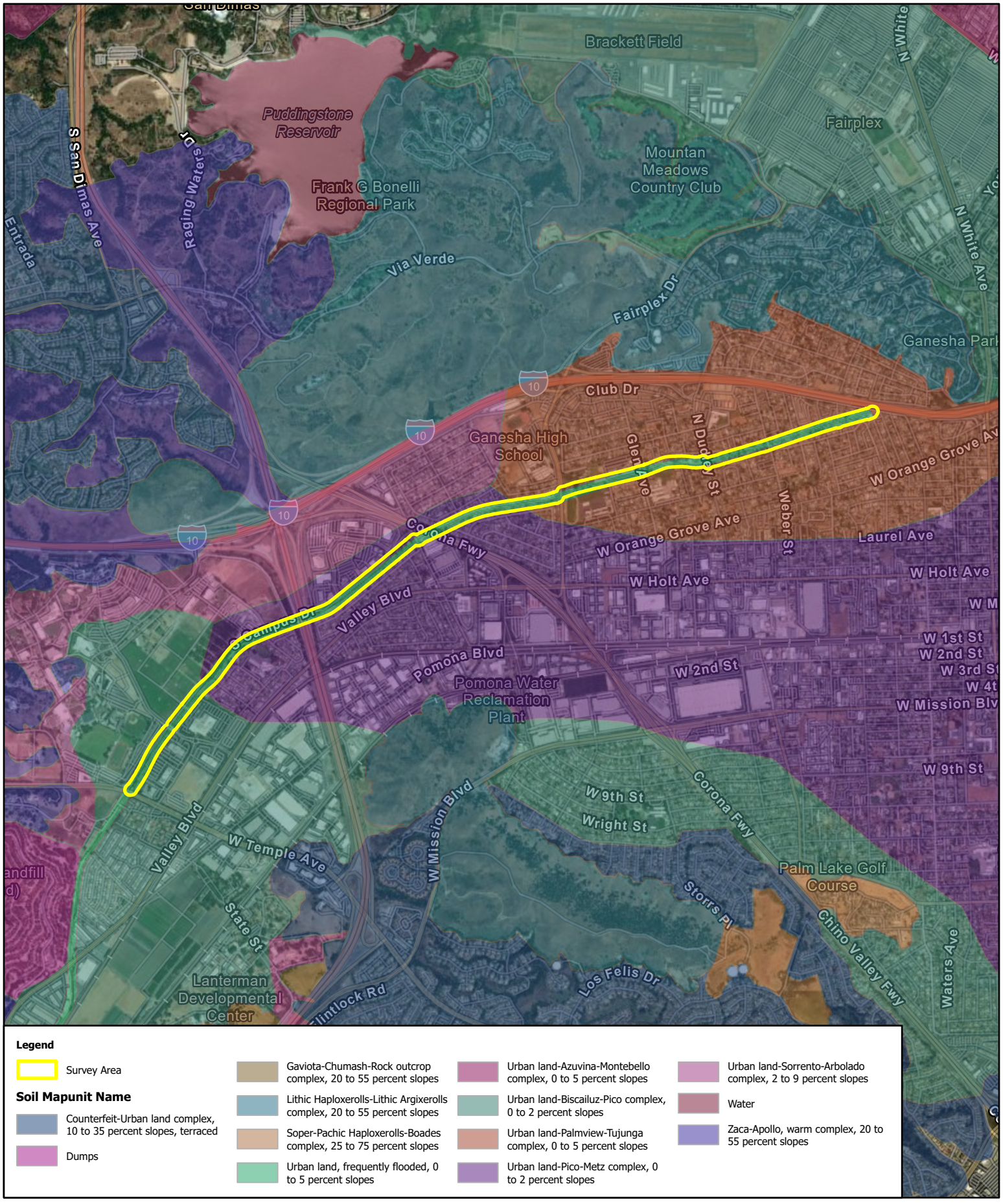



**Figure 2**
**Soils**

City of Pomona SJC Bikeway

Blackhawk Environmental

**Figure 3**

# Hydrology

City of Pomona SJC Bikeway

Blackhawk Environmental

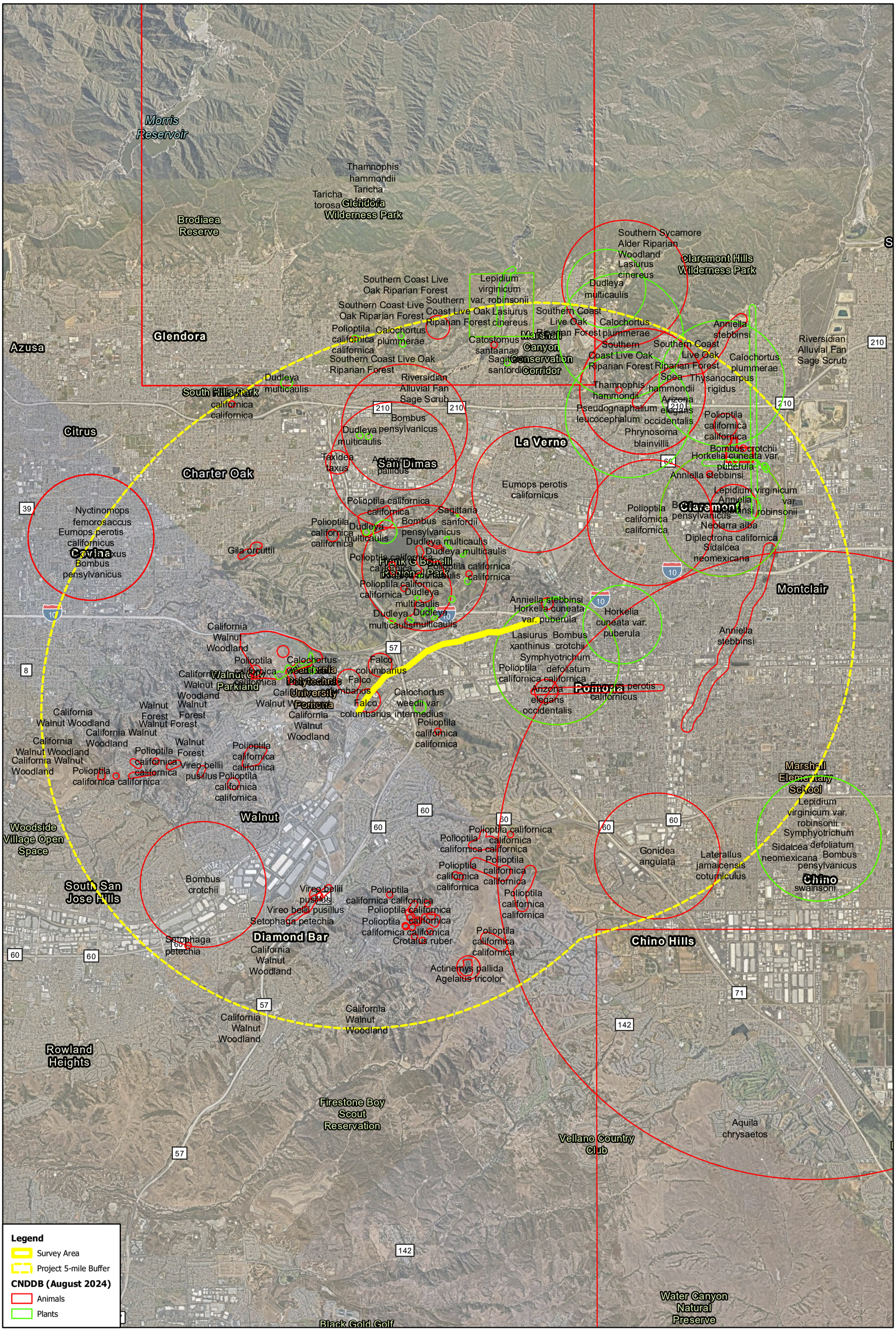



**Figure 4**

## CNDDB Map

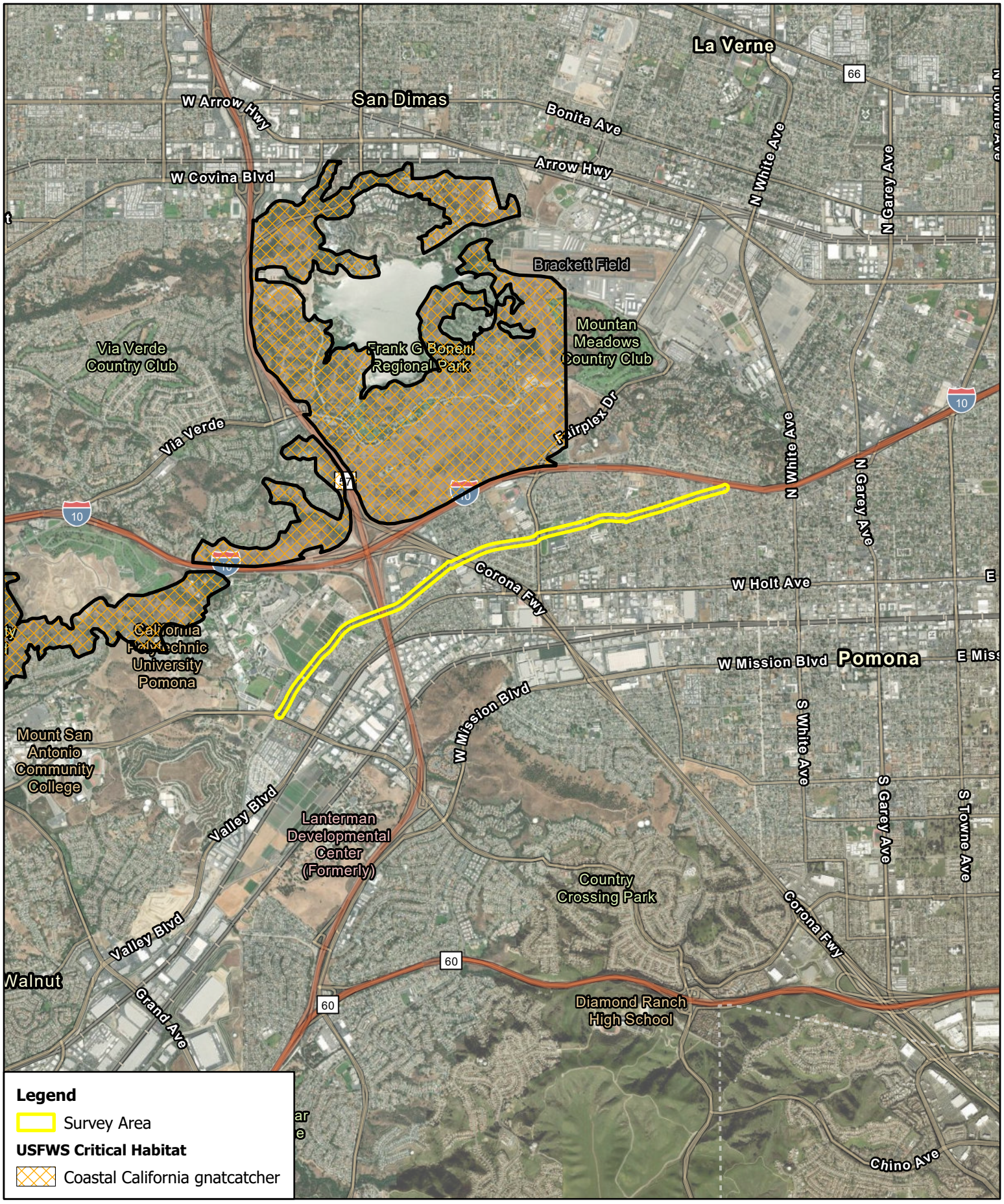
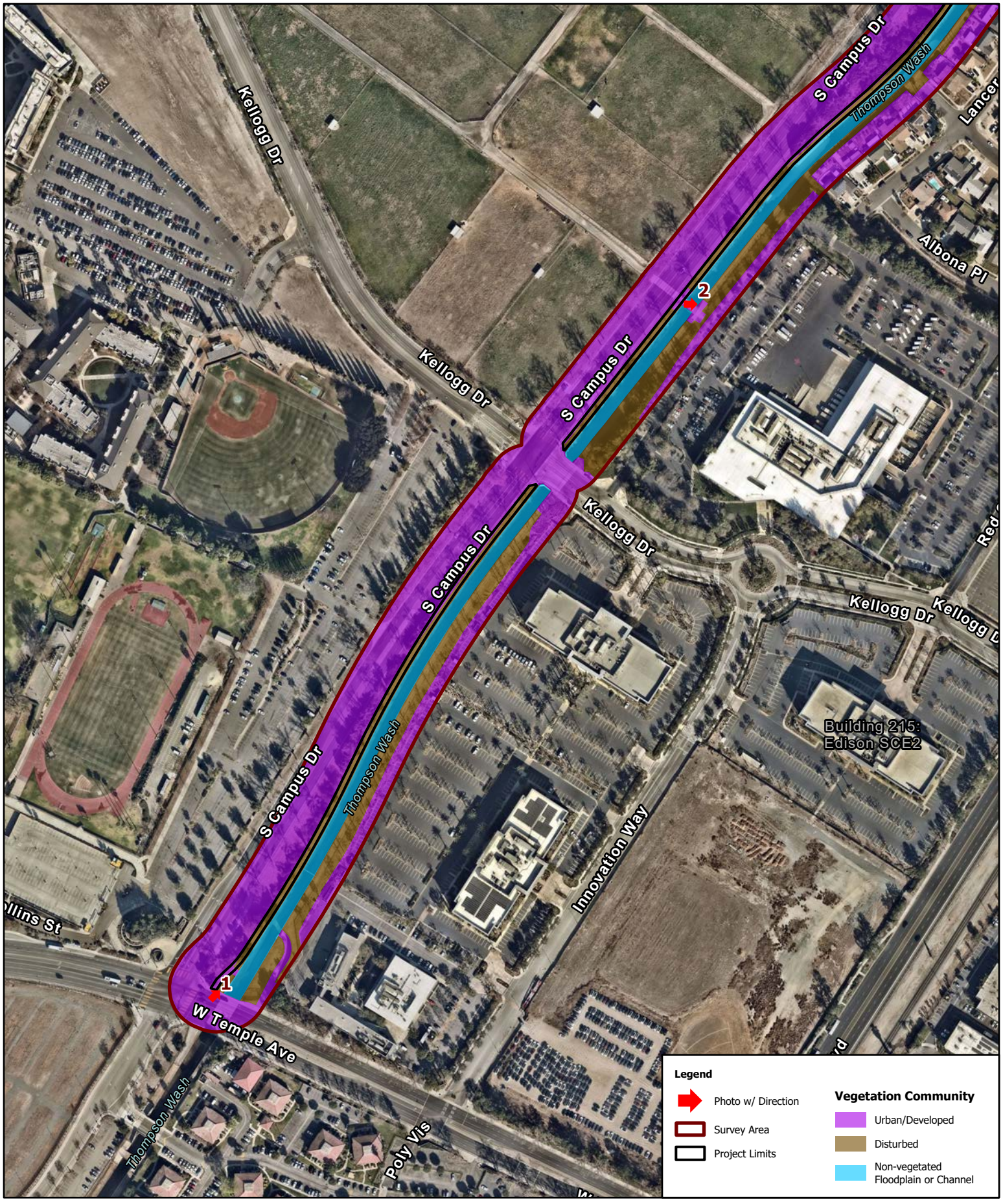



**Figure 5**

## USFWS Critical Habitat

City of Pomona SJC Bikeway

Blackhawk Environmental




N

0 300

Feet

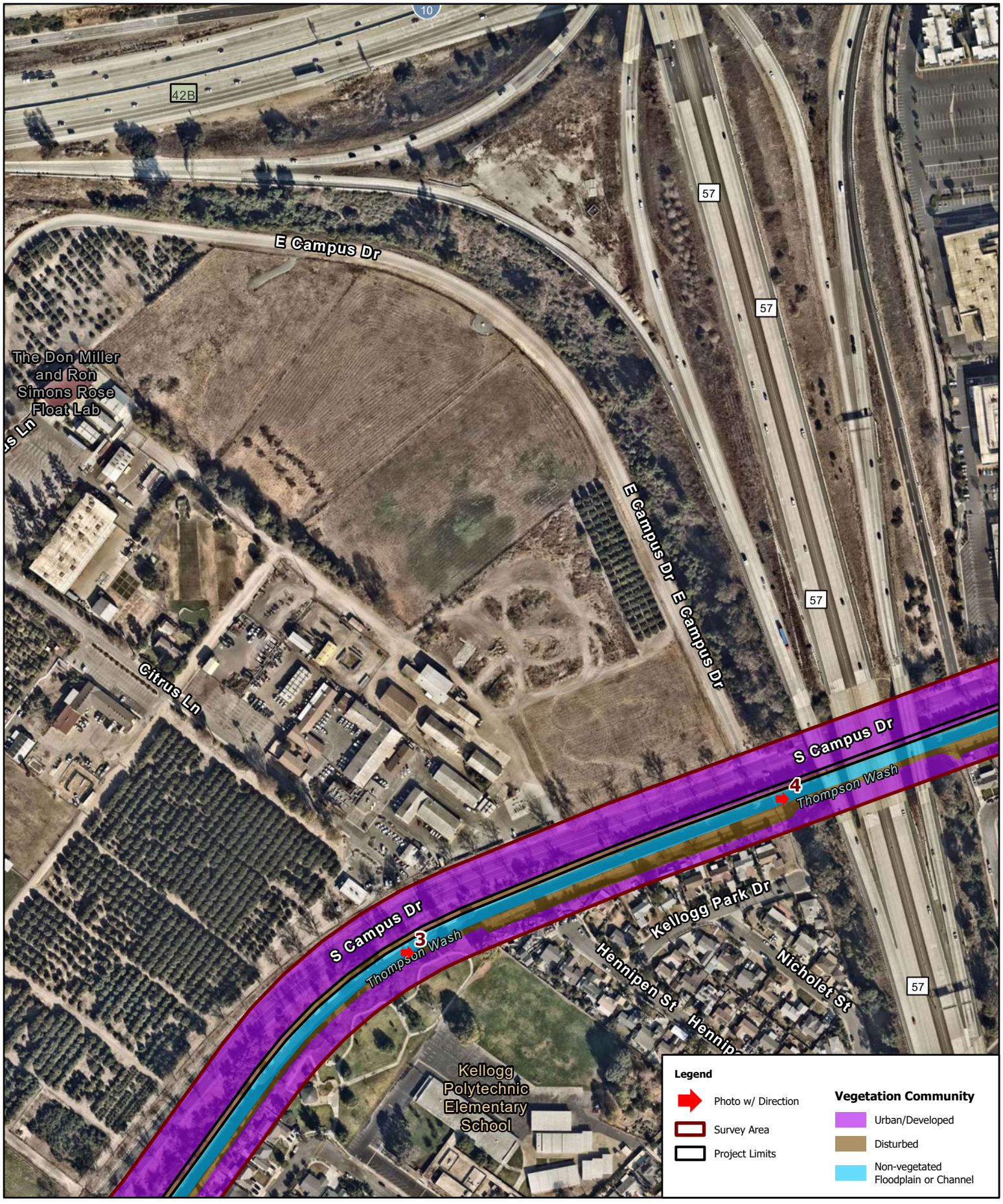
**Figure 6**

# Vegetation



San Jose Creek Multi-Use Bikeway Project

Blackhawk Environmental




N

0 300

Feet

**Figure 6**

# Vegetation



San Jose Creek Multi-Use Bikeway Project

Blackhawk Environmental

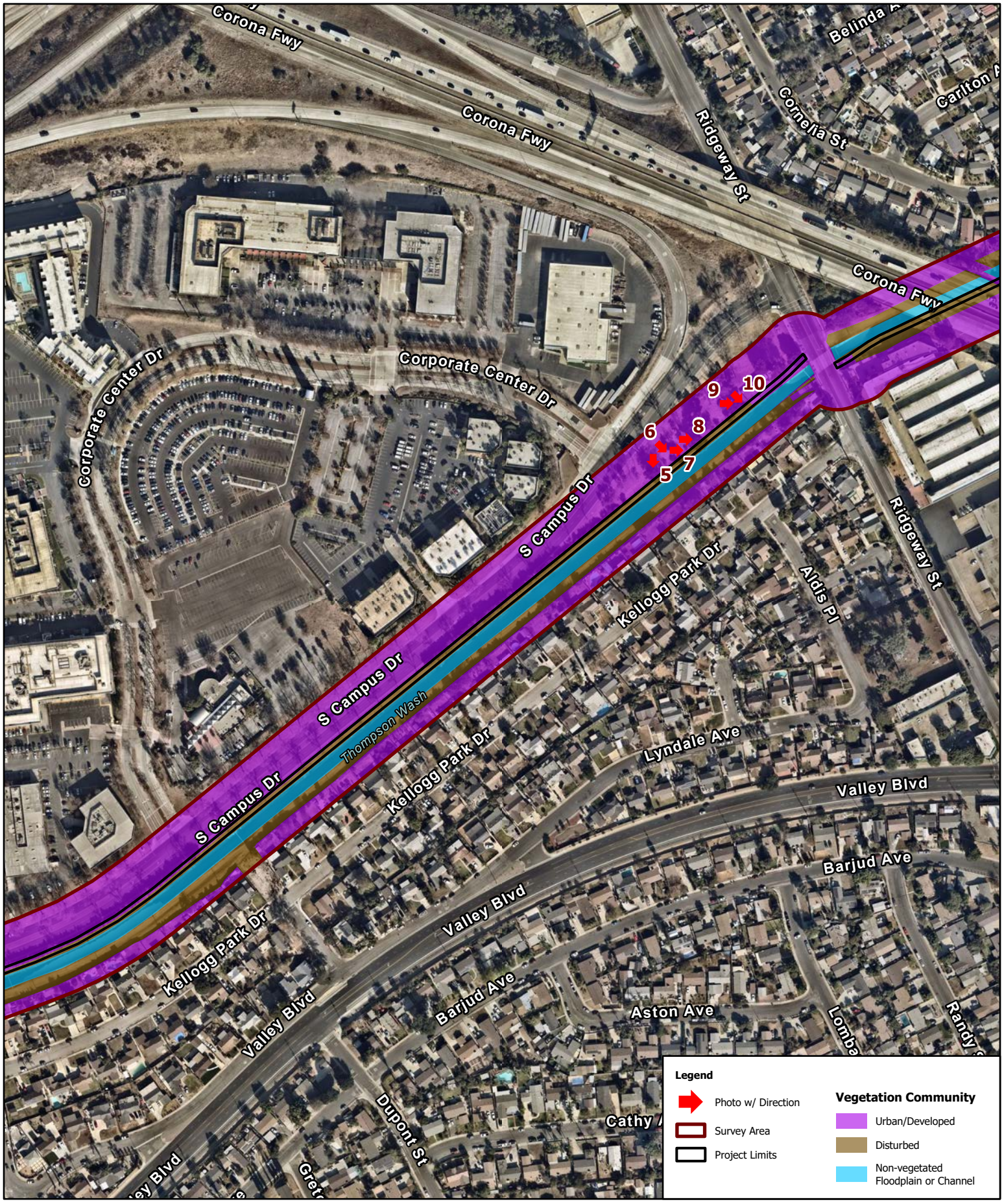


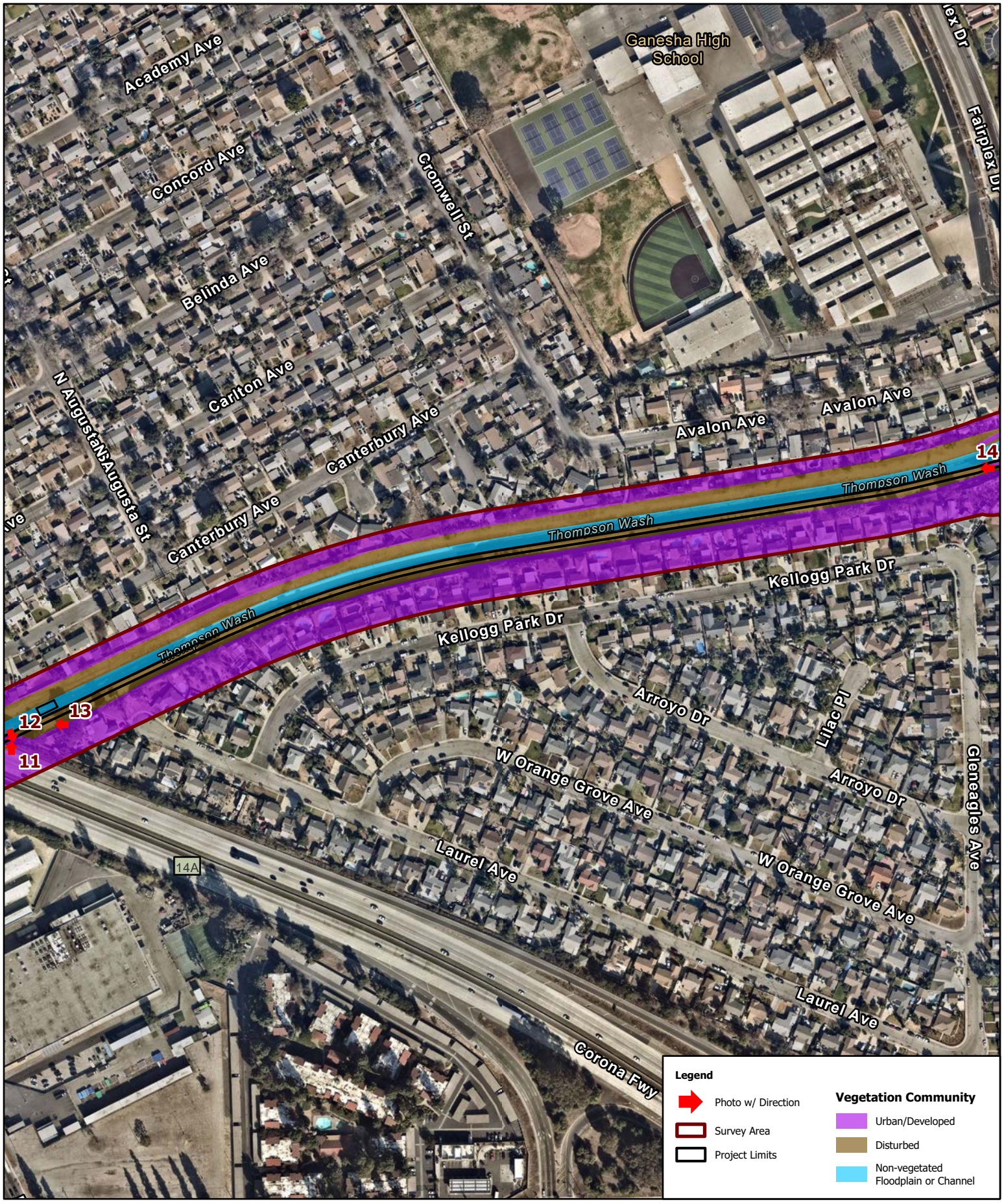

**Figure 6**

# Vegetation



San Jose Creek Multi-Use Bikeway Project

Blackhawk Environmental




N

0 300

Feet

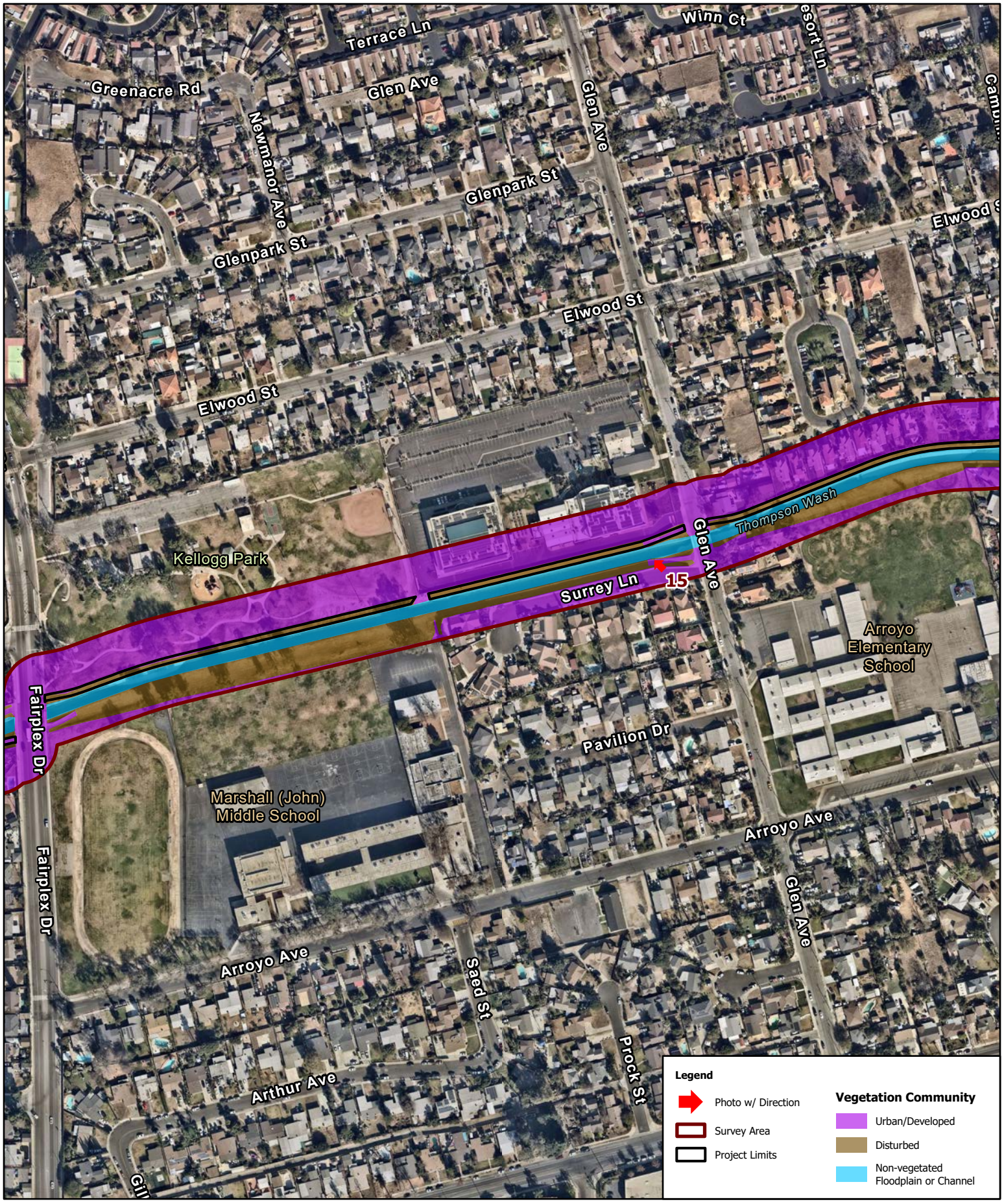
**Figure 6**

# Vegetation



San Jose Creek Multi-Use Bikeway Project

Blackhawk Environmental




N

0 300

Feet

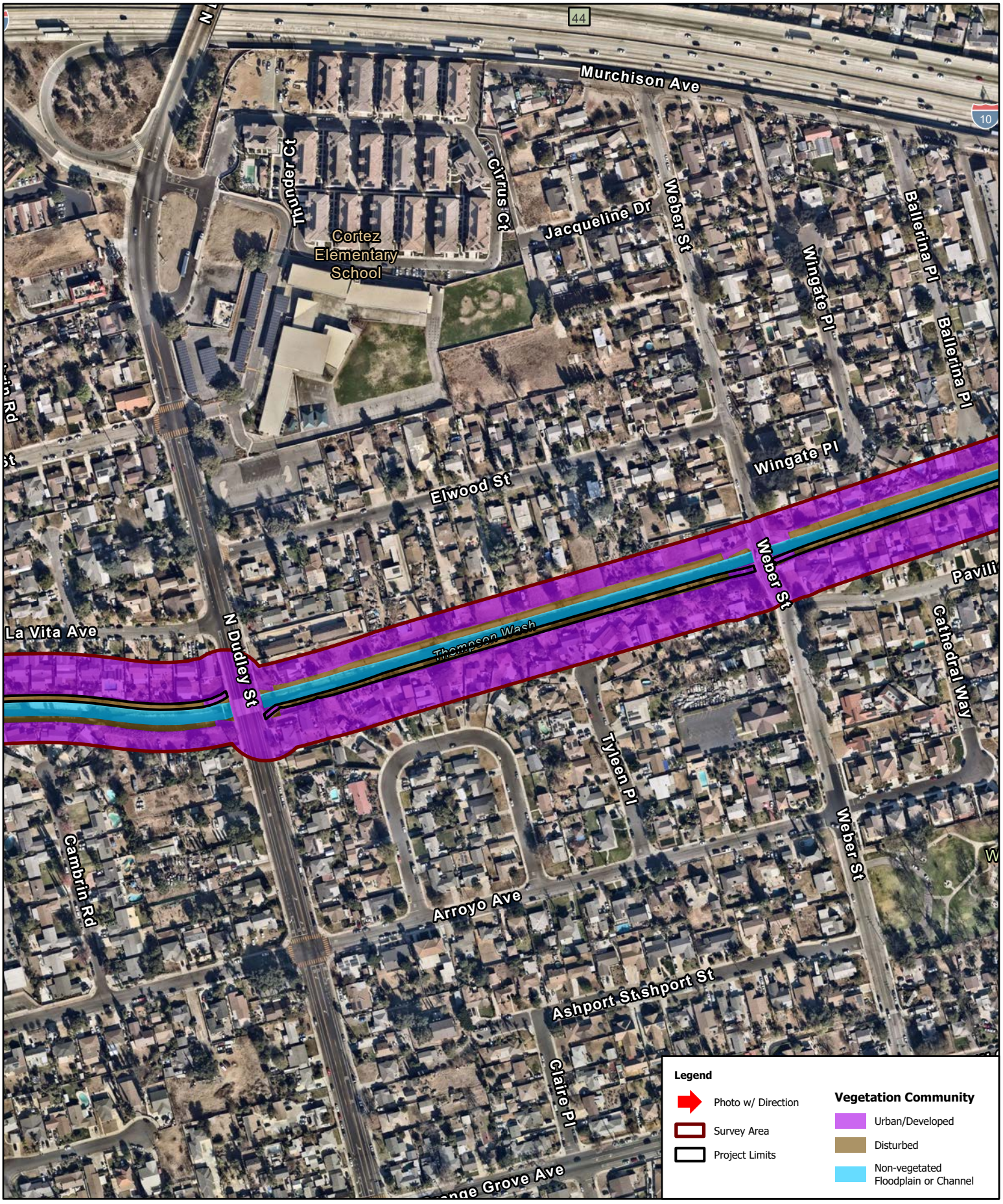
**Figure 6**

# Vegetation



San Jose Creek Multi-Use Bikeway Project

Blackhawk Environmental




N

0 300

Feet

**Figure 6**

# Vegetation



San Jose Creek Multi-Use Bikeway Project

Blackhawk Environmental

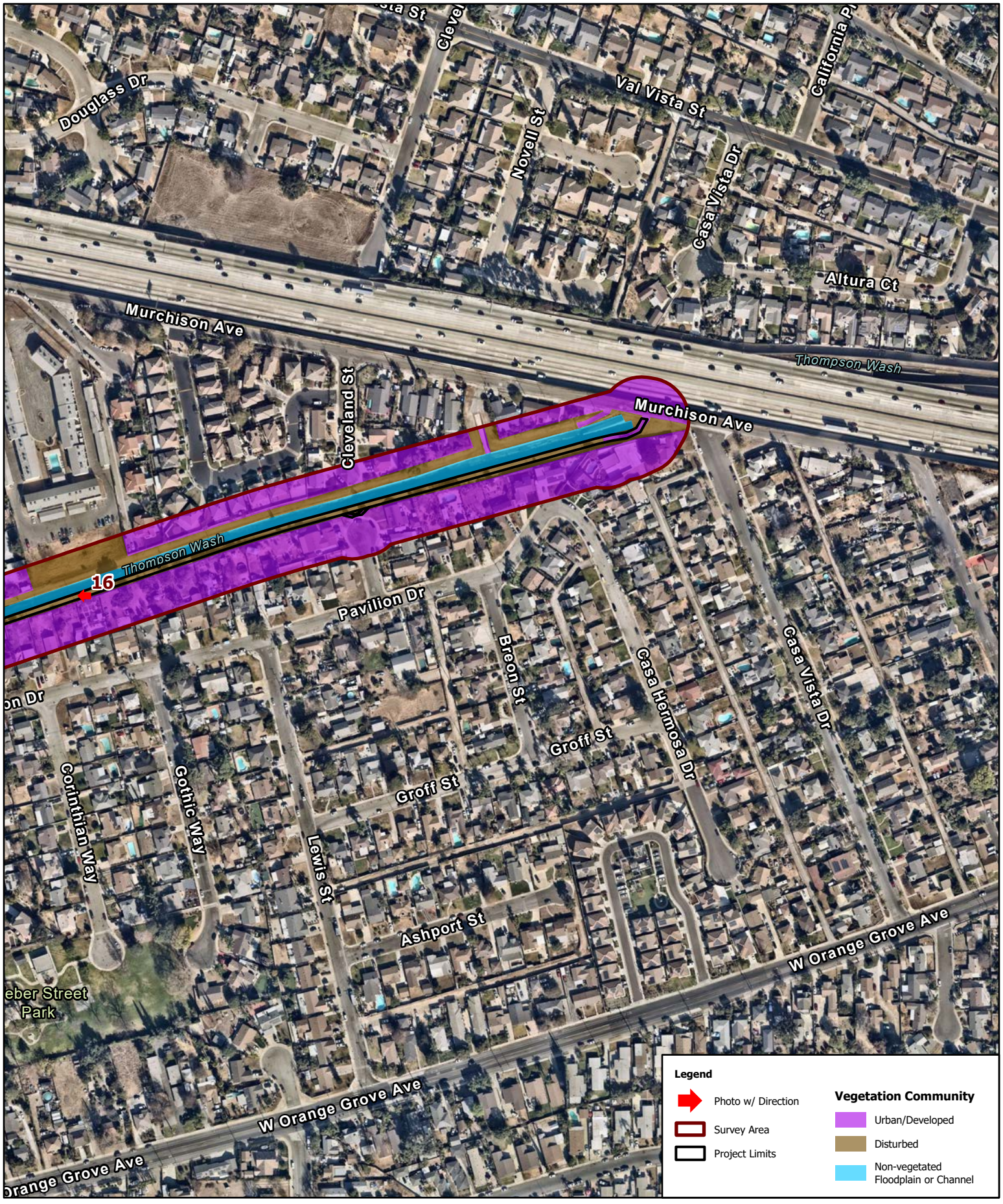



**Figure 6**

# Vegetation



San Jose Creek Multi-Use Bikeway Project

Blackhawk Environmental

# ATTACHMENT B

Photo Pages

Blackhawk Environmental

.

**Photograph 1.** East-facing view of the western Project limits along the San Jose Creek channel, consisting of disturbed habitat within the access road and further surrounded by developed areas, including landscaped/ornamental vegetation (Photo Point 1).

**Photograph 2.** North-facing view of the Project site consisting of disturbed habitat along the northern access road, bordered by landscaped California sycamores (*Platanus racemosa*) along S Campus Drive (Photo Point 2).

.

**Photograph 3.** Southwest-facing view of Kellogg Park bordering the south side of the San Jose Creek channel, located within the Survey Area (Photo Point 3).

**Photograph 4.** Northwest-facing view of the Project site, situated along the northern access road (left side of photo), located within the SR-57 underpass and consisting of disturbed habitat and bordered by landscaped/ornamental vegetation (Photo Point 4).

**Photograph 5.** South-facing view of two coast live oaks (*Quercus agrifolia*) approximately 10 feet northwest of the Project site (Photo Point 5).

**Photograph 6.** Southeast-facing view of a coast live oak (orange arrow) approximately 13 feet northwest of the Project site (Photo Point 6).

**Photograph 7.** Southwest-facing view of a coast live oak along the northern boundary of the Project (Photo Point 7).

**Photograph 8.** Southwest-facing view of a coast live oak approximately 5 feet northwest of the Project boundary (Photo Point 8).

.

**Photograph 9.** East-facing view of a coast live oak approximately 10 feet northwest of the Project boundary (Photo Point 9).

**Photograph 10.** Representative photo of coast live oak regrowth along the northern Project boundary that does not require mitigation (Photo Point 10).

.

**Photograph 11.** North-facing view of coast live oak within the Project site that will require removal (Photo Point 11).

**Photograph 12.** South-southeast-facing view coast live oak approximately 15 feet south of the Project site (Photo Point 12).

.

**Photograph 13.** West-facing view of the coast live oak (orange arrow) requiring removal within the Project site (Photo Point 13).

**Photograph 14.** West-facing view of bare ground within the Project site, buffered by the San Jose Creek channel to the north and residential developments, including landscaped/ornamental vegetation, to the south (Photo Point 14).

.

**Photograph 15.** Northwest-facing view of the Project site north of the San Jose Creek channel consisting of disturbed habitat and bound to the north by a concrete wall (Photo Point 15).

**Photograph 16.** West-facing view of the Project site south of the San Jose Creek channel consisting of disturbed habitat and bound to the south by residential developments (Photo Point 16).

.

**Photograph 16.** Northeast-facing view of the dry dock location within the San Jose Creek channel east of the SR-71 underpass.

# ATTACHMENT C

## Observed Wildlife Species List

| AVES | BIRDS |
|---|---|

| **ACCIPITRIDAE** | **Kites, Hawks, Eagles, and Allies** |
|---|---|
| *Accipiter cooperii* [+] | Cooper's hawk |
| *Buteo jamaicensis* | red-tailed hawk |
| *Buteo lineatus* | red-shouldered hawk |
| **COLUMBIDAE** | **Pigeons & Doves** |
| *Patagioenas fasciata* | band-tailed pigeon |
| *Streptopelia decaocto** | Eurasian-collared dove |
| *Zenaida macroura* | mourning dove |
| **CORVIDAE** | **Crows & Jays** |
| *Corvus brachyrhynchos* | American crow |
| **FRINGILLIDAE** | **Finches and Allies** |
| *Haemorhous mexicanus* | house finch |
| *Spinus psaltria* | lesser goldfinch |
| **MIMIDAE** | **Mockingbirds & Thrashers** |
| *Mimus polyglottos* | northern mockingbird |
| **PASSERELLIDAE** | **New World Sparrows** |
| *Melospiza melodia* | song sparrow |
| *Melozone crissalis* | California towhee |
| **PARULIDAE** | **Wood Warblers & relatives** |
| *Cardellina pusilla* | Wilson's warbler |
| *Geothlypis trichas* | common yellowthroat |
| **STURNIDAE** | **Starlings and Mynas** |
| *Sturnus vulgaris** | European starling |
| **TROCHILIDAE** | **Hummingbirds** |
| *Calypte anna* | Anna's hummingbird |
| *Selasphorus sasin* | Allen's hummingbird |
| **TYRANNIDAE** | **Tyrant Flycatchers** |
| *Pyrocephalus obscurus* | vermilion flycatcher |
| *Sayornis nigricans* | black phoebe |
| *Sayornis saya* | Say's phoebe |

| **MAMMALIA** | **MAMMALS** |
|---|---|
| **CANIDAE** | **Foxes, Wolves & Allies** |
| *Canis familiaris** | domestic dog |
| *Canis latrans* | coyote |
| **FELIDAE** | **Cats** |
| *Felis catus** | domestic cat |
| **GEOMYIDAE** | **Gophers** |
| *Thomomys bottae* | Botta's pocket gopher |
| **LEPORIDAE** | **Rabbits and Hares** |
| *Sylvillagus audubonii* | desert cottontail |
| **PHASIANIDAEA** | **Chickens, Pheasants & Allies** |
| **Gallus domesticus* | domestic chicken |
| **SCIURIDAE3** | **Squirrels** |

| | |
|---|---|
| *Otospermophilus beecheyi* | California ground squirrel |
| *Sciurus carolinensis** | eastern gray squirrel |

| **REPTILIA** | **REPTILES** |
|---|---|
| **PHRYNOSOMATIDAE** | **Spiny Lizards** |
| *Sceloporus occidentalis* | western fence lizard |
| *Uta stansburiana* | common side-blotched lizard |

**Non-native*
⁺*CDFW Watch List Species*

# ATTACHMENT D

## Plant Species Observed

Blackhawk Environmental

## OBSERVED PLANT SPECIES LIST

### MONOCOTS

| **AGAVACEAE** | **Agave Family** |
|---|---|
| *Agave* sp.* | agave |
| **ARECACEAE** | **Palm Family** |
| *Phoenix canariensis** | Canary Island date palm |
| *Syagrus romanzoffiana** | queen palm |
| *Washingtonia robusta*** | Mexican fan palm |
| **POACEAE** | **Grass Family** |
| *Arundo donax** | giant reed |
| *Bromus madritensis*** | compact brome |
| *Cortaderia selloana*** | pampas grass |
| *Ehrharta erecta*** | panic veldtgrass |
| *Pennisetum setaceum*** | African fountain grass |
| *Stipa miliacea* var. *miliacea*** | Smilo grass |

### DICOTS

| **AMARANTHACEAE** | **Amaranth Family** |
|---|---|
| *Amaranthus albus** | tumbleweed |
| **ANACARDIACEAE** | **Sumac Family** |
| *Schinus molle*** | Peruvian pepper tree |
| *Schinus terebinthifolia** | Brazilian pepper tree |
| **APOCYNACEAE** | **Dogbone Family** |
| *Nerium oleander** | oleander |
| **ARALIACEAE** | **Ginseng Family** |
| *Hedera helix*** | english ivy |
| **ASTERACEAE** | **Sunflower Family** |
| *Baccharis salicifolia* | mule fat |
| *Baccharis sarothroides* | broom baccharis |
| *Baccharis pilularis* | coyote brush |
| *Centaurea melitensis*** | tocalote |
| *Cirsium vulgare*** | bull thistle |
| *Erigeron bonariensis** | flax-leaved horseweed |
| *Erigeron canadensis** | horseweed |
| *Helianthus annuus* | common sunflower |
| *Heterotheca grandiflora* | telegraph weed |
| *Lactuca serriola** | prickly lettuce |
| **BIGNONIACEAE** | **Bignonia Family** |
| *Tecoma capensis** | cape honeysuckle |
| **BRASSICACEAE** | **Mustard Family** |

| | |
|---|---|
| *Brassica nigra*** | black mustard |
| *Hirschfeldia incana*** | short-pod mustard |
| **CHENOPODIACEAE** | **Goosefoot Family** |
| *Salsola tragus*** | Russian thistle |
| **EUPHORBIACEAE** | **Spurge Family** |
| *Ricinus communis*** | castor bean |
| **FABACEAE** | **Legume Family** |
| *Acacia cyclops*** | coastal wattle |
| **FAGACEAE** | **Beech Family** |
| *Quercus agrifolia* | coast live oak |
| **MYRTACEAE** | **Myrtle Family** |
| *Eucalyptus camaldulensis** | river red gum |
| *Eucalyptus globulus*** | blue gum |
| **NYCTAGINACEAE** | **The Four O'clock Family** |
| *Bougainvillea spectabilis** | great bougainvillea |
| **OLEACEAE** | **Olive Family** |
| *Fraxinus* sp. | ash |
| *Olea europea*** | olive |
| **PLATANACEAE** | **Plane-tree Family** |
| *Platanus racemosa* | California sycamore |
| **RUTACEAE** | **Citrus Family** |
| various citrus species* | various citrus species |
| **SALICACEAE** | **Willow Family** |
| *Populus fremontii* | Fremont cottonwood |
| *Salix lasiolepis* | arroyo willow |
| **SIMAROUBACEAE** | **Quassia Family** |
| *Ailanthus altissima** | tree of heaven |
| **SOLANACEAE** | **Nightshade Family** |
| *Datura stramonium** | jimsonweed |
| *Nicotiana glauca** | tree tobacco |
| **ULMACEAE** | **Elm Family** |
| *Ulmus parvifolia** | Siberian elm |
| **VIBURNACEAE** | **Elder Family** |
| *Sambucus mexicana* | blue elderberry |
| **VITACEAE** | **Grape Family** |
| *Vitis vinifera** | common grape vine |

## GYMNOSPERMS

| | |
|---|---|
| **PINACEAE** | **Pine Family** |
| *Pinus* sp.* | pine |

**Non-native*

***Non-native and invasive according to the California Invasive Plant Council*

# Appendix C

Cultural Resources Inventory Report

# Cultural Resources Inventory Report for the San Jose Multi-Use Bikeway Project

Prepared for:

**Alta Planning + Design, Inc.**
617 W 7th St #1103
Los Angeles, CA 90017

**June 2025**

# Cultural Resources Inventory Report for the San Jose Multi-Use Bikeway Project

Prepared for:

**Alta Planning + Design, Inc.**
617 W 7th St #1103
Los Angeles, CA 90017

Prepared by:

**Ascent Environmental**
455 Capitol Mall, Suite 300
Sacramento, CA 95814

Contact:
**Roberto Mora, RPA**

June 2025

# TABLE OF CONTENTS


Section Page

LIST OF ABBREVIATIONS ..... II

EXECUTIVE SUMMARY ..... ES-1
Purpose and Scope ..... ES-1
Inventory Conclusion and Recommendations ..... ES-1
Disposition of Data ..... ES-2
Personnel Qualifications ..... ES-2

1 INTRODUCTION ..... 1-1
1.1 Project Description and Location ..... 1-1
1.2 Regulatory Context ..... 1-5

2 RECORDS SEARCHES AND TRIBAL OUTREACH ..... 2-1
2.1 Records Search ..... 2-1
2.2 Other Sources ..... 2-2
2.3 Native American Outreach ..... 2-3
2.4 Field Methods ..... 2-3

3 ENVIRONMENTAL SETTING ..... 3-1
3.1 Geology and Soils ..... 3-1

4 CULTURAL SETTING ..... 4-1
4.1 Native American PreContact Setting ..... 4-1
4.2 Ethnohistoric Setting ..... 4-2
4.3 Historic Era Native American Setting ..... 4-3
4.4 Historic Period Overview ..... 4-4

5 RESULTS ..... 5-1
5.1 Background Research Results ..... 5-1
5.2 Pedestrian Survey Results ..... 5-1
5.3 Potential for Buried Archaeological Deposits ..... 5-1

6 CONCLUSIONS AND RECOMMENDATIONS ..... 6-1

7 REFERENCES ..... 7-1


## Appendices


A Record Search Results
B Tribal Correspondence


## Figures


Figure 1-1 Regional Location ..... 1-2
Figure 1-2 Project Alignment ..... 1-3
Figure 5-1 Eastern Portion of Project Alignment ..... 5-2
Figure 5-2 Western Portion of Project Alignment ..... 5-3


## Tables


Table 2-1 Resources Outside, but Within 0.25-mile radius from the Project Alignment ..... 2-1
Table 2-2 Reports Outside, but Within 0.25-mile radius from the Project Alignment ..... 2-1
Table 2-3 Native American Outreach Summary ..... 2-3

# LIST OF ABBREVIATIONS

| | |
|---|---|
| Alta | Alta Planning + Design, Inc. |
| APN | Assessor's Parcel Number |
| Ascent | Ascent Environmental |
| BLM | Bureau of Land Management |
| Cal | calibrated |
| CEQA | California Environmental Quality Act |
| CHRIS | California Historical Resources Information System |
| City | City of Pomona |
| CRHR | California Register of Historical Resources |
| CRIR | cultural resources inventory report |
| DPR | California Department of Parks and Recreation |
| MLD | Most Likely Descendant |
| NAHC | Native American Heritage Commission |
| NETR | Nationwide Environmental Title Research, LLC |
| NRHP | National Register of Historic Places |
| OPR | CA Office of Planning and Research |
| PRC | California Public Resources Code |
| SCCIC | South Central Coast Information Center |
| SLF | Sacred Lands File |
| SR | State Route |

# EXECUTIVE SUMMARY

## PURPOSE AND SCOPE

Ascent Environmental (Ascent) prepared a cultural resources inventory report (CRIR) for Alta Planning + Design, Inc (Alta) for the San Jose Multi-Use Bikeway Project (project) located in the City of Pomona (City), in Los Angeles County. The City is acting as the California Environmental Quality Act (CEQA) lead agency for this project. The services provided included a records search at the South Central Coastal Information Center (SCCIC), a Sacred Lands File (SLF) search through the Native American Heritage Commission (NAHC), intensive pedestrian survey of the project alignment, and an assessment of potential project impacts. This study was completed in compliance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code (PRC). The presence of, or the potential for the presence of tribal cultural resources as defined by PRC Section 21074, is not included in this study.

The SCCIC California Historical Resources Information System (CHRIS) records search indicated that one cultural resources study has been completed within project alignment, and 14 cultural resources studies have been completed outside the project alignment but within the 0.25-mile record search radius (Appendix A). The CHRIS search also indicated no cultural resources have been previously recorded within the project alignment, and that four cultural resources have been recorded within the 0.25-mile search radius.

A search of the SLF administered by the NAHC was conducted on May 31, 2024 (Appendix B). The results of the search were positive for the presence of known cultural resources of tribal importance. Attached to the results was a list of Native American tribes who may also have knowledge of cultural resources in the project alignment. Emails describing the project and its location were sent to the individuals and tribes listed on October 14, 2024. Results of this outreach are provided in Section 2.3.1.

A pedestrian survey of the project alignment was conducted on September 30, 2024, by Ascent's staff archaeologist, Roberto Mora, RPA. No cultural resources were identified as a result of the pedestrian survey.

## INVENTORY CONCLUSION AND RECOMMENDATIONS

No unique archaeological sites or historical resources of an archaeological nature were identified within the project alignment as a result of the background research or pedestrian survey. In addition, analysis of geotechnical data for the project alignment indicates there is a very low possibility for the presence of intact subsurface archaeological resources to be present within the project alignment. However, even though no cultural resources have been identified as a result of this cultural study, it is still recommended that the following measures be applied to the project:

- Inadvertent Discoveries – Archaeological Resources: If archaeological materials are inadvertently discovered during ground-disturbing activities, including midden soils, stone tools, chipped stone, baked clay, or concentrations of shell, bone, charcoal, glass, metal, or ceramics, all work shall cease within 100 feet (30.5 meters) of the find and the services of a professional archaeologist shall be retained immediately. At that time, the City of Pomona shall coordinate any necessary investigation of the site with the archaeologist as needed to evaluate the significance of the resource per PRC Section 5024.1 and 21083.2(g) and provide proper management recommendations. If the find is determined to be a historical resource and/or a unique archeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures and/or mitigation will be made available. Possible management recommendations for significant resources could include resource avoidance or data recovery excavations. The contractor shall implement any measures deemed necessary by the archeologist for the protection of the cultural resources. Do not resume work in the area of the discovery until directed to do so by the archaeologist.

Discovery of human remains is not expected; however, if human remains should be discovered, the following measure should be implemented.

- Inadvertent Discovery of Human Remains: If human remains are discovered during construction activities, work within 100 feet (30.5 meters) of the remains shall be stopped immediately, and the project proponent shall notify the Los Angeles County Coroner, in accordance with Section 5097.98 of the PRC and Section 7050.5 of California's Health and Safety Code. If the remains are determined by the coroner to be Native American, the coroner will notify the Native American Heritage Commission within 24 hours, and they will designate a Most Likely Descendant (MLD). Together the landowner and the MLD shall determine the ultimate treatment and disposition of the remains in accordance with PRC Section 5097.94.

# DISPOSITION OF DATA

This report will be filed with the SCCIC at California State University, Fullerton, and Ascent's office in Sacramento. All field notes and other documentation related to the study are on file at Ascent's Sacramento office.

# PERSONNEL QUALIFICATIONS

Roberto Mora has over 10 years of cultural resource management experience in throughout the western United States. He has served as the lead archaeological technician and co-field director on a variety of project types. Roberto has expertise in the precontact history of the Great Basin and California, human osteology, faunal remains, monitoring, survey and excavation methods, and laboratory analysis. His experience includes archaeological survey, monitoring, excavation, laboratory processing and cataloging, report writing, and data recovery of precontact and historic era archaeological sites. Roberto meets the Secretary of the Interior's Standards for archaeology and the Caltrans Professional Qualification Standards as a principal investigator in precontact archaeology.

# 1 INTRODUCTION

Alta retained Ascent to complete a CRIR for the project, located in Pomona, California. The project alignment is currently disturbed and is used for access to the channelized San Jose Creek. The City is the lead agency for this project under CEQA.

Ascent conducted this CRIR in compliance with PRC Section 21083.2 and CEQA Guidelines Section 15064.5. This CRIR details the methods and results of the study, which consisted of a records search, a SLF search and tribal outreach, an intensive pedestrian field survey, and a potential impact assessment for cultural resources.

## 1.1 PROJECT DESCRIPTION AND LOCATION

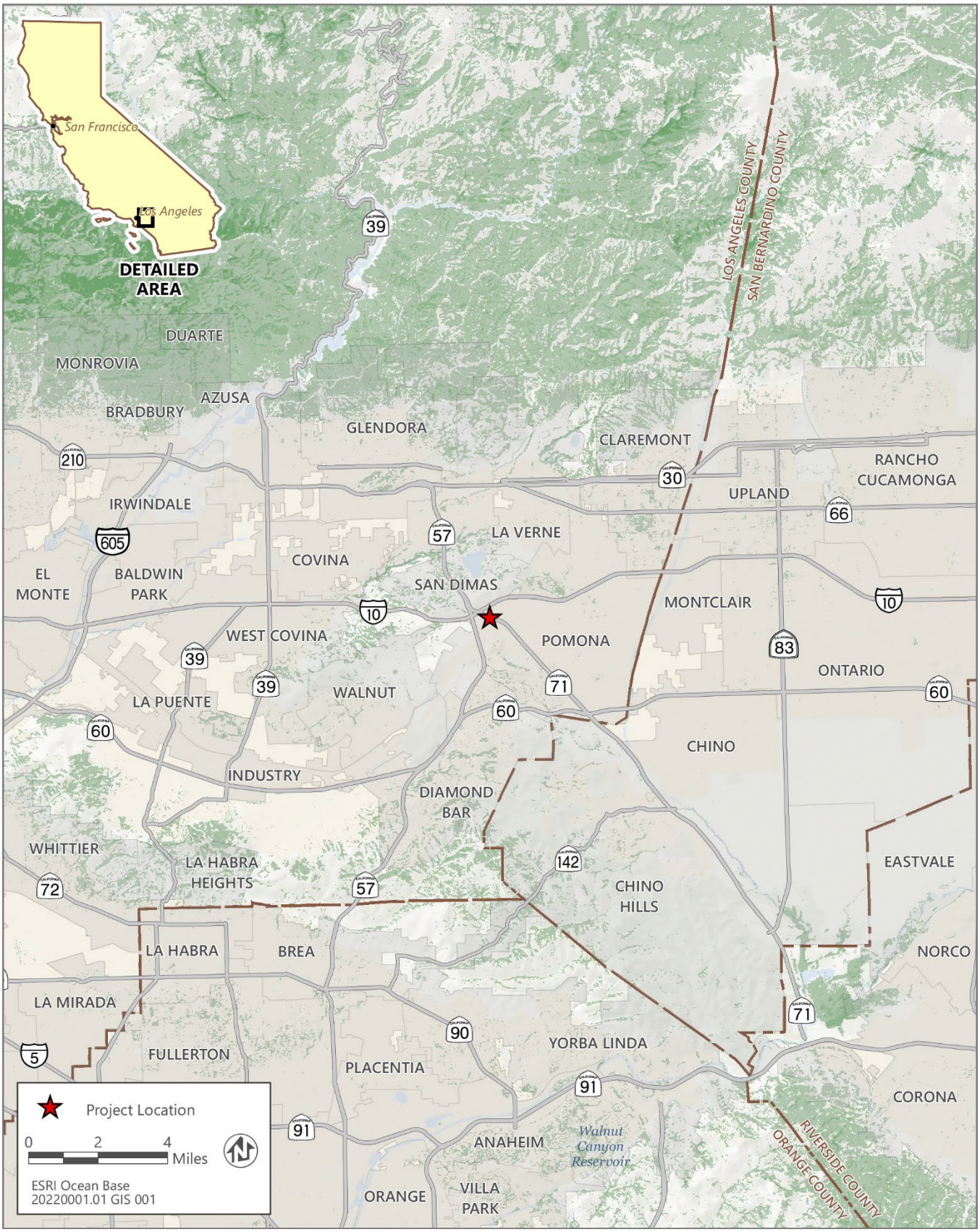
The proposed project is located in the city of Pomona, in eastern Los Angeles County (Figure 1-1). The 3.5-mile alignment extends along San Jose Creek from Temple Avenue in the western portion of the city to Murchison Avenue in the central portion of the city (Figure 1-2). The westernmost portion of the proposed bikeway at Temple Avenue and Campus Drive is directly across from Cal Poly Pomona. The proposed alignment would cross under the Orange Freeway (State Route [SR]-57) and Chino Valley Freeway (SR-71) and terminates just south of the San Bernardino Freeway (Interstate [I]-10).

San Jose Creek is an intermittent, tributary stream that flows nearly 20 miles westward from the city of Pomona into the San Gabriel River through the Pomona Valley and San Gabriel Valley. Within the project area, San Jose Creek is a 14-foot-wide concrete-lined channel with vertical walls and chain-link fencing along both sides. The proposed project alignment varies between 16 feet wide up to 35 feet wide and includes areas along the north and south sides of the channel in various locations along the alignment. The alignment extends along the north side of San Jose Creek from Temple Avenue to Ridgeway Street and from Fairplex Drive to Dudley Street; it switches to the south side of San Jose Creek from Ridgeway Street to Fairplex Drive and from Dudley Street to Murchison Avenue.

Upon completion of the proposed project, the City would have completed more than 50 percent of the priority projects identified in the Active Transportation Plan. The proposed project would reduce network gaps; offer greater access and route options throughout the city, particularly to and from the future Metro Foothill Gold Line Station; and provide stronger connections across two of the Pomona's major barriers, I-10 and SR-71. The proposed project would address five of the City's high-priority network gaps and would double the available low-stress bicycle networks, directing users away from roadways that have histories of bicycle and pedestrian collisions.

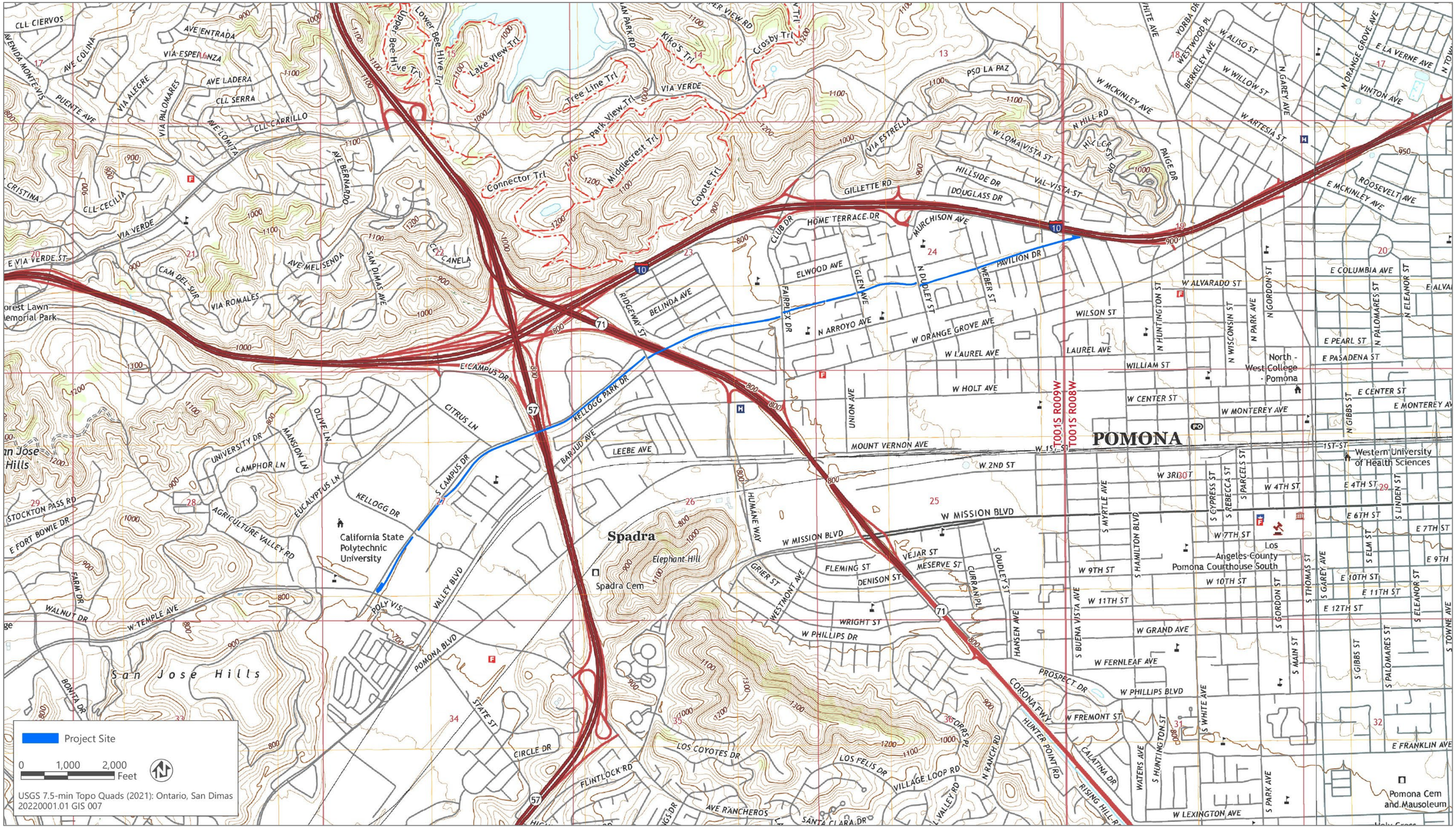
The proposed project would also connect to existing active transportation facilities, including other bicycle paths, lanes, and routes. By establishing these connections, the proposed project would expand safe and convenient access to destinations throughout Pomona, including five public schools (Kellogg Polytechnic Elementary, Arroyo Elementary, Lopez Elementary, Ganesha High School, and John Marshall Middle School), three grocery stores (Perez Market, Ace Market, Cardenas Market), and two parks (Cesar Chavez Park and John F. Kennedy Park). This project is intended to benefit students and residents already walking and biking and would make it more likely for those with safety concerns to be able to choose active and healthier modes of transportation.

The demolition phase involves removal of existing fencing, gates, and asphalt in select locations. The existing 4-foot-high chain-link fencing along the top of the concrete channel wall would be removed along the proposed alignment. This would occur along both the north and south sides of the San Jose Creek, respective to the side in which the proposed bike path is proposed. The proposed bikeway would be 10 feet wide with 2-foot-wide shoulders on each side and would be constructed of asphalt concrete for the full extent of the proposed alignment. The existing 4-foot-high chain-link fencing along the San Jose Creek channel would be removed and replaced with 6-foot-high new chain-link fence along the channel side of the pathway.




Source: Adapted by Ascent Environmental in 2024.

**Figure 1-1 Regional Location**




Source: Adapted by Ascent Environmental in 2024.

**Figure 1-2 Project Alignment**

# 1.2 REGULATORY CONTEXT

## 1.2.1 State

### CALIFORNIA REGISTER OF HISTORICAL RESOURCES

All properties in California that are listed in or formally determined eligible for listing in the National Register of Historic Places (NRHP) are eligible for listing in the California Register of Historical Resources (CRHR). The CRHR is a listing of State of California resources that are significant in the context of California's history. It is a Statewide program with a scope and with criteria for inclusion similar to those used for the NRHP. In addition, properties designated under municipal, or county ordinances are also eligible for listing in the CRHR.

A historic resource must be significant at the local, state, or national level under one or more of the criteria defined in the California Code of Regulations Title 15, Chapter 11.5, Section 4850 to be included in the CRHR. The CRHR criteria are tied to CEQA because any resource that meets the criteria below is considered a significant historical resource under CEQA. As noted above, all resources listed in or formally determined eligible for listing in the NRHP are automatically listed in the CRHR.

The CRHR uses four evaluation criteria for significance:

Criterion 1. Is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.

Criterion 2. Is associated with the lives of persons important to local, California, or national history.

Criterion 3. Embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of a master; or possesses high artistic values.

Criterion 4. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

A property must have both significance and integrity to be considered eligible for listing in the CRHR. Loss of integrity, if sufficiently great, will overwhelm the historical significance of a resource and render it ineligible. Likewise, a resource can have complete integrity, but if it lacks significance, it must also be considered ineligible. Integrity is evaluated by regarding the property's retention of its location, design, setting, workmanship, materials, feeling, and association to its period of significance. These seven factors can be roughly grouped into three types of integrity considerations. Location and setting relate to the relationship between the property and its environment. Design, materials, and workmanship, as they apply to historic buildings, relate to construction methods and architectural details. Feeling and association are the least objective of the seven factors and pertain to the overall ability of the property to convey a sense of the historical time and place in which it was constructed.

### CALIFORNIA ENVIRONMENTAL QUALITY ACT

CEQA requires public agencies to consider the effects of their actions on "historical resources," and "unique archaeological resources." Pursuant to PRC Section 21084.1, a "project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." PRC Section 21083.2 requires agencies to determine whether projects would have effects on unique archaeological resources.

## Historical Resources

"Historical resource" is a term with a defined statutory meaning (PRC Section 21084.1; State CEQA Guidelines Sections 15064.5[a] and [b]). Under State CEQA Guidelines Section 15064.5(a), historical resources include the following:

1) A resource listed in or determined to be eligible by the State Historical Resources Commission for listing in, the CRHR (PRC Section 5024.1).

2) A resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g), will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

3) Any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource will be considered by the lead agency to be historically significant if the resource meets the criteria for listing in the CRHR (PRC Section 5024.1).

4) The fact that a resource is not listed in or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to PRC Section 5020.1[k]) or identified in a historical resources survey (meeting the criteria in PRC Section 5024.1[g]) does not preclude a lead agency from determining that the resource may be a historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

## Unique Archaeological Resources

CEQA also requires lead agencies to consider whether projects will affect unique archaeological resources. PRC Section 21083.2(g) states that "unique archaeological resource" means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets one or more of the following criteria:

1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.

3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

## Mitigation of Impacts to Archaeological Resources

Treatment options under PRC Section 21083.2 (b) to mitigate impacts to archaeological resources include activities that preserve such resources in place in an undisturbed state. PRC Section 21083.2 states:

(a) As part of the determination made pursuant to Section 21080.1, the lead agency shall determine whether the project may have a significant effect on archaeological resources. If the lead agency determines that the project may have a significant effect on unique archaeological resources, the environmental impact report shall address the issue of those resources. An environmental impact report, if otherwise necessary, shall not address the issue of nonunique archaeological resources. A negative declaration shall be issued with respect to a project if, but for the issue of nonunique archaeological resources, the negative declaration would be otherwise issued.

(b) If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. Examples of that treatment, in no order of preference, may include, but are not limited to, any of the following:

    (1) Planning construction to avoid archaeological sites.

    (2) Deeding archaeological sites into permanent conservation easements.

(3) Capping or covering archaeological sites with a layer of soil before building on the sites.

(4) Planning parks, greenspace, or other open space to incorporate archaeological sites.

(c) To the extent that unique archaeological resources are not preserved in place or not left in an undisturbed state, mitigation measures shall be required as provided in this subdivision.

(d) Excavation as mitigation shall be restricted to those parts of the unique archaeological resource that would be damaged or destroyed by the project.

### CALIFORNIA NATIVE AMERICAN HISTORICAL, CULTURAL, AND SACRED SITES ACT

The California Native American Historical, Cultural, and Sacred Sites Act (PRC Section 5097.9) applies to both State and private lands. The act requires, upon discovery of human remains, that construction or excavation activity cease and that the county coroner be notified. If the remains are those of a Native American, the coroner must notify the NAHC, which notifies (and has the authority to designate) the Most Likely Descendant (MLD) of the deceased. The act stipulates the procedures the descendants may follow for treating or disposing of the remains and associated grave goods.

### HEALTH AND SAFETY CODE, SECTION 7050

Section 7050.5 of the Health and Safety Code requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If they are determined to be those of a Native American, the coroner must contact NAHC.

### PUBLIC RESOURCE CODE SECTION 5097

PRC Section 5097 specifies the procedures to be followed in the event of the unexpected discovery of human remains and paleontological resources on nonfederal land. The disposition of Native American human burials falls within the jurisdiction of the NAHC while local agencies have jurisdiction over the disposition of paleontological resources. Section 5097.5 of the Code states the following:

> No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological, or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

## 1.2.2 Local

#### Pomona General Plan

The Pomona General Plan policies applicable to the proposed project are listed below.

**7F.P34**. Promote preservation of older historic landscapes and natural features that help to define neighborhoods or maintain the context of historic districts and landmarks.

**7F.P35**. Per the Guidelines for the California Environmental Quality Act (CEQA), require that new development avoid or reduce potential impacts to archaeological, paleontological and historic resources.

**7F.P39**. Require that for proposed developments with the potential to adversely impact cultural resources, notification be sent to cultural organizations, including Native American organizations.

**7F.P41**. Maintain sources of information regarding paleontological and archaeological sites and the names and addresses of responsible organizations and qualified individuals, who can analyze, classify, record, and preserve paleontological or archeological findings.

7F.P42. Require a qualified paleontologist/archeologist to monitor all grading and/or excavation where there is a potential to affect cultural, archaeological, or paleontological resources. If these resources are found, the applicant shall implement the recommendations of the paleontologist/archeologist, subject to the approval of the Planning Divisions.

7F.P43. Require new development to donate scientifically valuable paleontological or archaeological materials to a responsible public or private institution with a suitable repository, located within Pomona, or Los Angeles County, whenever possible.

# 2 RECORDS SEARCHES AND TRIBAL OUTREACH

## 2.1 RECORDS SEARCH

On June 18, 2024, a records search that included the project alignment and a 0.25-mile radius around the project alignment was completed at the SCCIC, at California State University, Fullerton (File No. 24-207). As part of the SCCIC record search, the following information was reviewed:

- site records of previously recorded cultural resources,
- previous cultural studies,
- NRHP and CRHR listings,
- the California Historic Resources Inventory,
- Built Environment Resource Directory for Los Angeles County, and
- historical maps (USGS Topographic and GLO Plat maps).

Review of the SCCIC records search results revealed that there are no previously recorded resources within the project alignment, and there are four previously recorded resources within the 0.25-mile radius of the project alignment (Appendix A). The records search also found that one previous investigation has occurred within the project alignment, and 14 investigations have occurred within a 0.25-mile radius. The previous investigation within the project alignment, LA-10561, covers approximately five percent of the project alignment.

Table 2-1 lists the resources within 0.25-mile radius from the project alignment. Table 2-2 lists the cultural resource studies within 0.25-mile radius from the project alignment.

**Table 2-1 Resources Outside, but Within 0.25-mile radius from the Project Alignment**

| Primary Number/ Trinomial | Year (Author, Affiliation) | Age | Attribute Codes |
|---|---|---|---|
| P-19-150397 | 1993 (F. Smith, Myra L Frank & Associates) | Historic era | HP02 (Single family property) |
| P-19-150398 | 1993 (F. Smith, Myra L Frank & Associates) | Historic era | HP02 Single family property) |
| P-19-150400 | 1993 (F. Smith, Myra L Frank & Associates) | Historic Era | HP02 (Single family property) |
| P-19-188186 | 2004 (C.J. Hetzel) | Historic Era | HP16 (Religious building) |

Source: Compiled by Ascent in 2024.

**Table 2-2 Reports Outside, but Within 0.25-mile radius from the Project Alignment**

| Report Number | Year | Author/Affiliation | Title |
|---|---|---|---|
| LA-00279 | 1981 | Whitney-Desautels, Nancy A. Scientific Resource Surveys, Inc. | *Archaeological/historical Survey Report on the Kellogg Plaza Site, Pomona, County of Los Angeles.* |
| LA-00575 | 1979 | Beth Padon Contract Archaeologist | *An Archaeological Reconnaissance of the 40 Acre Extension of the Spadra Landfill, Pomona, Los Angeles County, Ca.* |
| LA-02932 | 1993 | Wlodarski, Robert J. Historical, Environmental, Archaeological, Research, Team | *Negative Archaeological Survey Report Provide High Occupancy Vehicle (HOV) Lanes on Interstate 10 (i-10) From the Junction of State Route 57 (SR 57/interstate 610 (i-210) in the City of Pomona to the Los Angeles/San Bernardino County Line 07-la-i10/p.m. 4.* |
| LA-03306 | 1993 | Whitney-Desautels, Nancy A. and Wayne H. Bonner Scientific Resource Surveys, Inc. | *Historic Property Survey Report Interstate 10 HOV Widening Los Angeles County, California Caltrans District 7.* |

| Report Number | Year | Author/Affiliation | Title |
|---|---|---|---|
| LA-03779 | 1994 | Smith, Francesca<br>Myra L. Frank & Associates, Inc. | *Historic Property Survey Report Provide High Occupancy Vehicle Lanes on Interstate 10 Between Sr 57/I-210 and the Los Angeles County/San Bernardino County Line in Los Angeles County 07-la-10-41.7/48.3.* |
| LA-03779 | 1993 | Wlodarski, Robert J.<br>Historical, Environmental, Archaeological, Research, Team | *Negative Archaeological Survey Report Provide High Occupancy Vehicle (HOV) Lanes on Interstate 10 (I-10) From the Junction of State Route 57 (SR-57 / Interstate 610 (I-210)) in the City of Pomona to the Los Angeles / San Bernardino County Line 07-LA-110/P.M. 41.7/48.3.* |
| LA-04835 | 1999 | Ashkar, Shahira<br>Jones & Stokes Associates, Inc. | *Cultural Resources Inventory Report for Williams Communications, Inc. Proposed Fiber Optic Cable System Installation Project, Los Angeles to Riverside, Los Angeles and Riverside Counties.* |
| LA-05643 | 2002 | Duke, Curt<br>LSA Associates, Inc. | *Cultural Resource Assessment: Cingular Wireless Facility No. Sb 148-01 Los Angeles County.* |
| LA-05925 | 1994 | Smith, Francesca<br>Myra L. Frank & Associates, Inc. | *Historic Property Survey Report Provide High Occupancy Vehicle Lanes on Interstate 10 Sr57/i-210 and the Los Angeles County/San Bernardino County Lines in Los Angeles 07-la-10-41.7/48.3.* |
| LA-06260 | 2002 | Duke, Curt<br>LSA Associates, Inc. | *Cultural Resource Assessment at & T Wireless Services Facility No. D293c Los Angeles County, California.* |
| LA-08828 | 2007 | Bonner, Wayne H.<br>Michael Brandman Associates | *Cultural Resources Records Search and Site Visit Results for Royal Streel Communications, LLC Candidate La2337a (i-10 at White), 875 West Orange Grove, Avenue, Pomona, Los Angeles County, California.* |
| LA-09079 | 2004 | Bonner, Wayne H. and Christeen Taniguchi<br>Michael Brandman Associates | Records Search Results and Site Visit for Sprint Telecommunications Facility Candidate La60xc010a (brethren Church) 875 West Orange Grove Avenue, Pomona, Los Angeles County, California. |
| LA-10190 | 2002 | Harbert, Claudia<br>Caltrans | *Supplemental Historic Property Survey Report for the I-10 HOV Lane Between I-605 and the SR-57/SR-71/I-210 Interchange in the Cities of Los Angeles, Baldwin Park, West Covina, Covina, San Dimas, and Pomona in Los Angeles County, CA.* |
| LA-11119 | 2010 | Vaughan-Acton, Sandra<br>Cal Poly Pomona Foundation | *Construction of Innovation Way, Innovation Village Research Park, Pomona, CA.* |
| LA-12978 | 2015 | Losee, Carolyn<br>Archaeological Resources Technology | *Cultural Resources Investigation for Trileaf 611939 Verizon "Lyndale" 900 Corporate Center Drive, Pomona, Los Angeles County, California 91768.* |

Source: Compiled by Ascent in 2024.

## 2.2 OTHER SOURCES

Additional research included review of historic USGS topographic maps and aerials available on-line from Nationwide Environmental Title Research, LLC (NETR). Historic USGS topographic maps from 1897 to 2021 and aerial images from 1938 to 2020 were reviewed. In addition, the Bureau of Land Management (BLM) 1877 Plat map was reviewed. The aerials show that Thompson Creek has been there as early as 1938 and continues to be present today. Similarly, Thompson Wash (creek) appears in the topo as early as 1928 and continues to be present today. It is likely that Thompson creek has been reinforced or channelized over time. Thompson Creek is presently known as the San Jose Creek, The 1877 Plat map revealed Rancho San Jose overlaying portions of the project alignment (see Section 4.4.1, "Regional History," for additional information).

## 2.3 NATIVE AMERICAN OUTREACH

On May 31, 2024, Ascent received the positive results of the SLF search (Appendix B). Attached to the results letter was a list of Native American individuals/groups that may have knowledge of cultural resources on the project alignment. On October 14, 2024, emails were sent to all groups and individuals provided by the NAHC. On October 15, 2024, Santa Rosa Band of Cahuilla Indians responded that they defer any comments to Soboba Band of Luiseno Indian. No responses from the other tribes have been received to date. Table 2-3 provides a summary of who was contacted, how, when, and the response, if any. Copies of the correspondence are included in Appendix B.

**Table 2-3 Native American Outreach Summary**

| Name and Title | Affiliation | Date and Medium of Contact | Response Summary |
|---|---|---|---|
| Andrew Salas, Chairperson | Gabrieleno Band of Mission Indians - Kizh Nation | October 14, 2024 Email | None to date. |
| Christina Swindall Martinez, Secretary | Gabrieleno Band of Mission Indians - Kizh Nation | October 14, 2024 Email | None to date. |
| Anthony Morales, Chairperson | Gabrieleno/Tongva San Gabriel Band of Mission Indians | October 14, 2024 Email | None to date. |
| Christina Conley, Cultural Resource Administrator | Gabrielino Tongva Indians of California Tribal Council | October 14, 2024 Email | None to date. |
| Robert Dorame, Chairperson | Gabrielino Tongva Indians of California Tribal Council | October 14, 2024 Email | None to date. |
| Sandonne Goad, Chairperson | Gabrielino/Tongva Nation | October 14, 2024 Email | None to date. |
| Sam Dunlap, Cultural Resource Director | Gabrielino/Tongva Nation | October 14, 2024 Email | None to date. |
| Charles Alvarez, Chairperson | Gabrielino/Tongva Nation | October 14, 2024 Email | None to date. |
| Steven Estrada, Tribal Chairman | Santa Rosa Band of Cahuilla Indians | October 14, 2024 Email | None to date. |
| Vanessa Minott, Tribal Administrator | Santa Rosa Band of Cahuilla Indians | October 14, 2024 Email | The tribe responded on October 15, 2024, that they defer any comments to Soboba Band of Luiseno Indians. |
| Jessica Valdez, Cultural Resource Specialist | Soboba Band of Luiseno Indians | October 14, 2024 Email | None to date. |
| Isaiah Vivanco, Chairperson | Soboba Band of Luiseno Indians | October 14, 2024 Email | None to date. |
| Joseph Ontiveros, Tribal Historic Preservation Officer | Soboba Band of Luiseno Indians | October 14, 2024 Email | None to date. |

Source: Compiled by Ascent in 2024.

## 2.4 FIELD METHODS

An intensive archaeological survey of the project alignment was conducted on September 30, 2024, by Roberto Mora, RPA, of Ascent. Special attention was given to bare patches of ground, excavated areas, rodent back dirt piles, cut-banks, berms, and exposed soils. Surveyed areas were photographed. The results of the survey are detailed in Section 5.

This page is intentionally left blank.

# 3 ENVIRONMENTAL SETTING

The project alignment is located in the Pomona Valley in the far eastern region of Los Angeles County on its border with San Bernardino County. Regional access to Pomona is via I-10, SR-60, SR-71, and SR-57. The Pomona Valley is approximately 250 square miles. It is bounded by the communities of San Dimas, La Verne, and Claremont to the north, Montclair and Chino to the east, Chino Hills to the south, and Diamond Bar and Walnut to the west. The project alignment is located in a relatively flat topographic area (Historic Resources Group 2022).

Water is naturally available via numerous springs and artesian wells in the northern reaches of the valley along the foothills of the San Gabriel Valley. The area has several plant communities including Valley Grasslands, Coastal Sage Scrub, Oak Woodlands, and Chaparral. The project alignment is approximately 700 feet above mean sea level in the west and approximately 850 feet above mean sea level in the east.

## 3.1 GEOLOGY AND SOILS

The project alignment is within an alluvial valley with deposits mostly of sediment runoff from the San Gabriel and San Bernardino Mountains to the north. Sediments within the project alignment consist of Quaternary aged deposits: Holocene (recent to 10,000 years old) and Pleistocene (10,000 to 2 million years old) marine and non-marine terrace deposits, to older Pliocene to Late Miocene (3.6 to 11.62 million years ago) marine basin deposits (Dibblee and Minch 2002). Late Pleistocene and Holocene deposits are generally considered more likely to contain precontact archaeological deposits.

The surficial soil on the project alignment is classified as urban land, which exists in areas of high population density in the largely built environment (USDA 2024). These soils are a mix of several soils and nature human-transported or "fill" materials.

This page is intentionally left blank.

# 4 CULTURAL SETTING

## 4.1 NATIVE AMERICAN PRECONTACT SETTING

The precontact setting of southern California is defined by different temporal periods and cultural complexes based on cross-dating of distinct artifact types, cultural patterns, and radiocarbon dates, if available. The cultural chronology of human occupation is characterized by changing settlement and subsistence strategies typically in response to environmental conditions, available resources, and population fluctuations. There is no single cultural historical framework that encompasses the entire precontact record for southern California. A generalized cultural sequence is provided below (Tetra Tech 2022).

### 4.1.1 Paleo-Indian and Terminal Pleistocene [13,000 Before Present (BP) to 9,000 BP]

There are very few recorded resources that represent this time in California. The lack of archaeological representation is often attributed to a mobile and low human population, the susceptibility of site to erosion (e.g., sea level rise, landslides, etc.), and alluvial and aeolian deposits. Available archaeological evidence suggested that Paleo-Indian groups were hunter and gatherers that were highly mobile and lived in temporary camps near fresh water sources. The Paleo-Indian period is generally characterized by small mobile groups that utilized tools such as large, fluted points, crescents, domed scrapers, and flake tools of local chert. Groundstone is typically absent or rare.

The Arlington Springs (CA-SRI-173) and the Daisy Cave site (CA-SMI-261) provide evidence of a late Pleistocene occupation along the southern California Pacific Coast. The Arlington Springs site identified on Santa Rosa Island yielded human remains of one individual that date to approximately 13,000 BP, no other artifacts were recovered. The Daisy Cave site on San Miguel Island was first occupied around 11,500 BP, is associated with a small rock shelter, and yielded expedient flake tools and faunal remains that include shellfish (red abalone, black turban), and a few marine fish bones. The Arlington Springs and Daisy Cave sites represent a late Pleistocene maritime adaption near the mainland, suggesting people also used boat technology (Tetra Tech 2022).

### 4.1.2 Archaic Period (9,000 to 1,500 BP)

The Archaic Period (similar to Millingstone Horizon, Encinitas Tradition, La Jolla Complex) is characterized by a transition from large projectile point tool use to a period of extensive millingstone and core tool use. The artifact assemblage typically consists of millingstones (manos or handstones, and metates), hammerstones, crude scrapers, cores, and other flaked-based stone tools. Manos and metates are thought to have been used to process small, hard seeds (and possibly nut) associated with the local vegetation communities. Faunal assemblages from sites occupied along or near the southern California coast (bays, lagoons, and estuaries) suggest subsistence consisted primarily of shellfish and plant resources, with hunting and fishing secondary. Interior sites also illustrate an emphasis on processing floral (e.g., nuts and seeds) resources and hunting of a variety of faunal resources (e.g., deer). Populations were semisedentary (Tetra Tech 2022).

### 4.1.3 Late Precontact Period (1,500 BP to 1769)

The Late Precontact period is defined by regional local patterns of change, an increase of human population, resource intensification, sedentism, associated expansion of cultural practices, food storage, and the introduction of the bow and arrow. Assemblages are typically characterized by small projectile points, pottery, mortar and pestle, shell fishhooks, the use of asphaltum, decorative shell and bone ornaments, and cremations. Bedrock mortars (a shallow-hole mortar[s] in bedrock) are also attributed to this period. Subsistence during this period varied dependent upon the local environment and foraging adaptations. Overexploitation of high-ranking subsistence resources by

hunters and gatherers resulted in resource depression and the intensification of more labor intensive floral and faunal resources, such as small plant seeds (e.g., grasses), acorns, small shellfish, fish, and terrestrial animals. Settlement patterns during this period included large residential camps (e.g., villages) and smaller, subsistence-related short-term encampments (Tetra Tech 2022).

## 4.2 ETHNOHISTORIC SETTING

The project alignment is located within the Los Angeles Basin, which is the ancestral home of the Native American group today referred to as the Tongva, Kizh, and/or Gabrielino/Gabrieliño/Gabrieleño. This context examines the historical background of Native American groups in Pomona. There are no extant built resources in the City of Pomona dating from the pre-1542 period. The study of archaeological resources is outside the scope of this project (Historic Resources Group 2022).

The Gabrielino/Tongva/Kizh have been identified by various names over the past two centuries. The Spanish settlers who colonized the area and developed the Mission San Gabriel Arcángel (San Gabriel Mission) assigned the name "Gabrieliño" to Native Americans associated with the Mission. In addition to the Gabrielino/Tongva/Kizh, some members of the Cahuilla and Serrano tribes were also historically encompassed under this nomenclature. Today, some descendants choose to refer to themselves as either Tongva or Kizh because they are terms of native, rather than Spanish, origin.

This historic context statement acknowledges and respects that each Native American tribe has the right for self-identification and for that choice to be honored. Because the area that now comprises the City of Pomona is included in the ancestral home of several Native American tribes that identify by different names, this historic context statement adopts the inclusive term "Gabrielino/Tongva/Kizh" when referring to Pomona's original Native American inhabitants.

For over 7,000 years, the Gabrielino/Tongva/Kizh have served as the traditional caretakers of the Los Angeles Basin, South Channel Islands, San Gabriel and Pomona Valleys, and portions of Orange, San Bernardino, and Riverside Counties. Historically, the Gabrielino/Tongva/Kizh were not a single "tribe," but a collection of lineages (a group of families with a common ancestor) that shared a common Uto-Aztecan language, culture, religion, and lifestyle that distinguished them from neighboring groups. This group did not have a single unifying name, and it was common for tribes to refer to themselves in their own language simply as "people" or "men," although they likely would have assigned tribes to other tribes.

Surrounding indigenous communities included the Chumash and the Tataviam/Alliklik to the north, the Serrano and Cahuilla to the east, and the Luiseño/Juaneño to the south. Interactions with surrounding groups were frequent and generally peaceful, occurring largely through the channels of intermarriage, matrilocal residence, and/or trade. The trade currency consisted of shell beads and objects made from steatite, a type of soapstone found on Catalina Island.

Their territory was so expansive, in fact, that it spanned several ecological zones. Consequently, the group's settlement and subsistence patterns varied slightly within each zone based on microenvironmental conditions, but on the whole, thrived on hunting, gathering, and fishing activities.

Like that of other Native American groups in California, acorns became a staple food over time, supplemented by the roots, leaves, seeds, and fruits of a variety of flora (e.g., islay, cactus, yucca, sages, and agave) as well as both large and small mammals. The group's subsistence practices were often focused on local estuarine, coastal, and near-coastal resources.

Studies indicate that habitation sites were hierarchically organized around estuaries and varied in size based on resource availability. While some estuaries supported large settlements, other estuaries supported linked but separated smaller habitation sites. Recent research implies that groups living near smaller estuaries practiced a strategy of mobility, employing foraging when resources were scarce. While it is difficult to estimate their population over time, evidence suggests that at the time of European contact in the 1500s there may have been more than fifty to one hundred mainland villages reflecting a range in population sizes.

Villages were politically autonomous and largely organized through shared kinship ties; each village was headed by a chief, who was usually descended from the prevailing lineage of the village. The chief typically spoke multiple languages, negotiated social relations, collected taxes, and directed the community's seasonal migrations. In addition to the chief, spiritual leaders also had authority over the tribal community. It appears that the Gabrielino/Tongva/Kizh also shared some rituals with the Chumash to the north, based on the distribution of similar stone effigies in the precontact period (Historic Resources Group 2022).

## 4.3 HISTORIC ERA NATIVE AMERICAN SETTING

The Mexican-American War (1846-48) was settled by the Treaty of Guadalupe, which ceded California to the United States. Treaty required the United States to maintain and protect California Indians, including the Gabrielino Tribe recognized to inhabit the geographic area of the Los Angeles Basin, in the free enjoyment of their liberty, property and religion (Gabrielino 2024).

In 1851-53, three U.S. Government Treaty Commissioners appointed by President Fillmore signed the 18 "lost treaties," setting aside 8.5 million acres in California for Indian reservations in return for the Indians' quitclaim to 75 million acres of California land. The 18 "lost treaties" recognized the Tongva but were never adopted.

Approximately 1.2 million acres were promised to the Gabrielino Tribe and other Mission Indians included 50,000 acres on the San Sebastian Reserve at the Tejon Pass at the edge of Los Angeles County, and a temporary reservation to which a number of Gabrielino families had been relocated. This 50,000-acre reserve was never officially taken into trust, but instead ended up as the private property of the Superintendent of Indian Affairs, Edward Beale, who incorporated it into his newly named "Tejon Ranch."

Based upon discovery of the 18 "lost treaties" in 1905, a series of efforts were made to address the treaty-less Gabrielino Tribe, or at least to compromise its claims to land in Los Angeles County. The California Jurisdiction Act of 1928 authorized the California Attorney General to represent the Gabrielino Tribe, among others, and to bring their land claims before the U.S. Court of Claims. The Court of Claims, in *California Indians v. US (1941) 98 Ct. Cols, 583*, recognized the arguments of the young California Attorney General, Earl Warren, that "a promise made to these tribes and bands of Indians and accepted by them but the treaties were never ratified so the promise was never fulfilled" (Gabrielino 2024).

Acting to "recognize the equitable claims" of the Gabrielinos and "all the Indians of California," the Court awarded 7 cents an acre as compensation for the 8.5 million acres of land which was never set up as reservations under the 18 "lost treaties." From this sum was deducted the cost of administration of the claims. In 1850, some 94 years earlier, no public lands were purchased for less than $1.50 per acre. The Court of Claims awarded no interest for the 94-year period between signature of the 1851-53 Treaties and payment of the monies in 1944.

After World War II reminded the public of the sacrifices of Native American soldiers, and the 1944 payments were seen as woefully inadequate, a second effort to settle land claims was begun under new legislation in 1946. The Indian Claims Commission addressed the claims of the Gabrielino Tribe in Docket 80, where the Gabrielino group was treated as an Indian tribe, but only its members were named as plaintiffs. This legal fiction would appear to a modern lawyer to eviscerate the effectiveness of the land claims settlement, which addressed only the claims of individual Indians (and not the land claims of the Tribe itself). In 1950, under the Eisenhower policy of "Assimilation" of Native American Tribes, the Gabrielino-Tongva were effectively terminated.

In 1959, the Court of Claims entered a final order recognizing the aboriginal title of the Gabrielino Tribe and other California tribes to 64 million acres west of the Sierra Nevada Range. The tribe's title was recognized and $633 was paid to each Gabrielino in 1972. As part of the efforts to adjudicate the two land claim payments in 1944 and 1972, hundreds of Gabrielino tribal members were recognized as "Gabrielino Indians" on each of the Bureau of Indian Affairs California Indian Rolls of 1928, 1950, and 1972.

The Eisenhower policy of "assimilation" also lead to the adoption of over 50,000 Native American children into white, often suburban households (until the practice was ended by the Indian Child Welfare Act of 1978). The settlement of Gabrielino land claims and the "assimilation" of Gabrielino Indians was administered by Commissioner of Indian

Affairs Dillon S. Meyer. Mr. Meyer had previously distinguished himself as chief administrator of the Japanese internment camps in California.

In 1994, the State of California recognized the Tongva in Assembly Joint Resolution 96, chaptered by the California Secretary of State as Resolution chapter 146, Statutes of 1994. The Joint Resolution states that the State of California "recognizes the Gabrielino-Tongva Nation as the aboriginal tribe of the Los Angeles Basin and takes great pride in recognizing the Indian inhabitance of the Los Angeles Basin and the continued existence of the Indian community" (Gabrielino 2024).

# 4.4 HISTORIC PERIOD OVERVIEW

## 4.4.1 Regional History

Pomona Valley's story began between 2000 and 500 BP with the inhabitance of the Gabrielino (Tongva) and Serrano Natives, nomadic hunter-gatherers who often lived near sources of water (Cal Poly Pomona 2024).

This changed in the late 1700s with the beginning of Spanish interest in the land now known as California and their introduction of the mission system in 1769. The San Gabriel Mission was built in Southern California in 1771 as the fourth of twenty-one missions, by 1800 holding a population of more than 1,000 natives. It was the most productive mission within the system because of its fertile land, but like the others, it had an overall negative impact on the native population. In 1821, Mexico declared independence from Spain and gained control of California in the process. Thirteen years later, Mexico passed the Secularization Act of 1834, opening mission lands to private ownership and thus setting the stage for Pomona Valley's new residents (Cal Poly Pomona 2024).

Ygnacio Palomares and Ricardo Vejar were two prominent pioneers in the region that encompasses present-day Pomona. In 1837, Palomares and Vejar traveled east in search of land for a new ranching enterprise, and ultimately petitioned the government for a 15,000-acre swath of land in the Pomona Valley. On April 15, 1837, Governor Juan Bautista Alvarado granted Palomares and Vejar the area, which came to be known as the Rancho San José. Palomares and Vejar split the ranch between them, with Palomares settling in the north and Vejar in the south. The rancho was accessible via the road that connected the San Gabriel Mission with San Bernardino, which became known as the San José Road (Historic Resources Group 2022).

The boom of the 1880s came as great stretches of land were divided and sold to settlers and businessmen alike. In 1885, the Atchison, Topeka, and Santa Fe (Santa Fe) Railway made plans to unite its rail line to a connection that ran between San Bernardino and Los Angeles, at the same time buying out Southern Pacific's assets in the region. A rate war between Santa Fe and Southern Pacific railways began in 1886 and peaked in in 1887, bringing ticket prices down as much as 80 percent. The significant rate decrease resulted in increased tourism and immigration from the eastern United States. For the Pomona Valley, the boom reached its peak in 1887 when plans were made with the Santa Fe Railway for a depot and route through Pomona and Claremont. (Cal Poly Pomona 2024).

## 4.4.2 Local History

The City of Pomona was named as a result of an 1875 naming contest held by the Los Angeles Immigration and Land Cooperative Association real estate investors who sought to promote and resell the land. Citrus worker Solomon Gates won the competition with Pomona, the Roman goddess of fruits. On January 6, 1888, the name Pomona was formally adopted with the City's official incorporation. Though the citrus industry didn't come into force until later years, the representation granted by the goddess "Pomona" was astoundingly fitting and became associated with the citrus industry (Cal Poly Pomona 2024).

By 1911, Pomona was added as an extension to Los Angeles' Pacific Electric Street railcar network. The "Big Red Cars" served much of the San Gabriel Valley into the Western Pomona Valley from 1911 through the 1950s. At the same time, Pomona was beginning to acquaint itself with the automobile through a tourist service that ran from Pasadena's

Green Hotel to Pomona's Palomares Hotel. By 1912, Pomona had a network of paved roads connecting it to neighboring cities.

World War II marked a turning point for the city of Pomona as California was transformed into a hub for the Pacific Theater. In the domestic sphere, the Pomona Fairgrounds were used for training and housing military personnel, held 5,400 Japanese-Americans awaiting internment, and detained German and Italian prisoners of war. The war saw the rise of aircraft and shipbuilding companies, Lockheed, Douglas, Northrop, Kaiser, and North American to aid in wartime production.

Although the citrus industry thrived as its products supplied allied forces during World War II, the end of the war also signaled the industry's decline. Many groves were eventually sold to make way for land development and the city's growing population. The 1980s saw the loss of companies like Broadway Glass and Pomona Tile, with a later loss of jobs in the closing down of defense contractor General Dynamics. As these industries departed, so did Pomona residents who no longer had a place of employment. The city's demographics shifted as a result, going from a population that was mostly Caucasian to one is predominantly Hispanic. These minority groups grew into important parts of city politics, and now dominate the City's political sphere (Cal Poly Pomona 2024).

This page is intentionally left blank.

# 5 RESULTS

## 5.1 BACKGROUND RESEARCH RESULTS

The results of the SCCIC record search found no previously recorded cultural resources within the project alignment, and that one previous cultural resources investigation has occurred within five percent of the project alignment. Review of the aerial images and topographic maps did not identify any development within the project alignment. The aerials revealed that the project alignment follows Thompson Creek (San Jose Creek) that was channelized over the years. In addition, the BLM 1872 Plat map revealed Rancho San Jose overlaying portions of the project alignment.

## 5.2 PEDESTRIAN SURVEY RESULTS

A pedestrian survey of the project alignment was conducted on September 30, 2024. The entirety of the project alignment was surveyed. Approximately 10 percent of the project alignment is paved and/or built over, obstructing ground visibility. The project alignment's overall ground visibility was moderate to very good, ranging between 70 to 100 percent. The disturbances within the project alignment were all modern which included plastic bags, beverage glass, plastic bottles, rusty metal, and concrete fencing fragments. Figures 5-1 through 5-2 depict representational photographs of the project alignment. Overall, the survey found no presence of anthropogenic soils (i.e., midden), hearth features, or concentrations of shell, bone, or lithic materials that would have indicated the presence of a precontact indigenous archaeological deposit. No cultural resources were discovered as a result of this survey.

## 5.3 POTENTIAL FOR BURIED ARCHAEOLOGICAL DEPOSITS

The surficial soil on the project alignment is classified as urban land, which exists in areas of high population density in the largely built environment (USDA 2024). These soils are a mix of several soils and nature human-transported or "fill" materials. Sediments within the project alignment consist of Quaternary aged deposits: Holocene (recent to 10,000 years old) and Pleistocene (10,000 to 2 million years old) marine and non-marine terrace deposits, to older Pliocene to Late Miocene (3.6 to 11.62 million years ago) marine basin deposits (Dibblee and Minch 2002). Late Pleistocene and Holocene deposits are generally considered more likely to contain precontact archaeological deposits. Landscape evolution and historic and modern development can impact the visibility of the archaeological record, but research has shown that archaeological sites tend to occur in specific geo-environmental settings (e.g., near reliable water sources and on stable land surfaces) rather than randomly throughout the landscape. For example, geoarchaeological studies have found that distance to water sources (e.g., stream, lake, spring) and landform slope (generally <18 percent) are two environmental variables that help accurately predict a location's potential to contain buried archaeological deposits (e.g., Caltrans 2008; Caltrans 2010; Rosenthal and Meyer 2004a, 2004b). The topography of the terrain in the project alignment is relatively flat. However, the project alignment is disturbed with urban land fill material. Therefore, the geography, geology, soils, and topography across most of the project alignment suggests that the potential for the presence of intact buried deposits of cultural resources in the project alignment is very low.

Source: Ascent Environmental in 2024.

Overview of the trail with landscaped ground surface. West view. Taken on September 30, 2024.

Source: Ascent Environmental in 2024.

Weber Street overview with paved ground surface. Northwest view. Taken on September 30, 2024.

**Figure 5-1 Eastern Portion of Project Alignment**

Source: Ascent Environmental in 2024.

Trail exit along Ridgeway Street. East view. Taken on September 30, 2024.

Source: Ascent Environmental in 2023.

Overgrown vegetation obscures ground surface visibility. Werst view. Taken on September 30, 2024.

**Figure 5-2 Western Portion of Project Alignment**

This page is intentionally left blank.

# 6 CONCLUSIONS AND RECOMMENDATIONS

The background research, which includes the SCCIC record search, tribal outreach, and the pedestrian survey, did not result in the identification of unique archaeological sites or historical resources of an archaeological nature. In addition, the results of the geoarchaeological sensitivity analysis revealed that the project alignment has a very low sensitivity for intact buried archaeological resources.

The presence of, or the potential for the presence of tribal cultural resources as defined by PRC Section 21074, is not included in this study.

Although no cultural resources have been identified as a result of this cultural study, it is recommended that the following measures be implemented for the project.

- Inadvertent Discoveries: If archaeological materials are inadvertently discovered during ground-disturbing activities, including midden soils, stone tools, chipped stone, baked clay, or concentrations of shell, bone, charcoal, glass, metal, or ceramics, all work shall cease within 100 feet (30.5 meters) of the find and the services of a professional archaeologist shall be retained immediately. At that time, the city of Pomona shall coordinate any necessary investigation of the site with the archaeologist as needed to evaluate the significance of the resource per PRC Section 5024.1 and 21083.2(g) and provide proper management recommendations. If the find is determined to be a historical resource and/or a unique archeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures and/or mitigation will be made available. Possible management recommendations for significant resources could include resource avoidance or data recovery excavations. The contractor shall implement any measures deemed necessary by the archeologist for the protection of the cultural resources. Do not resume work in the area of the discovery until directed to do so by the archaeologist.

Discovery of human remains is not expected; however, if human remains should be discovered, the following measure should be implemented.

- Inadvertent Discovery of Human Remains: If human remains are discovered during construction activities, work within 100 feet (30.5 meters) of the remains shall be stopped immediately, and the project proponent shall notify the Los Angeles County Coroner, in accordance with Section 5097.98 of the PRC and Section 7050.5 of California's Health and Safety Code. If the remains are determined by the coroner to be Native American, the coroner will notify the NAHC within 24 hours, and the NAHC will designate a Most Likely Descendant (MLD). Together the land-owner and the MLD shall determine the ultimate treatment and disposition of the remains in accordance with PRC Section 5097.94.

This page is intentionally left blank.

# 7 REFERENCES

Bureau of Land Management. 2024. General Land Office Records 1877. Available: https://glorecords.blm.gov/details/survey/default.aspx?dm_id=291033&sid=1bj3txhc.0wl#surveyDetailsTabIndex=1. Accessed on May 14, 2024.

BLM. *See* Bureau of Land Management.

California Department of Transportation. 2008 (April). *A Geoarchaeological Overview and Assessment of Caltrans District 3*. Prepared by Far Western Anthropological Group, Davis.

———. 2010. *Volume I: A Geoarchaeological Overview and Assessment of Caltrans Districts 6 and 9 – Cultural Resources Inventory of Caltrans District 6/9 Rural Conventional Highways.* Prepared by Jack Meyer, Craig Young, and Jeffrey S. Rosenthal, Far Western Anthropological Group, Davis.

Caltrans. *See* California Department of Transportation.

Cal Poly Pomona. 2024. Pomona Valley Historical Collection. Available on: https://libguides.library.cpp.edu/c.php?g=771946&p=6014362#:~:text=The%20Pomona%20Valley%27s%20story%20began,for%20Pomona%20Valley%27s%20new%20residents. Accessed on November 5, 2024.

Dibblee, T.W. and J.A. Minch. 2002. Geologic Map of the San Dimas and Ontario quadrangles, Los Angeles and San Bernardino Counties, California. California Department of Conservation, California Geological Survey.

Gabrielino-Tongva Indian Tribe. 2024. A California Indian Tribe know as San Gabriel Band of Mission Indians; Tribal History. Available on: https://gabrielinotribe.org/history/ Accessed on November 5, 2024.

Historic Resources Group. 2022. Historic Context Statement City of Pomona. Available on: https://www.pomonaca.gov/home/showpublisheddocument/4968/638006698405330000 Accessed on November 4, 2024.

National Environmental Title Research, LLC. 2024. 1897 to 2021 United States Geological Survey Topographic Maps, and 1938 to 2020 Aerial Photographs of Project alignment. Available: http://www.historicaerials.com/. Accessed May 14, 2024.

NETR. *See* National Environmental Title Research.

Rosenthal, J.S., and J. Meyer. 2004a. Landscape Evolution and the Archaeological Record: A Geoarchaeological Study of the Southern Santa Clara Valley and Surrounding Region. Center for Archaeological Research at Davis Publication No. 14. University of California, Davis.

———. 2004b. Cultural Resources Inventory of Caltrans District 10, Rural Conventional Highways. In Vol. III: Geoarchaeological Study, Landscape Evolution and the Archaeological Record of Central California. Report prepared by Far Western Anthropological Research Group, Davis, California.

Tetra Tech. 2022. *Cultural Resource Report 3730 Francis Avenue Battery Storage Project. San Bernardino County, California*. Prepared for Capacity Power Group and ENGIE Distributed Storage Development LLC.

US Department of Agriculture. 2024. Web Soil Web. Available: https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx Accessed on May 14, 2024.

USDA. See United States Department of Agriculture.

This page is intentionally left blank.

# Appendix A

Record Search Results

**South Central Coastal Information Center**
California State University, Fullerton
Department of Anthropology MH-426
800 North State College Boulevard
Fullerton, CA 92834-6846
657.278.5395 / FAX 657.278.5542
sccic@fullerton.edu
*California Historical Resources Information System*
*Orange, Los Angeles, and Ventura Counties*

---

6/18/2024 Records Search File No.: 26057.12083

Roberto Mora
Ascent Environmental, Inc.
455 Capitol Mall, Ste 300
Sacramento, CA 95814

Re: Record Search Results for 20220001.01 - City of Pomona SJC Bikeway

The South Central Coastal Information Center received your records search request for the project area(s) referenced above, located on the San Dimas, CA USGS 7.5' quadrangle(s). The following reflects the results of the records search for the project area and a ¼-mile radius:

As indicated on the data request form, the locations of resources and reports are provided in the following format: ☒ custom GIS maps ☐ shape files ☐ hand-drawn maps

| | |
|---|---|
| Resources within project area: 0 | None |
| Resources within ¼-mile radius: 4 | SEE ATTACHED MAP or LIST |
| Reports within project area: 1 | LA-10561 |
| Reports within ¼-mile radius: 14 | SEE ATTACHED MAP or LIST |

**Resource Database Printout (list):** ☒ enclosed ☐ not requested ☐ nothing listed
**Resource Database Printout (details):** ☒ enclosed ☐ not requested ☐ nothing listed
**Resource Digital Database (spreadsheet):** ☒ enclosed ☐ not requested ☐ nothing listed
**Report Database Printout (list):** ☒ enclosed ☐ not requested ☐ nothing listed
**Report Database Printout (details):** ☒ enclosed ☐ not requested ☐ nothing listed
**Report Digital Database (spreadsheet):** ☒ enclosed ☐ not requested ☐ nothing listed
**Resource Record Copies:** ☐ enclosed ☒ not requested ☐ nothing listed
**Report Copies:** ☒ enclosed ☐ not requested ☐ nothing listed
**OHP Built Environment Resources Directory (BERD) 2022:** ☒ available online; please go to https://ohp.parks.ca.gov/?page_id=30338
**Archaeo Determinations of Eligibility 2022:** ☐ enclosed ☐ not requested ☒ nothing listed
**Los Angeles Historic-Cultural Monuments** ☐ enclosed ☒ not requested ☐ nothing listed
**Historical Maps:** ☐ enclosed ☒ not requested ☐ nothing listed
**San Bernardino Historical Maps:** ☒ not available at SCCIC; please go to https://ngmdb.usgs.gov/topoview/viewer/#4/39.98/-100.02

**Ethnographic Information:** ☒ not available at SCCIC
**Historical Literature:** ☒ not available at SCCIC
**GLO and/or Rancho Plat Maps:** ☒ not available at SCCIC
**Caltrans Bridge Survey:** ☒ not available at SCCIC; please go to http://www.dot.ca.gov/hq/structur/strmaint/historic.htm
**Shipwreck Inventory:** ☒ not available at SCCIC; please go to http://shipwrecks.slc.ca.gov/ShipwrecksDatabase/Shipwrecks_Database.asp
**Soil Survey Maps: (see below)** ☒ not available at SCCIC; please go to http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the California Historical Resources Information System,

Isabela Kott

Digitally signed by Isabela Kott
Date: 2024.06.18 16:42:08 -07'00'

Isabela Kott
Assistant Coordinator, GIS Program Specialist

Enclosures:

(X) Custom Maps – 2 pages

(X) Resource Database Printout (list) – 1 page

(X) Resource Database Printout (details) – 4 pages

(X) Resource Digital Database (spreadsheet) – 4 lines

(X) Report Database Printout (list) – 3 pages

(X) Report Database Printout (details) – 17 pages

(X) Report Digital Database (spreadsheet) – 15 lines

(X) Report Copies – (project area only) 4 pages

# Resource Detail: P-19-150397

## Identifying information

*Primary No.:* P-19-150397
*Trinomial:*
*Name:* House for A E Packard
*Other IDs:*

| *Type* | *Name* |
|---|---|
| OHP Property Numb | 092972 |
| Resource Name | House for A E Packard |

*Cross-refs:*

## Attributes

*Resource type:* Building
*Age:* Historic
*Information base:* Other
*Attribute codes:* HP02 (Single family property)
*Disclosure:* Unrestricted
*Collections:* No
*Accession no(s):*
*Facility:*

## General notes

## Recording events

| *Date* | *Recorder(s)* | *Affiliation* | *Notes* |
|---|---|---|---|
| 10/8/1993 | F. Smith | Myra L Frank & Associates | |

## Associated reports

| *Report No.* | *Year* | *Title* | *Affiliation* |
|---|---|---|---|
| LA-03779 | 1994 | Historic Property Survey Report Provide High Occupancy Vehicle Lanes on Interstate 10 Between Sr 57/I-210 and the Los Angeles County/San Bernardino County Line in Los Angeles County 07-la-10-41.7/48.3 | Myra L. Frank & Associates, Inc. |

## Location information

*County:* Los Angeles
*USGS quad(s):* SAN DIMAS
*Address:*

| *Address* | *City* | *Assessor's parcel no.* | *Zip code* |
|---|---|---|---|
| 1318 E Murchison Ave | Pomona | | |

*PLSS:*
*UTMs:*

## Management status

## Database record metadata

| | *Date* | *User* | |
|---|---|---|---|
| *Entered:* | 5/1/2008 | jay | |
| *Last modified:* | 9/4/2019 | sstjames | |
| *IC actions:* | *Date* | *User* | *Action taken* |
| | 5/1/2008 | jay | Appended records from Encodent database. |

*Record status:* Verified

# Resource Detail: P-19-150398

## Identifying information

*Primary No.:* P-19-150398
*Trinomial:*
*Name:* 1304 N Hamilton Blvd
*Other IDs:*

| *Type* | *Name* |
|---|---|
| OHP Property Numb | 092973 |
| Resource Name | 1304 N Hamilton Blvd |

*Cross-refs:*

## Attributes

*Resource type:* Building
*Age:* Historic
*Information base:* Other
*Attribute codes:* HP02 (Single family property)
*Disclosure:* Unrestricted
*Collections:* No
*Accession no(s):*
*Facility:*

## General notes

## Recording events

| *Date* | *Recorder(s)* | *Affiliation* | *Notes* |
|---|---|---|---|
| 10/8/1993 | F. Smith | Myra L Frank & Associates | |

## Associated reports

| *Report No.* | *Year* | *Title* | *Affiliation* |
|---|---|---|---|
| LA-03779 | 1994 | Historic Property Survey Report Provide High Occupancy Vehicle Lanes on Interstate 10 Between Sr 57/I-210 and the Los Angeles County/San Bernardino County Line in Los Angeles County 07-la-10-41.7/48.3 | Myra L. Frank & Associates, Inc. |

## Location information

*County:* Los Angeles
*USGS quad(s):* SAN DIMAS
*Address:*

| *Address* | *City* | *Assessor's parcel no.* | *Zip code* |
|---|---|---|---|
| 1304 N Hamilton Ave | Pomona | | |

*PLSS:*
*UTMs:*

## Management status

## Database record metadata

| | *Date* | *User* | |
|---|---|---|---|
| *Entered:* | 5/1/2008 | jay | |
| *Last modified:* | 9/4/2019 | sstjames | |
| *IC actions:* | *Date* | *User* | *Action taken* |
| | 5/1/2008 | jay | Appended records from Encodent database. |

*Record status:* Verified

# Resource Detail: P-19-150400

## Identifying information

*Primary No.:* P-19-150400
*Trinomial:*
*Name:* House for Farell Fikel
*Other IDs:*

| *Type* | *Name* |
|---|---|
| OHP Property Numb | 092975 |
| Resource Name | House for Farell Fikel |

*Cross-refs:*

## Attributes

*Resource type:* Building
*Age:* Historic
*Information base:* Other
*Attribute codes:* HP02 (Single family property)
*Disclosure:* Unrestricted
*Collections:* No
*Accession no(s):*
*Facility:*

## General notes

## Recording events

| *Date* | *Recorder(s)* | *Affiliation* | *Notes* |
|---|---|---|---|
| 10/8/1993 | F. Smith | Myra L Frank & Associates | |

## Associated reports

| *Report No.* | *Year* | *Title* | *Affiliation* |
|---|---|---|---|
| LA-03779 | 1994 | Historic Property Survey Report Provide High Occupancy Vehicle Lanes on Interstate 10 Between Sr 57/I-210 and the Los Angeles County/San Bernardino County Line in Los Angeles County 07-la-10-41.7/48.3 | Myra L. Frank & Associates, Inc. |
| LA-08828 | 2007 | Cultural Resources Records Search and Site Visit Results for Royal Streel Communications, Llc Candidate La2337a (i-10 at White), 875 West Orange Grove, Avenue, Pomona, Los Angeles County, California | Michael Brandman Associates |

## Location information

*County:* Los Angeles
*USGS quad(s):* SAN DIMAS
*Address:*

| *Address* | *City* | *Assessor's parcel no.* | *Zip code* |
|---|---|---|---|
| 1390 N Casa Vista Dr | Pomona | | |

*PLSS:*
*UTMs:*

## Management status

## Database record metadata

| | *Date* | *User* | |
|---|---|---|---|
| *Entered:* | 5/1/2008 | jay | |
| *Last modified:* | 9/4/2019 | sstjames | |
| *IC actions:* | *Date* | *User* | *Action taken* |
| | 5/1/2008 | jay | Appended records from Encodent database. |

*Record status:* Verified

# Resource Detail: P-19-188186

## Identifying information

*Primary No.:* P-19-188186
*Trinomial:*
*Name:* Pomona Church of the Brethren
*Other IDs:*

| *Type* | *Name* |
|---|---|
| Resource Name | Pomona Church of the Brethren |
| Other | Pomona Fellowship Church |

*Cross-refs:*

## Attributes

*Resource type:* Building
*Age:* Historic
*Information base:* Other
*Attribute codes:* HP16 (Religious building)
*Disclosure:* Unrestricted
*Collections:*
*Accession no(s):*
*Facility:*

## General notes

## Recording events

| *Date* | *Recorder(s)* | *Affiliation* | *Notes* |
|---|---|---|---|
| 3/8/2004 | C.J. Hetzel | | |

## Associated reports

## Location information

*County:* Los Angeles
*USGS quad(s):* SAN DIMAS
*Address:*

| *Address* | *City* | *Assessor's parcel no.* | *Zip code* |
|---|---|---|---|
| 875 W Orange Grove Ave | Pomona | 8358-009-006 | 91768 |

*PLSS:*
*UTMs:*

## Management status

## Database record metadata

| | *Date* | *User* | |
|---|---|---|---|
| *Entered:* | 9/2/2008 | jay | |
| *Last modified:* | 9/4/2019 | sstjames | |
| *IC actions:* | *Date* | *User* | *Action taken* |
| | 9/2/2008 | jay | Appended records from Encodent database (second round of additions) |

*Record status:* Verified

## Resource List

| Primary No. | Trinomial | Other IDs | Type | Age | Attribute codes | Recorded by | Reports |
|---|---|---|---|---|---|---|---|
| P-19-150397 | | OHP Property Number - 092972; Resource Name - House for A E Packard | Building | Historic | HP02 | 1993 (F. Smith, Myra L Frank & Associates) | LA-03779 |
| P-19-150398 | | OHP Property Number - 092973; Resource Name - 1304 N Hamilton Blvd | Building | Historic | HP02 | 1993 (F. Smith, Myra L Frank & Associates) | LA-03779 |
| P-19-150400 | | OHP Property Number - 092975; Resource Name - House for Farell Fikel | Building | Historic | HP02 | 1993 (F. Smith, Myra L Frank & Associates) | LA-03779, LA-08828 |
| P-19-188186 | | Resource Name - Pomona Church of the Brethren; Other - Pomona Fellowship Church | Building | Historic | HP16 | 2004 (C.J. Hetzel) | |

# Report Detail: LA-00279

### Identifiers

*Report No.:* LA-00279
*Other IDs:*
*Cross-refs:*

### Citation information

*Author(s):* Whitney-Desautels, Nancy A.
*Year:* 1981
*Title:* Archaeological/historical Survey Report on the Kellogg Plaza Site, Pomona, County of Los Angeles.
*Affliliation:* Scientific Resource Surveys, Inc.
*No. pages:* 12
*No. maps:*
*Attributes:* Archaeological, Field study
*Inventory size:* QC
*Disclosure:*
*Collections:*

### General notes

### Associated resources

*No. resources:* 0
*Has informals:*

### Location information

*County(ies):* Los Angeles
*USGS quad(s):* SAN DIMAS
*Address:*
*PLSS:*

### Database record metadata

| | *Date* | *User* |
|---|---|---|
| *Entered:* | 5/5/2008 | jay |
| *Last modified:* | 3/12/2015 | agarcia |

*IC actions:*

| *Date* | *User* | *Action taken* |
|---|---|---|
| 5/6/2008 | jay | Appended records from old Surveys database. |
| 3/12/2015 | agarcia | GIS QC |

*Record status:*

# Report Detail: LA-00575

### Identifiers

*Report No.:* LA-00575
*Other IDs:*
*Cross-refs:*

### Citation information

*Author(s):* Padon, Beth
*Year:* 1979
*Title:* An Archaeological Reconnaissance of the 40 Acre Extension of the Spadra Landfill, Pomona, Los Angeles County, Ca.
*Affliliation:* Beth Padon, Contract Archaeologist
*No. pages:* 8
*No. maps:*
*Attributes:* Archaeological, Field study
*Inventory size:* QC
*Disclosure:* Not for publication
*Collections:* No

### General notes

### Associated resources

*No. resources:* 0
*Has informals:*

### Location information

*County(ies):* Los Angeles
*USGS quad(s):* SAN DIMAS
*Address:*
*PLSS:*

### Database record metadata

| | *Date* | *User* |
|---|---|---|
| *Entered:* | 5/5/2008 | jay |
| *Last modified:* | 3/13/2015 | agarcia |

*IC actions:*

| *Date* | *User* | *Action taken* |
|---|---|---|
| 5/6/2008 | jay | Appended records from old Surveys database. |
| 3/13/2015 | agarcia | GIS QC |

*Record status:*

# Report Detail: LA-02932

### Identifiers

*Report No.:* LA-02932
*Other IDs:*
*Cross-refs:*

### Citation information

*Author(s):* Wlodarski, Robert J.
*Year:* 1993
*Title:* Negative Archaeological Survey Report Provide High Occupancy Vehicle (hov) Lanes on Interstate 10 (i-10) From the Junction of State Route 57 (sr 57/interstate 610 (i-210) in the City of Pomona to the Los Angeles/san Bernardino County Line 07-la-i10/p.m. 4
*Affliliation:* Historical, Environmental, Archaeological, Research, Team
*No. pages:* 36
*No. maps:*
*Attributes:* Archaeological, Field study
*Inventory size:* QC
*Disclosure:*
*Collections:*

### General notes

### Associated resources

*No. resources:* 0
*Has informals:*

### Location information

*County(ies):* Los Angeles
*USGS quad(s):* ONTARIO, SAN DIMAS
*Address:*
*PLSS:*

### Database record metadata

| | *Date* | *User* |
|---|---|---|
| *Entered:* | 5/5/2008 | jay |
| *Last modified:* | 3/11/2015 | agarcia |

*IC actions:*

| *Date* | *User* | *Action taken* |
|---|---|---|
| 5/6/2008 | jay | Appended records from old Surveys database. |
| 3/11/2015 | agarcia | GIS QC |

*Record status:*

# Report Detail: LA-03306

### Identifiers

*Report No.:* LA-03306
*Other IDs:*
*Cross-refs:*

### Citation information

*Author(s):* Whitney-Desautels, Nancy A. and Wayne H. Bonner
*Year:* 1993
*Title:* Historic Property Survey Report Interstate 10 HOV Widening Los Angeles County, California Caltrans District 7
*Affliliation:* Scientific Resource Surveys, Inc.
*No. pages:* 35
*No. maps:*
*Attributes:* Archaeological, Architectural/Historical, Field study
*Inventory size:* QC
*Disclosure:* Not for publication
*Collections:* No

### General notes

### Associated resources

| *Primary No.* | *Trinomial* | *Name* |
|---|---|---|
| P-19-192856 | | Kellogg House; University House |

*No. resources:* 1
*Has informals:* No

### Location information

*County(ies):* Los Angeles
*USGS quad(s):* BALDWIN PARK, SAN DIMAS
*Address:*
*PLSS:*

### Database record metadata

| | *Date* | *User* |
|---|---|---|
| *Entered:* | 5/5/2008 | jay |
| *Last modified:* | 4/10/2023 | aswitals |

| *IC actions:* | *Date* | *User* | *Action taken* |
|---|---|---|---|
| | 5/6/2008 | jay | Appended records from old Surveys database. |
| | 3/16/2015 | agarcia | GIS QC |
| | 4/3/2023 | aswitals | A.S. |

*Record status:* Database Complete

# Report Detail: LA-03779

### Identifiers

*Report No.:* LA-03779
*Other IDs:*
*Cross-refs:*

### Citation information

*Author(s):* Smith, Francesca
*Year:* 1994
*Title:* Historic Property Survey Report Provide High Occupancy Vehicle Lanes on Interstate 10 Between Sr 57/I-210 and the Los Angeles County/San Bernardino County Line in Los Angeles County 07-la-10-41.7/48.3
*Affliliation:* Myra L. Frank & Associates, Inc.
*No. pages:* 132
*No. maps:*
*Attributes:* Archaeological, Architectural/Historical, Evaluation, Field study
*Inventory size:* QC
*Disclosure:* Not for publication
*Collections:* No

---

*Sub-desig.:*
*Author(s):* Wlodarski, Robert J.
*Year:* 1993
*Title:* Negative Archaeological Survey Report Provide High Occupancy Vehicle (HOV) Lanes on Interstate 10 (I-10) From the Junction of State Route 57 (SR-57 / Interstate 610 (I-210)) in the City of Pomona to the Los Angeles / San Bernardino County Line 07-LA-110/P.M. 41.7/48.3
*Affiliation:* Historical, Environmental, Archaeological, Research, Team
*Report type(s):* Archaeological, Field study
*Inventory size:*
*No. pages:* 3
*Disclosure:* Not for publication
*Collections:* No
*PDF Pages:* 19-21

### General notes

### Associated resources

| *Primary No.* | *Trinomial* | *Name* |
|---|---|---|
| P-19-150397 | | House for A E Packard |
| P-19-150398 | | 1304 N Hamilton Blvd |
| P-19-150399 | | Speculative House for C P Stens |
| P-19-150400 | | House for Farell Fikel |
| P-19-150401 | | House for C P Stensgard |
| P-19-150402 | | Joe Wilkins House |
| P-19-150403 | | 465 E Kenoak Pl |
| P-19-150404 | | 493 E Kenoak Pl |
| P-19-150405 | | J R Wilson House |
| P-19-150406 | | 1355 N Park Ave |
| P-19-150407 | | B F Hendricks House |
| P-19-150408 | | Dr Cordellia M Richmond Reside |

*No. resources:* 12
*Has informals:* No

### Location information

*County(ies):* Los Angeles
*USGS quad(s):* ONTARIO, SAN DIMAS
*Address:*
*PLSS:*

# Report Detail: LA-03779

**Database record metadata**

| | Date | User | |
|---|---|---|---|
| *Entered:* | 5/5/2008 | jay | |
| *Last modified:* | 2/26/2024 | aswitals | |
| *IC actions:* | *Date* | *User* | *Action taken* |
| | 5/6/2008 | jay | Appended records from old Surveys database. |
| | 3/11/2015 | agarcia | GIS QC |
| | 2/26/2024 | aswitals | A.S. |
| *Record status:* | Database Complete | | |

# Report Detail: LA-04835

### Identifiers

*Report No.:* LA-04835
*Other IDs:*
*Cross-refs:*

### Citation information

*Author(s):* Ashkar, Shahira
*Year:* 1999
*Title:* Cultural Resources Inventory Report for Williams Communications, Inc. Proposed Fiber Optic Cable System Installation Project, Los Angeles to Riverside, Los Angeles and Riverside Counties
*Affliliation:* Jones & Stokes Associates, Inc.
*No. pages:* 79
*No. maps:*
*Attributes:* Archaeological, Field study
*Inventory size:* QC
*Disclosure:*
*Collections:*

### General notes

### Associated resources

| *Primary No.* | *Trinomial* | *Name* |
|---|---|---|
| P-19-186109 | | VOID |
| P-19-186112 | | Union Pacific RR, Southern Paci |
| P-19-187090 | | E Los Angeles RR Station |

*No. resources:* 3
*Has informals:*

### Location information

*County(ies):* Los Angeles
*USGS quad(s):* BALDWIN PARK, EL MONTE, HOLLYWOOD, LA HABRA, LOS ANGELES, ONTARIO, SAN DIMAS, SOUTH GATE, WHITTIER, YORBA LINDA
*Address:*
*PLSS:*

### Database record metadata

| | *Date* | *User* |
|---|---|---|
| *Entered:* | 5/5/2008 | jay |
| *Last modified:* | 3/11/2015 | agarcia |

| *IC actions:* | *Date* | *User* | *Action taken* |
|---|---|---|---|
| | 5/6/2008 | jay | Appended records from old Surveys database. |
| | 3/11/2015 | agarcia | GIS QC |

*Record status:*

# Report Detail: LA-05643

### Identifiers

*Report No.:* LA-05643

| *Other IDs:* | *Type* | *Name* |
|---|---|---|
| | Cellular | |

*Cross-refs:*

### Citation information

*Author(s):* Duke, Curt
*Year:* 2002
*Title:* Cultural Resource Assessment: Cingular Wireless Facility No. Sb 148-01 Los Angeles County
*Affliliation:* LSA Associates, Inc.
*No. pages:* 8
*No. maps:*
*Attributes:* Archaeological, Field study
*Inventory size:* QC
*Disclosure:*
*Collections:*

### General notes

### Associated resources

| | *Primary No.* | *Trinomial* | *Name* |
|---|---|---|---|
| | P-19-186112 | | Union Pacific RR, Southern Paci |

*No. resources:* 1
*Has informals:*

### Location information

*County(ies):* Los Angeles
*USGS quad(s):* SAN DIMAS
*Address:*
*PLSS:*

### Database record metadata

| | *Date* | *User* |
|---|---|---|
| *Entered:* | 5/5/2008 | jay |
| *Last modified:* | 3/18/2015 | agarcia |

| *IC actions:* | *Date* | *User* | *Action taken* |
|---|---|---|---|
| | 5/6/2008 | jay | Appended records from old Surveys database. |
| | 3/18/2015 | agarcia | GIS QC |

*Record status:*

# Report Detail: LA-05925

### Identifiers

*Report No.:* LA-05925
*Other IDs:*
*Cross-refs:*

### Citation information

*Author(s):* Smith, Francesca
*Year:* 1994
*Title:* Historic Property Survey Report Provide High Occupancy Vehicle Lanes on Interstate 10 Sr57/i-210 and the Los Angeles County/san Bernardino County Lines in Los Angeles 07-la-10-41.7/48.3
*Affliliation:* Myra L. Frank & Associates, Inc.
*No. pages:* 15
*No. maps:*
*Attributes:* Other research
*Inventory size:* QC
*Disclosure:*
*Collections:*

### General notes

### Associated resources

*No. resources:* 0
*Has informals:*

### Location information

*County(ies):* Los Angeles
*USGS quad(s):* ONTARIO, SAN DIMAS
*Address:*
*PLSS:*

### Database record metadata

| | *Date* | *User* |
|---|---|---|
| *Entered:* | 5/5/2008 | jay |
| *Last modified:* | 3/11/2015 | agarcia |

| *IC actions:* | *Date* | *User* | *Action taken* |
|---|---|---|---|
| | 5/6/2008 | jay | Appended records from old Surveys database. |
| | 3/11/2015 | agarcia | GIS QC |

*Record status:*

# Report Detail: LA-06260

### Identifiers

*Report No.:* LA-06260

*Other IDs:*

| *Type* | *Name* |
|---|---|
| Cellular | |

*Cross-refs:*

### Citation information

*Author(s):* Duke, Curt
*Year:* 2002
*Title:* Cultural Resource Assessment at & T Wireless Services Facility No. D293c Los Angeles County, California
*Affliliation:* LSA Associates, Inc.
*No. pages:* 9
*No. maps:*
*Attributes:* Literature search
*Inventory size:* QC
*Disclosure:*
*Collections:*

### General notes

### Associated resources

*No. resources:* 0
*Has informals:*

### Location information

*County(ies):* Los Angeles
*USGS quad(s):* SAN DIMAS
*Address:*
*PLSS:*

### Database record metadata

| | *Date* | *User* |
|---|---|---|
| *Entered:* | 5/5/2008 | jay |
| *Last modified:* | 3/19/2015 | agarcia |

*IC actions:*

| *Date* | *User* | *Action taken* |
|---|---|---|
| 5/6/2008 | jay | Appended records from old Surveys database. |
| 3/19/2015 | agarcia | GIS QC |

*Record status:*

# Report Detail: LA-08828

### Identifiers

*Report No.:* LA-08828

*Other IDs:*

| *Type* | *Name* |
|---|---|
| Cellular | |

*Cross-refs:*

### Citation information

*Author(s):* Bonner, Wayne H.

*Year:* 2007

*Title:* Cultural Resources Records Search and Site Visit Results for Royal Streel Communications, Llc Candidate La2337a (i-10 at White), 875 West Orange Grove, Avenue, Pomona, Los Angeles County, California

*Affliliation:* Michael Brandman Associates

*No. pages:* 12

*No. maps:*

*Attributes:* Archaeological, Field study

*Inventory size:* QC

*Disclosure:*

*Collections:*

### General notes

### Associated resources

| *Primary No.* | *Trinomial* | *Name* |
|---|---|---|
| P-19-150348 | | 726 Maine Ave |
| P-19-150400 | | House for Farell Fikel |
| P-19-150401 | | House for C P Stensgard |

*No. resources:* 3

*Has informals:*

### Location information

*County(ies):* Los Angeles

*USGS quad(s):* SAN DIMAS

*Address:*

*PLSS:*

### Database record metadata

| | *Date* | *User* |
|---|---|---|
| *Entered:* | 5/5/2008 | jay |
| *Last modified:* | 3/23/2015 | agarcia |

*IC actions:*

| *Date* | *User* | *Action taken* |
|---|---|---|
| 5/6/2008 | jay | Appended records from old Surveys database. |
| 3/23/2015 | agarcia | GIS QC |

*Record status:*

# Report Detail: LA-09079

### Identifiers

*Report No.:* LA-09079

*Other IDs:*

| *Type* | *Name* |
|---|---|
| Cellular | |

*Cross-refs:*

### Citation information

*Author(s):* Bonner, Wayne H. and Christeen Taniguchi

*Year:* 2004

*Title:* Records Search Results and Site Visit for Sprint Telecommunications Facility Candidate La60xc010a (brethren Church) 875 West Orange Grove Avenue, Pomona, Los Angeles County, California

*Affliliation:* Michael Brandman Associates

*No. pages:* 10

*No. maps:*

*Attributes:* Archaeological, Field study

*Inventory size:* QC

*Disclosure:*

*Collections:*

### General notes

### Associated resources

*No. resources:* 0

*Has informals:*

### Location information

*County(ies):* Los Angeles

*USGS quad(s):* SAN DIMAS

*Address:*

| *Address* | *City* | *Assessor's parcel no.* | *Zip code* |
|---|---|---|---|
| 875 West Orange Grove Avenue | Pomona | | |

*PLSS:*

### Database record metadata

| | *Date* | *User* |
|---|---|---|
| *Entered:* | 5/5/2008 | jay |
| *Last modified:* | 3/23/2015 | agarcia |

*IC actions:*

| *Date* | *User* | *Action taken* |
|---|---|---|
| 5/6/2008 | jay | Appended records from old Surveys database. |
| 3/23/2015 | agarcia | GIS QC |

*Record status:*

# Report Detail: LA-10190

### Identifiers

*Report No.:* LA-10190
*Other IDs:*
*Cross-refs:*

### Citation information

*Author(s):* Harbert, Claudia
*Year:* 2002
*Title:* Supplemental Historic Property Survey Report for the I-10 HOV Lane Between I-605 and the SR-57/SR-71/I-210 Interchange in the Cities of Los Angeles, Baldwin Park, West Covina, Covina, San Dimas, and Pomona in Los Angeles County, CA
*Affliliation:* Caltrans
*No. pages:* 82
*No. maps:*
*Attributes:* Archaeological, Field study
*Inventory size:* QC
*Disclosure:* Not for publication
*Collections:* No

### General notes

### Associated resources

| *Primary No.* | *Trinomial* | *Name* |
|---|---|---|
| P-19-188913 | | |
| P-19-188914 | | |
| P-19-188915 | | |
| P-19-188916 | | |
| P-19-188917 | | |
| P-19-188918 | | |
| P-19-188919 | | |
| P-19-188920 | | Burl Watson Realty Inc |
| P-19-188921 | | |
| P-19-188922 | | |
| P-19-188923 | | |
| P-19-188924 | | |
| P-19-188925 | | |
| P-19-188926 | | The Aristocrat Motel |
| P-19-188927 | | Taxcos Restaurant |
| P-19-188928 | | Nextel |
| P-19-188929 | | |
| P-19-188930 | | |
| P-19-188931 | | |
| P-19-188932 | | |
| P-19-188933 | | |
| P-19-188934 | | |
| P-19-188935 | | |
| P-19-188936 | | Tract #15527 |
| P-19-188937 | | 2231 W Mossberg Ave |
| P-19-188938 | | West Covina Dental |
| P-19-188939 | | 2101 W Garvey Ave N |
| P-19-188940 | | 1647-1649 W Garvey Ave |
| P-19-188941 | | Trophy Center |
| P-19-188942 | | 1618 W Harbert St |
| P-19-188943 | | Catholic Resource Center |
| P-19-188944 | | 1415 W Garvey Ave |
| P-19-188945 | | 117 N Ellen Dr |
| P-19-188946 | | 118 N Morada Ave |
| P-19-188947 | | 118 N Maplewood Ave |

# Report Detail: LA-10190

| | |
|---|---|
| P-19-188948 | 1038 E Mardina St |
| P-19-188949 | 1042 E Mardina St |
| P-19-188950 | 1046 E Mardina St |
| P-19-188951 | Tract #16738 |
| P-19-188952 | Dental Office |
| P-19-188953 | 104 S Glendora Ave |
| P-19-188954 | 105 S Gardenglen St |
| P-19-188955 | 106 S Gardenglen St |
| P-19-188956 | 106 S Astell Ave |
| P-19-188957 | Tract #16472 |
| P-19-188958 | 104 S Turner Ave |
| P-19-188959 | 103 S Robin Rd |
| P-19-188960 | 102 S Cherrywood St |
| P-19-188961 | 101 S Fernwood St |
| P-19-188962 | 102 S Fernwood St |
| P-19-188963 | 107 S Homerest Ave |
| P-19-188964 | 118 S Homerest Ave |
| P-19-188965 | Tract # 17547 |
| P-19-188966 | 106 S Baymar St |
| P-19-188967 | Villa Tepeyac Mexican Restaura |
| P-19-188968 | 101 S Fircroft St |
| P-19-188969 | 2330 E Garvey Ave S |
| P-19-188970 | 2346 E Garvey Ave S |
| P-19-188971 | 2451 E Garvey Ave N |
| P-19-188972 | Tract # 19682 |
| P-19-188973 | Tract # 17045 |
| P-19-188974 | 3712 E Holt Ave |
| P-19-188975 | |
| P-19-188976 | |
| P-19-188977 | |
| P-19-188978 | |
| P-19-188979 | |
| P-19-188980 | |
| P-19-188981 | |
| P-19-188982 | |

*No. resources:* 70

*Has informals:*

### Location information

*County(ies):* Los Angeles

*USGS quad(s):* BALDWIN PARK, SAN DIMAS

*Address:*

*PLSS:*

### Database record metadata

| | *Date* | *User* |
|---|---|---|
| *Entered:* | 2/3/2010 | agarcia |
| *Last modified:* | 3/23/2015 | agarcia |

| *IC actions:* | *Date* | *User* | *Action taken* |
|---|---|---|---|
| | 3/23/2015 | agarcia | GIS QC |

*Record status:*

# Report Detail: LA-10561

### Identifiers

*Report No.:* LA-10561
*Other IDs:*
*Cross-refs:*

### Citation information

*Author(s):* Sylvia, Barbara
*Year:* 2001
*Title:* Negative Archaeological Survey Report - Highway Project Description, State Route 71
*Affliliation:* Caltrans
*No. pages:* 4
*No. maps:*
*Attributes:* Archaeological, Field study
*Inventory size:* QC
*Disclosure:* Not for publication
*Collections:* No

### General notes

### Associated resources

*No. resources:* 0
*Has informals:*

### Location information

*County(ies):* Los Angeles
*USGS quad(s):* ONTARIO, SAN DIMAS
*Address:*
*PLSS:*

### Database record metadata

| | *Date* | *User* |
|---|---|---|
| *Entered:* | 8/24/2010 | agarcia |
| *Last modified:* | 3/12/2015 | agarcia |

| *IC actions:* | *Date* | *User* | *Action taken* |
|---|---|---|---|
| | 3/12/2015 | agarcia | GIS QC |

*Record status:*

# Report Detail: LA-11119

### Identifiers

*Report No.:* LA-11119
*Other IDs:*
*Cross-refs:*

### Citation information

*Author(s):* Vaughan-Acton, Sandra
*Year:* 2010
*Title:* Construction of Innovation Way, Innovation Village Research Park, Pomona, CA
*Affliliation:* Cal Poly Pomona Foundation
*No. pages:* 24
*No. maps:*
*Attributes:* Archaeological, Architectural/historical, Other research
*Inventory size:* QC
*Disclosure:* Not for publication
*Collections:* No

### General notes

### Associated resources

*No. resources:* 0
*Has informals:* No

### Location information

*County(ies):* Los Angeles
*USGS quad(s):* SAN DIMAS

| *Address:* Address | City | Assessor's parcel no. | Zip code |
|---|---|---|---|
| Innovation Way | Pomona, CA | | |

*PLSS:*

### Database record metadata

| | Date | User |
|---|---|---|
| *Entered:* | 10/6/2011 | lnoyes |
| *Last modified:* | 9/14/2023 | aswitals |

| *IC actions:* Date | User | Action taken |
|---|---|---|
| 3/24/2015 | agarcia | GIS QC |
| 9/14/2023 | aswitals | A.S. |

*Record status:* Database Complete

# Report Detail: LA-12978

### Identifiers

*Report No.:* LA-12978
*Other IDs:*
*Cross-refs:*

### Citation information

*Author(s):* Losee, Carolyn
*Year:* 2015
*Title:* Cultural Resources Investigation for Trileaf 611939 Verizon “Lyndale” 900 Corporate Center Drive, Pomona, Los Angeles County, California 91768
*Affliliation:* Archaeological Resources Technology
*No. pages:* 7
*No. maps:*
*Attributes:* Archaeological, Architectural/Historical, Field study
*Inventory size:*
*Disclosure:* Not for publication
*Collections:* No

### General notes

### Associated resources

*No. resources:* 0
*Has informals:*

### Location information

*County(ies):* Los Angeles
*USGS quad(s):* SAN DIMAS

| *Address:* Address | City | Assessor's parcel no. | Zip code |
|---|---|---|---|
| 900 Corporate Center Drive | Pomona | 8707-001-052 | 91768 |

*PLSS:*

### Database record metadata

| | Date | User |
|---|---|---|
| *Entered:* | 10/25/2016 | ikott |
| *Last modified:* | 10/25/2016 | ikott |

*IC actions:*
*Record status:* Database Complete

# Report List

| Report No. | Other IDs | Year | Author(s) | Title | Affiliation | Resources |
|---|---|---|---|---|---|---|
| LA-00279 | | 1981 | Whitney-Desautels, Nancy A. | Archaeological/historical Survey Report on the Kellogg Plaza Site, Pomona, County of Los Angeles. | Scientific Resource Surveys, Inc. | |
| LA-00575 | | 1979 | Padon, Beth | An Archaeological Reconnaissance of the 40 Acre Extension of the Spadra Landfill, Pomona, Los Angeles County, Ca. | Beth Padon, Contract Archaeologist | |
| LA-02932 | | 1993 | Wlodarski, Robert J. | Negative Archaeological Survey Report Provide High Occupancy Vehicle (hov) Lanes on Interstate 10 (i-10) From the Junction of State Route 57 (sr 57/interstate 610 (i-210) in the City of Pomona to the Los Angeles/san Bernardino County Line 07-la-i10/p.m. 4 | Historical, Environmental, Archaeological, Research, Team | |
| LA-03306 | | 1993 | Whitney-Desautels, Nancy A. and Wayne H. Bonner | Historic Property Survey Report Interstate 10 HOV Widening Los Angeles County, California Caltrans District 7 | Scientific Resource Surveys, Inc. | 19-192856 |
| LA-03779 | | 1994 | Smith, Francesca | Historic Property Survey Report Provide High Occupancy Vehicle Lanes on Interstate 10 Between Sr 57/I-210 and the Los Angeles County/San Bernardino County Line in Los Angeles County 07-la-10-41.7/48.3 | Myra L. Frank & Associates, Inc. | 19-150397, 19-150398, 19-150399, 19-150400, 19-150401, 19-150402, 19-150403, 19-150404, 19-150405, 19-150406, 19-150407, 19-150408 |
| LA-03779 | | 1993 | Wlodarski, Robert J. | Negative Archaeological Survey Report Provide High Occupancy Vehicle (HOV) Lanes on Interstate 10 (I-10) From the Junction of State Route 57 (SR-57 / Interstate 610 (I-210)) in the City of Pomona to the Los Angeles / San Bernardino County Line 07-LA-110/P.M. 41.7/48.3 | Historical, Environmental, Archaeological, Research, Team | |
| LA-04835 | | 1999 | Ashkar, Shahira | Cultural Resources Inventory Report for Williams Communications, Inc. Proposed Fiber Optic Cable System Installation Project, Los Angeles to Riverside, Los Angeles and Riverside Counties | Jones & Stokes Associates, Inc. | 19-186109, 19-186112, 19-187090 |
| LA-05643 | Cellular - | 2002 | Duke, Curt | Cultural Resource Assessment: Cingular Wireless Facility No. Sb 148-01 Los Angeles County | LSA Associates, Inc. | 19-186112 |
| LA-05925 | | 1994 | Smith, Francesca | Historic Property Survey Report Provide High Occupancy Vehicle Lanes on Interstate 10 Sr57/i-210 and the Los Angeles County/san Bernardino County Lines in Los Angeles 07-la-10-41.7/48.3 | Myra L. Frank & Associates, Inc. | |

## Report List

| Report No. | Other IDs | Year | Author(s) | Title | Affiliation | Resources |
|---|---|---|---|---|---|---|
| LA-06260 | Cellular - | 2002 | Duke, Curt | Cultural Resource Assessment at & T Wireless Services Facility No. D293c Los Angeles County, California | LSA Associates, Inc. | |
| LA-08828 | Cellular - | 2007 | Bonner, Wayne H. | Cultural Resources Records Search and Site Visit Results for Royal Streel Communications, Llc Candidate La2337a (i-10 at White), 875 West Orange Grove, Avenue, Pomona, Los Angeles County, California | Michael Brandman Associates | 19-150348, 19-150400, 19-150401 |
| LA-09079 | Cellular - | 2004 | Bonner, Wayne H. and Christeen Taniguchi | Records Search Results and Site Visit for Sprint Telecommunications Facility Candidate La60xc010a (brethren Church) 875 West Orange Grove Avenue, Pomona, Los Angeles County, California | Michael Brandman Associates | |
| LA-10190 | | 2002 | Harbert, Claudia | Supplemental Historic Property Survey Report for the I-10 HOV Lane Between I-605 and the SR-57/SR-71/I-210 Interchange in the Cities of Los Angeles, Baldwin Park, West Covina, Covina, San Dimas, and Pomona in Los Angeles County, CA | Caltrans | 19-188913, 19-188914, 19-188915, 19-188916, 19-188917, 19-188918, 19-188919, 19-188920, 19-188921, 19-188922, 19-188923, 19-188924, 19-188925, 19-188926, 19-188927, 19-188928, 19-188929, 19-188930, 19-188931, 19-188932, 19-188933, 19-188934, 19-188935, 19-188936, 19-188937, 19-188938, 19-188939, 19-188940, 19-188941, 19-188942, 19-188943, 19-188944, 19-188945, 19-188946, 19-188947, 19-188948, 19-188949, 19-188950, 19-188951, 19-188952, 19-188953, 19-188954, 19-188955, 19-188956, 19-188957, 19-188958, 19-188959, 19-188960, 19-188961, 19-188962, 19-188963, 19-188964, 19-188965, 19-188966, 19-188967, 19-188968, 19-188969, 19-188970, 19-188971, 19-188972, 19-188973, 19-188974, 19-188975, 19-188976, 19-188977, 19-188978, 19-188979, 19-188980, 19-188981, 19-188982 |
| LA-10561 | | 2001 | Sylvia, Barbara | Negative Archaeological Survey Report - Highway Project Description, State Route 71 | Caltrans | |
| LA-11119 | | 2010 | Vaughan-Acton, Sandra | Construction of Innovation Way, Innovation Village Research Park, Pomona, CA | Cal Poly Pomona Foundation | |

## Report List

| Report No. | Other IDs | Year | Author(s) | Title | Affiliation | Resources |
|---|---|---|---|---|---|---|
| LA-12978 | | 2015 | Losee, Carolyn | Cultural Resources Investigation for Trileaf 611939 Verizon “Lyndale” 900 Corporate Center Drive, Pomona, Los Angeles County, California 91768 | Archaeological Resources Technology | |

# Appendix B

Tribal Correspondence

# NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Reginald Pagaling
*Chumash*

VICE-CHAIRPERSON
Buffy McQuillen
*Yokayo Pomo, Yuki, Nomlaki*

SECRETARY
Sara Dutschke
*Miwok*

PARLIAMENTARIAN
Wayne Nelson
*Luiseño*

COMMISSIONER
Isaac Bojorquez
*Ohlone-Costanoan*

COMMISSIONER
Stanley Rodriguez
*Kumeyaay*

COMMISSIONER
Laurena Bolden
*Serrano*

COMMISSIONER
Reid Milanovich
*Cahuilla*

COMMISSIONER
Bennae Calac
*Pauma-Yuima Band of Luiseño Indians*

EXECUTIVE SECRETARY
Raymond C. Hitchcock
*Miwok, Nisenan*

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov

May 31, 2024

Roberto Mora
Ascent Environmental

Via Email to: Roberto.Mora@ascent.inc

Re: 20220001.01 City of Pomona SJC Bikeway Project, Los Angeles County

To Whom It May Concern:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information submitted for the above referenced project. The results were positive. Please contact the Gabrieleno Band of Mission Indians – Kizh Nation on the attached list for information. Please note that tribes do not always record their sacred sites in the SLF, nor are they required to do so. A SLF search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with a project's geographic area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites, such as the appropriate regional California Historical Research Information System (CHRIS) archaeological Information Center for the presence of recorded archaeological sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. Please contact all of those listed; if they cannot supply information, they may recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
*Cultural Resources Analyst*

Attachment

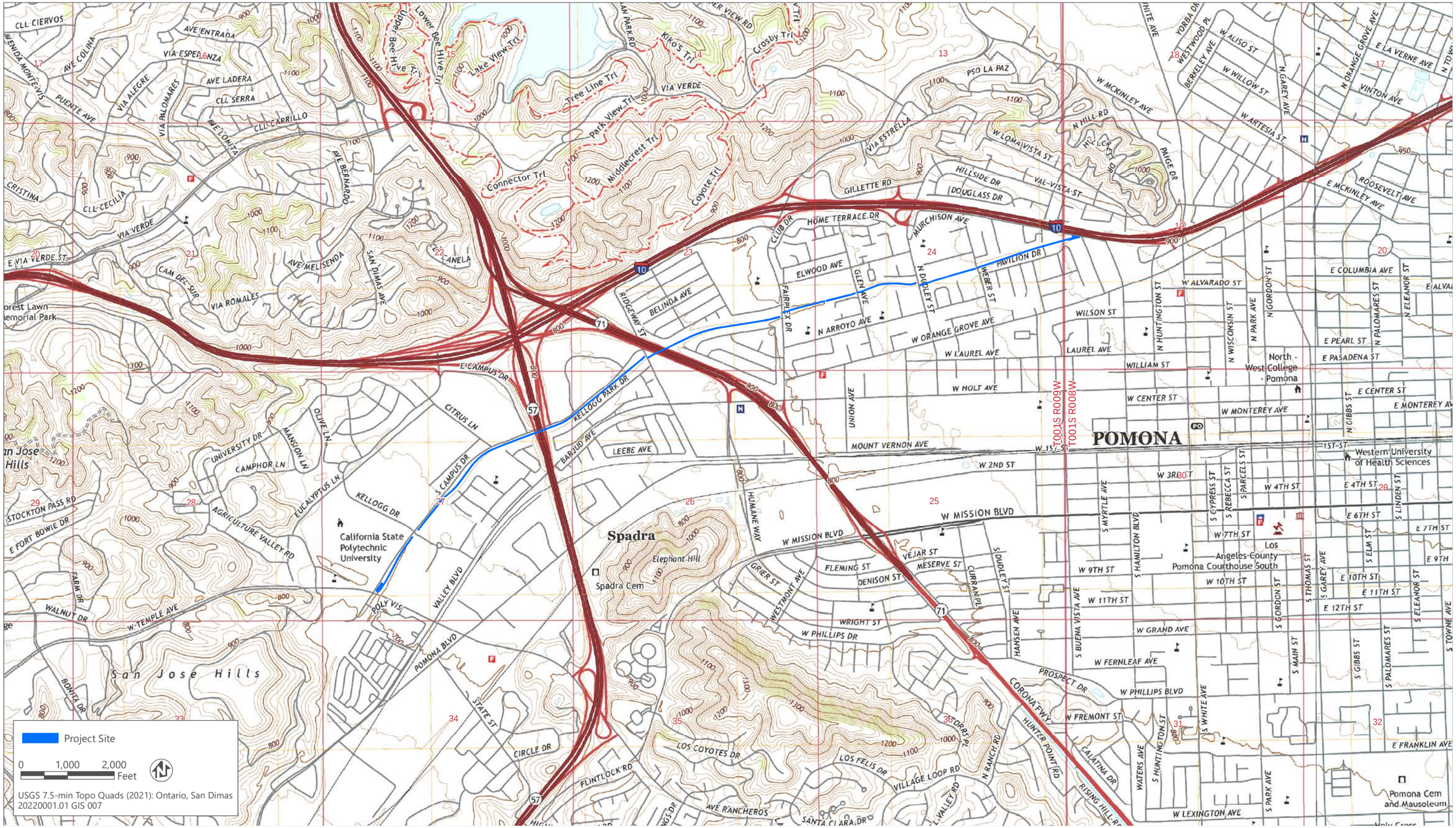
**Native American Heritage Commission**
**Native American Contact List**
**Los Angeles County**
**5/31/2024**

| Tribe Name | Fed (F) Non-Fed (N) | Contact Person | Contact Address | Phone # | Fax # | Email Address | Cultural Affiliation | Counties | Last Updated |
|---|---|---|---|---|---|---|---|---|---|
| Gabrieleno Band of Mission Indians - Kizh Nation | N | Andrew Salas, Chairperson | P.O. Box 393<br>Covina, CA, 91723 | (844) 390-0787 | | admin@gabrielenoindians.org | Gabrieleno | Los Angeles,Orange,Riverside, San Bernardino,Santa Barbara,Ventura | 8/18/2023 |
| Gabrieleno Band of Mission Indians - Kizh Nation | N | Christina Swindall Martinez, Secretary | P.O. Box 393<br>Covina, CA, 91723 | (844) 390-0787 | | admin@gabrielenoindians.org | Gabrieleno | Los Angeles,Orange,Riverside, San Bernardino,Santa Barbara,Ventura | 8/18/2023 |
| Gabrieleno/Tongva San Gabriel Band of Mission Indians | N | Anthony Morales, Chairperson | P.O. Box 693<br>San Gabriel, CA, 91778 | (626) 483-3564 | (626) 286-1262 | GTTribalcouncil@aol.com | Gabrieleno | Los Angeles,Orange,Riverside, San Bernardino,Santa Barbara,Ventura | 12/4/2023 |
| Gabrielino Tongva Indians of California Tribal Council | N | Christina Conley, Cultural Resource Administrator | P.O. Box 941078<br>Simi Valley, CA, 93094 | (626) 407-8761 | | christina.marsden@alumni.usc.edu | Gabrielino | Los Angeles,Orange,Riverside, San Bernardino,Santa Barbara,Ventura | 3/16/2023 |
| Gabrielino Tongva Indians of California Tribal Council | N | Robert Dorame, Chairperson | P.O. Box 490<br>Bellflower, CA, 90707 | (562) 761-6417 | (562) 761-6417 | gtongva@gmail.com | Gabrielino | Los Angeles,Orange,Riverside, San Bernardino,Santa Barbara,Ventura | 3/16/2023 |
| Gabrielino/Tongva Nation | N | Sandonne Goad, Chairperson | 106 1/2 Judge John Aiso St., #231<br>Los Angeles, CA, 90012 | (951) 807-0479 | | sgoad@gabrielino-tongva.com | Gabrielino | Los Angeles,Orange,Riverside, San Bernardino,Santa Barbara,Ventura | 3/28/2023 |
| Gabrielino-Tongva Tribe | N | Sam Dunlap, Cultural Resource Director | P.O. Box 3919<br>Seal Beach, CA, 90740 | (909) 262-9351 | | tongvatcr@gmail.com | Gabrielino | Los Angeles,Orange,Riverside, San Bernardino,Santa Barbara,Ventura | 5/30/2023 |
| Gabrielino-Tongva Tribe | N | Charles Alvarez, Chairperson | 23454 Vanowen Street<br>West Hills, CA, 91307 | (310) 403-6048 | | Chavez1956metro@gmail.com | Gabrielino | Los Angeles,Orange,Riverside, San Bernardino,Santa Barbara,Ventura | 5/30/2023 |
| Santa Rosa Band of Cahuilla Indians | F | Steven Estrada, Tribal Chairman | P.O. Box 391820<br>Anza, CA, 92539 | (951) 659-2700 | (951) 659-2228 | sestrada@santarosa-nsn.gov | Cahuilla | Imperial,Los Angeles,Orange,Riverside, San Bernardino,San Diego | 4/8/2024 |
| Santa Rosa Band of Cahuilla Indians | F | Vanessa Minott, Tribal Administrator | P.O. Box 391820<br>Anza, CA, 92539 | (951) 659-2700 | (951) 659-2228 | vminott@santarosa-nsn.gov | Cahuilla | Imperial,Los Angeles,Orange,Riverside, San Bernardino,San Diego | 4/8/2024 |
| Soboba Band of Luiseno Indians | F | Jessica Valdez, Cultural Resource Specialist | P.O. Box 487<br>San Jacinto, CA, 92581 | (951) 663-6261 | (951) 654-4198 | jvaldez@soboba-nsn.gov | Cahuilla Luiseno | Imperial,Los Angeles,Orange,Riverside, San Bernardino,San Diego | 7/14/2023 |
| Soboba Band of Luiseno Indians | F | Isaiah Vivanco, Chairperson | P.O. Box 487<br>San Jacinto, CA, 92581 | (951) 654-5544 | (951) 654-4198 | ivivanco@soboba-nsn.com | Cahuilla Luiseno | Imperial,Los Angeles,Orange,Riverside, San Bernardino,San Diego | 7/14/2023 |
| Soboba Band of Luiseno Indians | F | Joseph Ontiveros, Tribal Historic Preservation Officer | P.O. Box 487<br>San Jacinto, CA, 92581 | (951) 663-5279 | (951) 654-4198 | jontiveros@soboba-nsn.gov | Cahuilla Luiseno | Imperial,Los Angeles,Orange,Riverside, San Bernardino,San Diego | 7/14/2023 |

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed 20220001.01 City of Pomona SJC Bikeway Project, Los Angeles County.

Record: PROJ-2024-002820
Report Type: List of Tribes
Counties: Los




Source: adapted by Ascent in 2024

5/10/2024

**Project Site Topo**

*DRAFT*

**From:** Roberto Mora
**To:** sestrada@santarosa-nsn.gov; vminott@santarosa-nsn.gov
**Subject:** Request for information - San Jose Multi-Use Bikeway Project
**Date:** Monday, October 14, 2024 9:34:00 AM
**Attachments:** 20220001_01_GIS_007_Project_Site_Topo.pdf
image001.png
image002.png
image003.png
image004.png

---

Greetings!

I am contacting you today as part of the cultural resources background investigation for the San Jose Multi-Use Bikeway Project, Pomona, Los Angeles County. Ascent has been retained to conduct the cultural resources survey and technical report and this contact is concerning that effort.

Project Description

The City of Pomona (City) is proposing the San Jose Creek Multi-Use Bikeway Project (proposed project), which consists of the development of a 3.5-mile off-road bike and pedestrian greenway along a segment of San Jose Creek between Temple Avenue and Murchison Avenue in Pomona, California. The proposed project is identified as a Tier 1 priority project in the City's Active Transportation Plan; it is envisioned to provide pedestrians and bicyclists a safer off-street path of travel between community destinations and amenities in the city, which include the California Polytechnic University at Pomona (Cal Poly Pomona), the Los Angeles County Fairplex, regional transit and bikeway connections, various parks and schools, and commercial shopping centers. The project would consist of 15 access points, including 6 at-grade street crossings. The project would also feature stormwater capture treatments, trailhead gateways and access points, wayfinding and safety signage, and at-grade safe street crossings along the 3.5-mile greenway alignment.

Previous Investigations

A record search has been conducted at the South-Central Coastal Information Center and a pedestrian survey was completed on September 30, 2024. No precontact archaeological resources have been previously identified within the project site and the survey was negative for the presence of indications of indigenous archaeological resources. The SLF search through the Native American Heritage Commission (NAHC) returned positive. The cultural resources report is still in progress.

Request for Information

The NAHC has identified you as someone who may have information concerning cultural resources of tribal concern which may be present in the project site. If you have any knowledge of such resources within the project site, and are willing to share their nature and location, please let me know so I can include them in the cultural report. All information provided regarding specific sites or Native American cultural resources will remain confidential. My contact information is provided below.

Thank you much for your time and attention,

**Roberto Mora, RPA**
**Archaeologist**

Pronouns: he/him/his
**D** 916.732.3328 | **M** 916.330.0624
roberto.mora@ascent.inc

Careers @ Ascent

Ascent
455 Capitol Mall, Suite 300
Sacramento, CA 95814
**O** 916.444.7301

**Note:** *My email address has changed, please update your address book.*

| | |
|---|---|
| **From:** | Vanessa Minott |
| **To:** | Roberto Mora |
| **Subject:** | RE: Request for information - San Jose Multi-Use Bikeway Project |
| **Date:** | Tuesday, October 15, 2024 7:39:20 AM |
| **Attachments:** | image005.png<br>image006.png<br>image007.png<br>image008.png<br>image009.png |

---

Acha'i Tamit,
Thank you for reaching out to Santa Rosa Band of Cahuilla Indians. We defer any comments to Soboba Band of Luiseno Indians cultural resource department.

Respectfully,
Vanessa Minott,
Tribal Administrator

Santa Rosa Band of Cahuilla Indians
P.O. Box 391820
Anza, CA 92539
951-659-2700 ext. 102
760-668-0460 work cell

---

**From:** Roberto Mora <roberto.mora@ascent.inc>
**Sent:** Monday, October 14, 2024 9:35 AM
**To:** Steven Estrada <sestrada@santarosa-nsn.gov>; Vanessa Minott <vminott@santarosa-nsn.gov>
**Subject:** [External] Request for information - San Jose Multi-Use Bikeway Project

Greetings!

I am contacting you today as part of the cultural resources background investigation for the San Jose Multi-Use Bikeway Project, Pomona, Los Angeles County. Ascent has been retained to conduct the cultural resources survey and technical report and this contact is concerning that effort.

Project Description

The City of Pomona (City) is proposing the San Jose Creek Multi-Use Bikeway Project (proposed project), which consists of the development of a 3.5-mile off-road bike and pedestrian greenway along a segment of San Jose Creek between Temple Avenue and Murchison Avenue in Pomona, California. The proposed project is identified as a Tier 1 priority project in the City's Active Transportation Plan; it is envisioned to provide pedestrians and bicyclists a safer off-street path of travel between community destinations and amenities in the city, which include the California Polytechnic University at Pomona (Cal Poly Pomona), the Los Angeles County Fairplex, regional transit and bikeway connections, various parks and schools, and commercial shopping centers. The project would consist of 15 access points, including 6 at-grade street crossings. The project would also feature stormwater capture treatments, trailhead gateways and access points, wayfinding and

safety signage, and at-grade safe street crossings along the 3.5-mile greenway alignment.

Previous Investigations

A record search has been conducted at the South-Central Coastal Information Center and a pedestrian survey was completed on September 30, 2024. No precontact archaeological resources have been previously identified within the project site and the survey was negative for the presence of indications of indigenous archaeological resources. The SLF search through the Native American Heritage Commission (NAHC) returned positive. The cultural resources report is still in progress.

Request for Information

The NAHC has identified you as someone who may have information concerning cultural resources of tribal concern which may be present in the project site. If you have any knowledge of such resources within the project site, and are willing to share their nature and location, please let me know so I can include them in the cultural report. All information provided regarding specific sites or Native American cultural resources will remain confidential. My contact information is provided below.

Thank you much for your time and attention,

**Roberto Mora, RPA**
**Archaeologist**
Pronouns: he/him/his
**D** 916.732.3328 | **M** 916.330.0624
roberto.mora@ascent.inc

Careers @ Ascent

Ascent
455 Capitol Mall, Suite 300
Sacramento, CA 95814
**O** 916.444.7301

**Note:** *My email address has changed, please update your address book.*

| | |
|---|---|
| **From:** | Roberto Mora |
| **To:** | jvaldez@soboba-nsn.gov; ivivanco@soboba-nsn.com; jontiveros@soboba-nsn.gov |
| **Subject:** | Request for information - San Jose Multi-Use Bikeway Project |
| **Date:** | Monday, October 14, 2024 9:35:00 AM |
| **Attachments:** | 20220001_01_GIS_007_Project_Site_Topo.pdf<br>image001.png<br>image002.png<br>image003.png<br>image004.png |

---

Greetings!

I am contacting you today as part of the cultural resources background investigation for the San Jose Multi-Use Bikeway Project, Pomona, Los Angeles County. Ascent has been retained to conduct the cultural resources survey and technical report and this contact is concerning that effort.

Project Description

The City of Pomona (City) is proposing the San Jose Creek Multi-Use Bikeway Project (proposed project), which consists of the development of a 3.5-mile off-road bike and pedestrian greenway along a segment of San Jose Creek between Temple Avenue and Murchison Avenue in Pomona, California. The proposed project is identified as a Tier 1 priority project in the City's Active Transportation Plan; it is envisioned to provide pedestrians and bicyclists a safer off-street path of travel between community destinations and amenities in the city, which include the California Polytechnic University at Pomona (Cal Poly Pomona), the Los Angeles County Fairplex, regional transit and bikeway connections, various parks and schools, and commercial shopping centers. The project would consist of 15 access points, including 6 at-grade street crossings. The project would also feature stormwater capture treatments, trailhead gateways and access points, wayfinding and safety signage, and at-grade safe street crossings along the 3.5-mile greenway alignment.

Previous Investigations

A record search has been conducted at the South-Central Coastal Information Center and a pedestrian survey was completed on September 30, 2024. No precontact archaeological resources have been previously identified within the project site and the survey was negative for the presence of indications of indigenous archaeological resources. The SLF search through the Native American Heritage Commission (NAHC) returned positive. The cultural resources report is still in progress.

Request for Information

The NAHC has identified you as someone who may have information concerning cultural resources of tribal concern which may be present in the project site. If you have any knowledge of such resources within the project site, and are willing to share their nature and location, please let me know so I can include them in the cultural report. All information provided regarding specific sites or Native American cultural resources will remain confidential. My contact information is provided below.

Thank you much for your time and attention,

**Roberto Mora, RPA**
**Archaeologist**

Pronouns: he/him/his
**D** 916.732.3328 | **M** 916.330.0624
roberto.mora@ascent.inc

Careers @ Ascent

Ascent
455 Capitol Mall, Suite 300
Sacramento, CA 95814
**O** 916.444.7301

**Note:** *My email address has changed, please update your address book.*

| | |
|---|---|
| **From:** | Roberto Mora |
| **To:** | "christina.marsden@alumni.usc.edu"; gtongva@gmail.com |
| **Subject:** | Request for information - San Jose Multi-Use Bikeway Project |
| **Date:** | Monday, October 14, 2024 9:30:00 AM |
| **Attachments:** | 20220001_01_GIS_007_Project_Site_Topo.pdf<br>image001.png<br>image002.png<br>image003.png<br>image004.png |

---

Greetings!

I am contacting you today as part of the cultural resources background investigation for the San Jose Multi-Use Bikeway Project, Pomona, Los Angeles County. Ascent has been retained to conduct the cultural resources survey and technical report and this contact is concerning that effort.

Project Description

The City of Pomona (City) is proposing the San Jose Creek Multi-Use Bikeway Project (proposed project), which consists of the development of a 3.5-mile off-road bike and pedestrian greenway along a segment of San Jose Creek between Temple Avenue and Murchison Avenue in Pomona, California. The proposed project is identified as a Tier 1 priority project in the City's Active Transportation Plan; it is envisioned to provide pedestrians and bicyclists a safer off-street path of travel between community destinations and amenities in the city, which include the California Polytechnic University at Pomona (Cal Poly Pomona), the Los Angeles County Fairplex, regional transit and bikeway connections, various parks and schools, and commercial shopping centers. The project would consist of 15 access points, including 6 at-grade street crossings. The project would also feature stormwater capture treatments, trailhead gateways and access points, wayfinding and safety signage, and at-grade safe street crossings along the 3.5-mile greenway alignment.

Previous Investigations

A record search has been conducted at the South-Central Coastal Information Center and a pedestrian survey was completed on September 30, 2024. No precontact archaeological resources have been previously identified within the project site and the survey was negative for the presence of indications of indigenous archaeological resources. The SLF search through the Native American Heritage Commission (NAHC) returned positive. The cultural resources report is still in progress.

Request for Information

The NAHC has identified you as someone who may have information concerning cultural resources of tribal concern which may be present in the project site. If you have any knowledge of such resources within the project site, and are willing to share their nature and location, please let me know so I can include them in the cultural report. All information provided regarding specific sites or Native American cultural resources will remain confidential. My contact information is provided below.

Thank you much for your time and attention,

**Roberto Mora, RPA**
**Archaeologist**

Pronouns: he/him/his
**D** 916.732.3328 | **M** 916.330.0624
roberto.mora@ascent.inc

Careers @ Ascent

Ascent
455 Capitol Mall, Suite 300
Sacramento, CA 95814
**O** 916.444.7301

**Note:** *My email address has changed, please update your address book.*

**From:** Roberto Mora
**To:** GTTribalcouncil@aol.com
**Subject:** Request for information - San Jose Multi-Use Bikeway Project
**Date:** Monday, October 14, 2024 9:29:00 AM
**Attachments:** 20220001_01_GIS_007_Project_Site_Topo.pdf
image001.png
image002.png
image003.png
image004.png

---

Greetings!

I am contacting you today as part of the cultural resources background investigation for the San Jose Multi-Use Bikeway Project, Pomona, Los Angeles County. Ascent has been retained to conduct the cultural resources survey and technical report and this contact is concerning that effort.

Project Description

The City of Pomona (City) is proposing the San Jose Creek Multi-Use Bikeway Project (proposed project), which consists of the development of a 3.5-mile off-road bike and pedestrian greenway along a segment of San Jose Creek between Temple Avenue and Murchison Avenue in Pomona, California. The proposed project is identified as a Tier 1 priority project in the City's Active Transportation Plan; it is envisioned to provide pedestrians and bicyclists a safer off-street path of travel between community destinations and amenities in the city, which include the California Polytechnic University at Pomona (Cal Poly Pomona), the Los Angeles County Fairplex, regional transit and bikeway connections, various parks and schools, and commercial shopping centers. The project would consist of 15 access points, including 6 at-grade street crossings. The project would also feature stormwater capture treatments, trailhead gateways and access points, wayfinding and safety signage, and at-grade safe street crossings along the 3.5-mile greenway alignment.

Previous Investigations

A record search has been conducted at the South-Central Coastal Information Center and a pedestrian survey was completed on September 30, 2024. No precontact archaeological resources have been previously identified within the project site and the survey was negative for the presence of indications of indigenous archaeological resources. The SLF search through the Native American Heritage Commission (NAHC) returned positive. The cultural resources report is still in progress.

Request for Information

The NAHC has identified you as someone who may have information concerning cultural resources of tribal concern which may be present in the project site. If you have any knowledge of such resources within the project site, and are willing to share their nature and location, please let me know so I can include them in the cultural report. All information provided regarding specific sites or Native American cultural resources will remain confidential. My contact information is provided below.

Thank you much for your time and attention,

**Roberto Mora, RPA**
**Archaeologist**

Pronouns: he/him/his
**D** 916.732.3328 | **M** 916.330.0624
roberto.mora@ascent.inc

Careers @ Ascent

Ascent
455 Capitol Mall, Suite 300
Sacramento, CA 95814
**O** 916.444.7301

**Note:** *My email address has changed, please update your address book.*

**From:** Roberto Mora
**To:** tongvatcr@gmail.com; Chavez1956metro@gmail.com
**Subject:** Request for information - San Jose Multi-Use Bikeway Project
**Date:** Monday, October 14, 2024 9:34:00 AM
**Attachments:** 20220001_01_GIS_007_Project_Site_Topo.pdf
image001.png
image002.png
image003.png
image004.png

---

Greetings!

I am contacting you today as part of the cultural resources background investigation for the San Jose Multi-Use Bikeway Project, Pomona, Los Angeles County. Ascent has been retained to conduct the cultural resources survey and technical report and this contact is concerning that effort.

Project Description

The City of Pomona (City) is proposing the San Jose Creek Multi-Use Bikeway Project (proposed project), which consists of the development of a 3.5-mile off-road bike and pedestrian greenway along a segment of San Jose Creek between Temple Avenue and Murchison Avenue in Pomona, California. The proposed project is identified as a Tier 1 priority project in the City's Active Transportation Plan; it is envisioned to provide pedestrians and bicyclists a safer off-street path of travel between community destinations and amenities in the city, which include the California Polytechnic University at Pomona (Cal Poly Pomona), the Los Angeles County Fairplex, regional transit and bikeway connections, various parks and schools, and commercial shopping centers. The project would consist of 15 access points, including 6 at-grade street crossings. The project would also feature stormwater capture treatments, trailhead gateways and access points, wayfinding and safety signage, and at-grade safe street crossings along the 3.5-mile greenway alignment.

Previous Investigations

A record search has been conducted at the South-Central Coastal Information Center and a pedestrian survey was completed on September 30, 2024. No precontact archaeological resources have been previously identified within the project site and the survey was negative for the presence of indications of indigenous archaeological resources. The SLF search through the Native American Heritage Commission (NAHC) returned positive. The cultural resources report is still in progress.

Request for Information

The NAHC has identified you as someone who may have information concerning cultural resources of tribal concern which may be present in the project site. If you have any knowledge of such resources within the project site, and are willing to share their nature and location, please let me know so I can include them in the cultural report. All information provided regarding specific sites or Native American cultural resources will remain confidential. My contact information is provided below.

Thank you much for your time and attention,

**Roberto Mora, RPA**
**Archaeologist**

Pronouns: he/him/his
**D** 916.732.3328 | **M** 916.330.0624
roberto.mora@ascent.inc

Careers @ Ascent

Ascent
455 Capitol Mall, Suite 300
Sacramento, CA 95814
**O** 916.444.7301

**Note:** *My email address has changed, please update your address book.*

**From:** Roberto Mora
**To:** sgoad@gabrielino-tongva.com
**Subject:** Request for information - San Jose Multi-Use Bikeway Project
**Date:** Monday, October 14, 2024 9:33:00 AM
**Attachments:** 20220001_01_GIS_007_Project_Site_Topo.pdf
image001.png
image002.png
image003.png
image004.png

---

Greetings!

I am contacting you today as part of the cultural resources background investigation for the San Jose Multi-Use Bikeway Project, Pomona, Los Angeles County. Ascent has been retained to conduct the cultural resources survey and technical report and this contact is concerning that effort.

Project Description

The City of Pomona (City) is proposing the San Jose Creek Multi-Use Bikeway Project (proposed project), which consists of the development of a 3.5-mile off-road bike and pedestrian greenway along a segment of San Jose Creek between Temple Avenue and Murchison Avenue in Pomona, California. The proposed project is identified as a Tier 1 priority project in the City's Active Transportation Plan; it is envisioned to provide pedestrians and bicyclists a safer off-street path of travel between community destinations and amenities in the city, which include the California Polytechnic University at Pomona (Cal Poly Pomona), the Los Angeles County Fairplex, regional transit and bikeway connections, various parks and schools, and commercial shopping centers. The project would consist of 15 access points, including 6 at-grade street crossings. The project would also feature stormwater capture treatments, trailhead gateways and access points, wayfinding and safety signage, and at-grade safe street crossings along the 3.5-mile greenway alignment.

Previous Investigations

A record search has been conducted at the South-Central Coastal Information Center and a pedestrian survey was completed on September 30, 2024. No precontact archaeological resources have been previously identified within the project site and the survey was negative for the presence of indications of indigenous archaeological resources. The SLF search through the Native American Heritage Commission (NAHC) returned positive. The cultural resources report is still in progress.

Request for Information

The NAHC has identified you as someone who may have information concerning cultural resources of tribal concern which may be present in the project site. If you have any knowledge of such resources within the project site, and are willing to share their nature and location, please let me know so I can include them in the cultural report. All information provided regarding specific sites or Native American cultural resources will remain confidential. My contact information is provided below.

Thank you much for your time and attention,

**Roberto Mora, RPA**
**Archaeologist**

Pronouns: he/him/his
**D** 916.732.3328 | **M** 916.330.0624
roberto.mora@ascent.inc

Careers @ Ascent

Ascent
455 Capitol Mall, Suite 300
Sacramento, CA 95814
**O** 916.444.7301

**Note:** *My email address has changed, please update your address book.*

**From:** Roberto Mora
**To:** admin@gabrielenoindians.org
**Subject:** Request for information - San Jose Multi-Use Bikeway Project
**Date:** Monday, October 14, 2024 9:29:00 AM
**Attachments:** 20220001_01_GIS_007_Project_Site_Topo.pdf
image001.png
image002.png
image003.png
image004.png

---

Greetings!

I am contacting you today as part of the cultural resources background investigation for the San Jose Multi-Use Bikeway Project, Pomona, Los Angeles County. Ascent has been retained to conduct the cultural resources survey and technical report and this contact is concerning that effort.

Project Description

The City of Pomona (City) is proposing the San Jose Creek Multi-Use Bikeway Project (proposed project), which consists of the development of a 3.5-mile off-road bike and pedestrian greenway along a segment of San Jose Creek between Temple Avenue and Murchison Avenue in Pomona, California. The proposed project is identified as a Tier 1 priority project in the City's Active Transportation Plan; it is envisioned to provide pedestrians and bicyclists a safer off-street path of travel between community destinations and amenities in the city, which include the California Polytechnic University at Pomona (Cal Poly Pomona), the Los Angeles County Fairplex, regional transit and bikeway connections, various parks and schools, and commercial shopping centers. The project would consist of 15 access points, including 6 at-grade street crossings. The project would also feature stormwater capture treatments, trailhead gateways and access points, wayfinding and safety signage, and at-grade safe street crossings along the 3.5-mile greenway alignment.

Previous Investigations

A record search has been conducted at the South-Central Coastal Information Center and a pedestrian survey was completed on September 30, 2024. No precontact archaeological resources have been previously identified within the project site and the survey was negative for the presence of indications of indigenous archaeological resources. The SLF search through the Native American Heritage Commission (NAHC) returned positive. The cultural resources report is still in progress.

Request for Information

The NAHC has identified you as someone who may have information concerning cultural resources of tribal concern which may be present in the project site. If you have any knowledge of such resources within the project site, and are willing to share their nature and location, please let me know so I can include them in the cultural report. All information provided regarding specific sites or Native American cultural resources will remain confidential. My contact information is provided below.

Thank you much for your time and attention,

**Roberto Mora, RPA**
**Archaeologist**

Pronouns: he/him/his
**D** 916.732.3328 | **M** 916.330.0624
roberto.mora@ascent.inc

Careers @ Ascent

Ascent
455 Capitol Mall, Suite 300
Sacramento, CA 95814
**O** 916.444.7301

**Note:** *My email address has changed, please update your address book.*

# Appendix D

Geotechnical Report

*Prepared for:*

**Alta Planning + Design, Inc.**
617 West 7th Street
Los Angeles, CA 90017

# FINAL GEOTECHNICAL REPORT

## SAN JOSE CREEK MULTI-USE BIKEWAY
## POMONA, CALIFORNIA

*Prepared by:*

Geosyntec consultants

engineers | scientists | innovators

3530 Hyland Ave, Suite 100
Costa Mesa, CA 92626

Project Number: SC1303

9 May 2025 (Revised 12 June 2025)

Geosyntec consultants

# FINAL GEOTECHNICAL REPORT

## SAN JOSE CREEK MULTI-USE BIKEWAY
## POMONA, CALIFORNIA

*Prepared by:*

**Geosyntec Consultants, Inc.**
3530 Hyland Avenue, Suite 100
Costa Mesa, CA 92626

This report was prepared under the
supervision and direction of the undersigned

9 May 2025 (Revised 12 June 2025)

Santiago Caballero, Ph.D., P.E.(CA)
Project Geotechnical Engineer

Jerko Kocijan, Ph.D., P.E. (CA) G.E. (CA)
Principal Geotechnical Engineer

Geosyntec consultants

# TABLE OF CONTENTS


**Page**

1. INTRODUCTION ..... 1
   - 1.1 Project Description ..... 1
   - 1.2 Scope of Services ..... 2
   - 1.3 Relevant Codes and Standards ..... 2
   - 1.4 Organization of the Report ..... 3
   - 1.5 Previous Explorations and Available Information ..... 3
2. GEOTECHNICAL FIELD EXPLORATION AND LABORATORY TESTING PROGRAM ..... 5
   - 2.1 Site Visit / Reconnaissance and Pre-Exploration Planning ..... 5
   - 2.2 Subsurface Explorations ..... 6
     - 2.2.1 Phase I – Soil Borings Near SR-71 Undercrossing ..... 8
     - 2.2.2 Phase II – Hand Auger Test Pits ..... 9
     - 2.2.3 Geotechnical Laboratory Testing Program ..... 10
     - 2.2.4 Analytical Testing of Soil Cuttings ..... 10
3. SITE CONDITIONS ..... 11
   - 3.1 Regional Geologic Conditions ..... 11
   - 3.2 Site Conditions ..... 11
   - 3.3 Subsurface Conditions ..... 12
   - 3.4 Groundwater Conditions ..... 13
   - 3.5 Existing Adjacent Structures Near Proposed Bikeway Intersection ..... 13
4. GEOHAZARDS ..... 14
   - 4.1 Strong Ground Shaking and Design Ground Motions ..... 14
     - 4.1.1 California Building Code (CBC) 2022 Response Spectrum ..... 15
     - 4.1.2 Caltrans Acceleration Response Spectrum (ARS) ..... 16
     - 4.1.3 USACE Response Spectrum ..... 17
   - 4.2 Liquefaction ..... 19
     - 4.2.1 Lateral Spreading ..... 19
     - 4.2.2 Seismic Dry Soil Settlement ..... 19
     - 4.2.3 Fault Surface Rupture ..... 20
   - 4.3 Geologic Hazards ..... 20
     - 4.3.1 Landslides and Slope Stability ..... 20
     - 4.3.2 Expansive Soils ..... 20
     - 4.3.3 Flooding ..... 20
     - 4.3.4 Other Geologic Hazards ..... 21
5. GEOTECHNICAL ENGINEERING RECOMMENDATIONS ..... 22
   - 5.1.1 Site Stripping and Demolition ..... 22

## TABLE OF CONTENTS (Continued)

**Page**


5.2 Excavation and Site Grading ..... 22
5.2.1 Subgrade Preparation ..... 22
5.2.2 General Engineered Fill Placement ..... 24
5.2.3 Structural Fill ..... 24
5.2.4 Compaction Between Proposed Walls and Adjacent Structures ..... 25
5.3 Surface Drainage ..... 25
5.4 Impact to Existing Adjacent Structures near Proposed Undercrossing ..... 26
5.4.1 Evaluation of Existing Caltrans SR-71 Bridge Foundation ..... 26
5.4.2 Evaluation of Existing SJC Channel ..... 27
5.5 Uplift of Proposed Undercrossing Slab ..... 27
5.6 Settlement ..... 28
5.7 Modulus of Subgrade Reaction ..... 28
5.8 Retaining Walls ..... 28
5.8.1 Lateral Earth Pressures ..... 28
5.8.2 Retaining Wall Backfill ..... 30
5.8.3 Sand-Slurry Backfill ..... 30
5.8.4 Seismic Loads ..... 30
5.9 Pavement Design Recommendations ..... 31
5.10 Corrosivity of Onsite Soils ..... 31

6. CONSTRUCTION CONSIDERATIONS ..... 33
6.1 Groundwater During Excavation ..... 33
6.2 Construction Observation and Considerations ..... 33
6.3 Temporary Excavation Slopes ..... 33

7. LIMITATIONS ..... 34

8. REFERENCES ..... 35

## LIST OF TABLES

Table 1 – Summary of Geotechnical Explorations Near Proposed Intersection ..... 7
Table 2 – Summary of Test Pit Soils ..... 9
Table 3 – Nearby Active Faults to SR-71 Undercrossing ..... 14
Table 4 – Design Ground Motion Parameters ..... 16
Table 5 – Caltrans ARS Online Design Response Spectra..... 17
Table 6 – OBE and MCE Ground Motions [USACE, 2024] ..... 18
Table 7 – Lateral Earth Pressures for Retaining Walls..... 29
Table 8 –Pavement Design Recommendations ..... 31
Table 9 – Summary of Soil Corrosivity Laboratory Test Results ..... 32

## LIST OF FIGURES

Figure 1 – Site Vicinity Map
Figure 2 – Proposed Bikeway Undercrossing SR-71 Bridge
Figure 3A and 3B – As-built SR-71 Bridge Plans
Figure 4 – Boring Location Plan
Figure 5 – Regional Geology Map
Figure 6 –Seismic Hazard Zone Map

## LIST OF APPENDICES

APPENDIX A – 90% Concept Plans and Historical Information
APPENDIX B – Geophysical Survey Report
APPENDIX C – Boring Logs
APPENDIX D – Hammer Efficiency Report
APPENDIX E – Analytical Soil Testing
APPENDIX F – Geotechnical Laboratory Results
APPENDIX G – ASCE 7 Hazard Report Output
APPENDIX H – Caltrans ARS Report Output

# 1. INTRODUCTION

Geosyntec Consultants, Inc. (Geosyntec) is pleased to submit this geotechnical report to Alta Planning + Design Inc. (Alta) to support the design and construction of the San Jose Creek Multi-Use Bikeway Project (Project) in Pomona, California (Site). The information provided in this report was in accordance with the Service Agreement dated 16 September 2022 signed between Geosyntec and Alta.

The Project consists of a paved bikeway alignment of approximately 3.4 miles, including a crossing under the State Route (SR) 71 at the San Jose Creek (SJC) Channel bridge (Bridge No. 53-2051, also referred to as SR-71 bridge in this report). This report includes geotechnical recommendations for the design and construction of the bikeway undercrossing of the SR-71 bridge between approximately proposed Sta. 90+90 to 96+00.

## 1.1 Project Description

Based on 90% design plans provided by Alta (**Appendix A)**, we understand that the Project consists of a multi-use bikeway starting at the intersection of West Temple Ave and South Campus Dr. (approximately Sta. 10+00), running to the east and parallel to the SJC Channel (channel), on alternate sides of the channel, and ending near the intersection of Murchison Ave and the channel (Sta. 185+77.27). A site vicinity map is shown in Figure 1.

A proposed bikeway is anticipated to be constructed under the SR-71 at the San Jose Creek Channel bridge as part of the project, approximately between Sta. 90+90 to Sta. 96+00 on the proposed bikeway alignment. The undercrossing is located on the eastern side of the channel, between the channel wall and SR-71 bridge abutment No.2. It is understood that the SR-71 bridge is under the jurisdiction of the California Department of Transportation (Caltrans), and the SJC channel is under the jurisdiction of United States Army Corp of Engineers (USACE). The proposed undercrossing of SR-71 bridge is shown in Figure 2. Extracts from the as-built plans for the SR-71 bridge, dated October 1972, are shown in Figure 3A and 3B. Based on as-built information, an older non-operating bridge is also present under the SR-71 bridge, with its abutment serving as part of the SJC channel wall, as shown in the photo insert in Figure 2. Based on 90% design plans for the undercrossing, the bottom of the proposed concrete slab will vary in elevation approximately between EL.+768 and EL.+773 ft. Elevations provided in the 90% plans and this report are based on the North American Vertical Datum of 1988 (NAVD88) unless otherwise noted. The existing ground will need to be excavated up to approximately 6 to 10 feet at the lowest point between the proposed bikeway and the bridge (approximately Sta. 94+00) to provide the trail with a minimum of 10 feet of clearance below the bridge.

This project will also include new paved roads constructed near the existing ground level, integrated into the bikeway system, as well as several landscaped areas.

## 1.2 Scope of Services

The geotechnical field exploration program and recommendations documented in this Geotechnical Report were performed to support the proposed design and construction of the San Jose Creek Multi-Use Bikeway alignment and the undercrossing of the SR-71 bridge. The objectives of this study were to develop an understanding of the site subsurface conditions (i.e., soil and groundwater conditions) along the proposed alignment, develop relevant geotechnical design parameters, and provide geotechnical recommendations and construction considerations. Geosyntec performed the following tasks as part of this scope:

- Review of available information near the proposed undercrossing along with the proposed alignment;
- Geotechnical subsurface explorations, in-situ testing, and sampling;
- Geotechnical and analytical laboratory testing;
- Geotechnical evaluations and calculations;
- Development of geotechnical recommendations; and
- Preparation of this Report.

## 1.3 Relevant Codes and Standards

This report was prepared in general accordance with the following codes, standards, and manuals:

- 2025 California Department of Transportation (Caltrans) Seismic Design Criteria Version 2.1 (SDC V2.1) – ARS Online V4.0
- 2023 County of Los Angeles Building Code (Title 26);
- 2022 California Building Code, Title 24, Part 2 (CBC, 2022);
- 2016 Minimum Design Loads and Associated Criteria for Buildings and Other Structures, American Society of Civil Engineers (ASCE 7-16);
- 2022 California Department of Transportation (Caltrans) Geotechnical Manual;
- 2015 California Department of Transportation (Caltrans) Memo to Designers (MTDs); and
- 2024 United States Army Corp of Engineers (USACE), Earthquake Analysis, Evaluation, and Design for Civil Works Projects.

## 1.4 Organization of the Report

The body of this Report is divided into six sections, which contain the following:

- **Section 1 – Introduction:** provides a description of the Project, scope of work, project team, and summary of previous geotechnical investigations and available information;
- **Section 2 – Geologic, Tectonic, and Seismic Setting:** describes the regional and local geologic conditions;
- **Section 3 – Geotechnical Field Investigations and Laboratory Testing Program:** describes the current field investigation and laboratory testing program performed in support of the Project;
- **Section 4 – Site Conditions:** describes our understanding of the subsurface conditions based on the interpretation of the available data;
- **Section 5 – Seismic-Geologic Hazards:** describes seismic and geologic hazards present at the site; and
- **Section 6 – Geotechnical Recommendations**: presents the results of geotechnical evaluations and provides relevant geotechnical recommendations for the design and construction of the proposed bikeway undercrossing between proposed Sta. 90+90 to Sta. 96+00 and pavement recommendations for the proposed bikeway alignment.

## 1.5 Previous Explorations and Available Information

Geosyntec reviewed the available geotechnical information along the proposed bikeway alignment. As-built plans of the existing SR-71 bridge and the SJC Channel were provided by Alta as part of our document review. No additional geotechnical information was identified or provided for the remainder of the bikeway alignment. The reviewed documents are listed below:

- As-built plans for the SR-71 bridge dated October 1972, available as part of the Caltrans archive. The plans indicated that the bridge is supported on shallow footings embedded approximately at elevation EL.+767.0 ft based on the National Geodetic Vertical Datum of 1929 (NGVD29), approximately EL.+769.14 ft NAVD88. Footings are designed with an allowable footing pressure of 2.0 tons per square feet (tsf) (4.0 kips per square foot, ksf), as indicated in Figure 3B. Furthermore, per the Caltrans SR-71 Freeway Conversion Project and fact sheet EA 21061 (PM 0.5/1.8) & 21062 (PM1.8/R4.7), we understand that Caltrans is planning to widen SR-71 to add one mixed flow lane and one High Occupancy Vehicle (HOV) lane in each direction. The widening

project is planned to occur in two phases, for which Phase 1 will include design and construction near the proposed bikeway intersection. The fact sheet states that Phase 1 construction will start between 2021 and 2024. For reference, the SR-71 bridge as-built, widening plans at the proposed crossing and the fact sheet of widening projects are included in **Appendix A**.

- Review of historical boring logs performed as part of the SR-71 bridge design performed at the intersection with the SJC Channel. The boring location plan and associated borings are included in As-built plans dated 6 January 1969. A total of four explorations were performed for the design during the design phase of the bridge at this location (i.e., B-1 through B-4). Groundwater was encountered at a depth of approximately 46 feet (approximately elevation EL.+723 feet) during the explorations in 1966. No reference datum was identified from these records. For reference, the boring location plan and associated boring logs at this location are included in **Appendix A**.
- Review of historical boring logs performed approximately 400 feet east of the proposed project, on the Ridgeway St and SR-71 intersection. Two recent explorations were performed (i.e., A-20-001 and A-20-002) to a depth of approximately 100 feet below ground surface (bgs). No groundwater was encountered during this field exploration. For reference, the boring location plan and associated boring logs at this location are included in **Appendix A**.

# 2. GEOTECHNICAL FIELD EXPLORATION AND LABORATORY TESTING PROGRAM

The geotechnical field exploration program and laboratory testing were performed to gather data regarding the subsurface conditions along the alignment and the proposed bikeway undercrossing with SR-71. The following subcontractors were retained in the execution of the field exploration program and laboratory testing:

- Utility Clearance Survey – Subsurface Surveys & Associates, California;
- Hollow-stem Auger Drilling – BC2 Environmental, California;
- Hand-Auger Test Pits – Veteran Drilling, California;
- Geotechnical Laboratory Testing – AP Engineering and Testing, Inc., California;
- Soil Cuttings Analytical Testing – Eurofins Environment Testing Southwest, California; and
- Soil Cuttings Disposal – American Integrated Services, Inc., California.

Elements of the field exploration and laboratory testing are described in the following sections of this report.

## 2.1 Site Visit / Reconnaissance and Pre-Exploration Planning

Geosyntec planned the field investigation in two phases. Phase I included the drilling of soil borings near the proposed bikeway undercrossing with SR-71. Phase II included the excavation of hand-auger test pits along the bikeway alignment. Prior to planning each phase of the field investigation, Geosyntec reviewed available relevant information for the Site, including regional and Site geology, historical Site use, and other available subsurface information from previous geotechnical studies (Caltrans, 1969; Caltrans, 2021 for the bikeway undercrossing with SR-71). Geosyntec field personnel also performed a site reconnaissance to visually assess the Site conditions, access, and mark the field exploration locations for utility clearance and accessibility.

For phase I, Geosyntec notified Underground Services Alert (USA-DigAlert) a minimum of 48 hours prior to drilling (DigAlert Ticket Nos. A241310064-00A and B241310045-00B) to identify the presence of any subsurface utilities at the proposed exploration locations. Geosyntec also obtained exploration permits to advance the borings from the County of Los Angeles, Public Health department, required under the Drinking Water Program (Permit No. SR0369497).

Geosyntec also prepared a Health and Safety Task Hazard Analysis (THA) for both Phases I and II of the field investigation that included a description of the proposed field operations outlining the appropriate procedures to safely implement the scope of work performed in the field.

## 2.2 Subsurface Explorations

Geosyntec conducted geotechnical subsurface explorations, in-situ testing, and a sampling program, as summarized in **Table 1**. This table also includes a list of historical geotechnical explorations near the proposed bikeway undercrossing at SR-71. No additional historical explorations were identified along the remainder of the proposed bikeway alignment. Figures 4A through 4E illustrate the locations of both the recent and historical explorations along the alignment, including those near the proposed bridge undercrossing. Due to access restrictions within Caltrans and the USACE jurisdictional areas, Geosyntec performed our subsurface investigation (i.e., soil borings) approximately 250 to 350 feet from the proposed intersection.

As part of Phase I of the field investigation and prior to advancement of the drilled exploratory borings of the current exploration, and in addition to notifying DigAlert service as described above, each boring location was surveyed using the following geophysical instruments for utility conflict. A geophysical report provided by the subcontractor and associated field notes are included in **Appendix B**.

- Electromagnetic (EM) Instruments: Fischer TW-6 M-Scope;
- Ground Penetrating Radar (GPR): Sensors and Software Noggin;
- Line Locators: Metrotech 9800 series and a Ridgid SR-60; and
- Magnetics: Schonstedt GA-52.

## Table 1 – Summary of Geotechnical Explorations Near Proposed Intersection

| Exploration Type and ID | Approximate Surface Elevation (feet)[1] | Drilled Depth (feet) | Approximate Latitude (deg)[2] | Approximate Longitude (deg)[2] | Drilling Date | Groundwater (feet bgs)[3] |
|---|---|---|---|---|---|---|
| **Current Exploration (Geosyntec, 2024)** | | | | | | |
| B-1 | 768 | 51.5 | 34.063986 | -117.797060 | 5/16/2024 | N.E. |
| B-2 | 775 | 51.5 | 34.064692 | -117.794730 | 5/15/2024 | N.E. |
| P-1 | 701 | 3 | 34.050928 | -117.815681 | 12/5/2024 | N.E. |
| P-2 | 706 | 3 | 34.052928 | -117.814308 | 12/5/2024 | N.E. |
| P-3 | 710 | 3 | 34.054967 | -117.815681 | 12/13/2024 | N.E. |
| P-4 | 710 | 3 | 34.056464 | -117.810681 | 12/13/2024 | N.E. |
| P-5 | 719 | 3 | 34.058336 | -117.808753 | 12/13/2024 | N.E. |
| P-6 | 725 | 3 | 34.059261 | -117.806194 | 12/13/2024 | N.E. |
| P-7 | 729 | 3 | 34.060092 | -117.803444 | 12/13/2024 | N.E. |
| P-8 | 737 | 3 | 34.061539 | -117.80105 | 12/13/2024 | N.E. |
| P-9 | 770 | 3 | 34.064147 | -117.796728 | 12/5/2024 | N.E. |
| P-10 | 778 | 3 | 34.065472 | -117.79325 | 12/5/2024 | N.E. |
| P-11 | 783 | 3 | 34.065931 | -117.790564 | 12/5/2024 | N.E. |
| P-12 | 795 | 3 | 34.066369 | -117.787919 | 12/5/2024 | N.E. |
| P-13 | 792 | 3 | 34.067208 | -117.785083 | 12/5/2024 | N.E. |
| P-14 | 804 | 3 | 34.067853 | -117.782128 | 12/4/2024 | N.E. |
| P-15 | 817 | 3 | 34.068344 | -117.779564 | 12/4/2024 | N.E. |
| P-16 | 826 | 3 | 34.068475 | -117.776919 | 12/4/2024 | N.E. |
| P-17 | 834 | 3 | 34.069436 | -117.773153 | 12/4/2024 | N.E. |
| P-18 | 853 | 3 | 34.070531 | -117.769031 | 12/5/2024 | N.E. |
| P-19 | 745 | 3 | 34.062589 | -117.799506 | 12/13/2024 | N.E. |
| **Historical Explorations (Near the proposed bikeway undercrossing with SR-71)** | | | | | | |
| A-20-01 | 791[4] | 100 | - | - | 01/23/2020 | N.E. |
| A-20-02 | 798[4] | 97 | - | - | 01/30/2020 | N.E. |
| B-1 | 769[5] | 60 | - | - | 9/16/1966 | 46 |
| B-2 | 775[5] | 55 | - | - | 9/14/1966 | N.M. |
| B-3 | 770[5] | 55 | - | - | 9/14/1966 | N.M. |
| B-4 | 776[5] | 40 | - | - | 9/15/1966 | N.M. |

Notes:
[1] Surface elevation estimated based on Google Earth, or as listed on State of California Department of Public Works, Division of Highways records.
[2] Coordinate system refers to WGS84.
[3] N.E.- Not Encountered; N.M. – Not Measured.
[4] Elevation noted based on NAVD88 per records.
[5] Datum Not Available on As-Built Records.

### 2.2.1 Phase I – Soil Borings Near SR-71 Undercrossing

Phase I of the field investigation was conducted between 15 and 16 May 2024. Phase I consisted of drilling two hollow-stem auger (HSA) borings to 50 feet bgs near the north and south side of SR-71 bridge Abutment No.2. Due to accessibility factors to the location of the proposed crossing, the closest location at which Geosyntec was able to conduct the field explorations was approximately 200 feet west of Abutment No.2 (Boring B-1) and approximately 350 feet east of Abutment No. 2 (Boring B-2), as shown in Figure 4C.

The HSA borings were drilled with an 8-inch diameter auger, using a truck-mounted CME 95 drill rig. Prior to advancing the HSA borings, the uppermost 5 feet were hand augered. Cuttings from each location were collected as bulk samples in the upper 2.5 feet, and soil samples were then collected at 2.5-foot intervals to 12.5 feet bgs and in 5-foot intervals thereafter to the total depth of exploration. Representative soil samples were obtained using a 2-inch outside diameter split-barrel spoon sampler in general accordance with American Society for Testing and Materials (ASTM) D1586, Standard Penetration Test (SPT) or a 3-inch outside diameter Modified California (ModCal) sampler. SPTs were performed by driving the split-spoon sampler into the soil 18 inches over three six-inch intervals by means of an automatic 140-pound hammer falling 30 inches. The number of hammer blows required to drive the sampler through the second and third 6-inch intervals (i.e., the N values) for each sample are indicated on the soil test boring logs included in **Appendix C**. The N values provide an indication of the in-place consistency and density of the soils. Soil borings were backfilled with a cement bentonite grout after completion of drilling.

Excess soil cuttings were stored in drums for analytical testing and further disposal. The hammer efficiency test report provided by the drilling subcontractor is included in **Appendix D**. The exploration program was performed under the supervision of a California Licensed Professional Engineer (PE). The subsurface descriptions (visual-manual procedures) were developed in general accordance with ASTM Test Standard D2488 (ASTM, 2020). Visual Soil Classification and laboratory test results were performed in general accordance with ASTM D2487-17 (Unified Soil Classification System, 2017). A key to the logs, along with the individual boring logs, is included with the boring logs. Sampling information and other pertinent field data and observations are included in the boring logs.

Once the augers were removed, both borings were tremie backfilled with cement-bentonite grout. In general accordance with County of Los Angeles drilling permit requirements, the concrete driveway at the B-1 boring location was restored using quickset concrete patch, and the pavement at the B-2 boring location was restored with a cold asphalt patch.

### 2.2.2 Phase II – Hand Auger Test Pits

Phase II of the field investigation was conducted along the proposed bikeway alignment between 4 and 13 December 2024. Phase II consisted of excavating 19 hand auger test pits to a depth of 3 feet bgs. The test pits were spaced approximately 1,000 feet apart along the entire alignment, as shown in Figure 4A to 4E. The hand-auger test pits were excavated with a 3-inch diameter hand auger. Cuttings were visually classified, and bulk samples were collected at each location for laboratory testing. Hand-auger test pits were backfilled with cuttings. The exploration program was performed under the supervision of a California Licensed PE. The subsurface descriptions (visual-manual procedures) were developed in general accordance with ASTM Test Standard D2488 (ASTM, 2020). Visual Soil Classification and laboratory test results were performed in general accordance with ASTM D2487-17 (Unified Soil Classification System, 2017). A summary of the hand auger test pits and the visual classification of collected samples is tabulated in **Table 2**.

**Table 2 – Summary of Test Pit Soils**

| Test Pit ID | Soil Description[a] |
|---|---|
| P1 | Light yellowish brown Clayey Sand (SC) [5,80,15] |
| P2 | Light yellowish brown Silty Sand (SM) [5,75,20] |
| P3 | Light yellowish brown Silty Sand (SM) [5,75,20] |
| P4 | Light yellowish brown Silty Sand (SM) [5,65,30] |
| P5 | Light yellowish brown Silty Sand (SM) [5,75,20] |
| P6 | Light yellowish brown Silty Sand (SM) [0,70,30] |
| P-7 | Light yellowish brown Silty Sand (SM) [5,75,20] |
| P8 | Light yellowish brown Silty Sand with Gravel (SM) [15,60,25] |
| P9 | Yellowish brown Sandy Silt with Gravel (ML) [15,30,55] |
| P10 | Yellowish brown Silty Sand (SM) [10,75,15] |
| P11 | Reddish brown Silty Sand (SM) [0,85,15] |
| P12[b] | Dark reddish brown Sandy Silt with Gravel (ML) [15,30,55] |
| P13 | Light yellowish brown Silty Sand (SM) [10,75,15] |
| P14 | Yellowish brown Silty Sand with Gravel (SM) [15,70,15] |
| P15 | Light yellowish brown Silty Sand (SM) [10,75,15] |
| P16 | Light yellowish brown Silty Sand with Gravel [15,70,15] |
| P17 | Light yellowish brown Silty Sand (SM) with Gravel [20,65,15] |
| P18 | Light yellowish brown Silty Sand with Gravel [15,70,15] |
| P19 | Light yellowish brown Clayey Sand (SC) [5,75,20] |

Notes:
a. Percentages in brackets represent the percentage for gravel, sand and fines respectively, based on visual classification.
b. Asphalt core (3-inches)

### 2.2.3 Geotechnical Laboratory Testing Program

Geosyntec retained the services of AP Engineering and Testing, Inc., of Pomona, California, for geotechnical laboratory testing. The laboratory tests were performed in general accordance with ASTM testing procedures or other generally accepted test methods.

- Particle-size distribution (finer than #200 sieve) using wash (ASTM D1140);
- Moisture content and dry density (ASTM D2216 and D7263);
- Direct Shear (ASTM D3080);
- Atterberg limits (ASTM D4318); and
- R-Values (ASTM D2844).

Results of the laboratory testing program are summarized in **Appendix F**. The results of the geotechnical laboratory testing program were used to corroborate field classifications and assist in selecting inputs for geotechnical evaluations. Additionally, one sample from the Phase I soil borings was collected for soil corrosivity testing, including minimum resistivity, sulfate content, chloride content, and pH (California Testing Method [CTM] 643, CTM 417, and CTM 422). The results of this testing are included in Appendix B-2. Corrosion-related recommendations are presented in Section 5.8 of this report.

### 2.2.4 Analytical Testing of Soil Cuttings

Exploration-derived soil cuttings from Phase I soil borings were drummed in 50-gallon steel drums and stored off site at the City of Pomona Parks Maintenance Yard, pending analytical sampling and disposal. A total of seven drums were collected with soil cuttings for Phase I. Two composite samples were collected for analytical testing before disposal. Based on the analytical test results, the soil cuttings were transported and disposed of as non-hazardous materials. Results of the analytical testing are included in **Appendix E.** Analytical testing included the following:

- Volatile Organic Compounds (VOCs) by EPA 8260B;
- Total Petroleum Hydrocarbons (TPH) by EPA M8015B;
- Chlorinated Pesticides (OCP) by EPA 8081A; and
- Title 22 Metals and Mercury by EPA 6010B/7471A.

# 3. SITE CONDITIONS

The surface, subsurface, and geotechnical characterization of the Site is based on a review of topographic information provided by publicly available information from the California Geological Survey (CGS) and from the findings of our field explorations described in Section 2. The review of the site conditions includes a description of geologic and geotechnical conditions and an evaluation of both the current and historical groundwater elevations.

## 3.1 Regional Geologic Conditions

The project site is situated south of the San Jose Hills and north of the Puente Hills in the eastern portion of the Los Angeles Basin. The Los Angeles Basin is located at the northern extent of the Peninsular Ranges geomorphic province, which extends south into Baja California, Mexico. The Peninsular Ranges geomorphic province is characterized by a series of northwest trending mountains and valleys separated by associated faults that developed in response to oblique, right-lateral, strike-slip fault zones associated with the plate boundary interaction between the Pacific and North American tectonic plates. The site lies north of a mapped northwest trending splay of the Elsinore fault located at the eastern base of the Puente and Chino Hills. This splay of the Elsinore fault is a reverse right-lateral sense of movement with an estimated slip rate of 1.0 millimeters (mm) to 5.0 mm per year. The site is also south of the San Jose fault, which lies at the southeastern flank of the San Jose Hills. The San Jose fault is a northwest dipping, left-lateral reverse fault with a 0.2-mm to 1.0-mm per year slip rate. The closest Holocene-Active fault and potential seismic source to the Site is the Duarte fault, which is part of the Sierra Madre fault zone located 7.0 miles to the northwest. The Sierra Madre fault zone is a north-dipping reverse fault zone located at the southern flank of the San Gabriel Mountains with an average slip rate of 1.0 mm to 5.0 mm per year.

The youngest deposits in the vicinity of the site are Holocene to late Pleistocene alluvium. At depth, the alluvium is underlain by Cretaceous-age crystalline granitic bedrock, which is primarily Tonalite. A Regional Geology Map is illustrated in Figure 5.

## 3.2 Site Conditions

Based on 90% design plans provided by Alta, we understand that the bikeway alignment is generally planned near existing ground surface elevations starting between approximately Sta. 10+00 to 185+77.27. The elevations for the proposed alignment range between approximately EL. +703 ft NAVD88 near Sta. 10+00 to approximately EL. +857 ft NAVD88 near Sta. 185+77.27. The alignment runs along the SJC Channel, and it is anticipated that some of the near surface soils along the alignment consist of the backfill material previously placed and compacted behind the channel walls. The surface

conditions along the proposed bikeway alignment consist of unpaved surface, gravel, or asphalt concrete paving at some locations.

Existing surface elevations near the proposed bikeway undercrossing with SR-71 between Sta. 90+90 to Sta. 96+00, range approximately between EL.+770 and +778 ft NAVD88. As noted earlier in this report, the proposed construction consists of excavating the ground surface under the SR-71 bridge to the proposed bottom of the concrete slab that will also vary in elevation between approximately EL.+768 and EL.+773.50 ft NAVD88 at the proposed undercrossing. From the as-built bridge plans shown in Figure 3A, we also understand that the bottom of the shallow footing on Abutment No.2 for the SR-71 bridge is approximately at EL.+767 ft NGVD29 (EL.+769.14 ft NAVD88 as shown in Figure 2).

### 3.3 Subsurface Conditions

Subsurface conditions near the proposed bikeway undercrossing were evaluated using data from historical exploratory borings, considering the likely construction sequence for the channel and SR-71 bridge based on as-built documentation, and findings from the current Phase I field investigation. For the purpose of the subsurface evaluation at this location, Geosyntec divided the subsurface into shallow materials (i.e., soils from the existing ground surface to the bottom of existing wall channel, average elevation El.+757 ft NAVD88) (See Profile and Typical Section at Proposed Crossing in Figure 2) and materials deeper below the bottom of channel bottom. From the bridge as-built plans (Figure 3A and 3B), it can be interpreted that the channel was constructed before the current SR-71 bridge, and therefore, it can be considered that, to allow long-term performance of the channel wall, soils behind the channel wall may consist of compacted fill material that is typically used as backfill behind walls. It is also interpreted that the bridge foundation may have been supported on competent native material below EL.+769.14 ft NAVD88 and backfilled with structural backfill to the existing ground surface as part of the construction of the bridge foundations.

By considering the above sequence of construction and interpretation, soils underneath the proposed bikeway undercrossing, from the existing ground surface to an approximate average elevation of EL.+757 ft NAVD88, may consist of compacted fill soils and competent native soils as part of previous construction materials. Deeper materials below average elevation EL.+757 ft NAVD88 were assessed based on historical boring logs performed for the SR-71 bridge design (i.e., B-1 to B-4, Caltrans 1966), more recent historical boring logs near the intersection (i.e., A-20-001 and A-20-002, Caltrans 2020) and current explorations (i.e., B-1 and B-2, Geosyntec 2024). Deeper materials below average EL.+757 ft NAVD88, may include medium dense to dense Silty Sands (SM), Clayey Sands (SC) and firm to very stiff Sandy Lean Clays, Lean Clays, and Lean Clays

with Sand (CL) and Silt with Sand (ML). Some interbedded gravel was also encountered in a few layers at depths below EL.+757 ft NAVD88.

**N**ear-ground surface soils (i.e., up to 3 feet bgs) located along the proposed bikeway alignment were evaluated based on the current Phase II field investigation. The encountered near-ground surface soils consist of previously compacted materials as part of the channel walls, as described in SJC channel as-built information. Based on our review of the SJC channel as-built information, it is unknown how backfill materials were placed and compacted. Based on our Phase II field investigation, the near-ground surface soils along the alignment generally consist of Clayey Sands (SC), Silty Sands (SC) and Poorly graded Sands (SP).

## 3.4 Groundwater Conditions

No groundwater was encountered during the current investigation. Groundwater information from explorations near the proposed undercrossing, dated 1966 and 1972, indicated an approximate groundwater level about 46 feet bgs, approximate elevation EL+726 feet. No reference datum was identified in those records. Groundwater is not expected to affect the design and construction of the proposed bikeway alignment, including the bikeway undercrossing. However, it should be noted that fluctuations in groundwater levels and presence of perched water may occur as a result of seasonal variations in rainfall, evaporation, construction activity, surface runoff, and other site-specific factors.

## 3.5 Existing Adjacent Structures Near Proposed Bikeway Intersection

As described earlier in this report, the SR-71 bridge crosses obliquely over the proposed bikeway undercrossing, approximately between station Sta. 92+00 to Sta. 94+00. Based on the 90% design plans, we understand that shallow foundation of the SR-71 bridge are approximately at elevation EL.+769.14 ft NAVD88 and will have an approximate 3-foot clearance from the outer edge of the existing foundation to the proposed retaining wall of the bikeway undercrossing. For reference, a typical cross section is included in **Appendix A.**

The SJC channel will also run parallel to the proposed bikeway alignment and crossing, which consist of a reinforced concrete U-shape channel. We understand that the clearance between the existing retaining wall of the SJC channel structure and the planned retaining wall of the bikeway undercrossing will be approximately 9 inches.

# 4. GEOHAZARDS

This section contains a description and evaluation of potential geohazards such as fault rupture, ground shaking, liquefaction, and lateral spreading, based the understanding of site conditions described in Section 3 and a review of relevant publicly available information.

## 4.1 Strong Ground Shaking and Design Ground Motions

The Site is situated within a seismically active Southern California region and will likely experience moderate to severe ground shaking in response to a large magnitude earthquake occurring on a local or more distant active fault during the lifespan of the proposed facility. As a result, seismically induced ground shaking in response to an earthquake occurring on a nearby active fault, such as the San Jose Fault located to the northwest or the Indian Hill Fault, located to the northwest, is considered to be the major geologic hazard affecting the Project. Other active faults in the vicinity include the Sierra Madre Fault zone to the north, the Elsinore Fault Zone (Chino Section) Fault to the southeast, the San Antonia Fault to the northeast, the Elsinore Fault Zone (Whittier Section) to the southwest, the Yorba Linda Fault to the southeast, and the Red Hill-Etiwanda Avenue fault to the northeast. These fault zones and their respective distances from the Site and the representative maximum Moment Magnitudes, as obtained from the 2013 Caltrans Fault database, are summarized in **Table 3** below.

**Table 3 – Nearby Active Faults to SR-71 Undercrossing**

| Fault Name | Distance and Direction from the Site | Maximum Moment Magnitude |
|---|---|---|
| San Jose Fault | About 0.37 miles to the northwest | 6.6 |
| Indian Hill Fault | About 2.97 miles to the northwest | 6.4 |
| Sierra Madre Fault Zone | About 4.5 miles north | 7.2 |
| Elsinore Fault Zone (Chino Section) | About 8 miles southeast | 6.6 |
| San Antonio Fault | About 8.25 miles northeast | 6.5 |
| Elsinore Fault Zone (Whittier Section) | About 9.5 miles southwest | 6.9 |
| Yorba Linda Fault | About 10 miles southeast | 6.4 |
| Red Hill-Etiwanda Avenue Fault | About 10 miles northeast | 6.2 |

### 4.1.1 California Building Code (CBC) 2022 Response Spectrum

The seismic design parameters for the project were established in accordance with California Building Code 2022 [CBC, 2022], Chapter 26, Section 1613 for Site Class D, which follows ASCE 7-16 Chapter 20. The average SPT blow counts obtained during the Phase I soil exploration ranged from 15 to 50 blows per foot within the upper 51.5 feet of soil. Based on these field N-values and in accordance with ASCE 7-16 criteria, the site is classified as Site Class D, indicative of "stiff soil" conditions. We assumed that the soil below the boring termination depth of 51.5 feet to 100 feet bgs to be similar for the purpose of estimating Site Class. Mapped ground motion parameters $S_S$ and $S_1$ were obtained using the ASCE 7 Hazard Tool (https://asce7hazardtool.online/). The output from the web tool is included in **Appendix G**. The seismic design parameters are summarized in **Table 4.**

Note that ASCE 7-16, Section 11.4.8, requires that sites classified as Site Class D with an $S_1$ greater than or equal to 0.2 perform a site-specific ground motion hazard analysis. Although the Site meets the criteria for this requirement, a site-specific ground motion hazard analysis was not performed, which is permitted per Exception #2 in ASCE 7-16 Section 11.4.8. This exception states that a ground motion hazard analysis is not required provided that the value of the seismic response coefficient Cs is determined by Eq. (12.8-2) for values of $T \leq 1.5Ts$ and taken as equal to 1.5 times the value computed in accordance with either Eq. (12.8-3) for $TL \geq T > 1.5Ts$ or Eq. (12.8-4) for $T > TL$. This approach to computation of the seismic response coefficient Cs, should be implemented by the structural engineer.

**Table 4 – Design Ground Motion Parameters**

| Parameter | Value |
|---|---|
| Approximate Site Latitude (degrees) | 34.064372 |
| Approximate Site Longitude (degrees) | -117.796128 |
| Site Class | D |
| Mapped Short Period Spectral Response Acceleration, $S_s$ | 1.73 g |
| Mapped 1-second Spectral Response Acceleration, $S_1$ | 0.628 g [(a)] |
| Short Period Site coefficient (at 0.2-s period), $F_a$ | 1.0 |
| Long Period Site coefficient (at 1.0-s period), $F_v$ | 1.7 [(a)] |
| Site-modified Short Period Spectral Response Acceleration, $S_{MS}$ | 1.73 g |
| Site-modified 1-second Spectral Response Acceleration, $S_{M1}$ | 1.068 g |
| Design Short Period Spectral Response Acceleration, $S_{DS}$ | 1.153 g |
| Design 1-second Spectral Response Acceleration, $S_{D1}$ | 0.712 g |
| Long Period Transition | 8 s |
| Mapped $MCE_G$ Peak Ground Acceleration, PGA | 0.738 g |
| Site Coefficient, $F_{PGA}$ | 1.1 |
| Site Class Adjusted $MCE_G$ Peak Ground Acceleration, $PGA_M$ | 0.812 g |
| Design Moment Magnitude | 6.84 [(b)] |

Notes:
a. See the commentary in ASCE/SEI 7-16, Section 11.4.8 "Exception note" 2.
b. Design moment magnitude selected using a deaggregation data from the USGS hazard Tool USGS Hazard Tool, Dynamic Conterminous U.S. 2014 (update).

### 4.1.2 Caltrans Acceleration Response Spectrum (ARS) Online V4.0

The Caltrans Acceleration Response Spectrum (ARS) curves were developed following guidelines in Caltrans Seismic Design Criteria (SDC V2.1, 2025) and Caltrans ARS Online V4.0 applying near-fault adjustment factors as required by SDC V2.1 and the USGS uniform hazard spectrum for 975-year return period event. Site subsurface conditions were incorporated into the ARS development by using the site-specific assessment of the static (small-strain) $Vs_{30}$, the time-average shear wave velocity in the top 100 feet (30 meters). Shear wave velocities were not measured during the current investigation and were estimated based on nearby records obtained from the Shear-wave velocity profile database, VSPDB (Accessed June 2024). Shear wave velocities between 250 to 310 m/s (approximately 800 to 1,000 ft/s) were obtained for the proposed crossing and used as upper and lower values for estimation for the response spectrum. **Table 5** presents design ARS data based on an envelope of the upper and lower bound of shear

wave velocities collected. probabilistic event The results of the deaggregation at PGA level for the 975-return period indicates a controlling moment magnitude of about 7.25 and mean site-source distance for spectral acceleration at a 1-second period of 16.52 kilometers. The output from the web tool for the upper and lower value of shear wave velocities is included in **Appendix H**.

**Table 5 – Caltrans ARS Online Design Response Spectra**

| T (s) | Design Sa (g) 975 years (5% in 50 Years) |
|---|---|
| 0 | 0.69 |
| 0.05 | 0.82 |
| 0.1 | 1.21 |
| 0.15 | 1.47 |
| 0.2 | 1.6 |
| 0.25 | 1.68 |
| 0.3 | 1.71 |
| 0.4 | 1.66 |
| 0.5 | 1.58 |
| 0.75 | 1.37 |
| 1 | 1.21 |
| 1.5 | 0.86 |
| 2 | 0.65 |
| 3 | 0.42 |
| 4 | 0.29 |
| 5 | 0.22 |
| 7.5 | 0.12 |
| 10 | 0.08 |

### 4.1.3 USACE Response Spectrum

The ER 1110-2-1806 USACE [USACE 2024] publication dated 29 May 2024 provides general provisions to provide earthquake ground motions and associated performance requirements for analysis, evaluation, and design of civil works project features. The provisions indicate that ground motions should be provided for the following performance criteria and by categorizing the project features as non-critical or critical features. Following "*Table 1 – Consequence-based project feature classification"* of the ER 1110-2-1806 USACE provisions, the SJC channel may be classified as a non-critical feature.

a. Operating basis earthquake ground motion (OBE-GM), which uses a hazard spectrum for 975-year return period event (i.e., 5% in 50 years); and

b. The maximum credible earthquake ground motion (MCE-GM), which uses a hazard spectrum for 145-year return period event (i.e., 1% in 1 years).

Corresponding ground motions were estimated from the United States Geological Survey (USGS) website developed as part of the National Seismic Hazard Mapping (NSHM) project. The NSHM 2018 ground motions model is adopted in ASCE/SEI 7-22. The NSHM 2023 ground motion model is an updated model to the NSHM 2018 model, with a significant impact on the location-level hazard results at long return periods. However, we understand that based on the structure type, evaluation at long periods will not control. The ground motions developed as part of the NSHM 2018 (ASCE/SEI 7-22) and NSHM 2023 are provided in **Table 6**.

**Table 6 – OBE and MCE Ground Motions [USACE, 2024]**

| T (s) | Sa (g) 975 years (5% in 50 Years) | | Sa (g) 145 years (1% in 1 Year) | |
|---|---|---|---|---|
| | ASCE/SEI 2022 (NSHM, 2018) | NSHM (2023) | ASCE/SEI 2022 (NSHM, 2018) | NSHM (2023) |
| PGA | 0.61 | 0.67 | 0.29 | 0.34 |
| 0.01 | 0.61 | 0.68 | 0.29 | 0.35 |
| 0.02 | 0.61 | 0.68 | 0.30 | 0.35 |
| 0.03 | 0.62 | 0.69 | 0.30 | 0.36 |
| 0.05 | 0.70 | 0.78 | 0.35 | 0.40 |
| 0.075 | 0.87 | 0.97 | 0.43 | 0.51 |
| 0.1 | 1.03 | 1.16 | 0.52 | 0.60 |
| 0.15 | 1.26 | 1.38 | 0.64 | 0.75 |
| 0.2 | 1.39 | 1.54 | 0.71 | 0.83 |
| 0.25 | 1.48 | 1.64 | 0.74 | 0.86 |
| 0.3 | 1.54 | 1.71 | 0.75 | 0.87 |
| 0.4 | 1.51 | 1.69 | 0.70 | 0.82 |
| 0.5 | 1.43 | 1.60 | 0.64 | 0.75 |
| 0.75 | 1.14 | 1.28 | 0.48 | 0.57 |
| 1 | 0.94 | 1.04 | 0.38 | 0.44 |
| 1.5 | 0.66 | 0.73 | 0.25 | 0.30 |
| 2 | 0.49 | 0.55 | 0.18 | 0.21 |
| 3 | 0.32 | 0.35 | 0.11 | 0.13 |
| 4 | 0.23 | 0.25 | 0.08 | 0.09 |
| 5 | 0.17 | 0.18 | 0.05 | 0.07 |
| 7.5 | 0.10 | 0.10 | 0.03 | 0.04 |
| 10 | 0.06 | 0.07 | 0.02 | 0.02 |

## 4.2 Liquefaction

Seismically induced soil liquefaction can be described as a significant loss of strength and stiffness due to the generation of cyclic pore water pressure from seismic shaking or other large cyclic loading. The material types considered most susceptible to liquefaction are saturated, loose- to medium-dense granular soils and low-plasticity, fine-grained soils. Manifestations of soil liquefaction can include the loss of bearing capacity below foundations, surface settlements and tilting in level ground, and instabilities in areas of sloping ground. Soil liquefaction can also result in increased lateral and uplift pressures on buried structures. Lightweight or unrestrained buried structures may float upward to the ground surface during a liquefaction event. The Seismic Hazard Zone Map for the project area shown in Figure 6 indicates that the Site may be underlain by soils that are potentially susceptible to liquefaction.

As noted earlier in this report, the groundwater level was encountered at approximately 46 feet bgs in 1966 during the initial explorations performed for the SR-71 bridge. More recent boring log information near the bridge [Caltrans 2020], explorations A-20-001 and A-20-002, did not encounter groundwater and were advanced to approximately 100 feet bgs. Furthermore, groundwater was not encountered during our current Phase I explorations, which advanced to approximately 50 feet bgs. Considering the depth of groundwater and the presence of predominantly stiff fine-grained cohesive soils underlain by dense coarse-grained soils below 50 feet, the probability of soil liquefaction and liquefaction-induced settlement at the site is low.

### 4.2.1 Lateral Spreading

Seismically induced lateral spreading is a potential hazard characterized by lateral movement of liquefied saturated soils in gently sloping ground with free face (stream banks, and shorelines), when liquefiable soil layers are continuous over large lateral areas. Given the absence of shallow groundwater and negligible liquefaction triggering potential, the potential for lateral spreading is also considered negligible.

### 4.2.2 Seismic Dry Soil Settlement

Unsaturated cohesionless soils above the groundwater table may be subject to seismically induced settlement during strong ground shaking. An assessment of seismically induced dry sand settlements of unsaturated soils at the proposed crossing was performed. Approximately 1 to 2 inches of total seismically induced settlement of unsaturated sands above the groundwater level were estimated. Differential settlements were estimated to be about one-half of the total settlements over a distance of about 30 feet. Dry sand settlement estimation was estimated using two-thirds of the $PGA_M$ by following the procedures provided in the methodology developed by Pradel [Pradel, 1998].

### 4.2.3 Fault Surface Rupture

Fault surface rupture refers to the offset that occurs in the ground during an earthquake as a result of the relative movement of the ground on both sides of a fault. When that offset reaches the ground surface, either because the fault extends to the surface or because the offset propagates from the fault at depth through overlying soil to the surface, it is referred to as surface-fault rupture. Based on the review of online maps provided as part of the CGS Seismic Hazards Program: Alquist-Priolo Fault Hazard Zones, the project site is not within a State of California Alquist-Priolo Special Study Zone. As discussed earlier, the closest fault (San Jose fault) is located approximately 2,000 feet northwest of the project site. There are no known active or potentially active faults transecting the site. Therefore, we anticipate the potential for surface fault rupture to be low for the project site.

## 4.3 Geologic Hazards

### 4.3.1 Landslides and Slope Stability

Considering the lack of steep slopes adjacent to the Site, landslides and slope stability are not considered a significant developmental hazard for the proposed facilities. Furthermore, the CGS (2024) website for Earthquake Zone of Required Investigation (Figure 6) indicates that the Site is not located within an earthquake-induced landslide zone.

### 4.3.2 Expansive Soils

The term “expansive soils” refer to soils that exhibit significant volumetric expansion when water content is increased and volumetric contraction when water content is decreased. Expansive soils typically contain a relatively high percentage of clayey material, and their expansion potential is generally related to the type of clay mineral (e.g., montmorillonite). Based on the interpretation of construction and evaluation of subsurface conditions described in Section 3.3, soils underneath the proposed undercrossing are considered to have a low potential for expansion.

### 4.3.3 Flooding

The Federal Emergency Management Agency (FEMA) presents the flood hazard potential in the vicinity of the site as part of their National Flood Hazard Layer (NFHL) for Geographic Information Systems (GIS). NFHL, accessed in 2024, indicates the proposed undercrossing is located in Zone X, which is defined as an “area of 0.2% annual chance of flood” [FEMA, 2024]. Based on our review of the FEMA mapping, the geologic and physiographic setting, the distance to the ocean and other large water bodies, and the project elevations, the potential for flooding or inundation at the proposed

bikeway undercrossing site and along the alignment is considered low. However, it should be noted that due to the grading of the undercrossing, localized flooding or water ponding can occur and therefore an adequate drainage system should be considered as part of its design.

### 4.3.4 Other Geologic Hazards

Other potential geologic hazards evaluated that could possibly affect the Project include tsunamis and seiches. Tsunamis are seismically induced waves generated by sudden movements of the ocean bottom during submarine earthquakes, landslides, or volcanic activity. Seiches are similarly generated, but are oscillating waves within bodies of water such as reservoirs, lakes, or bays resulting in overtopping. The proposed project is not located within a mapped tsunami inundation area and no enclosed water bodies are located adjacent to or upgradient of the immediate project area. Based on the physiographic setting of the project, the distance to the ocean or other large water bodies, and the elevation of the project site, it is our opinion that the potential for flooding from seismically induced tsunamis and seiches is not considered a potential hazard.

# 5. GEOTECHNICAL ENGINEERING RECOMMENDATIONS

Based on our understanding of site conditions, it is our opinion that the proposed bikeway alignment, including the proposed undercrossing with SR-71 bridge, are feasible from a geotechnical perspective, provided that the recommendations outlined in this report are implemented in the design and construction.

### 5.1.1 Site Stripping and Demolition

Geosyntec understands that some stripping of vegetation and removal of debris and asphalt at some locations may be necessary prior to excavation and site grading. Furthermore, near the SR-71 bridge, based on the discretion of the project designer and the structural engineer, a demolition of the existing non-operating bridge slab may be also necessary (photo shown in Figure 2). Debris resultant from demolition should be disposed of off-site.

## 5.2 Excavation and Site Grading

### 5.2.1 Subgrade Preparation

#### *5.2.1.1 General Bikeway Alignment*

We understand that the finished grade of alignment will consist of flexible pavement. Based on the 90% design plans provided by Alta, the pavement finished grade is proposed near the existing ground surface, and therefore, minimum cut and fill earthwork is anticipated to achieve the finished grades. Some areas will require new compacted fill to meet final grades. The pavement section for the bikeway alignment may be placed on existing near-ground surface soils provided that the subgrade is prepared as described in this section.

The subgrade below the pavement section should be scarified to a depth of approximately 8 inches, moisture conditioned to 0 and 3 percent above optimum moisture content, and compacted to 95 percent of the maximum dry density, as determined by ASTM D 1557. If the subgrade soil of these areas is soft or disturbed, it should be excavated to expose firm soil, with the resulting subgrade scarified and conditioned as above, and the excavated material replaced with structural fill, as described in Section 5.2.3 below.

As discussed in earlier sections, Geosyntec does not anticipate encountering undocumented fill or unsuitable native soils such as expansive soils in the near-ground surface soils of the proposed alignment. Based on our evaluation of the near-ground surface soil conditions along the alignment, on-site soils can be considered suitable for general fill and structural backfill after observation and approval by the project geotechnical engineer. If on-site soils are not suitable for backfill, imported engineered

fill may be necessary. After achieving target subgrade elevations and the subgrade is exposed, the geotechnical engineer should assess the subgrade area to identify any areas that may have unsuitable subgrade. The bottom of the excavations and subgrade exposed should be observed and approved by the project geotechnical engineer.

#### *5.2.1.2 Bikeway Undercrossing*

Based on 90% design plans provided by Alta, the proposed bikeway undercrossing will consist of a U-shape reinforced concrete structure. To achieve grading of the proposed undercrossing, we understand that soils in front of the SR-71 bridge Abutment No.2, approximately between Sta. 90+90 to Sta. 96+00, are planned to be excavated, as shown in Figure 2. As shown in the profile view of the undercrossing (Figure 2), the depth of excavation to the bottom of the proposed concrete slab is planned to range approximately between a minimum of 2.5 feet bgs at Sta. 90+90 to approximately a maximum 8 to 10 feet bgs at the lowest point of the undercrossing at approximately Sta. 94+00.

Geosyntec anticipates the following steps to achieve adequate excavation and grading for the undercrossing and should follow the recommendations provided by the Caltrans Construction Manual Section 4-1903B [Caltrans, 2019]:

- After achieving target excavation depths and the subgrade is exposed, the geotechnical engineer should assess the subgrade area to identify any areas that may have unsuitable subgrade. The bottom of the excavation should be observed and approved by the project geotechnical engineer.
- Geosyntec anticipates the subgrade to be compacted backfill used as part of the construction of the channel wall and/or competent soils at which the bridge foundations are supported.
- The bottom of excavations should be scarified to a depth of 8 inches, moisture-conditioned between 0 and 3 percent above optimum moisture content, and compacted to 95 percent of the maximum dry density, as determined by ASTM D 1557.

As discussed in earlier sections, Geosyntec does not anticipate encountering undocumented fill or unsuitable native soils, such as expansive soils, at the bottom of the excavation. However, if these soils are locally identified or if the exposed subgrade soil is soft or disturbed, it should be overexcavated to expose firm soil following the recommendations of the geotechnical engineer on site, with the resulting subgrade scarified and conditioned as above, and the excavated material replaced with general engineered fill or structural fill and following the compaction requirements discussed in Section 5.2.3 or Section 5.2.4, respectively. Compaction requirements will follow the Caltrans Construction Manual [Caltrans, 2019]. The geotechnical engineer on site may

recommend collecting localized shallow samples for testing against collapse and expansion.

### 5.2.2 General Engineered Fill Placement

Geosyntec does not anticipate significant fill to achieve grading along the alignment and near the undercrossing. However, some fill may be necessary at some locations and also if localized unsuitable soils are identified and overexcavation is performed near the undercrossing. On-site soils and imported engineered fill soils should be free of perishable, organic, deleterious, or otherwise unsuitable materials. The general engineered fill materials should have:

1. At least 40% material less than ¼-inch in size;
2. A maximum size in the largest dimension of 3 inches;
3. Less than 50% of fines content passing sieve No. 200;
4. A plasticity index of less than 15, and a liquid limit of less than 40; and
5. An expansion index (ASTM D4829) of less than 50.

All general engineered fill should be scarified, plowed, disked, and/or bladed until it is heterogenous in particle size and free of large, unbroken clods of soil. Before placement of general engineered fill, the subgrade should be prepared in accordance with Section 5.2 above. General engineered fill should be placed in loose lifts no thicker than 8 inches, moisture conditioned and processed as necessary to achieve uniform moisture content at 0 to 3 percent above the optimum moisture content. Each lift should be compacted to at least 90 percent relative compaction, as determined by ASTM D 1557.

### 5.2.3 Structural Fill

Structural fill should be used beneath or against structures, including proposed concrete slab and flexible pavement sections. On-site or imported soils to be used as structural fill should be free of perishable, organic, deleterious, or otherwise unsuitable materials. The structural fill materials should have:

1. A maximum size in the largest dimension of 3 inches;
2. More than 85% material smaller than ¼-inch in size;
3. Less than 15% material passing sieve No. 200; and
4. An expansion index (ASTM D4829) of less than 20.

All structural fill should be scarified, plowed, disked, and/or bladed until it is heterogenous in particle size and free of large, unbroken clods of soil. Before placement of structural fill, the subgrade should be prepared in accordance with Section 5.2 above. Structural fill should be placed in loose lifts no thicker than 8 inches, moisture conditioned and processed as necessary to achieve uniform moisture content at 0 to 3

percent above the optimum moisture content. Each lift should be compacted to at least 90 percent relative compaction for general engineered fill as determined by ASTM D 1557.

### 5.2.4 Compaction Between Proposed Walls and Adjacent Structures

For the undercrossing construction and considering the space between the existing structures and proposed undercrossing walls, we do not anticipate soil backfill at these locations, and therefore, no anticipated compaction work near existing adjacent structures. However, if compaction is required near existing adjacent structures, it is recommended that light compacting equipment (e.g., handheld compactor, jumping jack, or small vibratory plate compactor) should be used to avoid displacing or damaging existing structures. The project geotechnical engineer should review and approve the compaction methods to be used for grading the proposed undercrossing near adjacent structures.

Compacted fill should not be placed during a rain event. No ponded water should be allowed inside the excavation before compaction. Water ingress to excavations should be avoided, and if water enters the excavation, it should be removed.

## 5.3 Surface Drainage

In general, the surface drainage of the bikeway alignment should be designed to avoid ponding and control and convey surface water to an existing or new drainage system. Due to the configuration of the proposed undercrossing (i.e., positive and negative longitudinal slopes), water ponding may occur during construction and operational phases of the project. Surface drainage of the undercrossing should be carefully designed and constructed to control surface water to be properly collected and conveyed. We understand that surface water is planned to be conveyed to the existing SJC channel as part of a proposed drainage system.

If water ponds during construction and grading of the undercrossing, pumping the water from the bottom of excavation may be necessary and should also be properly collected and conveyed to properly designed and approved storm drainage devices near the site.

Based on our conversation with the structural engineer, we also understand that the subsurface stormwater on the proposed undercrossing will drain in one way towards the existing SJC channel to avoid temporary inundation of the bikeway undercrossing. We recommend providing a non-woven geotextile around the drainage stormwater system to reduce clogging of drainage pipes. It is assumed that the structural and civil designers will discuss the drainage approach with USACE, since the channel is part of their jurisdiction.

## 5.4 Impact to Existing Adjacent Structures near Proposed Undercrossing

To address potential impacts of the proposed undercrossing to adjacent structures (i.e., wall channel and bridge foundation), Geosyntec performed the following geotechnical analyses and evaluation of the impacted structures: Caltrans SR-71 bridge foundations and SJC channel walls.

### 5.4.1 Evaluation of Existing Caltrans SR-71 Bridge Foundation

As discussed in the subsurface conditions section of the report, Geosyntec understands the existing bridge foundations are supported on competent native soils with an allowable soil bearing pressure of 4 ksf (Figure 3B) and backfilled with structural backfill to the existing ground surface. Due to the planned removal and excavation of soils in front of Abutment No.2 to construct the proposed undercrossing, vertical and lateral capacity of the bridge abutment foundation will be impacted. We understand that the structural engineer will perform assessment of the existing bridge foundation considering the temporary and post construction conditions. Geosyntec performed geotechnical analyses to develop recommendations in support of the structural assessment.

Geosyntec calculated bearing capacity using the Terzaghi methodology referenced in the Caltrans Foundation Manual [Caltrans, 2015] for the zero foundation embedment depth, which is consistent with the temporary and final conditions during and after new construction. Soil properties were selected based on SPT N-values using correlations presented in Caltrans Geotechnical Manual [Caltrans, 2021]. Based on the lower bound representative SPT $N_{1,60}$ value of 17 the friction angle of 33 degrees and unit weight of 115 pcf were selected.

The calculated ultimate bearing capacity is 15.3 ksf. Allowable bearing capacity for temporary and permanent conditions is calculated as 5.1 and 6.1 ksf, respectively, by applying factors of safety of 3 and 2.5, respectively. For comparison, the review of the historic documents indicated that the allowable bearing capacity for the original bridge design was 4 ksf.

For calculating the active lateral earth pressure on the backside of the bridge abutment, Geosyntec used $\phi$'=32 degrees and unit weight=120 pcf for existing level granular backfill materials on the backside of the bridge abutment. A friction angle between fill and abutment ($\delta$) is also taken as 2/3 of $\phi$' (i.e., 21 degrees). A triangular distribution with an equivalent fluid weight of 34 pcf can be used for the active lateral earth pressure on the backside of the bridge abutment. Lateral loads on the foundation can be resisted with the ultimate base friction coefficient of 0.65. Factor of safety of 1.5 should be applied to ultimate base friction. No passive resistance should be used considering that foundation will not have significant embedment compared to the bottom of the new bikeway structure.

### 5.4.2 Evaluation of Existing SJC Channel

Based on the 90% design plans, final clearance between the existing channel wall and the proposed undercrossing wall will be approximately 9-inch. We understand that the excavation will not extend to the bottom of the existing channel and that the existing backfill wall materials will be partially removed, as shown in Figure 2.

The loss of resistance because of the removal of the channel wall backfill soils will need to be compensated by the capacity of the new undercrossing wall (i.e., the new undercrossing wall should be designed for hydrostatic load transfer from the channel wall) loading and the gap between the two must be adequately infilled to ensure load transfer. The new undercrossing wall should have adequate stiffness and strength to support the channel wall once construction is completed. Temporary conditions during construction when the backfill will be removed and the new undercrossing wall not yet constructed should be planned for a dry season. Additionally, emergency action plan, such as emergency backfill, should be in place in case of unseasonal weather is forecasted that may result in high flows.

Due to limited spacing between the adjacent existing structure and the proposed undercrossing wall, slurry backfill may be considered as backfill between the existing channel wall and the proposed undercrossing, as discussed in Section 5.8.

## 5.5 Uplift of Proposed Undercrossing Slab

As discussed earlier, based on our conversations with the structural engineer, the drainage of the undercrossing will consist of one-way drainage to drain stormwater to the channel. It is our opinion that uplift pressures should not be generated as long as proper drainage features and the system are in place and operating at all times; However, an extreme scenario is considered that may consist of flow levels that increase to a point where drainage may not be sufficient to drain water back to the channel, and the undercrossing slab may be subjected to buoyancy.

If uplift resistance is necessary to achieve stability of the proposed bikeway undercrossing, it can be typically provided by installed elements such as tiedown anchors, driven piles, micropiles, or helical anchors. Tiedown anchors are likely to be the most cost-effective options for this site. Micropiles are a feasible option as well but more costly than tiedown anchors. Because soils at depth are very dense, installation of driven piles may meet refusal and require pre-drilling, and a helical anchor may not be able to penetrate these soils. The design approach to assess uplift capacity of tie-downs to resist hydrostatic uplift is presented in Federal Highway Administration (FHWA) (1999) and is based on assessing the weight of the soil mass enclosed above the tie-downs. Geosyntec can provide additional micropile and helical anchor recommendations if uplift resistance is required.

## 5.6 Settlement

Geosyntec evaluated the anticipated settlement implication near the proposed undercrossing. Considering soils to be excavated to achieve target depths at the proposed bikeway undercrossing, a reduction of vertical stress on subsurface materials is anticipated at this location. Also, the proposed bikeway undercrossing path reinforced concrete is considered lightly loaded as compared to the vertical stress exerted by existing soil. Therefore, static settlement is not anticipated to be a concern after the proposed bikeway undercrossing is completed.

## 5.7 Modulus of Subgrade Reaction

A unit modulus of subgrade reaction for a square foundation measuring one foot by one foot can be assumed as 150 pounds per cubic inch (pci). For larger loading areas, the modulus of subgrade reaction can be estimated by the following equation:

$$k = k_1 \left( \frac{B+1}{2B} \right)^2 \left( \frac{1+0.5\frac{B}{L}}{1.5} \right)$$

where $k_1$ is coefficient of subgrade reaction in units of pci of a square foundation measuring one foot by one foot, and B and L are width and length of the effective soil reaction area (i.e., loaded area) in units of feet, respectively.

## 5.8 Retaining Walls

For the construction of the undercrossing, we understand that once excavation of the undercrossing is completed, undercrossing walls and slab will be constructed. It is understood that no other retaining walls are planned as part of the bikeway alignment. Lateral earth pressures resulting from the backfill between adjacent structures and the proposed undercrossing walls are presented in the section below. Considering the anticipated subsurface conditions at the bottom elevation of undercrossing walls, a unit friction coefficient of 0.40 is also recommended.

### 5.8.1 Lateral Earth Pressures

**Table 7** provides earth pressure recommendations to consider for wall design based on anticipated granular backfill material. Geosyntec used ϕ'=32 degrees and unit weight=120 pcf for granular backfill materials to estimate the lateral earth pressures anticipated behind the proposed undercrossing walls. A friction angle between fill and wall (δ) was taken as 2/3 of ϕ' (i.e., 21 degrees).

Foundation walls and other walls in which horizontal movement is restricted at the top or designed such that the rotation is limited, should be designed for at-rest pressure. Retaining walls free to move and rotate at the top can be designed for active pressure. Furthermore, the 90% design plans also indicate that the bikeway undercrossing and the bottom of the associated concrete slab are planned approximately at the bottom elevation of the existing bridge foundation (i.e., EL.+769.14 ft NAVD88) between Sta. 92+00 to 92+50, and about 1 foot below the bottom elevation of the existing bridge foundation between Sta. 92+50 to 94+00 as shown in Figure 2. Considering a zone defined by an about 64-degree angle (i.e., 2Vertical:1Horizontal), and the 3 feet minimum clearance planned between the proposed undercrossing wall and the existing bridge foundation, we understand that the existing bridge foundation will not exert additional lateral pressures to the proposed bikeway undercrossing structure under static conditions.

To simulate a potential channel flooding, differential hydrostatic conditions between levels on the channel should be considered for the wall design next to the channel.

**Table 7 – Lateral Earth Pressures for Retaining Walls**

| Earth Pressure Conditions | Earth Pressure Coefficient | Groundwater Condition | Equivalent Fluid Pressure (pcf) |
|---|---|---|---|
| Active | 0.28 | With Drainage System | 34 |
| | | Includes hydrostatic pressure | 80 |
| At-Rest | 0.47 | With Drainage System | 57 |
| | | Includes hydrostatic pressure | 89 |
| Passive Resistance | 3.25 | With Drainage System | 390 |
| | | Includes hydrostatic pressure | 250 |

A relatively large movement may be required to mobilize the ultimate passive resistance; therefore, a factor of safety of 1.5 should be applied to the ultimate passive resistance values if significant lateral displacement is not desired.

Lateral earth pressures on walls for specific wall heights, surcharge conditions, or other conditions not described herein can be developed once details and construction procedures are available. Retaining walls without a drainage system should be designed assuming full hydrostatic pressure. If needed, lateral pressures due to uniform dead or live surface loading can be calculated using the at-rest or active earth pressure coefficient provided in **Table 7**, which is multiplied with added vertical pressure to calculate lateral pressures on the wall.

### 5.8.2 Retaining Wall Backfill

Retaining walls should be backfilled with well-graded and free draining non-expansive soils. Per our interpretation of subsurface conditions anticipated near the undercrossing, shallow on-site material may be suitable for the wall backfill. All retaining wall backfill should be placed and compacted under engineering-controlled conditions with compaction requirements, as described in Section 5.2. Care should be taken to avoid over-compaction of the soils behind the retaining walls, and the use of heavy compaction equipment should be avoided, as described in Section 5.2. Due to space limitations for compacting wall backfill, slurry backfill is anticipated to be used.

### 5.8.3 Sand-Slurry Backfill

Depending on the construction process of the undercrossing, backfill with soil may not be feasible due to limited space, such as at those between the proposed undercrossing walls and adjacent existing structures. At locations where compacted backfill can be difficult to achieve, sand-slurry backfill may be considered. Slurry cement backfill must conform to Section 19-3.02E of the Caltrans Standard Specifications.

Sand-cement slurry, also known as controlled density fill (CDF), or Controlled Low Strength Material (CLSM) in Section 201 of the Greenbook (latest edition) may be used to backfill localized areas where an alternative fill/backfill material to the compacted fill material is needed. Sand-cement slurry should not be used for mass backfilling of the over-excavations. Sand-cement slurry consists of a fluid, workable mixture of aggregate, Portland cement, fly ash, and water. It is an ideal backfill material when adequate room is limited or not available for conventional compaction equipment, or when settlement of the backfill must be minimized. No compaction is required to place sand-cement slurry; however, due to potential development of hydrostatic pressures behind walls, sand-slurry backfill should occur in maximum 2-foot lifts.

### 5.8.4 Seismic Loads

In accordance with the 2022 CBC, seismic loading is not required for retaining walls up to 6 feet in height. Taller walls are not expected. If walls 6 feet or more are required, the recommended seismic pressure applied as an added uniform horizontal pressure can be calculated as 18 H Rein pounds per square feet (psf) (where H is the height of the wall in feet) and should be added to at-rest earth pressure. This value was calculated using the Mononobe-Okabe method. The horizontal seismic coefficient used with the Mononobe-Okabe methods is taken as two-thirds of the design PGA, considering the potential restrained nature of the walls.

## 5.9 Pavement Design Recommendations

We understand that the bikeway alignment is planned to be a flexible pavement, with the exception of the proposed undercrossing that will consist of a concrete slab. Flexible pavement design is performed following the Caltrans Highway Design Manual. The project-specific traffic loading and pavement design criteria were not provided at the time of this report preparation. Geosyntec is providing pavement recommendations in **Table 8** based on the following assumptions:

- A minimum Traffic Design Index (TI) of five approximately $7x10^3$ equivalent single axle loads (ESALs) was utilized following Caltrans Highway Design Manual Chapter 630 Flexible Pavement, Section 633, as the minimum value recommended.
- An R-value of 50 was selected based on testing performed on near-ground surface soils. The R value is a measure of resistance of soils to deformation under wheel loading and saturated soil conditions. The materials encountered near the ground surface primarily consist of Clayey Sands (SC) and Silty Sands (SM).

**Table 8 –Pavement Design Recommendations**

| Traffic Design Index / ESALs | Asphalt Concrete – AC (in) | Class 2 Aggregate Base (in) | Total Pavement Thickness (in) |
|---|---|---|---|
| **5 / $7x10^3$** | **4** | **6** | **10** |

All aggregate base materials should be compacted to a minimum of 95 percent of the maximum dry density determined per ASTM D1557. Pavement subgrade preparation and compacted fill requirements are provided in Sections 5.2.3 and 5.2.4 of this report. Aggregate base courses (AB) should meet the gradation, material, and testing requirements of the Caltrans Highway Design Manual. The R-value should be verified in the final design stage and during construction once the pavement subgrades are established. During construction, soil laboratory CBR tests should be performed on representative samples recovered from the finished subgrades to provide pavement subgrade parameters for use in the final pavement design. All pavement materials should be in accordance with the Caltrans Highway Design Manual.

## 5.10 Corrosivity of Onsite Soils

Corrosivity testing was performed on collected shallow samples during Phase I of the current investigation. As discussed earlier, due to the location of current exploration and the proximity of proposed undercrossing, collected samples may not be representative of soils at the proposed undercrossing. For the purpose of reporting results from the explored

locations, **Table 7** summarizes the results of testing performed on shallow samples collected near the proposed undercrossing.

Per the County of Los Angeles Department of Public Works Manual for Preparation of Geotechnical Reports (LACPW 2013), nearby shallow soils are considered corrosive to ferrous metals and/or deleterious to concrete if one or more of the following conditions exist: soluble sulfate concentrations are equal to or greater than 2,000 parts per million (ppm) in soil and 1,000 ppm in saturated soil; chloride content is greater than 500 ppm; minimum resistivity is less than 1,000 ohm-cm; or the pH is 5.5 or less.

**Table 9 – Summary of Soil Corrosivity Laboratory Test Results**

| Boring ID | Depth (ft bgs) | USCS | CTM 417 | CTM 422 | CTM 643 | CTM 643 |
|---|---|---|---|---|---|---|
| | | | Sulfates, $SO_4^{2-}$ (ppm) | Chlorides, CL (ppm) | Minimum Resistivity (Ohm-cm) | pH |
| B-1 | 0 to 5 feet | SM | 82 | 21 | 3,807 | 9.1 |

As indicated in **Table 9**, the measured range of sulfates, chlorides, minimum resistivity, and pH are outside the limits specified by the LACPW (2013) and thus, shallow soils near the proposed undercrossing at the explored locations are not considered corrosive to ferrous metals and deleterious to concrete. Additionally, per ACI 350-20 Section 4.2, the observed sulfate content is less than 150 ppm and corresponds to exposure class S0 (i.e., water-soluble sulfate concentration in contact with concrete is low and injurious sulfate attack is not a concern for soils explored near the proposed site). The minimum specified compressive strength of concrete for class S0 is 2,500 pounds per square inch (psi), and no type of restriction is required on the concrete mix for the proposed improvements.

However, due to the proximity of explored locations and proposed undercrossing, we recommend that structures be provided with corrosion protection. We also recommend that exposed subgrade soils at the location of the proposed bikeway undercrossing be tested once finished grades are achieved to assess corrosivity of onsite soils at the proposed subgrade elevations.

# 6. CONSTRUCTION CONSIDERATIONS

## 6.1 Groundwater During Excavation

Based on the groundwater level observed during field exploration for this study, groundwater is not expected to be encountered during the excavation for the proposed undercrossing. Perched water conditions could occur on top of the lower permeability fine-grained layers. The contractor should verify groundwater levels prior to construction, and surface drainage recommendations should be followed as described in Section 4.

## 6.2 Construction Observation and Considerations

We recommend that a representative of the Geotechnical Engineer of Record review the subsurface conditions as they are exposed during construction, observe and test the site preparation and earthwork construction, observe the soil exposed in excavations, and assess whether subsurface conditions encountered throughout the site deviate significantly from those identified during our evaluation and were used as a basis for development of the recommendations contained herein. The Geotechnical Engineer of Record shall alert all parties of any unsuitable conditions related to the aspects discussed in this report.

Based on the field observations, additional recommendations may be provided regarding the suitability of soil and other materials for foundation support, compaction, import soil, etc. It is recommended that the Geotechnical Engineer of Record maintain a full-time, onsite presence for construction quality assurance (CQA) during earthwork operations. In addition to the items identified in this report, the Geotechnical Engineer's representative shall conduct observations and testing in accordance with the requirements of the building code and the building official.

## 6.3 Temporary Excavation Slopes

Based on our understanding of the undercrossing location, existing adjacent structures may be impacted to provide sloping setbacks for excavations. For preliminary planning, temporary cut slopes can be assumed to be no steeper than 1.5H:1V but may need to be flatter in areas of loose or unstable material. Heavy loads and stockpiling should not occur at the top of the slopes, unless specifically assessed by the temporary works designer. All temporary excavations shall conform to the requirements of CAL-OSHA (Title 8, Division 1, Subchapter 4, Article 6 "Excavations" Sections 1539 to 1547), as well as all specific worker safety requirements, as enforced by the local authority. The design of the temporary work is the responsibility of the contractor. The contractor is directly responsible for the means and methods of all excavation and grading, including the sequencing of all temporary excavations and providing suitable methods for ingress and egress into all temporary excavations, as well as the training and safety of all employees.

## 7. LIMITATIONS

The work documented in this Report focuses on the evaluation of geotechnical characteristics of subgrade soils at the Site and development of geotechnical design recommendations for the proposed Project. The recommendations presented herein are based on the understanding of the proposed Project, as outlined in Section 1 of this Report. Geosyntec should be notified of any significant changes so that we may either confirm or modify our recommendations.

The Report and other materials resulting from Geosyntec's efforts were prepared exclusively for use by Alta Planning + Design Inc. to support the design and construction of the proposed development. The Report is not intended to be used for other future improvements in the area and may not contain sufficient or appropriate information for such use. If this Report, or portions of this Report, are provided to contractors or included in the specifications, it should be understood that they are provided for information only.

Soil deposits may vary in type, strength, and many other important properties among points of exploration due to non-uniformity of the geologic formations or to man-made cut and fill operations. While Geosyntec cannot evaluate the consistency of the properties of materials in areas not explored, the conclusions drawn in this Report are based on the assumption that the data obtained in the field and laboratory are reasonably representative of field conditions and are conducive to interpolation and extrapolation.

Our investigation and evaluations were performed using generally accepted engineering approaches and principles available at this time and the degree of care and skill ordinarily exercised under similar circumstances by reputable geotechnical engineers practicing in this area. No other representation, either expressed or implied, is included or intended in our report.

## 8. REFERENCES

American Association of State Highway and Transportation Officials, AASHTO (2020) LRFD Bridge Design Specifications, 9th Edition, 978-1-56051-732-2

Alta (2023) City of Pomona San Jose Creek Multi-Use Bikeway 90% Conceptual Plan.

ASCE (2017), Minimum Design Loads and Associated Criteria for Buildings and Other Structures (ASCE7-16), American Society of Civil Engineers.

ASCE (2022), Minimum Design Loads and Associated Criteria for Buildings and Other Structures (ASCE7-22), American Society of Civil Engineers.

American Society for Testing and Materials, 2020, Annual Book of ASTM Standards. Section 4 Construction, Volume 04.08 Soil and Rock.

CBC (2022), "2022 California Building Code," California Building Standards Commission.

County of Los Angeles Building Code (2023) – Title 26.

California Geological Survey (CGS) (2024), "Earthquake Zones of Required Investigation" CGS website, accessed June 2024. https://maps.conservation.ca.gov/cgs/eqzapp/app/.

CGS (2018), "Earthquake Fault Zones, A Guide for Government Agencies, Property Owners,/Developers, and Geoscience Practitioners for Assessing Fault Rupture Hazards in California." Special Publication 42.

Dibblee, T.W., and Minch, J.A., 2002. "Geologic Map of the San Dimas and Ontario Quadrangles, Los Angeles and San Bernadino Counties, California." Dibblee Geological Foundation, Map DF-91, scale 1:24,000.

Federal Emergency Management Agency (FEMA), 2024. "National Flood Hazard Layer (NFHL) for Geographic Information Systems (GIS)" (NFHL), accessed in 2024.

Federal Highway Administration (1999) Geotechnical Engineering Circular No. 4 Ground Anchors and Anchored Systems

County of Los Angeles Department of Public Works (2013) Manual for Preparation of Geotechnical Reports

State of California Highway Transportation Agency Department of Public Works Bridge Department Caltrans (1966) San Jose FC Channel Bridge Log of Test Borings

State of California Highway Transportation Agency Department of Public Works Bridge Department Caltrans (1972) San Jose F.C. Channel Bridge As-Built Plans

State of California Highway Transportation Agency Department of Public Works Bridge Department Caltrans (1972) As-Built SR-71 Bridge Plans

State of California Department of Transportation Caltrans (2021) Ridgeway Street UC Log of Test Borings

State of California Department of Transportation Caltrans (2021) SR-71 Freeway Conversion Project Fact Sheet EA21031 (PM 0.5/1.8) & 21062 (PM 1.8/R4.7)

State of California Department of Transportation Caltrans (2022) SR-71 Bridge Widening Plan

State of California Highway Transportation Agency Department of Public Works Bridge Department Caltrans (2021) Rosecrans Street Undercrossing Log of Test Borings

U.S. Geological Survey and California Geological Survey, 1999, Earthquake Zones of Required Investigation, accessed June 2024, from USGS web site: https://maps.conservation.ca.gov/cgs/eqzapp/app/.

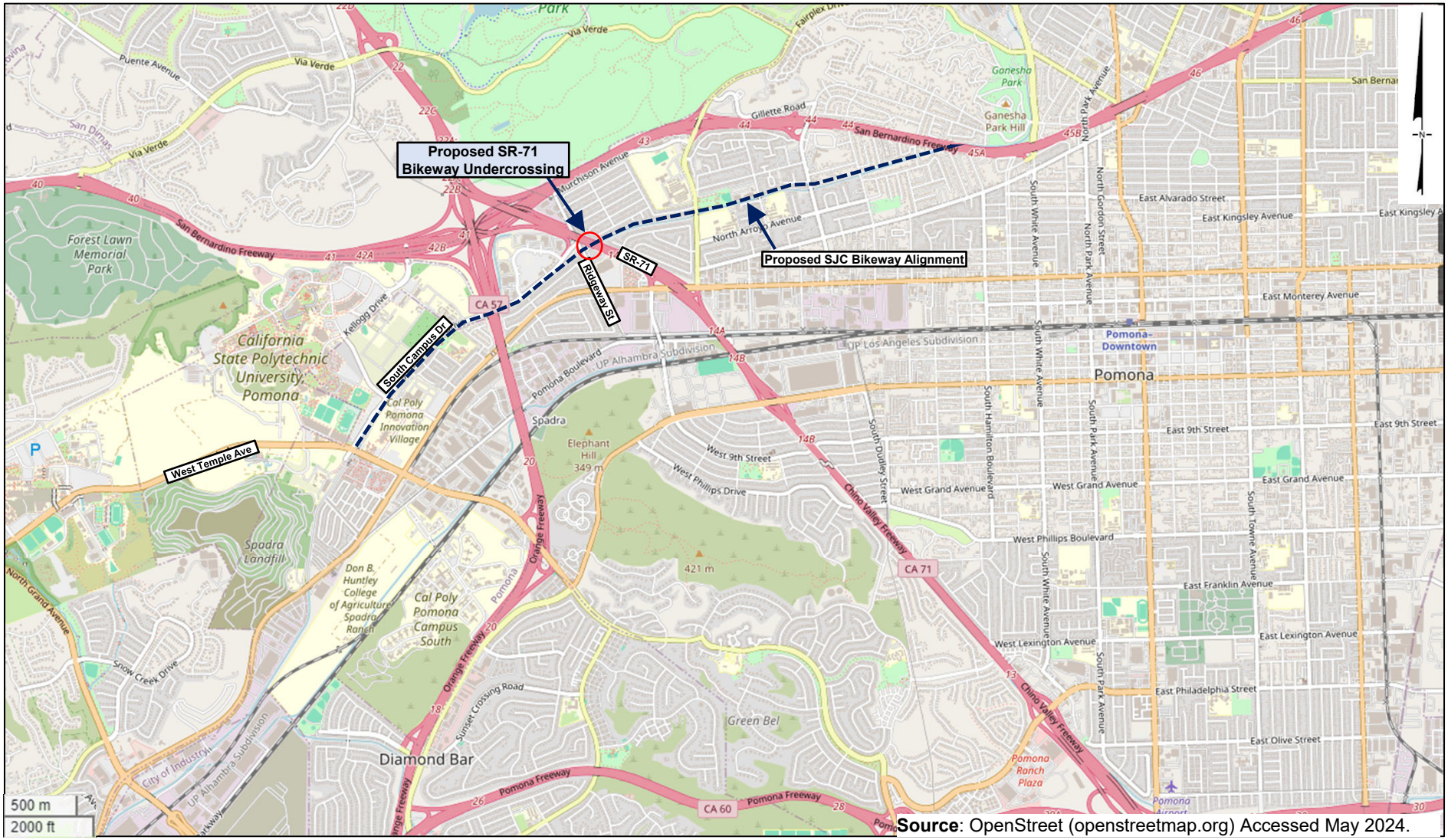
U.S. Geological Survey and California Geological Survey, 2006, Quaternary fault and fold database for the United States, accessed June 2024, from USGS web site: http://earthquake.usgs.gov/hazards/qfaults/.

U.S. Army Corps of Engineers (2024) Engineering and Design: Earthquake Analysis, Evaluation, and Design for Civil Works Projects. ER 1110-2-1806

U.S. Geological Survey and California Geological Survey (2018) National Seismic Hazard Model

U.S. Geological Survey and California Geological Survey (2023) National Seismic Hazard Model

# FIGURES




**Source**: OpenStreet (openstreetmap.org) Accessed May 2024.

## LEGEND

Proposed San Jose Creek Multi-Use Bikeway Alignment

Proposed San Jose Creek Multi-Use Bikeway Alignment and SR-71 Bridge Location

**SITE VICINITY MAP**
SAN JOSE CREEK MULTI-USE BIKEWAY

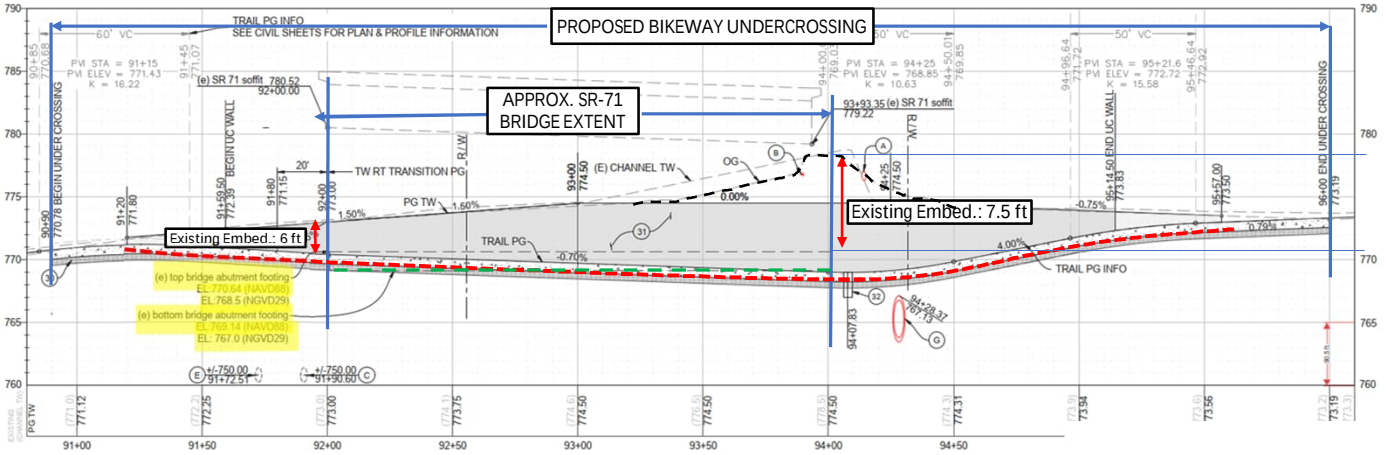
POMONA, CA

Geosyntec consultants

FIGURE
1

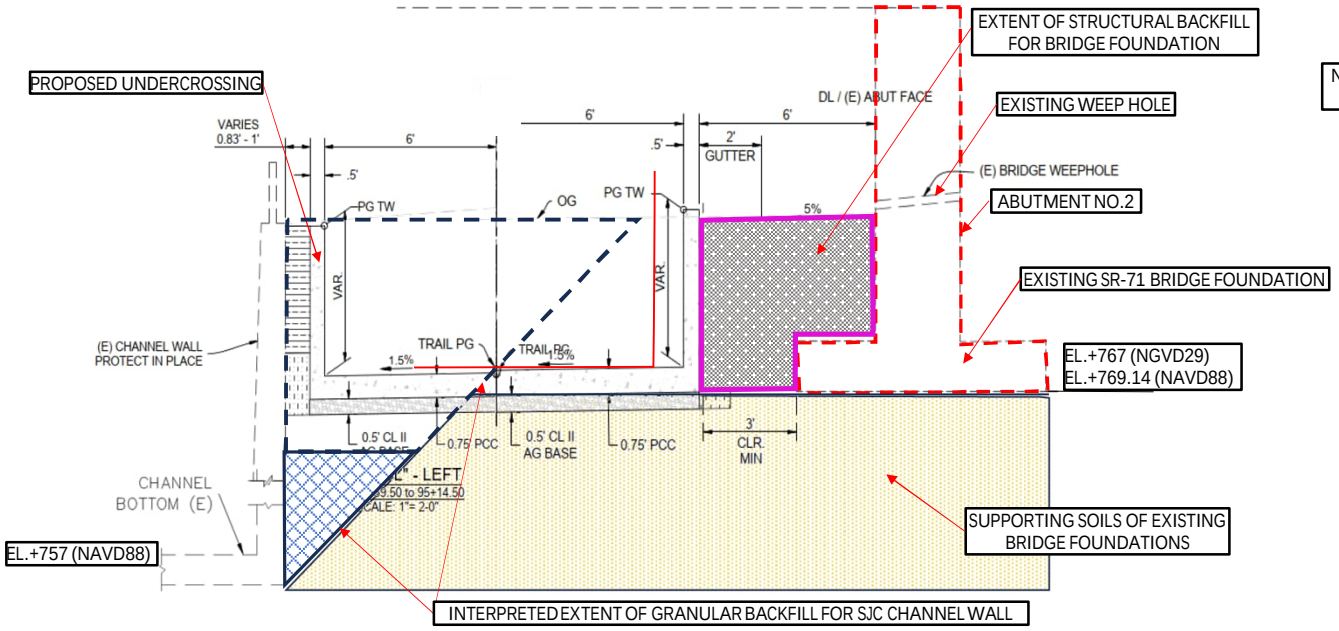
PROJECT NO: SC1303 | June 2025

\\orangecounty-01\DATA\PRJ\4\CAWP\SC1303 - San Jose Creek - Multi-Use Bikeway\08 - Geotechnical Report\Figures




## LEGEND

- EXISTING GROUND SURFACE
- APPROXIMATE BOTTOM OF EXISTING BRIDGE FOUNDATION EL. 767 FT NVGD29 (EL. 769.14 FT NAVD88) BASED ON AS-BUILT INFORMATION (FIGURE 3A)
- PROPOSED SLAB BOTTOM




TYPICAL SECTION AT PROPOSED UNDERCROSSING AND INTERPRETED SUBSURFACE CONDITIONS

PHOTO OF OLDER NON-OPERATING BRIDGE UNDER SR-71 BRIDGE (TAKEN BY BENGAL, STRUCTURAL ENGINEER)

SOURCE: OBTAINED FROM CROSS SECTIONS IN 90% CONCEPT PLANS PROVIDED BY ALTA AND BENGAL. FIGURE ONLY SHOWS THE PROPOSED BIKEWAY UNDERCROSSING SR-71 BRIDGE.

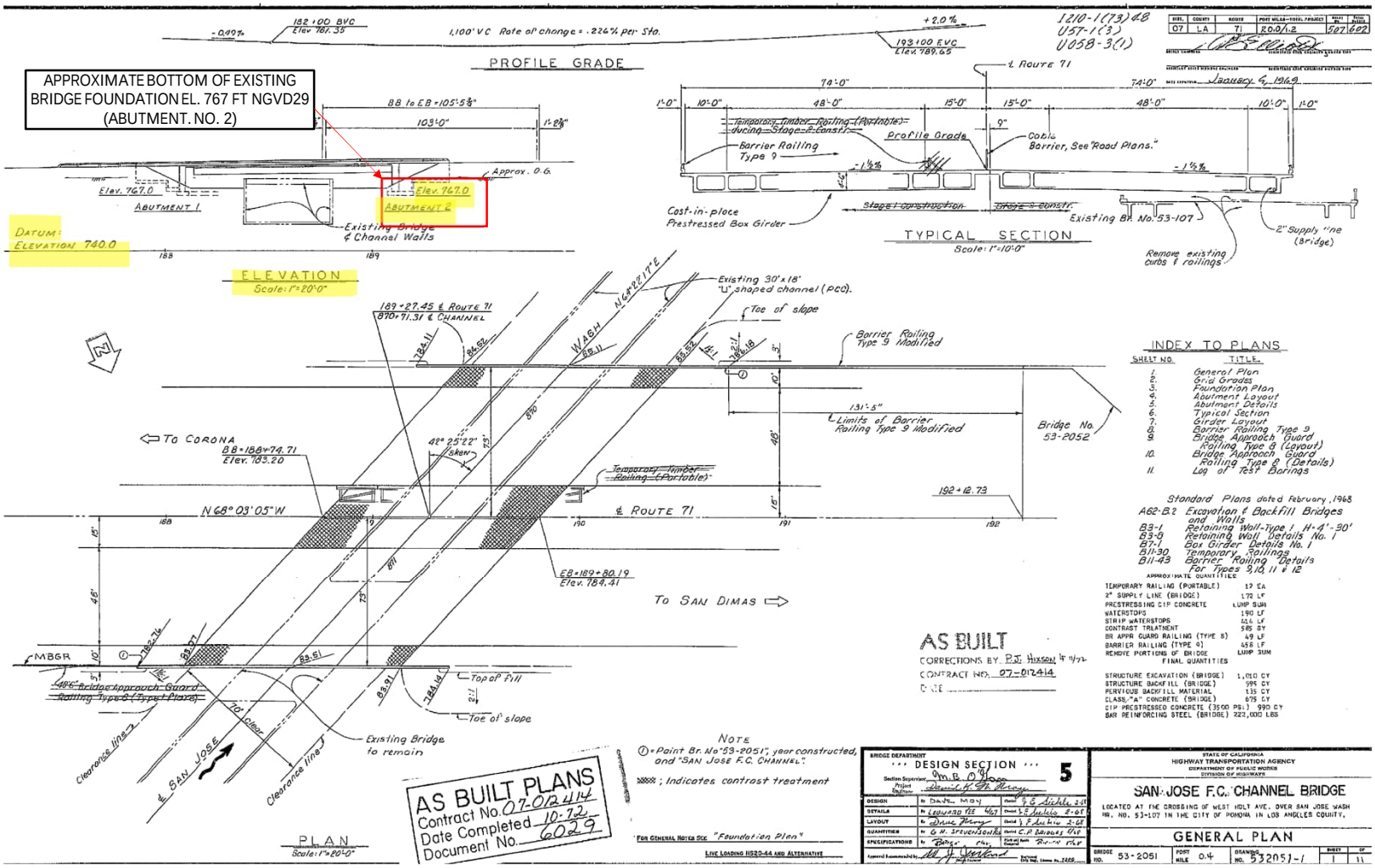
**PROPOSED BIKEWAY UNDERCROSSING**
**SR-71 BRIDGE**
SAN JOSE CREEK MULTI-USE BIKEWAY
POMONA, CA

Geosyntec consultants

FIGURE **2**

PROJECT NO: SC1303 | June 2025

\\orangecounty-01\DATA\PRJ4\CAW\SC1303 - San Jose Creek - Multi-Use Bikeway\08 - Geotechnical Report\Figures




SOURCE: OBTAINED FROM CALTRANS SR-71 BRIDGE AS-BUILT RECORDS

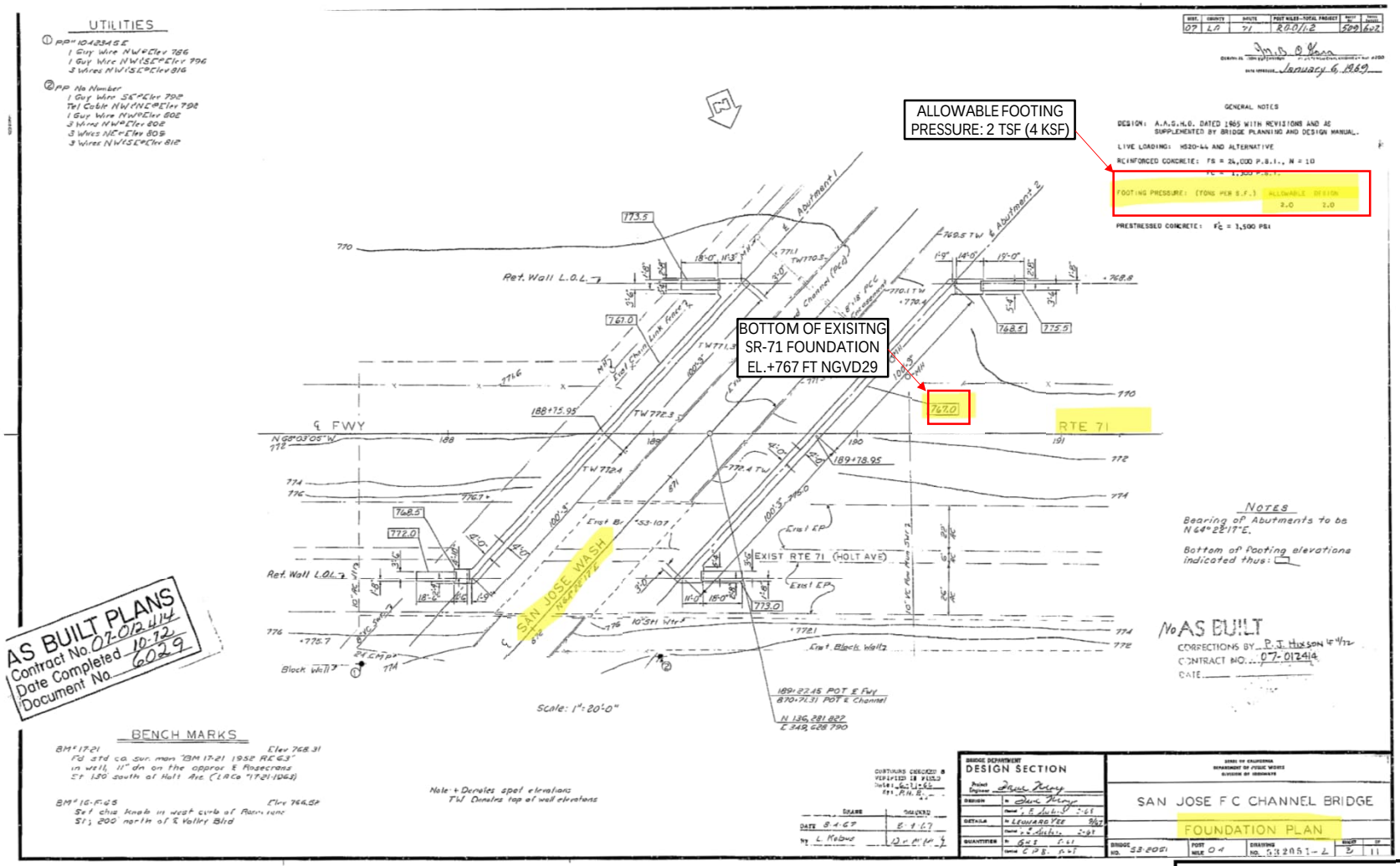
**AS-BUILT SR-71 BRIDGE PLANS**
SAN JOSE CREEK MULTI-USE BIKEWAY
POMONA, CA

Geosyntec consultants

FIGURE 3A

PROJECT NO: SC1303 | June 2025

\\orangecounty-01\DATA\PRJ4\CAWP\SC1303 - San Jose Creek - Multi-Use Bikeway\08 - Geotechnical Report\Figures




SOURCE: OBTAINED FROM CALTRANS SR-71 BRIDGE AS-BUILT RECORDS

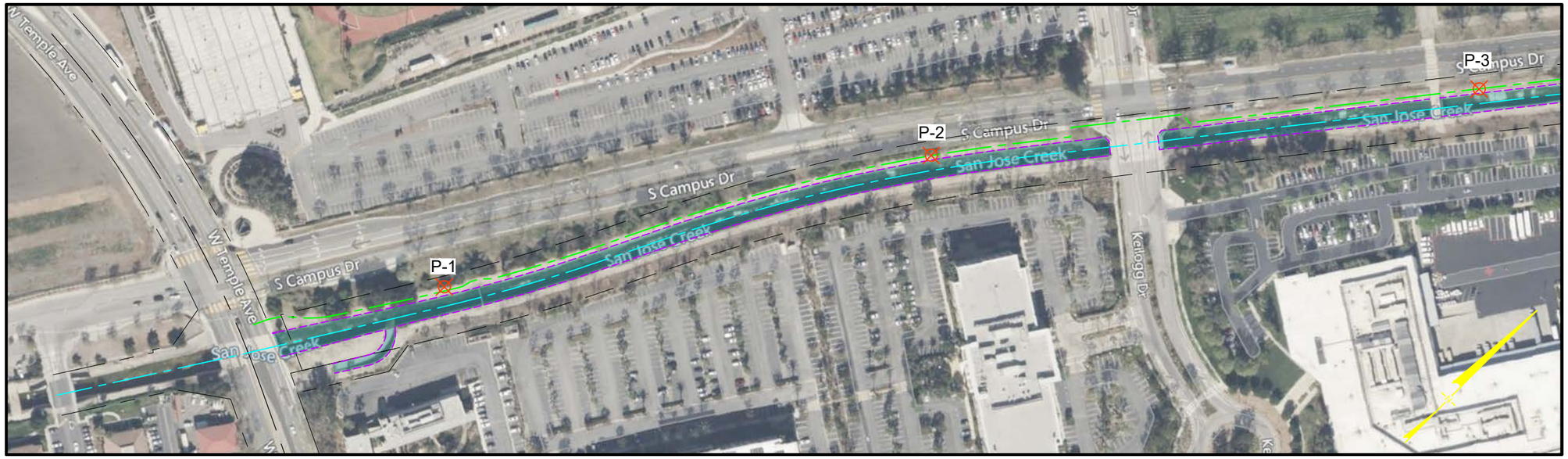
**AS-BUILT SR-71 BRIDGE PLANS**
SAN JOSE CREEK MULTI-USE BIKEWAY
POMONA, CA

Geosyntec consultants

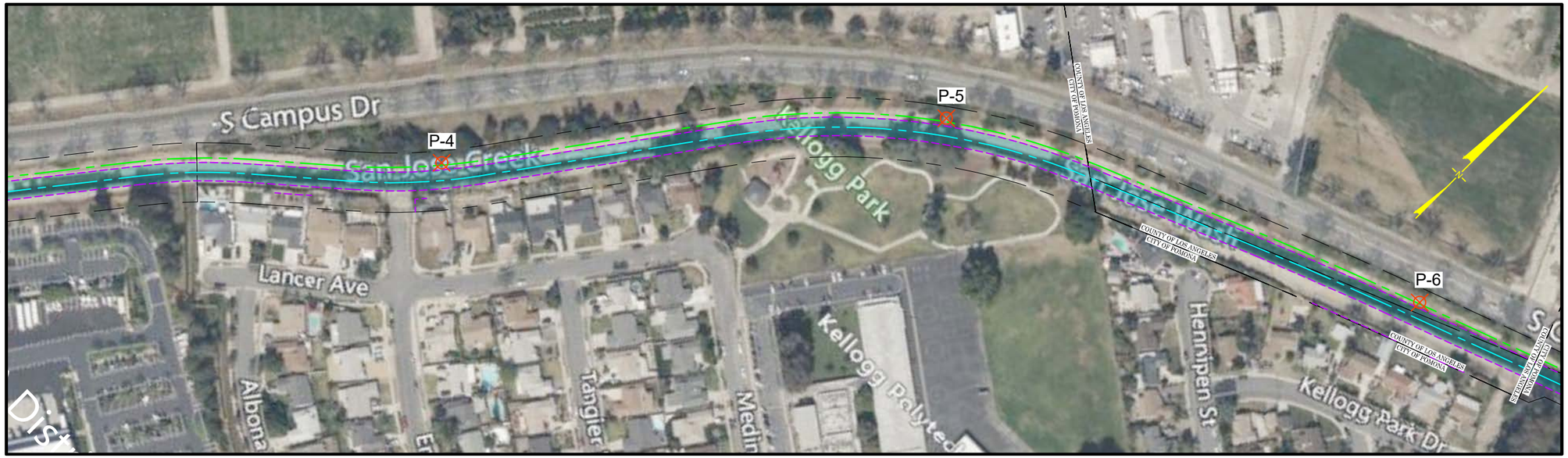
FIGURE
**3B**

PROJECT NO: SC1303 | June 2025

\\orangecounty-01\DATA\PRJ4\CAWP\SC1303 - San Jose Creek - Multi-Use Bikeway\08 - Geotechnical Report\Figures




MATCHLINE A




MATCHLINE A

MATCHLINE B
FIGURE 4B

0 200
SCALE IN FEET

**NOTE:**

SHOWN INFORMATION IS BASED ON SEPTEMBER 2022 SURVEY AND 90% PROGRESS SUBMITTAL PROVIDED BY ALTA DATED 12 NOVEMBER 2024.

LEGEND

- APPROXIMATE SURVEYED PROPERTY RIGHT OF WAY
- PROPOSED EASEMENT
- APPROXIMATE SURVEYED STRUCTURAL WALL
- APPROXIMATE SURVEYED CENTERLINE SAN JOSE CREEK CHANNEL
- APPROXIMATE BIKE PATH CENTERLINE
- P-X — PAVEMENT TEST PITS (CURRENT EXPLORATION)

BORING LOCATION PLAN I
SAN JOSE CREEK - MULTI-USE BIKEWAY
CITY OF POMONA, CALIFORNIA

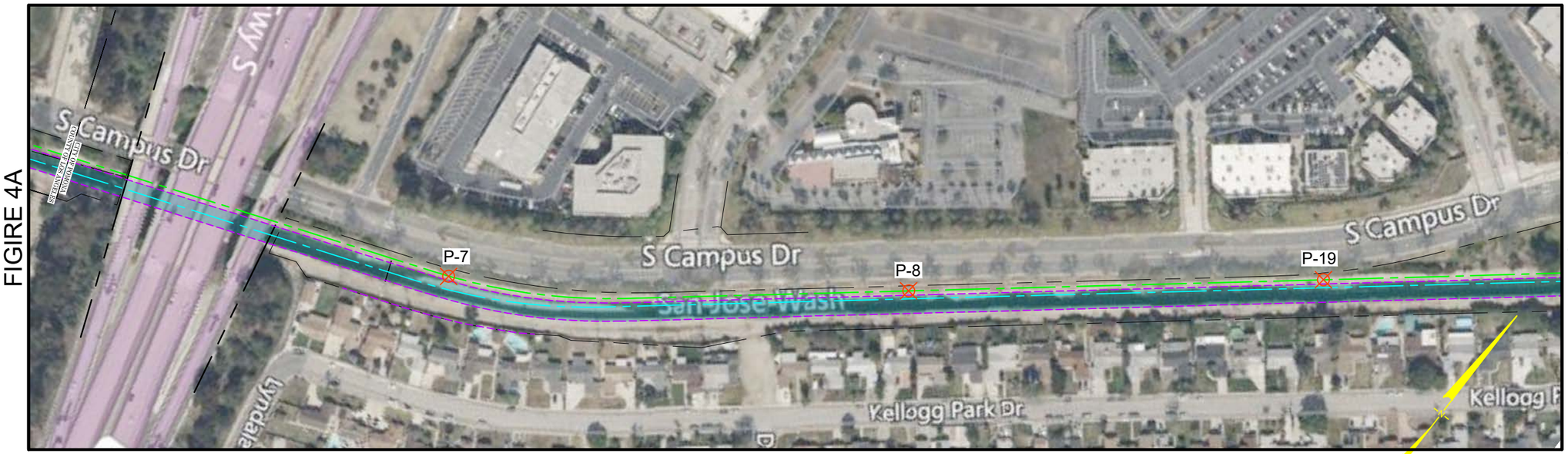
Geosyntec consultants

FIGURE 4A

PROJECT NO: SC1303 | June 2025

\\ORANGECOUNTY-01\DATA\PRJ\4CAWP\SC1303 - SAN JOSE CREEK - MULTI-USE BIKEWAY\09 - PLANSET\PLANSET 90%\SC1303F-01 (BORING LOCATIONS - 90%) - Last Saved by: Farshad.Sisan on 1/31/25

MATCHLINE B
FIGIRE 4A




MATCHLINE C
FIGURE 4C

## LEGEND

- APPROXIMATE SURVEYED PROPERTY RIGHT OF WAY
- PROPOSED EASEMENT
- APPROXIMATE SURVEYED STRUCTURAL WALL
- APPROXIMATE SURVEYED CENTERLINE SAN JOSE CREEK CHANNEL
- APPROXIMATE BIKE PATH CENTERLINE
- P-X — PAVEMENT TEST PITS (CURRENT EXPLORATION)

**NOTE:**

SHOWN INFORMATION IS BASED ON SEPTEMBER 2022 SURVEY AND 90% PROGRESS SUBMITTAL PROVIDED BY ALTA DATED 12 NOVEMBER 2024.

BORING LOCATION PLAN II
SAN JOSE CREEK - MULTI-USE BIKEWAY
CITY OF POMONA, CALIFORNIA

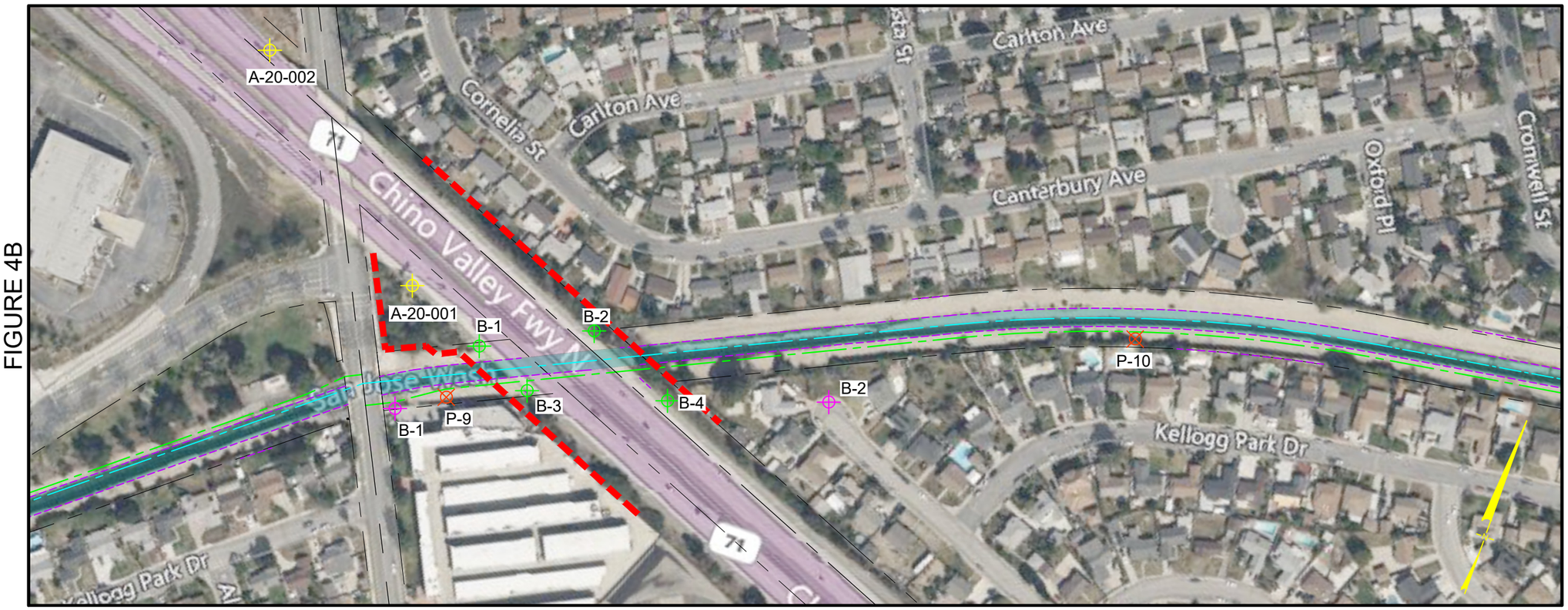
Geosyntec consultants

PROJECT NO: SC1303 | June 2025

FIGURE
4B

\\ORANGECOUNTY-01\DATA\PRJ4\CAMP\SC1303 - SAN JOSE CREEK - MULTI-USE BIKEWAY\09 - PLANSET\PLANSET 90%\SC1303F-01 (BORING LOCATIONS - 90%) - Last Saved by: Farshad.Sisan on 1/31/25

MATCHLINE C
FIGURE 4B




MATCHLINE D
FIGURE 4D

**NOTE:**

SHOWN INFORMATION IS BASED ON SEPTEMBER 2022 SURVEY AND 90% PROGRESS SUBMITTAL PROVIDED BY ALTA DATED 12 NOVEMBER 2024.

## LEGEND

- APPROXIMATE SURVEYED PROPERTY RIGHT OF WAY
- PROPOSED EASEMENT
- APPROXIMATE SURVEYED STRUCTURAL WALL
- APPROXIMATE SURVEYED CENTERLINE SAN JOSE CREEK CHANNEL
- APPROXIMATE BIKE PATH CENTERLINE
- APPROXIMATE CALTRANS RIGHT OF WAY (FROM CALTRANS SR-71 PRELIMINARY PLANS, 7/2/2010)
- P-X — PAVEMENT TEST PITS (CURRENT EXPLORATION)
- B-X — SR71 CROSSING BORINGS (CURRENT EXPLORATION)
- HISTORICAL BORINGS (1966)
- HISTORICAL BORINGS (2020)

0 200
SCALE IN FEET

BORING LOCATION PLAN II
SAN JOSE CREEK - MULTI-USE BIKEWAY
CITY OF POMONA, CALIFORNIA

Geosyntec consultants

FIGURE 4C

PROJECT NO: SC1303 | June 2025

\\ORANGECOUNTY-01\DATA\PRJ4\CAWP\SC1303 - SAN JOSE CREEK - MULTI-USE BIKEWAY\09 - PLANSET\PLANSET 90%\SC1303F-01 (BORING LOCATIONS - 90%) - Last Saved by: Farshad.Sisan on 1/31/25

MATCHLINE D
FIGURE 4C

MATCHLINE E

MATCHLINE E
FIGURE 4E

0 200
SCALE IN FEET

**NOTE:**

SHOWN INFORMATION IS BASED ON SEPTEMBER 2022 SURVEY AND 90% PROGRESS SUBMITTAL PROVIDED BY ALTA DATED 12 NOVEMBER 2024.

LEGEND

- APPROXIMATE SURVEYED PROPERTY RIGHT OF WAY
- PROPOSED EASEMENT
- APPROXIMATE SURVEYED STRUCTURAL WALL
- APPROXIMATE SURVEYED CENTERLINE SAN JOSE CREEK CHANNEL
- APPROXIMATE BIKE PATH CENTERLINE
- P-X PAVEMENT TEST PITS (CURRENT EXPLORATION)

BORING LOCATION PLAN III
SAN JOSE CREEK - MULTI-USE BIKEWAY
CITY OF POMONA, CALIFORNIA

Geosyntec consultants

FIGURE 4D

PROJECT NO: SC1303 | June 2025

\\ORANGECOUNTY-01\DATA\PRJ4\CAWP\SC1303 - SAN JOSE CREEK - MULTI-USE BIKEWAY\09 - PLANSET\PLANSET 90%\SC1303F-01 (BORING LOCATIONS - 90%) - Last Saved by: Farshad.Sisan on 1/31/25

MATCHLINE F
FIGURE 4C

| BORING CONTROL DATA | | |
|---|---|---|
| BORING ID | NORTHING | EASTING |
| B-1 | 1845731.87 | 6623130.11 |
| B-2 | 1845993.39 | 6623825.93 |
| P-1 | 1840964.08 | 6617492.69 |
| P-2 | 1841702.25 | 6617917.73 |
| P-3 | 1842435.44 | 6618493.54 |
| P-4 | 1842999.41 | 6619018.09 |
| P-5 | 1843655.12 | 6619568.05 |
| P-6 | 1844000.07 | 6620353.52 |
| P-7 | 1844309.24 | 6621199.74 |
| P-8 | 1844771.56 | 6621838.76 |

| BORING CONTROL DATA | | |
|---|---|---|
| BORING ID | NORTHING | EASTING |
| P-9 | 1845779.67 | 6623206.48 |
| P-10 | 1846272.81 | 6624283.70 |
| P-11 | 1846442.12 | 6625097.07 |
| P-12 | 1846603.32 | 6625897.46 |
| P-13 | 1846910.81 | 6626751.38 |
| P-14 | 1847141.88 | 6627656.78 |
| P-15 | 1847321.94 | 6628433.56 |
| P-16 | 1847376.64 | 6629227.13 |
| P-17 | 1847728.85 | 6630367.69 |
| P-18 | 1848130.25 | 6631615.12 |

| BORING CONTROL DATA | | |
|---|---|---|
| BORING ID | NORTHING | EASTING |
| P-19 | 1845221.03 | 6622389.64 |

**NOTE:**

SHOWN INFORMATION IS BASED ON SEPTEMBER 2022 SURVEY AND 90% PROGRESS SUBMITTAL PROVIDED BY ALTA DATED 12 NOVEMBER 2024.

LEGEND

- APPROXIMATE SURVEYED PROPERTY RIGHT OF WAY
- PROPOSED EASEMENT
- APPROXIMATE SURVEYED STRUCTURAL WALL
- APPROXIMATE SURVEYED CENTERLINE SAN JOSE CREEK CHANNEL
- APPROXIMATE BIKE PATH CENTERLINE
- P-X PAVEMENT TEST PITS (CURRENT EXPLORATION)

0 200
SCALE IN FEET

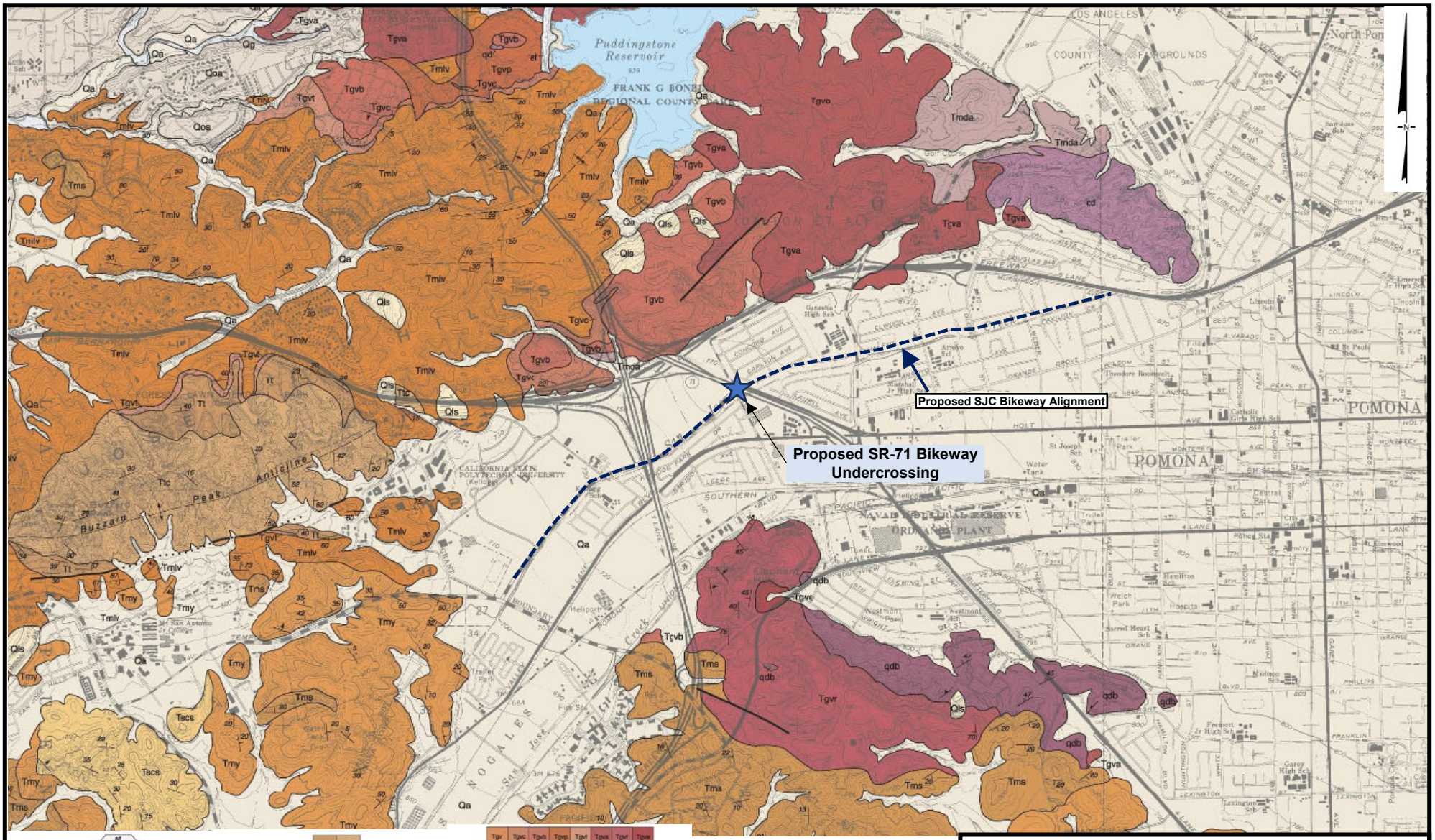
BORING LOCATION PLAN IV
SAN JOSE CREEK - MULTI-USE BIKEWAY
CITY OF POMONA, CALIFORNIA

Geosyntec consultants

PROJECT NO: SC1303 | June 2025

FIGURE 4E

\\ORANGECOUNTY-01\DATA\PRJ4\CAWP\SC1303 - SAN JOSE CREEK - MULTI-USE BIKEWAY\09 - PLANSET\PLANSET 90%\SC1303F-01 (BORING LOCATIONS - 90%) - Last Saved by: Farshad Sisan on 1/31/25




Reference: Dibblee and Minch, J.A. 2002

**REGIONAL GEOLOGY MAP**

SAN JOSE CREEK MULTI-USE BIKEWAY

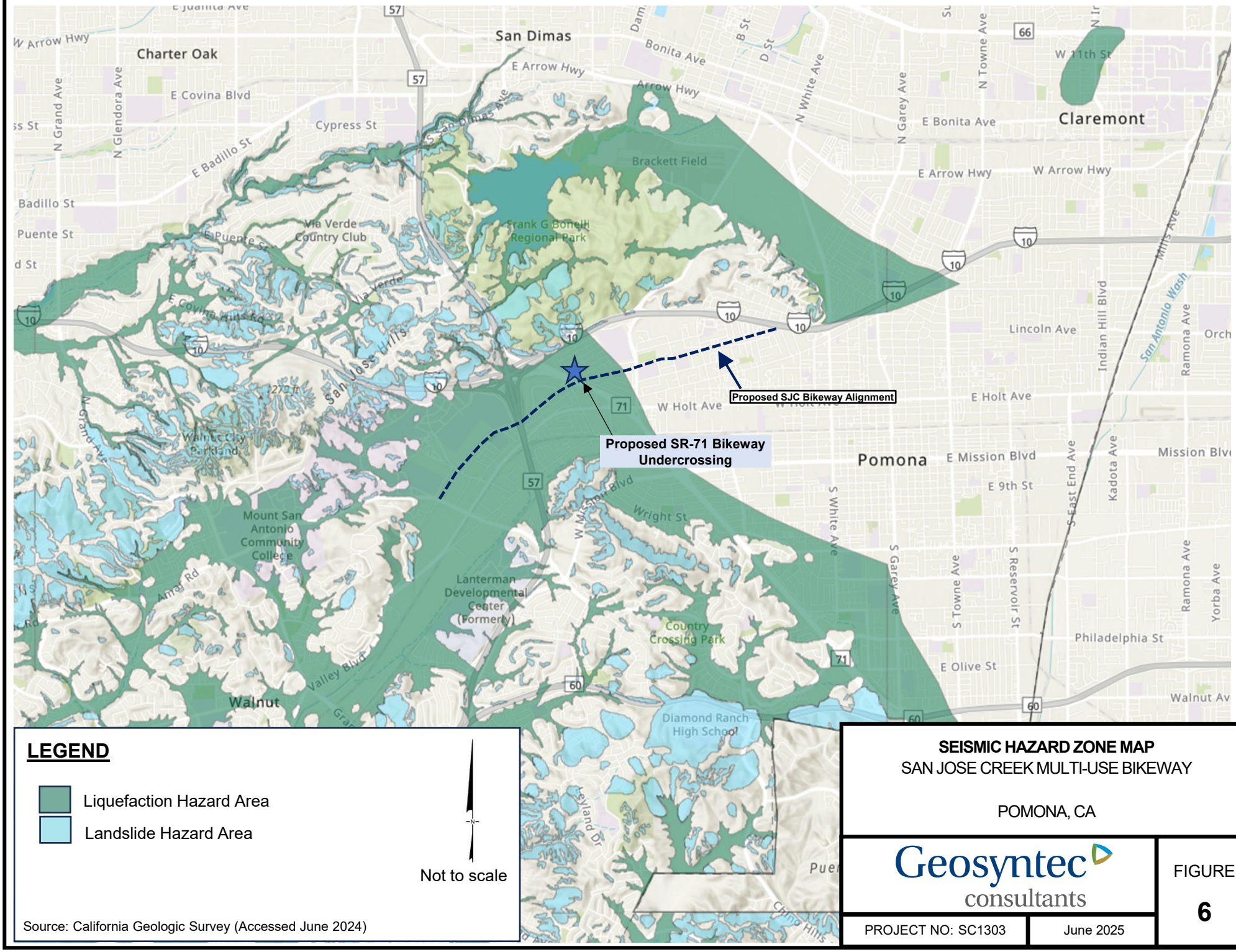
POMONA, CA

Geosyntec consultants

FIGURE 5

PROJECT NO: SC1303 | June 2025

\\orangecounty-01\DATA\PRJ4\CAWP\SC1303 - San Jose Creek - Multi-Use Bikeway\08 - Geotechnical Report\Figures




**LEGEND**

- Liquefaction Hazard Area
- Landslide Hazard Area

Not to scale

Source: California Geologic Survey (Accessed June 2024)

**SEISMIC HAZARD ZONE MAP**
SAN JOSE CREEK MULTI-USE BIKEWAY

POMONA, CA

Geosyntec consultants

FIGURE
**6**

PROJECT NO: SC1303 | June 2025

\\orangecounty-01\DATA\PRJ4\CAWP\SC1303 - San Jose Creek - Multi-Use Bikeway\08 - Geotechnical Report\Figures

Geosyntec consultants

# APPENDICES

Geosyntec consultants

# APPENDIX A – 90% Concept Plans and Historical Information

Geosyntec consultants

# 90% Concept Plans Provided by Alta

# San Jose Creek Bikeway

# CITY OF POMONA

## SAN JOSE CREEK MULTI-USE BIKEWAY - 90% SUBMITTAL

## GENERAL STREET CONSTRUCTION NOTES:

1. ALL WORK SHALL CONFORM TO THE LATEST EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (THE GREENBOOK), STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION (A.P.W.A. STANDARDS), AND STANDARDS OF THE CITY OF POMONA PUBLIC WORKS DEPARTMENT.
2. APPLICATION FOR EXCAVATION AND INSPECTION IN CONNECTION WITH WORK SHOWN ON THIS PLAN MUST BE COMPLETED BY THE CONTRACTOR AT LEAST TWENTY-FOUR (24) HOURS PRIOR TO STARTING ANY WORK.
3. WORK IN PUBLIC STREETS ONCE BEGUN SHALL BE PROSECUTED WITHOUT DELAY SO AS TO PROVIDE MINIMUM INCONVENIENCE TO ADJACENT PROPERTY OWNERS AND THE TRAVELING PUBLIC.
4. TRAFFIC CONTROL SHALL BE MAINTAINED IN ACCORDANCE WITH THE CALIFORNIA MUTCD.
5. CONTRACTOR SHALL IMPLEMENT DUST CONTROL MEASURES AT ALL TIMES.
6. CONTRACTOR SHALL PROTECT EXISTING IRRIGATION LINES AND SPRINKLER HEADS BEHIND EXISTING CURB. THE CONTRACTOR SHALL REPLACE ANY DAMAGED LINES AND SPRINKLER HEADS AT THEIR OWN EXPENSE.
7. CONTRACTOR SHALL REPLACE TRAFFIC STRIPES, LEGENDS, LOOP DETECTORS AND MARKINGS DAMAGED DURING THE CONSTRUCTION OF THIS PROJECT. TRAFFIC STRIPES, PAVEMENT LEGENDS, RAISED PAVEMENT MARKERS AND LOOP DETECTORS SHALL BE PER THE 2014 CALIFORNIA MUTCD, CALTRANS STANDARD PLANS AND CALTRANS STANDARD SPECIFICATIONS 84, 85, AND 86, LATEST EDITIONS.
8. AS BUILTS OF THE COMPLETED PROJECT SHALL BE PREPARED BY CONTRACTOR AND BE SUBMITTED FOR APPROVAL OF THE CITY ENGINEER.
9. CONTRACTOR SHALL NOTIFY ALL AFFECTED RESIDENCES IN WRITING AT LEAST TWO (2) FULL WORKING DAYS BEFORE ANY START OF CONSTRUCTION AS SPECIFIED.
10. CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (DIG ALERT) AT 811, TWO (2) FULL WORKING DAYS PRIOR TO START OF WORK. THE CONTRACTOR MUST OBTAIN AND MAINTAIN VALID DIG ALERT REFERENCE NUMBER THROUGH THE LIFE OF THE PROJECT AS NECESSARY FOR CONSTRUCTION.
11. CONTRACTOR SHALL PROTECT ALL CENTERLINE SURVEY MONUMENTS AND CENTERLINE TIES AS SPECIFIED.
12. THE LOCATION OF EXISTING UTILITIES IS SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES, WHICH MIGHT BE OCCASIONED BY THE FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
13. CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICES (BMPs) TO CONTROL EROSION AND SEDIMENT AND PRESERVE WATER QUALITY TO THE MAXIMUM EXTENT POSSIBLE.

## ADDITIONAL GENERAL NOTES:

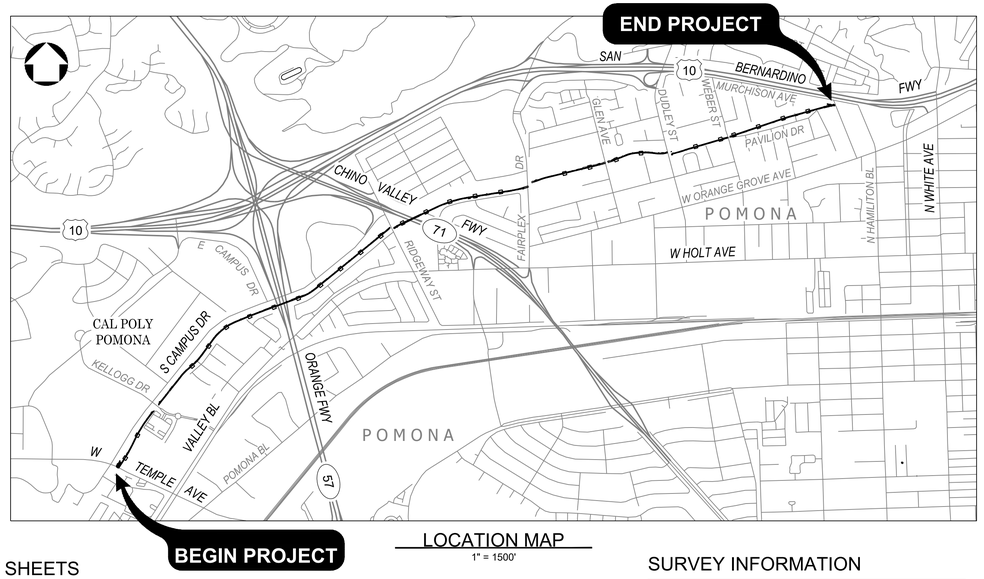
1. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE FOR PUBLIC SAFETY AND CONVENIENCES, THE CONTRACTOR SHALL ESTABLISH ADEQUATE ACCESS TO DRIVEWAYS AT ALL TIMES.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND PROTECTI0N OF ANY AND ALL SURFACE, SUBSURFACE, AND OVERHEAD LINES AND STRUCTURES.
3. THE CONTRACTOR SHALL MARK (CAT TRACK) THE TRAFFIC STRIPING LINES, STREET CENTERLINE, LANE LINES AND INTERSECTION LIMIT LINES/CROSSWALKS IMMEDIATELY AFTER HIS PAVING OPERATIONS AND PRIOR T0 OPENING THAT SECTION OF ROADWAY TO TRAFFIC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING ALL REGULATORY AND WARNING SIGNS.
4. PRIME CONTRACTOR LICENSE REQUIRED: CLASS A OR C12.
5. FIELD DENSITY AFTER ROLLING OF ALL ASPHALT CONCRETE PLACED ON THIS PROJECT SHALL BE A MINIMUM OF 95 PERCENT RELATIVE COMPACTION.
6. DROP OFFS ON THE PAVEMENT OVER 1" IN HEIGHT THAT WILL REMAIN OVERNIGHT SHALL BE RAMPED WITH TEMPORARY AC PAVEMENT.
7. DO NOT COLD MILL OVER EXISTING MANHOLES, CATCH BASINS, LOCAL DEPRESSIONS, SIGNAL LOOP LEAD-INS, OR UTILITY COVERS.
8. ALL UTILITY MANHOLES AND WATER VALVE COVERS WITHIN THE PROPOSED AREAS OF WORK SHALL BE ADJUSTED TO GRADE.
9. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL BUSINESSES AND COORDINATE DELIVERIES EXCEPT AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS.
10. NO TRENCHES MAY BE LEFT OPEN OVERNIGHT.
11. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (USA) AS REQUIRED PRIOR TO THE START OF WORK AND DURING THE EXECUTION OF THE WORK.
12. THE CONTRACTOR SHALL NOT CONDUCT ANY OPERATION OR PERFORM ANY WORK PERTAINING TO THE PROJECT BETWEEN 5:00 PM AND 7:00 AM ON ANY DAY NOR ON SATURDAY, SUNDAY; OR ANY HOLIDAY, EXCEPT AS APPROVED BY THE DIRECT0R OF PUBLIC WORKS. NO TRAFFIC LANES SHALL BE CLOSED BEFORE 8:30 AM OR AFTER 4:00 PM.
13. ALL PCC AND ASPHALT CONCRETE SHALL BE REMOVED TO A SAW CUT.
14. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL SUBSTRUCTURES WITHIN THE AGREEMENT OF THE PROPOSED IMPROVEMENTS. IN THE EVENT OF ANY STRUCTURE DAMAGE, THE CONTRACTOR SHALL BEAR THE TOTAL COST OF REPAIR AND REPLACEMENT.
15. CONTRACTOR SHALL USE SELF LEVELING PAVING MACHINE FOR ASPHALT SECTIONS.
16. CONSTRUCTION SURVEY AND STAKING SHALL BE PROVIDED BY THE CONTRACTOR
17. ALL NECESSARY MATERIALS, COMPACTION, AND ACCEPTANCE TESTING RELATED TO THE CONSTRUCTION WORK WILL BE DONE BY A LABORATORY APPROVED BY THE CITY. THE COST FOR THE TESTING SHALL BE BORNE BY THE CITY OF POMONA.
18. IF ANY EQUIPMENT OR CONSTRUCTION ACTIVITIES ARE TO OCCUR WITHIN THE CHANNEL, THE CONTRACTOR SHALL DETAIL THESE ACTIVITIES IN A RE-SUBMITTAL AND OUTLINE THE PROPOSED MEASURES TO PROTECT THE CHANNEL INVERT AND CHANNEL WALLS.
19. ANY DAMAGE TO USACE STRUCTURES SHALL BE REPAIRED AT NO EXPENSE TO THE U.S. ARMY CORPS OF ENGINEERS.
20. THE CONTRACTOR SHALL TAKE BEFORE-CONSTRUCTION AND AFTER-CONSTRUCTION VIDEOS OF THE CONSTRUCTION SITE, ADJACENT TO AND INSIDE THE EXISTING CHANNEL.

## SIGNING AND STRIPING GENERAL NOTES:

1. ALL WORK SHALL CONFORM TO THE 2014 CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD), THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARDS PLANS AND SPECIFICATIONS (LATEST EDITION), AND SPECIAL PROVISIONS, AND ALL ADDENDUM THERETO.
2. REFLECTORIZE ALL STRIPES AND LEGENDS. ALL PAVEMENT STRIPING, MARKINGS AND LEGENDS SHALL BE THERMOPLASTIC (MINIMUM 0.15" THICK) UNLESS OTHERWISE NOTED AND SHALL MATCH CITY STENCILS, OR CALTRANS STANDARDS. THE CONTRACTOR SHALL PROVIDE AND INSTALL RAISED PAVEMENT MARKERS FOR ALL STRIPING PERTAINING TO ON-STREET WORK. STRIPING, MARKINGS, AND LEGENDS SHALL CONFORM TO THE LATEST CALTRANS STANDARD PLANS A20A THRU A20D AND A24D THRU A24F.
3. EXISTING STRIPING AND PAVEMENT MARKINGS THAT ARE IN CONFLICT WITH PROPOSED STRIPING AND PAVEMENT MARKINGS SHALL BE REMOVED BY WET SAND BLASTING OR GRINDING AND DISPOSED OF PER SECTIONS 15-2.02 (B&C) AND 15-2.03 OF THE STATE STANDARD SPECIFICATIONS. BLACK OUT IS NOT PERMITTED. ALL DAMAGED PAVEMENT DUE TO REMOVALS SHALL BE REPAIRED AS NECESSARY TO MAINTAIN A SMOOTH AND UNIFORM SURFACE OR AS DIRECTED BY CITY ENGINEER.
4. TEMPORARY STRIPING, MARKINGS AND TABS SHALL BE APPLIED ON STREET WITH PAVEMENT SURFACE COURSE REPLACEMENTS PRIOR TO OPENING STREET TO THE PUBLIC. IN NO CASE SHALL A NEWLY (BASE OR FINAL) PAVED STREET OPEN TO THE PUBLIC BE LEFT UNSTRIPED OVERNIGHT. PERMANENT STRIPING & MARKING SHALL BE INSTALLED BETWEEN TEN (10) TO FIFTEEN (15) CALENDAR DAYS AFTER INSTALLING THE FINAL PAVEMENT SURFACE.
5. ALL TEMPORARY PAVEMENT MARKERS/TABS SHALL BE REMOVED AT THE CONCLUSION OF THE PROJECT.
6. ALL SIGNING, STRIPING AND PAVEMENT MARKINGS SHALL BE CAT-TRACKED AND APPROVED BY THE CITY TRAFFIC ENGINEER OR AUTHORIZED REPRESENTATIVE PRIOR TO FINAL INSTALLATION.
7. CONTRACTOR SHALL RE-STRIPE EXISTING STRIPING, MARKING ALL INTERSECTING, AND JOINING STREETS WITHIN 100' OF LIMITS OF PROJECT.
8. PRIOR TO FINAL ACCEPTANCE OF STREET IMPROVEMENTS, ALL PAVEMENT STRIPING AND STENCILING WITHIN THE PERIMETER OF THE CONSTRUCTION AREA SHALL BE RESTORED TO LIKE NEW CONDITION, IN MANNER MEETING THE APPROVAL OF THE CITY ENGINEER.
9. THE CONTRACTOR SHALL RESTRIPE EXISTING AND CURB MARKINGS OBLITERATED BY NEW CONSTRUCTION WHETHER OR NOT SHOWN ON PLANS AT NO COST TO THE CITY.
10. ALL EXISTING SIGNS TO REMAIN SHALL BE PROTECTED IN PLACE, UNLESS OTHERWISE NOTED.
11. CLEARANCE FROM THE FINISHED GRADE TO THE BASE OF ALL SIGNS SHALL BE 7 FEET MINIMUM.
12. ALL SIGNS SHALL MEET THE 2014 CA MUTCD REQUIREMENTS AND SHALL HAVE 3M DIAMOND GRADE REFLECTIVE SHEETING (OR APPROVED EQUAL) AND 3M 1160 ANTI-GRAFFITI FILM (OR APPROVED EQUAL).
13. TRAFFIC SIGNAL LOOPS SHALL BE INSTALLED AND FUNCTIONAL WITHIN FIVE (5) CALENDAR DAYS OF INSTALLING FINAL PAVEMENT SURFACE.
14. THE CONTRACTOR SHALL FURNISH AND INSTALL TYPE DB 2-WAY BLUE REFLECTIVE PAVEMENT MARKERS ADJACENT TO ALL EXISTING FIRE HYDRANTS WITHIN THE LIMITS OF CONSTRUCTION PER STATE AND CITY STANDARDS..
15. ALL SIGNS SHALL BE STANDARD SIZE UNLESS OTHERWISE NOTED ON PLANS. SIGN LOCATION SHALL BE VERIFIED IN THE FIELD BY THE ENGINEER.

## UTILITY COMPANY CONTACTS

| | | |
|---|---|---|
| AT&T | FLOYD DIZON | 714-618-9126 |
| CAL POLY UNIVERSITY | BRUYN BEVANS | 909-979-5517 |
| CITY OF POMONA PUBLIC WORKS | ARNOLD DICHOSA | 909-620-2266 |
| CITY OF POMONA WATER DISTRICT | HYLE TANG | 909-620-3753 |
| CROWN CASTLE | KELLY KLINEFELTER | 724-743-6085 |
| EXTENET SYSTEMS LLC | KAVIN L. WILLIAMS | 630-245-2120 |
| FRONTIER | RAY ROUNDTREE | 714-375-6760 |
| HP COMMUNICATIONS | TONYA ATKINSON | 909-532-1216 |
| LEVEL 3 | DANIEL GOETTE | 800-871-9244 |
| MCI/VERIZON | STEVEN GALLO | 949-253-8112 |
| METROPOLITAN WATER DISTRICT | DAVID FONG | 213-217-6094 |
| SCE | | 800-655-4555 |
| SO CAL GAS - DISTRIBUTION | CHRISTOPHER KEEVERN | 800-427-2200 |
| SPECTRUM | JAMES BIGGS | 626-430-3337 |
| WALNUT VALLEY WATER DISTRICT | VICENTE DE LA ROSA | 909-595-1268 |




LOCATION MAP
1" = 1500'

## INDEX OF SHEETS


| SHEET NO. | DRAWING NO. | CITY PLAN NO. | DESCRIPTION |
|---|---|---|---|
| 1 | G000 | FA - 2263 AA | TITLE SHEET, INDEX OF SHEETS, GENERAL NOTES, LOCATION MAP |
| 2 | G001 | FA - 2263 AB | LEGEND AND ABBREVIATIONS |
| 3 | G002 | FA - 2263 AC | KEY PLAN |
| 4-5 | G003 - G004 | FA - 2263 AD-AE | TYPICAL SECTIONS |
| 6-7 | C050 - C051 | FA - 2263 AF-AG | ALIGNMENT GEOMETRY PLANS |
| 8-28 | C100 - C120 | FA - 2263 AH-BB | PLAN & PROFILE |
| 29-44 | C200 - C213 | FA - 2263 BC-BR | DETAIL SHEETS |
| 45-54 | SS100 - SS109 | FA - 2263 BS-CB | SIGNING AND STRIPING |
| 55-56 | C060 - C061 | FA - 2263 CC-CD | CIVIL AND STRIPING DETAILS |
| 57 | LG100 | FA - 2263 CE | TEMPLE AVE. GRADING PLANS |
| 58-59 | LH100 - LH101 | FD - 24 AA-AB | HARDSCAPE PLANS |
| 60 | LI001 | FD - 24 AC | IRRIGATION LEGEND AND NOTES |
| 61-63 | LI100 - LI102 | FD - 24 AD-AF | IRRIGATION PLANS |
| 64-65 | LI200 - LI201 | FD - 24 AG-AH | IRRIGATION DETAILS |
| 66 | L001 | FD - 24 AI | PLANTING LEGEND AND NOTES |
| 67-69 | L100 - L102 | FD - 24 AJ-AL | PLANTING PLANS |
| 70-72 | L200-L202 | FD - 24 AM-AO | PLANTING AND AMENITY DETAILS |
| 73-78 | T101-T106 | FF - 374 AA-AF | TRAFFIC SIGNAL MODIFICATION PLANS |
| 79-80 | T107-T108 | FE - 442 AA-AB | STREET LIGHTING PLANS |
| 81-90 | T109-T118 | FJ - 204 AA-AJ | INTERSECTION SIGNING & STRIPING PLANS |
| 91-93 | S100-S102 | FA - 2263 CF-CH | SR-71 UNDERCROSSING PLAN |
| 94-95 | D100-D101 | FC - 381 AA-AB | SR-71 UNDERCROSSING DRAINAGE PLAN AND DETAILS |


## SURVEY INFORMATION

COORDINATES SHOWN ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM (CCS83), ZONE V, 1983 NAD (2017.50 EPOCH)

BEARINGS ARE BASED ON THE BEARING BETWEEN CALIFORNIA SPATIAL REFERENCE CENTER CONTINUOUS GPS STATIONS "SPMS" TO "LORS" BEING N29°08'55"E

ELEVATIONS ARE BASED ON LOS ANGELES COUNTY BENCH MARK "4G4924", DESCRIBED AS "L&LS 5411 TAG IN E CB 3.3FT N/O BCR @NE COR TEMPLE AVE & SOUTH CAMPUS DR (NR S END C.B." ELEV. = 706.184 FEET (NAVD 88)

DATE OF SURVEY: SEPTEMBER 2022

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

TITLE SHEET. INDEX OF SHEETS, GENERAL NOTES, LOCATION MAP

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

G000

PRELIMINARY


alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com


| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

SCALE AS SHOWN
DATE 12.12.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 1 OF 95 SHTS

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 pomona, co san jose bikeway\CAD\01_Plans\2022-171_00-G000_COVER.dwg 12/17/2024 13:48

FA-2263 AA

## TRAFFIC SIGNAL GENERAL NOTES:

1. ALL WORK SHALL CONFORM TO THE 2014 CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD), THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARDS PLANS AND SPECIFICATIONS (2015 EDITION), AND SPECIAL PROVISIONS, AND ALL ADDENDUM THERETO.
2. ALL SIGNS SHALL BE STANDARD SIZE UNLESS OTHERWISE NOTED ON PLANS. SIGN LOCATION SHALL BE VERIFIED IN THE FIELD BY THE ENGINEER.
3. ALL STRIPES, SIGNS, AND PAVEMENT MARKINGS SHALL BE REFLECTORIZED. STENCILS FOR PAVEMENT MARKINGS SHALL MATCH CITY STANDARD STENCILS EXACTLY. ALL STRIPING, MARKING DETAILS, AND RAISED PAVEMENT MARKERS SHALL MATCH CALTRANS STANDARD PLANS DETAILS AND SPECIFICATIONS.
4. PAINTED TRAFFIC STRIPES AND PAINTED PAVEMENT MARKINGS (IF ALLOWED) SHALL BE APPLIED IN TWO COATS. PAVEMENT MARKINGS SHALL BE APPLIED IN THERMOPLASTIC FORMAT, UNLESS APPROVED OTHERWISE.
5. ALL EXISTING SIGNS TO REMAIN SHALL BE PROTECTED IN PLACE, UNLESS OTHERWISE NOTED.
6. CONFLICTING SIGNS AND RAISED PAVEMENT MARKERS SHALL BE REMOVED. ALL REMOVAL OF SIGNS AND MARKINGS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
7. ALL CONFLICTING STRIPING AND PAVEMENT MARKING SHALL BE REMOVED BY SANDBLASTING OR GRINDING AS DIRECTED BY THE ENGINEER, UNLESS OTHERWISE NOTED.
8. NEW CONDUCTOR CABLES SHALL BE USED FOR TRAFFIC SIGNAL, AND STRANDED WIRES FOR SAFETY LIGHTS AND INTERNALLY ILLUMINATED STREET NAMES SIGNS (IISNS).
9. PEDESTRIAN PUSH BUTTON SHALL CONFIRM TO ADA REQUIREMENTS. PEDESTRIAN INDICATIONS SHALL BE LED PEDESTRIAN/HAND TYPE. TRAFFIC SIGNAL INDICATIONS SHALL BE 12" LENSES WITH METAL BACKPLATES AND VISORS, ETC. ALL INDICATIONS SHALL BE "LED" TYPE. IISNS SHALL BE RETROFITTED LED PER SPEC.
10. PRIOR TO BORING, JACKING OR TRENCHING OF ANY CONDUIT, THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES FOR EXACT LOCATION OF UTILITIES. NOTE: "TRENCHING IN PAVEMENT METHOD" IS NOT AN OPTION. ALL POT HOLES SHALL BE HAND DUG. SAW CUTTING POT HOLE LOCATIONS IS NOT AN OPTION.
11. THE CITY WILL PAY THE EDISON COMPANY, ALL APPROPRIATE SERVICE INSTALLATION CHARGES. THE CONTRACTOR SHALL MAKE ARRANGEMENTS WITH THE EDISON COMPANY FOR SERVICE CONNECTIONS. AT LEAST 48 HOURS ADVANCE NOTICE SHALL BE GIVEN TO THE EDISON COMPANY BY CONTACTING THEIR ENGINEER AT 909-592-3725.
12. ALL MATERIAL AND WORK SHALL CONFORM TO THE CURRENT CITY STANDARD PLANS AND THE STANDARD PLANS AND SPECIFICATIONS OF THE CALIFORNIA DEPARTMENT OF TRANSPORTATION. ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF CALTRANS STANDARD SPECIFICATIONS, SECTION 86. IF THERE IS A CONFLICT BETWEEN CALTRANS AND CITY SPECIFICATIONS, THE CITY SPECIFICATIONS WILL PREVAIL.
13. FINAL FIELD LOCATIONS OF ALL EQUIPMENT SHALL BE APPROVED BY THE CITY INSPECTOR PRIOR TO INSTALLATION.
14. PULL BOXES SHALL BE NO. 6E, EXCEPT AS SHOWN. PULL BOXES SHALL BE CRISTY N36 ELECTRICAL BOX WITH FIBRELYTE LID WITH N90 BOLT DOWN KIT.
15. MINOR ERRORS OR OMISSIONS ON THESE PLANS OR IN THE ACCOMPANYING SPECIFICATIONS SHALL NOT RELIEVE THE CONTRACTOR FROM PROVIDING A COMPLETE AND FULLY OPERATING SYSTEM.
16. EXISTING STREET LIGHTS TO BE REMOVED SHALL BE SALVAGED TO THE CITY YARD. CONTACT TRAFFIC OPERATIONS CREW CHIEF AT (909) 620-2395, 48 HOURS PRIOR TO DELIVERY.
17. SIGNS AND POSTS TO BE REMOVED SHALL BE SALVAGED TO CITY YARD. CONTACT PAINT AND SIGN SHOP AT (909) 620-2397, 48 HOURS PRIOR TO DELIVERY.
18. ALL EXISTING STRIPING AND PAVEMENT MARKINGS SHALL BE REPLACED ON ALL APPROACHES WITHIN 300 FEET OF THE INTERSECTION. ALL STRIPING, MARKING DETAILS, AND RAISED PAVEMENT MARKERS SHALL MATCH CITY STANDARD PLANS, DETAILS, AND SPECIFICATIONS. ALL STRIPING AND PAVEMENT MARKINGS SHALL BE IN THERMOPLASTIC UNLESS OTHERWISE NOTED.
19. GROUT THE BOTTOM OF ALL PULL BOXES, MINIMUM OF 2" THICK. SLOPE THE GROUT TO A 1 ½" DIAMETER DRAIN HOLE IN THE GROUT TO ALLOW WATER TO DRAIN THROUGH THE GROUT TO THE UNDERLYING CRUSHED ROCK.

## LEGEND — EXISTING

- RIGHT OF WAY
- ROAD CENTERLINE
- CHANNEL CENTERLINE
- PAVEMENT EDGE
- LACFCD EASEMENT
- 1-FT CONTOUR
- 825 — 5-FT CONTOUR
- +748.34 — SPOT ELEVATION
- FENCE
- GATE
- TREE / PALM
- BENCHMARK
- SIGN
- POST — BOLLARD
- U UR — BOX / RISER - UNKNOWN
- T — MANHOLE - TELE / COMM
- E — MANHOLE - ELECTRIC
- SD — MANHOLE - DRAINAGE
- S — MANHOLE - SANITARY
- W — MANHOLE - WATER
- U — MANHOLE - UNKNOWN
- CO — SANITARY SEWER CLEANOUT
- GV — GAS VALVE
- GM — GAS METER
- GR — GAS RISER
- WV — WATER VALVE
- WM — WATER METER
- FH — FIRE HYDRANT
- WR — WATER RISER
- VV — VALVE VAULT
- PP — POWER POLE
- GUY WIRE ANCHOR
- EPB — ELECTRIC PULL BOX
- ER PM — ELECTRIC RISER / METER
- T CPB — COMMUNICATION BOX
- LP — STREET LIGHT
- TS — TRAFFIC SIGNAL w/ MAST ARM
- TS — TRAFFIC SIGNAL
- TR — TRAFFIC RISER
- TSPB — TRAFFIC SIGNAL PULL BOX

## LEGEND — EXISTING UTILITIES (SIZE PER PLAN)

- G — G — NATURAL GAS (G)
- SS — SANITARY SEWER (SS)
- SS(ABAN) — ABANDONED SANITARY SEWER
- SD — STORM DRAINAGE (SD)
- W — W — WATER (W)

## LEGEND — PROPOSED

- PATH CENTERLINE
- DAYLIGHT LINE
- PROPOSED CHAINLINK FENCE
- PROPOSED WIRE MESH FENCE
- PROPOSED AC
- PROPOSED PCC
- PROPOSED CMB
- DETECTABLE WARNING SURFACE
- NATIVE SOIL
- PROPOSED DG
- PROPOSED PERMEABLE PAVERS
- PROPOSED LANDSCAPING
- PROPOSED COBBLESTONES

14' — PATH WIDTH
*NOMINAL WIDTH SHOWN, ACTUAL WIDTH MAY VARY SLIGHTLY TO CONFORM TO EXISTING SITE CONDITIONS*

*R / W* — RIGHT OF WAY

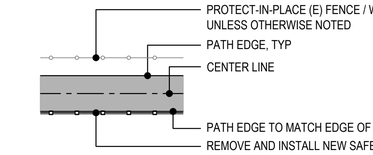
W TEMPLE AVE — STREET NAME

1 / C101 — DETAIL NUMBER; SHEET REFERENCE; SHEET WHERE DETAIL IS DRAWN

NORTH ARROW

SERVICE VEHICLE AND PEDESTRIAN GATE

## LEGEND — TYPICAL PLAN




*SAN JOSE CREEK CHANNEL*

## ABBREVIATIONS

| | |
|---|---|
| ABAN | ABANDONED |
| AC, ACP | ASPHALT CONCRETE PAVEMENT |
| ADA | AMERICANS WITH DISABILITIES ACT |
| APS | ACCESSIBLE PEDESTRIAN SIGNAL |
| AVE | AVENUE |
| BC | BEGIN CURVE |
| BCR | BEGIN CURB RETURN |
| BEG | BEGIN |
| BLVD | BOULEVARD |
| BP | BEGINNING PROJECT (ALIGNMENT) |
| BVCE | BEGINNING VERTICAL CURVE ELEVATION |
| BVCS | BEGINNING VERTICAL CURVE STATION |
| CA | STATE OF CALIFORNIA |
| CALTRANS | CALIFORNIA DEPARTMENT OF TRANSPORTATION |
| CB | CATCH BASIN |
| C&G | CURB AND GUTTER |
| CF | CURB FACE |
| C/L, CL | CENTER LINE |
| CLR | CLEAR |
| CMB | CRUSHED MISCELLANEOUS BASE |
| CONC | CONCRETE |
| CON. CL | CONSTRUCTION CENTERLINE |
| COMM | COMMUNICATION |
| CPP | CAL POLY POMONA |
| CMP | CORRUGATED METAL PIPE |
| CR | CURB RAMP |
| "D" | DUDLEY ST CENTERLINE |
| DI | DRAINAGE INLET |
| DG | DECOMPOSED GRANITE |
| DR | DRIVE |
| DWG | DRAWING |
| DWY | DRIVEWAY |
| (E), EX | EXISTING |
| EB | EASTBOUND |
| EC | END CURVE |
| ECR | END CURB RETURN |
| EG | EXISTING GRADE |
| EVCE | END VERTICAL CURVE ELEVATION |
| EVCS | END VERTICAL CURVE STATION |
| EL | ELEVATION |
| EP, EOP | END OF PROJECT (ALIGNMENT)<br>EDGE OF PAVEMENT |
| "F" | FAIRPLEX DRIVE CENTERLINE |
| FG | FINISH GRADE |
| FH | FIRE HYDRANT |
| FL | FLOW LINE |
| FS | FINISH SURFACE |
| FT | FEET |
| FWY | FREEWAY |
| "G" | GLEN AVENUE CENTERLINE |
| GB | GRADE BREAK |
| GM | GAS METER |
| GV | GAS VALVE |
| HORIZ | HORIZONTAL |
| HP | HIGH POINT |
| HT | HEIGHT |
| INV | INVERT ELEVATION |
| ICV | IRRIGATION CONTROL VALVE |
| K | RATE OF CURVATURE |
| "K" | KELLOGG DRIVE CENTERLINE |
| LACFCD | LOS ANGELES COUNTY FLOOD CONTROL DISTRICT |
| LF | LINEAL FOOT/FEET |
| LP | LOW POINT |
| LIP | LIP OF GUTTER |
| LVC | LENGTH OF VERTICAL CURVE |
| LT | LEFT |
| "M" | MURCHISON AVENUE CENTERLINE |
| MAX | MAXIMUM |
| MCR | MIDDLE CURB RETURN |
| MIN | MINIMUM |
| MH | MANHOLE |
| MOD. | MODIFIED |
| MUTCD | MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES |
| N | NORTH / NORTHING |
| NTS | NOT TO SCALE |
| NO. | NUMBER |
| O/S | OFFSET |
| OC | ON CENTER |
| PB | PULLBOX |
| PC | POINT OF CURVATURE |
| PI | POINT OF INTERSECTION |
| PCC | PORTLAND CEMENT CONCRETE<br>POINT OF COMPOUND CURVE |
| PGL | PROFILE GRADE LINE |
| PP | POWER POLE |
| PIP | PROTECT IN PLACE |
| PRC | POINT OF REVERSE CURVE |
| PT | POINT OF TANGENCY |
| PVI | POINT OF VERTICAL INTERSECTION |
| R | RADIUS |
| "R" | RIDGEWAY STREET CENTERLINE |
| RCP | REINFORCED CONCRETE PIPE |
| RRFB | RECTANGULAR RAPID FLASHING BEACON |
| RT | RIGHT |
| R/W | RIGHT OF WAY |
| S | SOUTH, SLOPE |
| SDMH | STORM DRAIN MANHOLE |
| SF | SQUARE FOOT |
| SHT | SHEET |
| SHLDR | SHOULDER |
| SJC CL | SAN JOSE CREEK CENTERLINE |
| SLPB | STREET LIGHT PULLBOX |
| SMH | SEWER MANHOLE |
| SPPWC | STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION |
| ST | STREET |
| STA | STATION |
| STD | STANDARD |
| SW | SIDEWALK |
| "T" | TEMPLE AVENUE CENTERLINE |
| TC | TOP OF CURB |
| CON. | TRANSITION |
| TS | TRAFFIC SIGNAL |
| TSPB | TRAFFIC SIGNAL PULLBOX |
| TYP | TYPICAL |
| TW | TOP OF WALL |
| UC, U/C | UNDERCROSSING |
| VERT | VERTICAL |
| "W" | WEBER STREET CENTERLINE |
| WB | WESTBOUND |
| WM | WATER METER |
| WV | WATER VALVE |
| W/ | WITH |

## CONSTRUCTION NOTES: C100 - C120

1. CONSTRUCT 4" ACP, 2" CLASS C2-PG-64-10 OVER 2" CLASS B2-PG-64-10, OVER 6" CMB, SUBGRADE COMPACTION MIN. 90%
2. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 6' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.
3. CONSTRUCT 4" PCC SIDEWALK OVER NATIVE PER CITY OF POMONA STD. No. A-7-02.
4. REMOVE AND RECONSTRUCT MODIFIED DRIVEWAY APPROACH PER CITY OF POMONA STD. No. A-27-10, TYPE II. SEE SHEETS 29-44 FOR ADDITIONAL DETAILS.
5. CONSTRUCT MODIFIED CURB RAMP PER CITY OF POMONA STD. No. A-28-10, CASE PER PLAN. SEE SHEETS 29-44 FOR ADDITIONAL DETAILS.
6. INSTALL SERVICE VEHICLE AND PEDESTRIAN GATE PER SHEET 55, DETAIL 1.
7. CONSTRUCT VARIABLE HEIGHT PCC CURB PER CITY OF POMONA STD. No. A-3-64, HEIGHT PER PLAN.
8. RECONSTRUCT CATCH BASIN LID.
9. REMOVE EXISTING CHAINLINK FENCE AND CONSTRUCT NEW 6' CHAINLINK FENCE PER SPPWC STD PLAN 600-4.
10. CONSTRUCT FULL DEPTH AC PAVEMENT OVER BASE FOR SAWCUT PATCH AS REQUIRED TO JOIN EXISTING AC PAVEMENT PER SPPWC STD PLAN 133-4.
11. REMOVE AND RECONSTRUCT 6"-8" VARIABLE HEIGHT TYPE "B" PCC CURB AND GUTTER PER CITY OF POMONA STD. NO. A-3-64, HEIGHT PER PLAN
12. CONSTRUCT CONCRETE PAVEMENT PER SPPWC STD PLAN 132-4.
13. RECONSTRUCT 4" PCC SIDEWALK PER CITY OF POMONA STD. No. A-7-02.
14. INSTALL PLANTING AND TRAIL AMENITIES PER SHEETS 66-72.
15. INSTALL WATER SERVICE AND WATER METER FOR IRRIGATION PURPOSES PER SHEETS 60-65.
16. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 10' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.
17. JOIN EXISTING, FEATURE PER PLAN.
18. REMOVE AND REPLACE LACFCD CHANNEL MAINTENANCE ACCESS GATE.
19. INSTALL NONWALKABLE SURFACE.
20. INSTALL HANDRAILING PER SPPWC STD PLAN 606-5.
21. CONSTRUCT CONCRETE BARRIER.
22. INSTALL PIPE GATE OR SIMILAR PER SPPWC STD PLAN 602-4.

## CONSTRUCTION NOTES: S100

30. CONSTRUCT 0.75' PCC TRAIL OVER 0.5' CL II AG. BASE
31. CONSTRUCT PCC UNDERCROSSING WALLS
32. CONSTRUCT DRAINAGE INLET (SEE DRAINAGE PLANS)
33. CONSTRUCT DRAINAGE GUTTER
34. CONSTRUCT CHAINLINK FENCE - TYPE CL-3.5
35. REMOVE (E) CL FENCE - SEE CIVIL PLANS
36. REMOVE TREE
37. (E) CHANNEL WALL - PROTECT IN PLACE
38. (E) BR. ABUT. (SR-71) - PROTECT IN PLACE
39. (E) CHAINLINK FENCE - PROTECT IN PLACE

## SIGNING AND STRIPING NOTES: SS100-SS109

1. INSTALL SHARED-USE PATH DASHED YELLOW CENTERLINE PER SHEET 56, DETAIL 5.
2. INSTALL 6" WHITE EDGE LINE PER CALTRANS STD PLAN A20D, DETAIL 39.
3. INSTALL SIGN ON NEW POST.
4. INSTALL 12" LIMIT LINE PER CALTRANS STD PLAN A24G.
5. INSTALL SHARED-USE PATH SOLID YELLOW CENTERLINE PER SHEET 56, DETAIL 6.
6. REMOVE AND REINSTALL SIGN AS SHOWN.

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

LEGEND AND ABBREVIATIONS

G001

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

SCALE AS SHOWN
DATE 12.18.2024

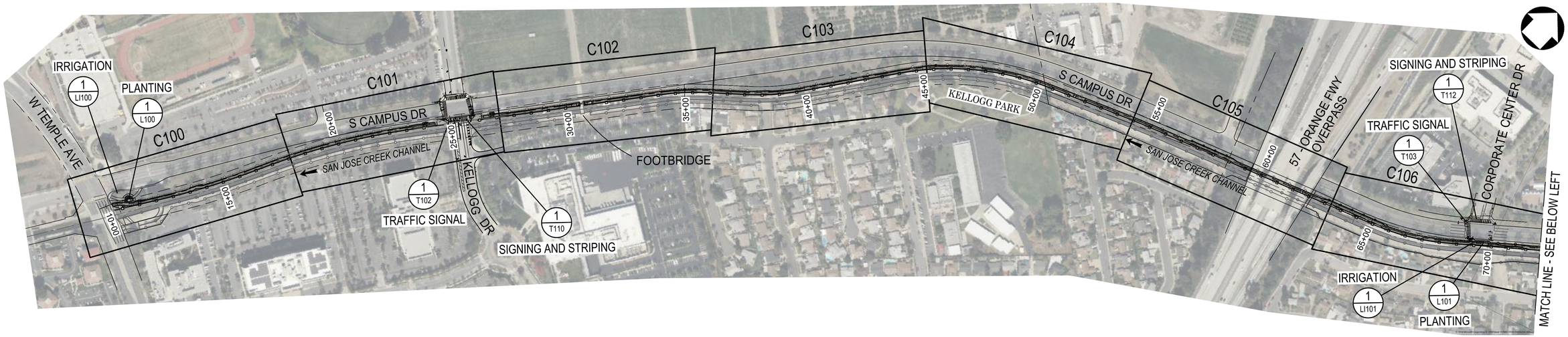
DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

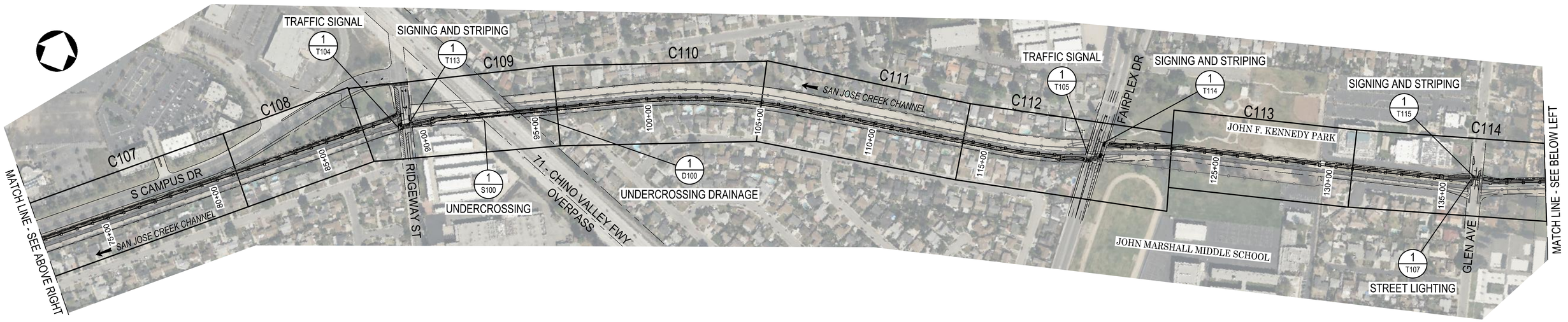
SHT. 2 OF 95 SHTS

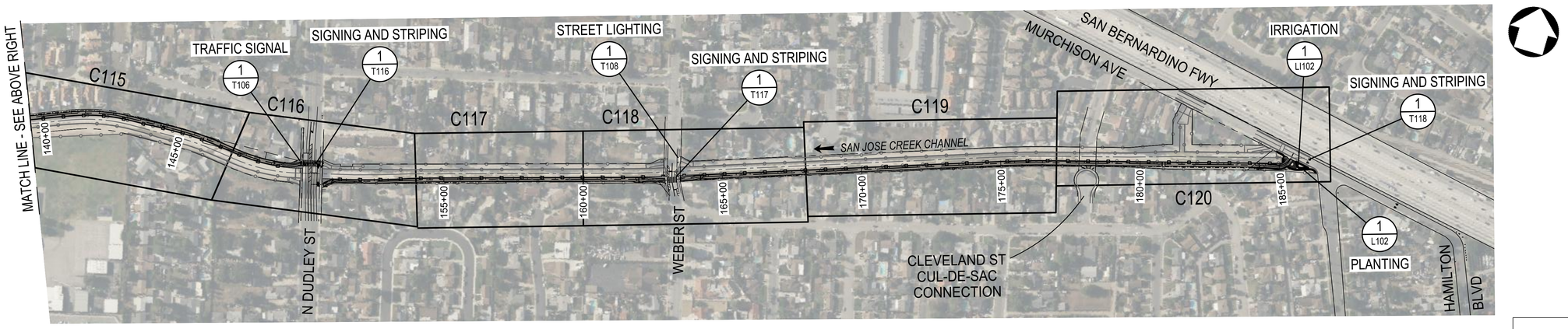
Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_01-G001_LEGEND.dwg 12/18/2024 16:25

FA-2263 AB




90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

G002

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

200' 100' 0 200' 400'
1" = 200'

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

KEY PLAN

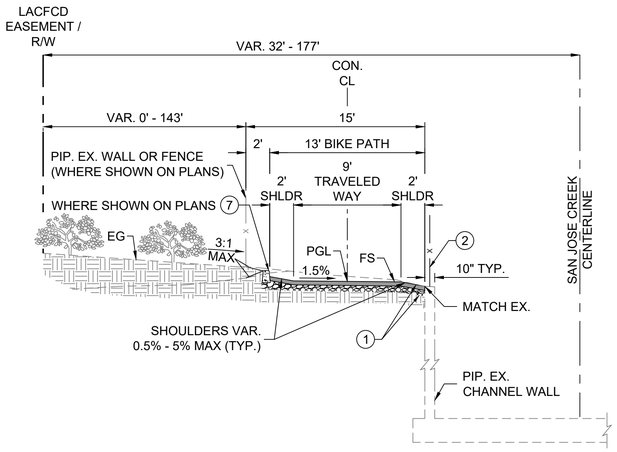
SCALE AS SHOWN
DATE 12.16.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 3 OF 95 SHTS

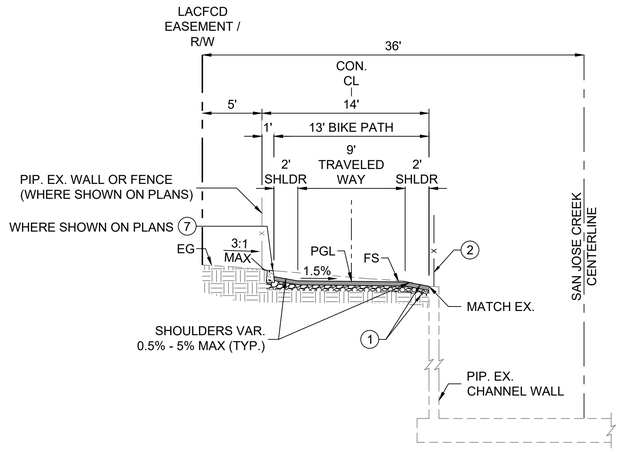
FA-2263 AC

N:\Shared\PROJECTS\2022\00-2022-171 pomona, ca san jose bikeway\CAD\01_Plans\2022-171_01-G003_KEYP.dwg 12/17/2024 10:11



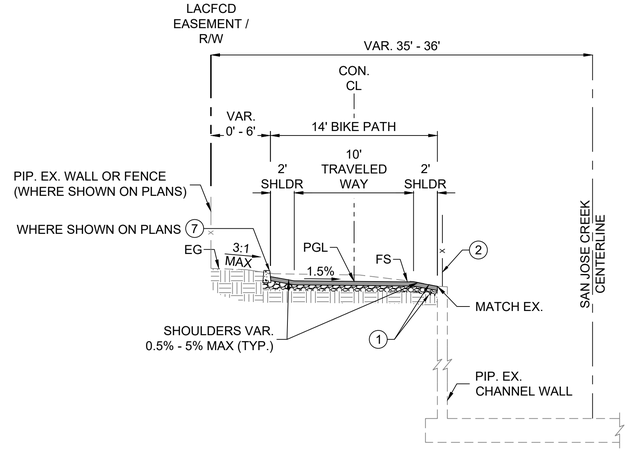

## TEMPLE AVENUE TO RIDGEWAY STREET

STA 10+54.95 TO STA 23+74.54
STA 26+92.47 TO STA 30+53.56
STA 30+71.00 TO STA 86+40.16
NOT TO SCALE




## FAIRPLEX DRIVE TO GLEN AVENUE

STA 121+40.40 TO STA 129+36.45
NOT TO SCALE




## FAIRPLEX DRIVE TO GLEN AVENUE

STA 129+76.04 TO STA 134+53.67

## GLEN AVENUE TO DUDLEY STREET

STA 138+06.10 TO STA 148+24.72
NOT TO SCALE

## CONSTRUCTION NOTES

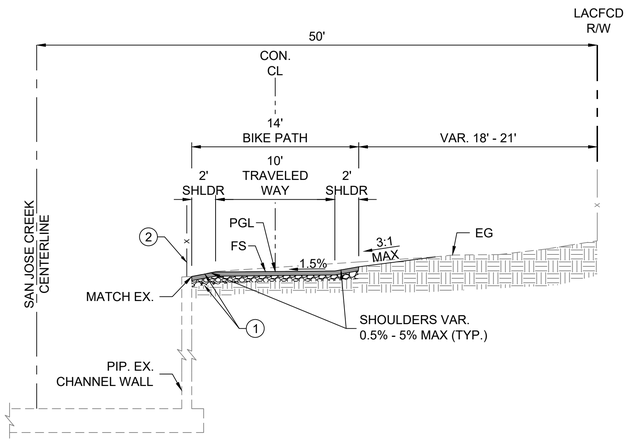
1. CONSTRUCT 4" ACP, 2" CLASS C2-PG-64-10 OVER 2" CLASS B2-PG-64-10, OVER 6" CMB, SUBGRADE COMPACTION MIN. 90%
2. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 6' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.
7. CONSTRUCT VARIABLE HEIGHT PCC CURB PER CITY OF POMONA STD. No. A-3-64, HEIGHT PER PLAN.

## LEGEND

PROPOSED AC PAVEMENT
PROPOSED CMB
PROPOSED PCC PAVEMENT
NATIVE SOIL

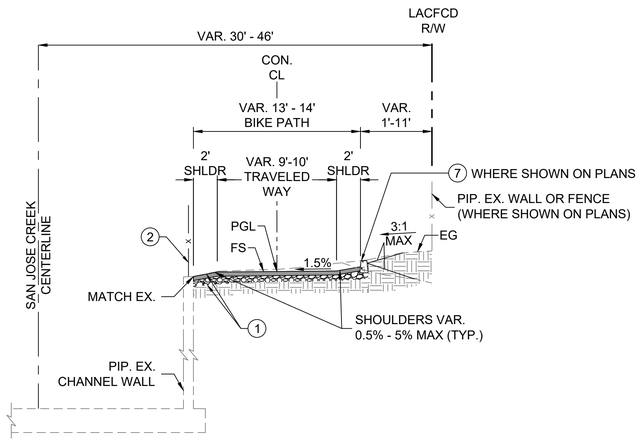
## GENERAL SHEET NOTES

1. ALL PROPOSED DIMENSIONING AND OFFSETS ARE FROM THE EXISTING CHANNEL WALL.
2. TYPICAL SECTIONS DO NOT SHOW PATH ENTRANCE AND EXITS THAT TIE INTO EXISTING STREET AND SECTIONS THAT DO NOT ALIGN WITH THE CHANNEL WALL. ENTRANCE AND EXIT DETAILS ARE SHOWN ON CIVIL DETAIL SHEETS, SEE SHEETS 29 TO 44.
3. TYPICAL SECTIONS DO NOT SHOW PROPOSED AREAS BEYOND THE PATH SUCH AS INTERSECTIONS. IMPROVEMENTS AT THE INTERSECTIONS ARE SHOWN ON CIVIL DETAIL SHEETS, SEE SEE SHEETS 29 TO 44.
4. TYPICAL SECTIONS DO NOT SHOW PROPOSED AREAS NEAR FIXED UTILITY STRUCTURES OR PROPOSED GATES. PATH DIVERSIONS FROM THE EXISTING WALL NEAR UTILITY FEATURES OR GATES ARE SHOWN ON CIVIL DETAIL SHEETS, SEE SHEETS SEE SHEETS 29 TO 44.
5. UNDERCROSSING SECTIONS ARE INCLUDED ON STRUCTURAL SHEETS 91 TO 93.
6. ALL EXISTING FENCES, GATES, POSTS, CURBS, AC BERM, AC PAVEMENT, PCC PAVEMENT, DG PATHWAYS, ETC THAT ARE WITHIN THE TRAILS RIGHT OF WAY SHOULD BE REMOVED FOR COMPLETION OF WORK, UNLESS OTHERWISE NOTED AS PROTECT IN PLACE. PROTECT ALL EXISTING TREES UNLESS OTHERWISE NOTED.




## RIDGEWAY STREET TO FAIRPLEX DRIVE

STA 90+63.95 TO STA 91+16.02
STA 96+00.00 TO STA 118+02.89
NOT TO SCALE

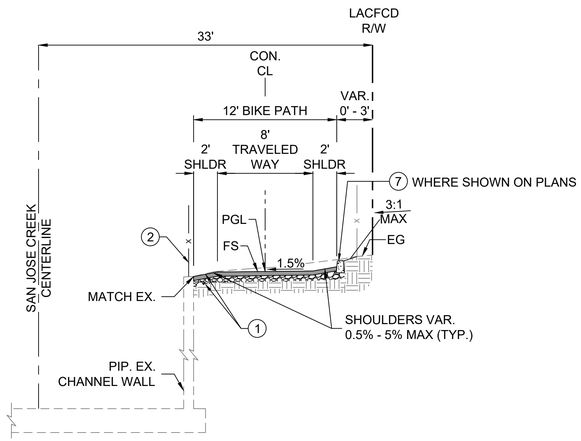



## DUDLEY STREET TO WEBER STREET

STA 153+50.00 TO STA 161+69.88

## WEBER STREET TO MURCHISON AVENUE

STA 164+42.49 TO STA 183+97.00
NOT TO SCALE




## DUDLEY STREET TO WEBER STREET

STA 150+60.29 TO STA 153+50.00
NOT TO SCALE

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

TYPICAL SECTIONS

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

G003

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

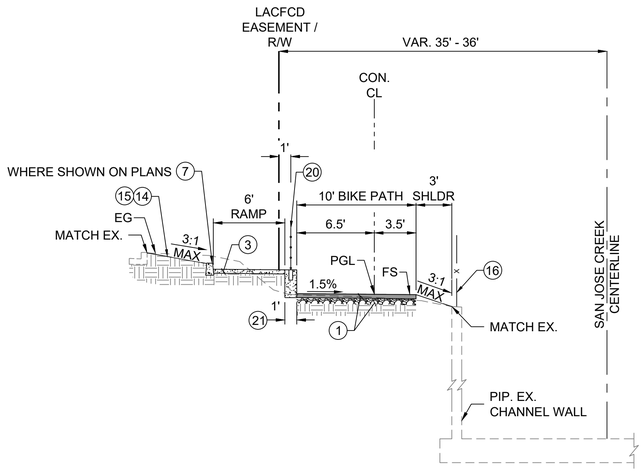
SCALE AS SHOWN
DATE 12.16.2024

| | |
|---|---|
| DESIGNED: | PVT ENG |
| DRAWN: | PVT ENG |
| CHECKED: | K. DI COCCO |
| REVIEWED: | S. FRIESON |

SHT. 4 OF 95 SHTS

FA-2263 AD

H:\Shared\PROJECTS\2022\00-2022-171 pomona, ca san jose bikeway\CAD\01_Plans\2022-171_01-G004_TYP.dwg 12/17/2024 10:12




# CORPORATE CENTER DR. TYPICAL DETAIL

STA 69+41.47 TO STA 69+87.00
NOT TO SCALE

## CONSTRUCTION NOTES

1. CONSTRUCT 4" ACP, 2" CLASS C2-PG-64-10 OVER 2" CLASS B2-PG-64-10, OVER 6" CMB, SUBGRADE COMPACTION MIN. 90%
3. CONSTRUCT 4" PCC SIDEWALK OVER NATIVE PER CITY OF POMONA STD. No. A-7-02.
7. CONSTRUCT VARIABLE HEIGHT PCC CURB PER CITY OF POMONA STD. No. A-3-64, HEIGHT PER PLAN.
14. INSTALL PLANTING AND TRAIL AMENITIES PER SHEETS 66-72.
15. INSTALL WATER SERVICE AND WATER METER FOR IRRIGATION PURPOSES PER SHEETS 60-65.
16. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 10' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.
20. INSTALL HANDRAILING PER SPPWC STD PLAN 606-5.
21. CONSTRUCT CONCRETE BARRIER.

## LEGEND

- PROPOSED AC PAVEMENT
- PROPOSED CMB
- PROPOSED PCC PAVEMENT
- NATIVE SOIL

## GENERAL SHEET NOTES

1. ALL PROPOSED DIMENSIONING AND OFFSETS ARE FROM THE EXISTING CHANNEL WALL.
2. TYPICAL SECTIONS DO NOT SHOW PATH ENTRANCE AND EXITS THAT TIE INTO EXISTING STREET AND SECTIONS THAT DO NOT ALIGN WITH THE CHANNEL WALL. ENTRANCE AND EXIT DETAILS ARE SHOWN ON CIVIL DETAIL SHEETS, SEE SHEETS 29 TO 44.
3. TYPICAL SECTIONS DO NOT SHOW PROPOSED AREAS BEYOND THE PATH SUCH AS INTERSECTIONS. IMPROVEMENTS AT THE INTERSECTIONS ARE SHOWN ON CIVIL DETAIL SHEETS, SEE SEE SHEETS 29 TO 44.
4. TYPICAL SECTIONS DO NOT SHOW PROPOSED AREAS NEAR FIXED UTILITY STRUCTURES OR PROPOSED GATES. PATH DIVERSIONS FROM THE EXISTING WALL NEAR UTILITY FEATURES OR GATES ARE SHOWN ON CIVIL DETAIL SHEETS, SEE SHEETS SEE SHEETS 29 TO 44.
5. UNDERCROSSING SECTIONS ARE INCLUDED ON STRUCTURAL SHEETS 91 TO 93.
6. ALL EXISTING FENCES, GATES, POSTS, CURBS, AC BERM, AC PAVEMENT, PCC PAVEMENT, DG PATHWAYS, ETC THAT ARE WITHIN THE TRAILS RIGHT OF WAY SHOULD BE REMOVED FOR COMPLETION OF WORK, UNLESS OTHERWISE NOTED AS PROTECT IN PLACE. PROTECT ALL EXISTING TREES UNLESS OTHERWISE NOTED.

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

TYPICAL SECTIONS

G004

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

SCALE AS SHOWN
DATE 12.16.2024

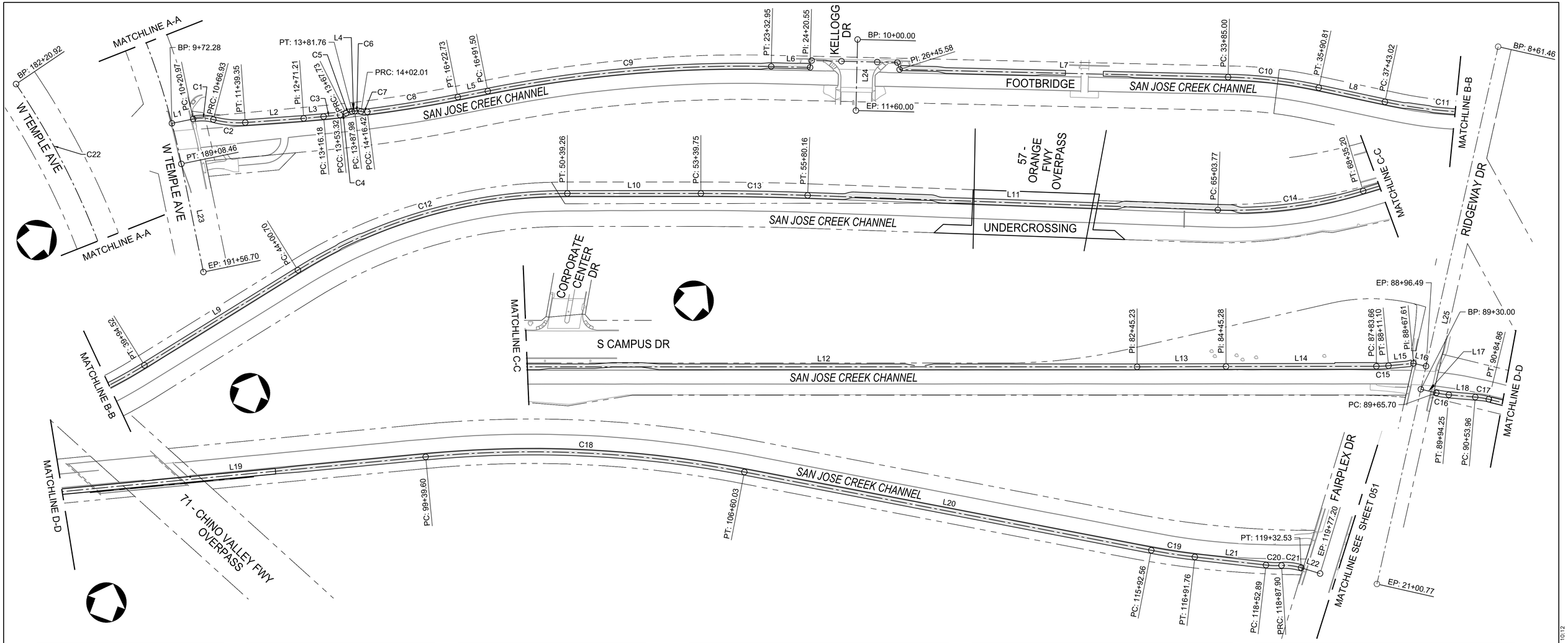
DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 5 OF 95 SHTS

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 pomona, ca san jose bikeway\CAD\01_Plans\2022-171_01-G004_TYP.dwg 12/17/2024 14:30

FA-2263 AE




| LINE TABLE | | | | |
|---|---|---|---|---|
| Line # | Length | Direction | Start Point | End Point |
| L1 | 48.69 | N25° 27' 46"E | STA 9+72.28<br>N: 1,840,667.67<br>E: 6,617,298.27 | STA 10+20.97<br>N: 1,840,711.64<br>E: 6,617,319.21 |
| L2 | 131.86 | N32° 55' 43"E | STA 11+39.35<br>N: 1,840,800.50<br>E: 6,617,396.22 | STA 12+71.21<br>N: 1,840,911.17<br>E: 6,617,467.90 |
| L3 | 44.97 | N31° 44' 12"E | STA 12+71.21<br>N: 1,840,911.17<br>E: 6,617,467.90 | STA 13+16.18<br>N: 1,840,949.42<br>E: 6,617,491.55 |
| L4 | 6.22 | N30° 24' 00"E | STA 13+81.76<br>N: 1,841,007.61<br>E: 6,617,520.82 | STA 13+87.98<br>N: 1,841,012.98<br>E: 6,617,523.97 |
| L5 | 68.77 | N25° 44' 38"E | STA 16+22.73<br>N: 1,841,217.08<br>E: 6,617,638.34 | STA 16+91.50<br>N: 1,841,279.03<br>E: 6,617,668.21 |
| L6 | 87.60 | N38° 19' 49"E | STA 23+32.95<br>N: 1,841,821.70<br>E: 6,618,007.80 | STA 24+20.55<br>N: 1,841,890.42<br>E: 6,618,062.13 |
| L7 | 739.42 | N38° 19' 49"E | STA 26+45.58<br>N: 1,842,048.41<br>E: 6,618,187.04 | STA 33+85.00<br>N: 1,842,629.44<br>E: 6,618,645.62 |
| L8 | 152.21 | N49° 03' 01"E | STA 35+90.81<br>N: 1,842,777.04<br>E: 6,618,787.58 | STA 37+43.02<br>N: 1,842,876.80<br>E: 6,618,902.54 |
| L9 | 406.18 | N35° 57' 02"E | STA 39+94.52<br>N: 1,843,061.82<br>E: 6,619,072.08 | STA 44+00.70<br>N: 1,843,390.64<br>E: 6,619,310.55 |

| LINE TABLE | | | | |
|---|---|---|---|---|
| Line # | Length | Direction | Start Point | End Point |
| L10 | 300.49 | N67° 44' 14"E | STA 50+39.26<br>N: 1,843,780.10<br>E: 6,619,806.25 | STA 53+39.75<br>N: 1,843,893.94<br>E: 6,620,084.34 |
| L11 | 923.60 | N69° 46' 41"E | STA 55+80.16<br>N: 1,843,981.04<br>E: 6,620,308.40 | STA 65+03.77<br>N: 1,844,300.29<br>E: 6,621,175.08 |
| L12 | 1,410.03 | N50° 47' 18"E | STA 68+35.20<br>N: 1,844,463.83<br>E: 6,621,461.61 | STA 82+45.23<br>N: 1,845,355.23<br>E: 6,622,554.12 |
| L13 | 200.05 | N50° 36' 24"E | STA 82+45.23<br>N: 1,845,355.23<br>E: 6,622,554.12 | STA 84+45.28<br>N: 1,845,482.19<br>E: 6,622,708.72 |
| L14 | 338.38 | N50° 41' 55"E | STA 84+45.28<br>N: 1,845,482.19<br>E: 6,622,708.72 | STA 87+83.66<br>N: 1,845,696.52<br>E: 6,622,970.57 |
| L15 | 56.51 | N45° 27' 25"E | STA 88+11.10<br>N: 1,845,714.86<br>E: 6,622,990.98 | STA 88+67.61<br>N: 1,845,754.49<br>E: 6,623,031.26 |
| L16 | 28.88 | N63° 30' 38"E | STA 88+67.61<br>N: 1,845,754.49<br>E: 6,623,031.26 | STA 88+96.49<br>N: 1,845,767.37<br>E: 6,623,057.10 |
| L17 | 35.70 | N63° 51' 57"E | STA 89+30.00<br>N: 1,845,719.84<br>E: 6,623,080.79 | STA 89+65.70<br>N: 1,845,735.56<br>E: 6,623,112.85 |
| L18 | 59.71 | N55° 41' 19"E | STA 89+94.25<br>N: 1,845,749.92<br>E: 6,623,137.49 | STA 90+53.96<br>N: 1,845,783.58<br>E: 6,623,186.81 |

| LINE TABLE | | | | |
|---|---|---|---|---|
| Line # | Length | Direction | Start Point | End Point |
| L19 | 854.74 | N64° 32' 25"E | STA 90+84.86<br>N: 1,845,798.96<br>E: 6,623,213.58 | STA 99+39.60<br>N: 1,846,166.39<br>E: 6,623,985.31 |
| L20 | 932.53 | N80° 53' 16"E | STA 106+60.03<br>N: 1,846,379.74<br>E: 6,624,670.87 | STA 115+92.56<br>N: 1,846,527.42<br>E: 6,625,591.63 |
| L21 | 161.13 | N76° 30' 55"E | STA 116+91.76<br>N: 1,846,546.85<br>E: 6,625,688.89 | STA 118+52.89<br>N: 1,846,584.42<br>E: 6,625,845.58 |
| L22 | 44.66 | N86° 56' 50"E | STA 119+32.53<br>N: 1,846,605.72<br>E: 6,625,921.94 | STA 119+77.20<br>N: 1,846,608.10<br>E: 6,625,966.54 |
| L23 | 248.24 | S64° 32' 14"E | STA 189+08.46<br>N: 1,840,629.65<br>E: 6,617,383.96 | STA 191+56.70<br>N: 1,840,522.93<br>E: 6,617,608.09 |
| L24 | 160.00 | S51° 40' 11"E | STA 10+00.00<br>N: 1,842,013.46<br>E: 6,618,076.23 | STA 11+60.00<br>N: 1,841,914.23<br>E: 6,618,201.74 |
| L25 | 1,239.31 | S26° 29' 22"E | STA 8+61.46<br>N: 1,846,427.00<br>E: 6,622,728.38 | STA 21+00.77<br>N: 1,845,317.79<br>E: 6,623,281.15 |

| CURVE TABLE | | | | | | |
|---|---|---|---|---|---|---|
| Curve # | Radius | Length | Chord Direction | Start Point | End Point | Delta |
| C1 | 100.00 | 45.95 | N38° 37' 37.36"E | STA 10+20.97<br>N: 1,840,711.64<br>E: 6,617,319.21 | STA 10+66.93<br>N: 1,840,747.22<br>E: 6,617,347.64 | 26°19'42" |
| C2 | 220.00 | 72.43 | N42° 21' 35.51"E | STA 10+66.93<br>N: 1,840,747.22<br>E: 6,617,347.64 | STA 11+39.35<br>N: 1,840,800.50<br>E: 6,617,396.22 | 18°51'46" |
| C3 | 2,920.00 | 37.14 | N31° 22' 20.48"E | STA 13+16.18<br>N: 1,840,949.42<br>E: 6,617,491.55 | STA 13+53.32<br>N: 1,840,981.13<br>E: 6,617,510.89 | 0°43'44" |
| C4 | 40.00 | 14.41 | N20° 41' 18.03"E | STA 13+53.32<br>N: 1,840,981.13<br>E: 6,617,510.89 | STA 13+67.73<br>N: 1,840,994.53<br>E: 6,617,515.95 | 20°38'21" |
| C5 | 40.00 | 14.03 | N20° 24' 53.85"E | STA 13+67.73<br>N: 1,840,994.53<br>E: 6,617,515.95 | STA 13+81.76<br>N: 1,841,007.61<br>E: 6,617,520.82 | 20°05'33" |
| C6 | 40.00 | 14.03 | N40° 23' 06.45"E | STA 13+87.98<br>N: 1,841,012.98<br>E: 6,617,523.97 | STA 14+02.01<br>N: 1,841,034.57<br>E: 6,617,533.01 | 20°05'33" |
| C7 | 40.00 | 14.41 | N40° 06' 42.27"E | STA 14+02.01<br>N: 1,841,034.57<br>E: 6,617,533.01 | STA 14+16.42<br>N: 1,841,047.67<br>E: 6,617,542.24 | 20°38'21" |
| C8 | 2,920.00 | 206.31 | N27° 46' 04.91"E | STA 14+16.42<br>N: 1,841,047.67<br>E: 6,617,542.24 | STA 16+22.73<br>N: 1,841,217.08<br>E: 6,617,638.34 | 4°02'53" |
| C9 | 2,920.00 | 641.45 | N32° 02' 13.75"E | STA 16+91.50<br>N: 1,841,279.03<br>E: 6,617,668.21 | STA 23+32.95<br>N: 1,841,821.70<br>E: 6,618,007.80 | 12°35'11" |

| CURVE TABLE | | | | | | |
|---|---|---|---|---|---|---|
| Curve # | Radius | Length | Chord Direction | Start Point | End Point | Delta |
| C10 | 1,100.00 | 205.81 | N43° 41' 25.22"E | STA 33+85.00<br>N: 1,842,628.44<br>E: 6,618,645.62 | STA 35+90.81<br>N: 1,842,777.04<br>E: 6,618,787.58 | 10°43'12" |
| C11 | 1,100.00 | 251.50 | N42° 30' 01.75"E | STA 37+43.02<br>N: 1,842,876.80<br>E: 6,618,902.54 | STA 39+94.52<br>N: 1,843,061.82<br>E: 6,619,072.08 | 13°05'59" |
| C12 | 1,151.00 | 638.55 | N51° 50' 38.25"E | STA 44+00.70<br>N: 1,843,390.64<br>E: 6,619,310.55 | STA 50+39.26<br>N: 1,843,780.10<br>E: 6,619,806.25 | 31°47'12" |
| C13 | 6,749.50 | 240.41 | N68° 45' 27.75"E | STA 53+39.75<br>N: 1,843,893.94<br>E: 6,620,084.34 | STA 55+80.16<br>N: 1,843,981.04<br>E: 6,620,308.40 | 2°02'27" |
| C14 | 1,000.00 | 331.43 | N60° 16' 59.74"E | STA 65+03.77<br>N: 1,844,300.29<br>E: 6,621,175.08 | STA 68+35.20<br>N: 1,844,463.83<br>E: 6,621,461.61 | 18°59'23" |
| C15 | 300.00 | 27.45 | N48° 04' 39.86"E | STA 87+83.66<br>N: 1,845,696.52<br>E: 6,622,970.57 | STA 88+11.10<br>N: 1,845,714.86<br>E: 6,622,990.98 | 5°14'31" |
| C16 | 200.00 | 28.54 | N59° 46' 38.22"E | STA 89+65.70<br>N: 1,845,735.56<br>E: 6,623,112.85 | STA 89+94.25<br>N: 1,845,749.92<br>E: 6,623,137.49 | 8°10'38" |
| C17 | 200.00 | 30.90 | N60° 06' 52.01"E | STA 90+53.96<br>N: 1,845,783.58<br>E: 6,623,186.81 | STA 90+84.86<br>N: 1,845,798.96<br>E: 6,623,213.58 | 8°51'06" |
| C18 | 2,525.00 | 720.43 | N72° 42' 50.50"E | STA 99+39.60<br>N: 1,846,166.39<br>E: 6,623,985.31 | STA 106+60.03<br>N: 1,846,379.74<br>E: 6,624,670.87 | 16°20'51" |

| CURVE TABLE | | | | | | |
|---|---|---|---|---|---|---|
| Curve # | Radius | Length | Chord Direction | Start Point | End Point | Delta |
| C19 | 1,300.00 | 99.21 | N78° 42' 05.75"E | STA 115+92.56<br>N: 1,846,527.42<br>E: 6,625,591.63 | STA 116+91.76<br>N: 1,846,546.85<br>E: 6,625,688.89 | 4°22'21" |
| C20 | 200.00 | 35.00 | N71° 30' 04.86"E | STA 118+52.89<br>N: 1,846,584.42<br>E: 6,625,845.58 | STA 118+87.90<br>N: 1,846,595.52<br>E: 6,625,878.73 | 10°01'41" |
| C21 | 125.00 | 44.64 | N76° 43' 02.15"E | STA 118+87.90<br>N: 1,846,595.52<br>E: 6,625,878.73 | STA 119+32.53<br>N: 1,846,605.72<br>E: 6,625,921.94 | 20°27'36" |
| C22 | 1,750.00 | 687.54 | S75° 47' 32.52"E | STA 182+20.92<br>N: 1,840,797.32<br>E: 6,616,721.73 | STA 189+08.46<br>N: 1,840,629.65<br>E: 6,617,383.96 | 22°30'38" |

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

ALIGNMENT GEOMETRY PLAN

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C050

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

NOTE: CURVE LENGTHS SHOWN MAY BE WITHIN +/- 0.01 FT OF THE DIFFERENCE IN PC & PT STATIONS DUE TO ROUNDING.

100' 50' 0 100' 200'
1" = 100'

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

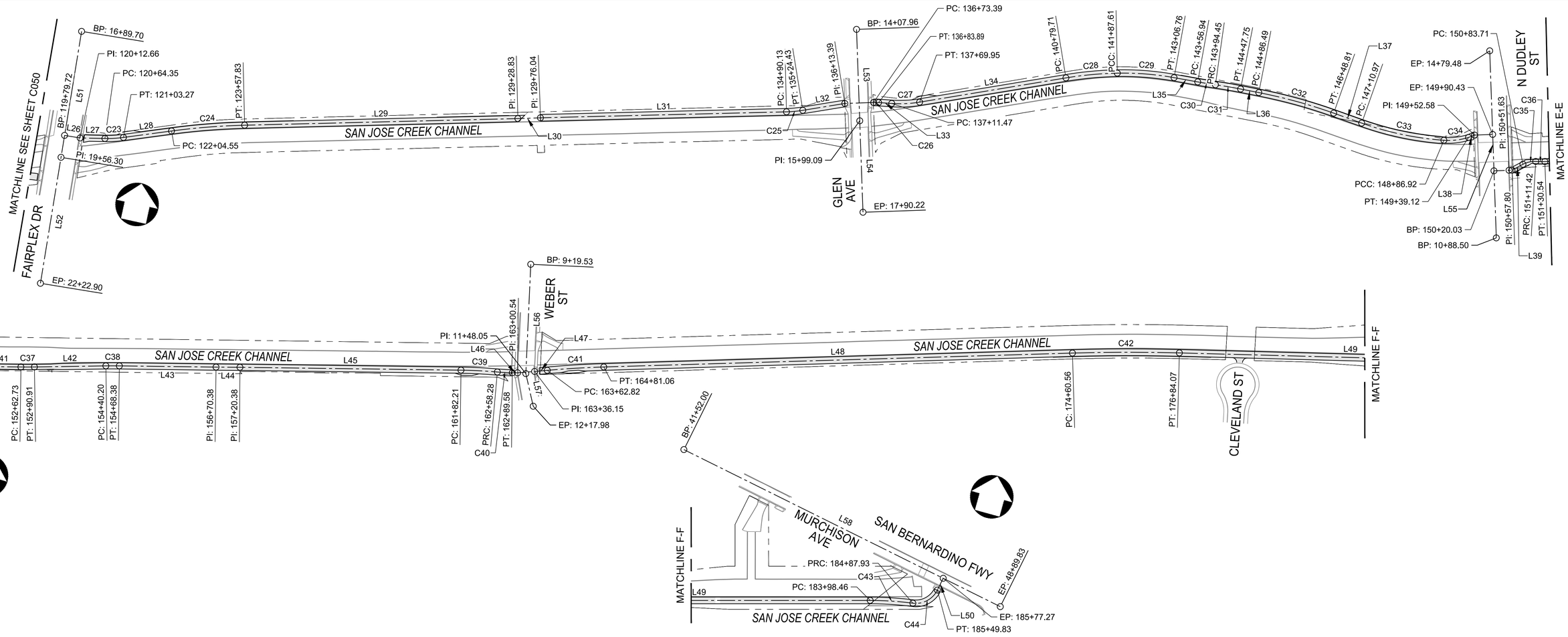
SCALE AS SHOWN
DATE 12.16.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 6 OF 95 SHTS

N:\Shared\PROJECTS\2022\100-2022-171 pomona, co san jose bikeway\CAD\01_Plans\2022-171_04-C050_GEOM.dwg 12/17/2024 10:12

FA-2263 AF




| LINE TABLE | | | | |
|---|---|---|---|---|
| Line # | Length | Direction | Start Point | End Point |
| L26 | 32.93 | N86° 57' 25"E | STA 119+79.72<br>N: 1,846,703.00<br>E: 6,625,961.48 | STA 120+12.66<br>N: 1,846,704.75<br>E: 6,625,994.37 |
| L27 | 51.69 | N78° 55' 36"E | STA 120+12.66<br>N: 1,846,704.75<br>E: 6,625,994.37 | STA 120+64.35<br>N: 1,846,714.68<br>E: 6,626,045.10 |
| L28 | 101.28 | N70° 00' 25"E | STA 121+03.27<br>N: 1,846,725.09<br>E: 6,626,082.56 | STA 122+04.55<br>N: 1,846,759.72<br>E: 6,626,177.73 |
| L29 | 571.00 | N76° 16' 49"E | STA 123+57.83<br>N: 1,846,804.14<br>E: 6,626,324.36 | STA 129+28.83<br>N: 1,846,939.57<br>E: 6,626,879.07 |
| L30 | 47.21 | N75° 40' 24"E | STA 129+28.83<br>N: 1,846,939.57<br>E: 6,626,879.07 | STA 129+76.04<br>N: 1,846,951.25<br>E: 6,626,924.81 |
| L31 | 514.09 | N76° 16' 49"E | STA 129+76.04<br>N: 1,846,951.25<br>E: 6,626,924.81 | STA 134+90.13<br>N: 1,847,073.18<br>E: 6,627,424.22 |
| L32 | 88.96 | N68° 25' 09"E | STA 135+24.43<br>N: 1,847,083.57<br>E: 6,627,456.88 | STA 136+13.39<br>N: 1,847,116.29<br>E: 6,627,539.61 |
| L33 | 27.58 | S81° 39' 42"W | STA 136+83.89<br>N: 1,847,133.23<br>E: 6,627,608.03 | STA 137+11.47<br>N: 1,847,137.23<br>E: 6,627,635.32 |
| L34 | 309.76 | N68° 15' 36"E | STA 137+69.95<br>N: 1,847,152.37<br>E: 6,627,691.66 | STA 140+79.71<br>N: 1,847,267.10<br>E: 6,627,979.39 |
| L35 | 50.19 | N87° 52' 51"E | STA 143+06.76<br>N: 1,847,315.89<br>E: 6,628,199.99 | STA 143+56.94<br>N: 1,847,317.75<br>E: 6,628,250.15 |
| L36 | 38.74 | N88° 47' 10"E | STA 144+47.75<br>N: 1,847,322.39<br>E: 6,628,340.82 | STA 144+86.49<br>N: 1,847,323.21<br>E: 6,628,379.56 |

| LINE TABLE | | | | |
|---|---|---|---|---|
| Line # | Length | Direction | Start Point | End Point |
| L37 | 62.16 | S82° 45' 33"E | STA 146+48.81<br>N: 1,847,314.68<br>E: 6,628,541.50 | STA 147+10.97<br>N: 1,847,306.85<br>E: 6,628,603.17 |
| L38 | 13.47 | N56° 28' 56"E | STA 149+39.12<br>N: 1,847,325.27<br>E: 6,628,827.65 | STA 149+52.58<br>N: 1,847,332.71<br>E: 6,628,838.88 |
| L39 | 25.90 | N49° 20' 53"E | STA 150+57.80<br>N: 1,847,277.83<br>E: 6,628,930.97 | STA 150+83.71<br>N: 1,847,294.71<br>E: 6,628,950.63 |
| L40 | 48.51 | N75° 37' 36"E | STA 151+30.54<br>N: 1,847,310.02<br>E: 6,628,994.19 | STA 151+79.05<br>N: 1,847,322.07<br>E: 6,629,041.18 |
| L41 | 83.69 | N73° 44' 19"E | STA 151+79.05<br>N: 1,847,322.07<br>E: 6,629,041.18 | STA 152+62.73<br>N: 1,847,345.50<br>E: 6,629,121.51 |
| L42 | 149.29 | N72° 07' 27"E | STA 152+90.91<br>N: 1,847,353.77<br>E: 6,629,148.45 | STA 154+40.20<br>N: 1,847,399.59<br>E: 6,629,290.53 |
| L43 | 202.01 | N73° 44' 19"E | STA 154+68.38<br>N: 1,847,407.86<br>E: 6,629,317.46 | STA 156+70.38<br>N: 1,847,464.43<br>E: 6,629,511.39 |
| L44 | 50.00 | N73° 27' 08"E | STA 156+70.38<br>N: 1,847,464.43<br>E: 6,629,511.39 | STA 157+20.38<br>N: 1,847,478.67<br>E: 6,629,559.32 |
| L45 | 461.82 | N73° 44' 19"E | STA 157+20.38<br>N: 1,847,478.67<br>E: 6,629,559.32 | STA 161+82.21<br>N: 1,847,607.99<br>E: 6,630,002.67 |
| L46 | 10.96 | N73° 36' 49"E | STA 162+89.58<br>N: 1,847,634.14<br>E: 6,630,106.78 | STA 163+00.54<br>N: 1,847,637.24<br>E: 6,630,117.30 |
| L47 | 26.67 | N67° 54' 50"E | STA 163+36.15<br>N: 1,847,650.32<br>E: 6,630,150.42 | STA 163+62.82<br>N: 1,847,660.34<br>E: 6,630,175.13 |

| LINE TABLE | | | | |
|---|---|---|---|---|
| Line # | Length | Direction | Start Point | End Point |
| L48 | 979.50 | N71° 18' 05"E | STA 164+81.06<br>N: 1,847,701.54<br>E: 6,630,285.94 | STA 174+60.56<br>N: 1,848,015.56<br>E: 6,631,213.74 |
| L49 | 714.39 | N74° 31' 23"E | STA 176+84.07<br>N: 1,848,081.22<br>E: 6,631,427.36 | STA 183+98.46<br>N: 1,848,271.86<br>E: 6,632,115.84 |
| L50 | 27.44 | N10° 55' 05"E | STA 185+49.83<br>N: 1,848,330.19<br>E: 6,632,245.36 | STA 185+77.27<br>N: 1,848,357.13<br>E: 6,632,250.56 |
| L51 | 266.60 | S03° 03' 10"E | STA 16+89.70<br>N: 1,846,922.89<br>E: 6,625,949.76 | STA 19+56.30<br>N: 1,846,656.66<br>E: 6,625,963.95 |
| L52 | 266.60 | S03° 03' 10"E | STA 19+56.30<br>N: 1,846,656.66<br>E: 6,625,963.95 | STA 22+22.90<br>N: 1,846,390.44<br>E: 6,625,978.15 |
| L53 | 191.13 | S14° 21' 20"E | STA 14+07.96<br>N: 1,847,272.71<br>E: 6,627,530.36 | STA 15+99.09<br>N: 1,847,087.55<br>E: 6,627,577.74 |
| L54 | 191.13 | S14° 21' 20"E | STA 15+99.09<br>N: 1,847,087.55<br>E: 6,627,577.74 | STA 17+90.22<br>N: 1,846,902.39<br>E: 6,627,625.13 |
| L55 | 390.98 | N14° 21' 04"W | STA 10+88.50<br>N: 1,847,132.63<br>E: 6,628,929.13 | STA 14+79.48<br>N: 1,847,511.41<br>E: 6,628,832.22 |
| L56 | 228.52 | S14° 24' 35"E | STA 9+19.53<br>N: 1,847,862.03<br>E: 6,630,077.40 | STA 11+48.05<br>N: 1,847,640.70<br>E: 6,630,134.26 |
| L57 | 69.93 | S29° 46' 09"E | STA 11+48.05<br>N: 1,847,640.70<br>E: 6,630,134.26 | STA 12+17.98<br>N: 1,847,579.99<br>E: 6,630,168.99 |
| L58 | 737.83 | S79° 04' 55"E | STA 41+52.00<br>N: 1,848,471.67<br>E: 6,631,656.77 | STA 48+89.83<br>N: 1,848,331.92<br>E: 6,632,381.24 |

| CURVE TABLE | | | | | | |
|---|---|---|---|---|---|---|
| Curve # | Radius | Length | Chord Direction | Start Point | End Point | Delta |
| C23 | 250.00 | 38.92 | N74° 28' 00.67"E | STA 120+64.35<br>N: 1,846,714.68<br>E: 6,626,045.10 | STA 121+03.27<br>N: 1,846,725.09<br>E: 6,626,082.56 | 8°55'11" |
| C24 | 1,400.00 | 153.29 | N73° 08' 37.06"E | STA 122+04.55<br>N: 1,846,759.72<br>E: 6,626,177.73 | STA 123+57.83<br>N: 1,846,804.14<br>E: 6,626,324.36 | 6°16'24" |
| C25 | 250.00 | 34.30 | N72° 20' 58.99"E | STA 134+90.13<br>N: 1,847,073.18<br>E: 6,627,424.22 | STA 135+24.43<br>N: 1,847,083.57<br>E: 6,627,456.88 | 7°51'40" |
| C26 | 100.00 | 10.50 | N78° 39' 11.17"E | STA 136+73.39<br>N: 1,847,131.17<br>E: 6,627,597.74 | STA 136+83.89<br>N: 1,847,133.23<br>E: 6,627,608.03 | 6°01'02" |
| C27 | 250.00 | 58.48 | N74° 57' 39.17"E | STA 137+11.47<br>N: 1,847,137.23<br>E: 6,627,635.32 | STA 137+69.95<br>N: 1,847,152.37<br>E: 6,627,691.66 | 13°24'06" |
| C28 | 750.00 | 107.91 | N72° 22' 54.54"E | STA 140+79.71<br>N: 1,847,267.10<br>E: 6,627,979.39 | STA 141+87.61<br>N: 1,847,299.74<br>E: 6,628,082.15 | 8°14'37" |
| C29 | 600.00 | 119.14 | N82° 11' 32.25"E | STA 141+87.61<br>N: 1,847,299.74<br>E: 6,628,082.15 | STA 143+06.76<br>N: 1,847,315.89<br>E: 6,628,199.99 | 11°22'38" |
| C30 | 1,000.00 | 37.50 | N86° 48' 23.78"E | STA 143+56.94<br>N: 1,847,317.75<br>E: 6,628,250.15 | STA 143+94.45<br>N: 1,847,319.84<br>E: 6,628,287.59 | 2°08'55" |
| C31 | 1,000.00 | 53.30 | N87° 15' 33.07"E | STA 143+94.45<br>N: 1,847,319.84<br>E: 6,628,287.59 | STA 144+47.75<br>N: 1,847,322.39<br>E: 6,628,340.82 | 3°03'14" |
| C32 | 1,100.00 | 162.32 | S86° 59' 11.44"E | STA 144+86.49<br>N: 1,847,323.21<br>E: 6,628,379.56 | STA 146+48.81<br>N: 1,847,314.68<br>E: 6,628,541.50 | 8°27'17" |
| C33 | 650.00 | 175.95 | N89° 29' 09.64"E | STA 147+10.97<br>N: 1,847,306.85<br>E: 6,628,603.17 | STA 148+86.92<br>N: 1,847,308.42<br>E: 6,628,778.58 | 15°30'35" |

| CURVE TABLE | | | | | | |
|---|---|---|---|---|---|---|
| Curve # | Radius | Length | Chord Direction | Start Point | End Point | Delta |
| C34 | 140.00 | 52.19 | N71° 03' 03.46"E | STA 149+39.12<br>N: 1,847,308.42<br>E: 6,628,778.58 | STA 149+91.32<br>N: 1,847,325.27<br>E: 6,628,827.65 | 21°21'38" |
| C35 | 50.00 | 27.71 | N65° 13' 32.94"E | STA 150+83.71<br>N: 1,847,294.71<br>E: 6,628,950.63 | STA 151+11.42<br>N: 1,847,306.17<br>E: 6,628,975.47 | 31°45'20" |
| C36 | 200.00 | 19.12 | N78° 21' 54.58"E | STA 151+11.42<br>N: 1,847,306.17<br>E: 6,628,975.47 | STA 151+30.54<br>N: 1,847,310.02<br>E: 6,628,994.19 | 5°28'37" |
| C37 | 1,000.00 | 28.18 | N72° 55' 52.98"E | STA 152+62.73<br>N: 1,847,345.50<br>E: 6,629,121.51 | STA 152+90.91<br>N: 1,847,353.77<br>E: 6,629,148.45 | 1°36'52" |
| C38 | 1,000.00 | 28.18 | N72° 55' 52.98"E | STA 154+40.20<br>N: 1,847,399.59<br>E: 6,629,290.53 | STA 154+68.38<br>N: 1,847,407.86<br>E: 6,629,317.46 | 1°36'52" |
| C39 | 1,000.00 | 76.07 | N75° 55' 04.76"E | STA 161+82.21<br>N: 1,847,607.99<br>E: 6,630,002.67 | STA 162+58.28<br>N: 1,847,626.50<br>E: 6,630,076.44 | 4°21'31" |
| C40 | 400.00 | 31.30 | N75° 51' 19.56"E | STA 162+58.28<br>N: 1,847,626.50<br>E: 6,630,076.44 | STA 162+89.58<br>N: 1,847,634.14<br>E: 6,630,106.78 | 4°29'02" |
| C41 | 2,000.00 | 118.24 | N69° 36' 27.77"E | STA 163+62.82<br>N: 1,847,660.34<br>E: 6,630,175.13 | STA 164+81.06<br>N: 1,847,701.54<br>E: 6,630,285.94 | 3°23'15" |
| C42 | 3,975.00 | 223.51 | N72° 54' 44.06"E | STA 174+60.56<br>N: 1,848,015.56<br>E: 6,631,213.74 | STA 176+84.07<br>N: 1,848,081.22<br>E: 6,631,427.36 | 3°13'18" |
| C43 | 700.00 | 89.47 | N78° 11' 05.04"E | STA 183+98.46<br>N: 1,848,271.86<br>E: 6,632,115.84 | STA 184+87.93<br>N: 1,848,290.16<br>E: 6,632,203.36 | 7°19'24" |
| C44 | 50.00 | 61.90 | N46° 22' 56.13"E | STA 184+87.93<br>N: 1,848,290.16<br>E: 6,632,203.36 | STA 185+49.83<br>N: 1,848,330.19<br>E: 6,632,245.36 | 70°55'42" |

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C051

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

ALIGNMENT GEOMETRY PLAN

SCALE AS SHOWN

DATE 12.16.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 7 OF 95 SHTS

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

NOTE: CURVE LENGTHS SHOWN MAY BE WITHIN +/- 0.01 FT OF THE DIFFERENCE IN PC & PT STATIONS DUE TO ROUNDING.

100' 50' 0 100' 200'
1" = 100'

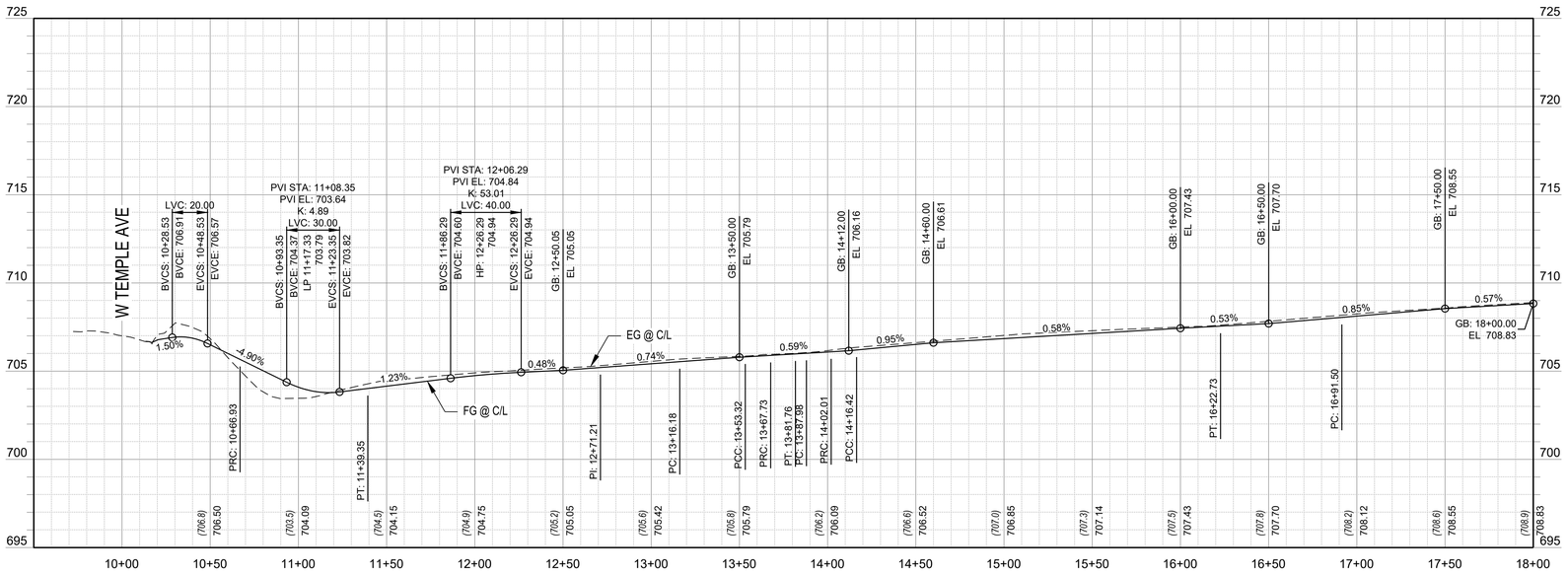
PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

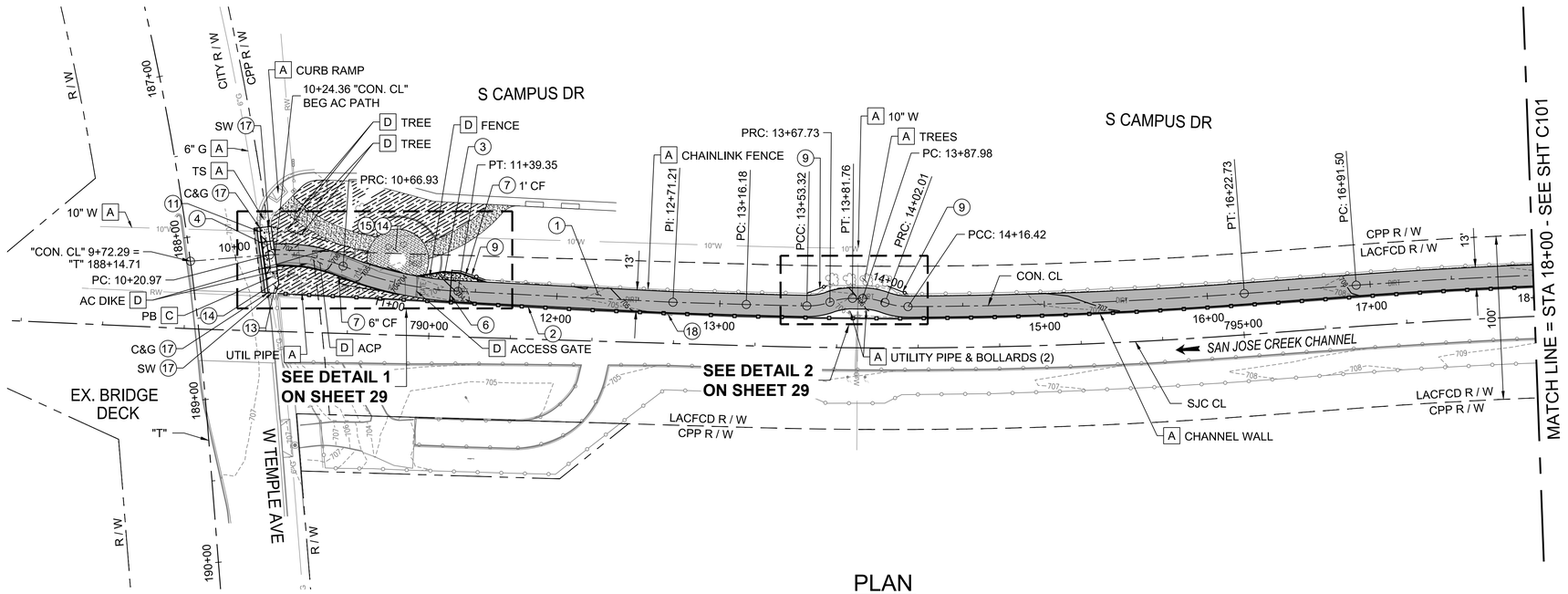
| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

N:\Shared\PROJECTS\2022\00-2022-171 pomona, ca san jose bikeway\CAD\01_Plans\2022-171_04-C051_GEOM.dwg 12/17/2024 10:12

FA-2263 AG




PROFILE




PLAN

## CONSTRUCTION NOTES

1. CONSTRUCT 4" ACP, 2" CLASS C2-PG-64-10 OVER 2" CLASS B2-PG-64-10, OVER 6" CMB, SUBGRADE COMPACTION MIN. 90%
2. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 6' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.
3. CONSTRUCT 4" PCC SIDEWALK OVER NATIVE PER CITY OF POMONA STD. No. A-7-02.
4. REMOVE AND RECONSTRUCT MODIFIED DRIVEWAY APPROACH PER CITY OF POMONA STD. No. A-27-10, TYPE II. SEE SHEETS 29-44 FOR ADDITIONAL DETAILS.
6. INSTALL SERVICE VEHICLE AND PEDESTRIAN GATE PER SHEET 55, DETAIL 1.
7. CONSTRUCT VARIABLE HEIGHT PCC CURB PER CITY OF POMONA STD. No. A-3-64, HEIGHT PER PLAN.
9. REMOVE EXISTING CHAINLINK FENCE AND CONSTRUCT NEW 6' CHAINLINK FENCE PER SPPWC STD PLAN 600-4.
11. REMOVE AND RECONSTRUCT 6"-8" VARIABLE HEIGHT TYPE "B" PCC CURB AND GUTTER PER CITY OF POMONA STD. NO. A-3-64, HEIGHT PER PLAN
13. RECONSTRUCT 4" PCC SIDEWALK PER CITY OF POMONA STD. No. A-7-02.
14. INSTALL PLANTING AND TRAIL AMENITIES PER SHEETS 66-72.
15. INSTALL WATER SERVICE AND WATER METER FOR IRRIGATION PURPOSES PER SHEETS 60-65.
17. JOIN EXISTING, FEATURE PER PLAN.
18. REMOVE AND REPLACE LACFCD CHANNEL MAINTENANCE ACCESS GATE.

## DISPOSITION NOTES

- A PROTECT IN PLACE (AS NOTED)
- C ADJUST TO GRADE (AS NOTED)
- D REMOVE (AS NOTED)

## GENERAL SHEET NOTES

1. FOR PATH ALIGNMENT AND INTERSECTING STREETS ALIGNMENTS LINE AND CURVE DATA SEE SHEETS 6 - 7.
2. FOR PROPOSED CROSSING IMPROVEMENTS AND TRAFFIC SIGNAL MODIFICATIONS, SEE SHEETS 73-90 FOR FURTHER INFORMATION.
3. ALL EXISTING FENCES, GATES, POSTS, CURBS, AC BERM, AC PAVEMENT, PCC PAVEMENT, DG PATHWAYS, ETC THAT ARE WITHIN THE TRAILS RIGHT OF WAY SHOULD BE REMOVED FOR COMPLETION OF WORK, UNLESS OTHERWISE NOTED AS PROTECT IN PLACE. PROTECT ALL EXISTING TREES UNLESS OTHERWISE NOTED.
4. HORIZONTAL CONTROL POINTS FOR PATHWAY IMPROVEMENTS ARE INCLUDED IN THE DETAILS ON SHEETS 29 - 44.
5. FENCE IMPROVEMENTS IDENTIFIED ON THE PLANS TO BE FIELD VERIFIED. EXACT MEASUREMENTS FOR FENCE REPLACEMENTS WHERE FENCING HAS BEEN DAMAGED, TO BE APPROVED BY THE ENGINEER.
6. CONTRACTOR TO TREE TRIM ALONG THE CORRIDOR FOR ANY TREE VERTICAL OR HORIZONTAL OBSTRUCTION WITHIN THE PATH PER DETAIL 7 ON SHEET 56.

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

PLAN & PROFILE
BEGIN TO STA 18+00

HORIZ: 1" = 40' (40' 20' 0 40' 80')

VERT: 1" = 4' (4' 0 4' 8')

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C100

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

SCALE AS SHOWN

DATE 12.18.2024

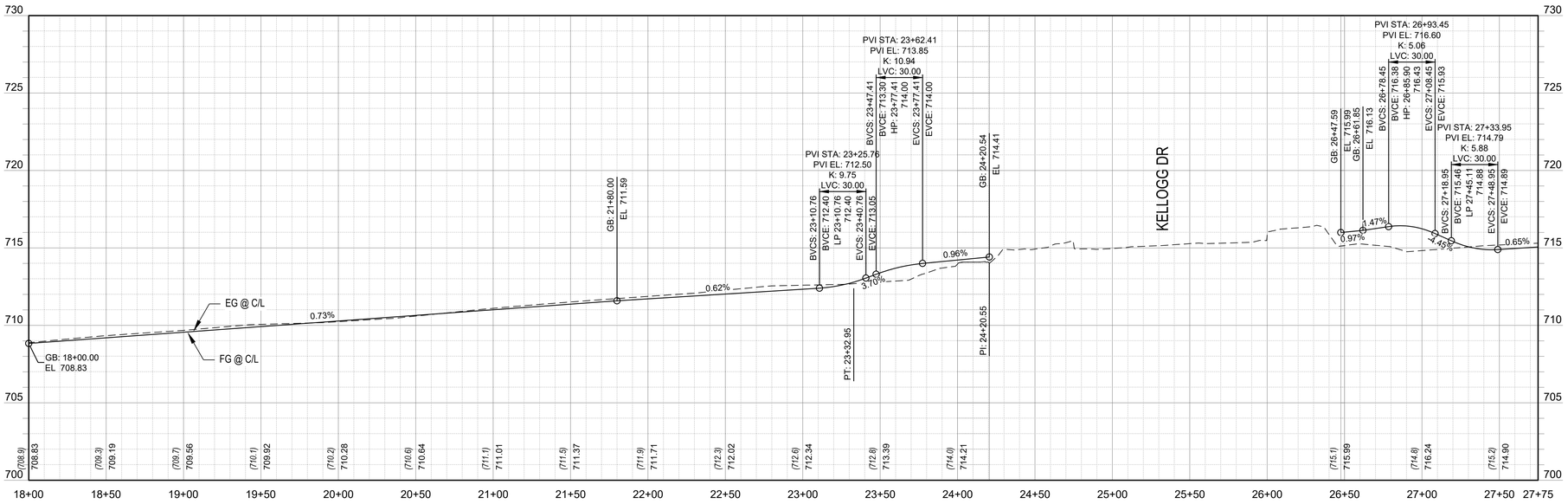
DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 8 OF 95 SHTS

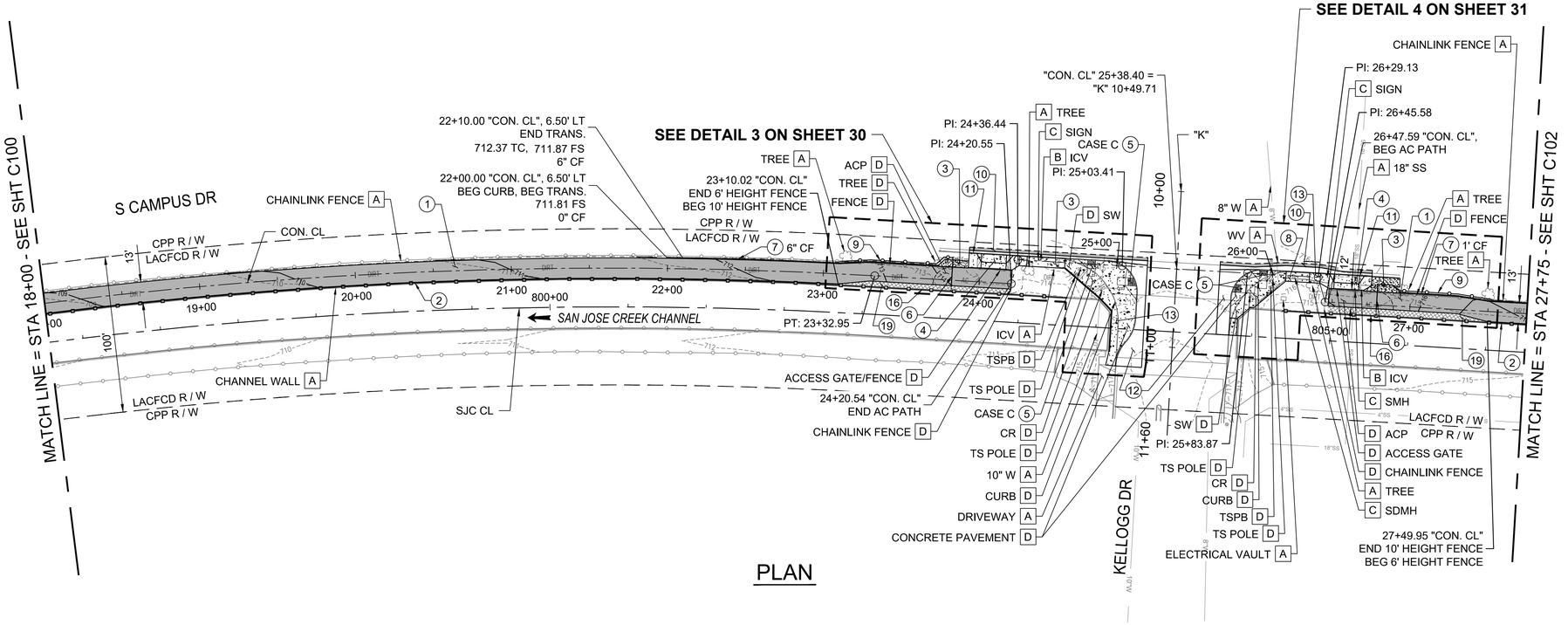
Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\100-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C100.dwg 12/18/2024 16:52

FA-2263 AH




## PROFILE




## PLAN

40' 20' 0 40' 80' HORIZ: 1" = 40'

4' 0 4' 8' VERT: 1" = 4'

## CONSTRUCTION NOTES

1. CONSTRUCT 4" ACP, 2" CLASS C2-PG-64-10 OVER 2" CLASS B2-PG-64-10, OVER 6" CMB, SUBGRADE COMPACTION MIN. 90%
2. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 6' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.
3. CONSTRUCT 4" PCC SIDEWALK OVER NATIVE PER CITY OF POMONA STD. No. A-7-02.
4. REMOVE AND RECONSTRUCT MODIFIED DRIVEWAY APPROACH PER CITY OF POMONA STD. No. A-27-10, TYPE II. SEE SHEETS 29-44 FOR ADDITIONAL DETAILS.
5. CONSTRUCT MODIFIED CURB RAMP PER CITY OF POMONA STD. No. A-28-10, CASE PER PLAN. SEE SHEETS 29-44 FOR ADDITIONAL DETAILS.
6. INSTALL SERVICE VEHICLE AND PEDESTRIAN GATE PER SHEET 55, DETAIL 1.
7. CONSTRUCT VARIABLE HEIGHT PCC CURB PER CITY OF POMONA STD. No. A-3-64, HEIGHT PER PLAN.
8. RECONSTRUCT CATCH BASIN LID.
9. REMOVE EXISTING CHAINLINK FENCE AND CONSTRUCT NEW 6' CHAINLINK FENCE PER SPPWC STD PLAN 600-4.
10. CONSTRUCT FULL DEPTH AC PAVEMENT OVER BASE FOR SAWCUT PATCH AS REQUIRED TO JOIN EXISTING AC PAVEMENT PER SPPWC STD PLAN 133-4.
11. REMOVE AND RECONSTRUCT 6"-8" VARIABLE HEIGHT TYPE "B" PCC CURB AND GUTTER PER CITY OF POMONA STD. NO. A-3-64, HEIGHT PER PLAN
12. CONSTRUCT CONCRETE PAVEMENT PER SPPWC STD PLAN 132-4.
13. RECONSTRUCT 4" PCC SIDEWALK PER CITY OF POMONA STD. No. A-7-02.
16. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 10' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.
19. INSTALL NONWALKABLE SURFACE.

## DISPOSITION NOTES

- A PROTECT IN PLACE (AS NOTED)
- B RELOCATE (AS NOTED)
- C ADJUST TO GRADE (AS NOTED)
- D REMOVE (AS NOTED)

## GENERAL SHEET NOTES

1. FOR PATH ALIGNMENT AND INTERSECTING STREETS ALIGNMENTS LINE AND CURVE DATA SEE SHEETS 6 - 7.
2. FOR PROPOSED CROSSING IMPROVEMENTS AND TRAFFIC SIGNAL MODIFICATIONS, SEE SHEETS 73-90 FOR FURTHER INFORMATION.
3. ALL EXISTING FENCES, GATES, POSTS, CURBS, AC BERM, AC PAVEMENT, PCC PAVEMENT, DG PATHWAYS, ETC THAT ARE WITHIN THE TRAILS RIGHT OF WAY SHOULD BE REMOVED FOR COMPLETION OF WORK, UNLESS OTHERWISE NOTED AS PROTECT IN PLACE. PROTECT ALL EXISTING TREES UNLESS OTHERWISE NOTED.
4. HORIZONTAL CONTROL POINTS FOR PATHWAY IMPROVEMENTS ARE INCLUDED IN THE DETAILS ON SHEETS 29 - 44.
5. FENCE IMPROVEMENTS IDENTIFIED ON THE PLANS TO BE FIELD VERIFIED. EXACT MEASUREMENTS FOR FENCE REPLACEMENTS WHERE FENCING HAS BEEN DAMAGED, TO BE APPROVED BY THE ENGINEER.
6. CONTRACTOR TO TREE TRIM ALONG THE CORRIDOR FOR ANY TREE VERTICAL OR HORIZONTAL OBSTRUCTION WITHIN THE PATH PER DETAIL 7 ON SHEET 56.

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

PLAN & PROFILE
STA 18+00 TO STA 27+75

SCALE AS SHOWN

DATE 12.20.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 9 OF 95 SHTS

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C101

PRELIMINARY

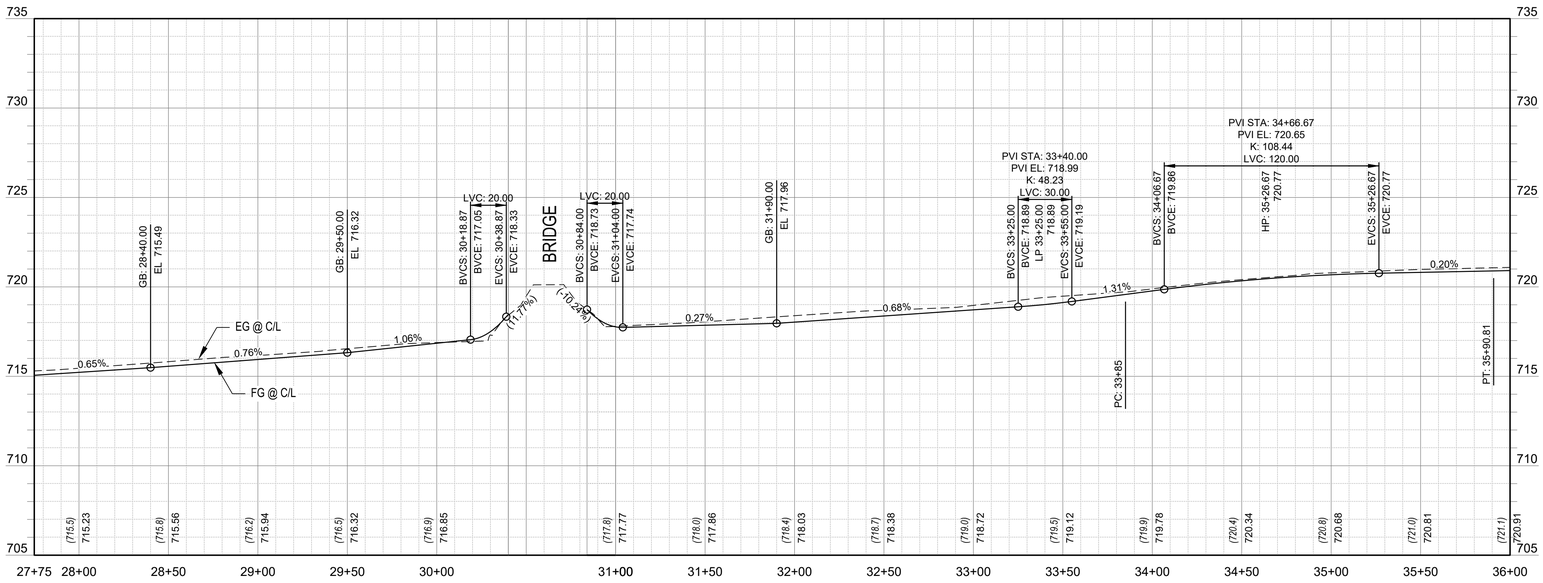
alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| | REVISIONS | DATE | INITIAL |
|---|---|---|---|

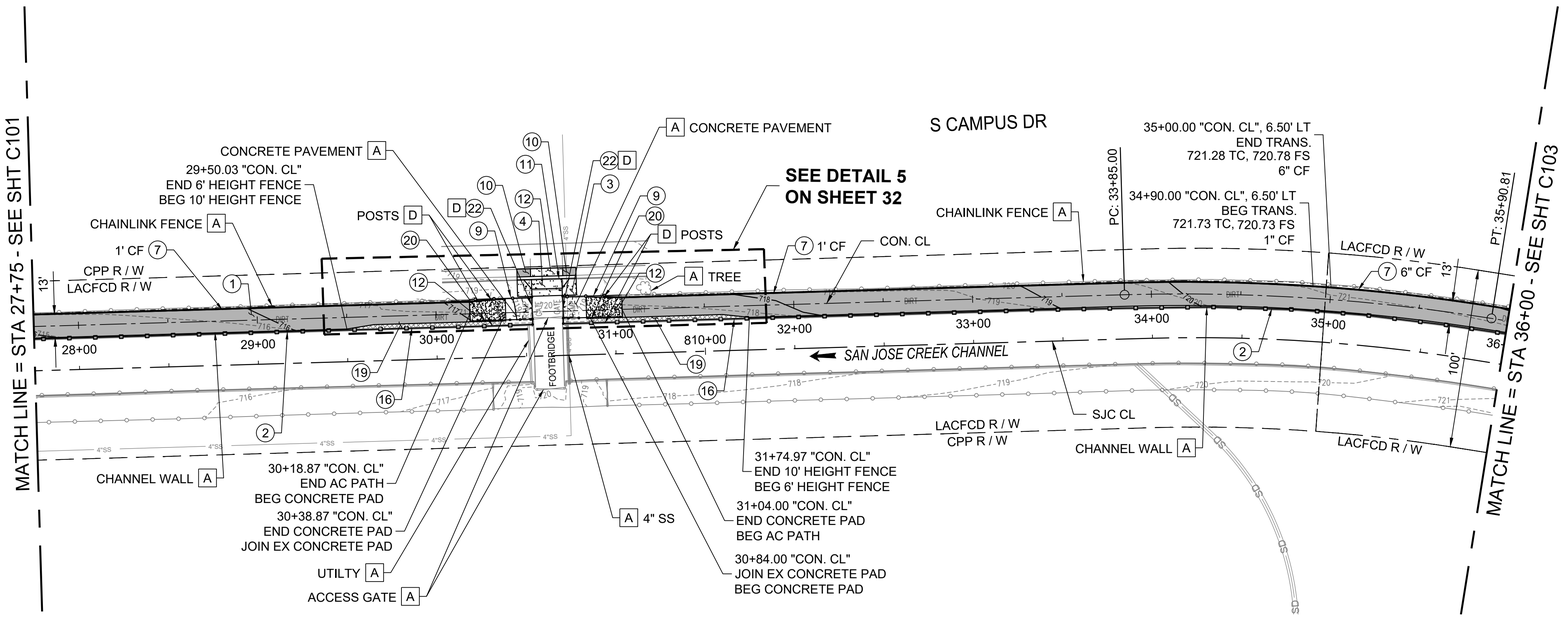
CALL BEFORE YOU DIG
Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C101.dwg 12/20/2024 10:57

FA-2263 AI




## PROFILE




## PLAN

## CONSTRUCTION NOTES

1. CONSTRUCT 4" ACP, 2" CLASS C2-PG-64-10 OVER 2" CLASS B2-PG-64-10, OVER 6" CMB, SUBGRADE COMPACTION MIN. 90%
2. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 6' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.
3. CONSTRUCT 4" PCC SIDEWALK OVER NATIVE PER CITY OF POMONA STD. No. A-7-02.
4. REMOVE AND RECONSTRUCT MODIFIED DRIVEWAY APPROACH PER CITY OF POMONA STD. No. A-27-10, TYPE II. SEE SHEETS 29-44 FOR ADDITIONAL DETAILS.
7. CONSTRUCT VARIABLE HEIGHT PCC CURB PER CITY OF POMONA STD. No. A-3-64, HEIGHT PER PLAN.
9. REMOVE EXISTING CHAINLINK FENCE AND CONSTRUCT NEW 6' CHAINLINK FENCE PER SPPWC STD PLAN 600-4.
10. CONSTRUCT FULL DEPTH AC PAVEMENT OVER BASE FOR SAWCUT PATCH AS REQUIRED TO JOIN EXISTING AC PAVEMENT PER SPPWC STD PLAN 133-4.
11. REMOVE AND RECONSTRUCT 6"-8" VARIABLE HEIGHT TYPE "B" PCC CURB AND GUTTER PER CITY OF POMONA STD. NO. A-3-64, HEIGHT PER PLAN
12. CONSTRUCT CONCRETE PAVEMENT PER SPPWC STD PLAN 132-4.
16. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 10' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.
19. INSTALL NONWALKABLE SURFACE.
20. INSTALL HANDRAILING PER SPPWC STD PLAN 606-5.
22. INSTALL PIPE GATE OR SIMILAR PER SPPWC STD PLAN 602-4.

## DISPOSITION NOTES

A PROTECT IN PLACE (AS NOTED)

D REMOVE (AS NOTED)

## GENERAL SHEET NOTES

1. FOR PATH ALIGNMENT AND INTERSECTING STREETS ALIGNMENTS LINE AND CURVE DATA SEE SHEETS 6 - 7.
2. FOR PROPOSED CROSSING IMPROVEMENTS AND TRAFFIC SIGNAL MODIFICATIONS, SEE SHEETS 73-90 FOR FURTHER INFORMATION.
3. ALL EXISTING FENCES, GATES, POSTS, CURBS, AC BERM, AC PAVEMENT, PCC PAVEMENT, DG PATHWAYS, ETC THAT ARE WITHIN THE TRAILS RIGHT OF WAY SHOULD BE REMOVED FOR COMPLETION OF WORK, UNLESS OTHERWISE NOTED AS PROTECT IN PLACE. PROTECT ALL EXISTING TREES UNLESS OTHERWISE NOTED.
4. HORIZONTAL CONTROL POINTS FOR PATHWAY IMPROVEMENTS ARE INCLUDED IN THE DETAILS ON SHEETS 29 - 44.
5. FENCE IMPROVEMENTS IDENTIFIED ON THE PLANS TO BE FIELD VERIFIED. EXACT MEASUREMENTS FOR FENCE REPLACEMENTS WHERE FENCING HAS BEEN DAMAGED, TO BE APPROVED BY THE ENGINEER.
6. CONTRACTOR TO TREE TRIM ALONG THE CORRIDOR FOR ANY TREE VERTICAL OR HORIZONTAL OBSTRUCTION WITHIN THE PATH PER DETAIL 7 ON SHEET 56.

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

PLAN & PROFILE
STA 27+75 TO STA 36+00

40' 20' 0 40' 80' HORIZ: 1" = 40'

4' 0 4' 8' VERT: 1" = 4'

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C102

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

SCALE AS SHOWN

DATE 12.16.2024

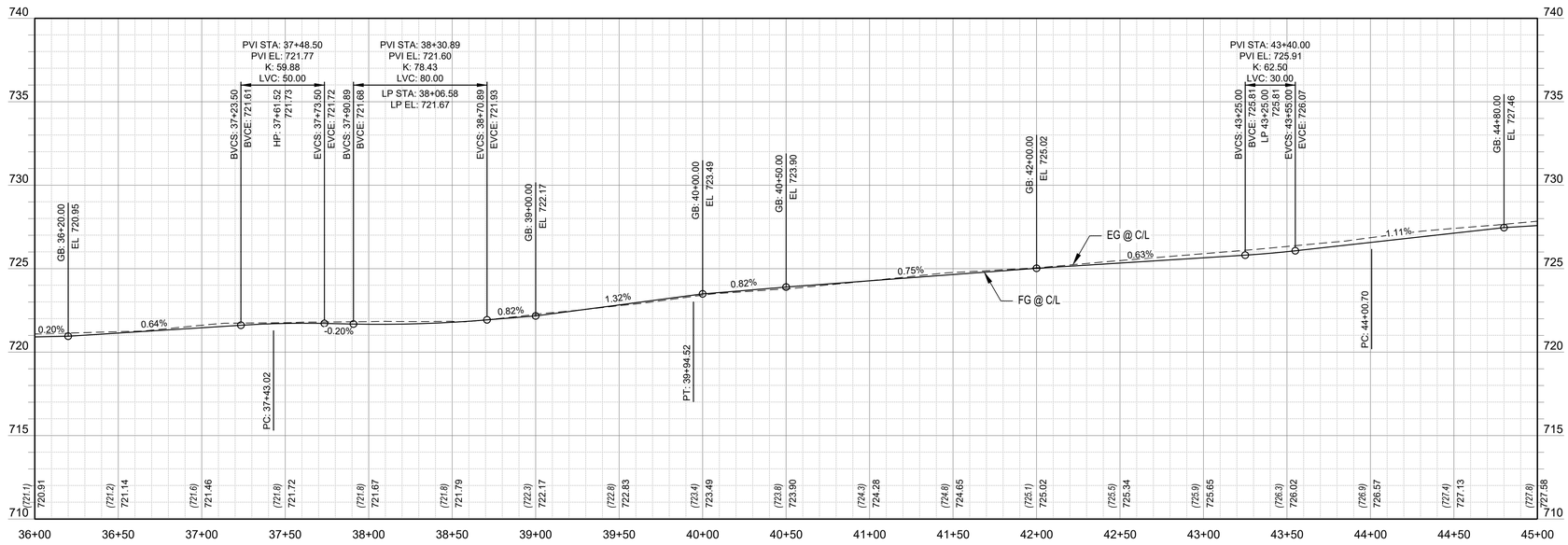
DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 10 OF 95 SHTS

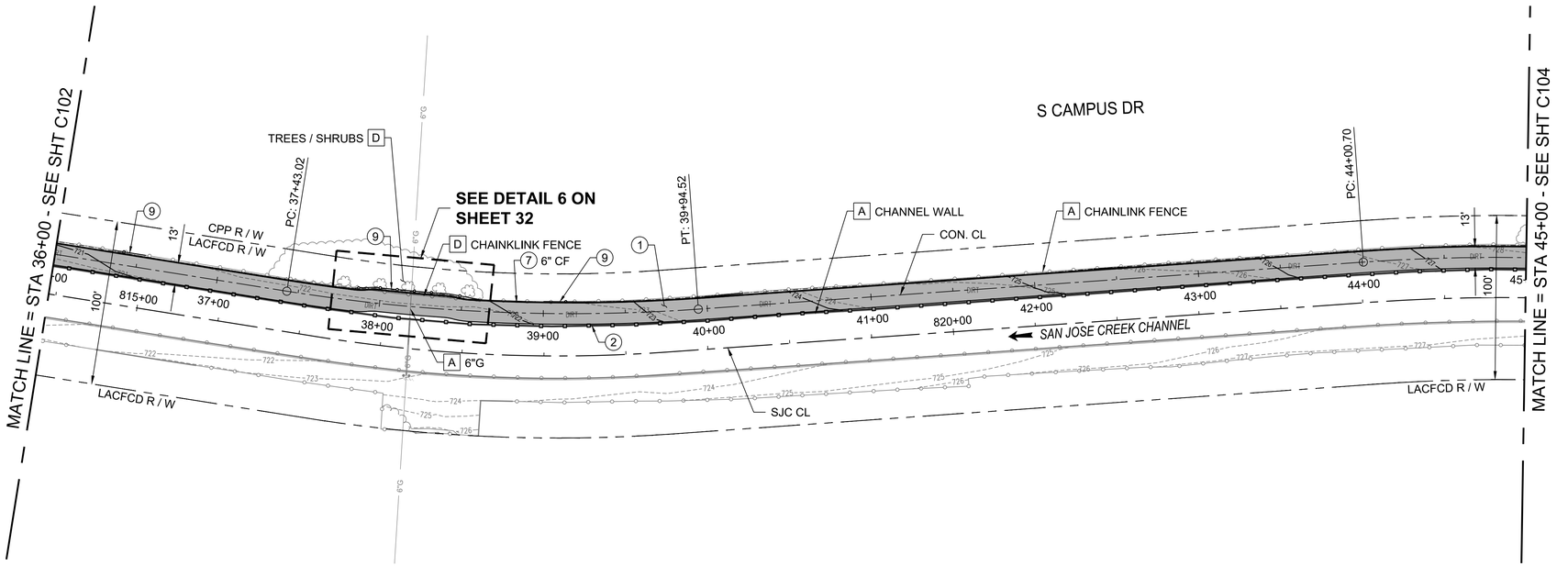
CALL BEFORE YOU DIG
Under Ground Service Alert of Southern California
Call: TOLL FREE
1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\100-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C102.dwg 12/18/2024 16:53

FA-2263 AJ




PROFILE




PLAN

## CONSTRUCTION NOTES

1. CONSTRUCT 4" ACP, 2" CLASS C2-PG-64-10 OVER 2" CLASS B2-PG-64-10, OVER 6" CMB, SUBGRADE COMPACTION MIN. 90%
2. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 6' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.
7. CONSTRUCT VARIABLE HEIGHT PCC CURB PER CITY OF POMONA STD. No. A-3-64, HEIGHT PER PLAN.
9. REMOVE EXISTING CHAINLINK FENCE AND CONSTRUCT NEW 6' CHAINLINK FENCE PER SPPWC STD PLAN 600-4.

## DISPOSITION NOTES

A PROTECT IN PLACE (AS NOTED)

D REMOVE (AS NOTED)

## GENERAL SHEET NOTES

1. FOR PATH ALIGNMENT AND INTERSECTING STREETS ALIGNMENTS LINE AND CURVE DATA SEE SHEETS 6 - 7.
2. FOR PROPOSED CROSSING IMPROVEMENTS AND TRAFFIC SIGNAL MODIFICATIONS, SEE SHEETS 73-90 FOR FURTHER INFORMATION.
3. ALL EXISTING FENCES, GATES, POSTS, CURBS, AC BERM, AC PAVEMENT, PCC PAVEMENT, DG PATHWAYS, ETC THAT ARE WITHIN THE TRAILS RIGHT OF WAY SHOULD BE REMOVED FOR COMPLETION OF WORK, UNLESS OTHERWISE NOTED AS PROTECT IN PLACE. PROTECT ALL EXISTING TREES UNLESS OTHERWISE NOTED.
4. HORIZONTAL CONTROL POINTS FOR PATHWAY IMPROVEMENTS ARE INCLUDED IN THE DETAILS ON SHEETS 29 - 44.
5. FENCE IMPROVEMENTS IDENTIFIED ON THE PLANS TO BE FIELD VERIFIED. EXACT MEASUREMENTS FOR FENCE REPLACEMENTS WHERE FENCING HAS BEEN DAMAGED, TO BE APPROVED BY THE ENGINEER.
6. CONTRACTOR TO TREE TRIM ALONG THE CORRIDOR FOR ANY TREE VERTICAL OR HORIZONTAL OBSTRUCTION WITHIN THE PATH PER DETAIL 7 ON SHEET 56.

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

40' 20' 0 40' 80'
HORIZ: 1" = 40'

4' 0 4' 8'
VERT: 1" = 4'

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C103

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

PLAN & PROFILE
STA 36+00 TO STA 45+00

SCALE AS SHOWN

DATE 12.9.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 11 OF 95 SHTS

PRELIMINARY

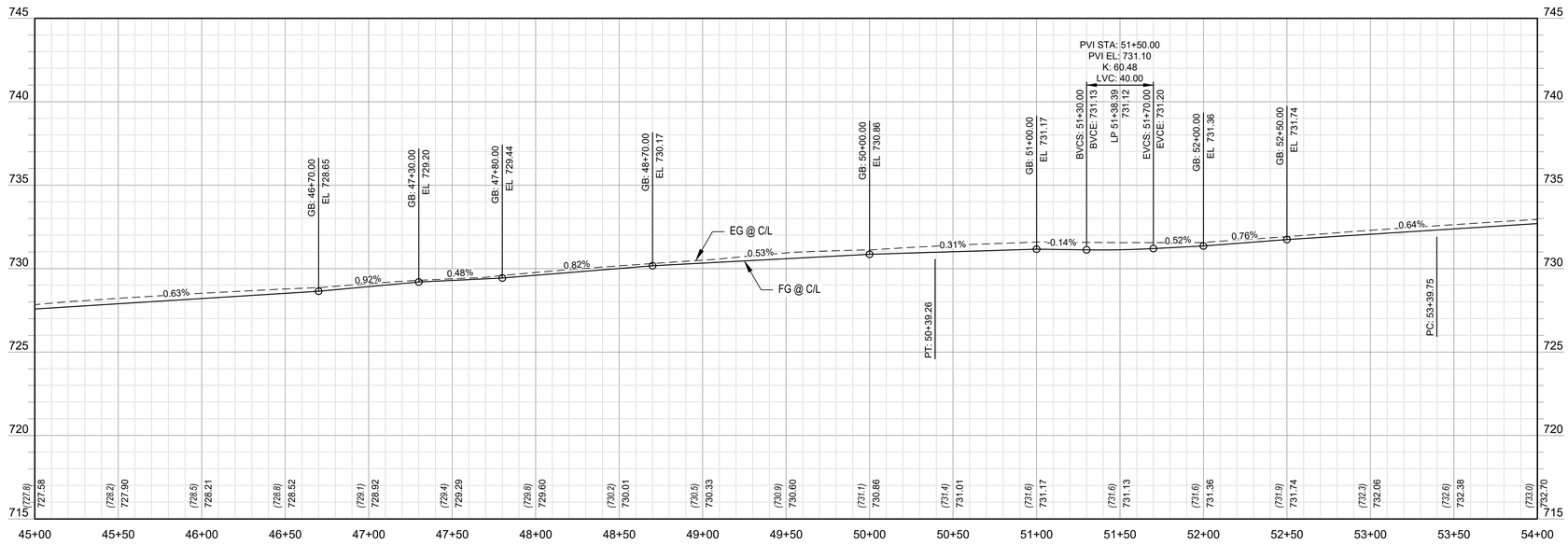
alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

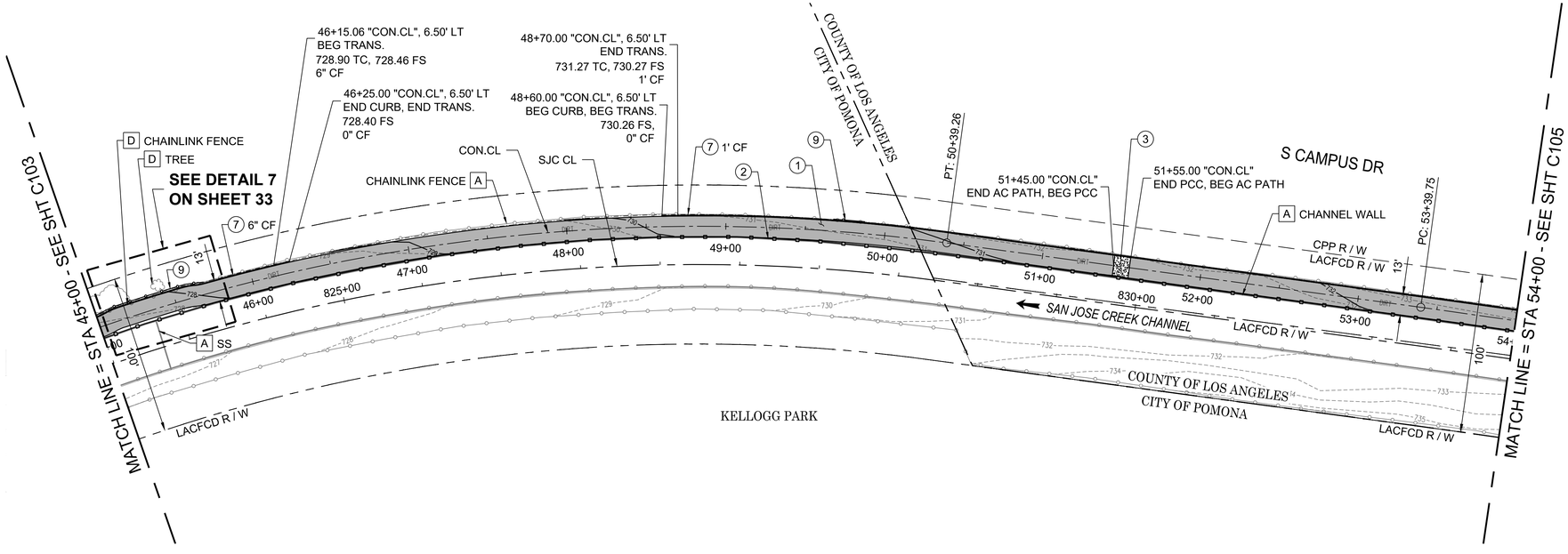
Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

FA-2263 AK

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C103.dwg 12/18/2024 16:54




## PROFILE




## PLAN

## CONSTRUCTION NOTES

1. CONSTRUCT 4" ACP, 2" CLASS C2-PG-64-10 OVER 2" CLASS B2-PG-64-10, OVER 6" CMB, SUBGRADE COMPACTION MIN. 90%
2. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 6' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.
3. CONSTRUCT 4" PCC SIDEWALK OVER NATIVE PER CITY OF POMONA STD. No. A-7-02.
7. CONSTRUCT VARIABLE HEIGHT PCC CURB PER CITY OF POMONA STD. No. A-3-64, HEIGHT PER PLAN.
9. REMOVE EXISTING CHAINLINK FENCE AND CONSTRUCT NEW 6' CHAINLINK FENCE PER SPPWC STD PLAN 600-4.

## DISPOSITION NOTES

A PROTECT IN PLACE (AS NOTED)

D REMOVE (AS NOTED)

## GENERAL SHEET NOTES

1. FOR PATH ALIGNMENT AND INTERSECTING STREETS ALIGNMENTS LINE AND CURVE DATA SEE SHEETS 6 - 7.
2. FOR PROPOSED CROSSING IMPROVEMENTS AND TRAFFIC SIGNAL MODIFICATIONS, SEE SHEETS 73-90 FOR FURTHER INFORMATION.
3. ALL EXISTING FENCES, GATES, POSTS, CURBS, AC BERM, AC PAVEMENT, PCC PAVEMENT, DG PATHWAYS, ETC THAT ARE WITHIN THE TRAILS RIGHT OF WAY SHOULD BE REMOVED FOR COMPLETION OF WORK, UNLESS OTHERWISE NOTED AS PROTECT IN PLACE. PROTECT ALL EXISTING TREES UNLESS OTHERWISE NOTED.
4. HORIZONTAL CONTROL POINTS FOR PATHWAY IMPROVEMENTS ARE INCLUDED IN THE DETAILS ON SHEETS 29 - 44.
5. FENCE IMPROVEMENTS IDENTIFIED ON THE PLANS TO BE FIELD VERIFIED. EXACT MEASUREMENTS FOR FENCE REPLACEMENTS WHERE FENCING HAS BEEN DAMAGED, TO BE APPROVED BY THE ENGINEER.
6. CONTRACTOR TO TREE TRIM ALONG THE CORRIDOR FOR ANY TREE VERTICAL OR HORIZONTAL OBSTRUCTION WITHIN THE PATH PER DETAIL 7 ON SHEET 56.

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

HORIZ: 1" = 40' (40' 20' 0 40' 80')

VERT: 1" = 4' (4' 0 4' 8')

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C104

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

PLAN & PROFILE
STA 45+00 TO STA 54+00

SCALE AS SHOWN
DATE 12.9.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 12 OF 95 SHTS

PRELIMINARY

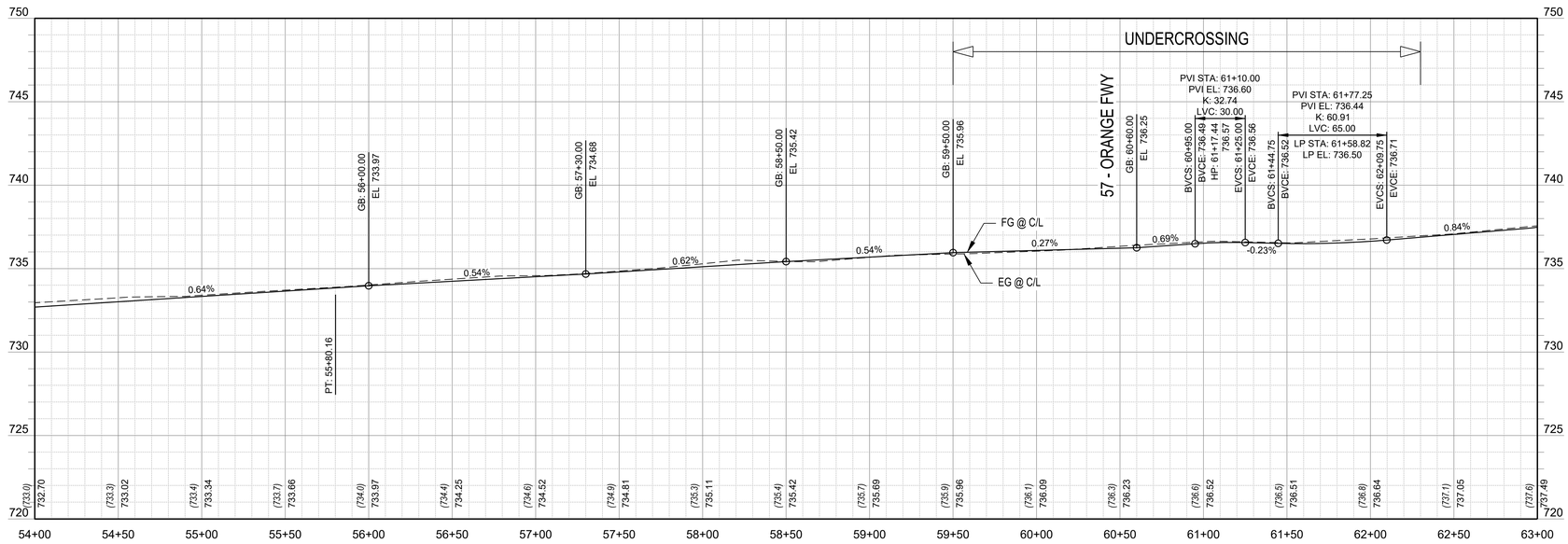
alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| | REVISIONS | DATE | INITIAL |
|---|---|---|---|

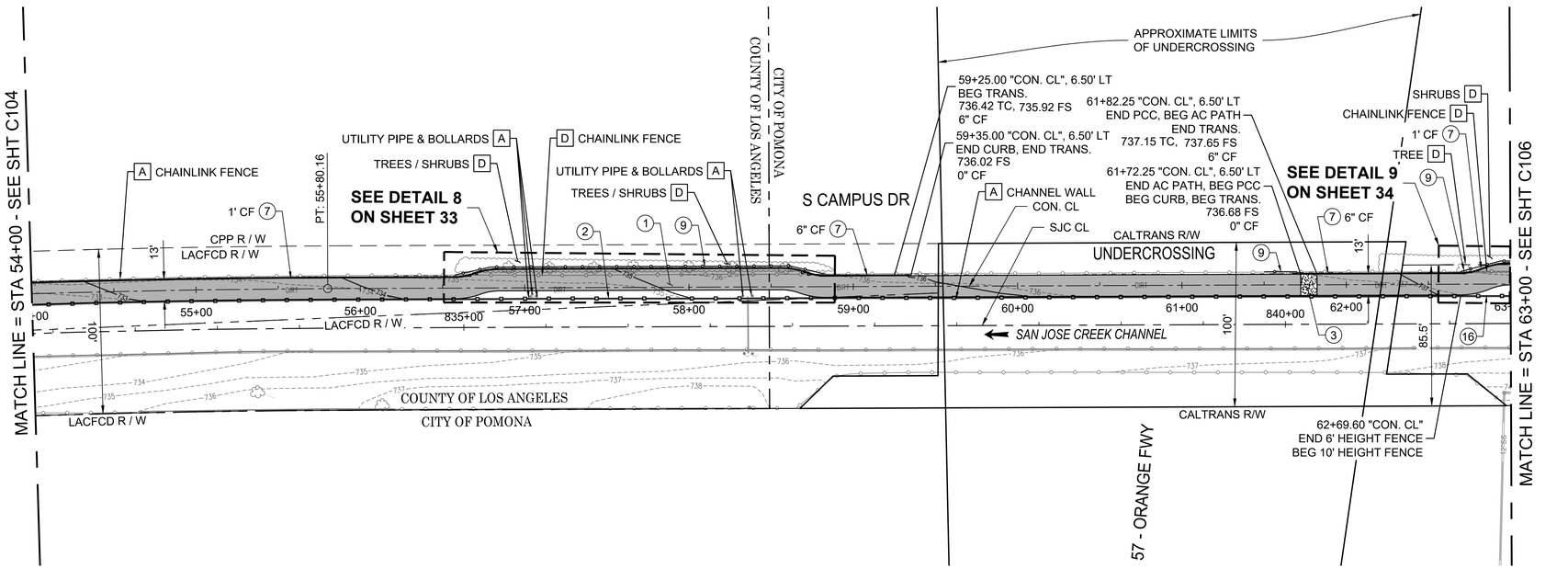
Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C104.dwg 12/18/2024 16:55

FA-2263 AL




## PROFILE




## PLAN

## CONSTRUCTION NOTES

1. CONSTRUCT 4" ACP, 2" CLASS C2-PG-64-10 OVER 2" CLASS B2-PG-64-10, OVER 6" CMB, SUBGRADE COMPACTION MIN. 90%
2. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 6' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.
3. CONSTRUCT 4" PCC SIDEWALK OVER NATIVE PER CITY OF POMONA STD. No. A-7-02.
7. CONSTRUCT VARIABLE HEIGHT PCC CURB PER CITY OF POMONA STD. No. A-3-64, HEIGHT PER PLAN.
9. REMOVE EXISTING CHAINLINK FENCE AND CONSTRUCT NEW 6' CHAINLINK FENCE PER SPPWC STD PLAN 600-4.
16. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 10' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.

## DISPOSITION NOTES

A PROTECT IN PLACE (AS NOTED)

D REMOVE (AS NOTED)

## GENERAL SHEET NOTES

1. FOR PATH ALIGNMENT AND INTERSECTING STREETS ALIGNMENTS LINE AND CURVE DATA SEE SHEETS 6 - 7.
2. FOR PROPOSED CROSSING IMPROVEMENTS AND TRAFFIC SIGNAL MODIFICATIONS, SEE SHEETS 73-90 FOR FURTHER INFORMATION.
3. ALL EXISTING FENCES, GATES, POSTS, CURBS, AC BERM, AC PAVEMENT, PCC PAVEMENT, DG PATHWAYS, ETC THAT ARE WITHIN THE TRAILS RIGHT OF WAY SHOULD BE REMOVED FOR COMPLETION OF WORK, UNLESS OTHERWISE NOTED AS PROTECT IN PLACE. PROTECT ALL EXISTING TREES UNLESS OTHERWISE NOTED.
4. HORIZONTAL CONTROL POINTS FOR PATHWAY IMPROVEMENTS ARE INCLUDED IN THE DETAILS ON SHEETS 29 - 44.
5. FENCE IMPROVEMENTS IDENTIFIED ON THE PLANS TO BE FIELD VERIFIED. EXACT MEASUREMENTS FOR FENCE REPLACEMENTS WHERE FENCING HAS BEEN DAMAGED, TO BE APPROVED BY THE ENGINEER.
6. CONTRACTOR TO TREE TRIM ALONG THE CORRIDOR FOR ANY TREE VERTICAL OR HORIZONTAL OBSTRUCTION WITHIN THE PATH PER DETAIL 7 ON SHEET 56.

HORIZ: 1" = 40' (40' 20' 0 40' 80')

VERT: 1" = 4' (4' 0 4' 8')

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C105

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

PLAN & PROFILE
STA 54+00 TO STA 63+00

SCALE AS SHOWN

DATE 12.16.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 13 OF 95 SHTS

PRELIMINARY

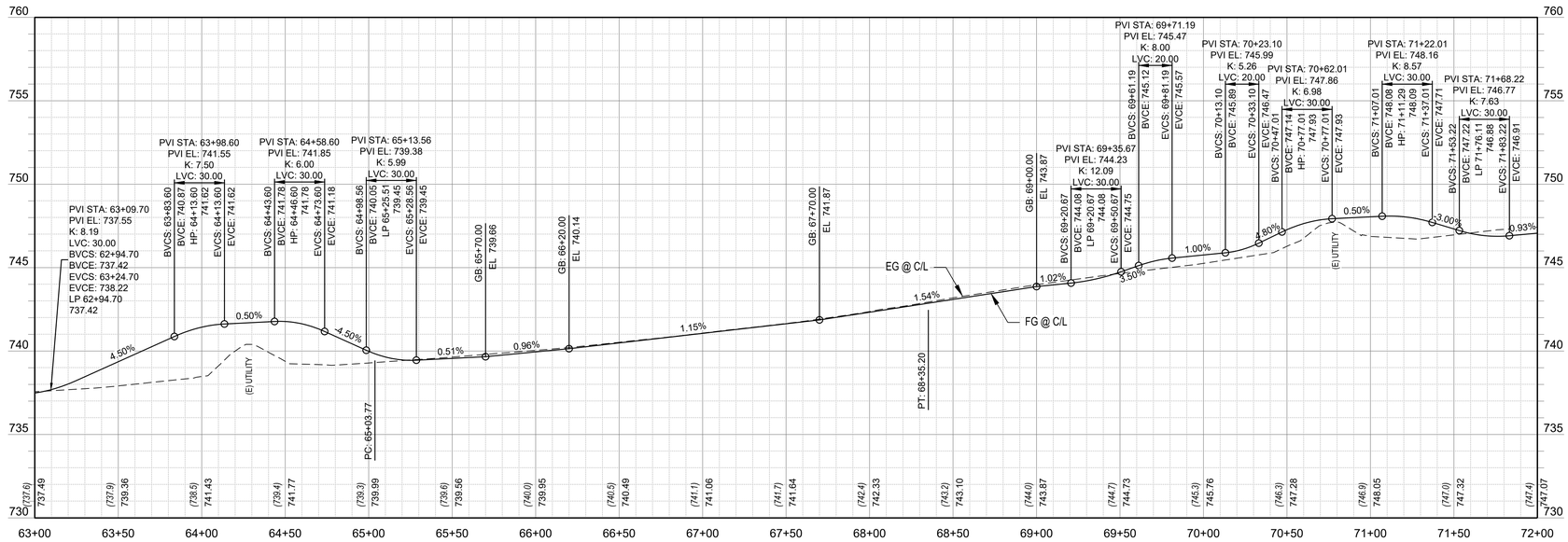
alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

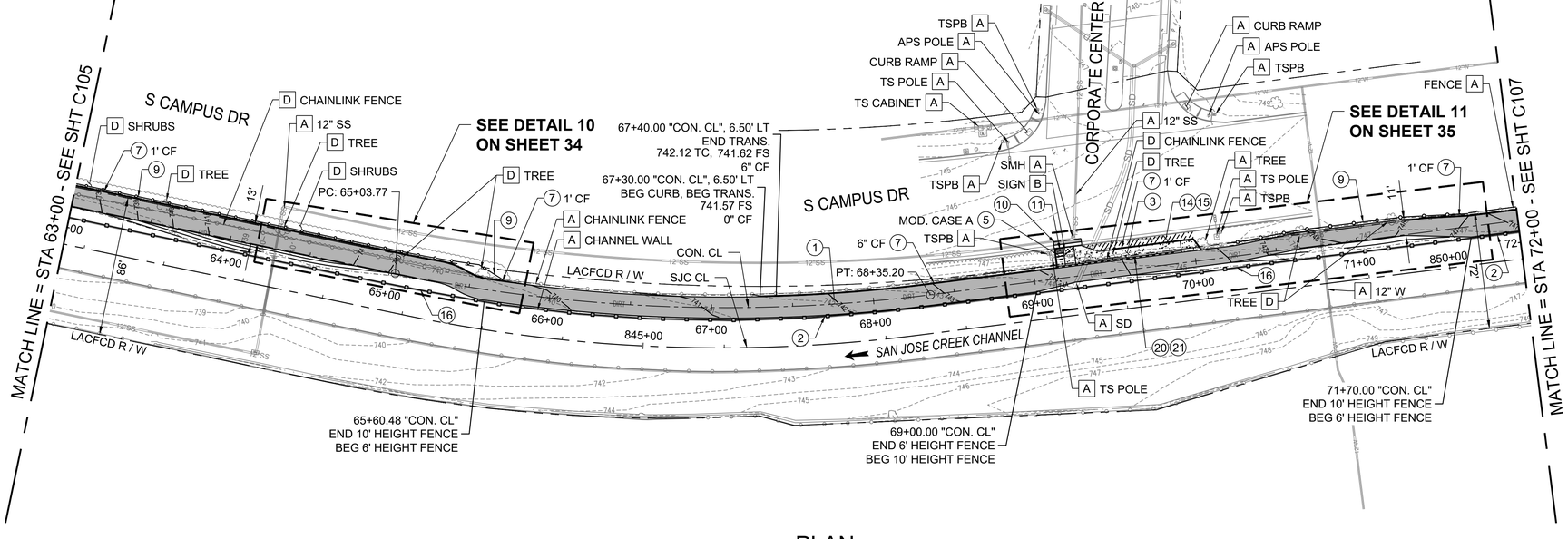
CALL BEFORE YOU DIG
Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C105.dwg 12/18/2024 16:55

FA-2263 AM




## PROFILE




## PLAN

## CONSTRUCTION NOTES

1. CONSTRUCT 4" ACP, 2" CLASS C2-PG-64-10 OVER 2" CLASS B2-PG-64-10, OVER 6" CMB, SUBGRADE COMPACTION MIN. 90%
2. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 6' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.
3. CONSTRUCT 4" PCC SIDEWALK OVER NATIVE PER CITY OF POMONA STD. No. A-7-02.
5. CONSTRUCT MODIFIED CURB RAMP PER CITY OF POMONA STD. No. A-28-10, CASE PER PLAN. SEE SHEETS 29-44 FOR ADDITIONAL DETAILS.
7. CONSTRUCT VARIABLE HEIGHT PCC CURB PER CITY OF POMONA STD. No. A-3-64, HEIGHT PER PLAN.
9. REMOVE EXISTING CHAINLINK FENCE AND CONSTRUCT NEW 6' CHAINLINK FENCE PER SPPWC STD PLAN 600-4.
10. CONSTRUCT FULL DEPTH AC PAVEMENT OVER BASE FOR SAWCUT PATCH AS REQUIRED TO JOIN EXISTING AC PAVEMENT PER SPPWC STD PLAN 133-4.
11. REMOVE AND RECONSTRUCT 6"-8" VARIABLE HEIGHT TYPE "B" PCC CURB AND GUTTER PER CITY OF POMONA STD. NO. A-3-64, HEIGHT PER PLAN
14. INSTALL PLANTING AND TRAIL AMENITIES PER SHEETS 66-72.
15. INSTALL WATER SERVICE AND WATER METER FOR IRRIGATION PURPOSES PER SHEETS 60-65.
16. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 10' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.
20. INSTALL HANDRAILING PER SPPWC STD PLAN 606-5.
21. CONSTRUCT CONCRETE BARRIER.

## DISPOSITION NOTES

- A PROTECT IN PLACE (AS NOTED)
- B RELOCATE (AS NOTED)
- D REMOVE (AS NOTED)

## GENERAL SHEET NOTES

1. FOR PATH ALIGNMENT AND INTERSECTING STREETS ALIGNMENTS LINE AND CURVE DATA SEE SHEETS 6 - 7.
2. FOR PROPOSED CROSSING IMPROVEMENTS AND TRAFFIC SIGNAL MODIFICATIONS, SEE SHEETS 73-90 FOR FURTHER INFORMATION.
3. ALL EXISTING FENCES, GATES, POSTS, CURBS, AC BERM, AC PAVEMENT, PCC PAVEMENT, DG PATHWAYS, ETC THAT ARE WITHIN THE TRAILS RIGHT OF WAY SHOULD BE REMOVED FOR COMPLETION OF WORK, UNLESS OTHERWISE NOTED AS PROTECT IN PLACE. PROTECT ALL EXISTING TREES UNLESS OTHERWISE NOTED.
4. HORIZONTAL CONTROL POINTS FOR PATHWAY IMPROVEMENTS ARE INCLUDED IN THE DETAILS ON SHEETS 29 - 44.
5. FENCE IMPROVEMENTS IDENTIFIED ON THE PLANS TO BE FIELD VERIFIED. EXACT MEASUREMENTS FOR FENCE REPLACEMENTS WHERE FENCING HAS BEEN DAMAGED, TO BE APPROVED BY THE ENGINEER.
6. CONTRACTOR TO TREE TRIM ALONG THE CORRIDOR FOR ANY TREE VERTICAL OR HORIZONTAL OBSTRUCTION WITHIN THE PATH PER DETAIL 7 ON SHEET 56.

HORIZ: 1" = 40'

VERT: 1" = 4'

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

PLAN & PROFILE
STA 63+00 TO STA 72+00

SCALE AS SHOWN

DATE 12.16.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 14 OF 95 SHTS

C106

PRELIMINARY

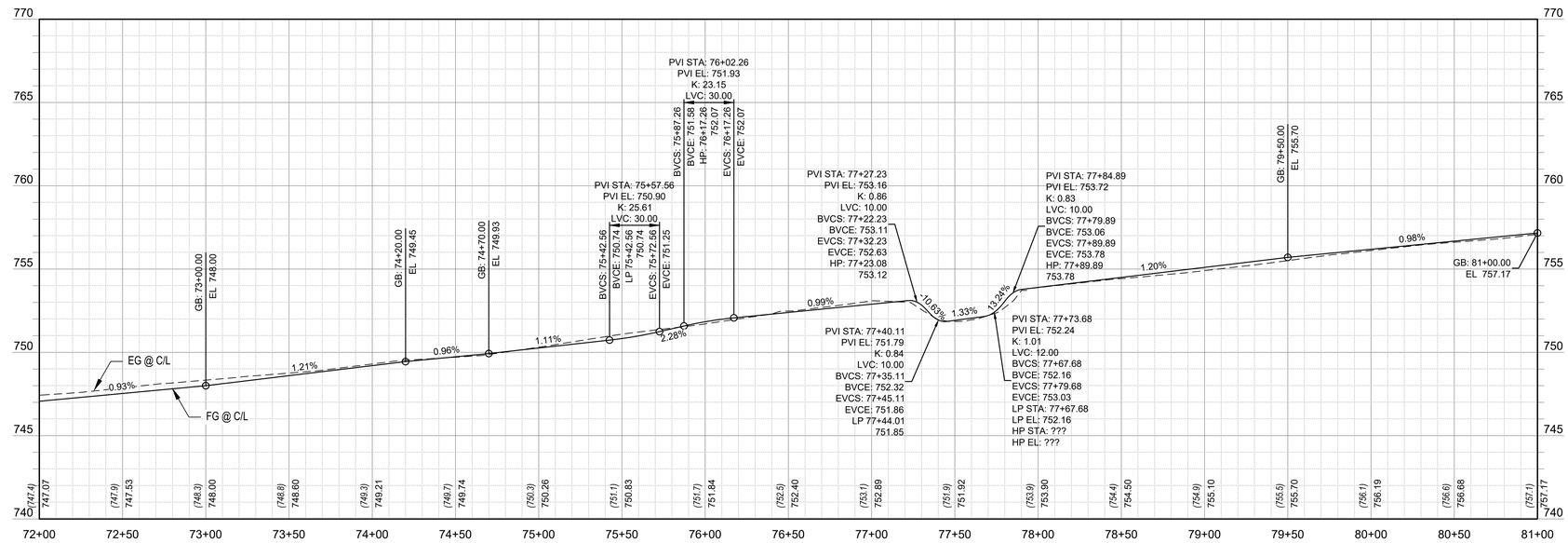
alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

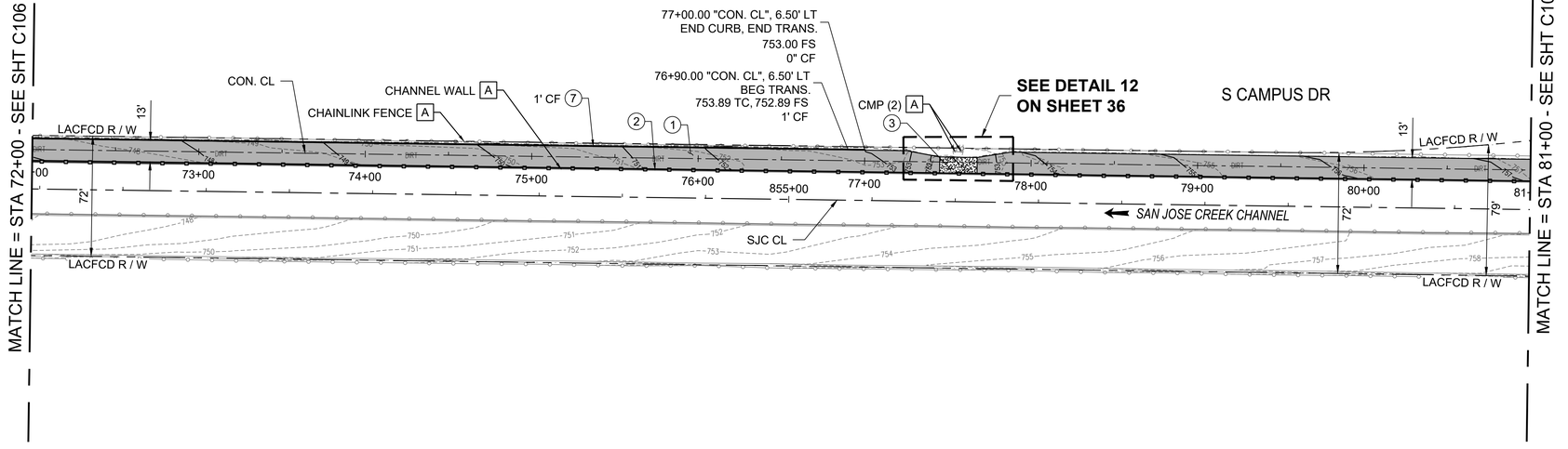
CALL BEFORE YOU DIG
Under Ground Service Alert of Southern California
Call: TOLL FREE
1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C105.dwg 12/18/2024 16:56

FA-2263 AN




PROFILE




PLAN

## CONSTRUCTION NOTES

1. CONSTRUCT 4" ACP, 2" CLASS C2-PG-64-10 OVER 2" CLASS B2-PG-64-10, OVER 6" CMB, SUBGRADE COMPACTION MIN. 90%
2. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 6' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.
3. CONSTRUCT 4" PCC SIDEWALK OVER NATIVE PER CITY OF POMONA STD. No. A-7-02.
7. CONSTRUCT VARIABLE HEIGHT PCC CURB PER CITY OF POMONA STD. No. A-3-64, HEIGHT PER PLAN.

## DISPOSITION NOTES

A PROTECT IN PLACE (AS NOTED)

## GENERAL SHEET NOTES

1. FOR PATH ALIGNMENT AND INTERSECTING STREETS ALIGNMENTS LINE AND CURVE DATA SEE SHEETS 6 - 7.
2. FOR PROPOSED CROSSING IMPROVEMENTS AND TRAFFIC SIGNAL MODIFICATIONS, SEE SHEETS 73-90 FOR FURTHER INFORMATION.
3. ALL EXISTING FENCES, GATES, POSTS, CURBS, AC BERM, AC PAVEMENT, PCC PAVEMENT, DG PATHWAYS, ETC THAT ARE WITHIN THE TRAILS RIGHT OF WAY SHOULD BE REMOVED FOR COMPLETION OF WORK, UNLESS OTHERWISE NOTED AS PROTECT IN PLACE. PROTECT ALL EXISTING TREES UNLESS OTHERWISE NOTED.
4. HORIZONTAL CONTROL POINTS FOR PATHWAY IMPROVEMENTS ARE INCLUDED IN THE DETAILS ON SHEETS 29 - 44.
5. FENCE IMPROVEMENTS IDENTIFIED ON THE PLANS TO BE FIELD VERIFIED. EXACT MEASUREMENTS FOR FENCE REPLACEMENTS WHERE FENCING HAS BEEN DAMAGED, TO BE APPROVED BY THE ENGINEER.
6. CONTRACTOR TO TREE TRIM ALONG THE CORRIDOR FOR ANY TREE VERTICAL OR HORIZONTAL OBSTRUCTION WITHIN THE PATH PER DETAIL 7 ON SHEET 56.

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

PLAN & PROFILE
STA 72+00 TO STA 81+00

40' 20' 0 40' 80' HORIZ: 1" = 40'
4' 0 4' 8' VERT: 1" = 4'

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C107

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

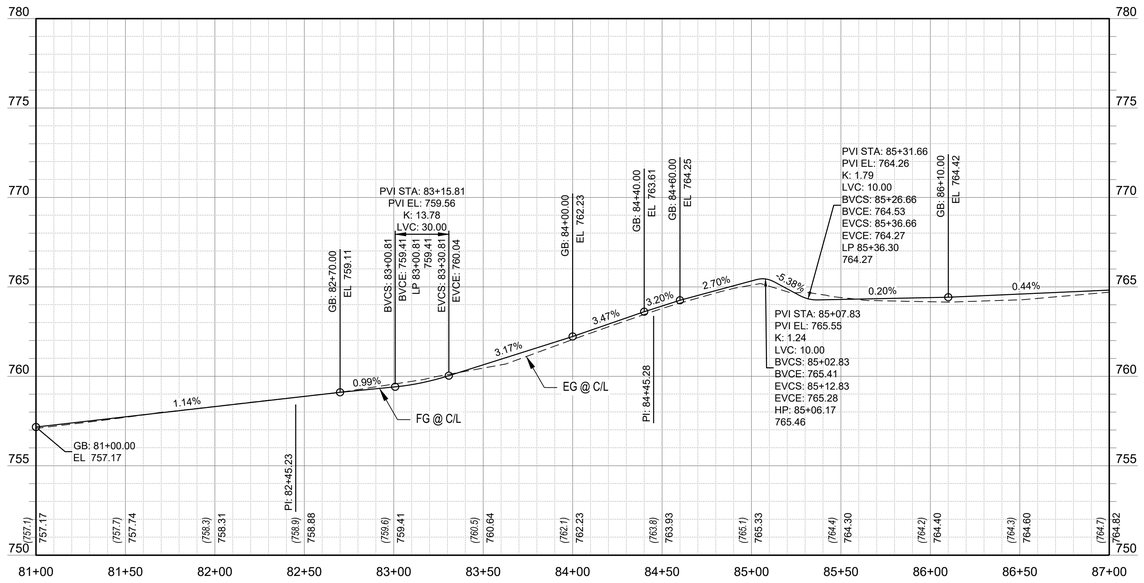
| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

SCALE AS SHOWN
DATE 12.9.2024
DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON
SHT. 15 OF 95 SHTS

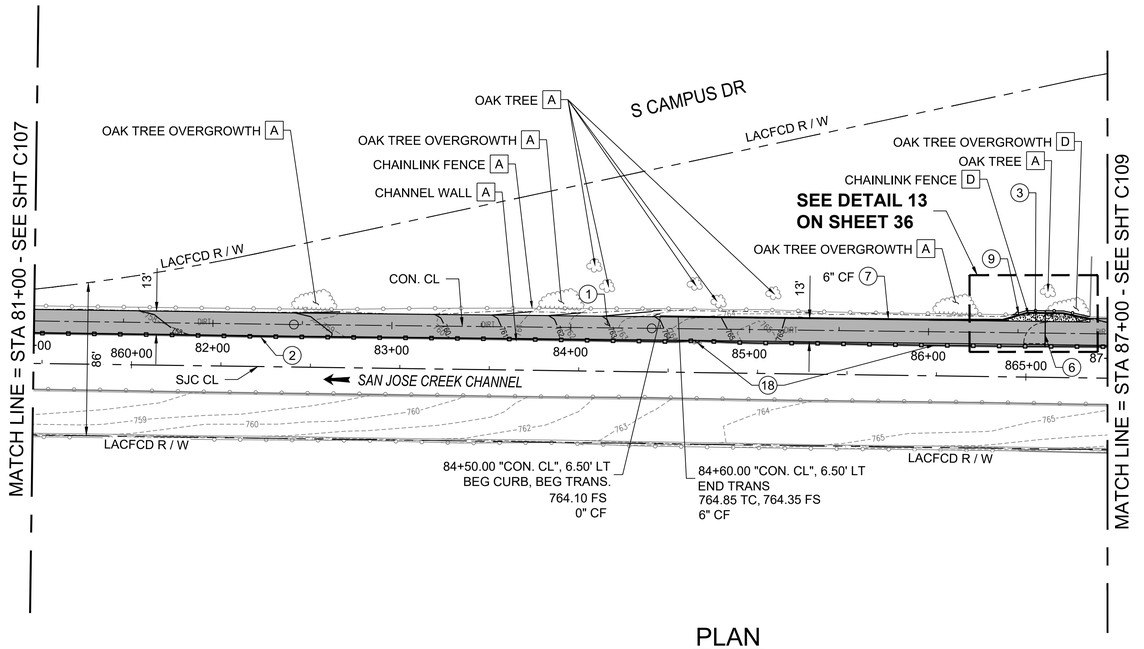
Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C107.dwg 12/20/2024 10:43

FA-2263 AO




PROFILE




PLAN

## CONSTRUCTION NOTES

1. CONSTRUCT 4" ACP, 2" CLASS C2-PG-64-10 OVER 2" CLASS B2-PG-64-10, OVER 6" CMB, SUBGRADE COMPACTION MIN. 90%
2. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 6' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.
3. CONSTRUCT 4" PCC SIDEWALK OVER NATIVE PER CITY OF POMONA STD. No. A-7-02.
6. INSTALL SERVICE VEHICLE AND PEDESTRIAN GATE PER SHEET 55, DETAIL 1.
7. CONSTRUCT VARIABLE HEIGHT PCC CURB PER CITY OF POMONA STD. No. A-3-64, HEIGHT PER PLAN.
9. REMOVE EXISTING CHAINLINK FENCE AND CONSTRUCT NEW 6' CHAINLINK FENCE PER SPPWC STD PLAN 600-4.
18. REMOVE AND REPLACE LACFCD CHANNEL MAINTENANCE ACCESS GATE.

## DISPOSITION NOTES

A PROTECT IN PLACE (AS NOTED)

D REMOVE (AS NOTED)

## GENERAL SHEET NOTES

1. FOR PATH ALIGNMENT AND INTERSECTING STREETS ALIGNMENTS LINE AND CURVE DATA SEE SHEETS 6 - 7.
2. FOR PROPOSED CROSSING IMPROVEMENTS AND TRAFFIC SIGNAL MODIFICATIONS, SEE SHEETS 73-90 FOR FURTHER INFORMATION.
3. ALL EXISTING FENCES, GATES, POSTS, CURBS, AC BERM, AC PAVEMENT, PCC PAVEMENT, DG PATHWAYS, ETC THAT ARE WITHIN THE TRAILS RIGHT OF WAY SHOULD BE REMOVED FOR COMPLETION OF WORK, UNLESS OTHERWISE NOTED AS PROTECT IN PLACE. PROTECT ALL EXISTING TREES UNLESS OTHERWISE NOTED.
4. HORIZONTAL CONTROL POINTS FOR PATHWAY IMPROVEMENTS ARE INCLUDED IN THE DETAILS ON SHEETS 29 - 44.
5. FENCE IMPROVEMENTS IDENTIFIED ON THE PLANS TO BE FIELD VERIFIED. EXACT MEASUREMENTS FOR FENCE REPLACEMENTS WHERE FENCING HAS BEEN DAMAGED, TO BE APPROVED BY THE ENGINEER.
6. CONTRACTOR TO TREE TRIM ALONG THE CORRIDOR FOR ANY TREE VERTICAL OR HORIZONTAL OBSTRUCTION WITHIN THE PATH PER DETAIL 7 ON SHEET 56.

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

40' 20' 0 40' 80' HORIZ: 1" = 40'

4' 0 4' 8' VERT: 1" = 4'

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C108

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

PLAN & PROFILE
STA 81+00 TO STA 87+00

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

SCALE AS SHOWN

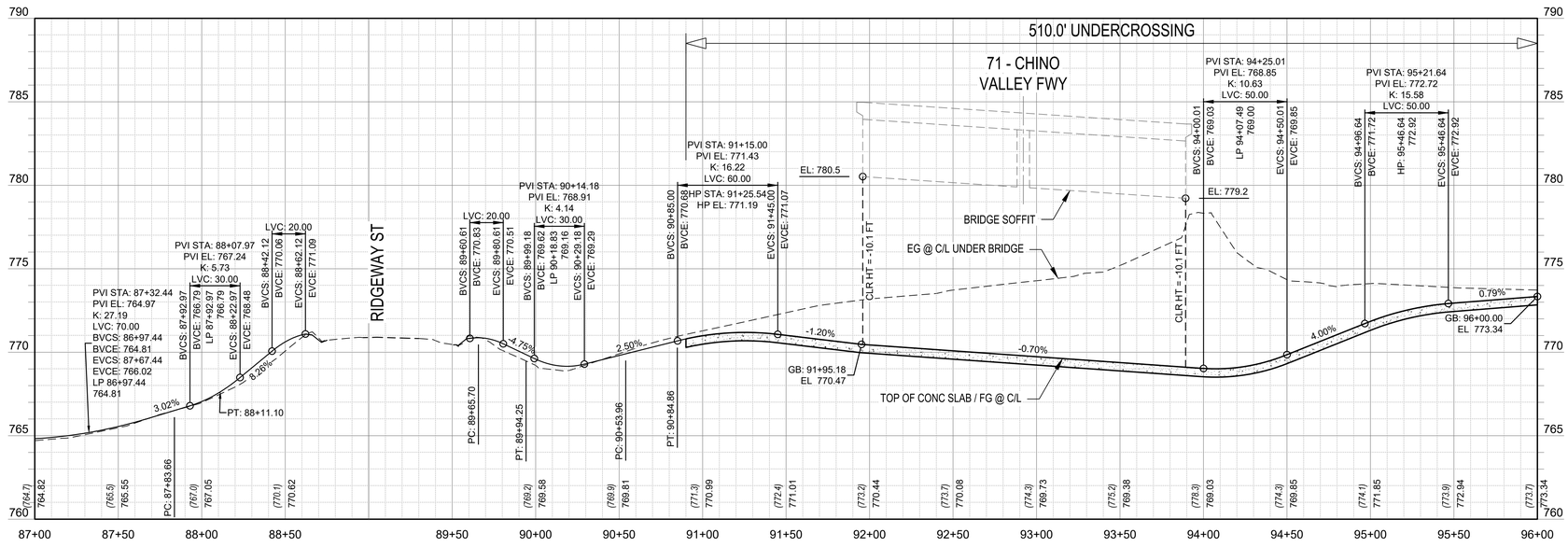
DATE 12.16.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

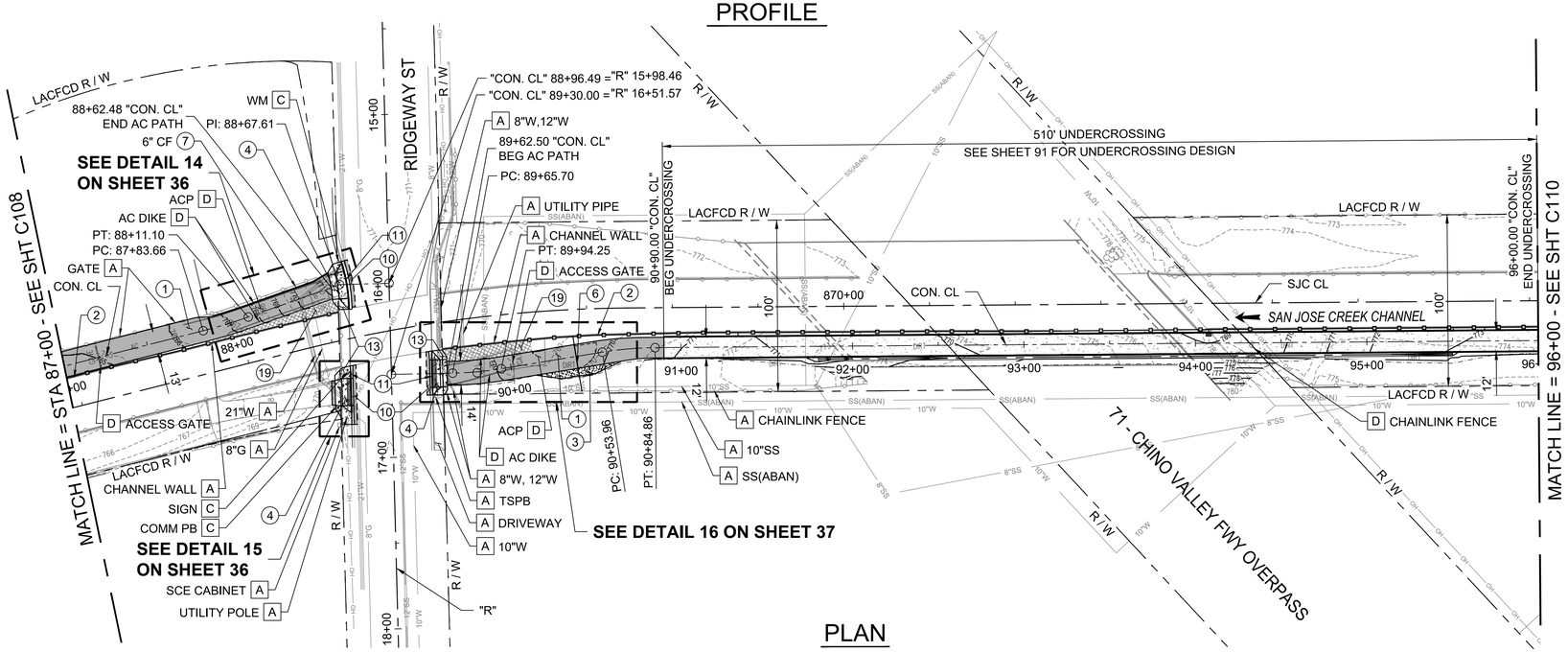
SHT. 16 OF 95 SHTS

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C108.dwg 12/18/2024 16:57

FA-2263 AP




## PROFILE




## PLAN

40' 20' 0 40' 80' HORIZ: 1" = 40'

4' 0 4' 8' VERT: 1" = 4'

## CONSTRUCTION NOTES

1. CONSTRUCT 4" ACP, 2" CLASS C2-PG-64-10 OVER 2" CLASS B2-PG-64-10, OVER 6" CMB, SUBGRADE COMPACTION MIN. 90%
2. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 6' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.
3. CONSTRUCT 4" PCC SIDEWALK OVER NATIVE PER CITY OF POMONA STD. No. A-7-02.
4. REMOVE AND RECONSTRUCT MODIFIED DRIVEWAY APPROACH PER CITY OF POMONA STD. No. A-27-10, TYPE II. SEE SHEETS 29-44 FOR ADDITIONAL DETAILS.
6. INSTALL SERVICE VEHICLE AND PEDESTRIAN GATE PER SHEET 55, DETAIL 1.
7. CONSTRUCT VARIABLE HEIGHT PCC CURB PER CITY OF POMONA STD. No. A-3-64, HEIGHT PER PLAN.
10. CONSTRUCT FULL DEPTH AC PAVEMENT OVER BASE FOR SAWCUT PATCH AS REQUIRED TO JOIN EXISTING AC PAVEMENT PER SPPWC STD PLAN 133-4.
11. REMOVE AND RECONSTRUCT 6"-8" VARIABLE HEIGHT TYPE "B" PCC CURB AND GUTTER PER CITY OF POMONA STD. NO. A-3-64, HEIGHT PER PLAN
13. RECONSTRUCT 4" PCC SIDEWALK PER CITY OF POMONA STD. No. A-7-02.
19. INSTALL NONWALKABLE SURFACE.

## DISPOSITION NOTES

- A PROTECT IN PLACE (AS NOTED)
- C ADJUST TO GRADE (AS NOTED)
- D REMOVE (AS NOTED)

## GENERAL SHEET NOTES

1. FOR PATH ALIGNMENT AND INTERSECTING STREETS ALIGNMENTS LINE AND CURVE DATA SEE SHEETS 6 - 7.
2. FOR PROPOSED CROSSING IMPROVEMENTS AND TRAFFIC SIGNAL MODIFICATIONS, SEE SHEETS 73-90 FOR FURTHER INFORMATION.
3. ALL EXISTING FENCES, GATES, POSTS, CURBS, AC BERM, AC PAVEMENT, PCC PAVEMENT, DG PATHWAYS, ETC THAT ARE WITHIN THE TRAILS RIGHT OF WAY SHOULD BE REMOVED FOR COMPLETION OF WORK, UNLESS OTHERWISE NOTED AS PROTECT IN PLACE. PROTECT ALL EXISTING TREES UNLESS OTHERWISE NOTED.
4. HORIZONTAL CONTROL POINTS FOR PATHWAY IMPROVEMENTS ARE INCLUDED IN THE DETAILS ON SHEETS 29 - 44.
5. FENCE IMPROVEMENTS IDENTIFIED ON THE PLANS TO BE FIELD VERIFIED. EXACT MEASUREMENTS FOR FENCE REPLACEMENTS WHERE FENCING HAS BEEN DAMAGED, TO BE APPROVED BY THE ENGINEER.
6. CONTRACTOR TO TREE TRIM ALONG THE CORRIDOR FOR ANY TREE VERTICAL OR HORIZONTAL OBSTRUCTION WITHIN THE PATH PER DETAIL 7 ON SHEET 56.

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C109

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

PLAN & PROFILE
STA 87+00 TO STA 96+00

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

SCALE AS SHOWN
DATE 12.18.2024

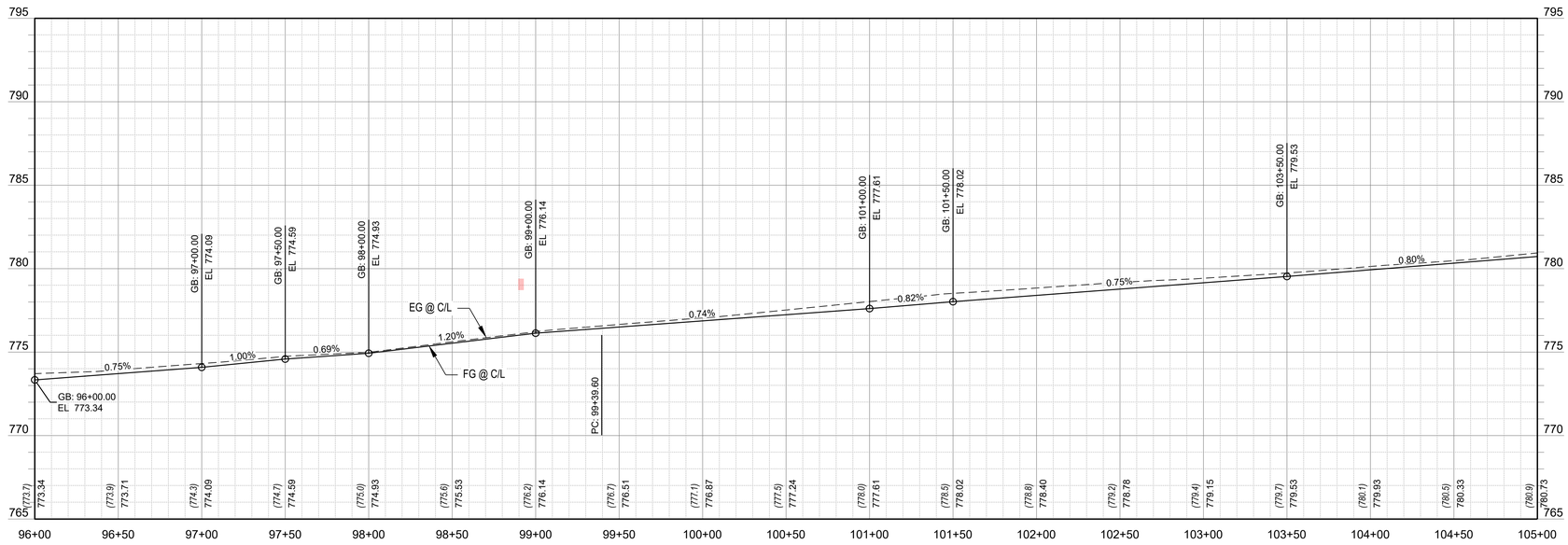
DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 17 OF 95 SHTS

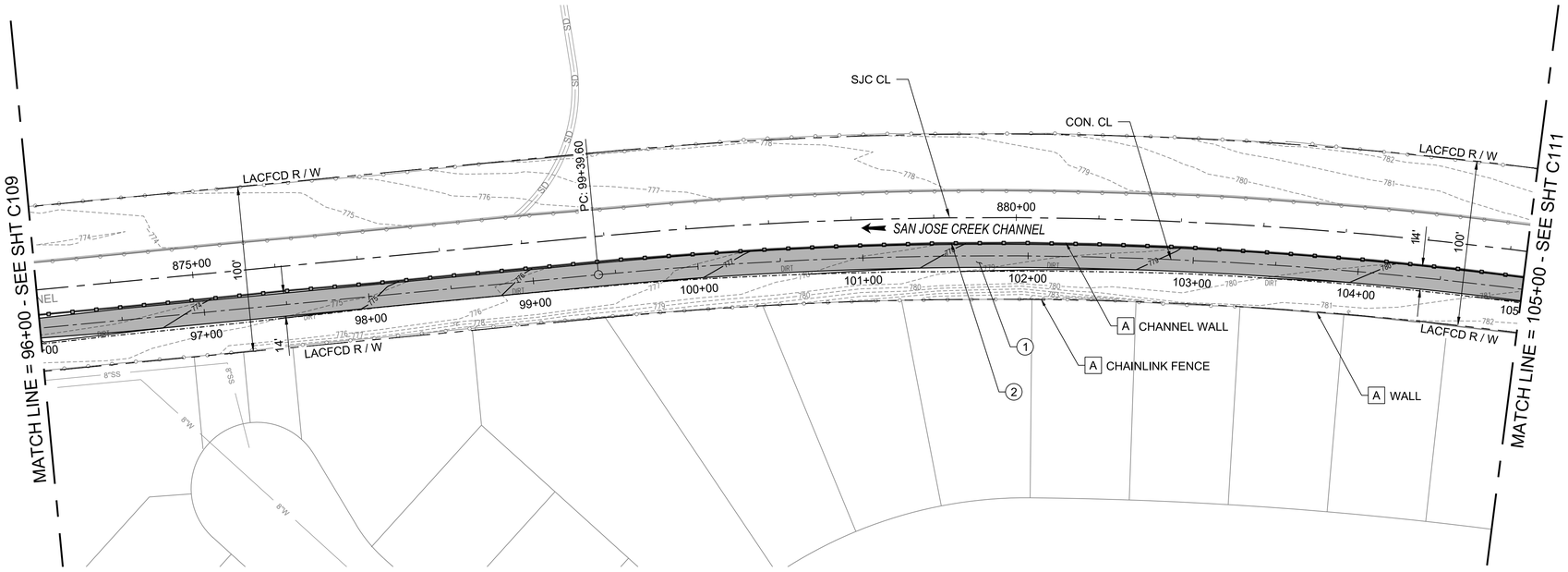
Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C109.dwg 12/18/2024 16:58

FA-2263 AQ




## PROFILE




## PLAN

## CONSTRUCTION NOTES

1. CONSTRUCT 4" ACP, 2" CLASS C2-PG-64-10 OVER 2" CLASS B2-PG-64-10, OVER 6" CMB, SUBGRADE COMPACTION MIN. 90%
2. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 6' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.

## DISPOSITION NOTES

A PROTECT IN PLACE (AS NOTED)

## GENERAL SHEET NOTES

1. FOR PATH ALIGNMENT AND INTERSECTING STREETS ALIGNMENTS LINE AND CURVE DATA SEE SHEETS 6 - 7.
2. FOR PROPOSED CROSSING IMPROVEMENTS AND TRAFFIC SIGNAL MODIFICATIONS, SEE SHEETS 73-90 FOR FURTHER INFORMATION.
3. ALL EXISTING FENCES, GATES, POSTS, CURBS, AC BERM, AC PAVEMENT, PCC PAVEMENT, DG PATHWAYS, ETC THAT ARE WITHIN THE TRAILS RIGHT OF WAY SHOULD BE REMOVED FOR COMPLETION OF WORK, UNLESS OTHERWISE NOTED AS PROTECT IN PLACE. PROTECT ALL EXISTING TREES UNLESS OTHERWISE NOTED.
4. HORIZONTAL CONTROL POINTS FOR PATHWAY IMPROVEMENTS ARE INCLUDED IN THE DETAILS ON SHEETS 29 - 44.
5. FENCE IMPROVEMENTS IDENTIFIED ON THE PLANS TO BE FIELD VERIFIED. EXACT MEASUREMENTS FOR FENCE REPLACEMENTS WHERE FENCING HAS BEEN DAMAGED, TO BE APPROVED BY THE ENGINEER.
6. CONTRACTOR TO TREE TRIM ALONG THE CORRIDOR FOR ANY TREE VERTICAL OR HORIZONTAL OBSTRUCTION WITHIN THE PATH PER DETAIL 7 ON SHEET 56.

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

PLAN & PROFILE
STA 96+00 TO STA 105+00

HORIZ: 1" = 40' (40' 20' 0 40' 80')

VERT: 1" = 4' (4' 0 4' 8')

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C110

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| | REVISIONS | DATE | INITIAL |
|---|---|---|---|
| | | | |

SCALE AS SHOWN

DATE 12.16.2024

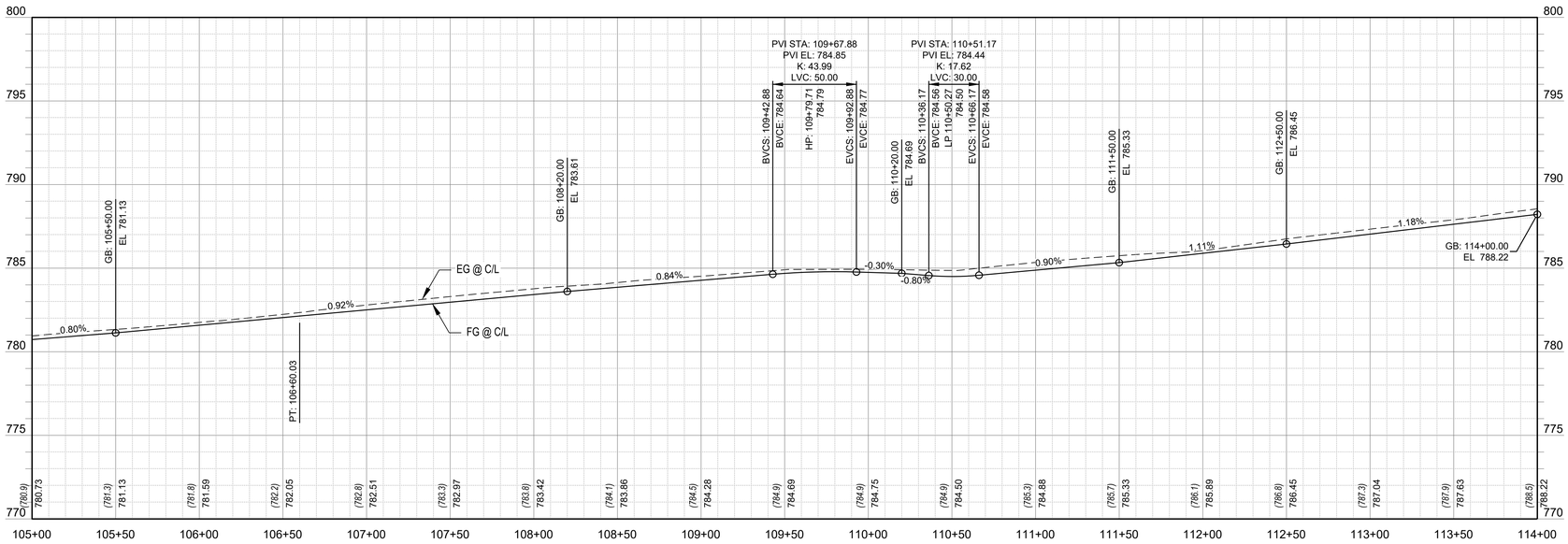
DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 18 OF 95 SHTS

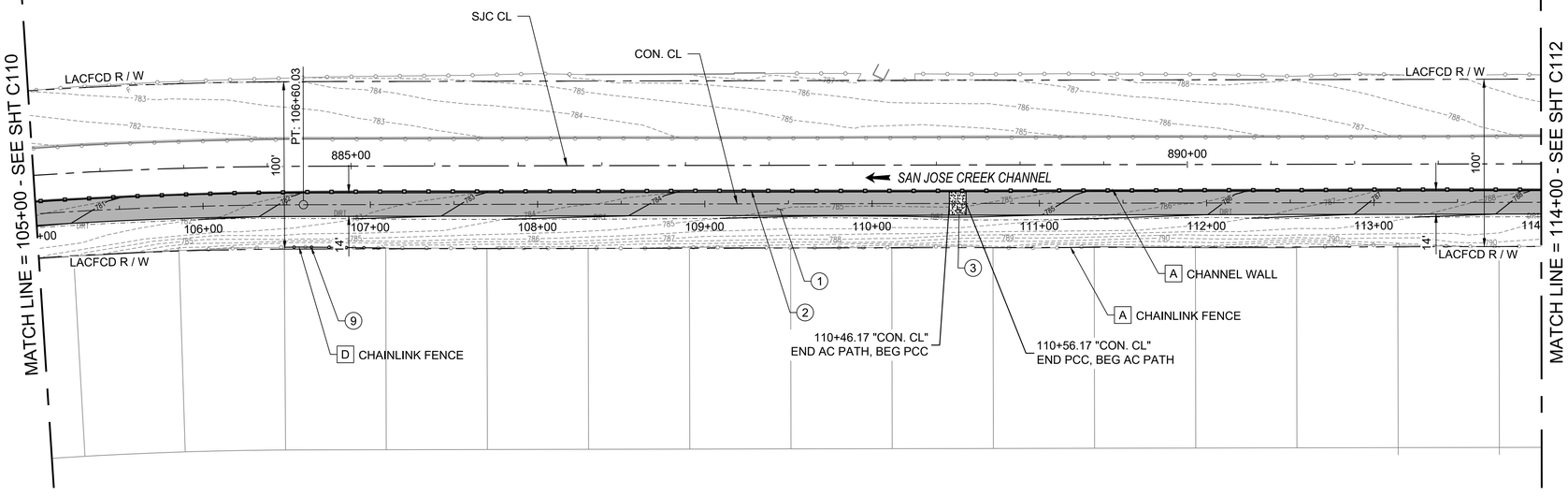
Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\100-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C110.dwg 12/18/2024 16:58

FA-2263 AR




## PROFILE




## PLAN

## CONSTRUCTION NOTES

1. CONSTRUCT 4" ACP, 2" CLASS C2-PG-64-10 OVER 2" CLASS B2-PG-64-10, OVER 6" CMB, SUBGRADE COMPACTION MIN. 90%
2. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 6' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.
3. CONSTRUCT 4" PCC SIDEWALK OVER NATIVE PER CITY OF POMONA STD. No. A-7-02.
9. REMOVE EXISTING CHAINLINK FENCE AND CONSTRUCT NEW 6' CHAINLINK FENCE PER SPPWC STD PLAN 600-4.

## DISPOSITION NOTES

- A PROTECT IN PLACE (AS NOTED)
- D REMOVE (AS NOTED)

## GENERAL SHEET NOTES

1. FOR PATH ALIGNMENT AND INTERSECTING STREETS ALIGNMENTS LINE AND CURVE DATA SEE SHEETS 6 - 7.
2. FOR PROPOSED CROSSING IMPROVEMENTS AND TRAFFIC SIGNAL MODIFICATIONS, SEE SHEETS 73-90 FOR FURTHER INFORMATION.
3. ALL EXISTING FENCES, GATES, POSTS, CURBS, AC BERM, AC PAVEMENT, PCC PAVEMENT, DG PATHWAYS, ETC THAT ARE WITHIN THE TRAILS RIGHT OF WAY SHOULD BE REMOVED FOR COMPLETION OF WORK, UNLESS OTHERWISE NOTED AS PROTECT IN PLACE. PROTECT ALL EXISTING TREES UNLESS OTHERWISE NOTED.
4. HORIZONTAL CONTROL POINTS FOR PATHWAY IMPROVEMENTS ARE INCLUDED IN THE DETAILS ON SHEETS 29 - 44.
5. FENCE IMPROVEMENTS IDENTIFIED ON THE PLANS TO BE FIELD VERIFIED. EXACT MEASUREMENTS FOR FENCE REPLACEMENTS WHERE FENCING HAS BEEN DAMAGED, TO BE APPROVED BY THE ENGINEER.
6. CONTRACTOR TO TREE TRIM ALONG THE CORRIDOR FOR ANY TREE VERTICAL OR HORIZONTAL OBSTRUCTION WITHIN THE PATH PER DETAIL 7 ON SHEET 56.

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

HORIZ: 1" = 40' (40' 20' 0 40' 80')

VERT: 1" = 4' (4' 0 4' 8')

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C111

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

PLAN & PROFILE
STA 105+00 TO STA 114+00

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

SCALE AS SHOWN

DATE 12.16.2024

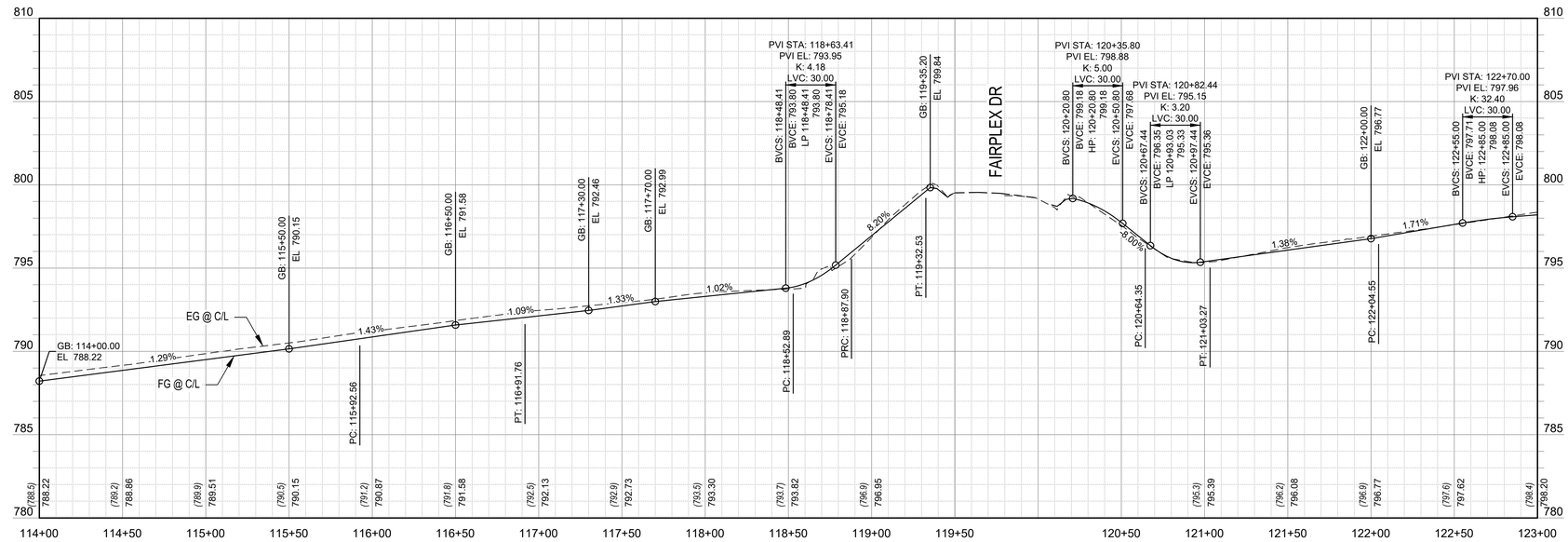
DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 19 OF 95 SHTS

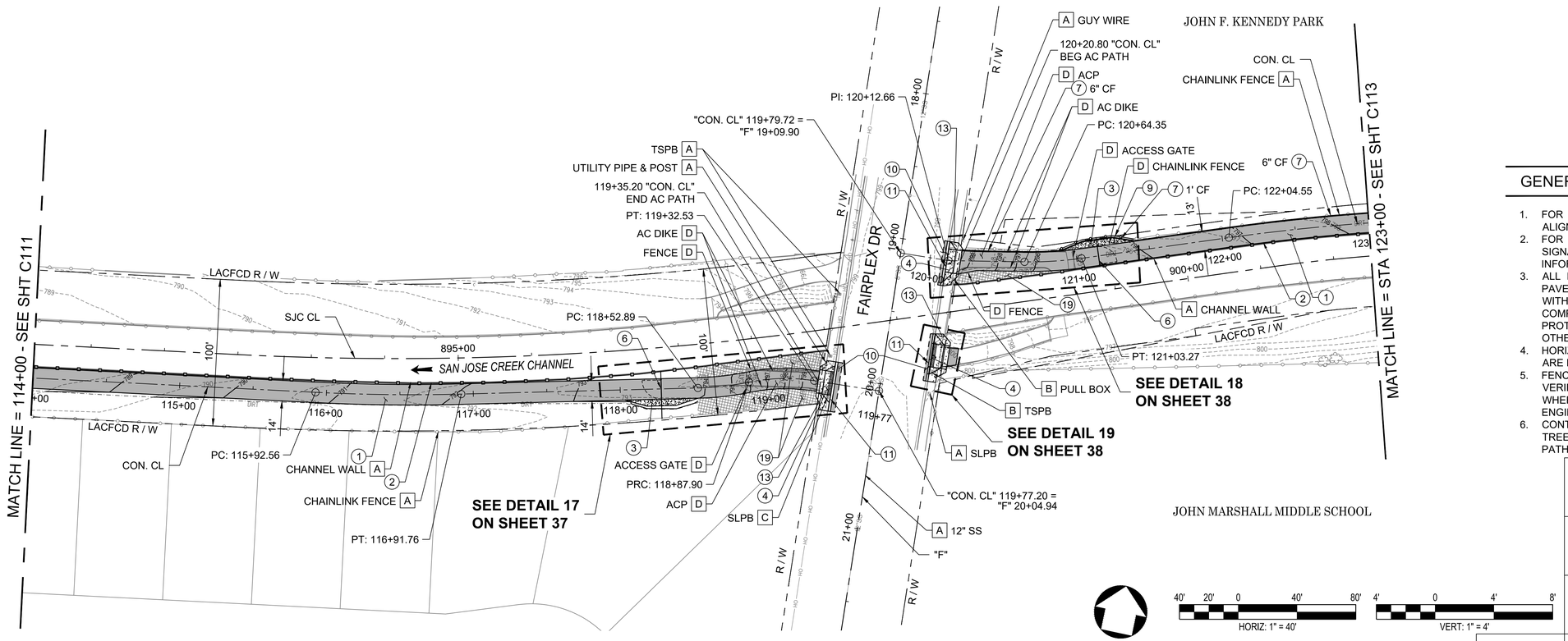
CALL BEFORE YOU DIG
Under Ground Service Alert of Southern California
Call: TOLL FREE
1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\100-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C111.dwg 12/18/2024 16:59

FA-2263 AS




## PROFILE




## PLAN

40' 20' 0 40' 80' HORIZ: 1" = 40'

4' 0 4' 8' VERT: 1" = 4'

## CONSTRUCTION NOTES

1. CONSTRUCT 4" ACP, 2" CLASS C2-PG-64-10 OVER 2" CLASS B2-PG-64-10, OVER 6" CMB, SUBGRADE COMPACTION MIN. 90%
2. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 6' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.
3. CONSTRUCT 4" PCC SIDEWALK OVER NATIVE PER CITY OF POMONA STD. No. A-7-02.
4. REMOVE AND RECONSTRUCT MODIFIED DRIVEWAY APPROACH PER CITY OF POMONA STD. No. A-27-10, TYPE II. SEE SHEETS 29-44 FOR ADDITIONAL DETAILS.
6. INSTALL SERVICE VEHICLE AND PEDESTRIAN GATE PER SHEET 55, DETAIL 1.
7. CONSTRUCT VARIABLE HEIGHT PCC CURB PER CITY OF POMONA STD. No. A-3-64, HEIGHT PER PLAN.
9. REMOVE EXISTING CHAINLINK FENCE AND CONSTRUCT NEW 6' CHAINLINK FENCE PER SPPWC STD PLAN 600-4.
10. CONSTRUCT FULL DEPTH AC PAVEMENT OVER BASE FOR SAWCUT PATCH AS REQUIRED TO JOIN EXISTING AC PAVEMENT PER SPPWC STD PLAN 133-4.
11. REMOVE AND RECONSTRUCT 6"-8" VARIABLE HEIGHT TYPE "B" PCC CURB AND GUTTER PER CITY OF POMONA STD. NO. A-3-64, HEIGHT PER PLAN
13. RECONSTRUCT 4" PCC SIDEWALK PER CITY OF POMONA STD. No. A-7-02.
19. INSTALL NONWALKABLE SURFACE.

## DISPOSITION NOTES

- A PROTECT IN PLACE (AS NOTED)
- B RELOCATE (AS NOTED)
- C ADJUST TO GRADE (AS NOTED)
- D REMOVE (AS NOTED)

## GENERAL SHEET NOTES

1. FOR PATH ALIGNMENT AND INTERSECTING STREETS ALIGNMENTS LINE AND CURVE DATA SEE SHEETS 6 - 7.
2. FOR PROPOSED CROSSING IMPROVEMENTS AND TRAFFIC SIGNAL MODIFICATIONS, SEE SHEETS 73-90 FOR FURTHER INFORMATION.
3. ALL EXISTING FENCES, GATES, POSTS, CURBS, AC BERM, AC PAVEMENT, PCC PAVEMENT, DG PATHWAYS, ETC THAT ARE WITHIN THE TRAILS RIGHT OF WAY SHOULD BE REMOVED FOR COMPLETION OF WORK, UNLESS OTHERWISE NOTED AS PROTECT IN PLACE. PROTECT ALL EXISTING TREES UNLESS OTHERWISE NOTED.
4. HORIZONTAL CONTROL POINTS FOR PATHWAY IMPROVEMENTS ARE INCLUDED IN THE DETAILS ON SHEETS 29 - 44.
5. FENCE IMPROVEMENTS IDENTIFIED ON THE PLANS TO BE FIELD VERIFIED. EXACT MEASUREMENTS FOR FENCE REPLACEMENTS WHERE FENCING HAS BEEN DAMAGED, TO BE APPROVED BY THE ENGINEER.
6. CONTRACTOR TO TREE TRIM ALONG THE CORRIDOR FOR ANY TREE VERTICAL OR HORIZONTAL OBSTRUCTION WITHIN THE PATH PER DETAIL 7 ON SHEET 56.

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

PLAN & PROFILE
STA 114+00 TO 123+00

SCALE AS SHOWN

DATE 12.18.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 20 OF 95 SHTS

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C112

PRELIMINARY

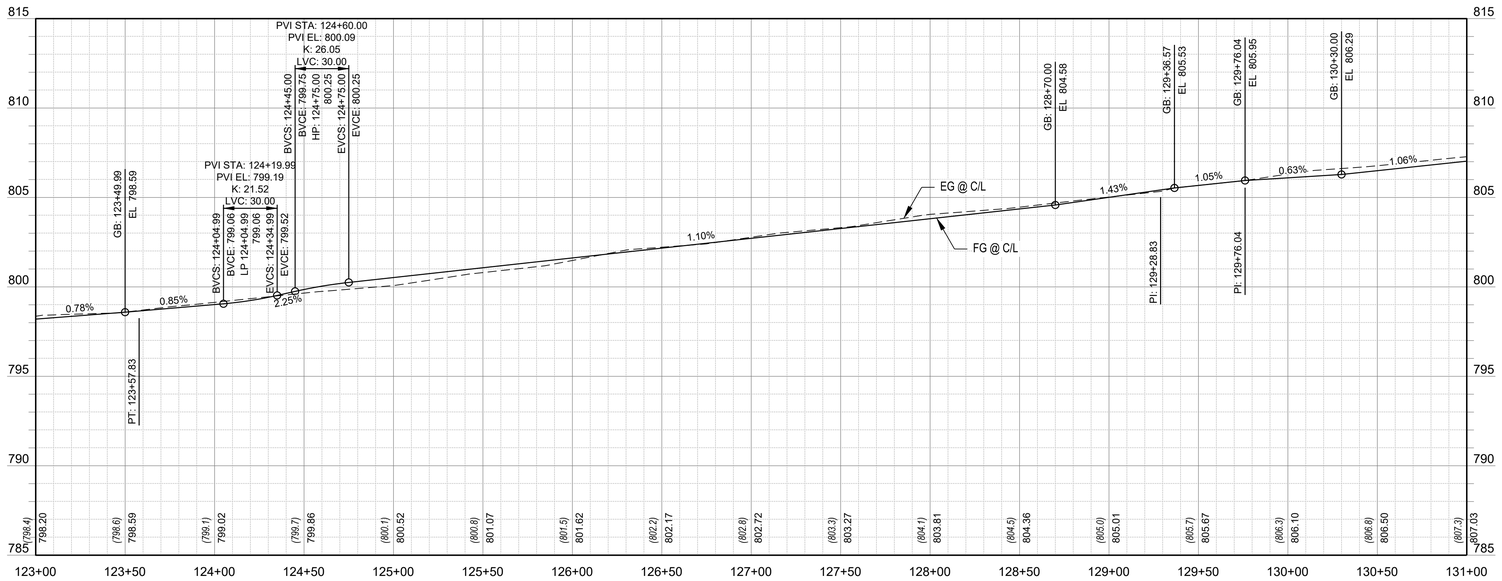
alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|
| | | | |

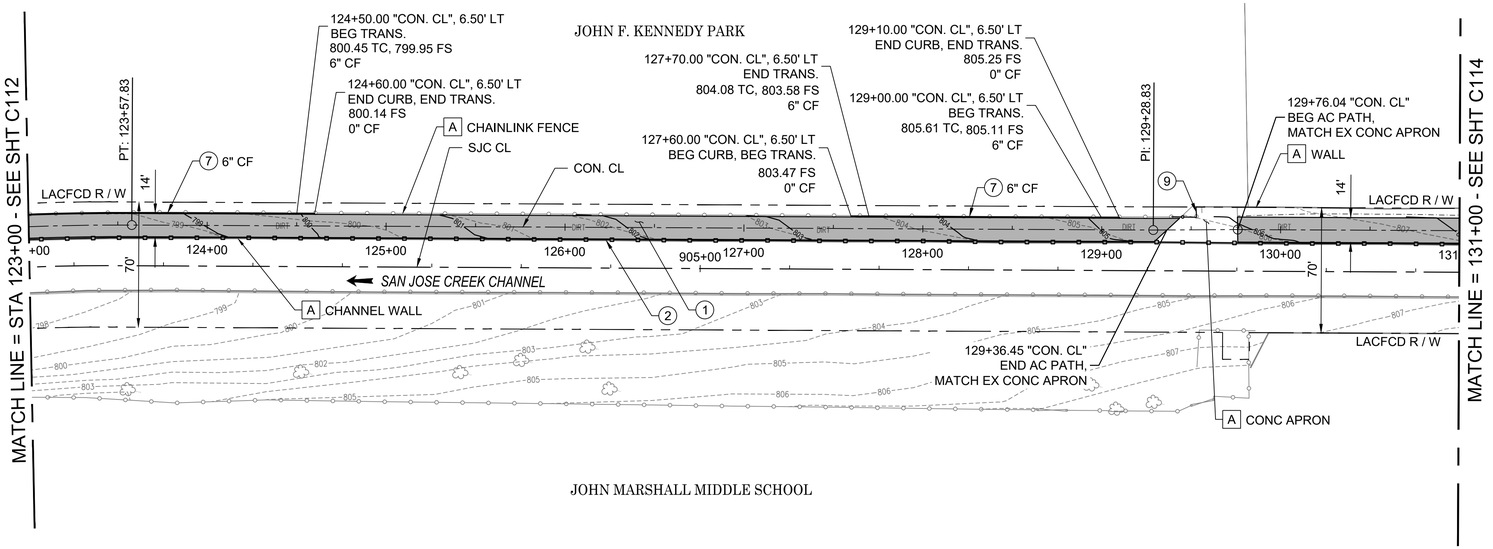
CALL BEFORE YOU DIG
Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Stored\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C112.dwg 12/18/2024 17:00

FA-2263 AT




## PROFILE




## PLAN

## CONSTRUCTION NOTES

1. CONSTRUCT 4" ACP, 2" CLASS C2-PG-64-10 OVER 2" CLASS B2-PG-64-10, OVER 6" CMB, SUBGRADE COMPACTION MIN. 90%
2. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 6' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.
7. CONSTRUCT VARIABLE HEIGHT PCC CURB PER CITY OF POMONA STD. No. A-3-64, HEIGHT PER PLAN.
9. REMOVE EXISTING CHAINLINK FENCE AND CONSTRUCT NEW 6' CHAINLINK FENCE PER SPPWC STD PLAN 600-4.

## DISPOSITION NOTES

A PROTECT IN PLACE (AS NOTED)

## GENERAL SHEET NOTES

1. FOR PATH ALIGNMENT AND INTERSECTING STREETS ALIGNMENTS LINE AND CURVE DATA SEE SHEETS 6 - 7.
2. FOR PROPOSED CROSSING IMPROVEMENTS AND TRAFFIC SIGNAL MODIFICATIONS, SEE SHEETS 73-90 FOR FURTHER INFORMATION.
3. ALL EXISTING FENCES, GATES, POSTS, CURBS, AC BERM, AC PAVEMENT, PCC PAVEMENT, DG PATHWAYS, ETC THAT ARE WITHIN THE TRAILS RIGHT OF WAY SHOULD BE REMOVED FOR COMPLETION OF WORK, UNLESS OTHERWISE NOTED AS PROTECT IN PLACE. PROTECT ALL EXISTING TREES UNLESS OTHERWISE NOTED.
4. HORIZONTAL CONTROL POINTS FOR PATHWAY IMPROVEMENTS ARE INCLUDED IN THE DETAILS ON SHEETS 29 - 44.
5. FENCE IMPROVEMENTS IDENTIFIED ON THE PLANS TO BE FIELD VERIFIED. EXACT MEASUREMENTS FOR FENCE REPLACEMENTS WHERE FENCING HAS BEEN DAMAGED, TO BE APPROVED BY THE ENGINEER.
6. CONTRACTOR TO TREE TRIM ALONG THE CORRIDOR FOR ANY TREE VERTICAL OR HORIZONTAL OBSTRUCTION WITHIN THE PATH PER DETAIL 7 ON SHEET 56.

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

PLAN & PROFILE
STA 123+00 TO STA 131+00

40' 20' 0 40' 80' HORIZ: 1" = 40'
4' 0 4' 8' VERT: 1" = 4'

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C113

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

SCALE AS SHOWN
DATE 12.5.2024

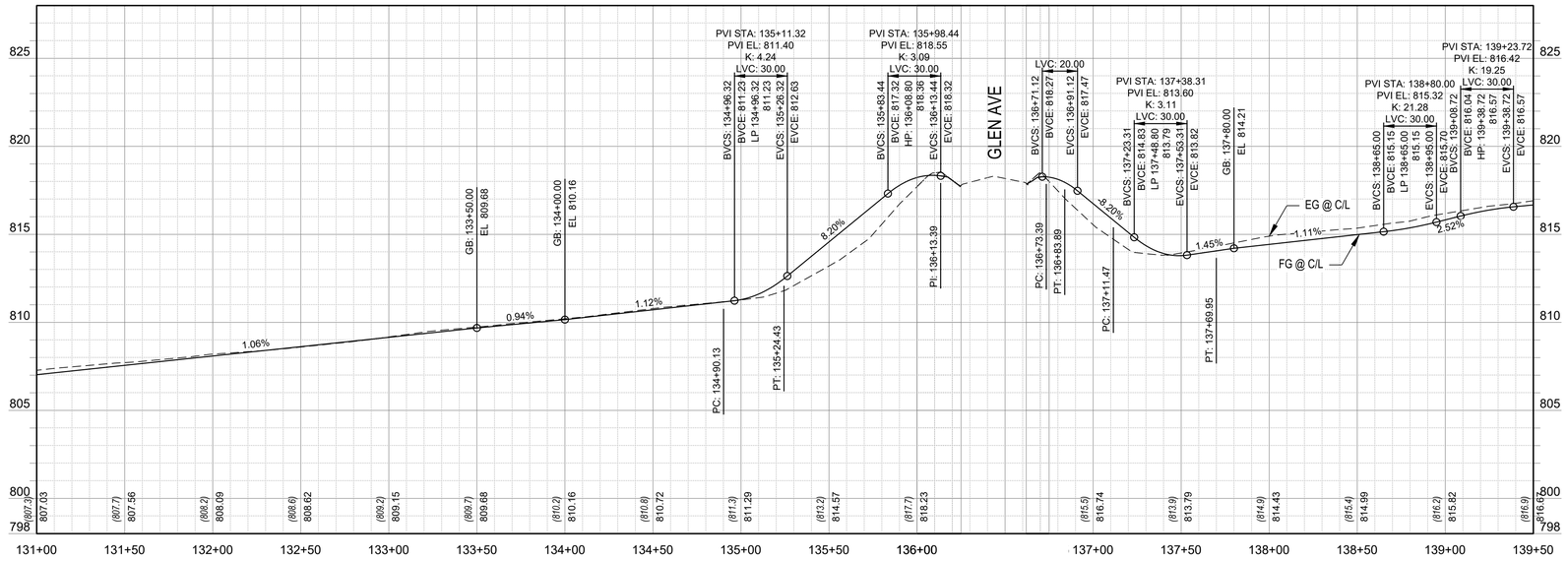
DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 21 OF 95 SHTS

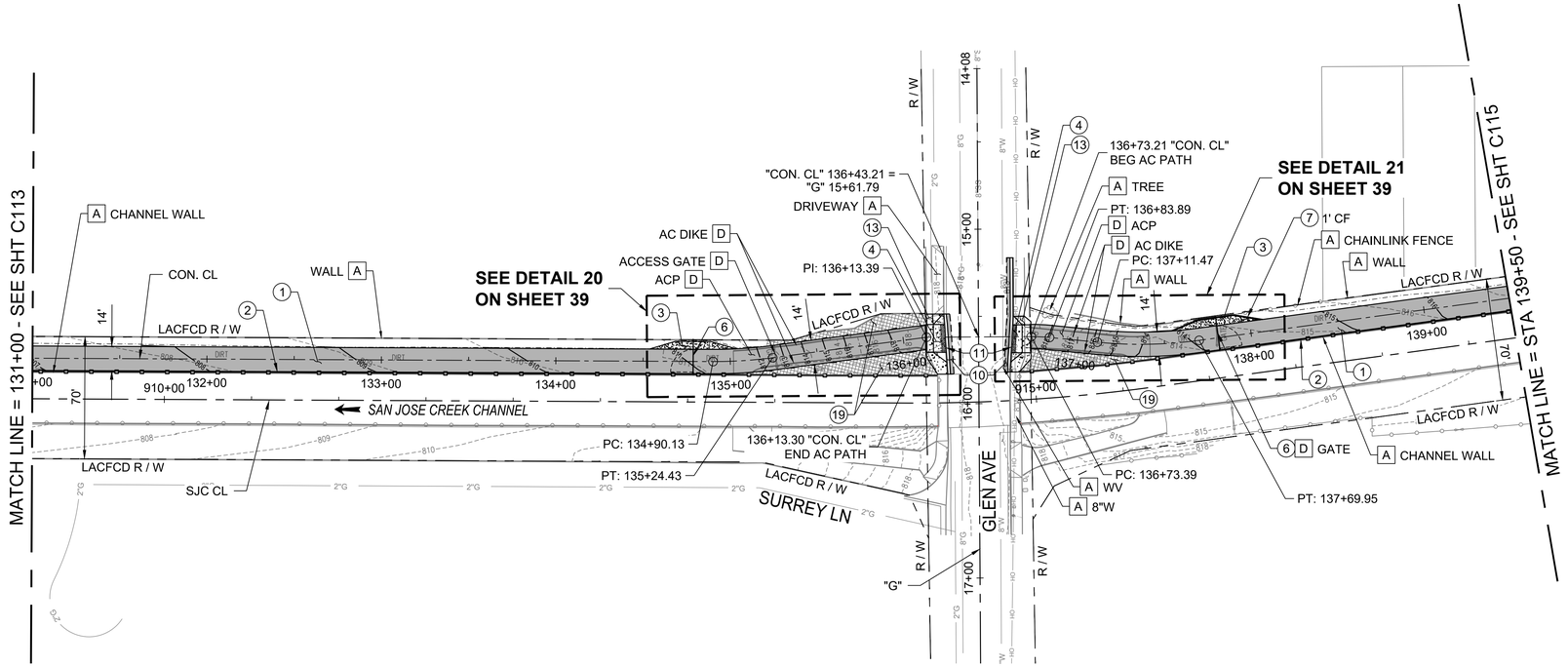
Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

FA-2263 AU

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C113.dwg 12/18/2024 16:53




## PROFILE




## PLAN

40' 20' 0 40' 80' HORIZ: 1" = 40'

4' 0 4' 8' VERT: 1" = 4'

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C114

## CONSTRUCTION NOTES

1. CONSTRUCT 4" ACP, 2" CLASS C2-PG-64-10 OVER 2" CLASS B2-PG-64-10, OVER 6" CMB, SUBGRADE COMPACTION MIN. 90%
2. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 6' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.
3. CONSTRUCT 4" PCC SIDEWALK OVER NATIVE PER CITY OF POMONA STD. No. A-7-02.
4. REMOVE AND RECONSTRUCT MODIFIED DRIVEWAY APPROACH PER CITY OF POMONA STD. No. A-27-10, TYPE II. SEE SHEETS 29-44 FOR ADDITIONAL DETAILS.
6. INSTALL SERVICE VEHICLE AND PEDESTRIAN GATE PER SHEET 55, DETAIL 1.
7. CONSTRUCT VARIABLE HEIGHT PCC CURB PER CITY OF POMONA STD. No. A-3-64, HEIGHT PER PLAN.
10. CONSTRUCT FULL DEPTH AC PAVEMENT OVER BASE FOR SAWCUT PATCH AS REQUIRED TO JOIN EXISTING AC PAVEMENT PER SPPWC STD PLAN 133-4.
11. REMOVE AND RECONSTRUCT 6"-8" VARIABLE HEIGHT TYPE "B" PCC CURB AND GUTTER PER CITY OF POMONA STD. NO. A-3-64, HEIGHT PER PLAN
13. RECONSTRUCT 4" PCC SIDEWALK PER CITY OF POMONA STD. No. A-7-02.
19. INSTALL NONWALKABLE SURFACE.

## DISPOSITION NOTES

A PROTECT IN PLACE (AS NOTED)

D REMOVE (AS NOTED)

## GENERAL SHEET NOTES

1. FOR PATH ALIGNMENT AND INTERSECTING STREETS ALIGNMENTS LINE AND CURVE DATA SEE SHEETS 6 - 7.
2. FOR PROPOSED CROSSING IMPROVEMENTS AND TRAFFIC SIGNAL MODIFICATIONS, SEE SHEETS 73-90 FOR FURTHER INFORMATION.
3. ALL EXISTING FENCES, GATES, POSTS, CURBS, AC BERM, AC PAVEMENT, PCC PAVEMENT, DG PATHWAYS, ETC THAT ARE WITHIN THE TRAILS RIGHT OF WAY SHOULD BE REMOVED FOR COMPLETION OF WORK, UNLESS OTHERWISE NOTED AS PROTECT IN PLACE. PROTECT ALL EXISTING TREES UNLESS OTHERWISE NOTED.
4. HORIZONTAL CONTROL POINTS FOR PATHWAY IMPROVEMENTS ARE INCLUDED IN THE DETAILS ON SHEETS 29 - 44.
5. FENCE IMPROVEMENTS IDENTIFIED ON THE PLANS TO BE FIELD VERIFIED. EXACT MEASUREMENTS FOR FENCE REPLACEMENTS WHERE FENCING HAS BEEN DAMAGED, TO BE APPROVED BY THE ENGINEER.
6. CONTRACTOR TO TREE TRIM ALONG THE CORRIDOR FOR ANY TREE VERTICAL OR HORIZONTAL OBSTRUCTION WITHIN THE PATH PER DETAIL 7 ON SHEET 56.

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

PLAN & PROFILE
STA 131+00 TO STA 139+50

SCALE AS SHOWN

DATE 12.18.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 22 OF 95 SHTS

PRELIMINARY

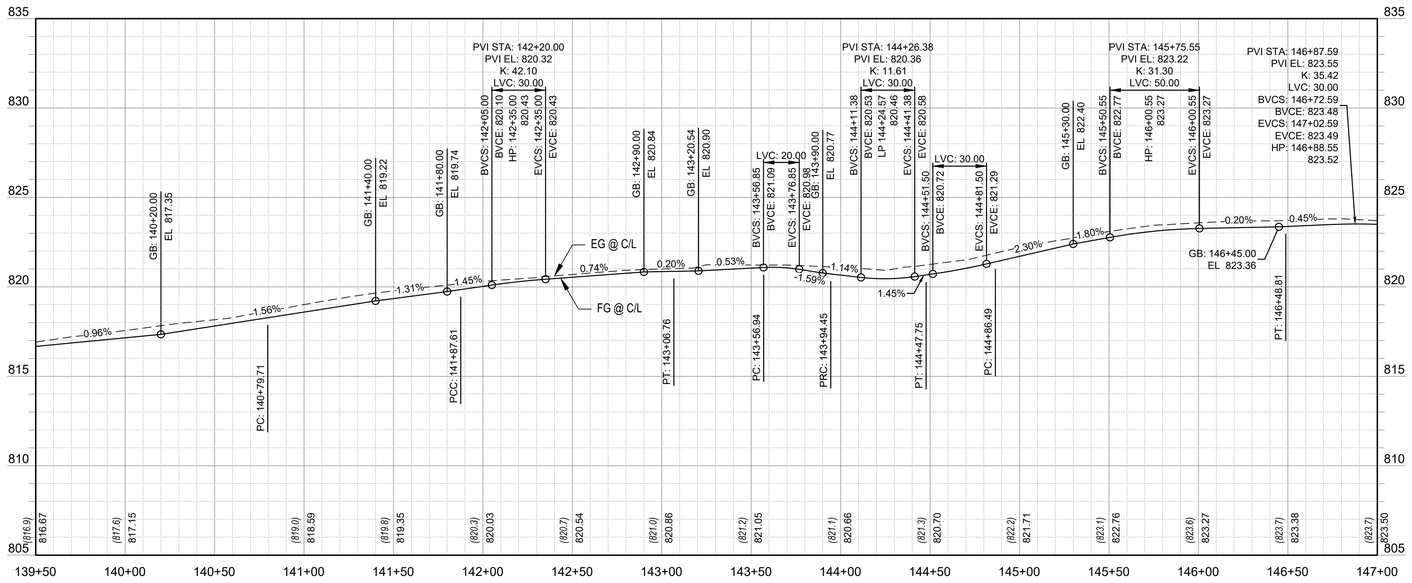
alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| | REVISIONS | DATE | INITIAL |
|---|---|---|---|

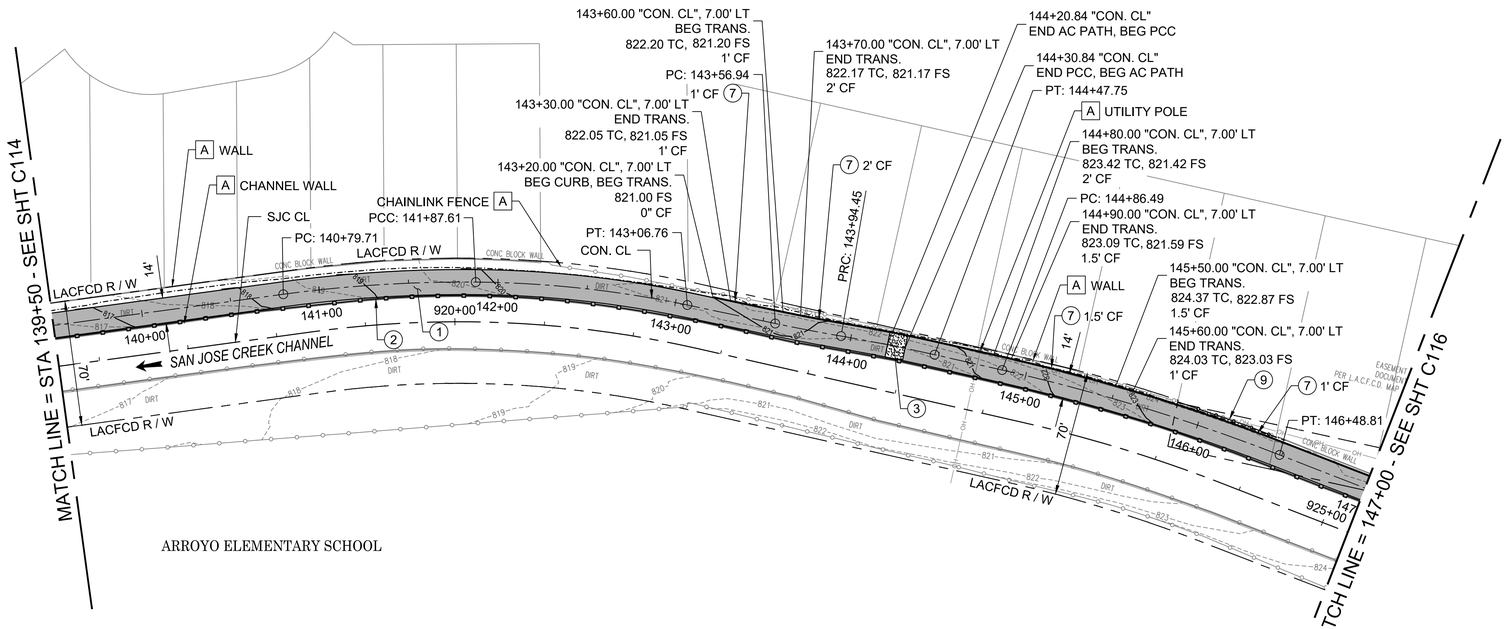
Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171_Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C114.dwg 12/18/2024 16:53

FA-2263 AV




## PROFILE




## PLAN

40' 20' 0 40' 80' HORIZ: 1" = 40'

4' 0 4' 8' VERT: 1" = 4'

## CONSTRUCTION NOTES

1. CONSTRUCT 4" ACP, 2" CLASS C2-PG-64-10 OVER 2" CLASS B2-PG-64-10, OVER 6" CMB, SUBGRADE COMPACTION MIN. 90%
2. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 6' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.
3. CONSTRUCT 4" PCC SIDEWALK OVER NATIVE PER CITY OF POMONA STD. No. A-7-02.
7. CONSTRUCT VARIABLE HEIGHT PCC CURB PER CITY OF POMONA STD. No. A-3-64, HEIGHT PER PLAN.

## DISPOSITION NOTES

A PROTECT IN PLACE (AS NOTED)

## GENERAL SHEET NOTES

1. FOR PATH ALIGNMENT AND INTERSECTING STREETS ALIGNMENTS LINE AND CURVE DATA SEE SHEETS 6 - 7.
2. FOR PROPOSED CROSSING IMPROVEMENTS AND TRAFFIC SIGNAL MODIFICATIONS, SEE SHEETS 73-90 FOR FURTHER INFORMATION.
3. ALL EXISTING FENCES, GATES, POSTS, CURBS, AC BERM, AC PAVEMENT, PCC PAVEMENT, DG PATHWAYS, ETC THAT ARE WITHIN THE TRAILS RIGHT OF WAY SHOULD BE REMOVED FOR COMPLETION OF WORK, UNLESS OTHERWISE NOTED AS PROTECT IN PLACE. PROTECT ALL EXISTING TREES UNLESS OTHERWISE NOTED.
4. HORIZONTAL CONTROL POINTS FOR PATHWAY IMPROVEMENTS ARE INCLUDED IN THE DETAILS ON SHEETS 29 - 44.
5. FENCE IMPROVEMENTS IDENTIFIED ON THE PLANS TO BE FIELD VERIFIED. EXACT MEASUREMENTS FOR FENCE REPLACEMENTS WHERE FENCING HAS BEEN DAMAGED, TO BE APPROVED BY THE ENGINEER.
6. CONTRACTOR TO TREE TRIM ALONG THE CORRIDOR FOR ANY TREE VERTICAL OR HORIZONTAL OBSTRUCTION WITHIN THE PATH PER DETAIL 7 ON SHEET 56.

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C115

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

PLAN & PROFILE
STA 139+50 TO STA 147+00

SCALE AS SHOWN

DATE 12.9.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

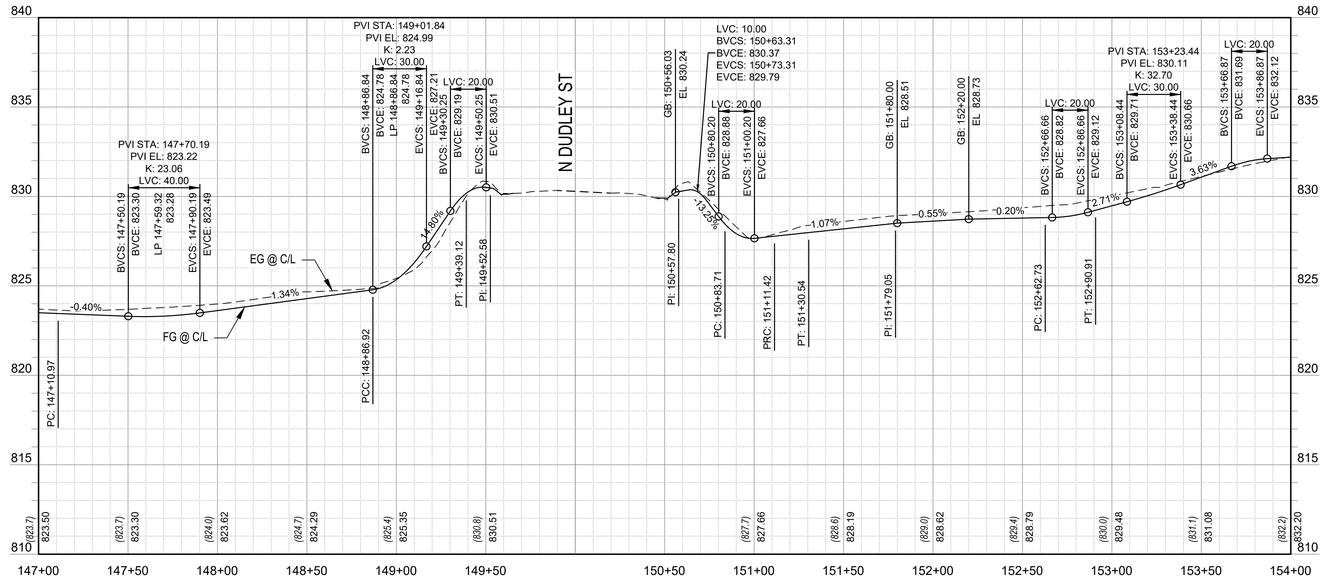
SHT. 23 OF 95 SHTS

PRELIMINARY

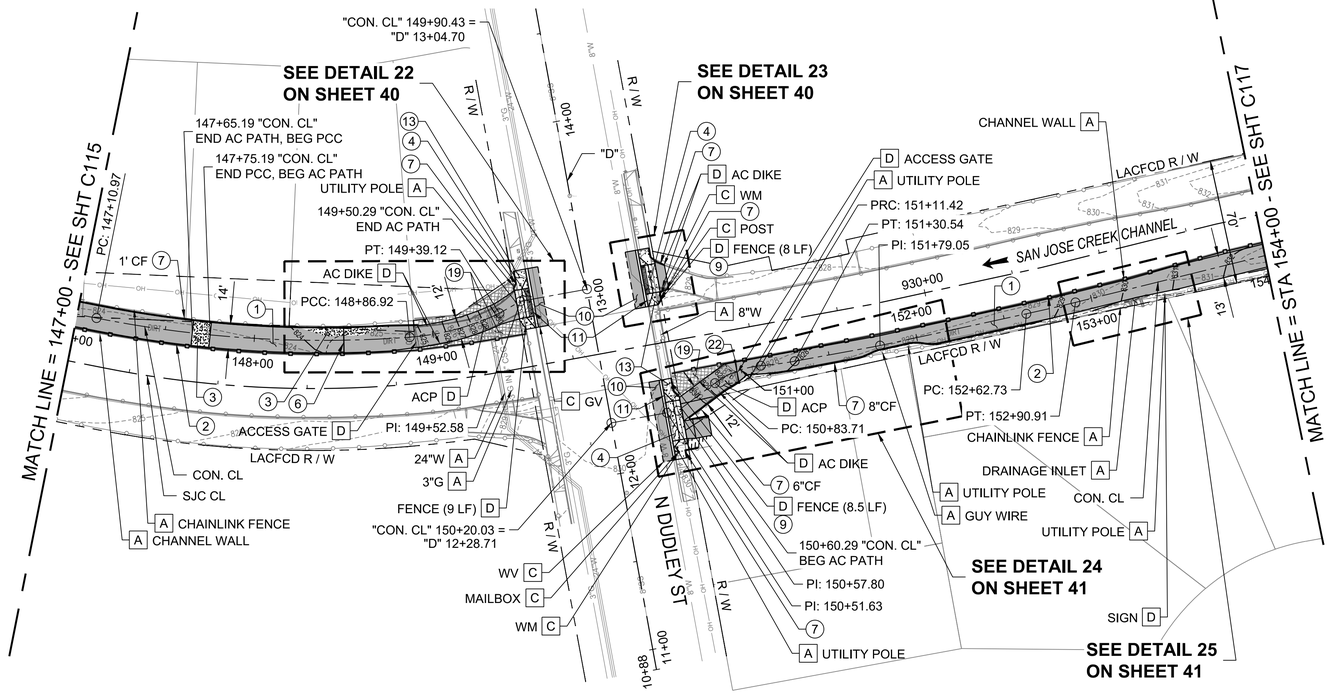
alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

Under Ground Service Alert of Southern California
Call: TOLL FREE
1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG




PROFILE




PLAN

40' 20' 0 40' 80' HORIZ: 1" = 40'

4' 0 4' 8' VERT: 1" = 4'

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

## CONSTRUCTION NOTES

1. CONSTRUCT 4" ACP, 2" CLASS C2-PG-64-10 OVER 2" CLASS B2-PG-64-10, OVER 6" CMB, SUBGRADE COMPACTION MIN. 90%
2. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 6' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.
3. CONSTRUCT 4" PCC SIDEWALK OVER NATIVE PER CITY OF POMONA STD. No. A-7-02.
4. REMOVE AND RECONSTRUCT MODIFIED DRIVEWAY APPROACH PER CITY OF POMONA STD. No. A-27-10, TYPE II. SEE SHEETS 29-44 FOR ADDITIONAL DETAILS.
6. INSTALL SERVICE VEHICLE AND PEDESTRIAN GATE PER SHEET 55, DETAIL 1.
7. CONSTRUCT VARIABLE HEIGHT PCC CURB PER CITY OF POMONA STD. No. A-3-64, HEIGHT PER PLAN.
9. REMOVE EXISTING CHAINLINK FENCE AND CONSTRUCT NEW 6' CHAINLINK FENCE PER SPPWC STD PLAN 600-4.
10. CONSTRUCT FULL DEPTH AC PAVEMENT OVER BASE FOR SAWCUT PATCH AS REQUIRED TO JOIN EXISTING AC PAVEMENT PER SPPWC STD PLAN 133-4.
11. REMOVE AND RECONSTRUCT 6"-8" VARIABLE HEIGHT TYPE "B" PCC CURB AND GUTTER PER CITY OF POMONA STD. NO. A-3-64, HEIGHT PER PLAN
13. RECONSTRUCT 4" PCC SIDEWALK PER CITY OF POMONA STD. No. A-7-02.
19. INSTALL NONWALKABLE SURFACE.
22. INSTALL PIPE GATE OR SIMILAR PER SPPWC STD PLAN 602-4.

## DISPOSITION NOTES

A PROTECT IN PLACE (AS NOTED)
C ADJUST TO GRADE (AS NOTED)
D REMOVE (AS NOTED)

## GENERAL SHEET NOTES

1. FOR PATH ALIGNMENT AND INTERSECTING STREETS ALIGNMENTS LINE AND CURVE DATA SEE SHEETS 6 - 7.
2. FOR PROPOSED CROSSING IMPROVEMENTS AND TRAFFIC SIGNAL MODIFICATIONS, SEE SHEETS 73-90 FOR FURTHER INFORMATION.
3. ALL EXISTING FENCES, GATES, POSTS, CURBS, AC BERM, AC PAVEMENT, PCC PAVEMENT, DG PATHWAYS, ETC THAT ARE WITHIN THE TRAILS RIGHT OF WAY SHOULD BE REMOVED FOR COMPLETION OF WORK, UNLESS OTHERWISE NOTED AS PROTECT IN PLACE. PROTECT ALL EXISTING TREES UNLESS OTHERWISE NOTED.
4. HORIZONTAL CONTROL POINTS FOR PATHWAY IMPROVEMENTS ARE INCLUDED IN THE DETAILS ON SHEETS 29 - 44.
5. FENCE IMPROVEMENTS IDENTIFIED ON THE PLANS TO BE FIELD VERIFIED. EXACT MEASUREMENTS FOR FENCE REPLACEMENTS WHERE FENCING HAS BEEN DAMAGED, TO BE APPROVED BY THE ENGINEER.
6. CONTRACTOR TO TREE TRIM ALONG THE CORRIDOR FOR ANY TREE VERTICAL OR HORIZONTAL OBSTRUCTION WITHIN THE PATH PER DETAIL 7 ON SHEET 56.

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

PLAN & PROFILE
STA 147+00 TO STA 154+00

C116

SCALE AS SHOWN
DATE 12.18.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 24 OF 95 SHTS

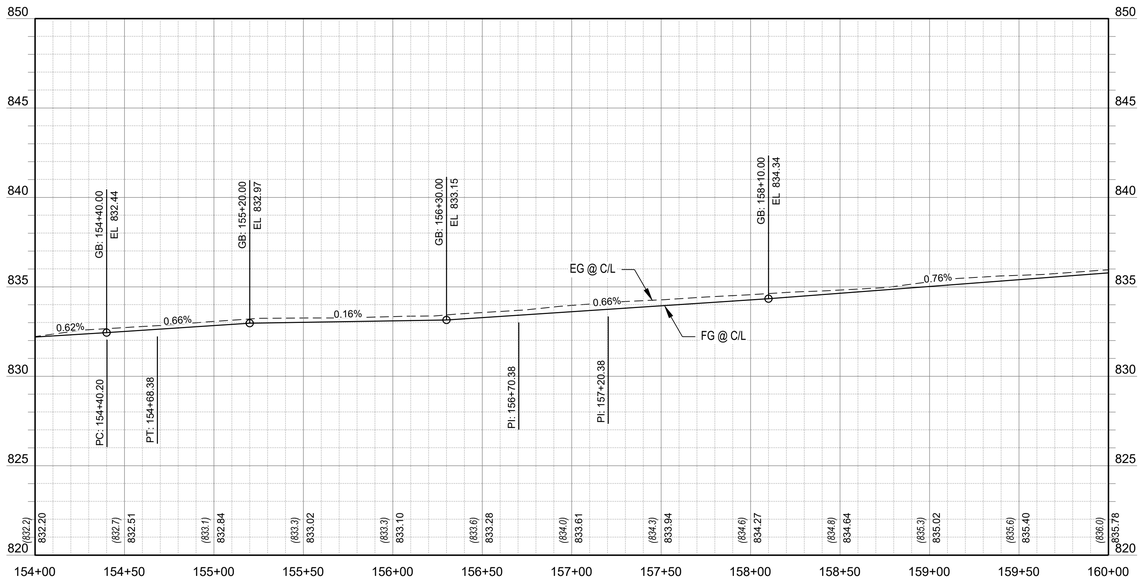
PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

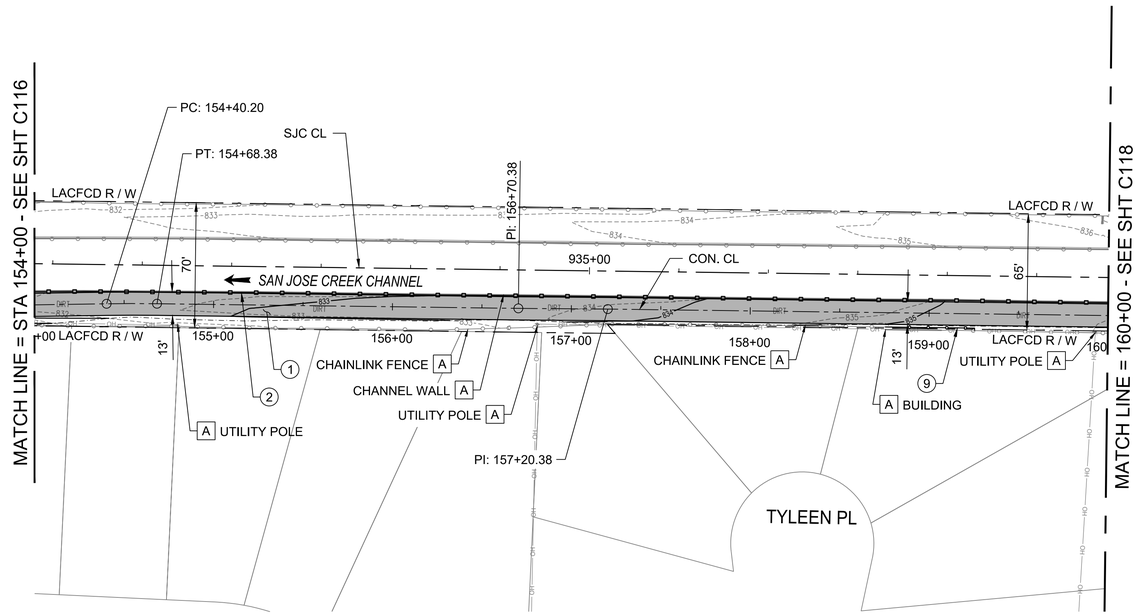
| | REVISIONS | DATE | INITIAL |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| △ | | | |

CALL BEFORE YOU DIG
Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Stored\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C116.dwg 12/18/2024 16:54




PROFILE




PLAN

## CONSTRUCTION NOTES

1. CONSTRUCT 4" ACP, 2" CLASS C2-PG-64-10 OVER 2" CLASS B2-PG-64-10, OVER 6" CMB, SUBGRADE COMPACTION MIN. 90%
2. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 6' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.
9. REMOVE EXISTING CHAINLINK FENCE AND CONSTRUCT NEW 6' CHAINLINK FENCE PER SPPWC STD PLAN 600-4.

## DISPOSITION NOTES

A PROTECT IN PLACE (AS NOTED)

## GENERAL SHEET NOTES

1. FOR PATH ALIGNMENT AND INTERSECTING STREETS ALIGNMENTS LINE AND CURVE DATA SEE SHEETS 6 - 7.
2. FOR PROPOSED CROSSING IMPROVEMENTS AND TRAFFIC SIGNAL MODIFICATIONS, SEE SHEETS 73-90 FOR FURTHER INFORMATION.
3. ALL EXISTING FENCES, GATES, POSTS, CURBS, AC BERM, AC PAVEMENT, PCC PAVEMENT, DG PATHWAYS, ETC THAT ARE WITHIN THE TRAILS RIGHT OF WAY SHOULD BE REMOVED FOR COMPLETION OF WORK, UNLESS OTHERWISE NOTED AS PROTECT IN PLACE. PROTECT ALL EXISTING TREES UNLESS OTHERWISE NOTED.
4. HORIZONTAL CONTROL POINTS FOR PATHWAY IMPROVEMENTS ARE INCLUDED IN THE DETAILS ON SHEETS 29 - 44.
5. FENCE IMPROVEMENTS IDENTIFIED ON THE PLANS TO BE FIELD VERIFIED. EXACT MEASUREMENTS FOR FENCE REPLACEMENTS WHERE FENCING HAS BEEN DAMAGED, TO BE APPROVED BY THE ENGINEER.
6. CONTRACTOR TO TREE TRIM ALONG THE CORRIDOR FOR ANY TREE VERTICAL OR HORIZONTAL OBSTRUCTION WITHIN THE PATH PER DETAIL 7 ON SHEET 56.

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

40' 20' 0 40' 80'
HORIZ: 1" = 40'

4' 0 4' 8'
VERT: 1" = 4'

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C117

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

PLAN & PROFILE
STA 154+00 TO STA 160+00

SCALE AS SHOWN
DATE 12.16.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 25 OF 95 SHTS

PRELIMINARY

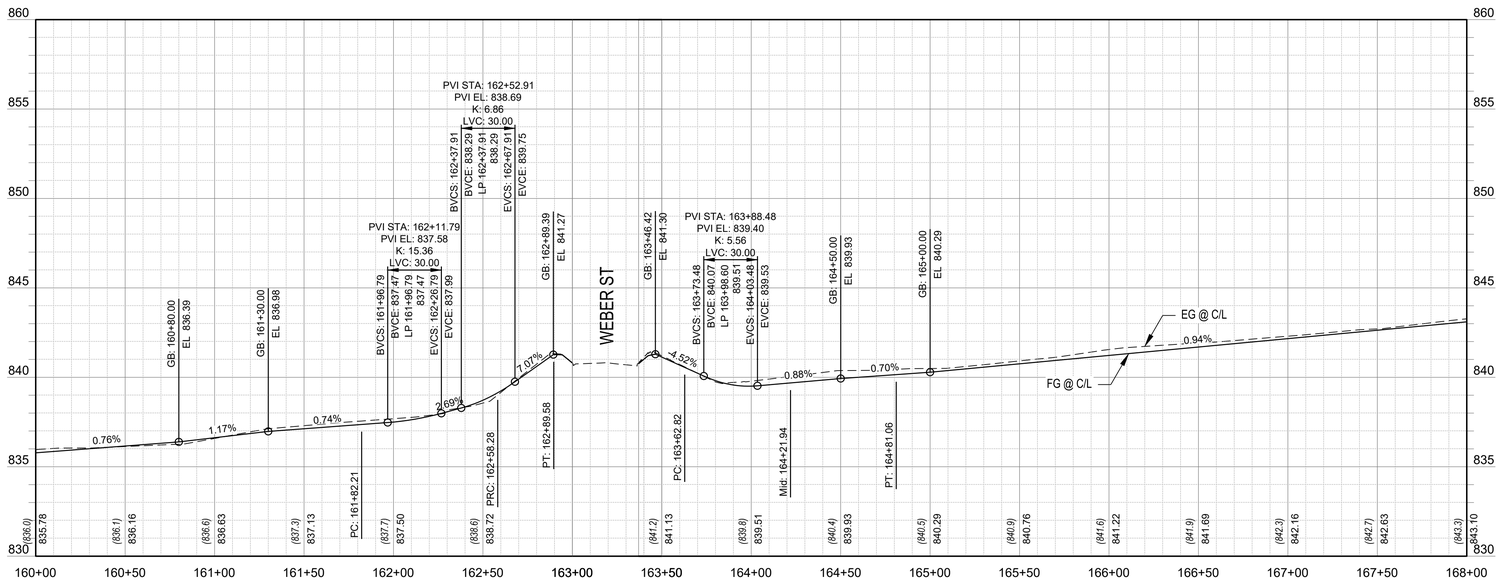
alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| | REVISIONS | DATE | INITIAL |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| △ | | | |

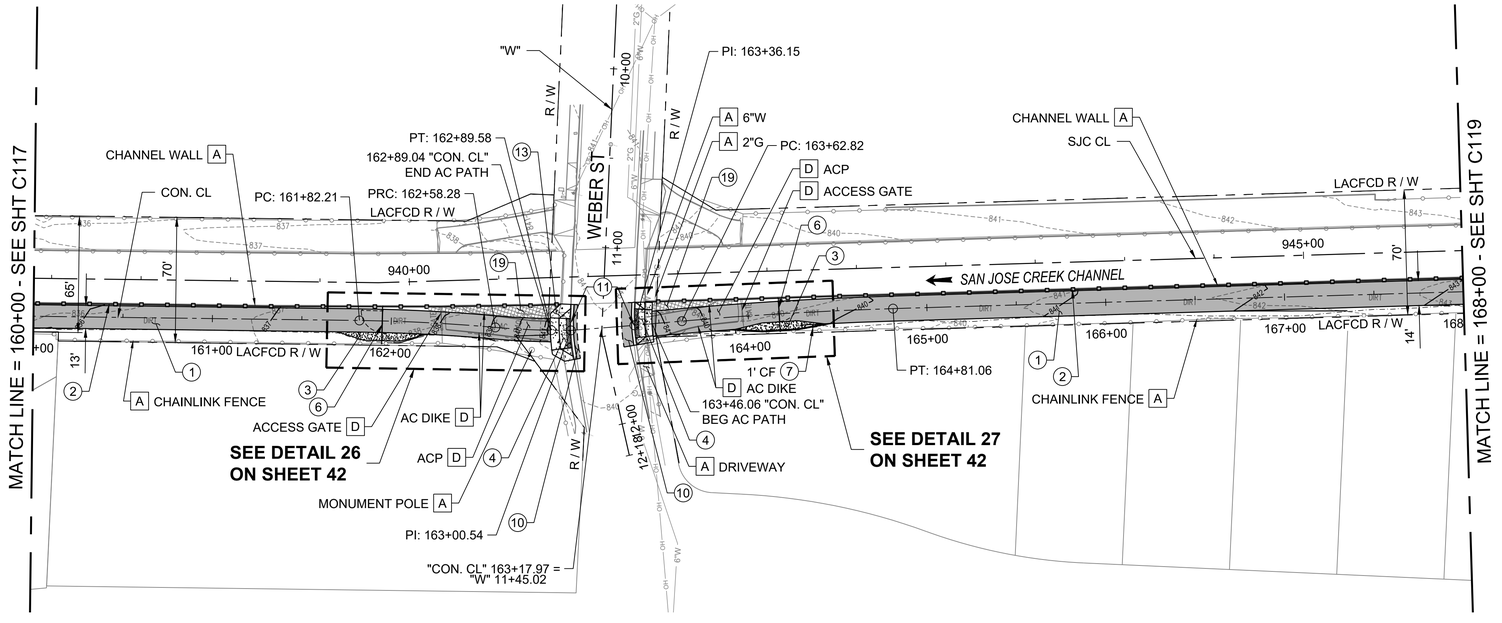
Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C117.dwg 12/18/2024 16:55

FA-2263 AY




## PROFILE




## PLAN

## CONSTRUCTION NOTES

1. CONSTRUCT 4" ACP, 2" CLASS C2-PG-64-10 OVER 2" CLASS B2-PG-64-10, OVER 6" CMB, SUBGRADE COMPACTION MIN. 90%
2. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 6' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.
3. CONSTRUCT 4" PCC SIDEWALK OVER NATIVE PER CITY OF POMONA STD. No. A-7-02.
4. REMOVE AND RECONSTRUCT MODIFIED DRIVEWAY APPROACH PER CITY OF POMONA STD. No. A-27-10, TYPE II. SEE SHEETS 29-44 FOR ADDITIONAL DETAILS.
6. INSTALL SERVICE VEHICLE AND PEDESTRIAN GATE PER SHEET 55, DETAIL 1.
7. CONSTRUCT VARIABLE HEIGHT PCC CURB PER CITY OF POMONA STD. No. A-3-64, HEIGHT PER PLAN.
10. CONSTRUCT FULL DEPTH AC PAVEMENT OVER BASE FOR SAWCUT PATCH AS REQUIRED TO JOIN EXISTING AC PAVEMENT PER SPPWC STD PLAN 133-4.
11. REMOVE AND RECONSTRUCT 6"-8" VARIABLE HEIGHT TYPE "B" PCC CURB AND GUTTER PER CITY OF POMONA STD. NO. A-3-64, HEIGHT PER PLAN
13. RECONSTRUCT 4" PCC SIDEWALK PER CITY OF POMONA STD. No. A-7-02.
19. INSTALL NONWALKABLE SURFACE.

## DISPOSITION NOTES

A PROTECT IN PLACE (AS NOTED)

D REMOVE (AS NOTED)

## GENERAL SHEET NOTES

1. FOR PATH ALIGNMENT AND INTERSECTING STREETS ALIGNMENTS LINE AND CURVE DATA SEE SHEETS 6 - 7.
2. FOR PROPOSED CROSSING IMPROVEMENTS AND TRAFFIC SIGNAL MODIFICATIONS, SEE SHEETS 73-90 FOR FURTHER INFORMATION.
3. ALL EXISTING FENCES, GATES, POSTS, CURBS, AC BERM, AC PAVEMENT, PCC PAVEMENT, DG PATHWAYS, ETC THAT ARE WITHIN THE TRAILS RIGHT OF WAY SHOULD BE REMOVED FOR COMPLETION OF WORK, UNLESS OTHERWISE NOTED AS PROTECT IN PLACE. PROTECT ALL EXISTING TREES UNLESS OTHERWISE NOTED.
4. HORIZONTAL CONTROL POINTS FOR PATHWAY IMPROVEMENTS ARE INCLUDED IN THE DETAILS ON SHEETS 29 - 44.
5. FENCE IMPROVEMENTS IDENTIFIED ON THE PLANS TO BE FIELD VERIFIED. EXACT MEASUREMENTS FOR FENCE REPLACEMENTS WHERE FENCING HAS BEEN DAMAGED, TO BE APPROVED BY THE ENGINEER.
6. CONTRACTOR TO TREE TRIM ALONG THE CORRIDOR FOR ANY TREE VERTICAL OR HORIZONTAL OBSTRUCTION WITHIN THE PATH PER DETAIL 7 ON SHEET 56.

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

HORIZ: 1" = 40' (40' 20' 0 40' 80')

VERT: 1" = 4' (4' 0 4' 8')

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C118

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

PLAN & PROFILE
STA 160+00 TO STA 168+00

SCALE AS SHOWN

DATE 12.18.2024

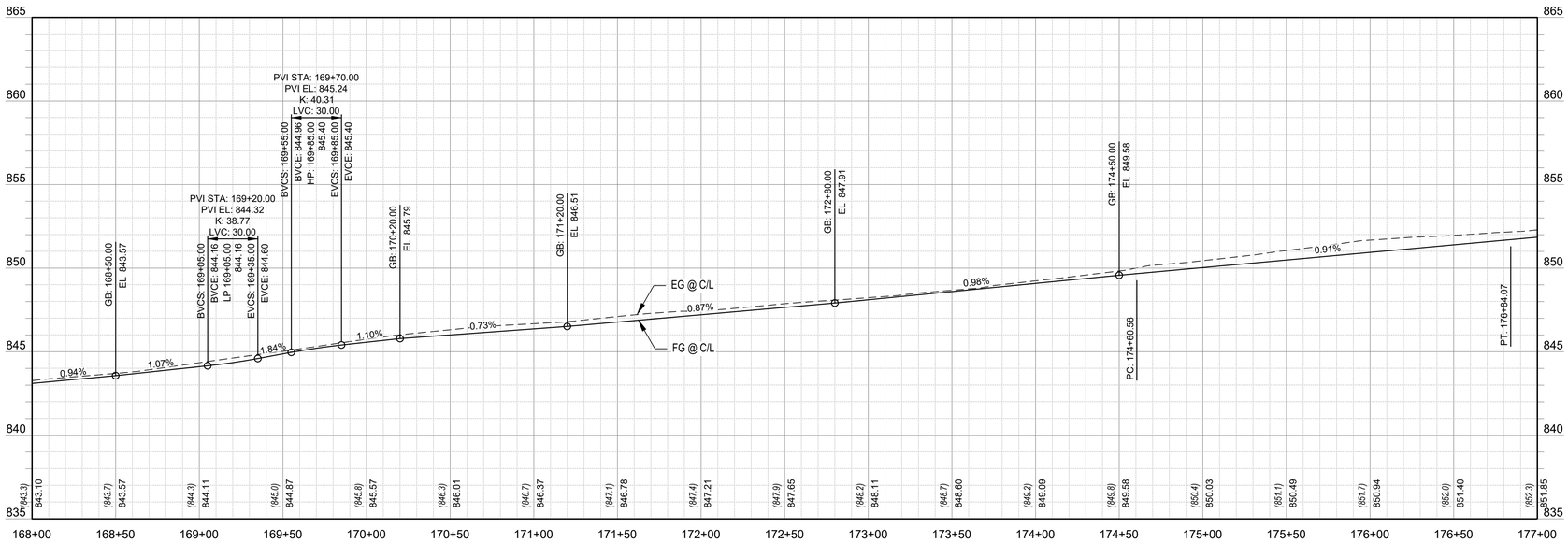
DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 26 OF 95 SHTS

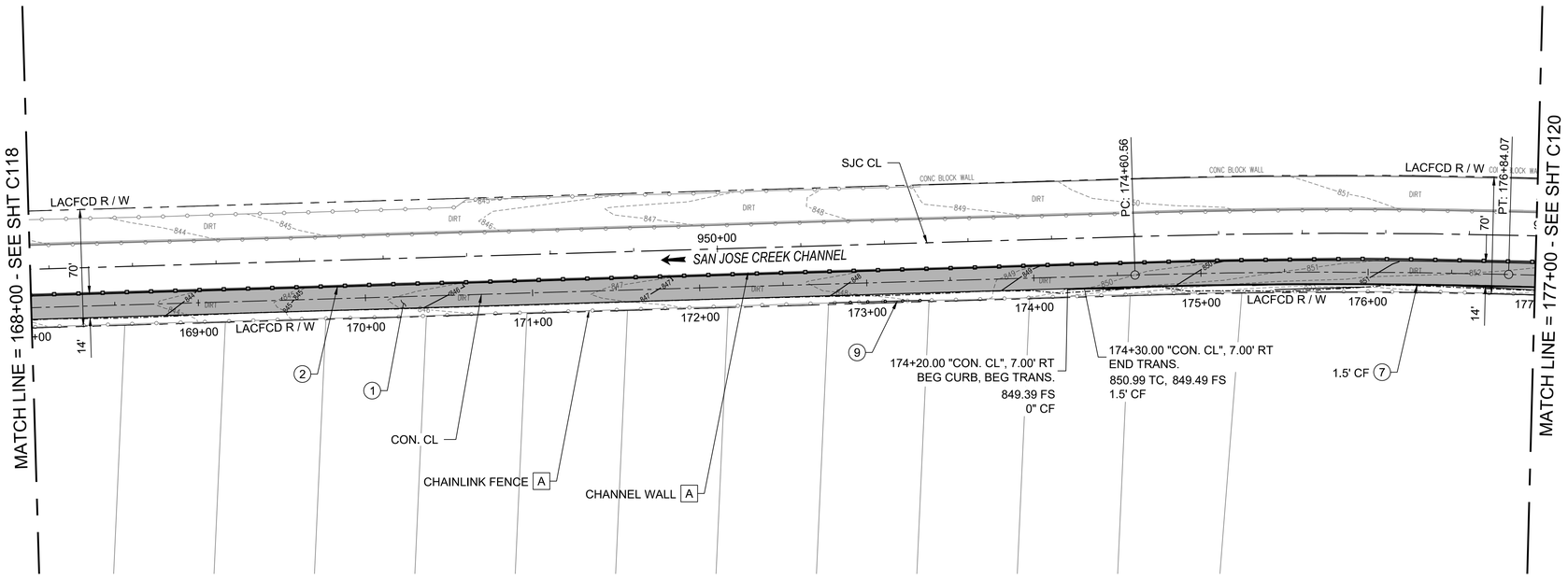
Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

FA-2263 AZ

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C118.dwg 12/18/2024 16:55




PROFILE




PLAN

## CONSTRUCTION NOTES

1. CONSTRUCT 4" ACP, 2" CLASS C2-PG-64-10 OVER 2" CLASS B2-PG-64-10, OVER 6" CMB, SUBGRADE COMPACTION MIN. 90%
2. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 6' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.
7. CONSTRUCT VARIABLE HEIGHT PCC CURB PER CITY OF POMONA STD. No. A-3-64, HEIGHT PER PLAN.
9. REMOVE EXISTING CHAINLINK FENCE AND CONSTRUCT NEW 6' CHAINLINK FENCE PER SPPWC STD PLAN 600-4.

## DISPOSITION NOTES

A PROTECT IN PLACE (AS NOTED)

## GENERAL SHEET NOTES

1. FOR PATH ALIGNMENT AND INTERSECTING STREETS ALIGNMENTS LINE AND CURVE DATA SEE SHEETS 6 - 7.
2. FOR PROPOSED CROSSING IMPROVEMENTS AND TRAFFIC SIGNAL MODIFICATIONS, SEE SHEETS 73-90 FOR FURTHER INFORMATION.
3. ALL EXISTING FENCES, GATES, POSTS, CURBS, AC BERM, AC PAVEMENT, PCC PAVEMENT, DG PATHWAYS, ETC THAT ARE WITHIN THE TRAILS RIGHT OF WAY SHOULD BE REMOVED FOR COMPLETION OF WORK, UNLESS OTHERWISE NOTED AS PROTECT IN PLACE. PROTECT ALL EXISTING TREES UNLESS OTHERWISE NOTED.
4. HORIZONTAL CONTROL POINTS FOR PATHWAY IMPROVEMENTS ARE INCLUDED IN THE DETAILS ON SHEETS 29 - 44.
5. FENCE IMPROVEMENTS IDENTIFIED ON THE PLANS TO BE FIELD VERIFIED. EXACT MEASUREMENTS FOR FENCE REPLACEMENTS WHERE FENCING HAS BEEN DAMAGED, TO BE APPROVED BY THE ENGINEER.
6. CONTRACTOR TO TREE TRIM ALONG THE CORRIDOR FOR ANY TREE VERTICAL OR HORIZONTAL OBSTRUCTION WITHIN THE PATH PER DETAIL 7 ON SHEET 56.

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

40' 20' 0 40' 80' HORIZ: 1" = 40'
4' 0 4' 8' VERT: 1" = 4'

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C119

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

PLAN & PROFILE
STA 168+00 TO STA 177+00

SCALE AS SHOWN
DATE 12.16.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 27 OF 95 SHTS

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

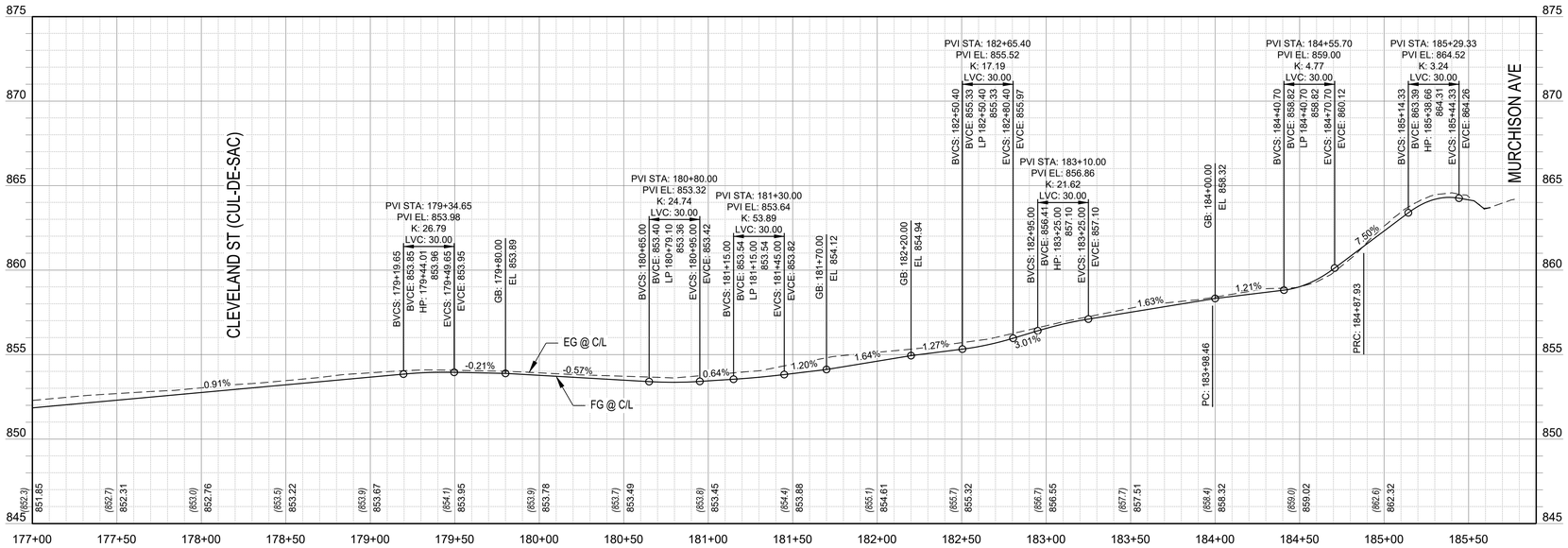
| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

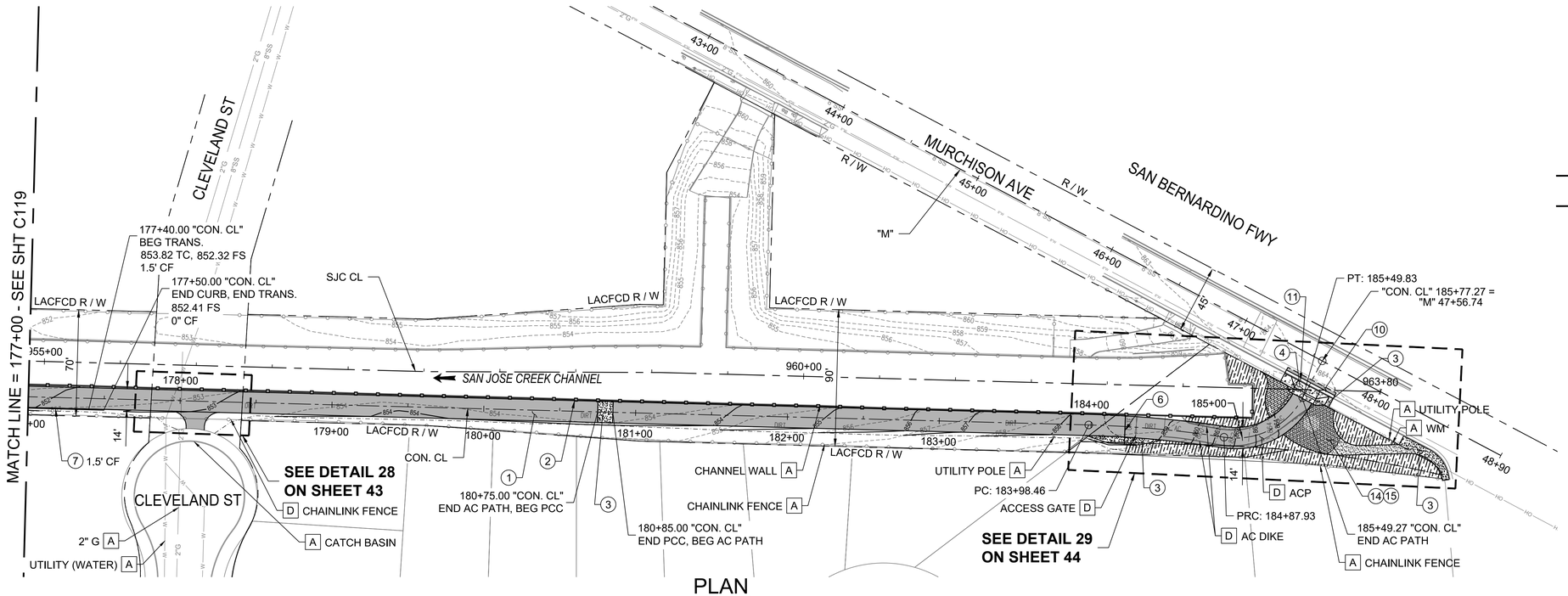
N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C119.dwg 12/18/2024 16:56

FA-2263 BA

## PROFILE




## PLAN




## CONSTRUCTION NOTES

1. CONSTRUCT 4" ACP, 2" CLASS C2-PG-64-10 OVER 2" CLASS B2-PG-64-10, OVER 6" CMB, SUBGRADE COMPACTION MIN. 90%
2. REMOVE EXISTING CHAINLINK FENCE, SAWCUT EXISTING 4' POST AT BASE, CORE DRILL 6' HIGH POST ADJACENT TO EXISTING POST AND INSTALL WELDED WIRE MESH FENCE ON NEW POSTS.
3. CONSTRUCT 4" PCC SIDEWALK OVER NATIVE PER CITY OF POMONA STD. No. A-7-02.
4. REMOVE AND RECONSTRUCT MODIFIED DRIVEWAY APPROACH PER CITY OF POMONA STD. No. A-27-10, TYPE II. SEE SHEETS 29-44 FOR ADDITIONAL DETAILS.
6. INSTALL SERVICE VEHICLE AND PEDESTRIAN GATE PER SHEET 55, DETAIL 1.
7. CONSTRUCT VARIABLE HEIGHT PCC CURB PER CITY OF POMONA STD. No. A-3-64, HEIGHT PER PLAN.
10. CONSTRUCT FULL DEPTH AC PAVEMENT OVER BASE FOR SAWCUT PATCH AS REQUIRED TO JOIN EXISTING AC PAVEMENT PER SPPWC STD PLAN 133-4.
11. REMOVE AND RECONSTRUCT 6"-8" VARIABLE HEIGHT TYPE "B" PCC CURB AND GUTTER PER CITY OF POMONA STD. NO. A-3-64, HEIGHT PER PLAN
14. INSTALL PLANTING AND TRAIL AMENITIES PER SHEETS 66-72.
15. INSTALL WATER SERVICE AND WATER METER FOR IRRIGATION PURPOSES PER SHEETS 60-65.

## DISPOSITION NOTES

- A PROTECT IN PLACE (AS NOTED)
- D REMOVE (AS NOTED)

## GENERAL SHEET NOTES

1. FOR PATH ALIGNMENT AND INTERSECTING STREETS ALIGNMENTS LINE AND CURVE DATA SEE SHEETS 6 - 7.
2. FOR PROPOSED CROSSING IMPROVEMENTS AND TRAFFIC SIGNAL MODIFICATIONS, SEE SHEETS 73-90 FOR FURTHER INFORMATION.
3. ALL EXISTING FENCES, GATES, POSTS, CURBS, AC BERM, AC PAVEMENT, PCC PAVEMENT, DG PATHWAYS, ETC THAT ARE WITHIN THE TRAILS RIGHT OF WAY SHOULD BE REMOVED FOR COMPLETION OF WORK, UNLESS OTHERWISE NOTED AS PROTECT IN PLACE. PROTECT ALL EXISTING TREES UNLESS OTHERWISE NOTED.
4. HORIZONTAL CONTROL POINTS FOR PATHWAY IMPROVEMENTS ARE INCLUDED IN THE DETAILS ON SHEETS 29 - 44.
5. FENCE IMPROVEMENTS IDENTIFIED ON THE PLANS TO BE FIELD VERIFIED. EXACT MEASUREMENTS FOR FENCE REPLACEMENTS WHERE FENCING HAS BEEN DAMAGED, TO BE APPROVED BY THE ENGINEER.
6. CONTRACTOR TO TREE TRIM ALONG THE CORRIDOR FOR ANY TREE VERTICAL OR HORIZONTAL OBSTRUCTION WITHIN THE PATH PER DETAIL 7 ON SHEET 56.

40' 20' 0 40' 80' HORIZ: 1" = 40'

4' 0 4' 8' VERT: 1" = 4'

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

PLAN & PROFILE
STA 177+00 TO END

C120

SCALE AS SHOWN

DATE 12.18.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 28 OF 95 SHTS

PRELIMINARY

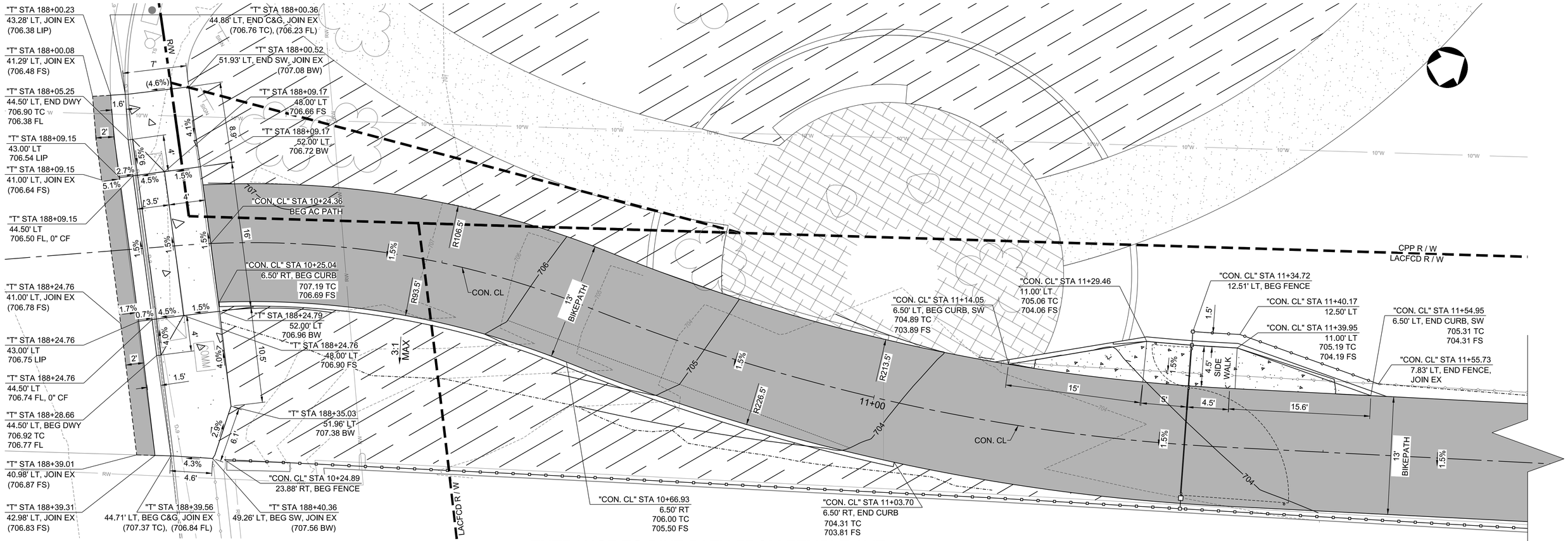
alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| | REVISIONS | DATE | INITIAL |
|---|---|---|---|
| △ | | | |

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

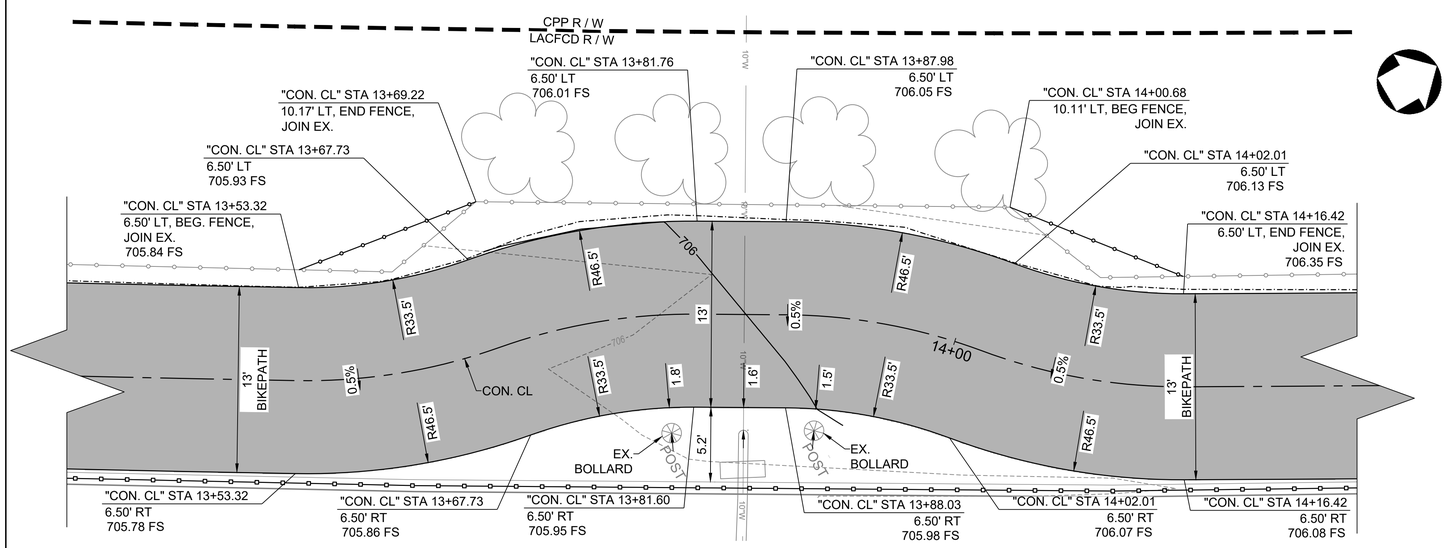
N:\Shared\PROJECTS\2022\100-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C120.dwg 12/18/2024 16:57

FA-2263 BB




1 ENTRANCE TO BIKE PATH FROM TEMPLE AVE

SCALE: 1" = 5'




2 BIKE PATH NEAR UTILITY NEAR STA 13+85

SCALE: 1" = 5'

5 0 5 10

SCALE PLAN SCALE FEET

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C200

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

DETAIL SHEETS

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

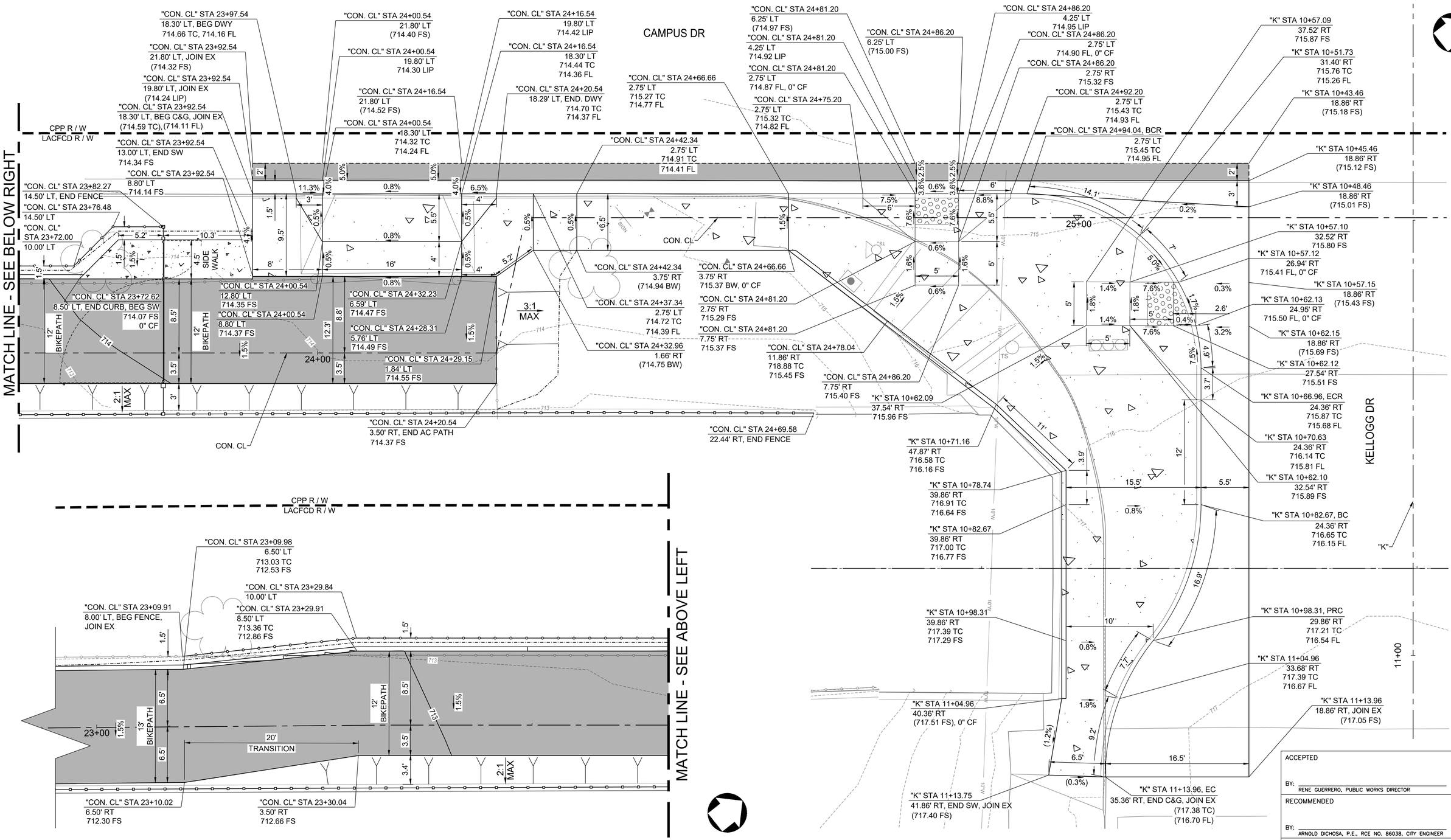
SCALE AS SHOWN
DATE 12.5.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 29 OF 95 SHTS

N:\Shared\PROJECTS\2022\005-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C200.dwg 12/18/2024 16:23

FA-2263 BC




## 3 KELLOGG DRIVE AND CAMPUS DRIVE SW CORNER

SCALE: 1" = 5'

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C201

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

DETAIL SHEETS

Under Ground Service Alert of Southern California
Call: TOLL FREE
1-800
227-2600
TWO WORKING DAYS BEFORE YOU DIG

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

SCALE AS SHOWN

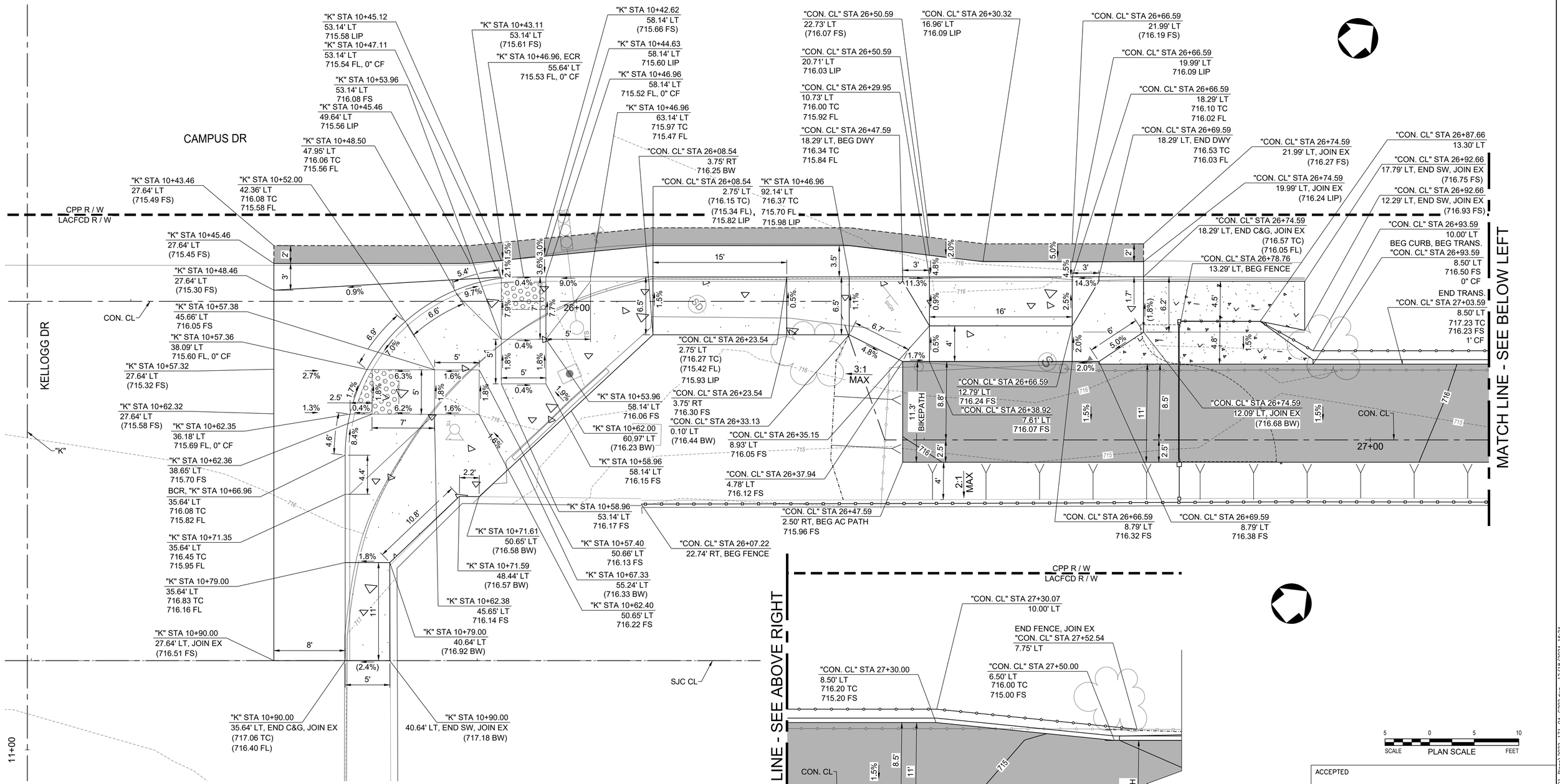
DATE 12.18.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 30 OF 95 SHTS

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C201.dwg 12/18/2024 16:23

FA-2263 BD




4 KELLOGG DRIVE AND CAMPUS DRIVE SE CORNER

SCALE: 1" = 5'

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C202

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

DETAIL SHEETS

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

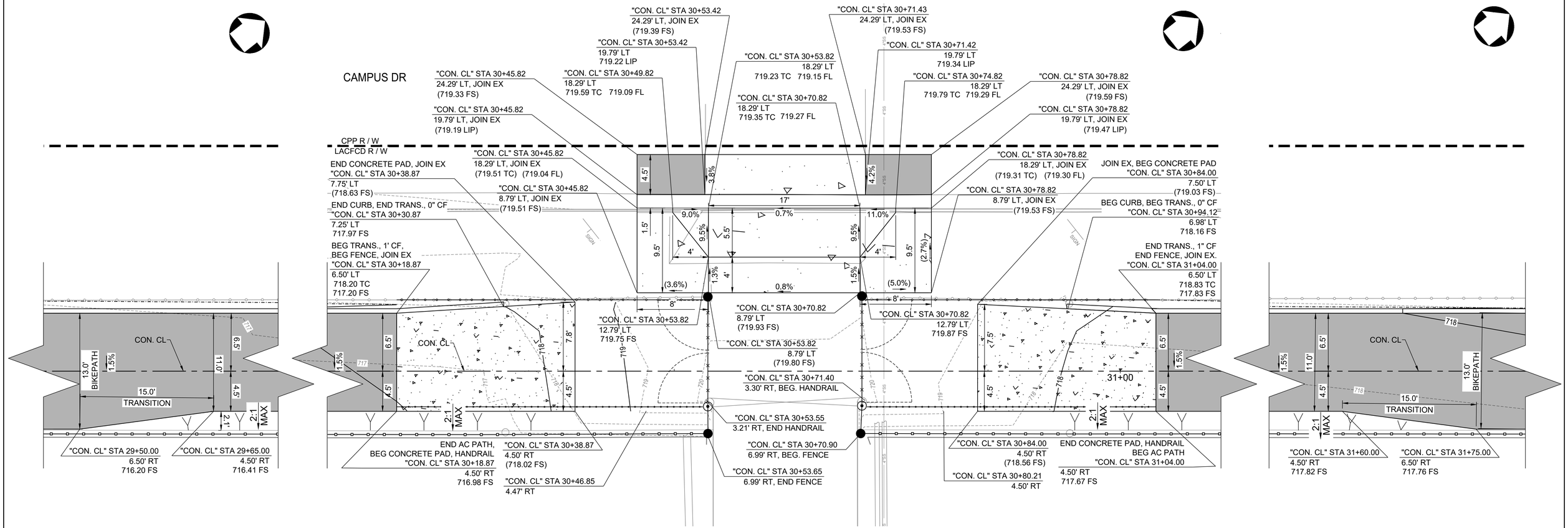
SCALE AS SHOWN
DATE 12.18.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 31 OF 95 SHTS

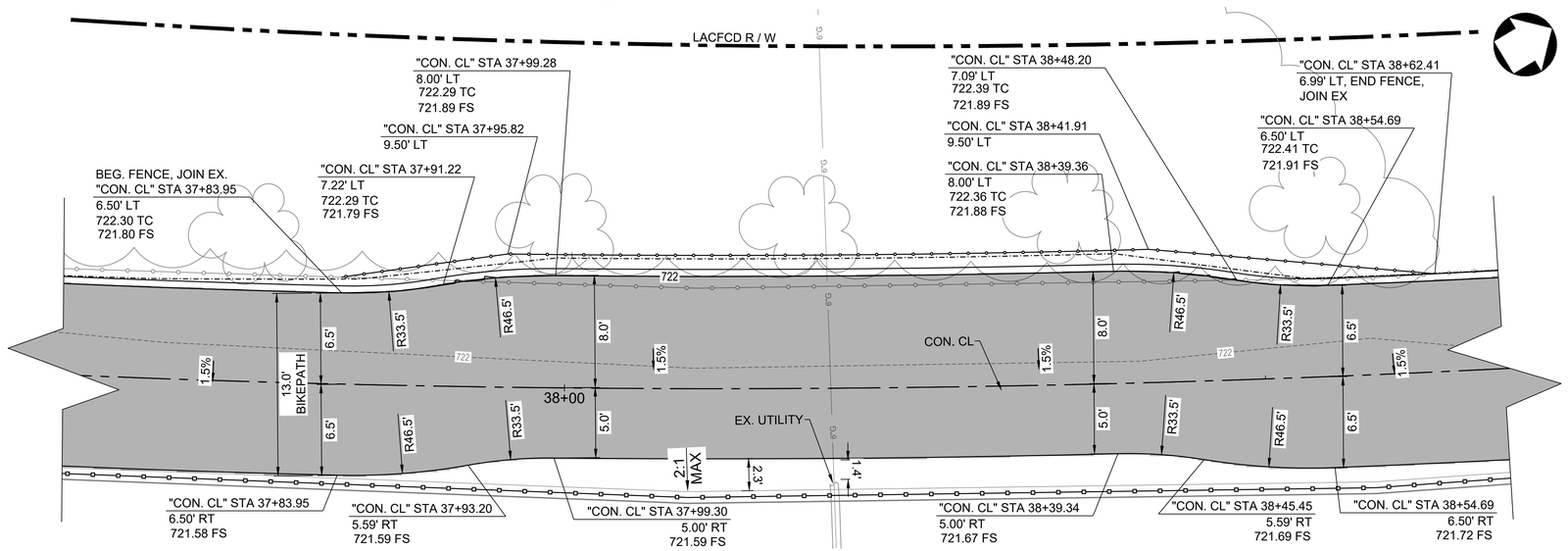
N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C202.dwg 12/18/2024 16:24

FA-2263 BE




## 5 ENTRANCE TO BIKE PATH FROM MAINTENANCE BRIDGE NEAR STA 30+60

SCALE: 1" = 5'




## 6 BIKE PATH NEAR UTILITY NEAR STA 38+25

SCALE: 1" = 5'

5 0 5 10
SCALE PLAN SCALE FEET

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

DETAIL SHEETS

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C203

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

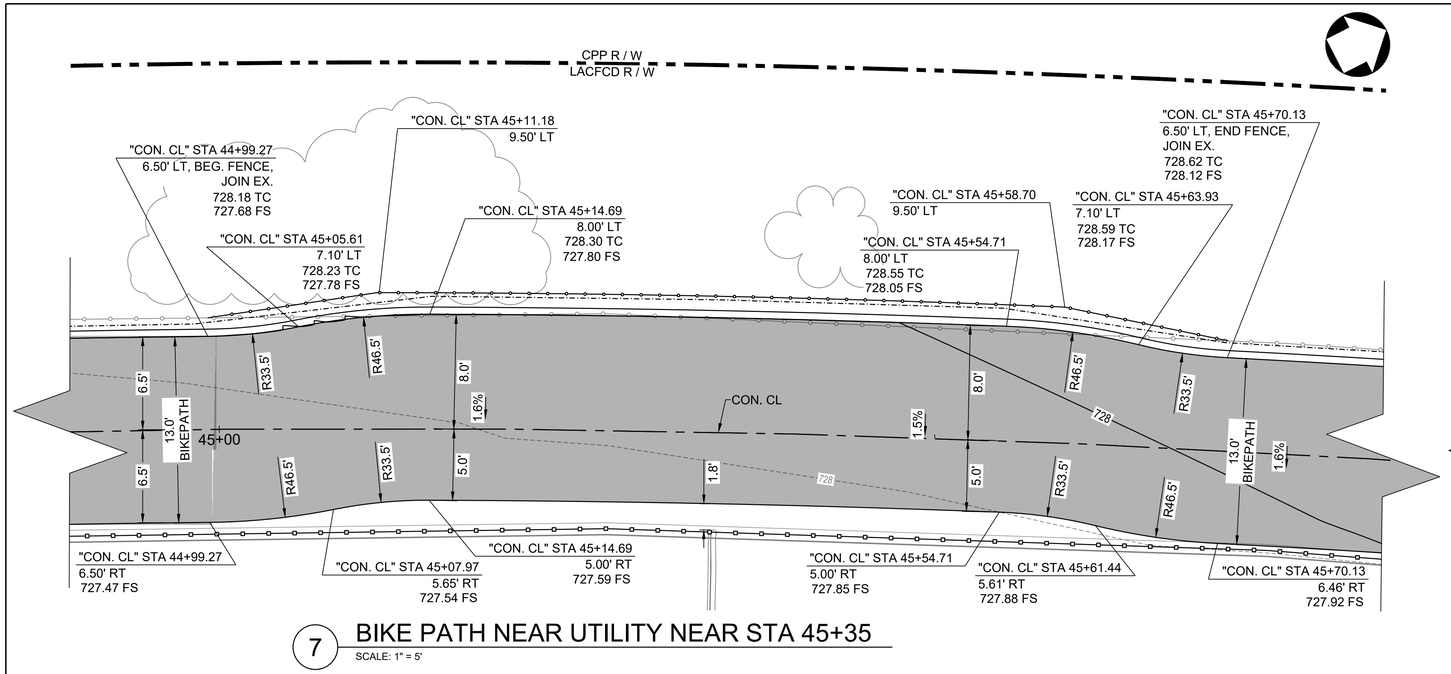
SCALE AS SHOWN
DATE 12.9.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 32 OF 95 SHTS

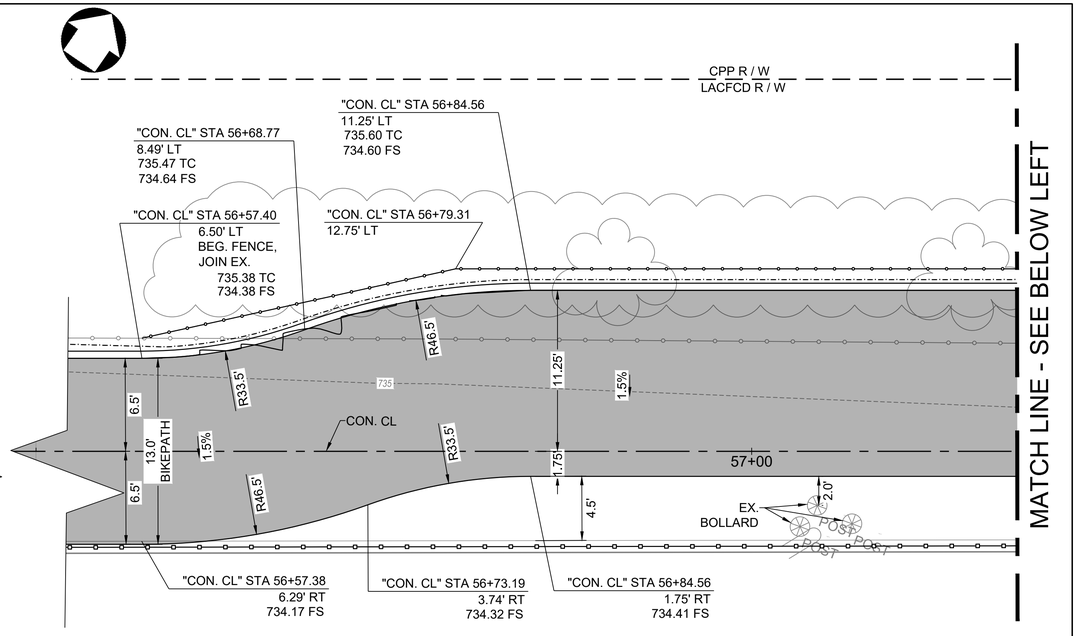
N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C203.dwg 12/18/2024 16:24

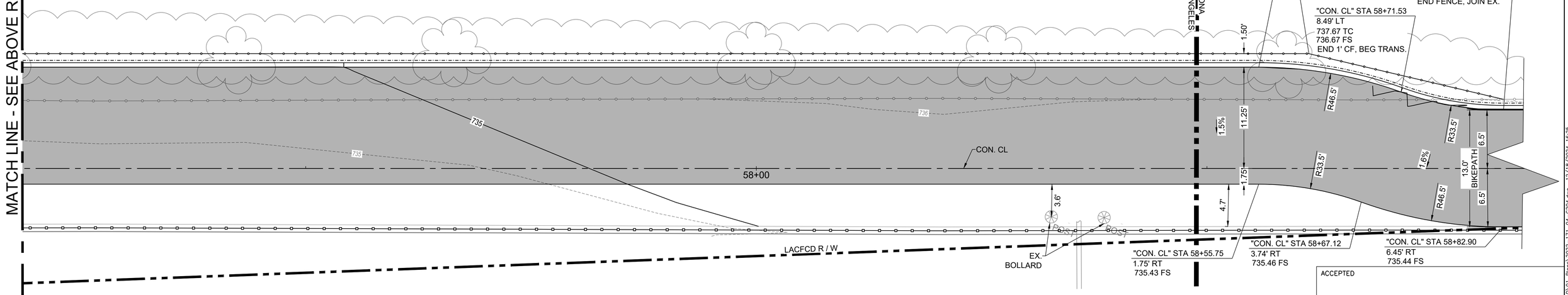
FA-2263 BF




7 BIKE PATH NEAR UTILITY NEAR STA 45+35

SCALE: 1" = 5'




8 BIKE PATH NEAR UTILITIES NEAR STA 57+50

SCALE: 1" = 5'

5 0 5 10
SCALE PLAN SCALE FEET

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

DETAIL SHEETS

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C204

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

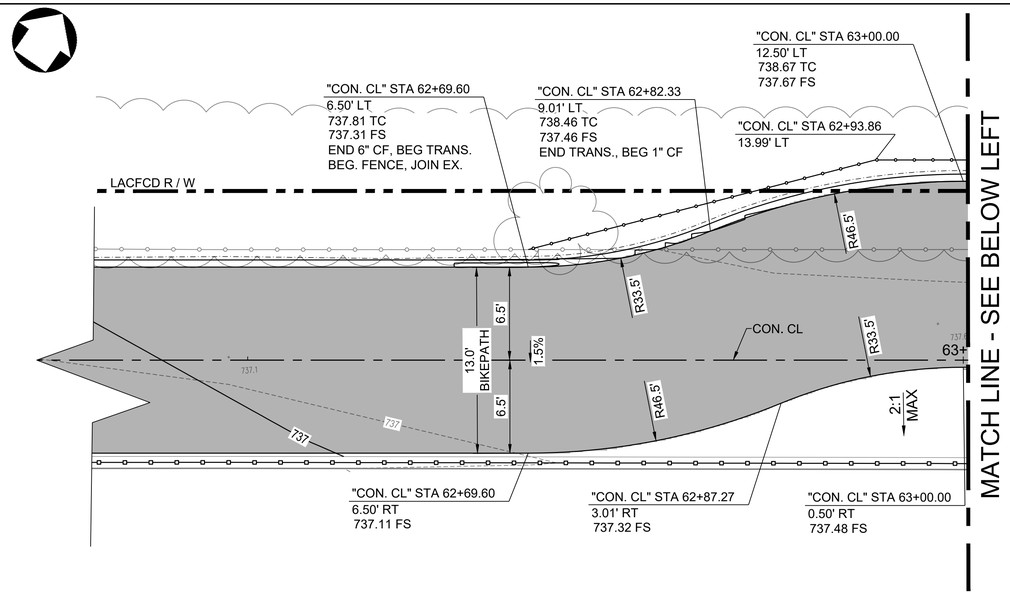
SCALE AS SHOWN
DATE 12.9.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 33 OF 95 SHTS

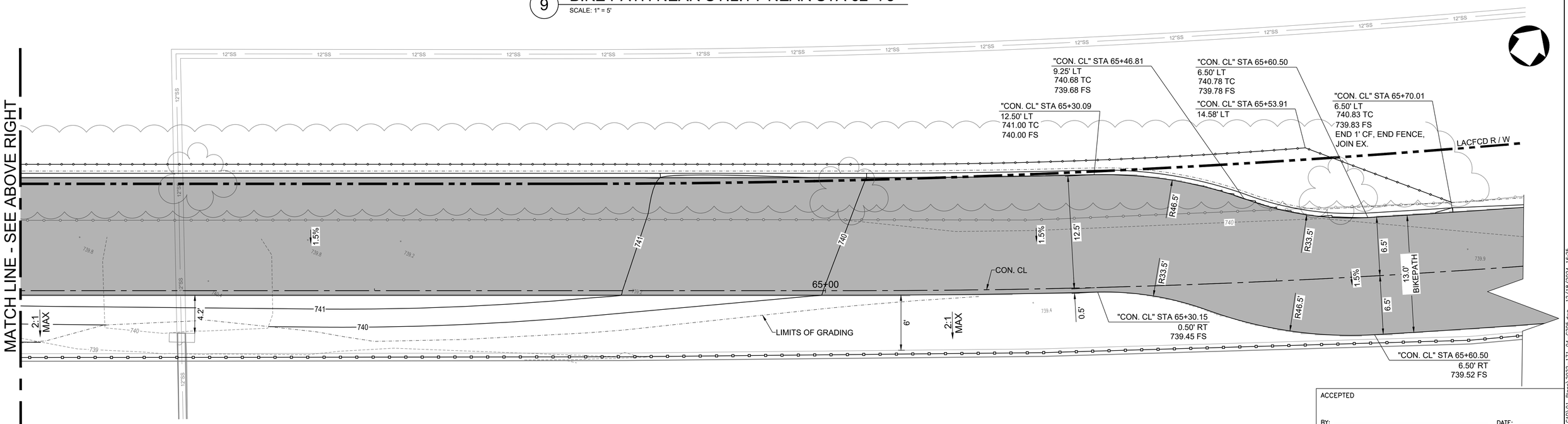
FA-2263 BG

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C204.dwg 12/18/2024 16:25




9 BIKE PATH NEAR UTILITY NEAR STA 62+75

SCALE: 1" = 5'




10 BIKE PATH NEAR UTILITY NEAR STA 64+00

SCALE: 1" = 5'

5 0 5 10
SCALE PLAN SCALE FEET

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

DETAIL SHEETS

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C205

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| | REVISIONS | DATE | INITIAL |
|---|---|---|---|
| △ | | | |

SCALE AS SHOWN

DATE 12.5.2024

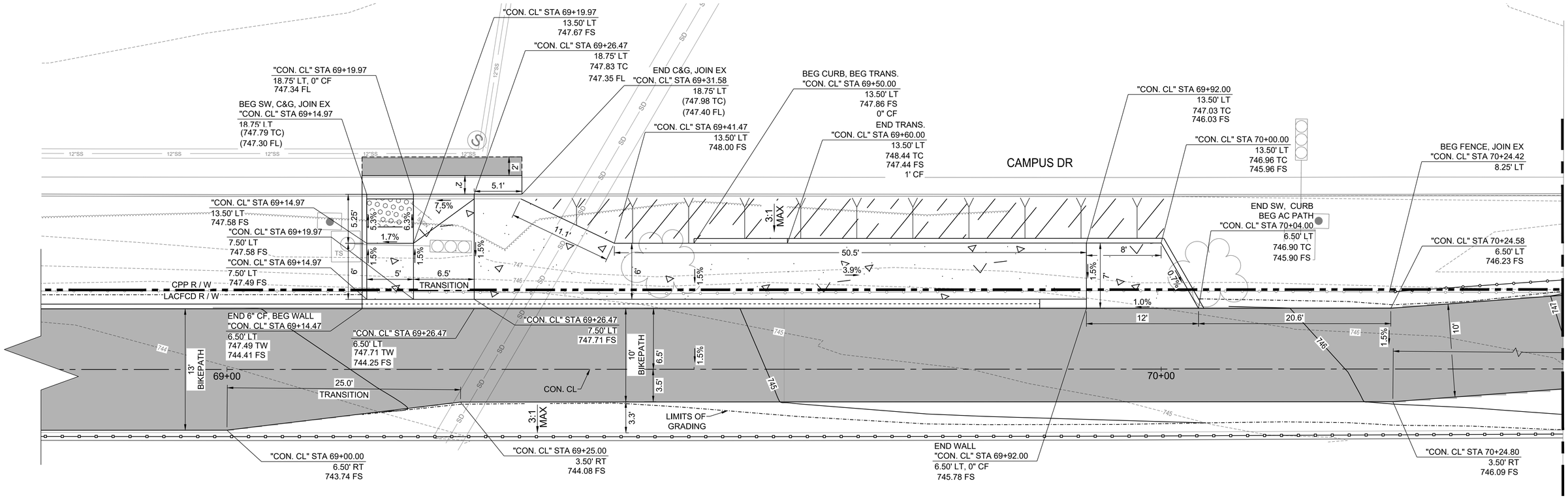
DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

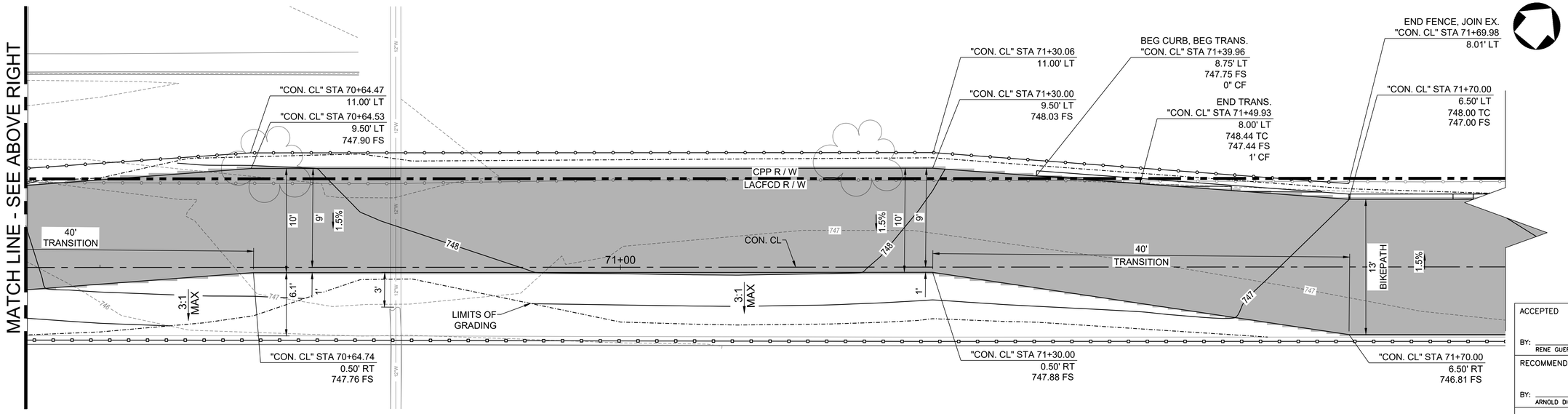
SHT. 34 OF 95 SHTS

CALL BEFORE YOU DIG
Under Ground Service Alert of Southern California
Call: TOLL FREE
1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C205.dwg 12/18/2024 16:25

FA-2263 BH




11 CORPORATE CENTER DRIVE AND CAMPUS DRIVE CONNECTION

SCALE: 1" = 5'

SCALE 5 0 5 10 FEET — PLAN SCALE

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

DETAIL SHEETS

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C206

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

SCALE AS SHOWN

DATE 12.5.2024

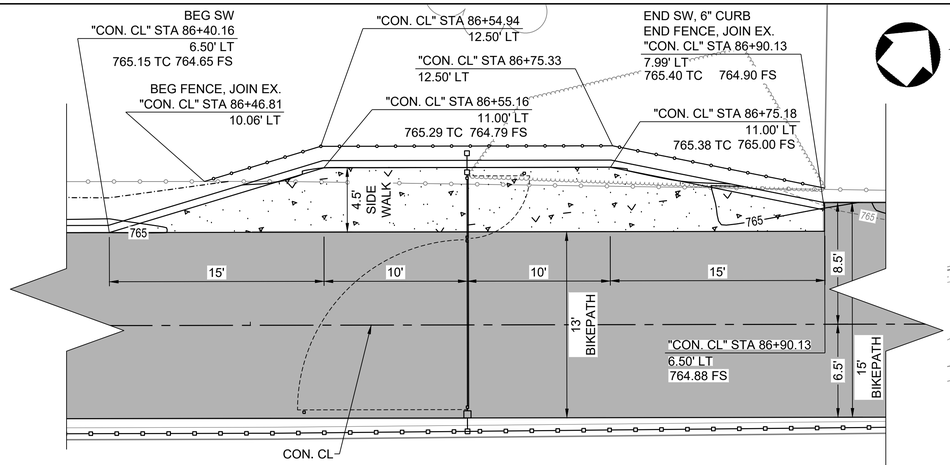
DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 35 OF 95 SHTS

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

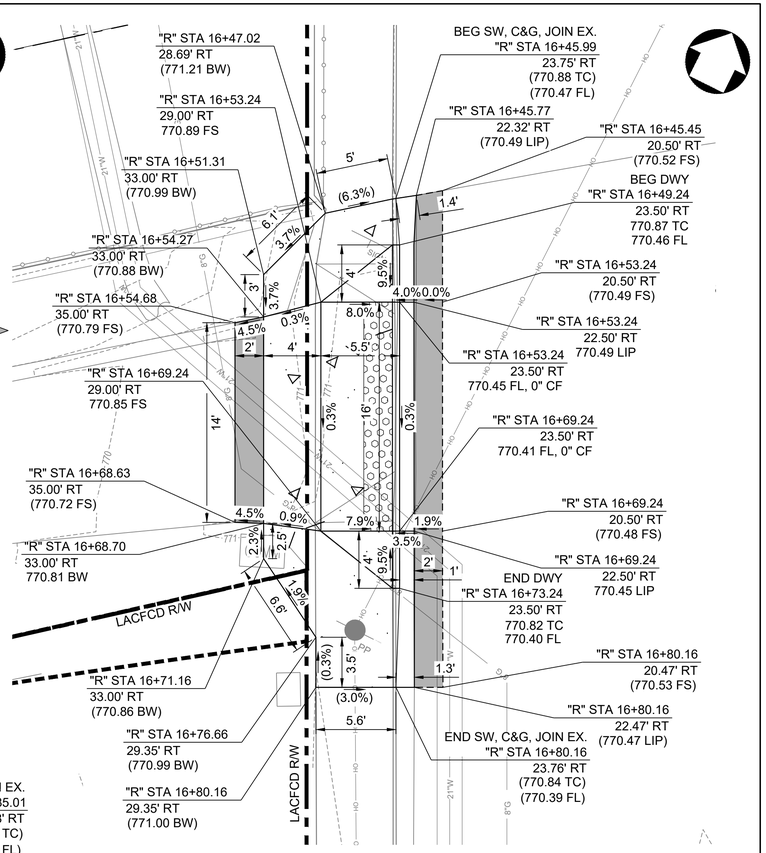
N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C206.dwg 12/18/2024 16:26

FA-2263 BI



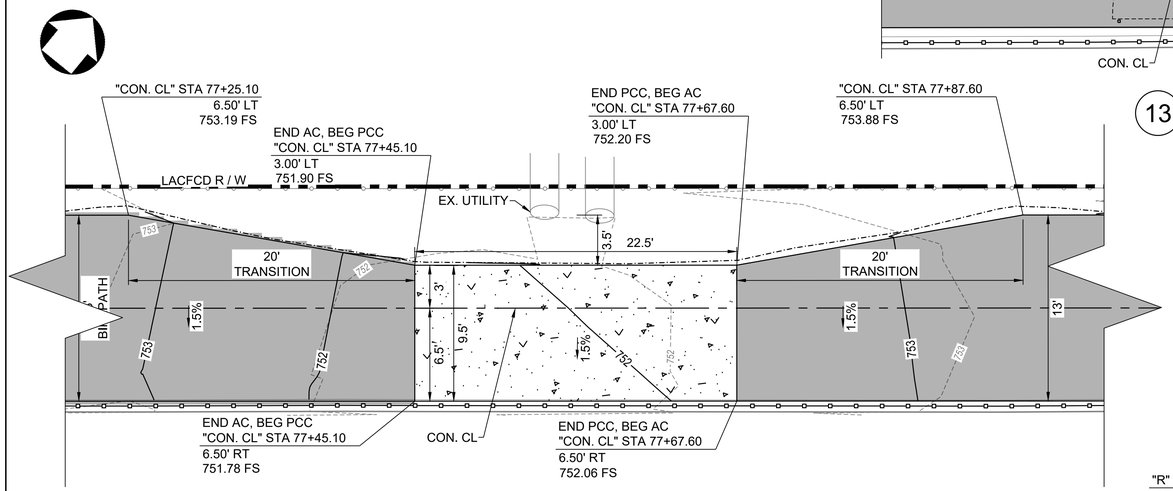

13 ACCESS AREA DETAIL - STA 86+65 +/-

SCALE: 1" = 5'



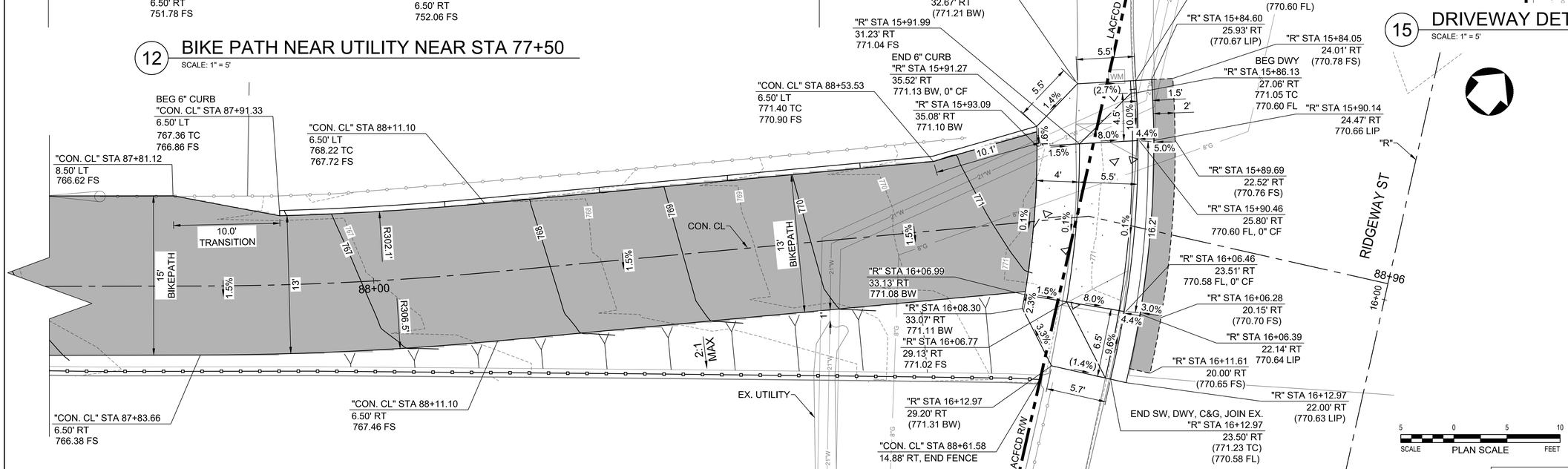

15 DRIVEWAY DETAIL - RIDGEWAY STREET (SW)

SCALE: 1" = 5'




12 BIKE PATH NEAR UTILITY NEAR STA 77+50

SCALE: 1" = 5'




14 DRIVEWAY DETAIL - RIDGEWAY STREET (NW)

SCALE: 1" = 5'

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C207

5 0 5 10
SCALE PLAN SCALE FEET

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

DETAIL SHEETS

SCALE AS SHOWN
DATE 12.18.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 36 OF 95 SHTS

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

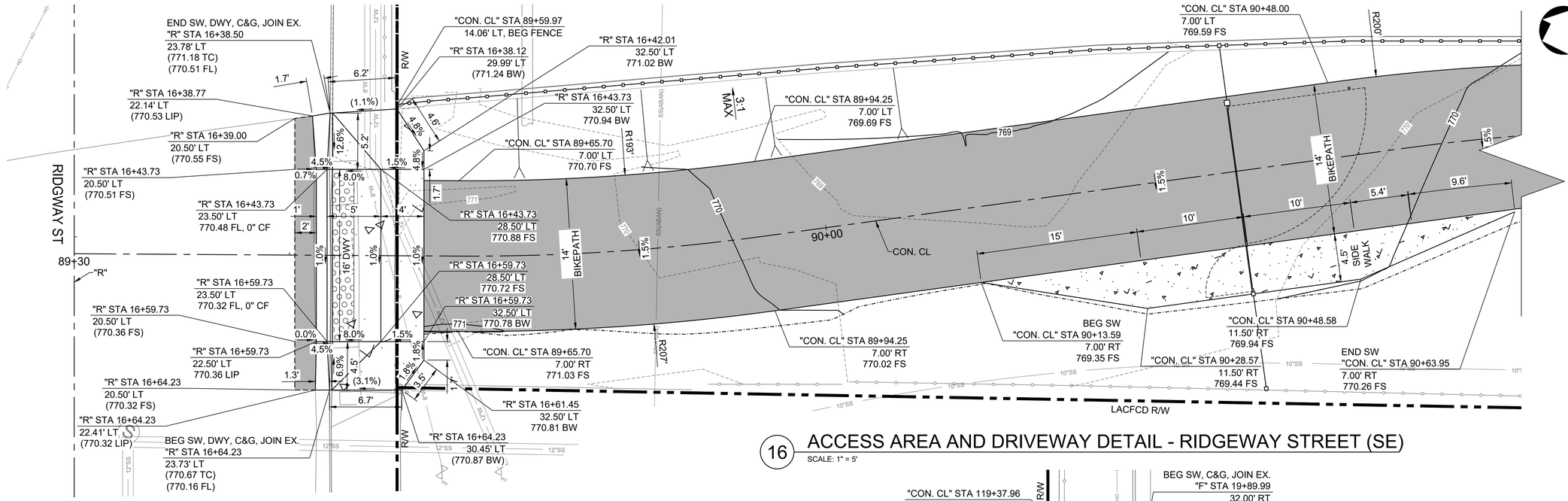
PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

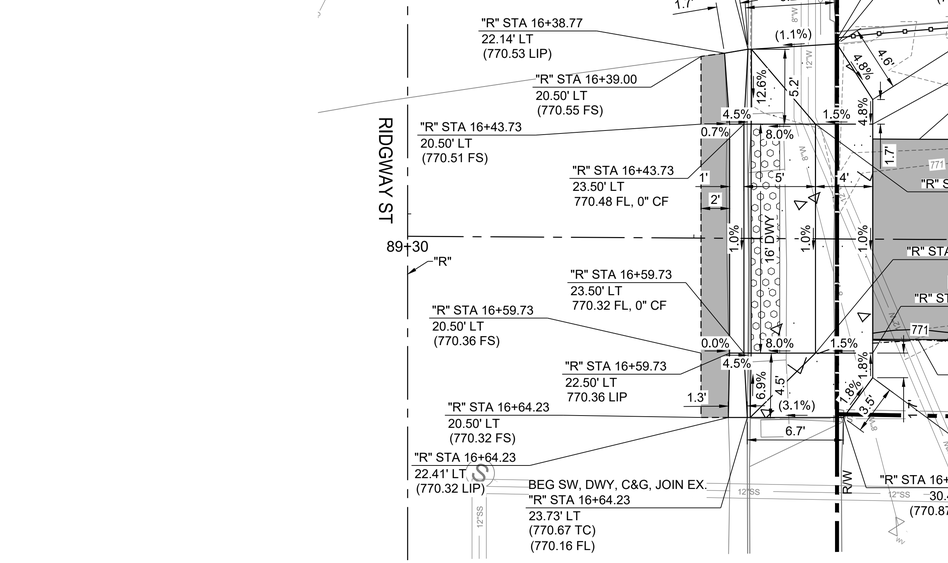
N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C207.dwg 12/18/2024 16:27

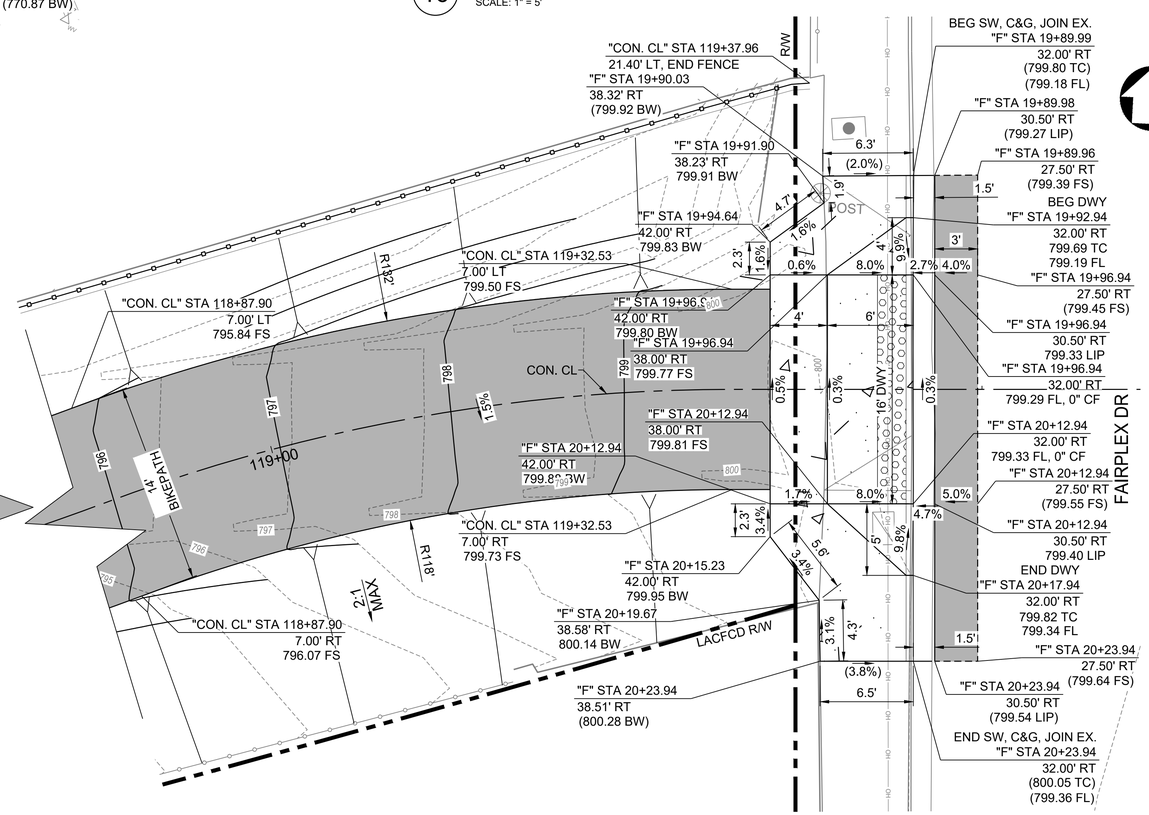
FA-2263 BJ




16 ACCESS AREA AND DRIVEWAY DETAIL - RIDGWAY STREET (SE)

SCALE: 1" = 5'




17 ACCESS AREA AND DRIVEWAY DETAIL - FAIRPLEX DRIVE (SW)

SCALE: 1" = 5'

5 0 5 10
SCALE PLAN SCALE FEET

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

DETAIL SHEETS

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C208

SCALE AS SHOWN

DATE 12.18.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 37 OF 95 SHTS

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

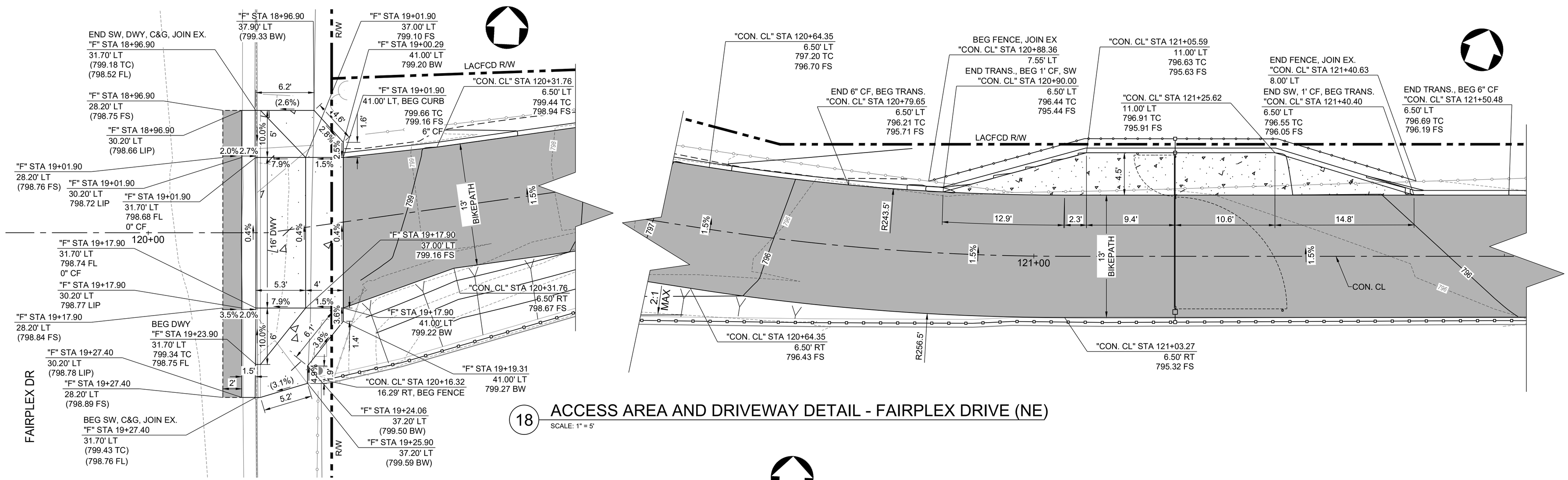
PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

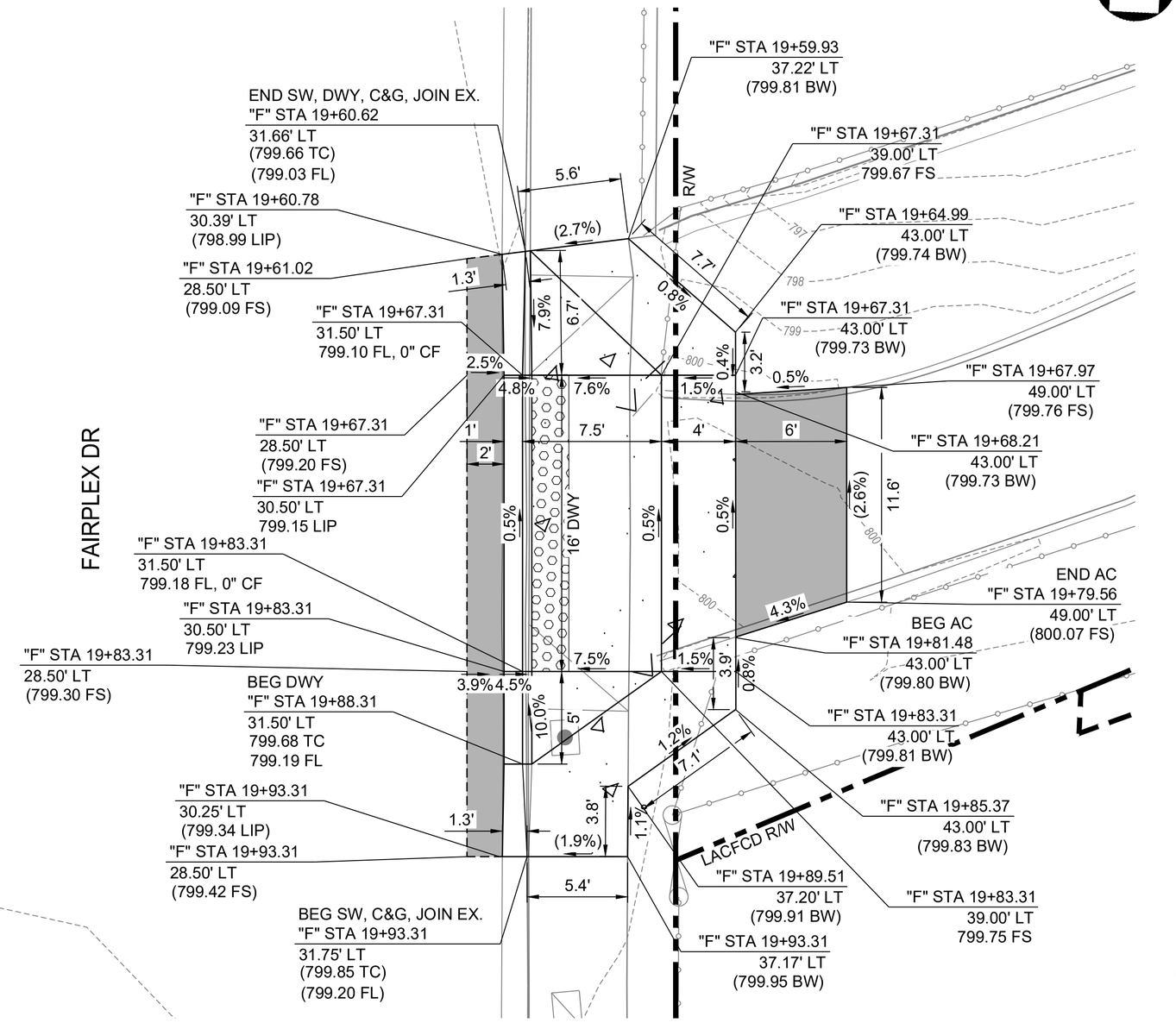
N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C208.dwg 12/18/2024 16:27

FA-2263 BK




18 ACCESS AREA AND DRIVEWAY DETAIL - FAIRPLEX DRIVE (NE)

SCALE: 1" = 5'




19 DRIVEWAY DETAIL - FAIRPLEX DRIVE (SE)

SCALE: 1" = 5'

5 0 5 10
SCALE PLAN SCALE FEET

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

C209

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

DETAIL SHEETS

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

SCALE AS SHOWN
DATE 12.5.2024

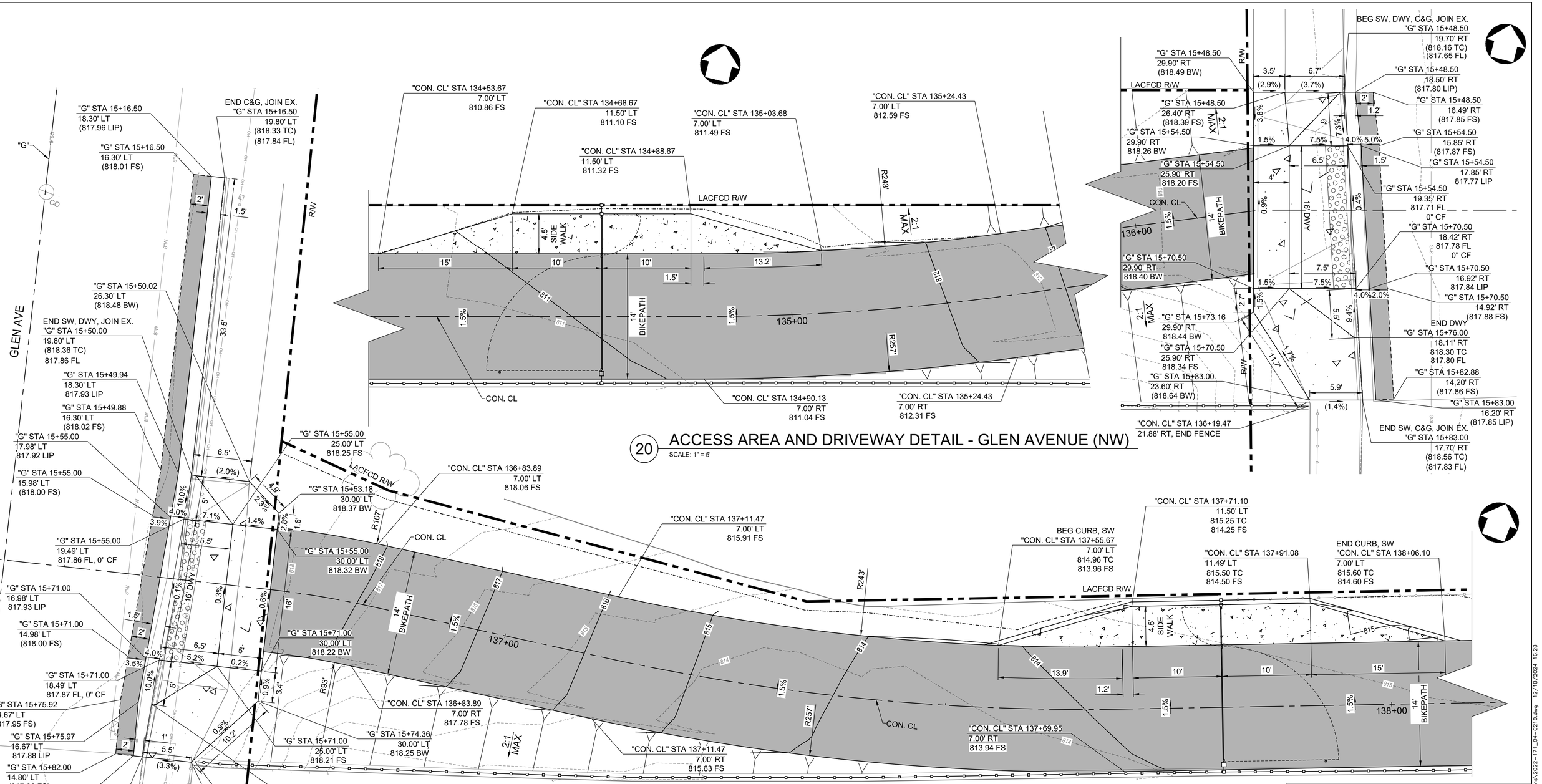
DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 38 OF 95 SHTS

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C209.dwg 12/18/2024 16:28

FA-2263 BL




20 ACCESS AREA AND DRIVEWAY DETAIL - GLEN AVENUE (NW)
SCALE: 1" = 5'

21 ACCESS AREA AND DRIVEWAY DETAIL - GLEN AVENUE (NE)
SCALE: 1" = 5'

5 0 5 10
SCALE PLAN SCALE FEET

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C210

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

DETAIL SHEETS

SCALE AS SHOWN
DATE 12.18.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 39 OF 95 SHTS

PRELIMINARY

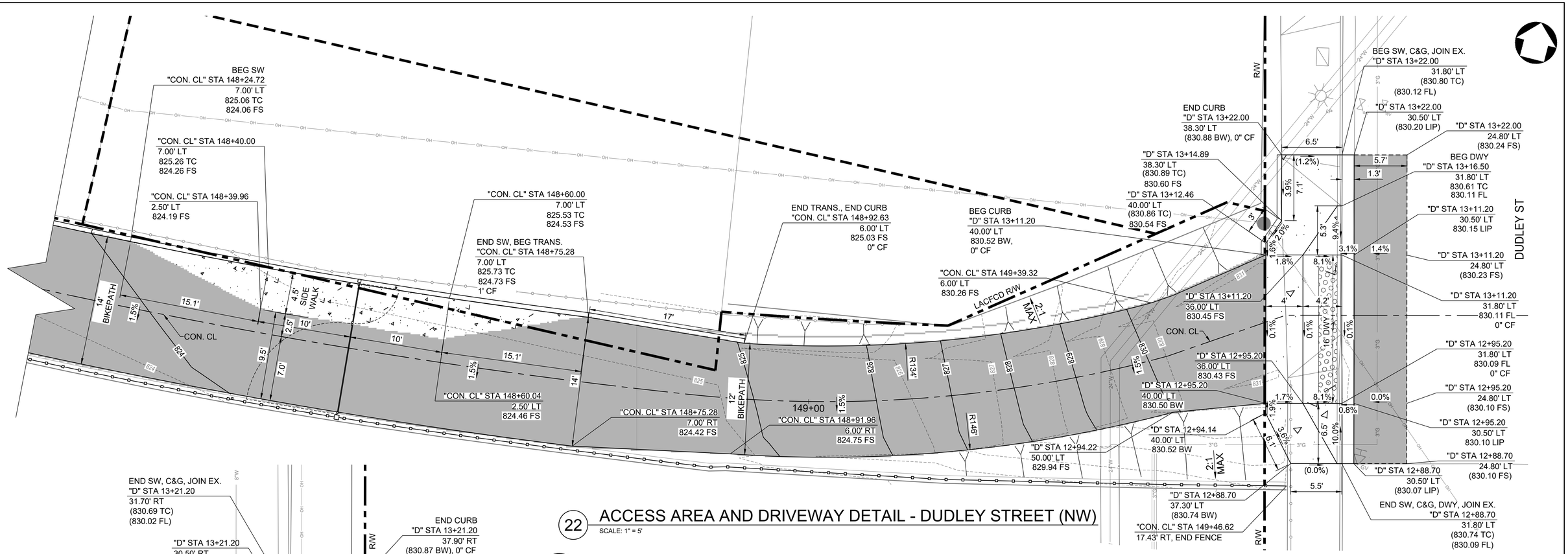
alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

△ REVISIONS DATE INITIAL

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C210.dwg 12/18/2024 16:28

FA-2263 BM




22 ACCESS AREA AND DRIVEWAY DETAIL - DUDLEY STREET (NW)
SCALE: 1" = 5'

23 DRIVEWAY DETAIL - DUDLEY STREET (NE)
SCALE: 1" = 5'

SCALE PLAN SCALE: 5 0 5 10 FEET

ACCEPTED
BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED
BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C211

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

DETAIL SHEETS

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

SCALE AS SHOWN
DATE 12.5.2024

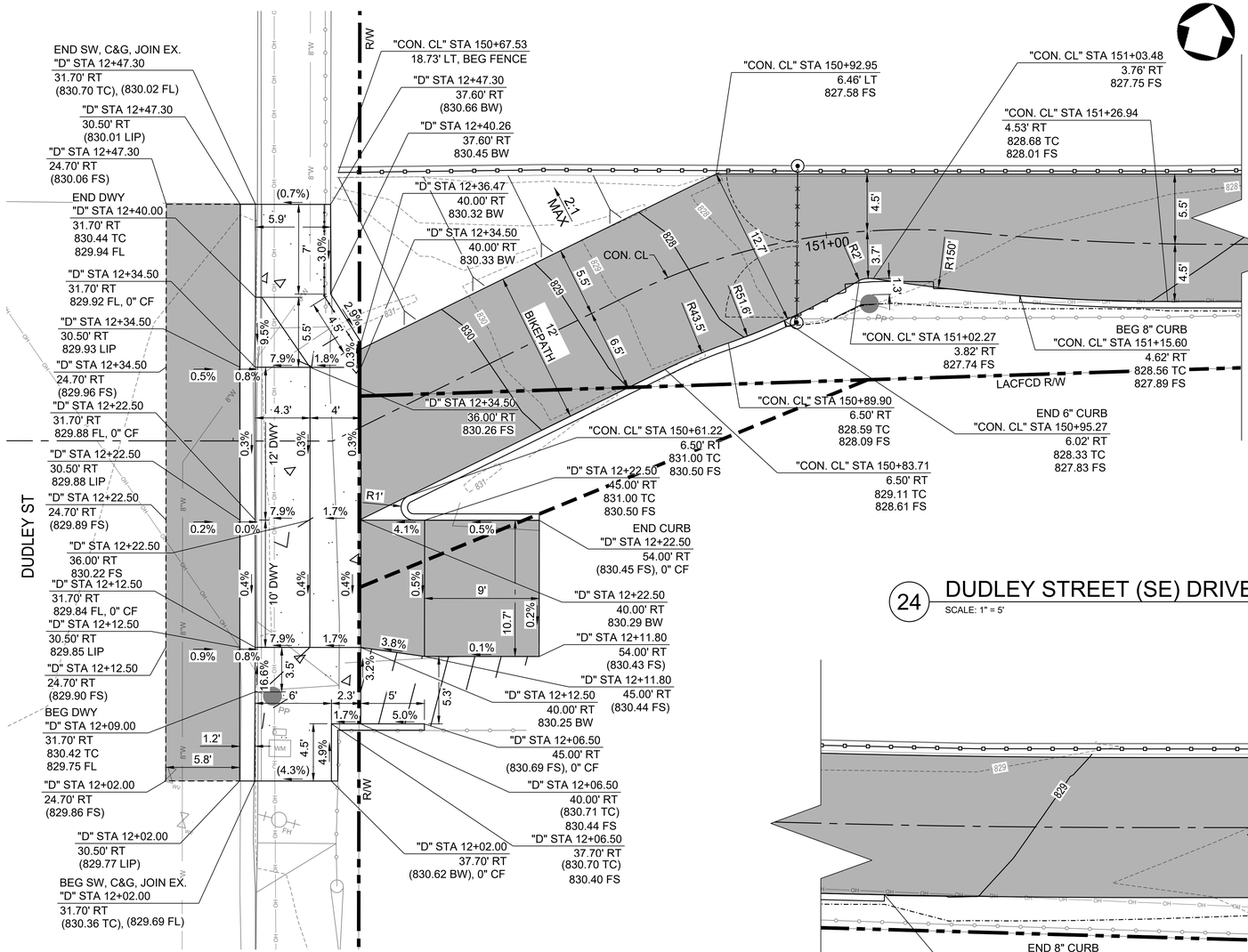
DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

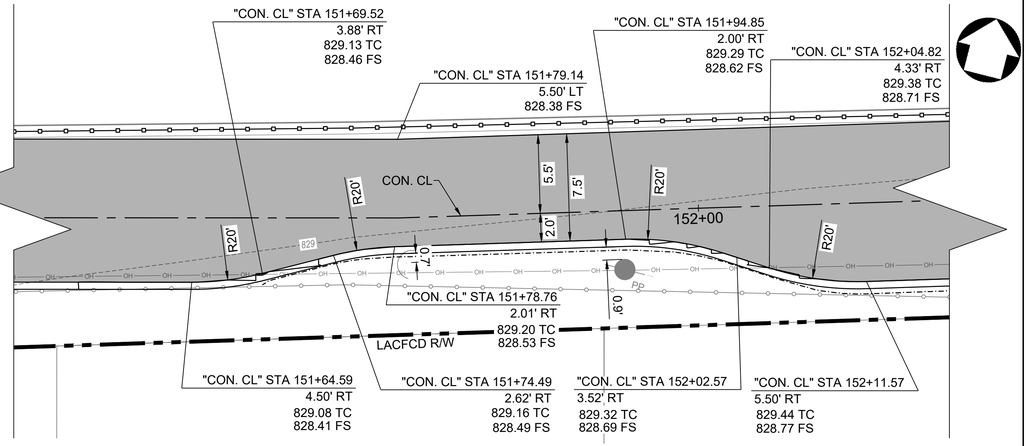
SHT. 40 OF 95 SHTS

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Stored\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\C4D\01_Plans\2022-171_04-C211.dwg 12/18/2024 16:29

FA-2263 BN




## 24 DUDLEY STREET (SE) DRIVEWAY DETAIL AND BIKE PATH NEAR UTILITIES

SCALE: 1" = 5'




## 25 BIKE PATH NEAR UTILITY NEAR STA 153+40

SCALE: 1" = 5'

5 0 5 10
SCALE PLAN SCALE FEET

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C212

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

DETAIL SHEETS

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

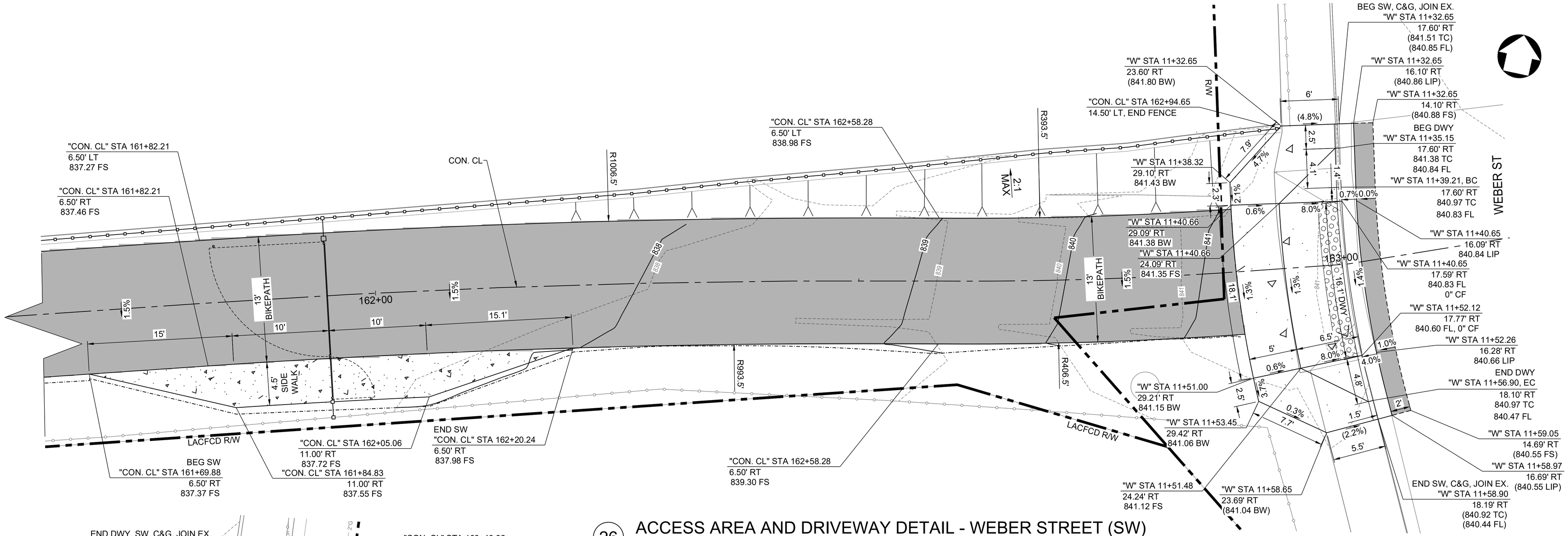
SCALE AS SHOWN
DATE 12.5.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 41 OF 95 SHTS

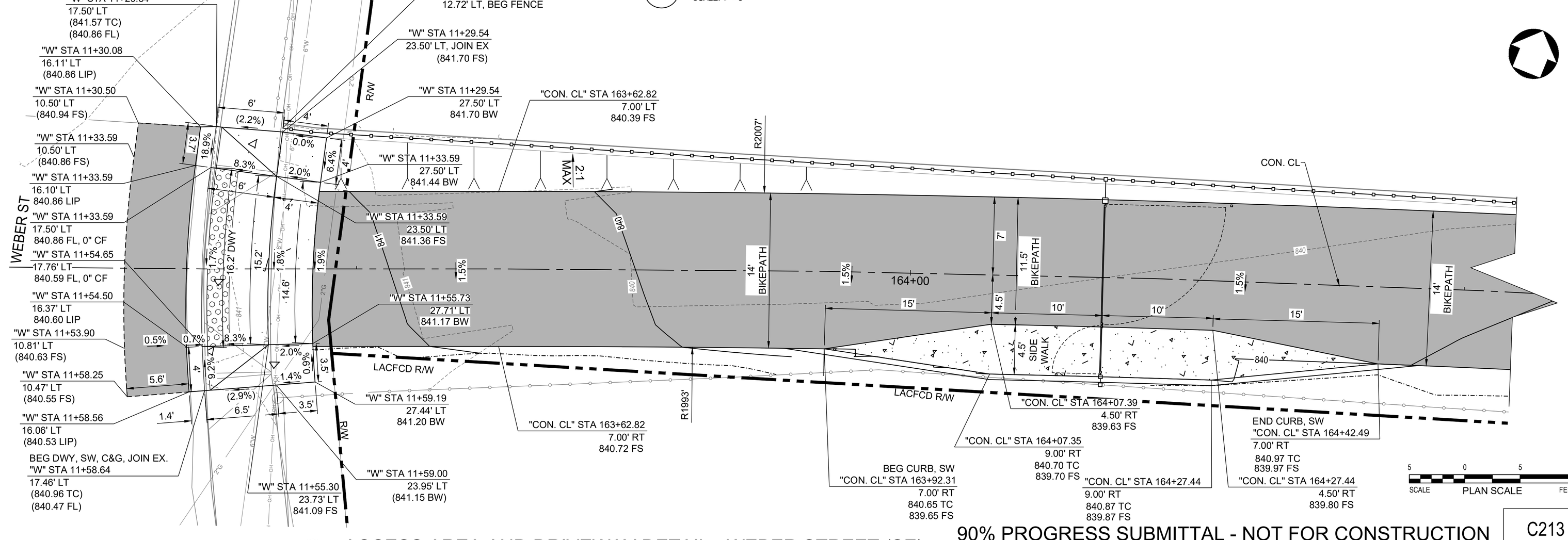
FA-2263 BO

N:\Stored\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C212.dwg 12/18/2024 16:29




26 ACCESS AREA AND DRIVEWAY DETAIL - WEBER STREET (SW)

SCALE: 1" = 5'




27 ACCESS AREA AND DRIVEWAY DETAIL - WEBER STREET (SE)

SCALE: 1" = 5'

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

SCALE: 5 0 5 10 FEET — PLAN SCALE

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

C213

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

DETAIL SHEETS

SCALE AS SHOWN

DATE 12.16.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 42 OF 95 SHTS

PRELIMINARY

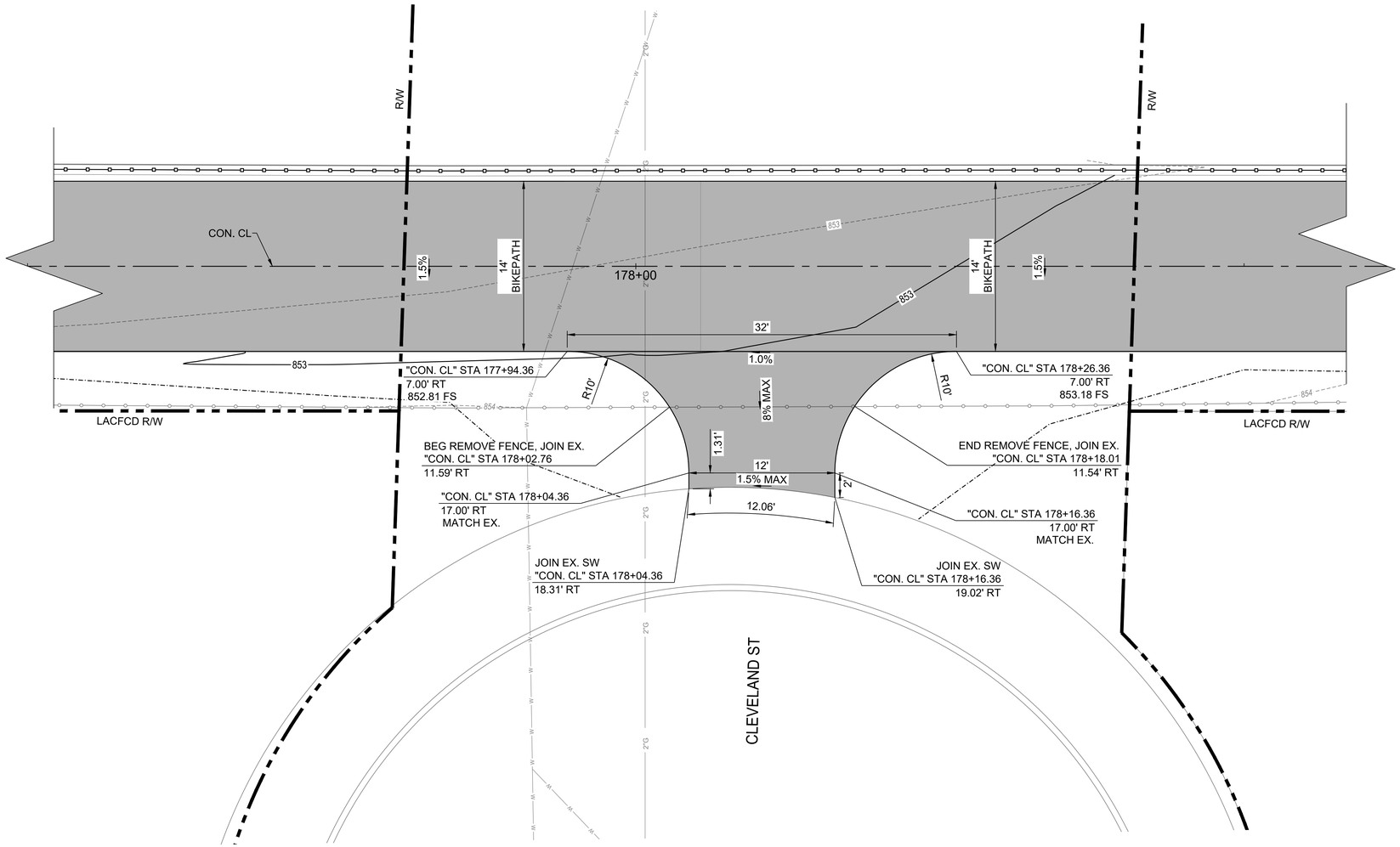
alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C213.dwg 12/18/2024 16:30

FA-2263 BP




## 28 CLEVELAND STREET CONNECTION

SCALE: 1" = 5'

5 0 5 10
SCALE PLAN SCALE FEET

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C214

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

DETAIL SHEETS

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|
| | | | |

SCALE AS SHOWN
DATE 12.3.2024

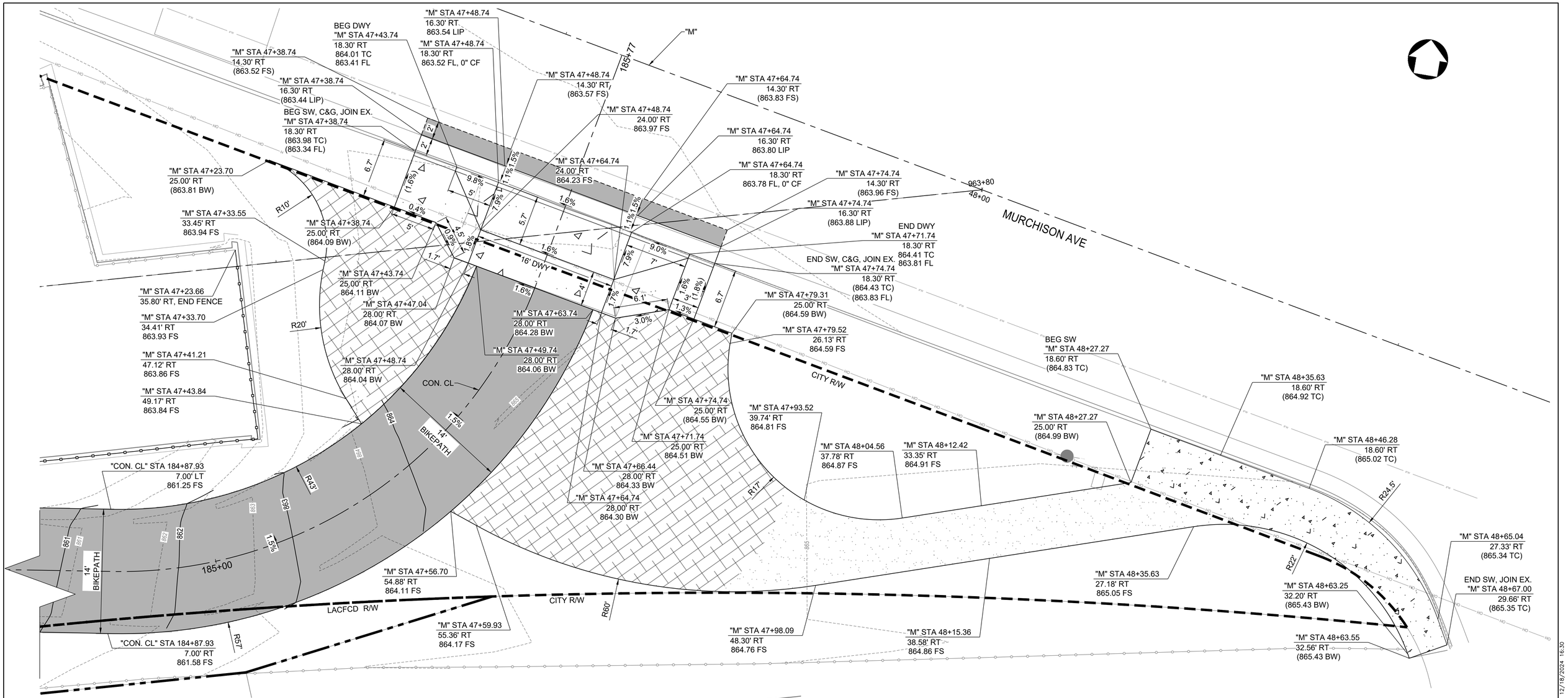
DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 43 OF 95 SHTS

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

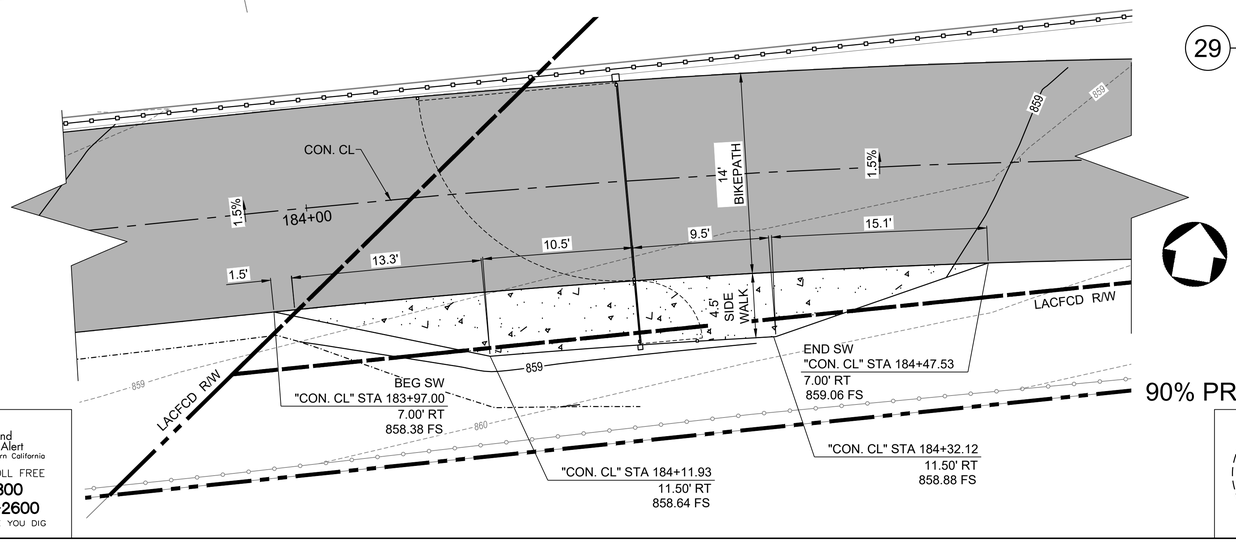
N:\Stored\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CADD\01_Plans\2022-171_04-C214.dwg 12/18/2024 16:30

FA-2263 BQ




## 29 ACCESS AREA AND DRIVEWAY DETAIL - MURCHISON AVENUE

SCALE: 1" = 5'




90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

SCALE 5 0 5 10 FEET
PLAN SCALE

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

DETAIL SHEETS

C215

SCALE AS SHOWN
DATE 12.18.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 44 OF 95 SHTS

PRELIMINARY

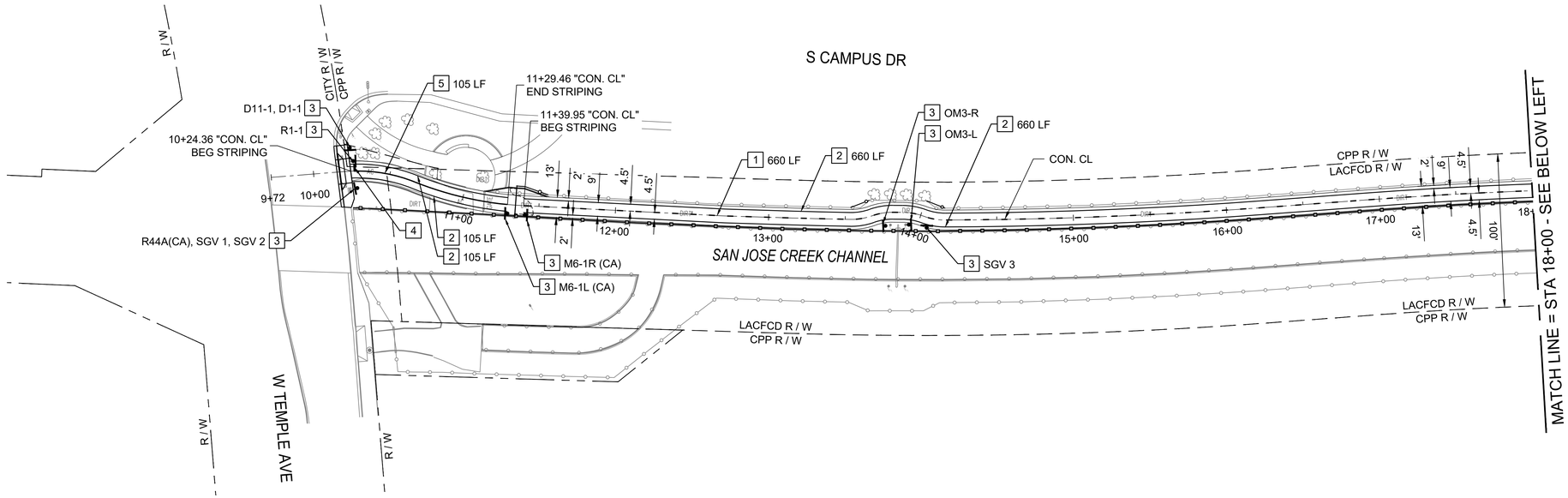
alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

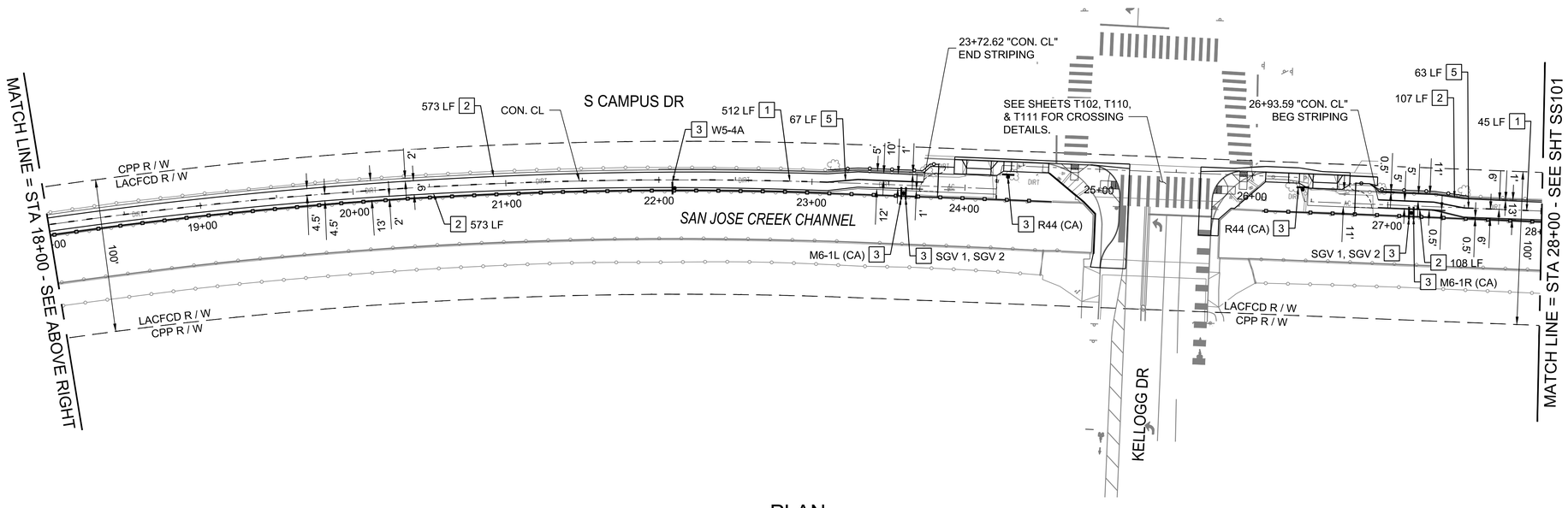
Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_04-C215.dwg 12/18/2024 16:30

FA-2263 BR




PLAN




PLAN

## SIGNING AND STRIPING NOTES

1. INSTALL SHARED-USE PATH DASHED YELLOW CENTERLINE PER SHEET 56, DETAIL 5.
2. INSTALL 6" WHITE EDGE LINE PER CALTRANS STD PLAN A20D, DETAIL 39.
3. INSTALL SIGN ON NEW POST.
4. INSTALL 12" LIMIT LINE PER CALTRANS STD PLAN A24G.
5. INSTALL SHARED-USE PATH SOLID YELLOW CENTERLINE PER SHEET 56, DETAIL 6.
6. REMOVE AND REINSTALL SIGN AS SHOWN.

## SYMBOL LEGEND

PROPOSED SIGN - SINGLE SIDED

PROPOSED SIGNS - DOUBLE SIDED

## SIGN LEGEND

R1-1 18" X 18" | R44A (CA) 12" X 24" | SGV 1 | SGV 2 | SGV 3 18" X18"

W5-4A 18" X18" | D11-1 24" X18" | D1-1 36" X 6" | M6-1L(CA) 12" X 9" | M6-1R(CA) 12" X 9"

OM3-L 8" X 18" | OM3-R 8" X 18"

40' 20' 0 40' 80'

HORIZ: 1" = 40'

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

SS100

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

SIGNING AND STRIPING

SCALE AS SHOWN

DATE 12.16.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 45 OF 95 SHTS

PRELIMINARY

alta

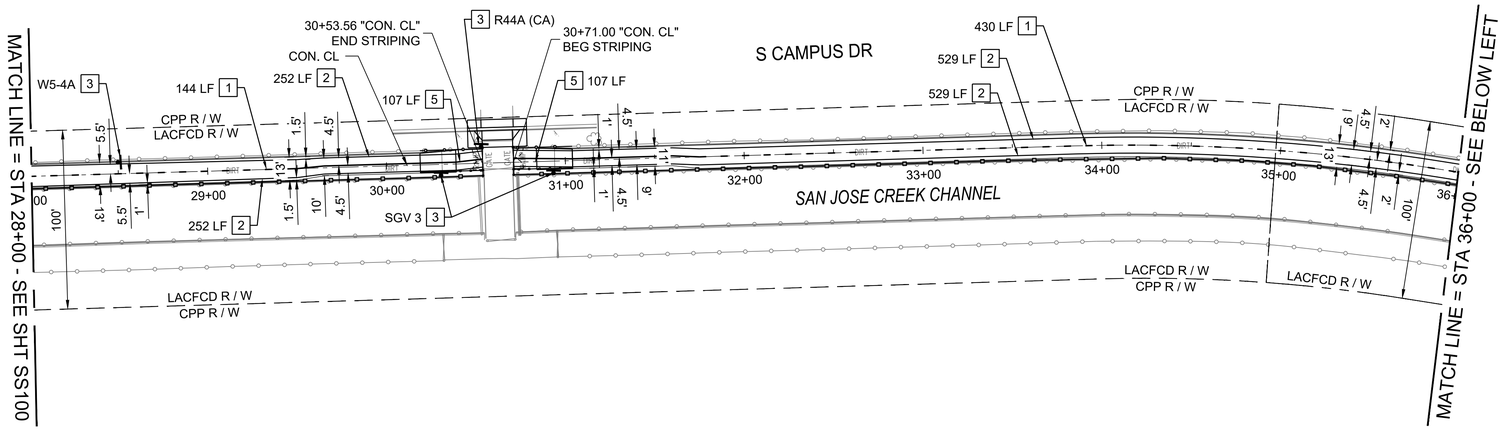
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

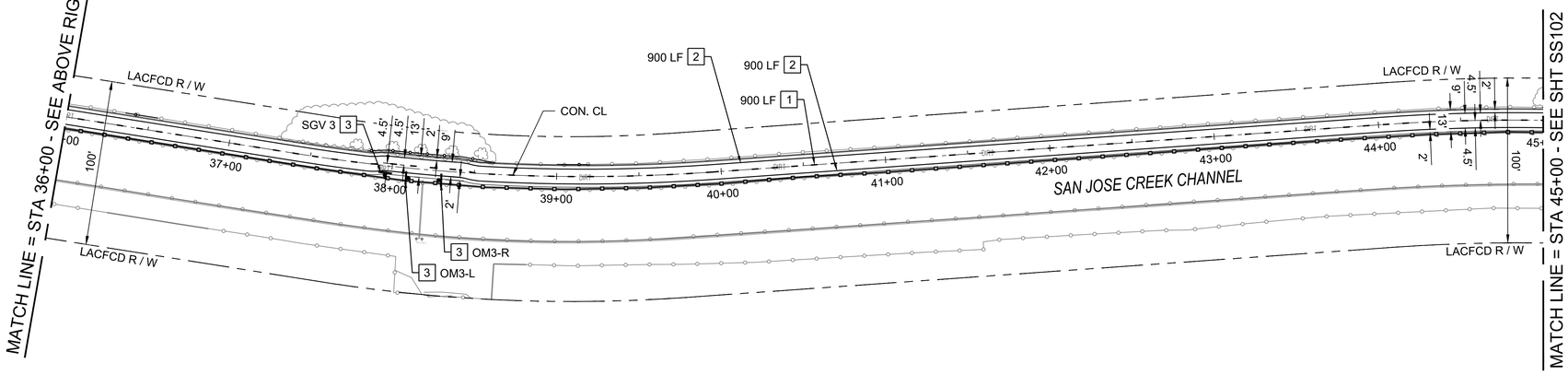
Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 pomona, ca san jose bikeway\CAD\01_Plans\2022-171_04-C001 TO C010_SPM.dwg 12/17/2024 14:20

FA-2263 BS




PLAN




PLAN

## SIGNING AND STRIPING NOTES

1. INSTALL SHARED-USE PATH DASHED YELLOW CENTERLINE PER SHEET 56, DETAIL 5.
2. INSTALL 6" WHITE EDGE LINE PER CALTRANS STD PLAN A20D, DETAIL 39.
3. INSTALL SIGN ON NEW POST.
4. INSTALL 12" LIMIT LINE PER CALTRANS STD PLAN A24G.
5. INSTALL SHARED-USE PATH SOLID YELLOW CENTERLINE PER SHEET 56, DETAIL 6.
6. REMOVE AND REINSTALL SIGN AS SHOWN.

## SYMBOL LEGEND

PROPOSED SIGN - SINGLE SIDED

## SIGN LEGEND

R44A (CA) 12" X 24" | SGV 3 18" X18" | W5-4A 18" X18" | OM3-L 6" X 18" | OM3-R 6" X 18"

40' 20' 0 40' 80'

HORIZ: 1" = 40'

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

SS101

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

SIGNING AND STRIPING

SCALE AS SHOWN

DATE 12.16.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 46 OF 95 SHTS

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| | REVISIONS | DATE | INITIAL |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| △ | | | |

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 pomona, ca san jose bikeway\CAD\01_Plans\2022-171_04-C001 TO C010_SPM.dwg 12/17/2024 14:20

FA-2263 BT

## SIGNING AND STRIPING NOTES

1. INSTALL SHARED-USE PATH DASHED YELLOW CENTERLINE PER SHEET 56, DETAIL 5.
2. INSTALL 6" WHITE EDGE LINE PER CALTRANS STD PLAN A20D, DETAIL 39.
3. INSTALL SIGN ON NEW POST.
4. INSTALL 12" LIMIT LINE PER CALTRANS STD PLAN A24G.
5. INSTALL SHARED-USE PATH SOLID YELLOW CENTERLINE PER SHEET 56, DETAIL 6.
6. REMOVE AND REINSTALL SIGN AS SHOWN.

## SYMBOL LEGEND

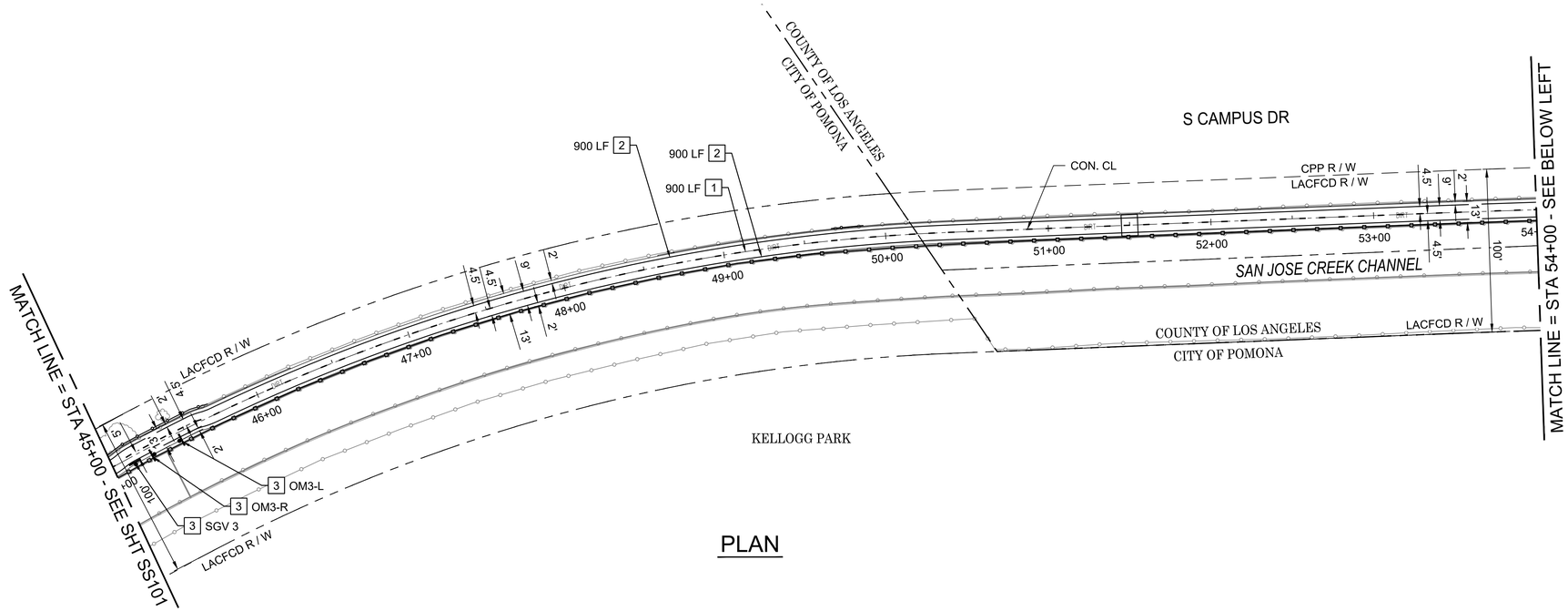
PROPOSED SIGN - SINGLE SIDED

## SIGN LEGEND

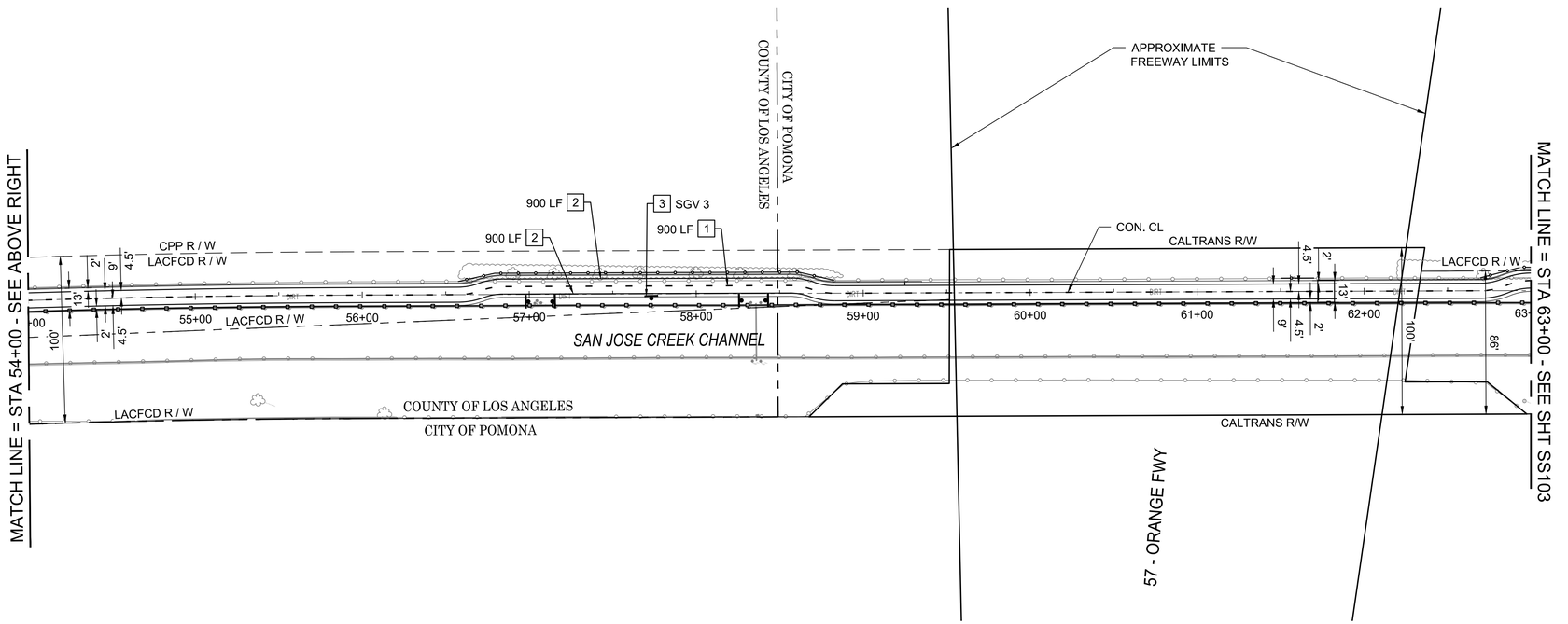
SGV 3
18" X18"

OM3-L
6" X 18"

OM3-R
6" X 18"




PLAN




PLAN

HORIZ: 1" = 40'

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

SS102

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

SIGNING AND STRIPING

SCALE
AS SHOWN

DATE
12.16.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 47 OF 95 SHTS

PRELIMINARY

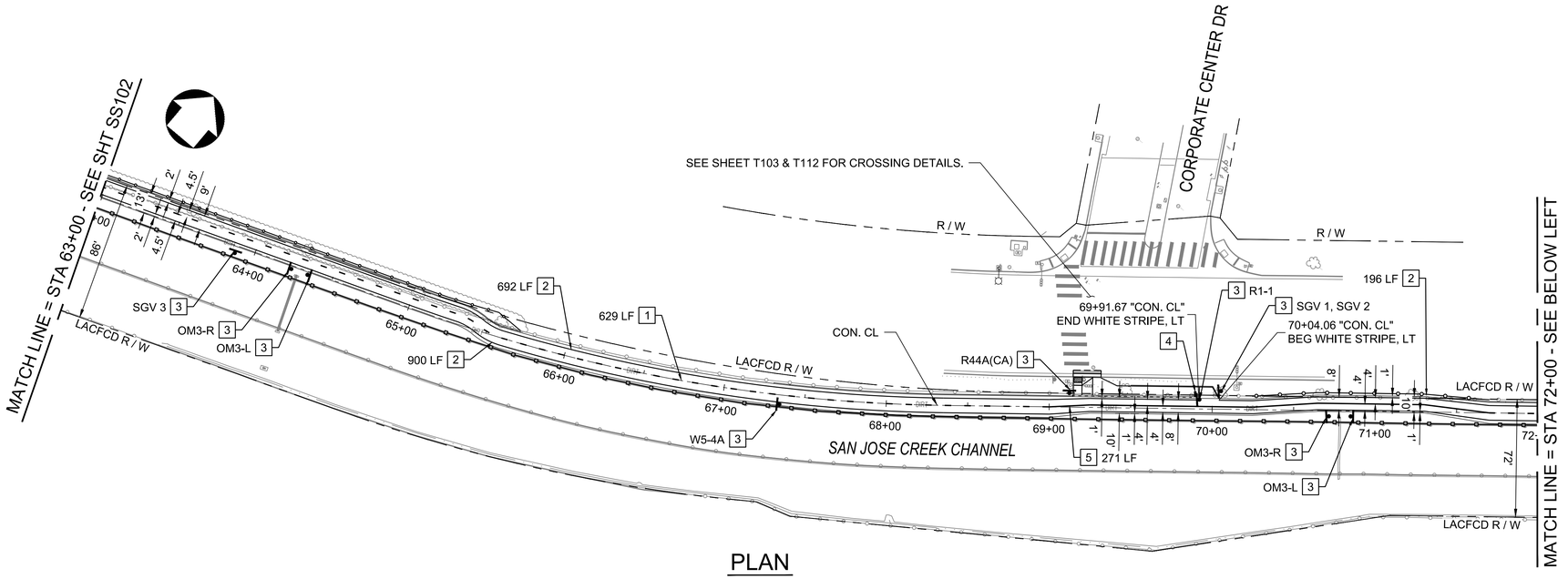
alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

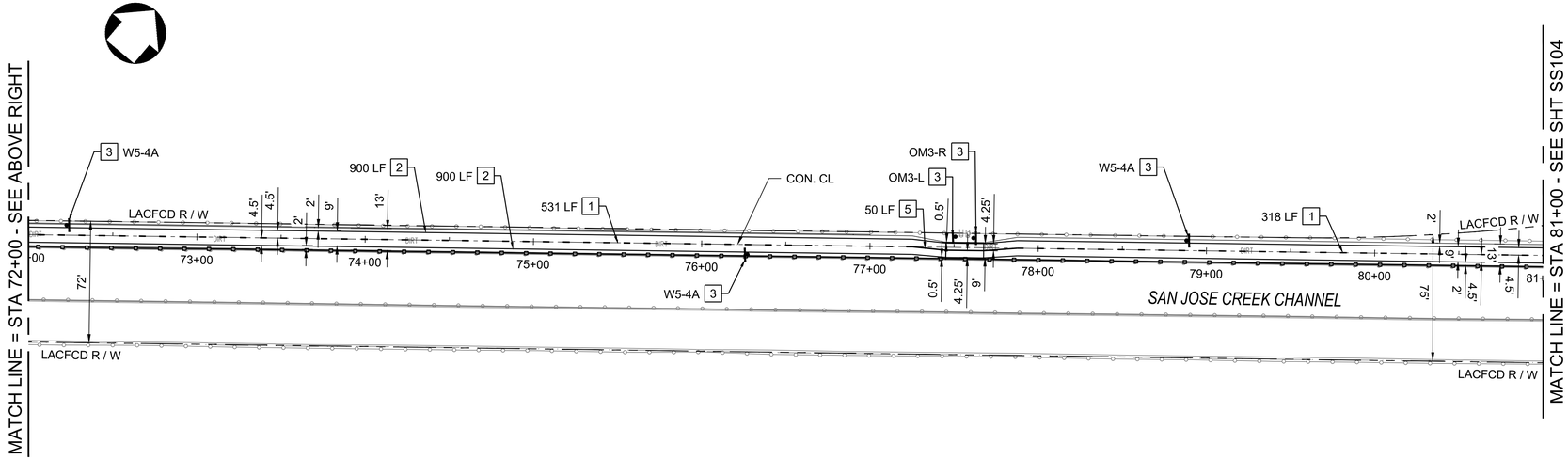
Under Ground Service Alert of Southern California
Call: TOLL FREE
1-800
227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 pomona, co san jose bikeway\CAD\01_Plans\2022-171_04-C001 TO C010_SPM.dwg 12/17/2024 14:20

FA-2263 BU




PLAN




PLAN

## SIGNING AND STRIPING NOTES

1. INSTALL SHARED-USE PATH DASHED YELLOW CENTERLINE PER SHEET 56, DETAIL 5.
2. INSTALL 6" WHITE EDGE LINE PER CALTRANS STD PLAN A20D, DETAIL 39.
3. INSTALL SIGN ON NEW POST.
4. INSTALL 12" LIMIT LINE PER CALTRANS STD PLAN A24G.
5. INSTALL SHARED-USE PATH SOLID YELLOW CENTERLINE PER SHEET 56, DETAIL 6.
6. REMOVE AND REINSTALL SIGN AS SHOWN.

## SYMBOL LEGEND

PROPOSED SIGN - SINGLE SIDED

## SIGN LEGEND

R1-1 18" X 18" | R44A (CA) 12" X 24" | SGV 1 | SGV 2 | SGV 3 18" X18"

W5-4A 18" X18" | OM3-L 6" X 18" | OM3-R 6" X 18"

40' 20' 0 40' 80'
HORIZ: 1" = 40'

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

SS103

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

SIGNING AND STRIPING

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

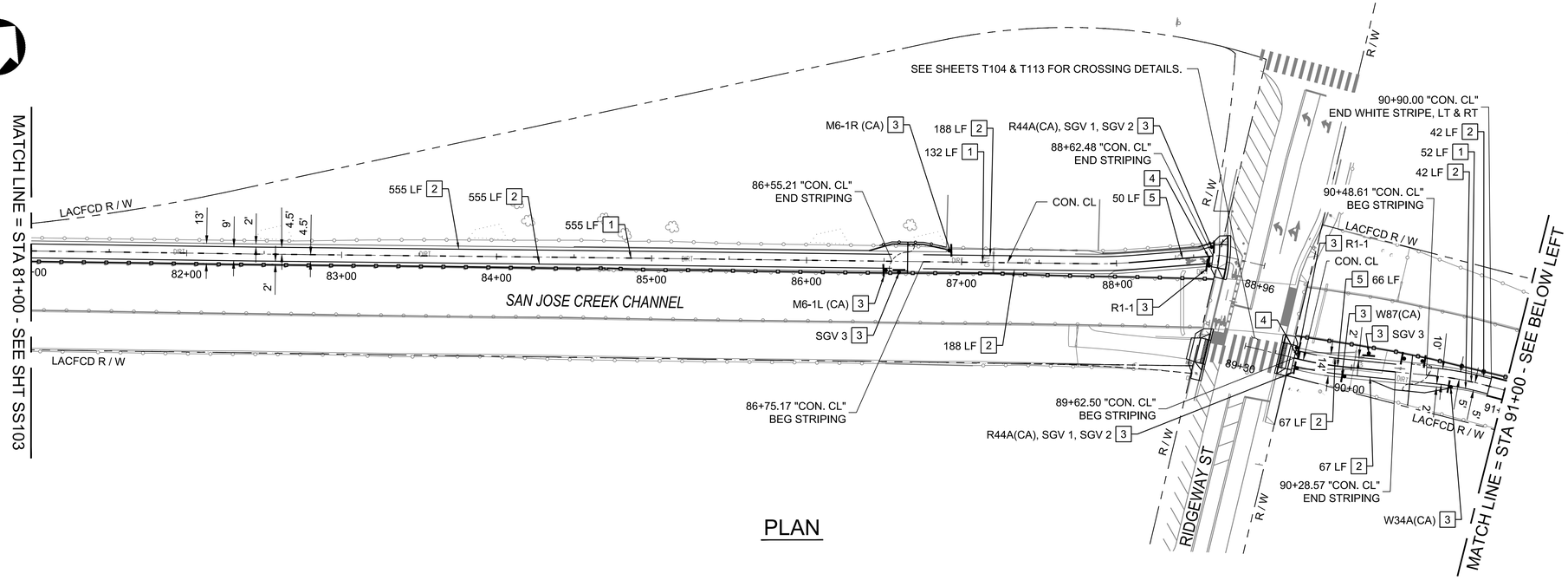
SCALE AS SHOWN
DATE 12.16.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

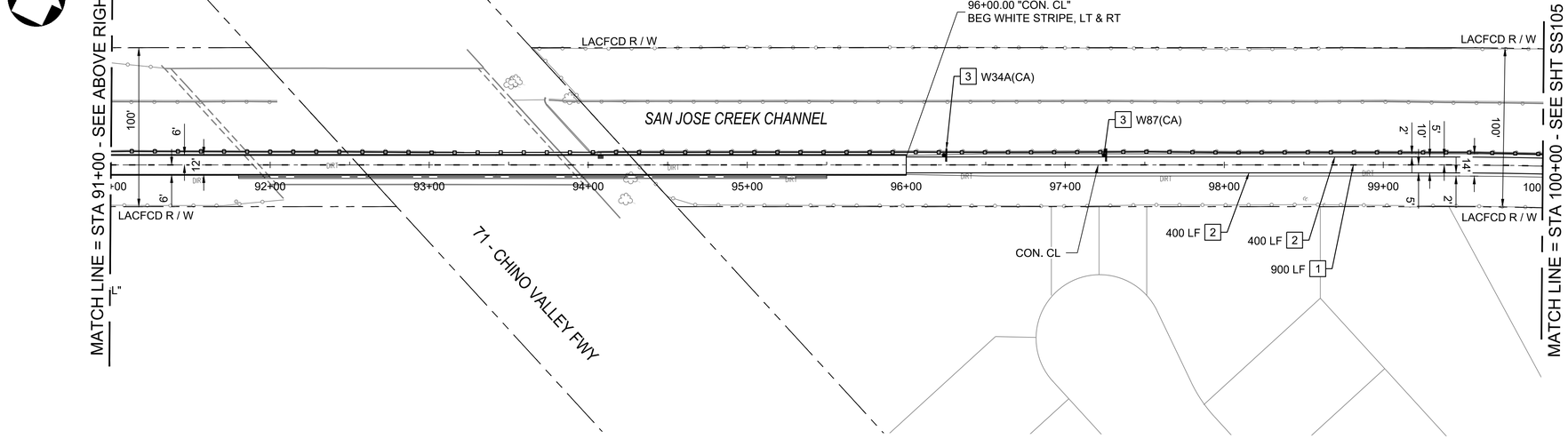
SHT. 48 OF 95 SHTS

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Stored\PROJECTS\2022\00-2022-171 pomona, ca san jose bikeway\CAD\01_Plans\2022-171_04-C001 TO C010_SPM.dwg 12/17/2024 14:20




PLAN




PLAN

## SIGNING AND STRIPING NOTES

1. INSTALL SHARED-USE PATH DASHED YELLOW CENTERLINE PER SHEET 56, DETAIL 5.
2. INSTALL 6" WHITE EDGE LINE PER CALTRANS STD PLAN A20D, DETAIL 39.
3. INSTALL SIGN ON NEW POST.
4. INSTALL 12" LIMIT LINE PER CALTRANS STD PLAN A24G.
5. INSTALL SHARED-USE PATH SOLID YELLOW CENTERLINE PER SHEET 56, DETAIL 6.
6. REMOVE AND REINSTALL SIGN AS SHOWN.

## SYMBOL LEGEND

PROPOSED SIGN - SINGLE SIDED

## SIGN LEGEND

R1-1 18" X 18" | R44A (CA) 12" X 24" | SGV 1 | SGV 2 | SGV 3 18" X18"

W87 (CA) 18" X 18" | W34A (CA) (10' 0") 36" X 54" | M6-1L(CA) 12" X 9" | M6-1R(CA) 12" X 9"

40' 20' 0 40' 80'
HORIZ: 1" = 40'

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

SS104

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

SIGNING AND STRIPING

SCALE AS SHOWN

DATE 12.16.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 49 OF 95 SHTS

PRELIMINARY

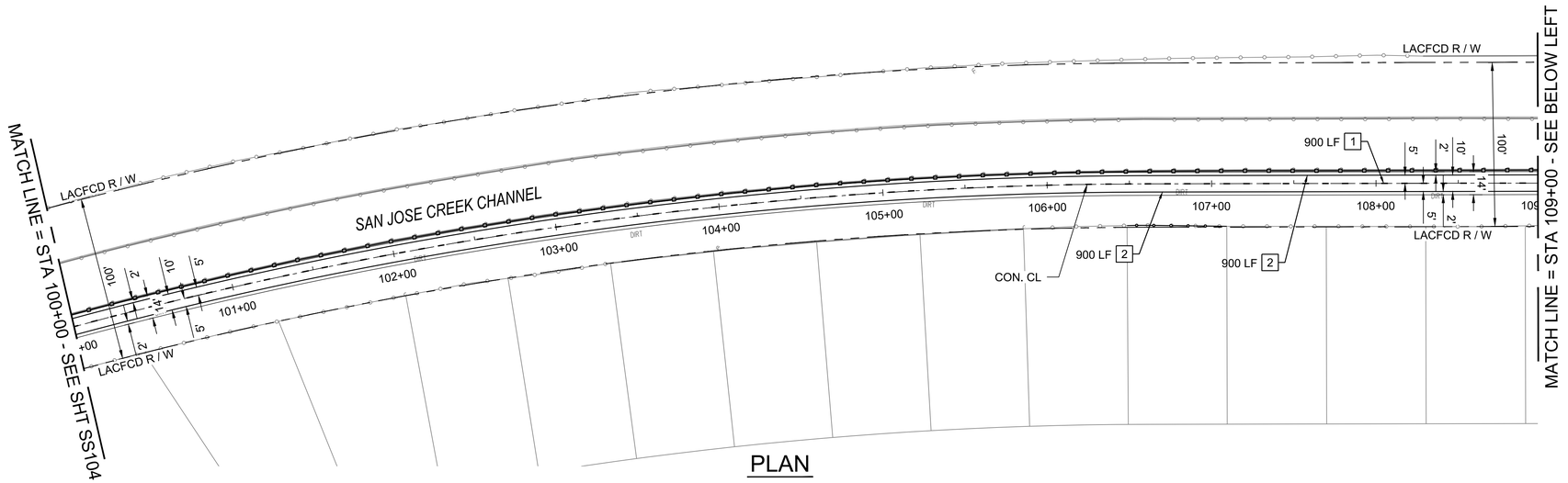
alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

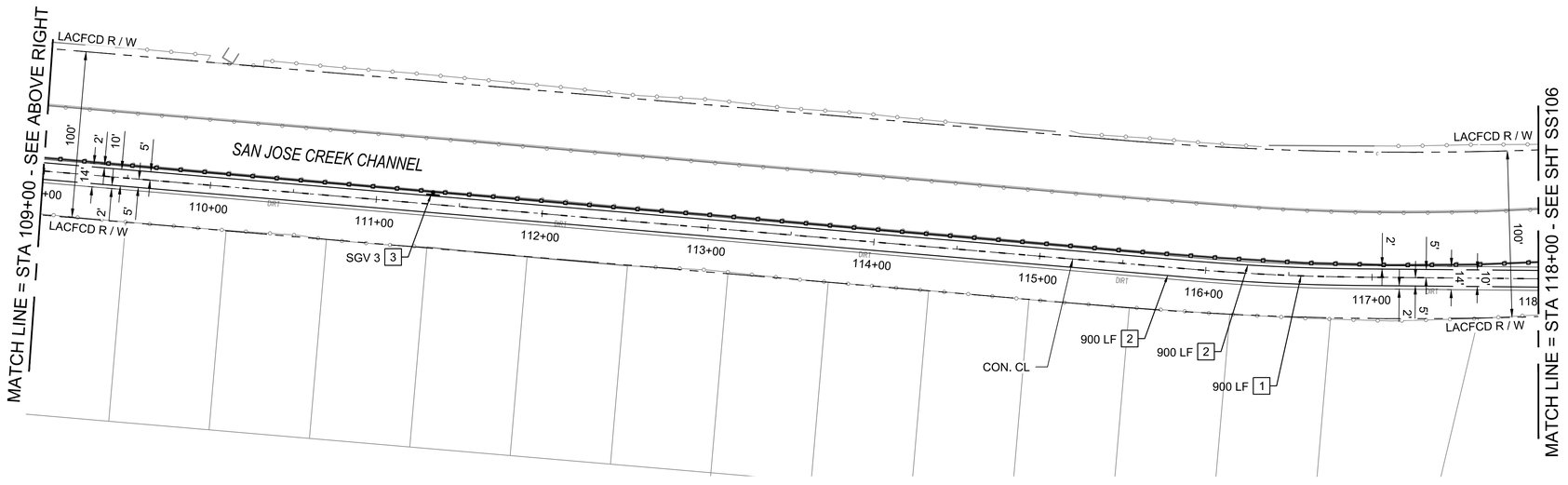
Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 pomona, co san jose bikeway\CAD\01_Plans\2022-171_04-C001 TO C010_SPM.dwg 12/17/2024 14:20

FA-2263 BW




PLAN




PLAN

## SIGNING AND STRIPING NOTES

1. INSTALL SHARED-USE PATH DASHED YELLOW CENTERLINE PER SHEET 56, DETAIL 5.
2. INSTALL 6" WHITE EDGE LINE PER CALTRANS STD PLAN A20D, DETAIL 39.
3. INSTALL SIGN ON NEW POST.
4. INSTALL 12" LIMIT LINE PER CALTRANS STD PLAN A24G.
5. INSTALL SHARED-USE PATH SOLID YELLOW CENTERLINE PER SHEET 56, DETAIL 6.
6. REMOVE AND REINSTALL SIGN AS SHOWN.

## SYMBOL LEGEND

PROPOSED SIGN - SINGLE SIDED

## SIGN LEGEND

SGV 3
18" X18"

40' 20' 0 40' 80'
HORIZ: 1" = 40'

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

SS105

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

SIGNING AND STRIPING

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

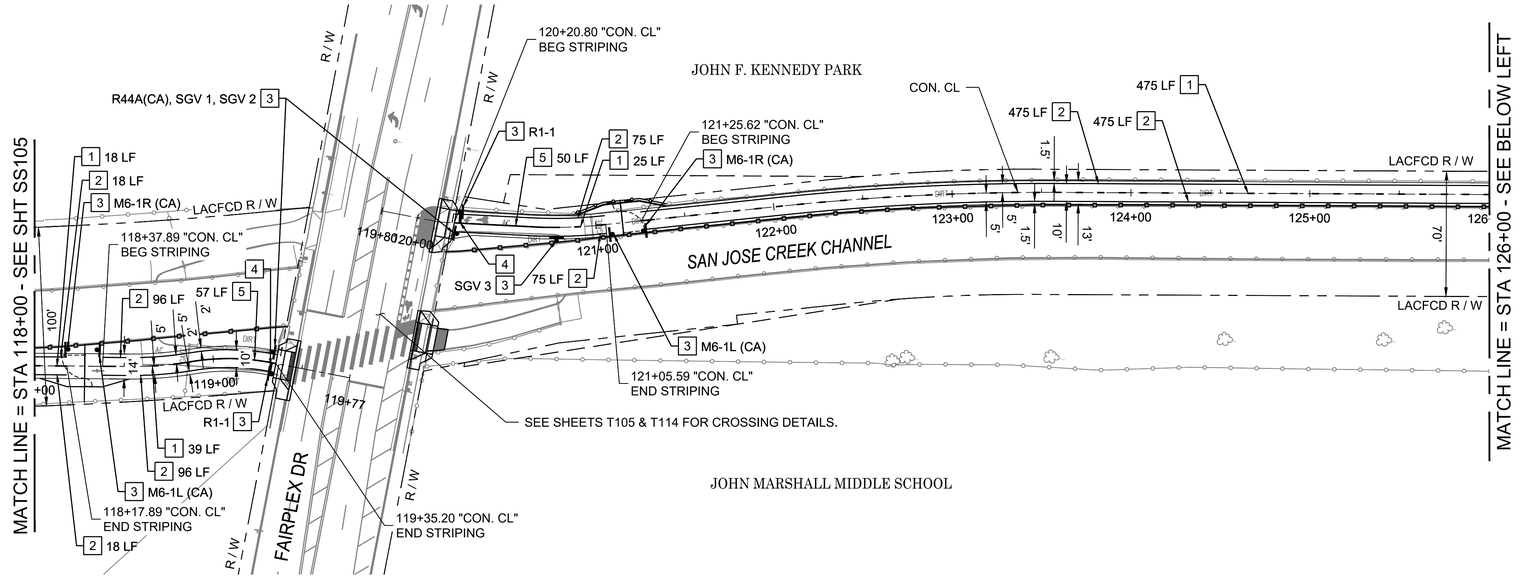
SCALE AS SHOWN
DATE 12.16.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

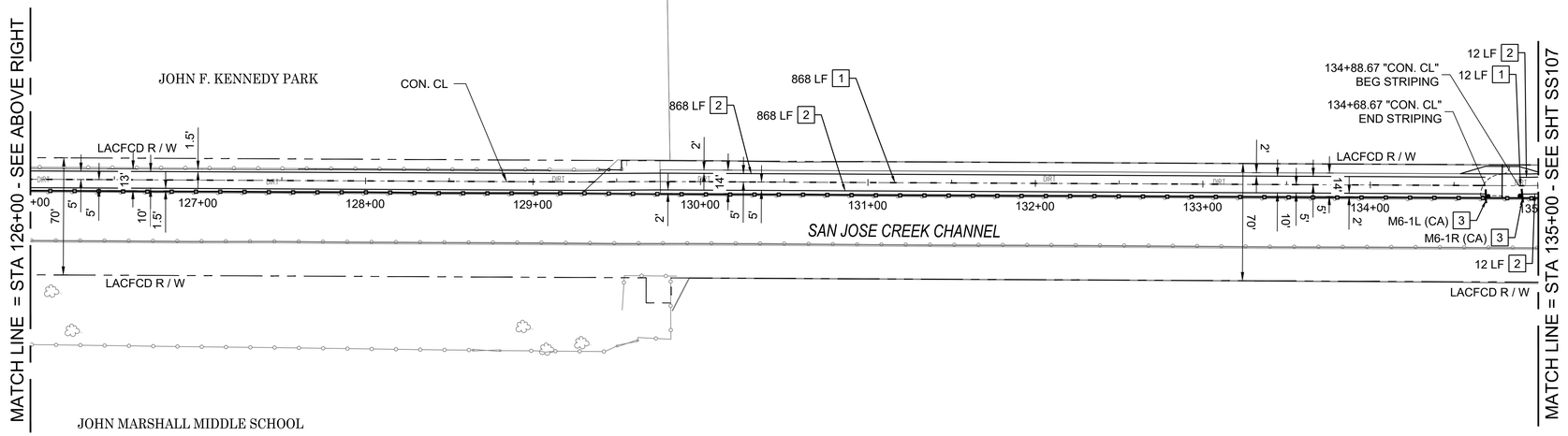
SHT. 50 OF 95 SHTS

N:\Shared\PROJECTS\2022\00-2022-171 pomona, co san jose bikeway\CAD\01_Plans\2022-171_04-C001 TO C010_SPM.dwg 12/17/2024 14:21

FA-2263 BX




PLAN




PLAN

## SIGNING AND STRIPING NOTES

1. INSTALL SHARED-USE PATH DASHED YELLOW CENTERLINE PER SHEET 56, DETAIL 5.
2. INSTALL 6" WHITE EDGE LINE PER CALTRANS STD PLAN A20D, DETAIL 39.
3. INSTALL SIGN ON NEW POST.
4. INSTALL 12" LIMIT LINE PER CALTRANS STD PLAN A24G.
5. INSTALL SHARED-USE PATH SOLID YELLOW CENTERLINE PER SHEET 56, DETAIL 6.
6. REMOVE AND REINSTALL SIGN AS SHOWN.

## SYMBOL LEGEND

PROPOSED SIGN - SINGLE SIDED

## SIGN LEGEND

R1-1 18" X 18" | R44A (CA) 12" X 24" | SGV 1 | SGV 2 | SGV 3 18" X18"

M6-1L(CA) 12" X 9" | M6-1R(CA) 12" X 9"

40' 20' 0 40' 80'

HORIZ: 1" = 40'

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

SS106

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

SIGNING AND STRIPING

SCALE AS SHOWN

DATE 12.16.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 51 OF 95 SHTS

PRELIMINARY

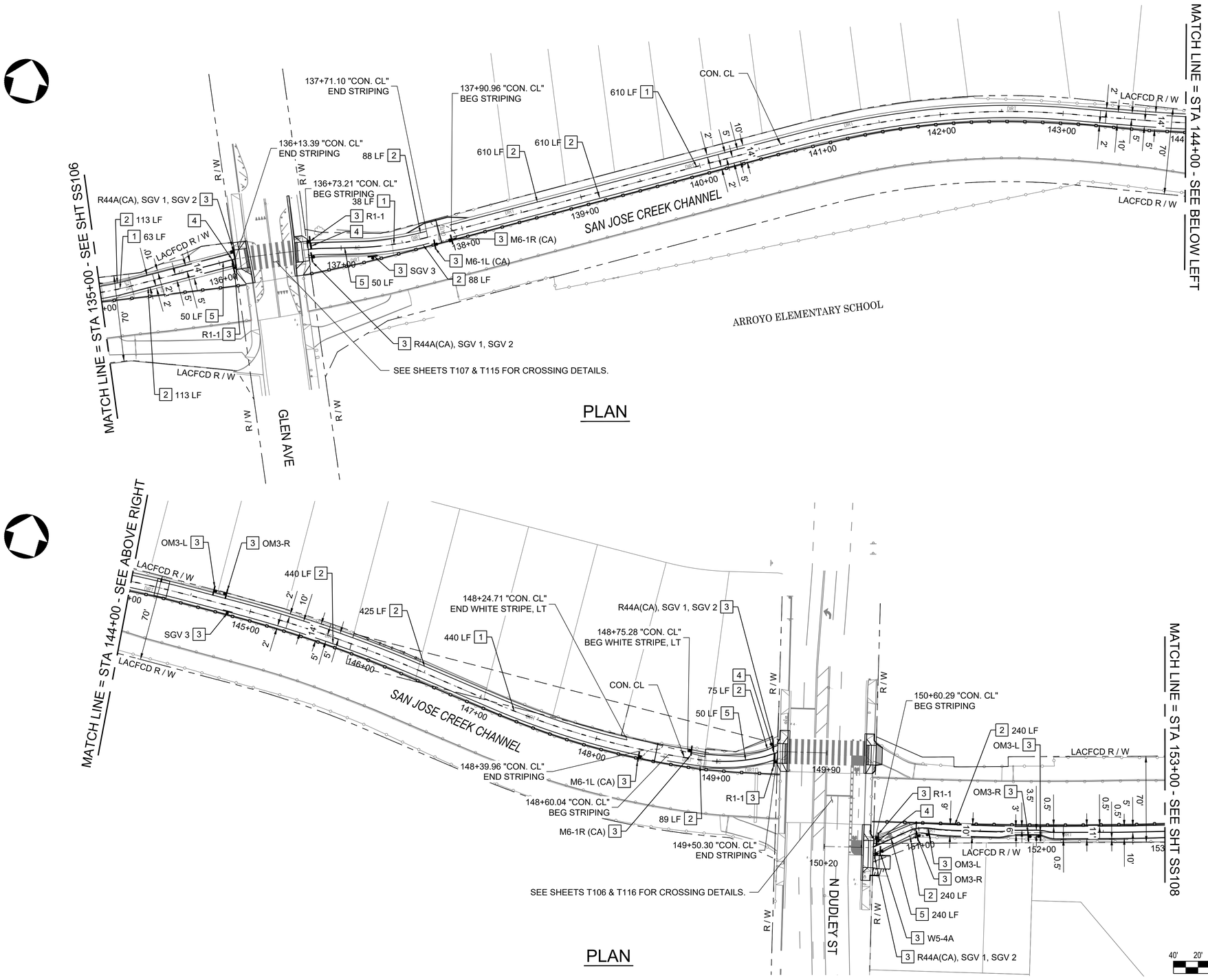
alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 pomona, ca san jose bikeway\CAD\01_Plans\2022-171_04-C001 TO C010_SPM.dwg 12/17/2024 14:21

FA-2263 BY




## SIGNING AND STRIPING NOTES

1. INSTALL SHARED-USE PATH DASHED YELLOW CENTERLINE PER SHEET 56, DETAIL 5.
2. INSTALL 6" WHITE EDGE LINE PER CALTRANS STD PLAN A20D, DETAIL 39.
3. INSTALL SIGN ON NEW POST.
4. INSTALL 12" LIMIT LINE PER CALTRANS STD PLAN A24G.
5. INSTALL SHARED-USE PATH SOLID YELLOW CENTERLINE PER SHEET 56, DETAIL 6.
6. REMOVE AND REINSTALL SIGN AS SHOWN.

## SYMBOL LEGEND

PROPOSED SIGN - SINGLE SIDED

## SIGN LEGEND

R1-1 18" X 18" | R44A (CA) 12" X 24" | SGV 1 | SGV 2 | SGV 3 18" X18"

W5-4A 18" X18" | OM3-L 6" X 18" | OM3-R 6" X 18" | M6-1L(CA) 12" X 9" | M6-1R(CA) 12" X 9"

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

SS107

SIGNING AND STRIPING

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

SCALE AS SHOWN

DATE 12.16.2024

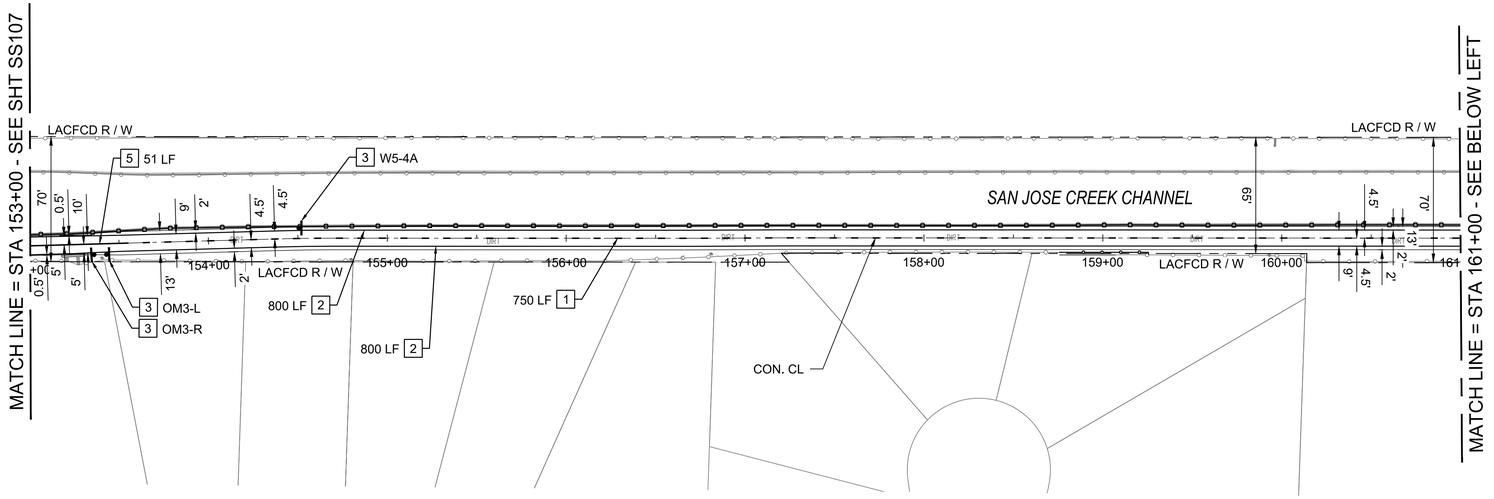
DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 52 OF 95 SHTS

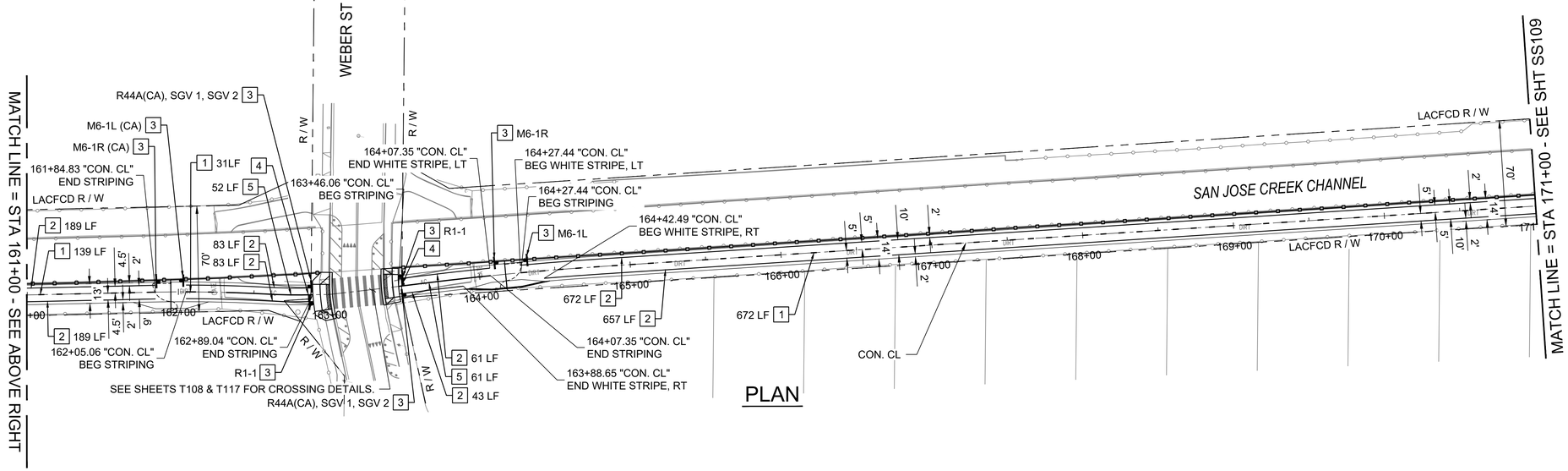
CALL BEFORE YOU DIG
Underground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

FA-2263 BZ

N:\Shared\PROJECTS\2022\00-2022-171 pomona, co san jose bikeway\CAD\01_Plans\2022-171_04-C001 TO C010_SPM.dwg 12/17/2024 14:21




PLAN




PLAN

## SIGNING AND STRIPING NOTES

1. INSTALL SHARED-USE PATH DASHED YELLOW CENTERLINE PER SHEET 56, DETAIL 5.
2. INSTALL 6" WHITE EDGE LINE PER CALTRANS STD PLAN A20D, DETAIL 39.
3. INSTALL SIGN ON NEW POST.
4. INSTALL 12" LIMIT LINE PER CALTRANS STD PLAN A24G.
5. INSTALL SHARED-USE PATH SOLID YELLOW CENTERLINE PER SHEET 56, DETAIL 6.
6. REMOVE AND REINSTALL SIGN AS SHOWN.

## SYMBOL LEGEND

PROPOSED SIGN - SINGLE SIDED

## SIGN LEGEND

R1-1 18" X 18" | R44A (CA) 12" X 24" | SGV 1 | SGV 2

W5-4A 18" X18" | OM3-L 6" X 18" | OM3-R 6" X 18" | M6-1L(CA) 12" X 9" | M6-1R(CA) 12" X 9"

40' 20' 0 40' 80'

HORIZ: 1" = 40'

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

SS108

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

SIGNING AND STRIPING

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

SCALE AS SHOWN

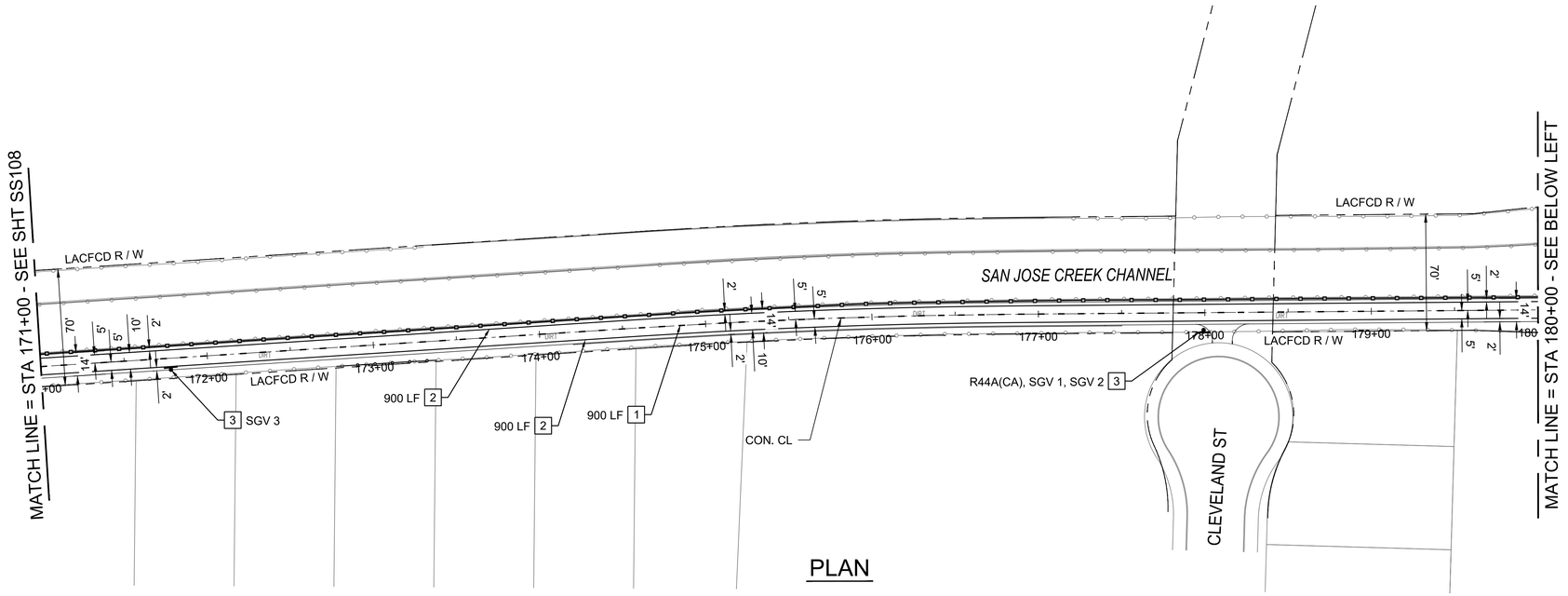
DATE 12.16.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

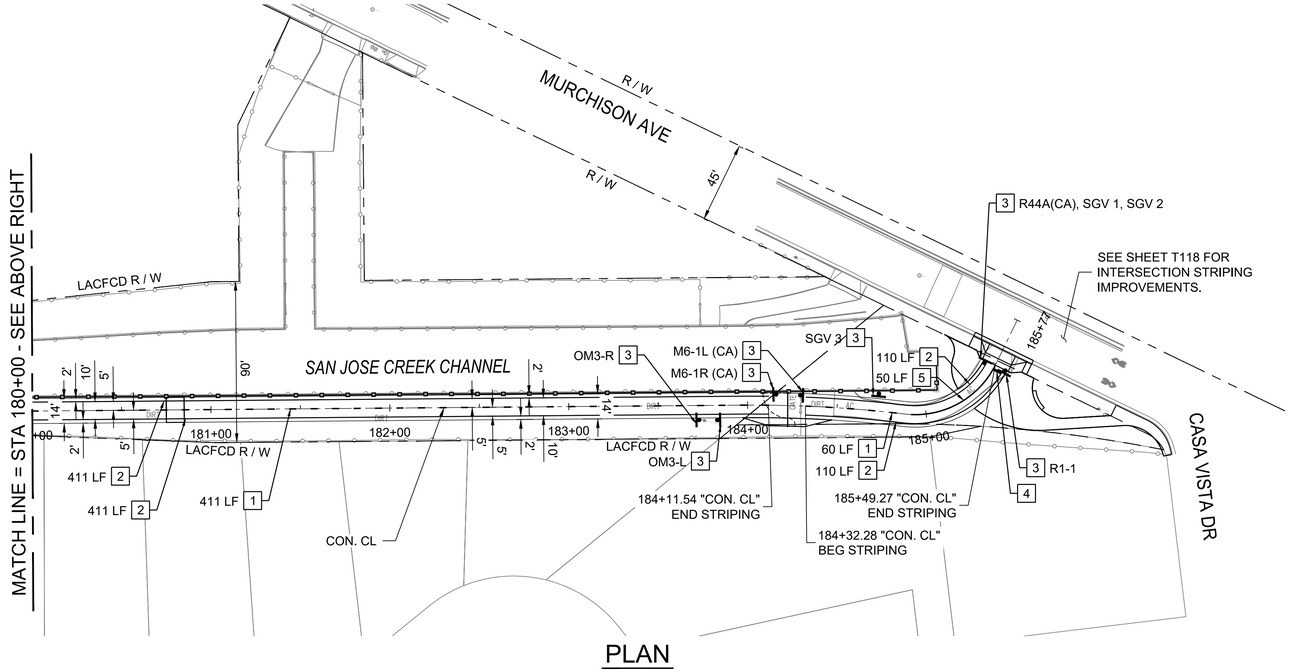
SHT. 53 OF 95 SHTS

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 pomona, ca san jose bikeway\CAD\01_Plans\2022-171_04-C001 10 C010_SPM.dwg 12/17/2024 14:21




PLAN




PLAN

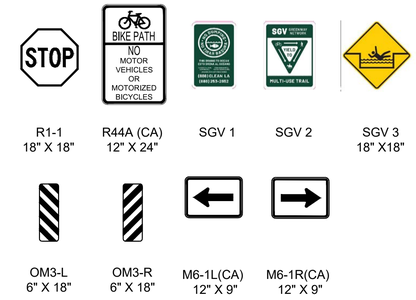
## SIGNING AND STRIPING NOTES

1. INSTALL SHARED-USE PATH DASHED YELLOW CENTERLINE PER SHEET 56, DETAIL 5.
2. INSTALL 6" WHITE EDGE LINE PER CALTRANS STD PLAN A20D, DETAIL 39.
3. INSTALL SIGN ON NEW POST.
4. INSTALL 12" LIMIT LINE PER CALTRANS STD PLAN A24G.
5. INSTALL SHARED-USE PATH SOLID YELLOW CENTERLINE PER SHEET 56, DETAIL 6.
6. REMOVE AND REINSTALL SIGN AS SHOWN.

## SYMBOL LEGEND

PROPOSED SIGN - SINGLE SIDED

## SIGN LEGEND




R1-1 18" X 18" | R44A (CA) 12" X 24" | SGV 1 | SGV 2 | SGV 3 18" X18"

OM3-L 6" X 18" | OM3-R 6" X 18" | M6-1L(CA) 12" X 9" | M6-1R(CA) 12" X 9"

40' 20' 0 40' 80'
HORIZ: 1" = 40'

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

SS109

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

SIGNING AND STRIPING

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

SCALE AS SHOWN

DATE 12.16.2024

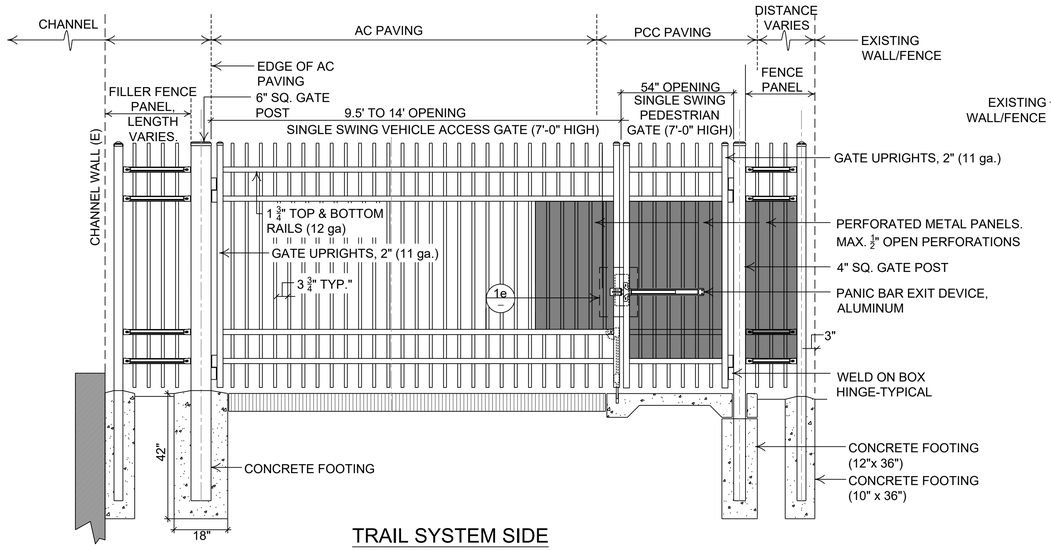
DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 54 OF 95 SHTS

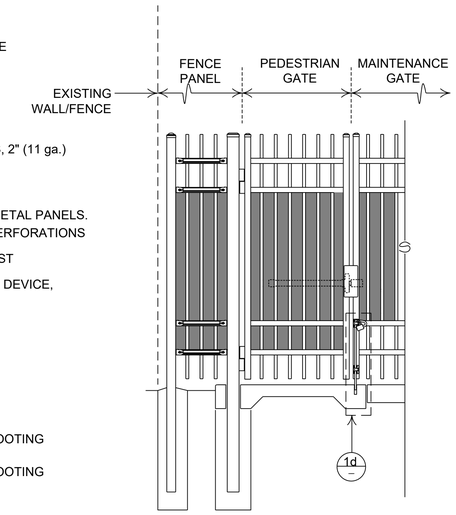
Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 pomona, ca san jose bikeway\CAD\01_Plans\2022-171_04-C001 TO C010_SPM.dwg 12/17/2024 14:21

FA-2263 CB

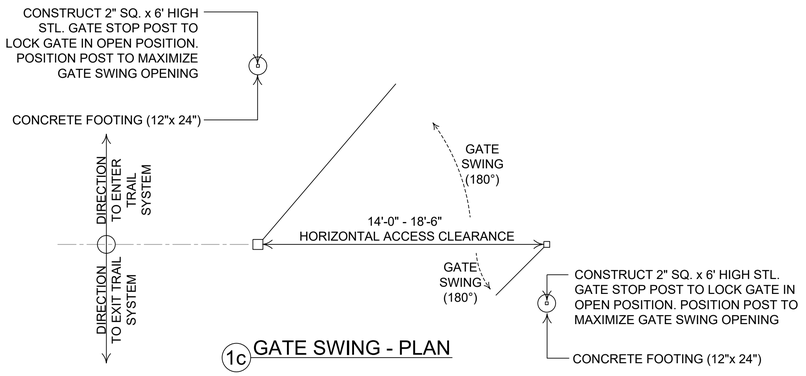



TRAIL SYSTEM SIDE




OUTSIDE TRAIL SYSTEM SIDE

## 1a SINGLE SWING GATE - ELEVATION



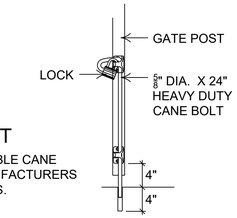

## 1c GATE SWING - PLAN

## GATE CONSTRUCTION NOTES:

THE FINAL PLACEMENT OF EACH PROPOSED GATE SHALL BE REVIEWED AND APPROVED BY THE LANDSCAPE ARCHITECT OR THE CITY'S DESIGNATED REPRESENTATIVE.

THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE REVIEW AND APPROVAL OF THE LANDSCAPE ARCHITECT.

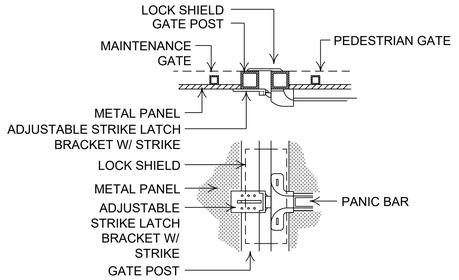
| | |
|---|---|
| GATE MANUFACTURE: | AMERISTAR OR APPROVED EQUIVALENT |
| SERIES: | MONTAGE II - INDUSTRIAL ORNAMENTAL STEEL GATE (4 RAIL) |
| STYLE: | GENESIS |
| HEIGHT: | 7' HIGH |
| COLOR: | BRONZE |




### CANE BOLT

INSTALL LOCKABLE CANE BOLT PER MANUFACTURERS SPECIFICATIONS.

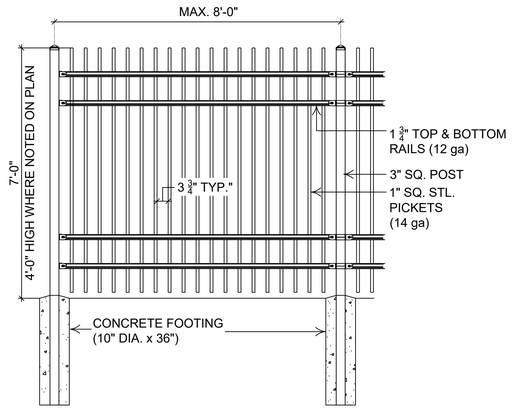
## 1d LOCKABLE CANE BOLT




## 1e PANIC BAR AND STRIKE LATCH BRACKET

## 1 SERVICE VEHICLE & PEDESTRIAN GATES (7' HIGH)

NTS




FENCE PANEL - ELEVATION

## FENCE PANEL CONSTRUCTION NOTES:

THE FENCE PANEL LENGTHS MAY VARY TO ACCOMMODATE ACTUAL FIELD CONDITIONS. THE CONTRACTOR SHALL FIELD VERIFY AND COORDINATE WITH THE FENCE PANEL MANUFACTURE.

THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE REVIEW AND APPROVAL OF THE LANDSCAPE ARCHITECT.

| | |
|---|---|
| FENCE PANEL MANUFACTURE: | AMERISTAR OR APPROVED EQUIVALENT |
| SERIES: | MONTAGE II - INDUSTRIAL ORNAMENTAL STEEL FENCE (4 RAIL) |
| STYLE: | GENESIS |
| HEIGHT: | 7' HIGH, UNLESS OTHERWISE NOTED OF PLAN |
| COLOR: | BRONZE |

## 2 TUBE STEEL FENCE PANEL

NTS

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

C060

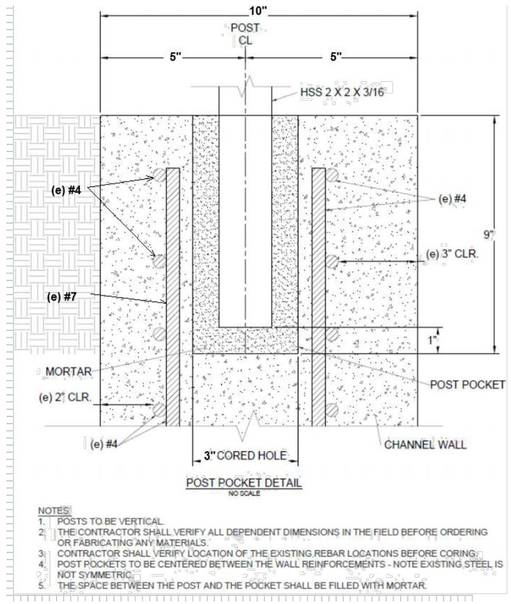
CIP 428-58072 / SAN JOSE CREEK BIKEWAY

CIVIL AND STRIPING DETAILS

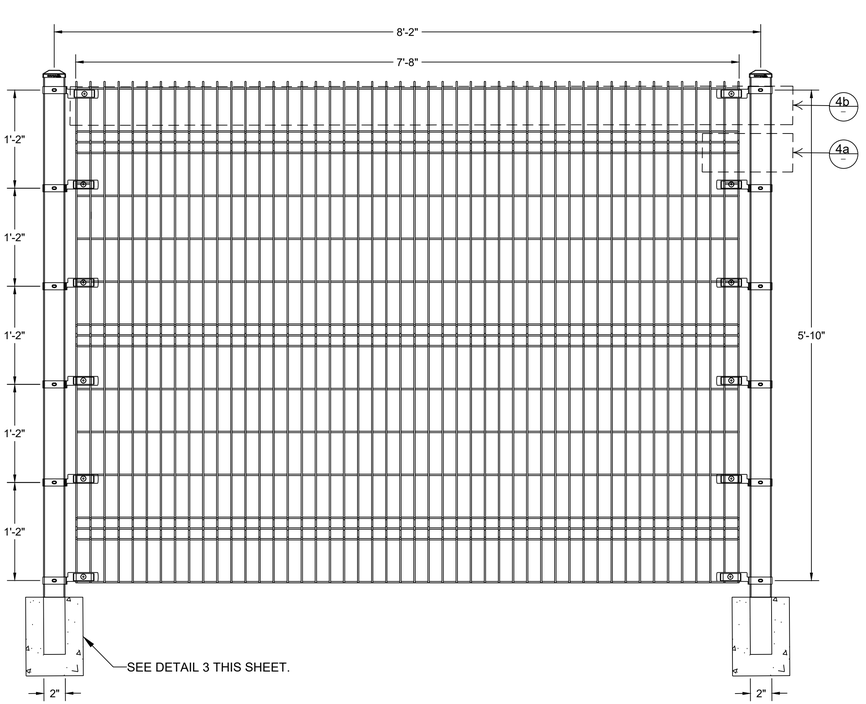
| | | | |
|---|---|---|---|
| SCALE AS SHOWN | DESIGNED: | PVT ENG | SHT. 55 |
| DATE 12.17.2024 | DRAWN: | PVT ENG | OF |
| | CHECKED: | K. DI COCCO | 95 SHTS |
| | REVIEWED: | S. FRIESON | |

N:\Shared\PROJECTS\2022\00-2022-171 pomona, co san jose bikeway\CAD\01_Plans\2022-171_04-C060_CIVIL DETAILS.dwg 12/17/2024 10:31

FA-2263 CC



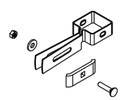

3 CHANNEL WALL FENCE POST
NTS



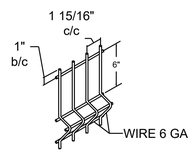

4 WELDED WIRE MESH FENCING
NTS

## NOTES:

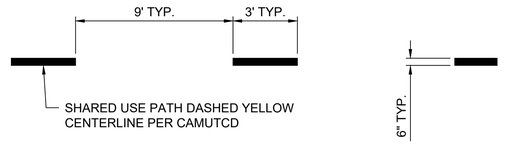
1. UNIVERSAL BRACKET FOR STANDARD USE INCLUDES THE FOLLOWING: 14 GAUGE STEEL COLLAR AND WIRE RETAINING PLATE 1/4 IN x 1 IN, NUT, WASHER AND CARRIAGE BOLT 5/16 IN x 1-1/2 IN, ALL GALVANIZED STEEL.



4a UNIVERSAL COLLAR BRACKET



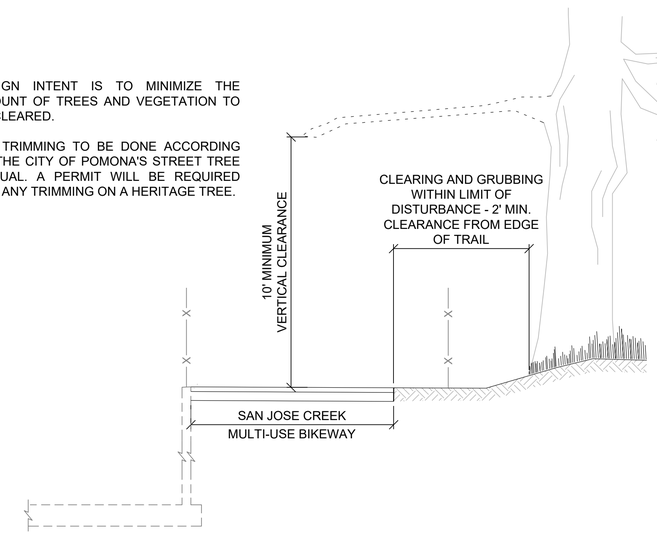

4b MESH DETAIL




5 SHARED-USE PATH DASHED YELLOW CENTERLINE
NTS

6 SHARED-USE PATH SOLID YELLOW CENTERLINE
NTS

1. DESIGN INTENT IS TO MINIMIZE THE AMOUNT OF TREES AND VEGETATION TO BE CLEARED.
2. ALL TRIMMING TO BE DONE ACCORDING TO THE CITY OF POMONA'S STREET TREE MANUAL. A PERMIT WILL BE REQUIRED FOR ANY TRIMMING ON A HERITAGE TREE.




7 VEGETATIVE CLEARING AND GRUBBING DETAIL
NTS

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

CIVIL AND STRIPING DETAILS

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

C061

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

SCALE AS SHOWN

DATE 12.17.2024

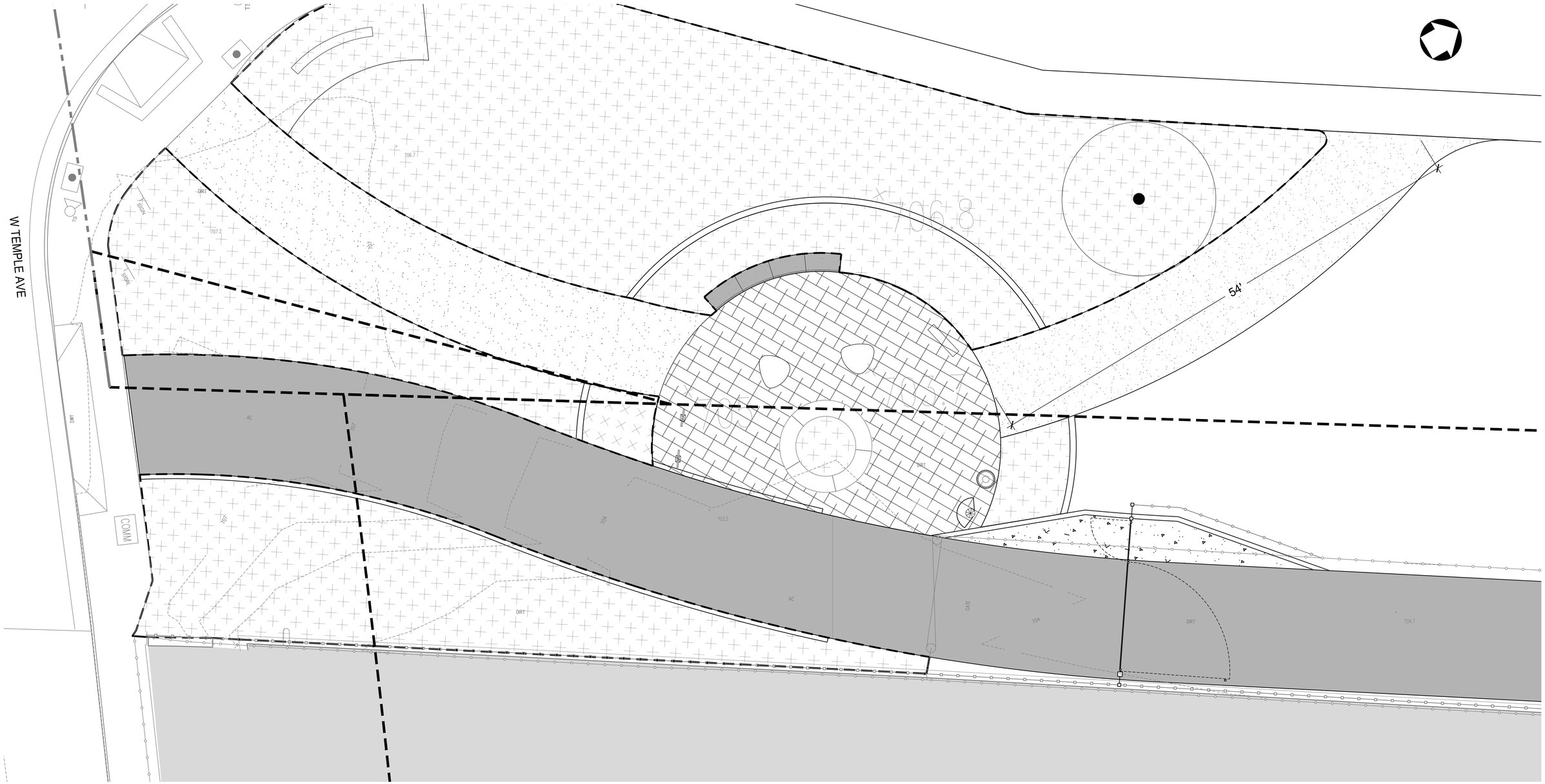
DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: K. DI COCCO
REVIEWED: S. FRIESON

SHT. 56 OF 95 SHTS

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

FA-2263 CD

N:\Shared\PROJECTS\2022\00-2022-171 pomona, ca san jose bikeway\CAD\01_Plans\2022-171_04-C060_CIVIL DETAILS.dwg 12/17/2024 13:26




# TEMPLE TRAILHEAD

10' 5' 0 10' 20'
1" = 10'

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

LG100

IN PROGRESS

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

W TEMPLE AVE
TRAILHEAD GRADING PLANS

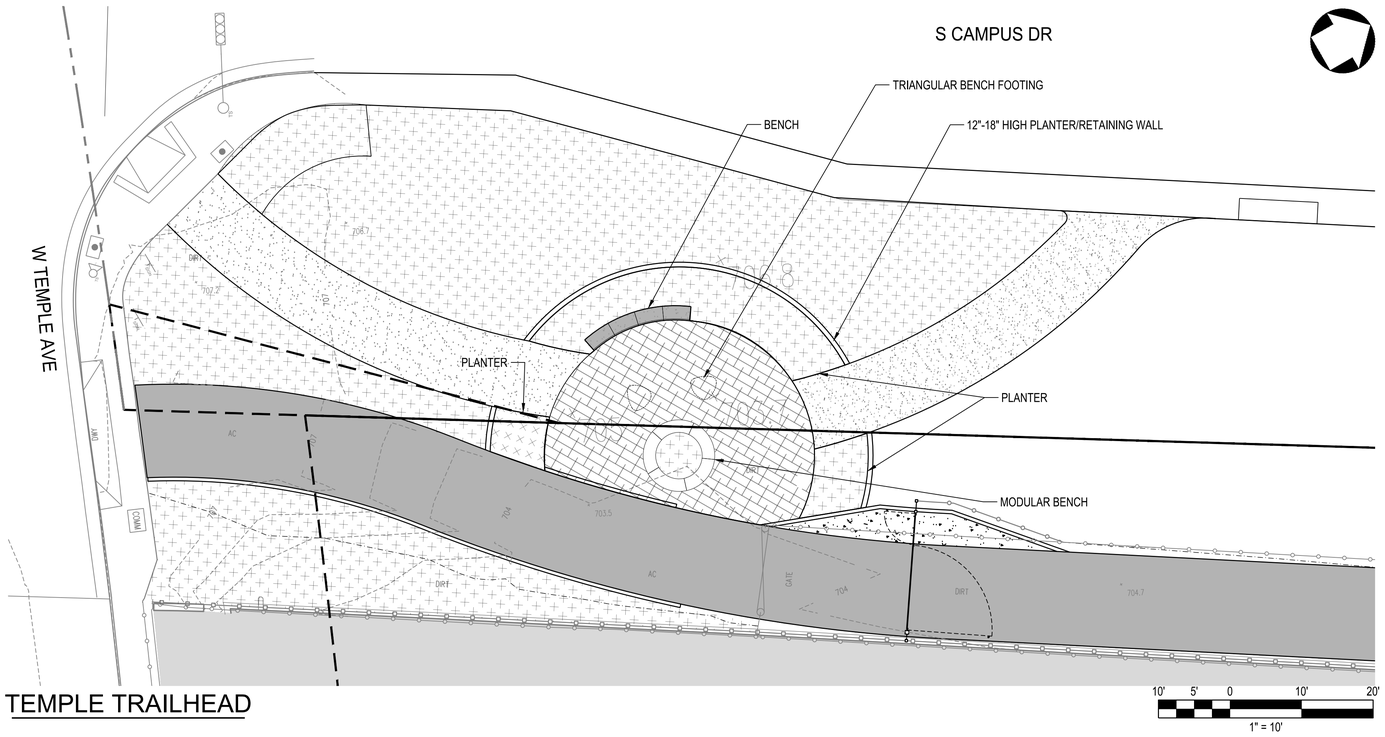
SCALE AS SHOWN
DATE 12.12.2024

DESIGNED: PVT ENG
DRAWN: SA
CHECKED: K. MCKERNIN
REVIEWED: K. MCKERNIN

SHT. 57 OF 95 SHTS

N:\Shared\PROJECTS\2022\00-2022-171 pomona, co san jose bikeway\CAD\01_Plans\2022-171_05-L-GRD.dwg 12/17/2024 10:32

FA-2263 CE




TEMPLE TRAILHEAD

## HARDSCAPE SCHEDULE

| SYMBOL | DESCRIPTION | DETAIL |
|---|---|---|
| | DECOMPOSED GRANITE | 3/L200 |
| | CONCRETE PERMEABLE PAVERS | 4/L200 |
| | MULCH SURFACE - 3" DEPTH | |
| | BIKE PATH | |

# IN PROGRESS

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

LH100

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

W TEMPLE AVE
HARDSCAPE PLANS

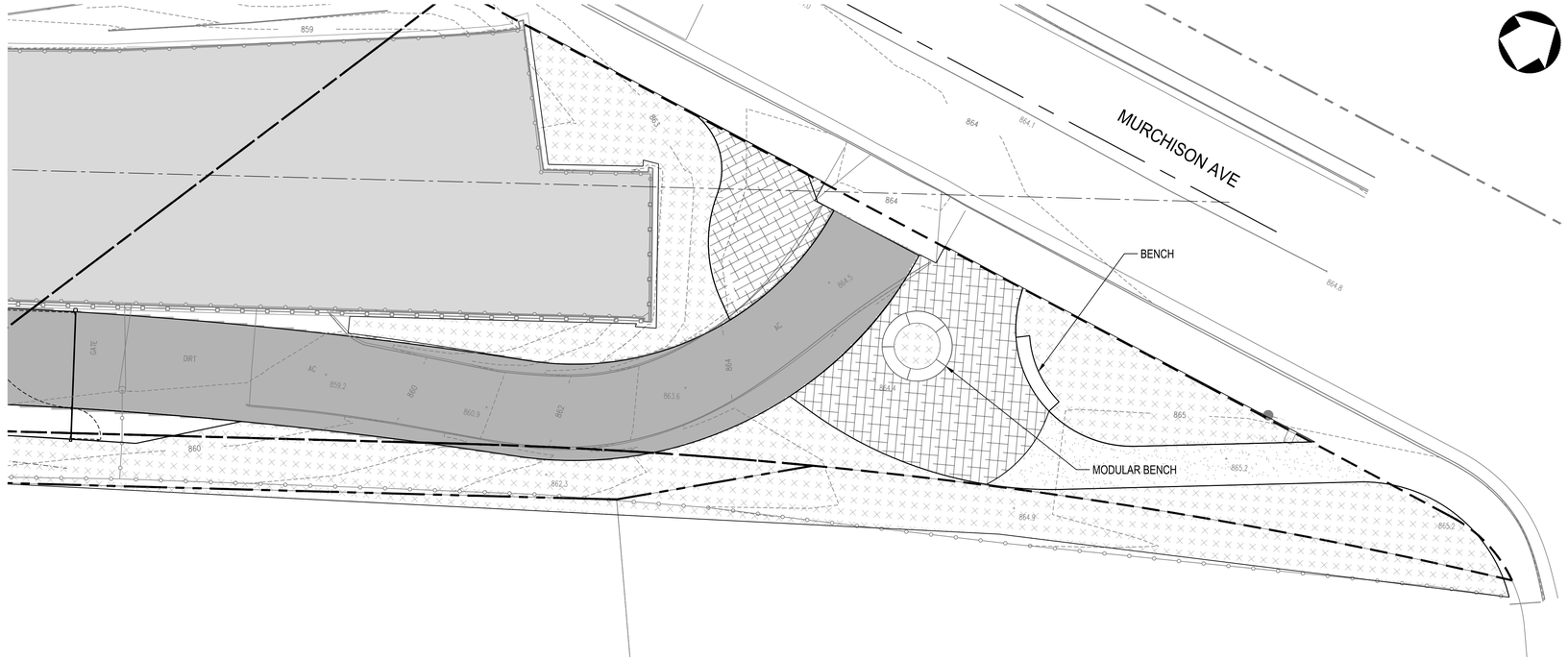
SCALE AS SHOWN
DATE 12.11.2024

DESIGNED: PVT ENG
DRAWN: SA
CHECKED: K. MCKERNIN
REVIEWED: K. MCKERNIN

SHT. 58 OF 95 SHTS

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_05-L-HRD.dwg 12/11/2024 11:37

FD-24 AA




10' 5' 0 10' 20'

1" = 10'

# MURCHISON TRAILHEAD

## HARDSCAPE SCHEDULE

| SYMBOL | DESCRIPTION | DETAIL |
|---|---|---|
| | DECOMPOSED GRANITE | 3/L200 |
| | CONCRETE PERMEABLE PAVERS | 4/L200 |
| | MULCH SURFACE - 3" DEPTH | |
| | BIKE PATH | |

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

LH101

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

MURCHISON AVE
HARDSCAPE PLANS

SCALE
AS SHOWN

DATE
12.11.2024

DESIGNED: PVT ENG
DRAWN: SA
CHECKED: K. MCKERNIN
REVIEWED: K. MCKERNIN

SHT. 59
OF
95 SHTS

Under Ground Service Alert of Southern California
Call: TOLL FREE
1-800
227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_05-L-HRD.dwg 12/11/2024 11:37

FD-24 AB

# IRRIGATION SCHEDULE

| SYMBOL | MANUFACTURER/MODEL/DESCRIPTION | QTY | DETAIL |
|---|---|---|---|
| 1401 1402 | Rain Bird RWS-M-B-C 1401<br>Mini Root Watering System with 4.0" diameter x 18.0" long with locking grate, semi-rigid mesh tube and Rain Bird 1401 0.25 gpm or 1402 0.5 gpm bubbler as indicated. With Check Valve. | 30 | 3/LI200 |

| SYMBOL | MANUFACTURER/MODEL/DESCRIPTION | QTY | DETAIL |
|---|---|---|---|
| | Rain Bird XCZ-100-PRB-COM 1"<br>Wide Flow Drip Control Kit for Commercial Applications. 1" Ball Valve with 1" PESB Valve and 1" Pressure Regulating 40psi Quick-Check Basket Filter. 0.3gpm to 20gpm. | 4 | 5/LI200 |
| | Area to Receive Dripline<br>Netafim TLHCVXR-053-18<br>Techline HCVXR Pressure Compensating Landscape Dripline with Check Valve and Anti-Siphon feature. 0.53 GPH emitters at 18" O.C. Dripline laterals spaced at 15" apart, with emitters offset for triangular pattern. 17mm. | 7,781 l.f. | 9/LI200 |

| SYMBOL | MANUFACTURER/MODEL/DESCRIPTION | QTY | DETAIL |
|---|---|---|---|
| | Rain Bird PEB 1"<br>1", 1-1/2", 2" Plastic Industrial Valves. Low Flow Operating Capability, Globe Configuration. | 2 | 6/LI200 |
| | Nibco T-113<br>Class 125 bronze gate shut off valve with wheel handle, same size as mainline pipe diameter at valve location. Size Range - 1/4" - 3" | 3 | 8/LI200 |
| MV | Buckner-Superior 3000 1"<br>Normally Closed Brass Master Valve that Provides Dirty Water Protection and 3-Way Solenoid Design. Available in 1", 1-1/4", 1-1/2", 2", 2-1/2" and 3" sizes. | 3 | 2/LI200 |
| BF | Febco 825Y 1"<br>Reduced Pressure Backflow Preventer | 3 | 1/LI200 |
| C1 | Hunter XCH-0600-SS-P<br>Electromechanical controller, 6 stations, outdoor model with mounted solar panel. Battery-powered. Stainless Steel Cabinet, mounted with Hunter mounting pole #XCHSPOLE. For residential/commercial use. | 1 | 7/LI200 |
| C2 | Hunter XCH-0600-SS-P<br>Electromechanical controller, 6 stations, outdoor model with mounted solar panel. Battery-powered. Stainless Steel Cabinet, mounted with Hunter mounting pole #XCHSPOLE. For residential/commercial use. | 1 | 7/LI200 |
| C3 | Hunter XCH-0600-SS-P<br>Electromechanical controller, 6 stations, outdoor model with mounted solar panel. Battery-powered. Stainless Steel Cabinet, mounted with Hunter mounting pole #XCHSPOLE. For residential/commercial use. | 1 | |
| FS | Calsense FM1.25-B | 3 | / |
| PMP | Munro CP1502B<br>Complete pump package:<br>• 2-1/2hp, single-phase, high-pressure turf irrig pump, 2in. intake, 1-1/2in. discharge<br>• Pump start + pump protection – SS 220v SmartBox works w/ low-amp (<.35) controllers or 2-wire systems<br>• Pressure gauge<br>• Pressure & temp sensors<br>• Intake & discharge fittings<br>• Enclosure –lockable, powdercoated, SS, vented, flexible design for right/left facing & side/bottom discharge. For product selection assistance or additional info: 800-942-4270 or technicalsupport@munropump.com | 1 | 1/LI200 |
| EN | Strong Box SBBC-30AL<br>Low profile backflow enclosure, with marine grade aluminum. 30in.L, 30in.H, 16.25in.W. Front entry door with flush-mounted locking system | 3 | |

| | | |
|---|---|---|
| M1 | Water Meter 1"<br>New water meter at W Temple Ave. 10" water line. Water pressure provided by City of Pomona Water Resources Department, Roman Richards. | 1 |
| M2 | Water Meter 1"<br>New water meter at Murchison Ave. 8" water line. Water pressure provided by City of Pomona Water Resources Department, Roman Richards. | 1 |
| M3 | Water Meter 1" | 1 |
| | Irrigation Lateral Line: PVC Schedule 40-NP | 142.7 l.f. |
| | Irrigation Lateral Line: PVC Schedule 40-NP 3/4" | 380.0 l.f. |
| | Irrigation Lateral Line: PVC Schedule 40-NP 1" | 5.1 l.f. |
| | Irrigation Mainline: PVC Schedule 40-NP | 23.2 l.f. |
| | Irrigation Mainline: PVC Schedule 40-NP 3/4" | 3.4 l.f. |
| | Irrigation Mainline: PVC Schedule 40-NP 1" | 124.1 l.f. |
| | Pipe Sleeve: PVC Class 200 SDR 21 | 61.2 l.f. |

# VALVE SCHEDULE

| NUMBER | MODEL | SIZE | TYPE | GPM | WIRE | PSI | PSI @ POC | PRECIP |
|---|---|---|---|---|---|---|---|---|
| A-1 | Rain Bird PEB | 1" | Bubbler | 4.5 | | 31.9 | 44.1 | 1.09 in/h |
| A-2 | Rain Bird XCZ-100-PRB-COM | 1" | Area for Dripline | 23.88 | | 66.0 | 84.0 | 0.62 in/h |
| B1 | Rain Bird XCZ-100-PRB-COM | 1" | Area for Dripline | 10.1 | | 53.0 | 68.3 | 0.84 in/h |
| B2 | Rain Bird PEB | 1" | Bubbler | 3 | | 31.6 | 44.1 | 1.06 in/h |
| B3 | Rain Bird XCZ-100-PRB-COM | 1" | Area for Dripline | 9.55 | | 51.8 | 68.7 | 0.58 in/h |
| C-1 | Rain Bird XCZ-100-PRB-COM | 1" | Area for Dripline | 1.19 | | 47.0 | 59.2 | 0.75 in/h |
| C-2 | Rain Bird XCZ-100-PRB-COM | 1" | Area for Dripline | 1.1 | | 47.0 | 59.2 | 0.74 in/h |
| | Common Wire | | | | 164.2 | | | |

**MAWA = Maximum Applied Water Allowance**

MAWA = (Eto - Eppt)(0.62)[(0.7)(LA)+(0.3)(SLA)]
Where:
MAWA = Maximum Applied Water Allowance (gallons per year)
Eto = Reference Evapo-transpiration (for location in inches per year)
Eppt = Effective Precipitation (no more than 25% of local Eto, typically 10%)
0.62 = conversion factor to gallons
0.7 = Eto Adjustment Factor (average Ks of .5 divided by 0.7 irrigation efficiency)
LA = Total irrigated Landscape Area (in square feet) including Special Landscape Area (SLA)
SLA = Portion of the total irrigated Landscape Area identified as Special Landscape Area (recreational turf)
0.45 = The additional ET Adjustment Allowance Factor for Special Landscape Area

| | | |
|---|---|---|
| Enter Eto @ site here = | 55.1 | inches/ year |
| Enter Eppt @ site here = | 1.4 | inches/ year |
| Enter LA @ site here = | 7,781 | square feet |
| Enter SLA @ site here = | 0 | square feet |

| MAWA= | 55.1 | 1.4 | 0.62 | 0.7 | 7,781 | 0.45 | 0 |
|---|---|---|---|---|---|---|---|

MAWA= 181,309 Gallons/Yea × 0.56 Acre Feet/Year
242 Units/Year

**ETWU = Estimated Total Water Use**

ETWU = (Eto)(0.62)[(PF x HA)/IA+ SLA]
Where:
ETWU = Estimated Total Water Use in gallons per year
Eto = Reference Evapo-transpiration (for location in inches per year)
0.62 = conversion factor to gallons
PF = Plant Factor from WOLCOLS
HA = Hydrozone Area [high, medium, low water use areas] (square feet)
IA = Irrigation Efficiency (minimum 0.71)
Special Landscape Area (square feet)

| Hydrozone | Plant water Use Type(s) | Plant Factor (PF)* | Area (square feet) | PF x Area (square feet) | Application Eficiency | Calc. Factor |
|---|---|---|---|---|---|---|
| A1 | Low | 0.3 | 2,666 | 800 | 0.81 | 987 |
| A2 | Low | 0.3 | 4,071 | 1,221 | 0.81 | 1,508 |
| B1 | Low | 0.3 | 1,526 | 458 | 0.81 | 565 |
| B2 | Low | 0.3 | 2,181 | 654 | 0.81 | 808 |
| B3 | Low | 0.3 | 1,615 | 485 | 0.81 | 598 |
| C1 | Low | 0.3 | 153 | 46 | 0.81 | 57 |
| C2 | Low | 0.3 | 143 | 43 | 0.81 | 53 |
| | | | Sum | 3,707 | Sum | 4,576 |
| 6 | SLA | 1.0 | 0 | 0 | 1.00 | 0 |

*Plant Factor from WUCOLS

ETWU = (Eto)(0.62)[(PF x HA)/IA+ SLA]

| | | | | |
|---|---|---|---|---|
| ETWU = | 55.1 | 0.62 | 4,576 | 0 |
| ETWU = | 156,323 | Gallons/Year | | |
| | 209 | Units/Year | | |
| | 0.5 | Acre-Ft/Year | | |

**ETWU must be less than MAWA**

# CRITICAL ANALYSIS

Generated: 2024-11-25 12:18

P.O.C. NUMBER: 01
Water Source Information: New water meter at W Temple Ave. 10" water line. Water pressure provided by City of Pomona Water Resources Department, Roman Richards.

FLOW AVAILABLE
Water Meter Size: 1"
Flow Available 37.5 GPM

PRESSURE AVAILABLE
Static Pressure at POC: 90 PSI
Elevation Change: 1.00 ft
Service Line Size: 10"
Length of Service Line: 20 ft
Pressure Available: 90 PSI

DESIGN ANALYSIS
Maximum Station Flow: 23.88 GPM
Flow Available at POC: 37.5 GPM
Residual Flow Available: 13.62 GPM

Critical Station: A-2
Design Pressure: 40 PSI
Friction Loss: 0.93 PSI
Fittings Loss: 0.1 PSI
Elevation Loss: 0 PSI
Loss through Valve: 25 PSI
Pressure Req. at Critical Station: 66.0 PSI
Loss for Fittings: 0.03 PSI
Loss for Main Line: 0.34 PSI
Loss for POC to Valve Elevation: 0 PSI
Loss for Backflow: 10.7 PSI
Loss for Master Valve: 3.8 PSI
Loss for Water Meter: 3.37 PSI
Critical Station Pressure at POC: 84.3 PSI
Pressure Available: 90 PSI
Residual Pressure Available: 5.7 PSI

# CRITICAL ANALYSIS

Generated: 2024-04-04 12:47

P.O.C. NUMBER: 02
Water Source Information: New water meter at Murchison Ave. 8" water line. Water pressure provided by City of Pomona Water Resources Department, Roman Richards.

FLOW AVAILABLE
Water Meter Size: 1"
Flow Available 37.5 GPM

PRESSURE AVAILABLE
Static Pressure at POC: 44 PSI
Elevation Change: 5.00 ft
Service Line Size: 8"
Length of Service Line: 20 ft
Booster Pump pressure provided: 47 PSI
Pressure Available: 89 PSI

DESIGN ANALYSIS
Maximum Station Flow: 10.1 GPM
Flow Available at POC: 37.5 GPM
Residual Flow Available: 27.4 GPM

Critical Station: B3
Design Pressure: 40 PSI
Friction Loss: 0.23 PSI
Fittings Loss: 0.02 PSI
Elevation Loss: 0 PSI
Loss through Valve: 11.6 PSI
Pressure Req. at Critical Station: 51.8 PSI
Loss for Fittings: 0.29 PSI
Loss for Main Line: 2.94 PSI
Loss for POC to Valve Elevation: 0 PSI
Loss for Backflow: 12.3 PSI
Loss for Master Valve: 0.7 PSI
Loss for Water Meter: 0.65 PSI
Critical Station Pressure at POC: 68.7 PSI
Pressure Available: 89 PSI
Residual Pressure Available: 20.3 PSI

# CRITICAL ANALYSIS

Generated: 2024-11-26 14:54

P.O.C. NUMBER: 03
Water Source Information: New water meter at Corporate Center Drive. 10" water line. Water pressure provided by City of Pomona Water Resources Department, Roman Richards.

FLOW AVAILABLE
Water Meter Size: 1"
Flow Available 37.5 GPM

PRESSURE AVAILABLE
Static Pressure at POC: 68 PSI
Elevation Change: 0.00 ft
Service Line Size: 12"
Length of Service Line: 20 ft
Pressure Available: 68 PSI

DESIGN ANALYSIS
Maximum Station Flow: 1.19 GPM
Flow Available at POC: 37.5 GPM
Residual Flow Available: 36.31 GPM

Design Pressure: 40 PSI
Friction Loss: 0 PSI
Fittings Loss: 0 PSI
Elevation Loss: 0 PSI
Loss through Valve: 7 PSI
Pressure Req. at Critical Station: 47.0 PSI
Loss for Fittings: 0.0 PSI
Loss for Main Line: 0.03 PSI
Loss for POC to Valve Elevation: 0 PSI
Loss for Backflow: 11.8 PSI
Loss for Master Valve: 0.2 PSI
Loss for Water Meter: 0.2 PSI
Critical Station Pressure at POC: 59.2 PSI
Pressure Available: 68 PSI
Residual Pressure Available: 8.77 PSI

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

IRRIGATION LEGEND AND NOTES

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

LI001

SCALE AS SHOWN
DATE 12.9.2024
DESIGNED: PVT ENG
DRAWN: SA
CHECKED: K. MCKERNIN
REVIEWED: K. MCKERNIN
SHT. 60 OF 95 SHTS

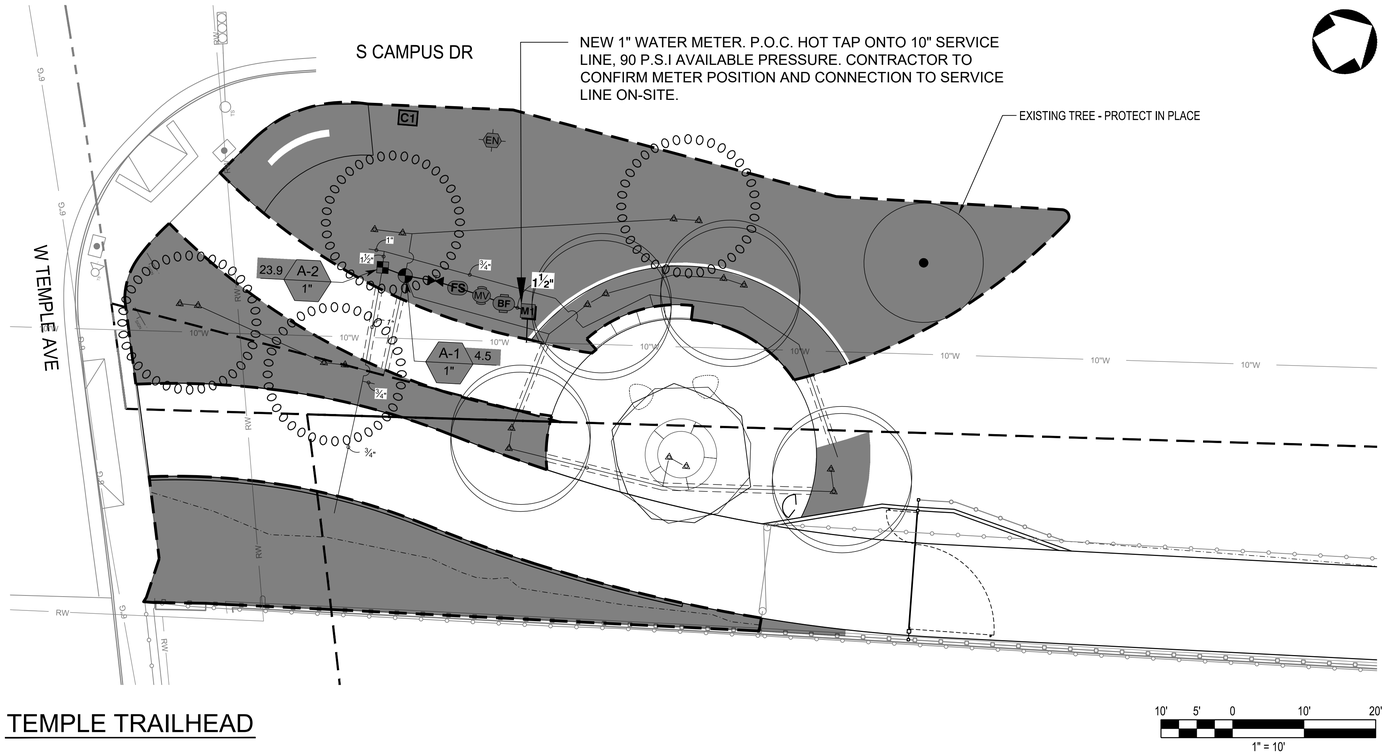
PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_06-L-IRR-NOTES.dwg 12/11/2024 11:38




TEMPLE TRAILHEAD

10' 5' 0 10' 20'
1" = 10'

# IRRIGATION SCHEDULE TEMPLE TRAILHEAD

| SYMBOL | MANUFACTURER/MODEL/DESCRIPTION | QTY | DETAIL |
|---|---|---|---|
| 1401 1402 | Rain Bird RWS-M-B-C 1401<br>Mini Root Watering System with 4.0" diameter x 18.0" long with locking grate, semi-rigid mesh tube and Rain Bird 1401 0.25 gpm or 1402 0.5 gpm bubbler as indicated. With Check Valve. | 18 | 8/LI200 |

| SYMBOL | MANUFACTURER/MODEL/DESCRIPTION | QTY | DETAIL |
|---|---|---|---|
| | Rain Bird XCZ-100-PRB-COM 1"<br>Wide Flow Drip Control Kit for Commercial Applications. 1" Ball Valve with 1" PESB Valve and 1" Pressure Regulating 40psi Quick-Check Basket Filter. 0.3gpm to 20gpm. | 1 | 5/LI200 |
| | Area to Receive Dripline<br>Netafim TLHCVXR-053-18<br>Techline HCVXR Pressure Compensating Landscape Dripline with Check Valve and Anti-Siphon feature. 0.53 GPH emitters at 18" O.C. Dripline laterals spaced at 15" apart, with emitters offset for triangular pattern. 17mm. | 4,071 l.f. | 9/LI200 |

| SYMBOL | MANUFACTURER/MODEL/DESCRIPTION | QTY | DETAIL |
|---|---|---|---|
| | Rain Bird PEB 1"<br>1", 1-1/2", 2" Plastic Industrial Valves. Low Flow Operating Capability, Globe Configuration. | 1 | 6/LI200 |
| | Nibco T-113<br>Class 125 bronze gate shut off valve with wheel handle, same size as mainline pipe diameter at valve location. Size Range - 1/4" - 3" | 1 | 3/LI200 |
| MV | Buckner-Superior 3000 1"<br>Normally Closed Brass Master Valve that Provides Dirty Water Protection and 3-Way Solenoid Design. Available in 1", 1-1/4", 1-1/2", 2", 2-1/2" and 3" sizes. | 1 | 2/LI200 |
| BF | Febco 825Y 1"<br>Reduced Pressure Backflow Preventer | 1 | 1/LI200 |
| C1 | Hunter XCH-0600-SS-P<br>Electromechanical controller, 6 stations, outdoor model with mounted solar panel. Battery-powered. Stainless Steel Cabinet, mounted with Hunter mounting pole #XCHSPOLE. For residential/commercial use. | 1 | 7/LI200 |
| FS | Calsense FM1.25-B | 1 | 2/LI200 |
| EN | Strong Box SBBC-30AL<br>Low profile backflow enclosure, with marine grade aluminum. 30in.L, 30in.H, 16.25in.W. Front entry door with flush-mounted locking system | 1 | 1/LI200 |
| M1 | Water Meter 1"<br>New water meter at W Temple Ave. 10" water line. Water pressure provided by City of Pomona Water Resources Department, Roman Richards. | 1 | |
| | Irrigation Lateral Line: PVC Schedule 40-NP | 139.4 l.f. | |
| | Irrigation Lateral Line: PVC Schedule 40-NP 3/4" | 205.1 l.f. | |
| | Irrigation Mainline: PVC Schedule 40-NP | 7.5 l.f. | |
| | Irrigation Mainline: PVC Schedule 40-NP 3/4" | 3.4 l.f. | |
| | Pipe Sleeve: PVC Class 200 SDR 21 | 41.0 l.f. | |

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

W TEMPLE AVE
IRRIGATION PLANS

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

LI100

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

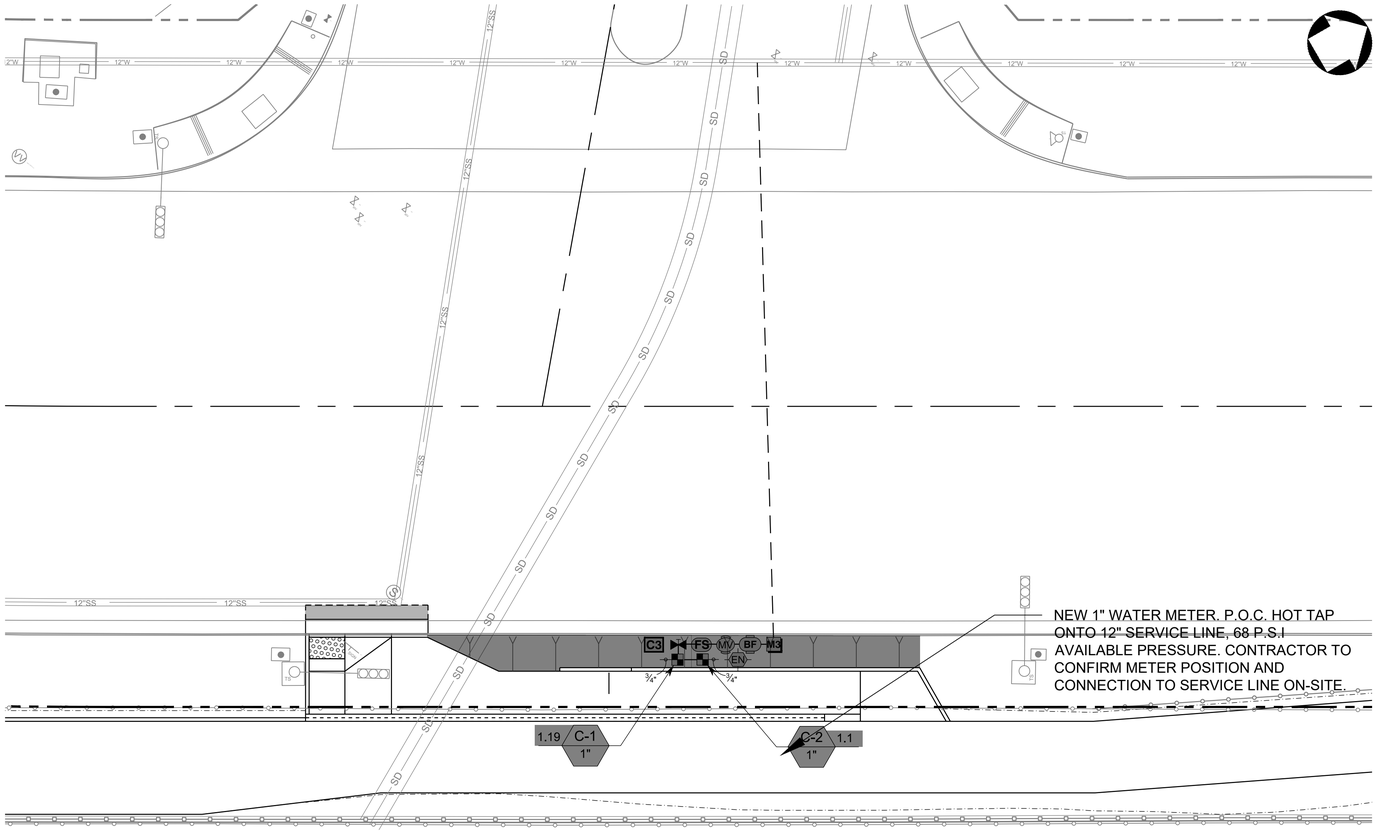
SCALE AS SHOWN
DATE 12.11.2024

DESIGNED: PVT ENG
DRAWN: SA
CHECKED: K. MCKERNIN
REVIEWED: K. MCKERNIN

SHT. 61 OF 95 SHTS

N:\Stored\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_06-L-IRR.dwg 12/11/2024 11:38

FD-24 AD




CORPORATE CENTER DR ACCESS POINT

10' 5' 0 10' 20'

1" = 10'

# IRRIGATION SCHEDULE CORPORATE CTR DR

| SYMBOL | MANUFACTURER/MODEL/DESCRIPTION | QTY | DETAIL |
|---|---|---|---|
| | Rain Bird XCZ-100-PRB-COM 1" Wide Flow Drip Control Kit for Commercial Applications. 1" Ball Valve with 1" PESB Valve and 1" Pressure Regulating 40psi Quick-Check Basket Filter. 0.3gpm to 20gpm. | 1 | 5/LI200 |
| | Area to Receive Dripline Netafim TLHCVXR-053-18 Techline HCVXR Pressure Compensating Landscape Dripline with Check Valve and Anti-Siphon feature. 0.53 GPH emitters at 18" O.C. Dripline laterals spaced at 15" apart, with emitters offset for triangular pattern. 17mm. | 381.3 l.f. | 9/LI200 DETAIL |

| SYMBOL | MANUFACTURER/MODEL/DESCRIPTION | QTY | DETAIL |
|---|---|---|---|
| | Nibco T-113 Class 125 bronze gate shut off valve with wheel handle, same size as mainline pipe diameter at valve location. Size Range - 1/4" - 3" | 1 | 3/LI200 |
| MV | Buckner-Superior 3000 1" Normally Closed Brass Master Valve that Provides Dirty Water Protection and 3-Way Solenoid Design. Available in 1", 1-1/4", 1-1/2", 2", 2-1/2" and 3" sizes. | 1 | 2/LI200 |
| BF | Febco 825Y 1" Reduced Pressure Backflow Preventer | 1 | 1/LI200 |
| C3 | Hunter XCH-0600-SS-P Electromechanical controller, 6 stations, outdoor model with mounted solar panel. Battery-powered. Stainless Steel Cabinet, mounted with Hunter mounting pole #XCHSPOLE. For residential/commercial use. | 1 | 7/LI200 |
| FS | Calsense FM1.25-B | 1 | 2/LI200 |
| EN | Strong Box SBBC-30AL Low profile backflow enclosure, with marine grade aluminum. 30in.L, 30in.H, 16.25in.W. Front entry door with flush-mounted locking system | 1 | 1/LI200 |
| M3 | Water Meter 1" | 1 | |
| | Irrigation Lateral Line: PVC Schedule 40-NP | 3.3 l.f. | |
| | Irrigation Mainline: PVC Schedule 40-NP | 15.7 l.f. | |

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

CORPORATE CENTER DR
IRRIGATION PLANS

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

LI101

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|
| | | | |

SCALE AS SHOWN

DATE 12.11.2024

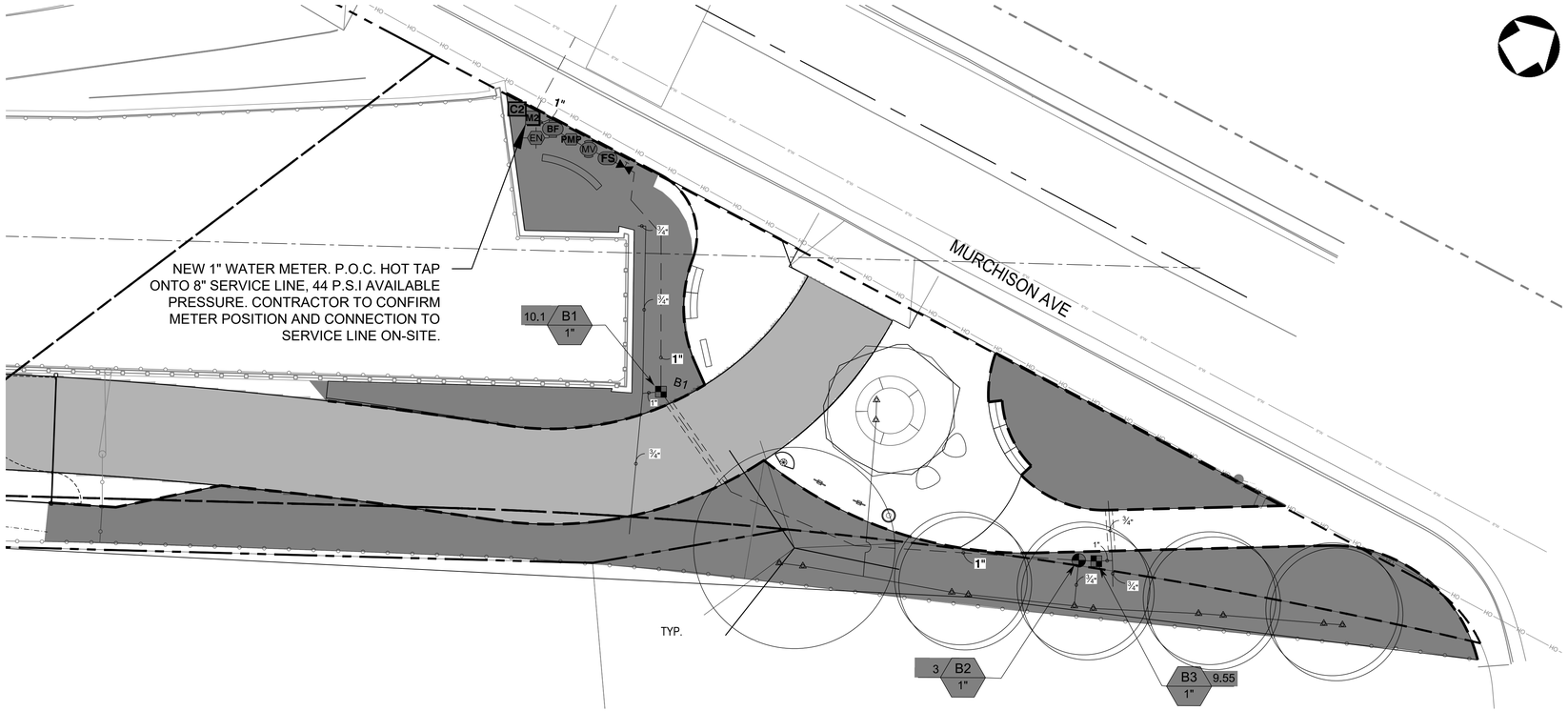
DESIGNED: PVT ENG
DRAWN: SA
CHECKED: K. MCKERNIN
REVIEWED: K. MCKERNIN

SHT. 62 OF 95 SHTS

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_06-LI-IRR.dwg 12/11/2024 11:38

FD-24 AE




# MURCHISON TRAILHEAD

## IRRIGATION SCHEDULE MURCHISON TRAILHEAD

| SYMBOL | MANUFACTURER/MODEL/DESCRIPTION | QTY | DETAIL |
|---|---|---|---|
| 1401 1402 | Rain Bird RWS-M-B-C 1401<br>Mini Root Watering System with 4.0" diameter x 18.0" long with locking grate, semi-rigid mesh tube and Rain Bird 1401 0.25 gpm or 1402 0.5 gpm bubbler as indicated. With Check Valve. | 12 | 8/LI200 |

| SYMBOL | MANUFACTURER/MODEL/DESCRIPTION | QTY | DETAIL |
|---|---|---|---|
| | Rain Bird XCZ-100-PRB-COM 1"<br>Wide Flow Drip Control Kit for Commercial Applications. 1" Ball Valve with 1" PESB Valve and 1" Pressure Regulating 40psi Quick-Check Basket Filter. 0.3gpm to 20gpm. | 2 | 5/LI200 |
| | Area to Receive Dripline<br>Netafim TLHCVXR-053-18<br>Techline HCVXR Pressure Compensating Landscape Dripline with Check Valve and Anti-Siphon feature. 0.53 GPH emitters at 18" O.C. Dripline laterals spaced at 15" apart, with emitters offset for triangular pattern. 17mm. | 3,328 l.f. | 9/LI200 |

| SYMBOL | MANUFACTURER/MODEL/DESCRIPTION | QTY | DETAIL |
|---|---|---|---|
| | Rain Bird PEB 1"<br>1", 1-1/2", 2" Plastic Industrial Valves. Low Flow Operating Capability, Globe Configuration. | 1 | 6/LI200 |
| | Nibco T-113<br>Class 125 bronze gate shut off valve with wheel handle, same size as mainline pipe diameter at valve location. Size Range - 1/4" - 3" | 1 | 3/LI200 |

## IRRIGATION SCHEDULE MURCHISON TRAILHEAD

| SYMBOL | MANUFACTURER/MODEL/DESCRIPTION | QTY | DETAIL |
|---|---|---|---|
| MV | Buckner-Superior 3000 1"<br>Normally Closed Brass Master Valve that Provides Dirty Water Protection and 3-Way Solenoid Design. Available in 1", 1-1/4", 1-1/2", 2", 2-1/2" and 3" sizes. | 1 | 2/LI200 |
| BF | Febco 825Y 1"<br>Reduced Pressure Backflow Preventer | 1 | 1/LI200 |
| C2 | Hunter XCH-0600-SS-P<br>Electromechanical controller, 6 stations, outdoor model with mounted solar panel. Battery-powered. Stainless Steel Cabinet, mounted with Hunter mounting pole #XCHSPOLE. For residential/commercial use. | 1 | 7/LI200 |
| FS | Calsense FM1.25-B | 1 | 2/LI200 |
| PMP | Munro CP1502B<br>Complete pump package:<br>• 2-1/2hp, single-phase, high-pressure turf irrig pump, 2in. intake, 1-1/2in. discharge<br>• Pump start + pump protection – SS 220v SmartBox works w/ low-amp (<.35) controllers or 2-wire systems<br>• Pressure gauge<br>• Pressure & temp sensors<br>• Intake & discharge fittings<br>• Enclosure –lockable, powdercoated, SS, vented, flexible design for right/left facing & side/bottom discharge. For product selection assistance or additional info: 800-942-4270 or technicalsupport@munropump.com | 1 | |
| EN | Strong Box SBBC-30AL<br>Low profile backflow enclosure, with marine grade aluminum. 30in.L, 30in.H, 16.25in.W. Front entry door with flush-mounted locking system | 1 | 1/LI200 |
| M2 | Water Meter 1"<br>New water meter at Murchison Ave. 8" water line. Water pressure provided by City of Pomona Water Resources Department, Roman Richards. | 1 | |
| | Irrigation Lateral Line: PVC Schedule 40-NP 3/4" | 174.9 l.f. | |
| | Irrigation Lateral Line: PVC Schedule 40-NP 1" | 5.1 l.f. | |
| | Irrigation Mainline: PVC Schedule 40-NP 1" | 124.1 l.f. | |
| | Pipe Sleeve: PVC Class 200 SDR 21 | 20.3 l.f. | |

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

MURCHISON AVE
IRRIGATION PLANS

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

LI102

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

SCALE AS SHOWN
DATE 12.11.2024

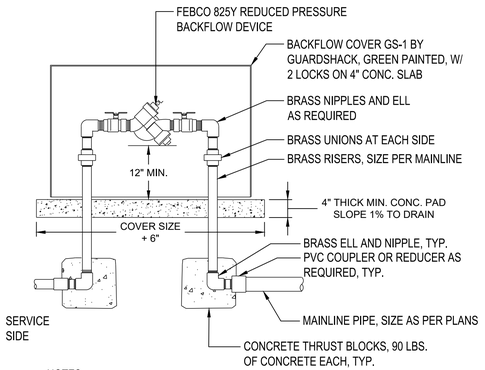
DESIGNED: PVT ENG
DRAWN: SA
CHECKED: K. MCKERNIN
REVIEWED: K. MCKERNIN

SHT. 63 OF 95 SHTS

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_06-L-IRR.dwg 12/11/2024 11:38

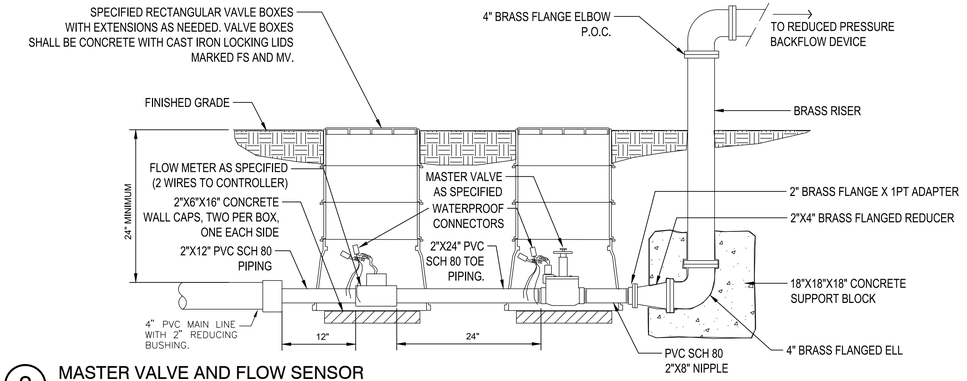
FD-24 AF




NOTES:
1. ALL FITTINGS AND RISERS TO BE RED BRASS
2. VERIFY EXACT LOCATION WITH ENGINEER PRIOR TO INSTALLATION
3. INSTALL BACKFLOW PREVENTER AS REQUIRED BY LOCAL CODES AND HEALTH DEPARTMENT. VERIFY LOCAL REQUIREMENTS PRIOR TO INSTALLATION.

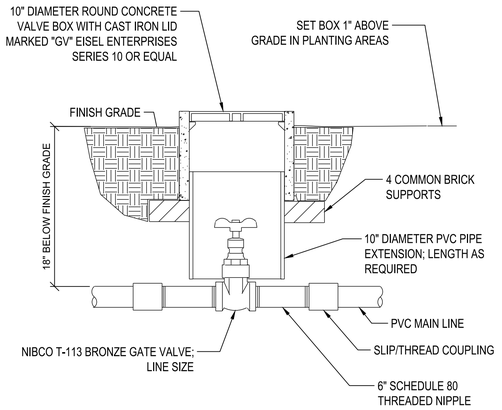
## 1 BACKFLOW PREVENTER

N.T.S. P-CO-12



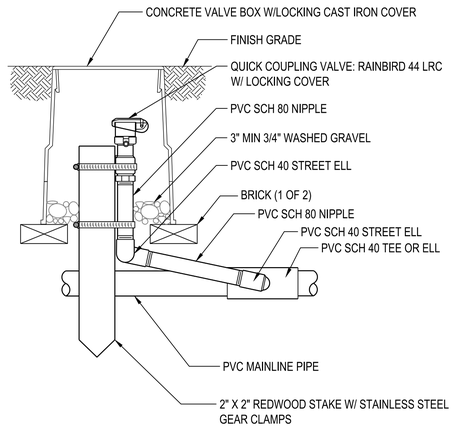

## 2 MASTER VALVE AND FLOW SENSOR

N.T.S. P-GL-29



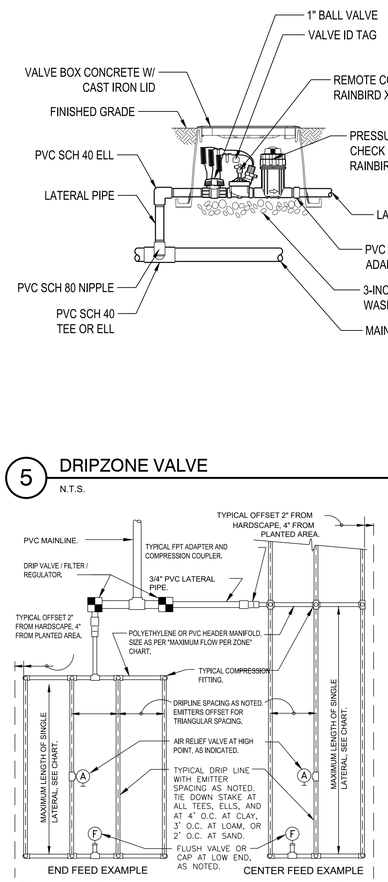

## 3 GATE VALVE

N.T.S. P-ME-22



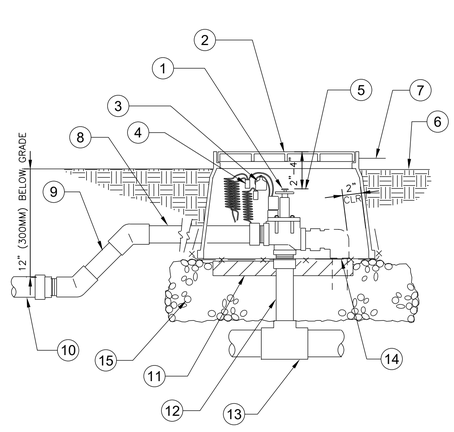

## 4 QUICK COUPLER VALVE

N.T.S. P-GL-09




## 5 DRIPZONE VALVE

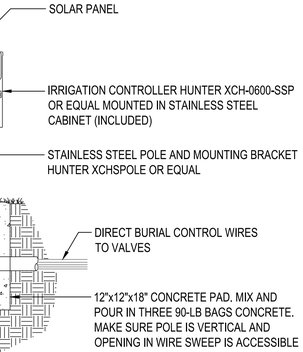
N.T.S. P-GL-06




1. REMOTE CONTROL VALVE AS SPECIFIED, ONE PER BOX.
2. 10X15 RECTANGULAR VALVE BOX.
3. PLASTIC I.D. TAG AT EACH VALVE.
4. WATER PROOF WIRE CONNECTORS ON 30" LOOPED WIRES.
5. 2" (50MM) MINIMUM, 4" (100MM) MAXIMUM BELOW TOP OF BOX.
6. 2" (100MM) ABOVE FINISH GRADE AT SHRUBS.
7. 3/4" (19MM) ABOVE FINISH GRADE AT LAWN.
8. OUTLET PIPE SAME SIZE AS VALVE, 24" MINIMUM (300MM) TO FIRST FITTING.
9. 45 DEGREE DOWN AS REQUIRED TO LATERAL PIPE DEPTH.
10. INCREASE LATERAL LINE SIZE AS PER IRRIGATION PLAN.
11. TWO 6X2X16 CONCRETE BLOCK CAPS, ONE EACH SIDE OF THE BOX.
12. SCHEDULE 80 RISER.
13. MAIN LINE AS OCCURS.
14. 1/2" WIRE CLOTH GOPHER SCREEN, WRAP UP SIDES.
15. 6" (150MM) THICK LAYER OF PEA GRAVEL BASE.

## 6 REMOTE CONTROL VALVE

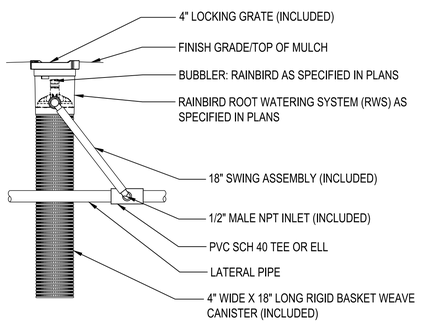
1 1/2" = 1'-0" P-SA2-05




NOTE: MAKE SURE CONCRETE PAD IS DRY BEFORE CONTINUING WITH THE INSTALLATION

## 7 SOLAR POWERED CONTROLLER

1 1/2" = 1'-0" P-ME-28




NOTES:
1. INSTALL PRODUCT SO THAT THE GRATE IS EVEN WITH THE FINISHED GRADE OR TOP OF MULCH
2. WHEN INSTALLING IN HARD OR CLAY SOILS, ADD ¾" GRAVEL UNDER AND AROUND UNIT TO ALLOW FASTER WATER INFILTRATION
3. ONCE RWS HAS BEEN INSTALLED FILL BASKET WITH PEA GRAVEL BEFORE LOCKING LID

## 8 ROOT WATERING SYSTEM

N.T.S. P-GL-04



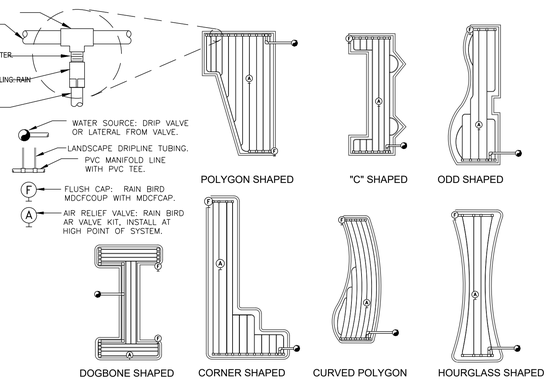

| MAXIMUM LATERAL LENGTH (FEET) | | | | | | |
|---|---|---|---|---|---|---|
| | EMITTER FLOW RATE GPH | | | | | |
| PSI | 12" SPACING 0.6 | 0.9 | 18" SPACING 0.6 | 0.9 | 24" SPACING 0.6 | 0.9 |
| 10 | 125 | 96 | 175 | 135 | 218 | 171 |
| 20 | 249 | 191 | 350 | 171 | 442 | 340 |
| 30 | 307 | 236 | 434 | 333 | 550 | 422 |
| 40 | 350 | 268 | 495 | 380 | 627 | 171 |
| 50 | 125 | 96 | 175 | 135 | 218 | 171 |
| 60 | 125 | 96 | 175 | 135 | 218 | 171 |

| GRID PRECIPITATION RATES (IN/HR) | | | |
|---|---|---|---|
| | | EMITTER FLOW RATE | |
| EMITTER SPACING | LATERAL SPACING | 0.6 | 0.9 |
| 12 | 12 | 0.96 | .44 |
| 18 | 18 | 0.69 | .03 |
| 24 | 24 | 0.28 | 0.41 |

| LATERAL FLOW PER 100 FT (GPM) | | | |
|---|---|---|---|
| EMITTER FLOW | 12" SPACING | 18" SPACING | 24" SPACING |
| 0.6 GPH | 1.0 GPM | 0.67 GPM | 0.50 GPM |
| 0.9 GPH | 1.5 GPM | 1.0 GPM | 0.75 GPM |

| MAXIMUM FLOW PER ZONE | | |
|---|---|---|
| | MAX GPM | PSI LOSS |
| SCHEDULE 40 PVC HEADER SIZE | | |
| 1/2" | 4.7 GPM | 7.7 PSI |
| 3/4" | 8.3 GPM | 5.6 PSI |
| 1" | 13.5 GPM | 4.2 PSI |
| 1-1/2" | 33.9 GPM | 2.9 PSI |
| 2" | 52.4 GPM | 1.9 PSI |
| POLY PIPE HEADER SIZE | | |
| 1/2" | 4.7 GPM | 8.8 PSI |
| 3/4" | 8.3 GPM | 6.3 PSI |
| 1" | 13.5 GPM | 4.8 PSI |
| 1-1/2" | 31.8 GPM | 2.9 PSI |
| 2" | 52.4 GPM | 2.2 PSI |

SLOPED CONDITION NOTE:
1. DRIPLINE LATERALS SHOULD FOLLOW THE CONTOURS OF THE SLOPE WHENEVER POSSIBLE.
2. INSTALL AIR RELIEF VALVE AT HIGHEST POINT.
3. NORMAL SPACING WITHIN THE TOP ⅓ OF SLOPE.
4. INSTALL DRIPLINE AT 25% GREATER SPACING AT THE BOTTOM ⅓ OF THE SLOPE.
5. WHEN ELEVATION CHANGE IS 10 FT OR MORE, ZONE THE BOTTOM ⅓ ON A SEPARATE VALVE.




## 9 TYPICAL RAIN BIRD DRIPLINE REQUIREMENTS

N.T.S. FX-IR-RB-DRIP-25

CALL BEFORE YOU DIG
Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

LI200

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

IRRIGATION DETAILS

SCALE AS SHOWN

DATE 12.6.2024

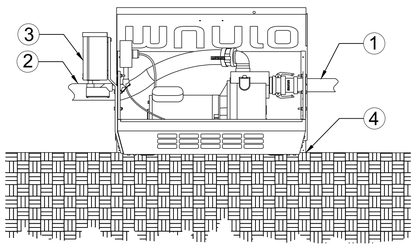
DESIGNED: PVT ENG
DRAWN: SA
CHECKED: K. MCKERNIN
REVIEWED: K. MCKERNIN

SHT. 64 OF 95 SHTS

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_06-L-IRR-DET.dwg 12/11/2024 11:39

FD-24 AG

1. 2" INTAKE LINE
2. 1"-1 1/2" DISCHARGE LINE
3. 208 230 V POWER
4. FINISH GRADE (PUMP CAN BE PLACED ON GROUND OR CONCRETE PAD)




## 1 MUNRO COMPLETE PRO 3HP SIDE DISCHARGE

1" = 1'-0"

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

LI201

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

IRRIGATION DETAILS

SCALE AS SHOWN

DATE 12.6.2024

DESIGNED: PVT ENG
DRAWN: SA
CHECKED: K. MCKERNIN
REVIEWED: K. MCKERNIN

SHT. 65 OF 95 SHTS

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_06-L-IRR-DET.dwg 12/11/2024 11:39

FD-24 AH

# PLANT SCHEDULE

| SYMBOL | CODE | BOTANICAL NAME | COMMON NAME | SIZE | PLS/POUND | | QTY | REMARKS |
|---|---|---|---|---|---|---|---|---|
| TREES | | | | | | | | |
| | AS | Arbutus unedo | Strawberry Tree | 36" | L | | 8 | |
| | CW | Cercis occidentalis | Western Redbud Multi-trunk | 36" | L | | 2 | |
| | CL | Chilopsis linearis | Desert Willow | 24" box | M | | 1 | STANDARD |
| | CT | x Chitalpa tashkentensis | Chitalpa | 36" | L | | 4 | |
| SYMBOL | CODE | BOTANICAL NAME | COMMON NAME | SIZE | | SPACING | QTY | REMARKS |
| SHRUBS | | | | | | | | |
| | AM2 | Achillea millefolium | Common Yarrow | 1 gal. | L | 18" o.c. | 14 | NATIVE |
| | AE | Arctostaphylos edmundsii 'Carmel Sur' | Carmel Sur Little Sur Manzanita | 1 gal. | L | 72" o.c. | 3 | |
| | AU | Arctostaphylos uva-ursi | Kinnikinnick | 1 gal. | L | 72" o.c. | 6 | |
| | AP | Aristida purpurea | Purple Threeawn | 1 gal. | L | 24" o.c. | 58 | |
| | AM | Artemisia californica 'Montara' | Montara California Sagebrush | 1 gal. | VL | 48" o.c. | 42 | |
| | BP | Baccharis pilularis consanguinea `Pozo Surf` | Pozo Surf Coyote Brush | 5 gal. | L | 36" o.c. | 58 | NATIVE |
| | BS2 | Baccharis sarothroides | Desertbroom Baccharis | 5 gal. | L | 72" o.c. | 9 | |
| | CY | Ceanothus griseus horizontalis 'Yankee Point' | Yankee Point Carmel Creeper | 5 gal. | L | 60" o.c. | 116 | |
| | DA2 | Diplacus aurantiacus | Sticky Monkeyflower | 1 gal. | VL | 36" o.c. | 28 | NATIVE |
| | EE | Epilobium canum latifolium `Everett`s Choice` | Everett`s California Fuchsia | 1 gal. | L | 48" o.c. | 18 | NATIVE |
| | EW | Eriogonum fasciculatum `Warriner Lytle` | Warriner Lytle California Buckwheat | 5 gal. | VL | 48" o.c. | 25 | NATIVE |
| | LC | Leymus condensatus | Giant Wild Rye | 5 gal. | M | 48" o.c. | 2 | |
| | MD | Muhlenbergia dubia | Pine Muhly | 1 gal. | L | 24" o.c. | 317 | PRUNE FLOWERS |
| | SM | Salvia chamaedryoides | Germander Sage | 1 gal. | M | 48" o.c. | 25 | NATIVE |
| | SW2 | Salvia clevelandii 'Winnifred Gilman' | Winnifred Gilman Cleveland Sage | 5 gal. | L | 48" o.c. | 14 | NATIVE |
| | SP | Salvia leucophylla | Purple Sage | 1 gal. | L | 48" o.c. | 28 | |
| | SM3 | Salvia mellifera | Black Sage | 5 gal. | L | 84" o.c. | 5 | NATIVE |
| | SR | Salvia mellifera 'Jade Carpet' | Jade Carpet Black Sage | 5 gal. | L | 60" o.c. | 19 | |

# PLANTING NOTES

1. PRIOR TO BEGINNING WORK, LANDSCAPE CONTRACTOR SHALL REVIEW THE CIVIL ENGINEERING DRAWINGS FOR ANY SPECIAL CONDITIONS PARTICULARLY AS THEY PERTAIN TO GRADING FEATURES SUCH AS SWALES, DETENTION BASINS AND INFILTRATION AREAS THAT MAY HAVE AN EFFECT ON PLANTING AREAS.
2. LOCATIONS OF PLANTS ARE SCHEMATIC. ALL SHRUBS TO BE PLANTED A MINIMUM OFFSET OF TWO (2) FEET FROM ANY EXISTING UTILITIES OR STRUCTURES AND TREES A MINIMUM THREE (5) FEET FROM UTILITIES OR STRUCTURES.
3. ALL TREES TO BE TAGGED BY LANDSCAPE ARCHITECT PRIOR TO PURCHASE.
4. LANDSCAPE ARCHITECT OR PROJECT REPRESENTATIVE TO BE PRESENT TO APPROVE PLANT MATERIAL WHEN DELIVERED TO PROJECT SITE.
5. ALL PLANTS AND TREES STORED ON-SITE TO FOLLOW PROCEDURES IN PROJECT SPECIFICATIONS.
6. PLANTS ARE SHOWN DIAGRAMMATICALLY ON PLAN THEREFORE PLANT SPACING IN PLANTING NOTES AND PLANTING SPECIFICATIONS TAKE PRECEDENCE TO PLANTS SHOWN ON THE PLAN. CONTRACTOR IS TO CALCULATE QUANTITY OF PLANTS CALLED FOR AND INSTALL ALL THAT ARE SHOWN ON PLAN.
7. ALL LANDSCAPE PLANTING, IRRIGATION AND PAVING DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED AND APPROVED BY OWNER'S REPRESENTATIVE BEFORE 100% COMPLETION OF CONSTRUCTION.
8. WHERE MULCH IS SPECIFIED, PER PLANS, SPREAD 3-4" LAYER OF MATERIAL UNDER AND IN BETWEEN ALL PLANTS SO AS TO LEAVE SOIL COMPLETELY COVERED WITH MULCH. NO MULCH SHALL BE PLACED WITHIN 2' OF TREE CENTER.
9. ALL TREES TO RECEIVE ROOT CONTROL BARRIERS PER PLAN. INSTALL ROOT BARRIER PER MANUFACTURER SPECIFICATION. ROOT BARRIER SHALL EXTEND 10 LINEAR FEET BEYOND TREE TRUNK IN EACH DIRECTION (20 FEET OF ROOT BARRIER ON EACH SIDE, 2 SIDES TOTAL) BETWEEN HARDSCAPE ELEMENTS OR AS SHOWN ON PLANS.
10. PRIOR TO PLANTING A TREE FILL THE HOLE WITH 10 GALLONS OF WATER. LET DRAIN, AMEND AND AFTER PLANTING, EACH TREE SHALL BE WATERED WITH A MINIMUM OF 20 GALLONS OF WATER. REPEAT THE WATERING TWICE IN THE NEXT 3 DAYS, NOT SOONER THAN AT 24-HOUR INTERVALS.
11. SOIL TESTS TO BE CONDUCTED AS DESCRIBED IN LANDSCAPE SPECIFICATIONS. THESE TESTS ARE TO DETERMINE RECOMMENDED AMOUNTS OF FERTILIZER AND ANY HARMFUL SUBSTANCES THAT REQUIRE MITIGATION. SEE SPECIFICATIONS FOR FURTHER INFORMATION.
12. DURING SOIL PREPARATION AMEND WITH GYPSUM (AGRICULTURAL CALCIUM SULFATE CA SO4) PER AMOUNT RECOMMENDED BY THE SOIL TEST RESULTS. SEE SPECIFICATIONS FOR FURTHER INFORMATION.
13. LANDSCAPE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE GENERAL CONTRACTOR TO DISCUSS ANY LANDSCAPE ISSUES BEFORE START OF CONSTRUCTION.
14. THE CONTRACTOR SHALL MAINTAIN PLANTED AREAS DURING THE PLANT ESTABLISHMENT PERIOD BY MEANS OF CONTINUOUS WATERING, PRUNING, RAISING ROOT BALLS WHICH SETTLE BELOW GRADE, APPLICATION OF SPRAYS WHICH ARE NECESSARY TO KEEP THE PLANTINGS FREE OF INSECTS AND DISEASES, FERTILIZING, WEEDING, AND/OR OTHER OPERATIONS NECESSARY FOR PROPER CARE AND UPKEEP.

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

PLANTING NOTES

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

L001

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

SCALE AS SHOWN

DATE 12.6.2024

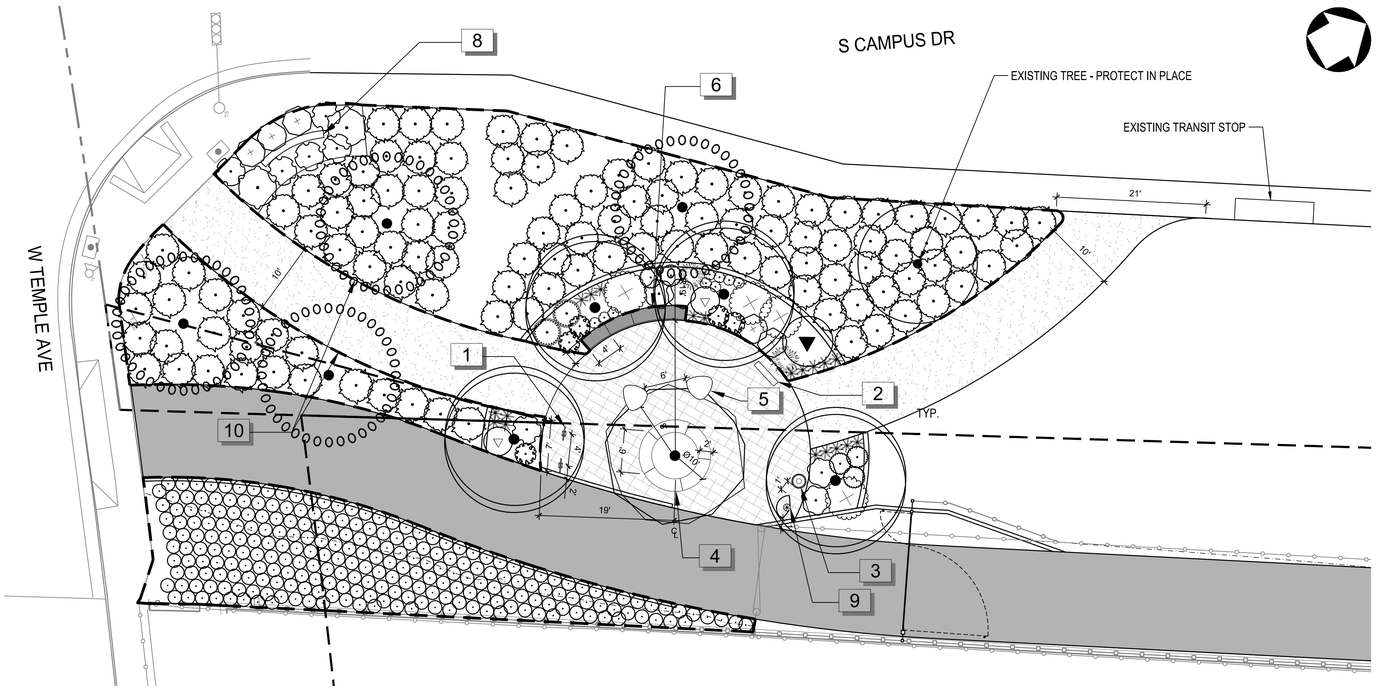
DESIGNED: PVT ENG
DRAWN: SA
CHECKED: K. MCKERNIN
REVIEWED: K. MCKERNIN

SHT. 66 OF 95 SHTS

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_05-L-PLA-NOTES.dwg 12/11/2024 11:39

FD-24 AI




# TEMPLE TRAILHEAD

## PLANT SCHEDULE

| SYMBOL | CODE | BOTANICAL NAME | COMMON NAME | SIZE | PLS/POUND | SPACING | QTY | REMARKS |
|---|---|---|---|---|---|---|---|---|
| TREES | | | | | | | | |
| | AS | Arbutus unedo | Strawberry Tree | 36" | L | | 8 | |
| | CW | Cercis occidentalis | Western Redbud Multi-trunk | 36" | L | | 2 | |
| | CL | Chilopsis linearis | Desert Willow | 24" box | M | | 1 | STANDARD |
| | CT | x Chitalpa tashkentensis | Chitalpa | 36" | L | | 4 | |
| SYMBOL | CODE | BOTANICAL NAME | COMMON NAME | SIZE | | SPACING | QTY | REMARKS |
| SHRUBS | | | | | | | | |
| | AM2 | Achillea millefolium | Common Yarrow | 1 gal. | L | 18" o.c. | 14 | NATIVE |
| | AE | Arctostaphylos edmundsii 'Carmel Sur' | Carmel Sur Little Sur Manzanita | 1 gal. | L | 72" o.c. | 3 | |
| | AU | Arctostaphylos uva-ursi | Kinnikinnick | 1 gal. | L | 72" o.c. | 6 | |
| | AP | Aristida purpurea | Purple Threeawn | 1 gal. | L | 24" o.c. | 58 | |
| | AM | Artemisia californica 'Montara' | Montara California Sagebrush | 1 gal. | VL | 48" o.c. | 42 | |
| | BP | Baccharis pilularis consanguinea `Pozo Surf` | Pozo Surf Coyote Brush | 5 gal. | L | 36" o.c. | 58 | NATIVE |
| | BS2 | Baccharis sarothroides | Desertbroom Baccharis | 5 gal. | L | 72" o.c. | 9 | |
| | CY | Ceanothus griseus horizontalis 'Yankee Point' | Yankee Point Carmel Creeper | 5 gal. | L | 60" o.c. | 116 | |
| | DA2 | Diplacus aurantiacus | Sticky Monkeyflower | 1 gal. | VL | 36" o.c. | 28 | NATIVE |
| | EE | Epilobium canum latifolium `Everett`s Choice` | Everett`s California Fuchsia | 1 gal. | L | 48" o.c. | 18 | NATIVE |
| | EW | Eriogonum fasciculatum `Warriner Lytle` | Warriner Lytle California Buckwheat | 5 gal. | VL | 48" o.c. | 25 | NATIVE |
| | LC | Leymus condensatus | Giant Wild Rye | 5 gal. | M | 48" o.c. | 2 | |
| | MD | Muhlenbergia dubia | Pine Muhly | 1 gal. | L | 24" o.c. | 317 | PRUNE FLOWERS |
| | SM | Salvia chamaedryoides | Germander Sage | 1 gal. | M | 48" o.c. | 25 | NATIVE |
| | SW2 | Salvia clevelandii 'Winnifred Gilman' | Winnifred Gilman Cleveland Sage | 5 gal. | L | 48" o.c. | 14 | NATIVE |
| | SP | Salvia leucophylla | Purple Sage | 1 gal. | L | 48" o.c. | 28 | |
| | SM3 | Salvia mellifera | Black Sage | 5 gal. | L | 84" o.c. | 5 | NATIVE |
| | SR | Salvia mellifera 'Jade Carpet' | Jade Carpet Black Sage | 5 gal. | L | 60" o.c. | 19 | |

## AMENITIES SCHEDULE

| SYMBOL | DESCRIPTION | DETAIL |
|---|---|---|
| 1 | BIKE RACK | 5/L200 |
| 2 | INTERPRETIVE SIGNAGE | 1,2/L202 |
| 3 | TRASH RECEPTACLES | 6/L200 |
| 4 | CIRCULAR BENCH WITH TREE | 1,4/L201 |
| 5 | TRIANGULAR BENCH | 1,5/L201 |
| 6 | PRECAST SEAT WALL (CONCAVE) | 1,2/L201 |
| 7 | PRECAST SEAT WALL (CONVEX) | 1,3/L201 |
| 8 | MONUMENT SIGN | 3/L202 |
| 9 | SOLAR POST LIGHTS | 7,8/L200 |
| 10 | METAL LANDSCAPE EDGING | 9/L200 |
| | DECOMPOSED GRANITE | 3/L200 |
| | CONCRETE PERMEABLE PAVERS | 4/L200 |

## PLANTING NOTES

1. PRIOR TO BEGINNING WORK, LANDSCAPE CONTRACTOR SHALL REVIEW THE CIVIL ENGINEERING DRAWINGS FOR ANY SPECIAL CONDITIONS PARTICULARLY AS THEY PERTAIN TO GRADING FEATURES SUCH AS SWALES, DETENTION BASINS AND INFILTRATION AREAS THAT MAY HAVE AN EFFECT ON PLANTING AREAS.
2. LOCATIONS OF PLANTS ARE SCHEMATIC. ALL SHRUBS TO BE PLANTED A MINIMUM OFFSET OF TWO (2) FEET FROM ANY EXISTING UTILITIES OR STRUCTURES AND TREES A MINIMUM THREE (5) FEET FROM UTILITIES OR STRUCTURES.
3. ALL TREES TO BE TAGGED BY LANDSCAPE ARCHITECT PRIOR TO PURCHASE.
4. LANDSCAPE ARCHITECT OR PROJECT REPRESENTATIVE TO BE PRESENT TO APPROVE PLANT MATERIAL WHEN DELIVERED TO PROJECT SITE.
5. ALL PLANTS AND TREES STORED ON-SITE TO FOLLOW PROCEDURES IN PROJECT SPECIFICATIONS.
6. PLANTS ARE SHOWN DIAGRAMMATICALLY ON PLAN THEREFORE PLANT SPACING IN PLANTING NOTES AND PLANTING SPECIFICATIONS TAKE PRECEDENCE TO PLANTS SHOWN ON THE PLAN. CONTRACTOR IS TO CALCULATE QUANTITY OF PLANTS CALLED FOR AND INSTALL ALL THAT ARE SHOWN ON PLAN.
7. ALL LANDSCAPE PLANTING, IRRIGATION AND PAVING DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED AND APPROVED BY OWNER'S REPRESENTATIVE BEFORE 100% COMPLETION OF CONSTRUCTION.
8. WHERE MULCH IS SPECIFIED, PER PLANS, SPREAD 3-4" LAYER OF MATERIAL UNDER AND IN BETWEEN ALL PLANTS SO AS TO LEAVE SOIL COMPLETELY COVERED WITH MULCH. NO MULCH SHALL BE PLACED WITHIN 2' OF TREE CENTER.
9. ALL TREES TO RECEIVE ROOT CONTROL BARRIERS PER PLAN. INSTALL ROOT BARRIER PER MANUFACTURER SPECIFICATION. ROOT BARRIER SHALL EXTEND 10 LINEAR FEET BEYOND TREE TRUNK IN EACH DIRECTION (20 FEET OF ROOT BARRIER ON EACH SIDE, 2 SIDES TOTAL) BETWEEN HARDSCAPE ELEMENTS OR AS SHOWN ON PLANS.
10. PRIOR TO PLANTING A TREE FILL THE HOLE WITH 10 GALLONS OF WATER. LET DRAIN, AMEND AND AFTER PLANTING, EACH TREE SHALL BE WATERED WITH A MINIMUM OF 20 GALLONS OF WATER. REPEAT THE WATERING TWICE IN THE NEXT 3 DAYS, NOT SOONER THAN AT 24-HOUR INTERVALS.
11. SOIL TESTS TO BE CONDUCTED AS DESCRIBED IN LANDSCAPE SPECIFICATIONS. THESE TESTS ARE TO DETERMINE RECOMMENDED AMOUNTS OF FERTILIZER AND ANY HARMFUL SUBSTANCES THAT REQUIRE MITIGATION. SEE SPECIFICATIONS FOR FURTHER INFORMATION.
12. DURING SOIL PREPARATION AMEND WITH GYPSUM (AGRICULTURAL CALCIUM SULFATE CA SO4) PER AMOUNT RECOMMENDED BY THE SOIL TEST RESULTS. SEE SPECIFICATIONS FOR FURTHER INFORMATION.
13. LANDSCAPE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE GENERAL CONTRACTOR TO DISCUSS ANY LANDSCAPE ISSUES BEFORE START OF CONSTRUCTION.
14. THE CONTRACTOR SHALL MAINTAIN PLANTED AREAS DURING THE PLANT ESTABLISHMENT PERIOD BY MEANS OF CONTINUOUS WATERING, PRUNING, RAISING ROOT BALLS WHICH SETTLE BELOW GRADE, APPLICATION OF SPRAYS WHICH ARE NECESSARY TO KEEP THE PLANTINGS FREE OF INSECTS AND DISEASES, FERTILIZING, WEEDING, AND/OR OTHER OPERATIONS NECESSARY FOR PROPER CARE AND UPKEEP.

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

L100

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

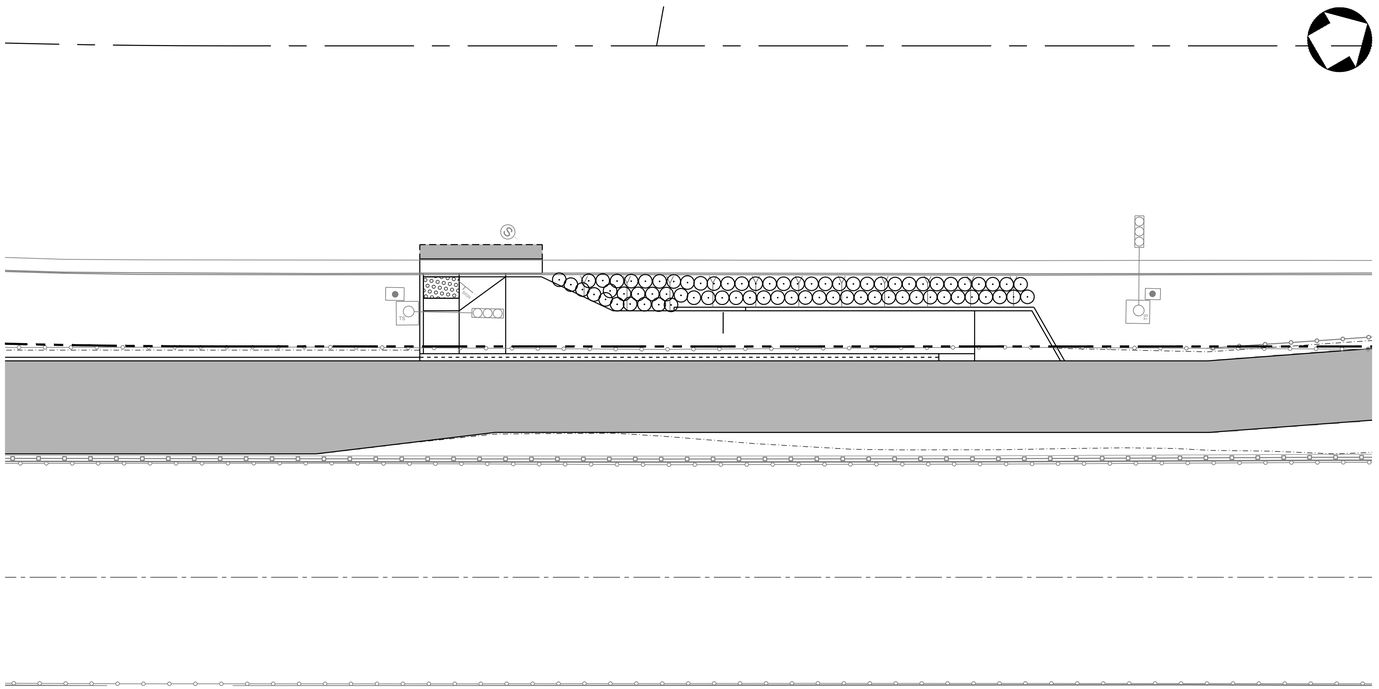
CIP 428-58072 / SAN JOSE CREEK BIKEWAY

W TEMPLE AVE
PLANTING PLANS

| SCALE | DESIGNED: | PVT ENG | SHT. 67 |
|---|---|---|---|
| AS SHOWN | DRAWN: | SA | OF |
| DATE | CHECKED: | K. MCKERNIN | 95 SHTS |
| 12.11.2024 | REVIEWED: | K. MCKERNIN | |

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_05-L-PLA.dwg 12/11/2024 11:40

FD-24 AJ



CORPORATE CENTER DR ACCESS POINT

10' 5' 0 10' 20'

1" = 10'

## PLANT SCHEDULE

| SYMBOL | CODE | BOTANICAL NAME | COMMON NAME | SIZE | PLS/POUND | QTY | REMARKS |
|---|---|---|---|---|---|---|---|
| TREES | | | | | | | |
| | AS | Arbutus unedo | Strawberry Tree | 36" | L | 8 | |
| | CW | Cercis occidentalis | Western Redbud Multi-trunk | 36" | L | 2 | |
| | CL | Chilopsis linearis | Desert Willow | 24" box | M | 1 | STANDARD |
| | CT | x Chitalpa tashkentensis | Chitalpa | 36" | L | 4 | |

| SYMBOL | CODE | BOTANICAL NAME | COMMON NAME | SIZE | | SPACING | QTY | REMARKS |
|---|---|---|---|---|---|---|---|---|
| SHRUBS | | | | | | | | |
| | AM2 | Achillea millefolium | Common Yarrow | 1 gal. | L | 18" o.c. | 14 | NATIVE |
| | AE | Arctostaphylos edmundsii 'Carmel Sur' | Carmel Sur Little Sur Manzanita | 1 gal. | L | 72" o.c. | 3 | |
| | AU | Arctostaphylos uva-ursi | Kinnikinnick | 1 gal. | L | 72" o.c. | 6 | |
| | AP | Aristida purpurea | Purple Threeawn | 1 gal. | L | 24" o.c. | 58 | |
| | AM | Artemisia californica 'Montara' | Montara California Sagebrush | 1 gal. | VL | 48" o.c. | 42 | |
| | BP | Baccharis pilularis consanguinea `Pozo Surf` | Pozo Surf Coyote Brush | 5 gal. | L | 36" o.c. | 58 | NATIVE |
| | BS2 | Baccharis sarothroides | Desertbroom Baccharis | 5 gal. | L | 72" o.c. | 9 | |
| | CY | Ceanothus griseus horizontalis 'Yankee Point' | Yankee Point Carmel Creeper | 5 gal. | L | 60" o.c. | 116 | |
| | DA2 | Diplacus aurantiacus | Sticky Monkeyflower | 1 gal. | VL | 36" o.c. | 28 | NATIVE |
| | EE | Epilobium canum latifolium `Everett`s Choice` | Everett`s California Fuchsia | 1 gal. | L | 48" o.c. | 18 | NATIVE |
| | EW | Eriogonum fasciculatum `Warriner Lytle` | Warriner Lytle California Buckwheat | 5 gal. | VL | 48" o.c. | 25 | NATIVE |
| | LC | Leymus condensatus | Giant Wild Rye | 5 gal. | M | 48" o.c. | 2 | |
| | MD | Muhlenbergia dubia | Pine Muhly | 1 gal. | L | 24" o.c. | 317 | PRUNE FLOWERS |
| | SM | Salvia chamaedryoides | Germander Sage | 1 gal. | M | 48" o.c. | 25 | NATIVE |
| | SW2 | Salvia clevelandii 'Winnifred Gilman' | Winnifred Gilman Cleveland Sage | 5 gal. | L | 48" o.c. | 14 | NATIVE |
| | SP | Salvia leucophylla | Purple Sage | 1 gal. | L | 48" o.c. | 28 | |
| | SM3 | Salvia mellifera | Black Sage | 5 gal. | L | 84" o.c. | 5 | NATIVE |
| | SR | Salvia mellifera 'Jade Carpet' | Jade Carpet Black Sage | 5 gal. | L | 60" o.c. | 19 | |

## AMENITIES SCHEDULE

| SYMBOL | DESCRIPTION | DETAIL |
|---|---|---|
| 1 | BIKE RACK | 5/L200 |
| 2 | INTERPRETIVE SIGNAGE | 1,2/L202 |
| 3 | TRASH RECEPTACLES | 6/L200 |
| 4 | CIRCULAR BENCH WITH TREE | 1,4/L201 |
| 5 | TRIANGULAR BENCH | 1,5/L201 |
| 6 | PRECAST SEAT WALL (CONCAVE) | 1,2/L201 |
| 7 | PRECAST SEAT WALL (CONVEX) | 1,3/L201 |
| 8 | MONUMENT SIGN | 3/L202 |
| 9 | SOLAR POST LIGHTS | 7,8/L200 |
| 10 | METAL LANDSCAPE EDGING | 9/L200 |

## PLANTING NOTES

1. PRIOR TO BEGINNING WORK, LANDSCAPE CONTRACTOR SHALL REVIEW THE CIVIL ENGINEERING DRAWINGS FOR ANY SPECIAL CONDITIONS PARTICULARLY AS THEY PERTAIN TO GRADING FEATURES SUCH AS SWALES, DETENTION BASINS AND INFILTRATION AREAS THAT MAY HAVE AN EFFECT ON PLANTING AREAS.
2. LOCATIONS OF PLANTS ARE SCHEMATIC. ALL SHRUBS TO BE PLANTED A MINIMUM OFFSET OF TWO (2) FEET FROM ANY EXISTING UTILITIES OR STRUCTURES AND TREES A MINIMUM THREE (5) FEET FROM UTILITIES OR STRUCTURES.
3. ALL TREES TO BE TAGGED BY LANDSCAPE ARCHITECT PRIOR TO PURCHASE.
4. LANDSCAPE ARCHITECT OR PROJECT REPRESENTATIVE TO BE PRESENT TO APPROVE PLANT MATERIAL WHEN DELIVERED TO PROJECT SITE.
5. ALL PLANTS AND TREES STORED ON-SITE TO FOLLOW PROCEDURES IN PROJECT SPECIFICATIONS.
6. PLANTS ARE SHOWN DIAGRAMMATICALLY ON PLAN THEREFORE PLANT SPACING IN PLANTING NOTES AND PLANTING SPECIFICATIONS TAKE PRECEDENCE TO PLANTS SHOWN ON THE PLAN. CONTRACTOR IS TO CALCULATE QUANTITY OF PLANTS CALLED FOR AND INSTALL ALL THAT ARE SHOWN ON PLAN.
7. ALL LANDSCAPE PLANTING, IRRIGATION AND PAVING DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED AND APPROVED BY OWNER'S REPRESENTATIVE BEFORE 100% COMPLETION OF CONSTRUCTION.
8. WHERE MULCH IS SPECIFIED, PER PLANS, SPREAD 3-4" LAYER OF MATERIAL UNDER AND IN BETWEEN ALL PLANTS SO AS TO LEAVE SOIL COMPLETELY COVERED WITH MULCH. NO MULCH SHALL BE PLACED WITHIN 2' OF TREE CENTER.
9. ALL TREES TO RECEIVE ROOT CONTROL BARRIERS PER PLAN. INSTALL ROOT BARRIER PER MANUFACTURER SPECIFICATION. ROOT BARRIER SHALL EXTEND 10 LINEAR FEET BEYOND TREE TRUNK IN EACH DIRECTION (20 FEET OF ROOT BARRIER ON EACH SIDE, 2 SIDES TOTAL) BETWEEN HARDSCAPE ELEMENTS OR AS SHOWN ON PLANS.
10. PRIOR TO PLANTING A TREE FILL THE HOLE WITH 10 GALLONS OF WATER. LET DRAIN, AMEND AND AFTER PLANTING, EACH TREE SHALL BE WATERED WITH A MINIMUM OF 20 GALLONS OF WATER. REPEAT THE WATERING TWICE IN THE NEXT 3 DAYS, NOT SOONER THAN AT 24-HOUR INTERVALS.
11. SOIL TESTS TO BE CONDUCTED AS DESCRIBED IN LANDSCAPE SPECIFICATIONS. THESE TESTS ARE TO DETERMINE RECOMMENDED AMOUNTS OF FERTILIZER AND ANY HARMFUL SUBSTANCES THAT REQUIRE MITIGATION. SEE SPECIFICATIONS FOR FURTHER INFORMATION.
12. DURING SOIL PREPARATION AMEND WITH GYPSUM (AGRICULTURAL CALCIUM SULFATE CA SO4) PER AMOUNT RECOMMENDED BY THE SOIL TEST RESULTS. SEE SPECIFICATIONS FOR FURTHER INFORMATION.
13. LANDSCAPE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE GENERAL CONTRACTOR TO DISCUSS ANY LANDSCAPE ISSUES BEFORE START OF CONSTRUCTION.
14. THE CONTRACTOR SHALL MAINTAIN PLANTED AREAS DURING THE PLANT ESTABLISHMENT PERIOD BY MEANS OF CONTINUOUS WATERING, PRUNING, RAISING ROOT BALLS WHICH SETTLE BELOW GRADE, APPLICATION OF SPRAYS WHICH ARE NECESSARY TO KEEP THE PLANTINGS FREE OF INSECTS AND DISEASES, FERTILIZING, WEEDING, AND/OR OTHER OPERATIONS NECESSARY FOR PROPER CARE AND UPKEEP.

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

CORPORATE CENTER DR
PLANTING PLANS

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

L101

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

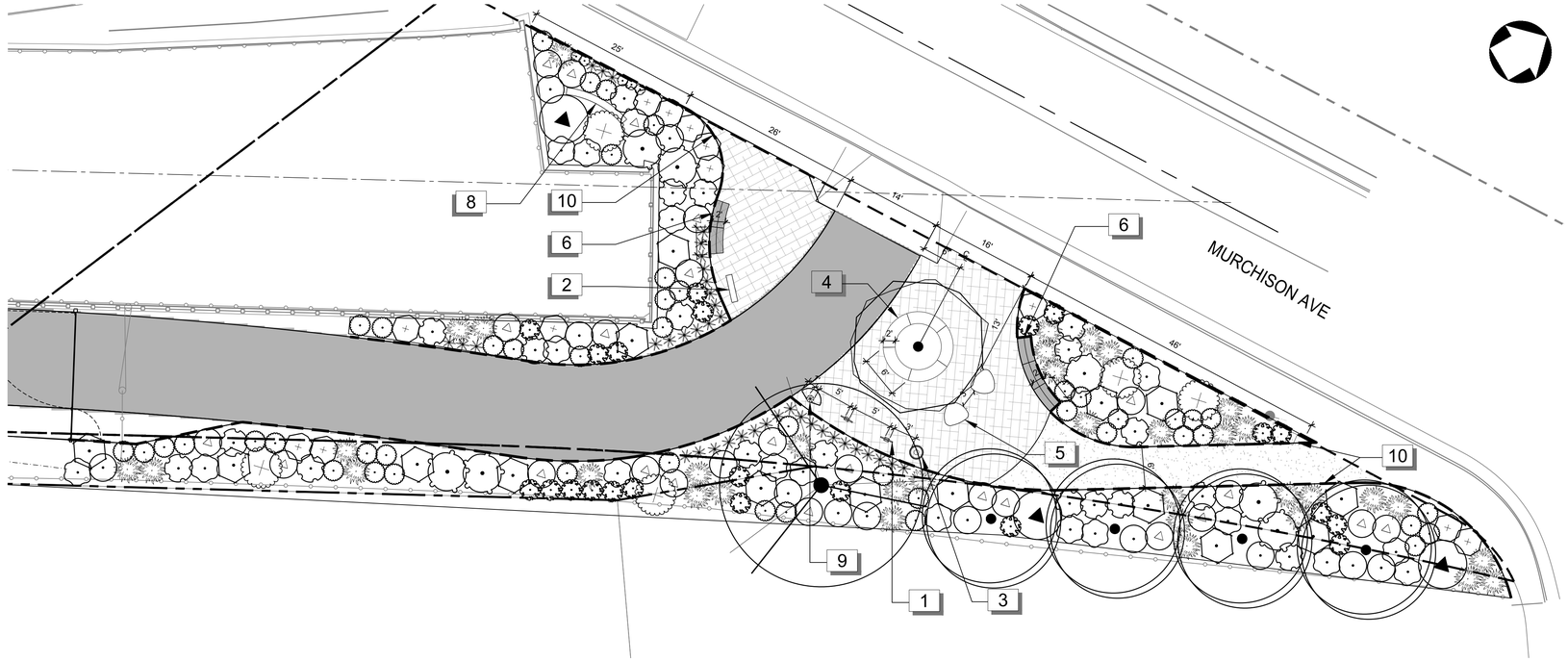
SCALE AS SHOWN
DATE 12.11.2024

DESIGNED: PVT ENG
DRAWN: SA
CHECKED: K. MCKERNIN
REVIEWED: K. MCKERNIN

SHT. 68 OF 95 SHTS

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_05-L-PLA.dwg 12/11/2024 11:40

FD-24 AK




# MURCHISON TRAILHEAD

## PLANT SCHEDULE

| SYMBOL | CODE | BOTANICAL NAME | COMMON NAME | SIZE | PLS/POUND | QTY | REMARKS |
|---|---|---|---|---|---|---|---|
| TREES | | | | | | | |
| | AS | Arbutus unedo | Strawberry Tree | 36" | L | 8 | |
| | CW | Cercis occidentalis | Western Redbud Multi-trunk | 36" | L | 2 | |
| | CL | Chilopsis linearis | Desert Willow | 24" box | M | 1 | STANDARD |
| | CT | x Chitalpa tashkentensis | Chitalpa | 36" | L | 4 | |

| SYMBOL | CODE | BOTANICAL NAME | COMMON NAME | SIZE | | SPACING | QTY | REMARKS |
|---|---|---|---|---|---|---|---|---|
| SHRUBS | | | | | | | | |
| | AM2 | Achillea millefolium | Common Yarrow | 1 gal. | L | 18" o.c. | 14 | NATIVE |
| | AE | Arctostaphylos edmundsii 'Carmel Sur' | Carmel Sur Little Sur Manzanita | 1 gal. | L | 72" o.c. | 3 | |
| | AU | Arctostaphylos uva-ursi | Kinnikinnick | 1 gal. | L | 72" o.c. | 6 | |
| | AP | Aristida purpurea | Purple Threeawn | 1 gal. | L | 24" o.c. | 58 | |
| | AM | Artemisia californica 'Montara' | Montara California Sagebrush | 1 gal. | VL | 48" o.c. | 42 | |
| | BP | Baccharis pilularis consanguinea `Pozo Surf` | Pozo Surf Coyote Brush | 5 gal. | L | 36" o.c. | 58 | NATIVE |
| | BS2 | Baccharis sarothroides | Desertbroom Baccharis | 5 gal. | L | 72" o.c. | 9 | |
| | CY | Ceanothus griseus horizontalis 'Yankee Point' | Yankee Point Carmel Creeper | 5 gal. | L | 60" o.c. | 116 | |
| | DA2 | Diplacus aurantiacus | Sticky Monkeyflower | 1 gal. | VL | 36" o.c. | 28 | NATIVE |
| | EE | Epilobium canum latifolium `Everett`s Choice` | Everett`s California Fuchsia | 1 gal. | L | 48" o.c. | 18 | NATIVE |
| | EW | Eriogonum fasciculatum `Warriner Lytle` | Warriner Lytle California Buckwheat | 5 gal. | VL | 48" o.c. | 25 | NATIVE |
| | LC | Leymus condensatus | Giant Wild Rye | 5 gal. | M | 48" o.c. | 2 | |
| | MD | Muhlenbergia dubia | Pine Muhly | 1 gal. | L | 24" o.c. | 317 | PRUNE FLOWERS |
| | SM | Salvia chamaedryoides | Germander Sage | 1 gal. | M | 48" o.c. | 25 | NATIVE |
| | SW2 | Salvia clevelandii 'Winnifred Gilman' | Winnifred Gilman Cleveland Sage | 5 gal. | L | 48" o.c. | 14 | NATIVE |
| | SP | Salvia leucophylla | Purple Sage | 1 gal. | L | 48" o.c. | 28 | |
| | SM3 | Salvia mellifera | Black Sage | 5 gal. | L | 84" o.c. | 5 | NATIVE |
| | SR | Salvia mellifera 'Jade Carpet' | Jade Carpet Black Sage | 5 gal. | L | 60" o.c. | 19 | |

## AMENITIES SCHEDULE

| SYMBOL | DESCRIPTION | DETAIL |
|---|---|---|
| 1 | BIKE RACK | 5/L200 |
| 2 | INTERPRETIVE SIGNAGE | 1,2/L202 |
| 3 | TRASH RECEPTACLES | 6/L200 |
| 4 | CIRCULAR BENCH WITH TREE | 1,4/L201 |
| 5 | TRIANGULAR BENCH | 1,5/L201 |
| 6 | PRECAST SEAT WALL (CONCAVE) | 1,2/L201 |
| 7 | PRECAST SEAT WALL (CONVEX) | 1,3/L201 |
| 8 | MONUMENT SIGN | 3/L202 |
| 9 | SOLAR POST LIGHTS | 7,8/L200 |
| 10 | METAL LANDSCAPE EDGING | 9/L200 |
| | DECOMPOSED GRANITE | 3/L200 |
| | CONCRETE PERMEABLE PAVERS | 4/L200 |

## PLANTING NOTES

1. PRIOR TO BEGINNING WORK, LANDSCAPE CONTRACTOR SHALL REVIEW THE CIVIL ENGINEERING DRAWINGS FOR ANY SPECIAL CONDITIONS PARTICULARLY AS THEY PERTAIN TO GRADING FEATURES SUCH AS SWALES, DETENTION BASINS AND INFILTRATION AREAS THAT MAY HAVE AN EFFECT ON PLANTING AREAS.
2. LOCATIONS OF PLANTS ARE SCHEMATIC. ALL SHRUBS TO BE PLANTED A MINIMUM OFFSET OF TWO (2) FEET FROM ANY EXISTING UTILITIES OR STRUCTURES AND TREES A MINIMUM THREE (5) FEET FROM UTILITIES OR STRUCTURES.
3. ALL TREES TO BE TAGGED BY LANDSCAPE ARCHITECT PRIOR TO PURCHASE.
4. LANDSCAPE ARCHITECT OR PROJECT REPRESENTATIVE TO BE PRESENT TO APPROVE PLANT MATERIAL WHEN DELIVERED TO PROJECT SITE.
5. ALL PLANTS AND TREES STORED ON-SITE TO FOLLOW PROCEDURES IN PROJECT SPECIFICATIONS.
6. PLANTS ARE SHOWN DIAGRAMMATICALLY ON PLAN THEREFORE PLANT SPACING IN PLANTING NOTES AND PLANTING SPECIFICATIONS TAKE PRECEDENCE TO PLANTS SHOWN ON THE PLAN. CONTRACTOR IS TO CALCULATE QUANTITY OF PLANTS CALLED FOR AND INSTALL ALL THAT ARE SHOWN ON PLAN.
7. ALL LANDSCAPE PLANTING, IRRIGATION AND PAVING DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED AND APPROVED BY OWNER'S REPRESENTATIVE BEFORE 100% COMPLETION OF CONSTRUCTION.
8. WHERE MULCH IS SPECIFIED, PER PLANS, SPREAD 3-4" LAYER OF MATERIAL UNDER AND IN BETWEEN ALL PLANTS SO AS TO LEAVE SOIL COMPLETELY COVERED WITH MULCH. NO MULCH SHALL BE PLACED WITHIN 2' OF TREE CENTER.
9. ALL TREES TO RECEIVE ROOT CONTROL BARRIERS PER PLAN. INSTALL ROOT BARRIER PER MANUFACTURER SPECIFICATION. ROOT BARRIER SHALL EXTEND 10 LINEAR FEET BEYOND TREE TRUNK IN EACH DIRECTION (20 FEET OF ROOT BARRIER ON EACH SIDE, 2 SIDES TOTAL) BETWEEN HARDSCAPE ELEMENTS OR AS SHOWN ON PLANS.
10. PRIOR TO PLANTING A TREE FILL THE HOLE WITH 10 GALLONS OF WATER. LET DRAIN, AMEND AND AFTER PLANTING, EACH TREE SHALL BE WATERED WITH A MINIMUM OF 20 GALLONS OF WATER. REPEAT THE WATERING TWICE IN THE NEXT 3 DAYS, NOT SOONER THAN AT 24-HOUR INTERVALS.
11. SOIL TESTS TO BE CONDUCTED AS DESCRIBED IN LANDSCAPE SPECIFICATIONS. THESE TESTS ARE TO DETERMINE RECOMMENDED AMOUNTS OF FERTILIZER AND ANY HARMFUL SUBSTANCES THAT REQUIRE MITIGATION. SEE SPECIFICATIONS FOR FURTHER INFORMATION.
12. DURING SOIL PREPARATION AMEND WITH GYPSUM (AGRICULTURAL CALCIUM SULFATE CA SO4) PER AMOUNT RECOMMENDED BY THE SOIL TEST RESULTS. SEE SPECIFICATIONS FOR FURTHER INFORMATION.
13. LANDSCAPE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE GENERAL CONTRACTOR TO DISCUSS ANY LANDSCAPE ISSUES BEFORE START OF CONSTRUCTION.
14. THE CONTRACTOR SHALL MAINTAIN PLANTED AREAS DURING THE PLANT ESTABLISHMENT PERIOD BY MEANS OF CONTINUOUS WATERING, PRUNING, RAISING ROOT BALLS WHICH SETTLE BELOW GRADE, APPLICATION OF SPRAYS WHICH ARE NECESSARY TO KEEP THE PLANTINGS FREE OF INSECTS AND DISEASES, FERTILIZING, WEEDING, AND/OR OTHER OPERATIONS NECESSARY FOR PROPER CARE AND UPKEEP.

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

L102

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

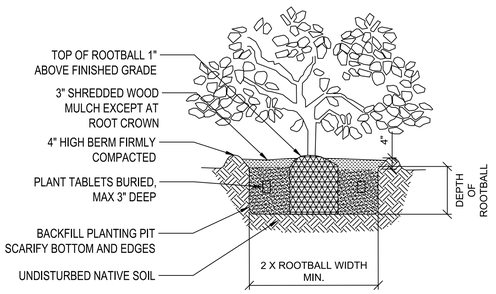
MURCHISON AVE
PLANTING PLANS

| SCALE | DESIGNED: | PVT ENG |
|---|---|---|
| AS SHOWN | DRAWN: | SA |
| DATE | CHECKED: | K. MCKERNIN |
| 12.11.2024 | REVIEWED: | K. MCKERNIN |

SHT. 69 OF 95 SHTS

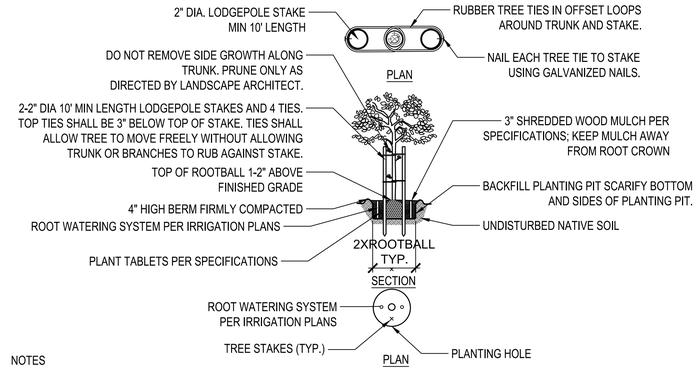
N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_05-L-PLA.dwg 12/11/2024 11:40

FD-24 AL




## 1 SHRUB PLANTING

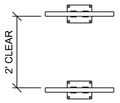
N.T.S. P-LA-09



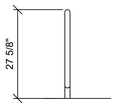

NOTES
1. DOUBLE STAKE 15 GAL AND LARGER TREES
2. POSITION STAKES OUTSIDE OF ROOTBALL; ALIGN STAKES PARALLEL TO PREVAILING WIND
3. PROVIDE MINIMUM DISTANCE FROM OTHER OBJECTS AS FOLLOWS: 20' TRAFFIC SIGNALS, 12' STREET LIGHTS, 10' FIRE HYDRANTS, SEWER LINES, PAD MOUNTED EQUIPMENT, 5' FOR UNDERGROUND GAS AND ELECTRIC LINES.
4. REFER TO IRRIGATION SHEETS FOR ALL IRRIGATION DETAILS

## 2 TREE PLANTING AND STAKING

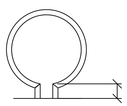
N.T.S. P-MM-04




TYPICAL LAYOUT (PLAN)




SIDE

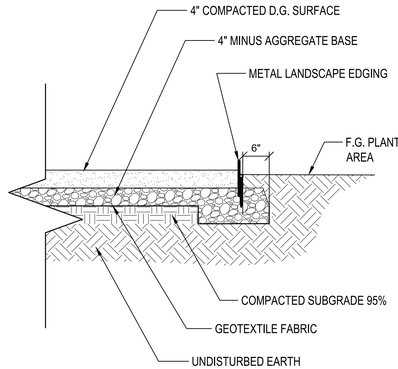



FRONT

NOTES:
1. INSTALLATION TO BE COMPLETED PER MANUFACTURERS SPECIFICATIONS.
2. MANUFACTURER: LANDSCAPE FORMS, FINISH: ELECTRO POLISHED STAINLESS STEEL

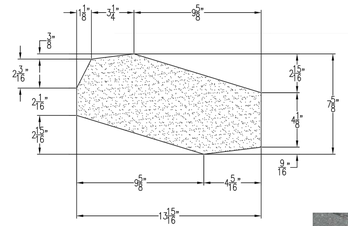
## 3 DECOMPOSED GRANITE PAVING

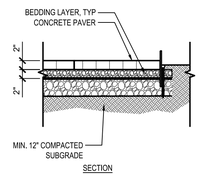
N.T.S. P-LA-14




## 4 CONCRETE PERMEABLE PAVERS

N.T.S. DETAIL-FILE






SECTION

NOTES
1. MANUFACTURER: WASAU TILE
2. MATERIAL NAME: V-SERIES
3. COLOR: EXTERIOR TERRAZZO -ET-16
4. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
5. USE PAVER EDGE RESTRAINTS (HTTPS://WAUSAUTILE.COM/PRODUCTS/V-SERIES-PERMEABLE.CFM)

| REVISION | | | |
|---|---|---|---|
| | DRAWN BY | DATE | NOTES |
| 1 | | | |
| 2 | | | |
| 3 | | | |

CONFIDENTIAL INFORMATION
THESE DRAWING, SPECIFICATIONS AND OTHER INFORMATION AND DOCUMENTS ACCOMPANYING THEM ARE THE CONFIDENTIAL AND PROPRIETARY PROPERTY OF WAUSAU TILE, INC. THE DRAWINGS THEMSELVES SHALL BELONG TO THE OWNER FOR USE ONLY ON THE PROJECT. ANY ADDITIONAL USE SHALL REQUIRE THE PRIOR WRITTEN APPROVAL OF WAUSAU TILE, INC. THE PROPRIETARY INFORMATION CONTAINED WITHIN THE DRAWINGS AND THE DOCUMENTS IS AND SHALL REMAIN THE SOLE PROPERTY OF WAUSAU TILE, INC.

GREEN BAY PERMEABLE

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS ± 1/8"

DRAWN BY: TAS

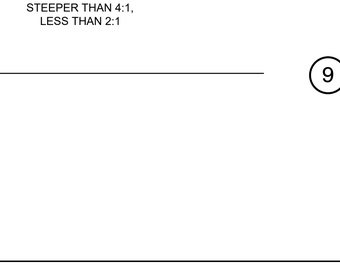
DATE: OCT 8, 2012

CO NUMBER: -

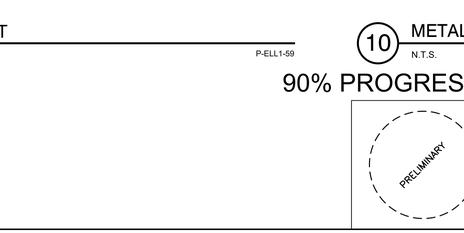
SHEET NO. 1000

## 5 BICYCLE RACK

N.T.S. P-MM-65



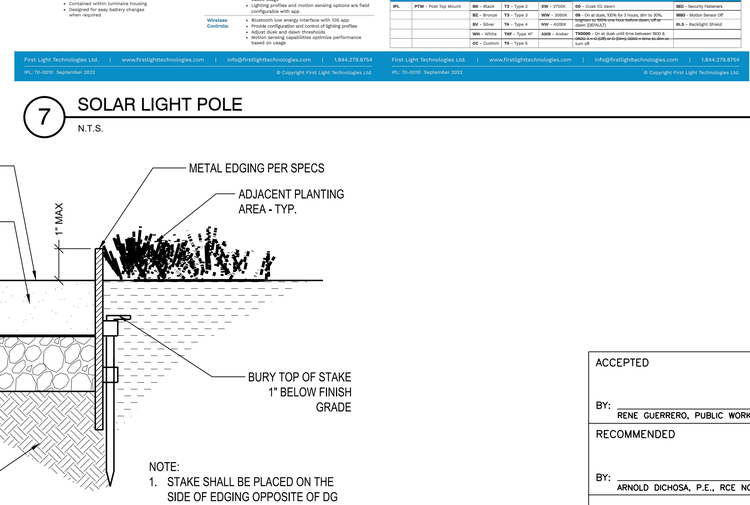

IN-GROUND INSTALLATION




NOTES:
1. ALUMINUM TRASH RECEPTACLE 'PLAINWELL' BY LANDSCAPE FORMS OR APPROVED EQUAL. POWDER COATED SILVER.
2. CONTRACTOR TO PROVIDE ANCHORING HARDWARE AS NEEDED FOR SURFACE MOUNTING TO CONCRETE SIDEWALK PER MANUFACTURER'S SPECIFICATIONS.
3. VERIFY EXACT LOCATION WITH ENGINEER PRIOR TO INSTALLATION

## 6 TRASH RECEPTACLE

N.T.S. P-CO-71



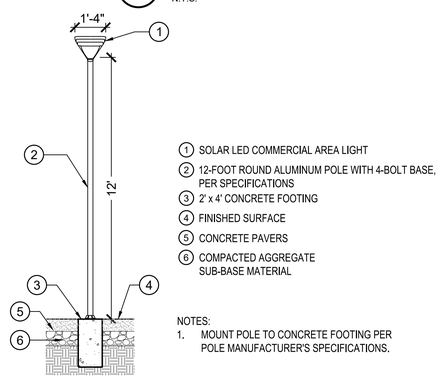




NOTE:
1. POSTS ARE TO BE 5' ROUND, 12' TALL STRAIGHT ALUMINUM.
2. THE POLE SHALL BE CONSTRUCTED OF SEAMLESS EXTRUDED TUBE OF 6063 ALUMINUM ALLOY.

## 7 SOLAR LIGHT POLE

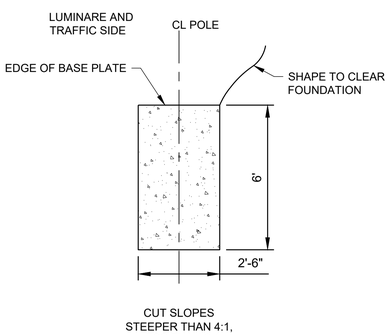
N.T.S. DETAIL-FILE



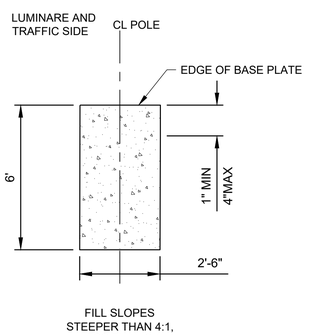

NOTES:
1. MOUNT POLE TO CONCRETE FOOTING PER POLE MANUFACTURER'S SPECIFICATIONS.

## 8 SOLAR LIGHT POLE FOOTING DETAILS

N.T.S.




CUT SLOPES STEEPER THAN 4:1, LESS THAN 2:1



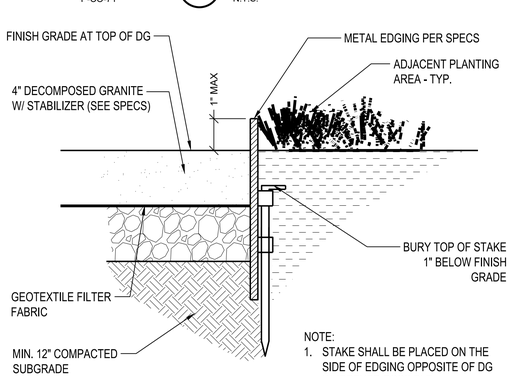

FILL SLOPES STEEPER THAN 4:1, LESS THAN 2:1

## 9 LIGHT POST

N.T.S. P-ELL1-59

## 10 METAL EDGING

N.T.S. P-SA2-72




NOTE:
1. STAKE SHALL BE PLACED ON THE SIDE OF EDGING OPPOSITE OF DG WHEREVER POSSIBLE.

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

PLANTING DETAILS

L200

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

SCALE AS SHOWN

DATE 12.11.2024

DESIGNED: PVT ENG
DRAWN: SA
CHECKED: K. MCKERNIN
REVIEWED: K. MCKERNIN

SHT. 70 OF 95 SHTS

PRELIMINARY

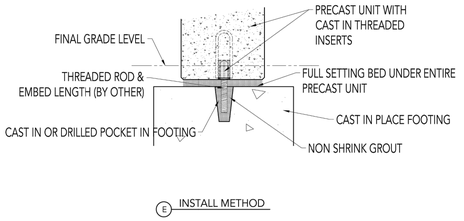
alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

CALL BEFORE YOU DIG
Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

FD-24 AM

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_05-L-PLA-DET.dwg 12/11/2024 11:40




E INSTALL METHOD

SCALE: NOT TO SCALE

NOTES:
ITEM MANUFACTURER - WAUSAU TILE

| | |
|---|---|
| PRODUCT: | MISC PRODUCT INSTALL STYLES |
| MATERIAL: PRECAST CONCRETE | |
| DRAWN BY: SKD | |
| REV DATE: 01.04.21 | |
| FILE: - | |

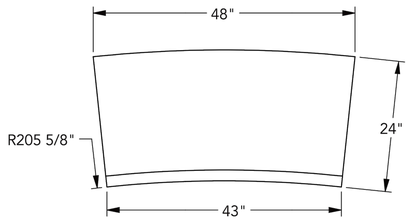
CONFIDENTIAL INFORMATION
THESE DRAWING, SPECIFICATIONS AND OTHER INFORMATION AND DOCUMENTS ACCOMPANYING THEM ARE THE CONFIDENTIAL AND PROPRIETARY PROPERTY OF WAUSAU TILE, INC. THE DRAWINGS THEMSELVES SHALL BELONG TO THE OWNER FOR USE ONLY ON THE PROJECT. ANY ADDITIONAL USE SHALL REQUIRE THE PRIOR WRITTEN APPROVAL OF WAUSAU TILE, INC. THE PROPRIETARY INFORMATION CONTAINED WITHIN THE DRAWINGS AND THE DOCUMENTS IS AND SHALL REMAIN THE SOLE PROPERTY OF WAUSAU TILE, INC.

UNLESS OTHERWISE SPECIFIED DIMENSIONS SHOWN IN INCHES AND ARE ROUNDED TO THE CLOSEST FRACTION ± 1/16"
FABRICATION TOLERANCE: ± 1/8"

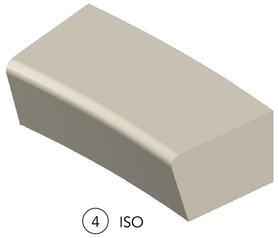
PG 29

## 1 PRECAST SITE FURNISHING ANCHORING DETAIL

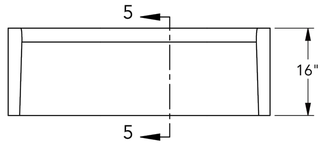
N.T.S.



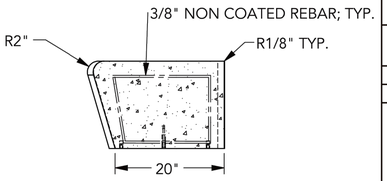

1 TOP VIEW



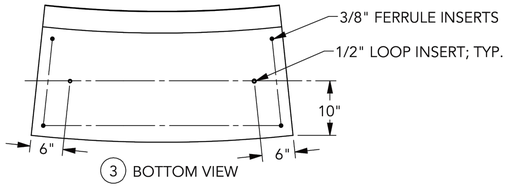
4 ISO




2 FRONT VIEW




5 SECTION




3 BOTTOM VIEW

NOTES:
ITEM MANUFACTURER - WAUSAU TILE
STYLE - CENTENAIRE BENCH (CONCAVE)
FINISH COLOR - A22 SAND

REFER TO DETAIL 1/L201 FOR INSTALLATION

REVISIONS

| | BY | DATE | NOTE |
|---|---|---|---|
| 1 | - | | - |
| 2 | - | | - |
| 3 | - | | - |
| 4 | - | | - |
| 5 | | | |

CONFIDENTIAL INFORMATION
THESE DRAWINGS, SPECIFICATIONS AND OTHER INFORMATION AND DOCUMENTS ACCOMPANYING THEM ARE THE CONFIDENTIAL AND PROPRIETARY PROPERTY OF WAUSAU TILE, INC. THE DRAWINGS THEMSELVES SHALL BELONG TO THE OWNER FOR USE ONLY ON THE PROJECT. ANY ADDITIONAL USE SHALL REQUIRE THE PRIOR WRITTEN APPROVAL OF WAUSAU TILE, INC. THE PROPRIETARY INFORMATION CONTAINED WITHIN THE DRAWINGS AND THE DOCUMENTS IS AND SHALL REMAIN THE SOLE PROPERTY OF WAUSAU TILE, INC.

UNLESS OTHERWISE SPECIFIED DIMENSIONS SHOWN ARE ROUNDED TO THE CLOSEST FRACTION ± 1/16"

DRAWING SCALE: NOT TO SCALE

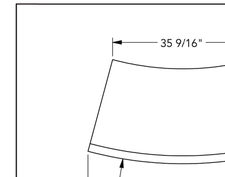
FABRICATION TOLERANCE: ± 1/8"

CENTENAIRE

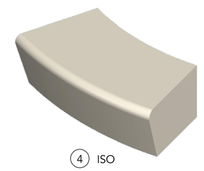
| | |
|---|---|
| DRAWN BY: SKD | DATE: 7/29/2020 |
| CO NUMBER: | - |
| WEIGHT: | 1,416 LBS |
| PRODUCT NUMBER: | ZB.CE.04 |

## 2 CURVED MODULAR PRECAST SEATWALL (CONCAVE)

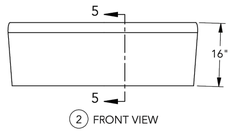
N.T.S.



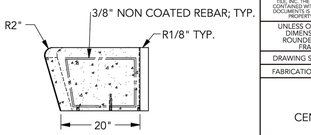

1 TOP VIEW



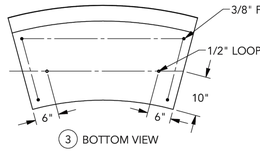
4 ISO




2 FRONT VIEW




5 SECTION




3 BOTTOM VIEW

NOTES:
ITEM MANUFACTURER - WAUSAU TILE
STYLE - CENTENAIRE BENCH (CONVEX)
FINISH COLOR - A22 SAND

REFER TO DETAIL 1/L201 FOR INSTALLATION

REVISIONS

| | BY | DATE | NOTE |
|---|---|---|---|
| 1 | - | | - |
| 2 | - | | - |
| 3 | - | | - |
| 4 | - | | - |
| 5 | | | |

CONFIDENTIAL INFORMATION
THESE DRAWINGS, SPECIFICATIONS AND OTHER INFORMATION AND DOCUMENTS ACCOMPANYING THEM ARE THE CONFIDENTIAL AND PROPRIETARY PROPERTY OF WAUSAU TILE, INC. THE DRAWINGS THEMSELVES SHALL BELONG TO THE OWNER FOR USE ONLY ON THE PROJECT. ANY ADDITIONAL USE SHALL REQUIRE THE PRIOR WRITTEN APPROVAL OF WAUSAU TILE, INC. THE PROPRIETARY INFORMATION CONTAINED WITHIN THE DRAWINGS AND THE DOCUMENTS IS AND SHALL REMAIN THE SOLE PROPERTY OF WAUSAU TILE, INC.

UNLESS OTHERWISE SPECIFIED DIMENSIONS SHOWN ARE ROUNDED TO THE CLOSEST FRACTION ± 1/16"

DRAWING SCALE: NOT TO SCALE

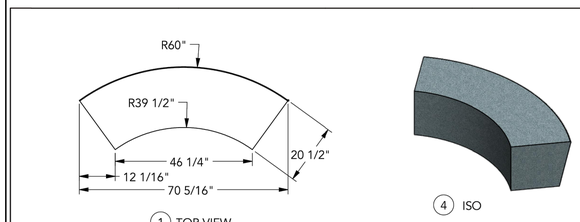
FABRICATION TOLERANCE: ± 1/8"

CENTENAIRE

| | |
|---|---|
| DRAWN BY: SKD | DATE: 7/29/2020 |
| CO NUMBER: | - |
| WEIGHT: | 1,295 LBS |
| PRODUCT NUMBER: | ZB.CE.05 |

## 3 CURVED MODULAR PRECAST SEATWALL (CONVEX)

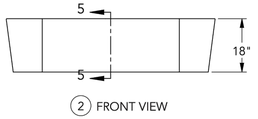
N.T.S.



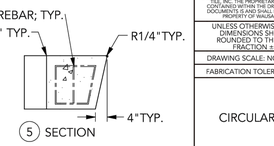

1 TOP VIEW



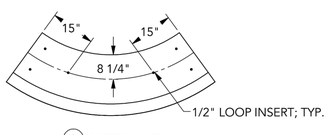
4 ISO




2 FRONT VIEW




5 SECTION




3 BOTTOM VIEW

NOTES:
ITEM MANUFACTURER - WAUSAU TILE
STYLE - CIRCULAR BENCH
FINISH COLOR - A22 SAND

REFER TO DETAIL 1/L201 FOR INSTALLATION

REVISIONS

| | BY | DATE | NOTE |
|---|---|---|---|
| 1 | - | | - |
| 2 | - | | - |
| 3 | - | | - |
| 4 | - | | - |
| 5 | | | |

CONFIDENTIAL INFORMATION
THESE DRAWING, SPECIFICATIONS AND OTHER INFORMATION AND DOCUMENTS ACCOMPANYING THEM ARE THE CONFIDENTIAL AND PROPRIETARY PROPERTY OF WAUSAU TILE, INC. THE DRAWINGS THEMSELVES SHALL BELONG TO THE OWNER FOR USE ONLY ON THE PROJECT. ANY ADDITIONAL USE SHALL REQUIRE THE PRIOR WRITTEN APPROVAL OF WAUSAU TILE, INC. THE PROPRIETARY INFORMATION CONTAINED WITHIN THE DRAWINGS AND THE DOCUMENTS IS AND SHALL REMAIN THE SOLE PROPERTY OF WAUSAU TILE, INC.

UNLESS OTHERWISE SPECIFIED DIMENSIONS SHOWN ARE ROUNDED TO THE CLOSEST FRACTION ± 1/16"

DRAWING SCALE: NOT TO SCALE

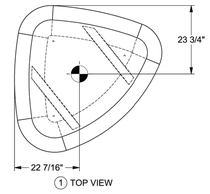
FABRICATION TOLERANCE: ± 1/8"

CIRCULAR 3000

| | |
|---|---|
| DRAWN BY: SKD | DATE: 8/18/2020 |
| CO NUMBER: | - |
| WEIGHT: | 1,778 LBS |
| PRODUCT NUMBER: | ZB.CI.3000 |

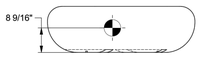
## 4 CURVED MODULAR PRECAST BENCH SEATING

N.T.S.

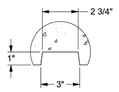



1 TOP VIEW

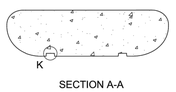
4 ISO



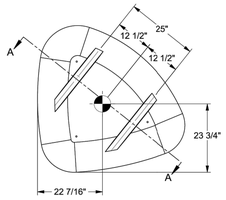

2 FRONT VIEW




DETAIL K
SCALE 1 : 4




SECTION A-A




3 BOTTOM VIEW

NOTES:
ITEM MANUFACTURER - WAUSAU TILE
STYLE - GALET I
FINISH COLOR - A22 SAND

REFER TO DETAIL 1/L201 FOR INSTALLATION

REVISIONS

| | BY | DATE | NOTE |
|---|---|---|---|
| 1 | - | | - |
| 2 | - | | - |
| 3 | - | | - |
| 4 | - | | - |
| 5 | | | |

CONFIDENTIAL INFORMATION
THESE DRAWING, SPECIFICATIONS AND OTHER INFORMATION AND DOCUMENTS ACCOMPANYING THEM ARE THE CONFIDENTIAL AND PROPRIETARY PROPERTY OF WAUSAU TILE, INC. THE DRAWINGS THEMSELVES SHALL BELONG TO THE OWNER FOR USE ONLY ON THE PROJECT. ANY ADDITIONAL USE SHALL REQUIRE THE PRIOR WRITTEN APPROVAL OF WAUSAU TILE, INC. THE PROPRIETARY INFORMATION CONTAINED WITHIN THE DRAWINGS AND THE DOCUMENTS IS AND SHALL REMAIN THE SOLE PROPERTY OF WAUSAU TILE, INC.

UNLESS OTHERWISE SPECIFIED DIMENSIONS SHOWN ARE ROUNDED TO THE CLOSEST FRACTION ± 1/16"

DRAWING SCALE: NOT TO SCALE

FABRICATION TOLERANCE: ± 1/8"

MOLD, GL.01; BENCH

CUSTOMER SIGNATURE REQUIRED

APPROVED:

DATE:

(SIGNATURE ABOVE ILLUSTRATES YOU HAVE REVIEWED ALL ASPECTS OF THE DESIGN FOR ACCURACY AND COMPLIANCE WITH YOUR JOB REQUIREMENTS

| | |
|---|---|
| DRAWN BY: | SKD Last saved 8/07/2020 |
| CO NUMBER: | - |
| WEIGHT: | 2370 |
| PRODUCT NUMBER: | ZB.GL.01_MOLD_Belt postic |

## 5 TRIANGULAR BENCH

N.T.S.

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

AMENITY DETAILS

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

L201

SCALE AS SHOWN

DATE 12.11.2024

| | |
|---|---|
| DESIGNED: | PVT ENG |
| DRAWN: | SA |
| CHECKED: | K. MCKERNIN |
| REVIEWED: | K. MCKERNIN |

SHT. 71 OF 95 SHTS

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_05-L-PLA-DET.dwg 12/11/2024 11:40

FD-24 AN

## Exhibit Base Assembly and Installation Instructions

FORM # PRDINST 101 010523

### Installation

Move all assembled exhibit bases, tools and materials to the installation site. Mark the installation location using stakes or approved marking paint to indicate pedestal base locations. Prior to installation, please check the local building and signage codes as well as the applicable ADA (Americans with Disabilities Act) regulations for compliance.

***Installing to a permanent surface:***

When installing the exhibit base with attached base plates to a permanent surface, such as concrete, use the appropriate fastening devices to provide a secure and permanent installation.

***Installing in the ground:***

When installing the pedestal in the ground, you will need to dig holes approximately 6" below the local frost line. We recommend that you plan your installation depth to allow for approximately 28" to 32" distance between the ground surface and the bottom of the exhibit frame assembly when finished.

**Preparing the holes**

Fill the completed holes with approximately 6" of gravel and tamp to provide an even and firm surface.

**Protecting the exhibit base**

To prevent concrete splatter from attaching to the pedestal base(s), wrap and secure plastic to the upper portion of the pedestal base(s) to protect any part which will be seen after installation.

**Setting the exhibit base**

Set the exhibit base in the ground, level the uprights by securing with temporary braces and clamps as shown in Figure 3. Double-check the distance from the ground surface to the exhibit frame for proper height.

Mix and fill the holes with wet cement to within 2" of the ground surface. Agitate the concrete to remove air pockets making sure to not bump or move the braced exhibit base. Carefully recheck the base level before the concrete begins to harden.

**Finishing the installation**

Let cement set for at least 24 hours, remove the plastic and braces, back fill remaining holes and finish as necessary.

NOTE: ALTA TO SUPPLY GRAPHICS. TBD.

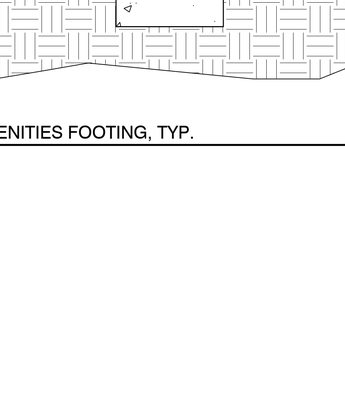
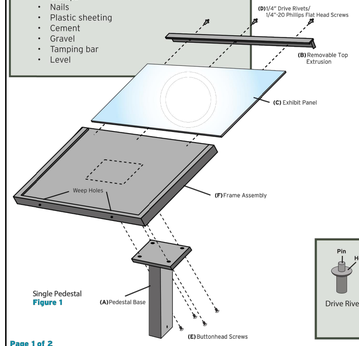



Figure 3

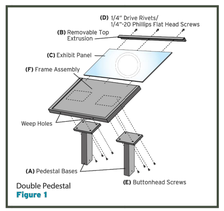
345 Oak Road
Gibsonia, PA 15044
724-265-4900
marketing@pannier.com
www.PannierGraphics.com

**Recommended tools and materials:**

- Power or manual post-hole digger
- Shovel
- Wood braces
- Hammer
- Clamps
- Nails
- Plastic sheeting
- Cement
- Gravel
- Tamping bar
- Level




Single Pedestal
Figure 1




Double Pedestal
Figure 1

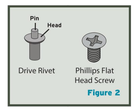
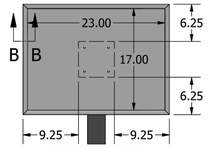



Figure 2



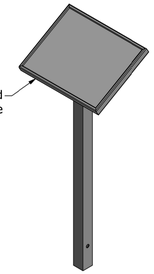


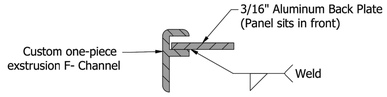
1 PANNIER SIGNAGE ASSEMBLY & FOOTING DETAIL
N.T.S.



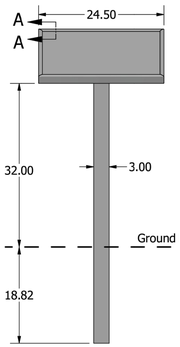

PANEL VIEW
SCALE 1/12

NOTE:
SIGN GRAPHICS ARE TBD

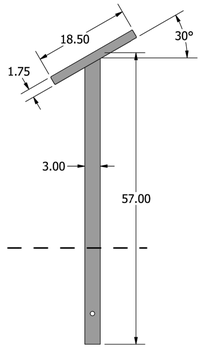


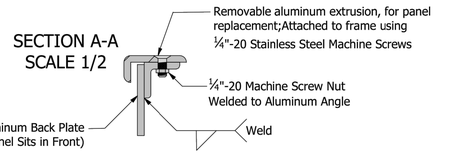

SECTION B-B
SCALE 1/2



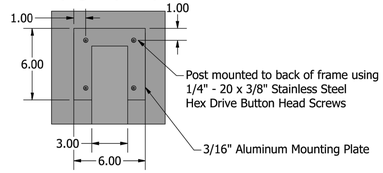

FRONT VIEW
SCALE 1/14




SIDE VIEW
SCALE 1/14

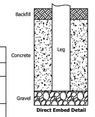



SECTION A-A
SCALE 1/2




MOUNTING PLATE
(leg to plate)

| HARDWARE INCLUDED | | |
|---|---|---|
| Type | QTY | Image |
| 1/4"-20 x 3/8" Stainless Steel Phillips Drive Button Head Screws | 4 each | |
| 1/4"-20 x 5/8" Flat Head Phillips Screws | 2 each | |




Direct Embed Detail

**Single Pedestal Exhibit Base**

**Frame Size:** 24.5"w x 18.5"h
**Trim Size:** 23.875"w x 17.875"h
**Visual Area:** 23"w x 17"h
**Frame Color:**
**Finish:**

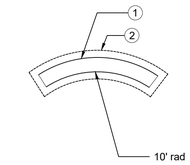
* Post holes should be dug below the frost line depth. Pannier recommends height from ground to bottom of frame to be 32".

CUSTOMER SIGNATURE

**Job #**
**Qty:**
**Date:**
**Rev. #:**
**Drawn By:**

345 Oak Road
Gibsonia, PA 15044
Phone: 724.265.4900
Fax: 724.265.4300
www.PannierGraphics.com

2 PANNIER INTERPRETIVE SIGNAGE
N.T.S.



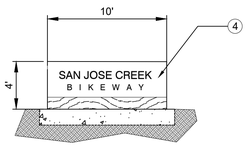

1 POURED-IN-PLACE CURVED CONCRETE TEXTURED WALL

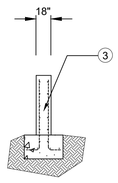
2 3' WIDE X 2' DEEP FOUNDATION

3 REINFORCING BARS PER LOCAL CODE

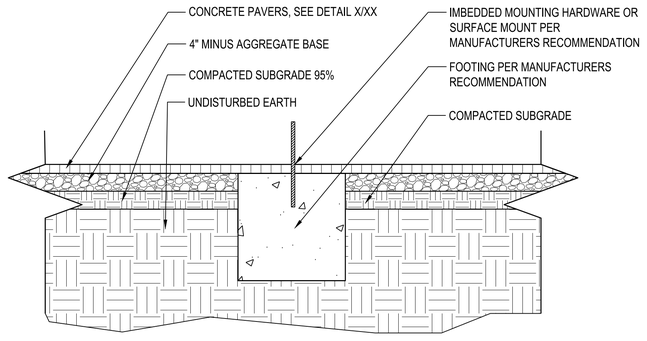
4 TEXT AND LAYOUT TBD

NOTE:
STRUCTURAL CALULATIONS FOR FOOTING TO BE PROVIDED BY MANUFACTURER




3 MONUMENT SIGN
N.T.S.




4 SITE AMENITIES FOOTING, TYP.
N.T.S.
P-SA2-74

Under Ground Service Alert of Southern California
Call: TOLL FREE
1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

L202

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

AMENITY DETAILS

SCALE AS SHOWN
DATE 12.11.2024

DESIGNED: PVT ENG
DRAWN: SA
CHECKED: K. MCKERNIN
REVIEWED: K. MCKERNIN

SHT. 72 OF 95 SHTS

N:\Shared\PROJECTS\2022\00-2022-171 Pomona, CA San Jose Bikeway\CAD\01_Plans\2022-171_05-L-PLA-DET.dwg 12/11/2024 11:41

FD-24 AO

# TRAFFIC SIGNAL GENERAL NOTES:

1. ALL WORK SHALL CONFORM TO THE 2023 CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD), THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARDS PLANS AND SPECIFICATIONS (2024 EDITION), AND SPECIAL PROVISIONS, AND ALL ADDENDUM THERETO.

2. NEW CONDUCTOR CABLES SHALL BE USED FOR TRAFFIC SIGNAL, AND STRANDED WIRES FOR SAFETY LIGHTS AND INTERNALLY ILLUMINATED STREET NAMES SIGNS (IISNS).

3. PEDESTRIAN PUSH BUTTON SHALL CONFIRM TO ADA REQUIREMENTS. PEDESTRIAN INDICATIONS SHALL BE LED PEDESTRIAN/HAND TYPE. TRAFFIC SIGNAL INDICATIONS SHALL BE 12" LENSES WITH METAL BACKPLATES AND VISORS, ETC. ALL INDICATIONS SHALL BE "LED" TYPE. IISNS SHALL BE RETROFITTED LED PER SPEC.

4. PRIOR TO BORING, JACKING OR TRENCHING OF ANY CONDUIT, THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES FOR EXACT LOCATION OF UTILITIES. NOTE: "TRENCHING IN PAVEMENT METHOD" IS NOT AN OPTION. ALL POT HOLES SHALL BE HAND DUG. SAW CUTTING POT HOLE LOCATIONS IS NOT AN OPTION.

5. THE CITY WILL PAY THE EDISON COMPANY, ALL APPROPRIATE SERVICE INSTALLATION CHARGES. THE CONTRACTOR SHALL MAKE ARRANGEMENTS WITH THE EDISON COMPANY FOR SERVICE CONNECTIONS. AT LEAST 48 HOURS ADVANCE NOTICE SHALL BE GIVEN TO THE EDISON COMPANY BY CONTACTING THEIR ENGINEER AT 909-592-3725.

6. ALL MATERIAL AND WORK SHALL CONFORM TO THE CURRENT CITY STANDARD PLANS AND THE STANDARD PLANS AND SPECIFICATIONS OF THE CALIFORNIA DEPARTMENT OF TRANSPORTATION. ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF CALTRANS STANDARD SPECIFICATIONS, SECTION 86. IF THERE IS A CONFLICT BETWEEN CALTRANS AND CITY SPECIFICATIONS, THE CITY SPECIFICATIONS WILL PREVAIL.

7. FINAL FIELD LOCATIONS OF ALL EQUIPMENT SHALL BE APPROVED BY THE CITY INSPECTOR PRIOR TO INSTALLATION.

8. PULL BOXES SHALL BE NO. 6E, EXCEPT AS SHOWN. PULL BOXES SHALL BE CRISTY N36 ELECTRICAL BOX WITH FIBRELYTE LID WITH N90 BOLT DOWN KIT.

9. MINOR ERRORS OR OMISSIONS ON THESE PLANS OR IN THE ACCOMPANYING SPECIFICATIONS SHALL NOT RELIEVE THE CONTRACTOR FROM PROVIDING A COMPLETE AND FULLY OPERATING SYSTEM.

10. EXISTING STREET LIGHTS TO BE REMOVED SHALL BE SALVAGED TO THE CITY YARD. CONTACT TRAFFIC OPERATIONS CREW CHIEF AT (909) 620-2395, 48 HOURS PRIOR TO DELIVERY.

11. ALL EXISTING STRIPING AND PAVEMENT MARKINGS SHALL BE REPLACED ON ALL APPROACHES WITHIN 300 FEET OF THE INTERSECTION. ALL STRIPING, MARKING DETAILS, AND RAISED PAVEMENT MARKERS SHALL MATCH CITY STANDARD PLANS, DETAILS, AND SPECIFICATIONS. ALL STRIPING AND PAVEMENT MARKINGS SHALL BE IN THERMOPLASTIC UNLESS OTHERWISE NOTED.

12. GROUT THE BOTTOM OF ALL PULL BOXES, MINIMUM OF 2" THICK. SLOPE THE GROUT TO A 1 ½" DIAMETER DRAIN HOLE IN THE GROUT TO ALLOW WATER TO DRAIN THROUGH THE GROUT TO THE UNDERLYING CRUSHED ROCK.

13. PAINT ALL POLES, CABINETS, TRAFFIC SIGNAL EQUIPMENT, AND MOUNTINGS (VISIBLE TO THE PUBLIC) WITH SAN DIMAS BROWN. THE ONLY BLACK IS THE TRAFFIC SIDE OF BACK PLATE, INSIDE THE VISORS, AND THE PED CRATE (IN PEDESTRIAN INDICATION). *******CHECK WITH CITY BEFORE INCLUDING THIS NOTE**********

14. ALL VEHICLE SIGNAL HEADS SHALL INCLUDE A 2" YELLOW REFLECTIVE STRIP BACKPLATE.

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

PRELIMINARY

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

FEHR & PEERS
600 Wilshire Boulevard Suite 1050 Los Angeles, CA 90017 (213) 261-3050

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

GENERAL NOTES
TRAFFIC SIGNAL PLAN

T101

SCALE AS SHOWN
DATE

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: C. STRAYER
REVIEWED: C. STRAYER

SHT. 73 OF 95 SHTS

FF - 374 AA

C:\Users\jschmidt\OneDrive - Fehr & Peers\Documents\LA-3404 SJ Creek\90_Submittal\3404-TS.dwg 12/11/2024 17:02

## POLE AND EQUIPMENT SCHEDULE

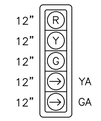
| POLE NO. | SIGNAL STANDARD | | | | SIGNAL MOUNTING | | | PED PUSH BUTTONS | | | | LED LUM WATAGE | PLACEMENT DIMENSIONS | | I.I.S.N.S. LEGEND |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DESCRIPTION | HEIGHT | SIG MA | LUM ARM | POLE VEHICLE | MAST ARM VEHICLE | POLE PED | ø | TYPE | QUAD | ARROW | | "A" | "B" | |
| (1) | PED PUSH BUTTON POST | 5'-7" | – | – | – | – | – | 8 | APS (N) | NE | → | – | EX. | EX. | — |
| (2) | 1-A | 10' | – | – | TV-1-T | – | SP-1-T | 2 | APS (N) | SE | ← | – | EX. | EX. | – |
| (3) | 26A-A-80 | 35' | 40' | 15' | SV-1-T | 2-MAS | SP-1-T | 2 | APS (N) | SE | → | 110W(N) | EX. | EX. | So Campus Dr |
| (4) | 1-A | 10' | – | – | TV-1-T | – | SP-1-T | 4 | APS (N) | SW | ← | – | EX. | EX. | – |
| (5) | 24A-4-100(N) | 35' | 35' | 15' | SV-1-T(N) | 2-MAS(N) | SP-1-T(N) | 4 | APS (N) | SW | → | 110W(N) | 2' | 8' | Kellogg Dr |
| (6) | 1-A(N) | 10' | – | – | TV-2-T(N) | – | SP-1-T(N) | 6 | APS (N) | NW | ← | – | 2' | 10' | – |
| (7) | 26A-4-100(N) | 35' | 40' | 15' | SV-1-T(N) | 2-MAS(N) | SP-1-T(N) | 6 | APS (N) | NW | → | 110W(N) | 3' | 10' | So Campus Dr |
| (8) | 1-A(N) | 10' | – | – | TV-2-T(N) | – | SP-1-T(N) | 8 | APS (N) | NE | ← | – | 14' | 8' | – |
| (9) | 24A-4-80 | 35' | 35' | 15' | SV-1-T | 2-MAS | SP-1-T | – | – | – | – | 110W(N) | EX. | EX. | Kellogg Dr |

ALL EQUIPMENT EXISTING UNLESS OTHERWISE NOTED. (N) = NEW.

## LEGEND (THIS SHEET ONLY)

- VIDEO DETECTION CAMERA
- INTERNALLY ILLUMINATED STREET NAME SIGN
- VIDEO DETECTION ZONE
- BICYCLE DETECTION LOOP

- AB — ABANDON. IF APPLIED TO CONDUIT, REMOVE CONDUCTORS.
- BC — INSTALL PULL BOX IN EXISTING CONDUIT RUN.
- RS — REMOVE AND SALVAGE EQUIPMENT.




DETAIL 'A'
N.T.S.

## CONDUCTOR SCHEDULE

| AWG OR CABLE | PHASE NO. | POLE | NUMBER OF CONDUCTORS — RUN NUMBERS 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|---|
| 12 CSC VEH PED | 4,2P 2P | (1) | – | – | – | – | – | – | – | 1 |
| | 4,2P 2P | (2) | – | – | – | – | 1 | – | – | 1 |
| | 4,2P 2P | (3) | – | – | – | 1 | 1 | – | – | 1 |
| | 4,2P 2P | (4) | – | – | 1 | 1 | 1 | – | – | 1 |
| | 4,2P 2P | (5) | – | 1 | 1 | 1 | 1 | – | – | 1 |
| | 4,2P 2P | (6) | 1N 1N | 1 1 | 1 1 | 1 1 | 1 1 | – – | – – | 1 1 |
| | 4,2P 2P | (7) | – – | – – | – – | – – | – – | 1 1 | 1N 1N | 1 1 |
| | 4,2P 2P | (8) | – – | – – | – – | – – | – – | 1 1 | – – | 1 1 |
| 3 CSC PPB | 4,2P 2P | (9) | – – | – – | – – | – – | – – | – – | – – | 1 – |
| | TOTAL CABLES | | 1 1 | 2 2 | 3 3 | 4 4 | 5 5 | 2 2 | 1 1 | 8 8 |
| NO. 12 | I.I.S.N.S. | | – | 2 | 2 | 2 | 2 | 2 | 2N | 2 |
| NO. 10 | LUMINAIRES | | – | 2 | 2 | 2 | 2 | 2 | 2N | 2 |
| | VIDEO CABLE | | – | 2 | 2 | 3 | 3 | 1 | 1N | 5 |
| 12 PR #19 | INTERCONNECT CABLE | | | | | | | | | 1 |
| CONDUIT SIZE | | | 3"N | 3" | 3" | 3" | 3" | 3" | 3"N | 3"3" |

ALL EQUIPMENT EXISTING UNLESS OTHERWISE NOTED. N = NEW.

## PROPOSED SIGN LEGEND (THIS SHEET ONLY):

R10-15(MOD) (30"x30")

R73-6(CA) (36"x36")

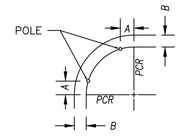
R73-3(CA) (36"x36")

R9-5 (12"x18")

R5-2(CA) (24"x24")

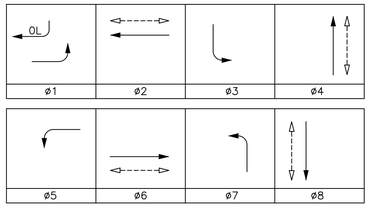
R14-1(CA) (24"x18")

G34(CA)(R) (21"x15")



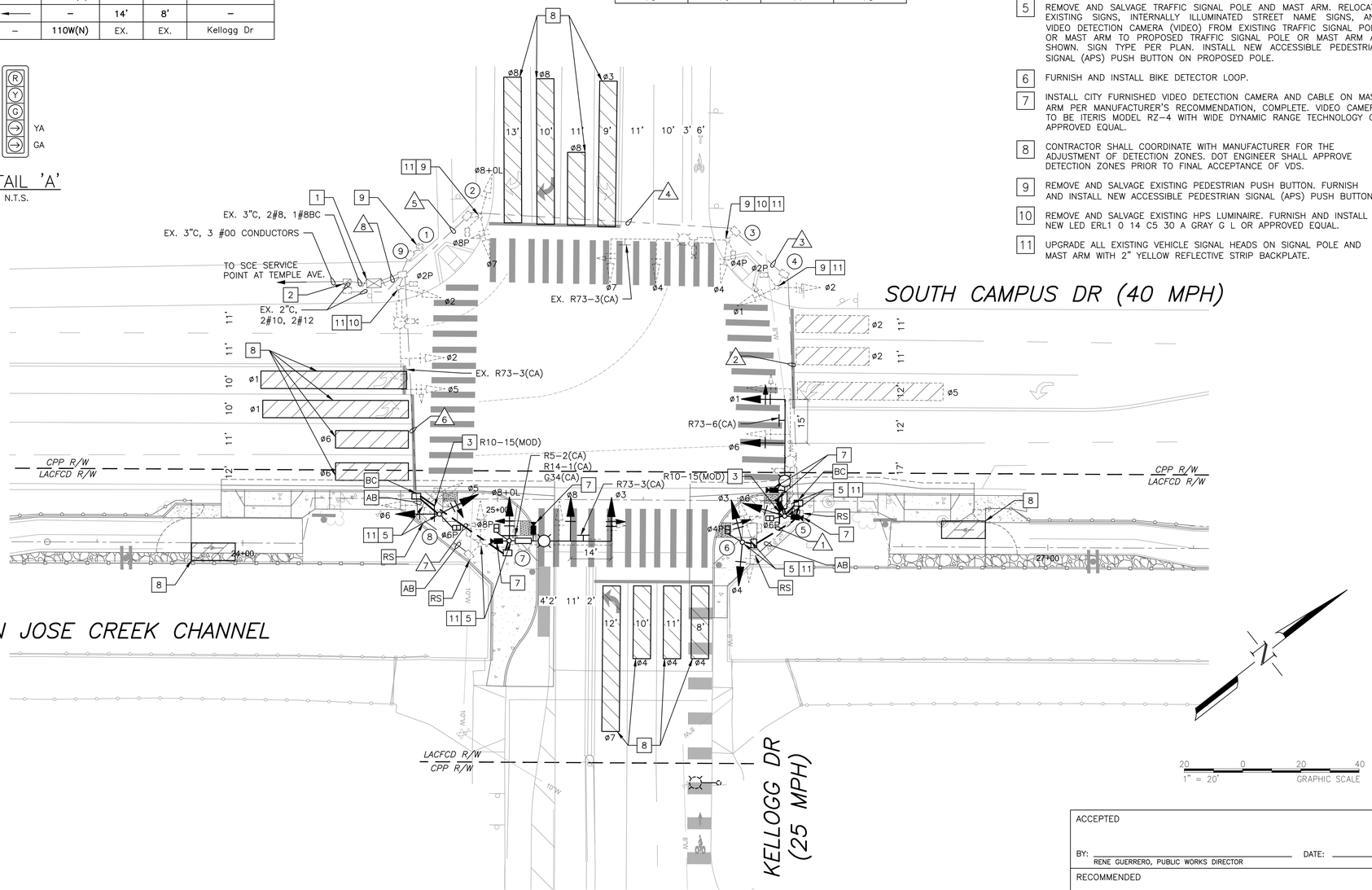

POLE PLACEMENT DETAIL

## EXISTING SIGNAL PHASE DIAGRAMTO REMAIN




## PROJECT NOTES (THIS SHEET ONLY):

1. (2) EXISTING QUAD-ACIA MODEL 170 CONTROLLERS IN TYPE 332 CABINET WITH HAYES 2400 OR EQUIVALENT EXTERNAL MODEM AND CABLE ASSEMBLIES C20S AND C2S WIRED TO THE TBO CONNECTOR INSIDE THE CABINET.
2. EXISTING TESCO 26000 PEDESTAL WITH (1) 100A-240V-3P MAIN BREAKER, (1) 30A-120V-2P BREAKER, (1) 50A-120V-1P BREAKER FOR METERED SIGNALS, (1) 30A-120V-2P BREAKER FOR UNMETERED LIGHTING AND (1) 15A-120V-1P BREAKER FOR METERED IISNS. EXISTING TESCO UPS 1400XL UNINTERRUPTED POWER SUPPLY MOUNTED IN AN EXTERNAL CABINET & ATTACHED TO THE TESCO 26000 PEDESTAL.
3. FURNISH AND INSTALL SIGN ON TRAFFIC SIGNAL POLE.
4. FURNISH AND INSTALL SIGN ON TRAFFIC SIGNAL MAST ARM.
5. REMOVE AND SALVAGE TRAFFIC SIGNAL POLE AND MAST ARM. RELOCATE EXISTING SIGNS, INTERNALLY ILLUMINATED STREET NAME SIGNS, AND VIDEO DETECTION CAMERA (VIDEO) FROM EXISTING TRAFFIC SIGNAL POLE OR MAST ARM TO PROPOSED TRAFFIC SIGNAL POLE OR MAST ARM AS SHOWN. SIGN TYPE PER PLAN. INSTALL NEW ACCESSIBLE PEDESTRIAN SIGNAL (APS) PUSH BUTTON ON PROPOSED POLE.
6. FURNISH AND INSTALL BIKE DETECTOR LOOP.
7. INSTALL CITY FURNISHED VIDEO DETECTION CAMERA AND CABLE ON MAST ARM PER MANUFACTURER'S RECOMMENDATION, COMPLETE. VIDEO CAMERA TO BE ITERIS MODEL RZ-4 WITH WIDE DYNAMIC RANGE TECHNOLOGY OR APPROVED EQUAL.
8. CONTRACTOR SHALL COORDINATE WITH MANUFACTURER FOR THE ADJUSTMENT OF DETECTION ZONES. DOT ENGINEER SHALL APPROVE DETECTION ZONES PRIOR TO FINAL ACCEPTANCE OF VDS.
9. REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ACCESSIBLE PEDESTRIAN SIGNAL (APS) PUSH BUTTON.
10. REMOVE AND SALVAGE EXISTING HPS LUMINAIRE. FURNISH AND INSTALL NEW LED ERL1 0 14 C5 30 A GRAY G L OR APPROVED EQUAL.
11. UPGRADE ALL EXISTING VEHICLE SIGNAL HEADS ON SIGNAL POLE AND MAST ARM WITH 2" YELLOW REFLECTIVE STRIP BACKPLATE.




ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

TRAFFIC SIGNAL MODIFICATION PLAN
KELLOGG DRIVE
AND SOUTH CAMPUS DRIVE

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

T102

SCALE AS SHOWN

DATE

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: C. STRAYER
REVIEWED: C. STRAYER

SHT. 74 OF 95 SHTS

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|


alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

FEHR & PEERS
600 Wilshire Boulevard Suite 1050 Los Angeles, CA 90017 (213) 261-3050


PRELIMINARY

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.


CALL BEFORE YOU DIG
Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG


C:\Users\jschmidt\OneDrive - Fehr & Peers\Documents\LA-3404 SJ Creek\90_Submittal\3404-TS.dwg 12/11/2024 17:03

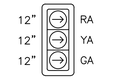
## POLE AND EQUIPMENT SCHEDULE

| POLE NO. | SIGNAL STANDARD | | | SIGNAL MOUNTING | | | PED PUSH BUTTONS | | | | LED LUM WATAGE | PLACEMENT DIMENSIONS | | I.I.S.N.S. LEGEND |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DESCRIPTION | SIG MA | LUM ARM | POLE VEHICLE | MAST ARM VEHICLE | POLE PED | ø | TYPE | QUAD | ARROW | | A | B | |
| (1) | 1–A(10') | – | – | TV–1–T | – | SP–1–T | 6 | APS (N) | NW | → | – | 10' | 4' | – |
| (2) | 24–4–70 | 35' | 12' | SV–2–TA | MAS–2 | – | — | – | – | – | 250W | – | 2.5' | CORPORATE CTR DR. |
| (3) | 17–2–70 | 20' | – | SV–1–T | – | SP–1–T (N) | 3 | APS (N) | SE | ← | – | – | 2.5' | SOUTH CAMPUS DR. |
| (4) | 17–2–70 | 20' | 12' | SV–1–T SV–1–T | MAS | SP–1–T | 4 | APS (N) | NE | ← | 250W | 6' | 2.5' | CORPORATE CTR DR. |
| (5) | 1–A(7') | – | – | – | – | TP–1–T (N) | 6 | APS (N) | SE | → | – | 8' | 2.5' | – |

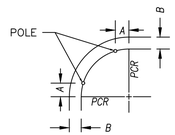
ALL EQUIPMENT EXISTING UNLESS OTHERWISE NOTED. (N) = NEW.

## LEGEND (THIS SHEET ONLY)

- VIDEO DETECTION CAMERA
- INTERNALLY ILLUMINATED STREET NAME SIGN
- VIDEO DETECTION ZONE

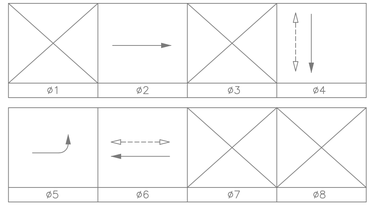



DETAIL 'A'
N.T.S.

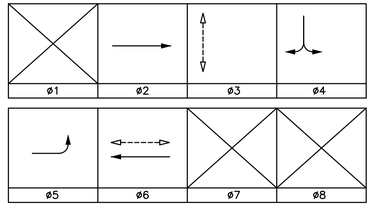



POLE PLACEMENT DETAIL

## EXISTING SIGNAL PHASE DIAGRAM




## PROPOSED SIGNAL PHASE DIAGRAM



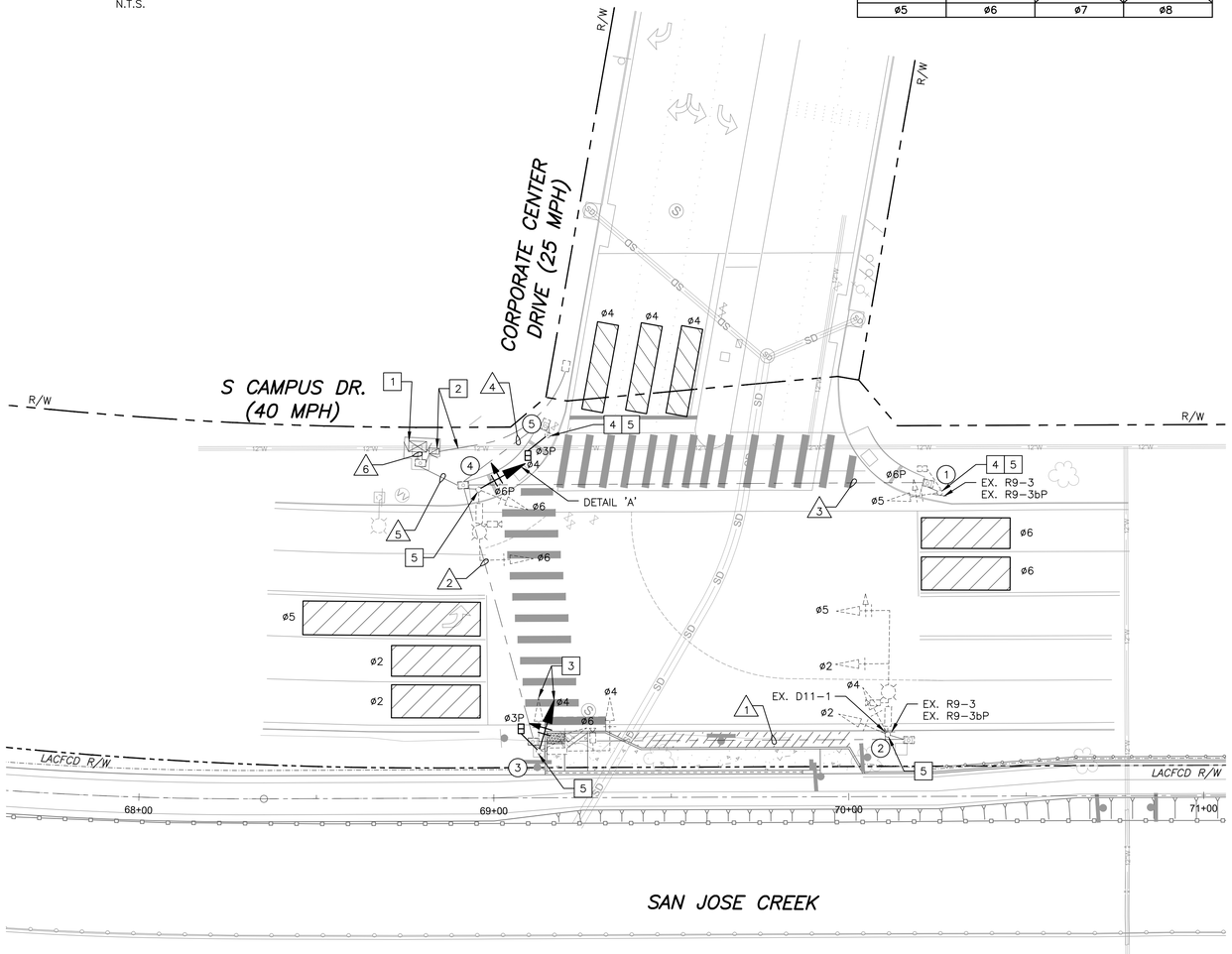

## PROJECT NOTES (THIS SHEET ONLY):

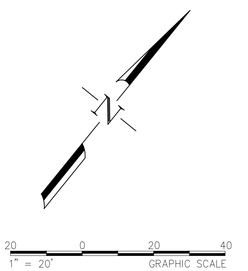
1. EXISTING TYPE 170 CONTROLLER AND MODEL 332 CABINET TO REMAIN
2. EXISTING 120/240 VOLT TESCO SERVICE WITH 50 AMP METERED SIGNAL CIRCUIT, 15 AMP METERED I.S.N.S CIRCUIT AND 30 AMP UNMETERED LIGHTING CIRCUIT TO REMAIN. EXISTING 3" CONDUIT FROM EDISON h.h. TO SERVICE CABINET TO REMAIN. EXISTING EDISON 3½'S TO REMAIN
3. REPLACE EXISTING RYG BALL SIGNAL HEAD WITH RIGHT TURN SIGNAL HEAD AS SHOWN PER DETAIL 'A'.
4. REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW ACCESSIBLE PEDESTRIAN SIGNAL (APS) PUSH BUTTON.
5. UPGRADE ALL EXISTING VEHICLE SIGNAL HEADS ON SIGNAL POLE AND MAST ARM WITH 2" YELLOW REFLECTIVE STRIP BACKPLATE.

## CONDUCTOR SCHEDULE

| AWG OR CABLE | CONDUCTOR DESIGNATION | NUMBER OF CONDUCTORS RUN NUMBERS 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|
| NO. 14 | ø2 | 3 | 3 | – | – | 3 | 3 |
| | ø4 | 3 | 6 | – | – | 6 | 6 |
| | ø5 | 3 | 3 | 3 | – | 6 | 6 |
| | ø6 | – | 3 | – | – | 6 | 6 |
| | ø3P (N) | – | 2 | – | 2 | 4 | 4 |
| | ø6P | – | – | 2 | – | 4 | 4 |
| | PPB (ø3) (N) | – | 1 | – | – | 2 | 2 |
| | PPB (ø6) | – | – | 1 | 1 | 2 | 2 |
| | PPB COMMON | – | 1 | 1 | – | 2 | 2 |
| | SPARES | 3 | 3 | 3 | 3 | 6 | 6 |
| | TOTAL NO. 14 | 12 | 22 | 10 | 6 | 41 | 41 |
| | | | | | | | |
| NO. 12 | ILLUMINATED STREET NAME SIGN (I.S.N.S) | 2 | 2 | – | – | 2 | – |
| | | | | | | | |
| NO. 10 | LUMINAIRES | 2 | 2 | – | – | 2 | – |
| | SIGNAL COMMON | 1 | 1 | – | – | 2 | 2 |
| | TOTAL NO. 10 | 3 | 3 | – | – | 4 | 2 |
| | | | | | | | |
| VIDEO DETECTION COAX CABLE | | 1 | 2 | – | – | 3 | 3 |
| | CONDUIT SIZE | 3" | 3" | 3" | 3" | 2–3" | 2–3" |

ALL CONDUITS AND CONDUCTORS ARE EXISTING, UNLESS OTHERWISE NOTED. (N) = NEW.




ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428–58072 / SAN JOSE CREEK BIKEWAY

TRAFFIC SIGNAL MODIFICATION PLAN
CORPORATE CENTER DRIVE
AND SOUTH CAMPUS DRIVE

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

T103

SCALE AS SHOWN

DATE

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: C. STRAYER
REVIEWED: C. STRAYER

SHT. 75 OF 95 SHTS

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|


alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

FEHR & PEERS
600 Wilshire Boulevard Suite 1050 Los Angeles, CA 90017 (213) 261-3050


PRELIMINARY

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

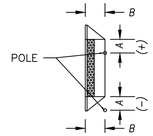

CALL BEFORE YOU DIG
Under Ground Service Alert of Southern California
Call: TOLL FREE
1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG


C:\Users\jschmidt\OneDrive - Fehr & Peers\Documents\LA-3404 SJ Creek\90_Submittal\3404-T5.dwg 12/11/2024 17:03

## POLE AND EQUIPMENT SCHEDULE

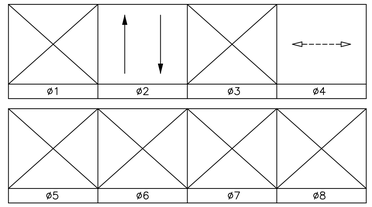
| POLE NO. | SIGNAL STANDARD | | | SIGNAL MOUNTING | | | PED PUSH BUTTONS | | | | LED LUM WATAGE | PLACEMENT DIMENSIONS | | I.I.S.N.S. LEGEND |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DESCRIPTION | SIG MA | LUM ARM | POLE VEHICLE | MAST ARM VEHICLE | POLE PED | ø | TYPE | QUAD | ARROW | | "A" | "B" | |
| (1) | 1–A | – | – | – | – | SP–1–T | – | – | – | → | – | 0.5' | 10.5' | |
| (2) | 19–3–100 | 25' | 15' | SV–1–T | MAS | – | 4 | APS | N | ← | 110W | 1.5' | 10.5' | SJ CREEK TRAIL |
| (3) | 1–A | – | – | – | – | SP–1–T | 4 | APS | N | → | – | 0' | 10' | |
| (4) | 17A–3–100 | 20' | 15' | SV–1–T | MAS | – | 4 | APS | S | ← | 110W | 0' | 9.5' | SJ CREEK TRAIL |

ALL EQUIPMENT IS NEW, UNLESS OTHERWISE NOTED.
NEW LED LUMINAIRES TO BE ERL1 0 14 C5 30 A GRAY G L OR APPROVED EQUAL.




POLE PLACEMENT DETAIL

## PROPOSED SIGNAL PHASE DIAGRAM




## PROJECT NOTES (THIS SHEET ONLY):

1. INSTALL QUAD–ACIA MODEL 170 CONTROLLERS IN TYPE 332 CABINET WITH HAYES 2400 OR EQUIVALENT EXTERNAL MODEM AND CABLE ASSEMBLIES C20S AND C2S WIRED TO THE TBO CONNECTOR INSIDE THE CABINET.
2. INSTALL TESCO 26000 PEDESTAL WITH (1) 100A–240V–3P MAIN BREAKER, (1) 30A–120V–2P BREAKER, (1) 50A–120V–1P BREAKER FOR METERED SIGNALS, (1) 30A–120V–2P BREAKER FOR UNMETERED LIGHTING AND (1) 15A–120V–1P BREAKER FOR METERED IISNS. INSTALL TESCO UPS 1400XL UNINTERRUPTED POWER SUPPLY MOUNTED IN AN EXTERNAL CABINET & ATTACHED TO THE TESCO 26000 PEDESTAL.
3. FURNISH AND INSTALL SIGN ON TRAFFIC SIGNAL POLE.
4. FURNISH AND INSTALL BIKE DETECTOR LOOP.
5. FURNISH AND INSTALL MODEL 721 EVP OPTICAL DETECTOR UNITS ON SIGNAL MAST ARM AS SHOWN.
6. INSTALL CITY FURNISHED VIDEO DETECTION CAMERA AND CABLE ON MAST ARM PER MANUFACTURER'S RECOMMENDATION, COMPLETE. VIDEO CAMERA TO BE ITERIS MODEL RZ–4 WITH WIDE DYNAMIC RANGE TECHNOLOGY OR APPROVED EQUAL.
7. CONTRACTOR SHALL COORDINATE WITH MANUFACTURER FOR THE ADJUSTMENT OF DETECTION ZONES. DOT ENGINEER SHALL APPROVE DETECTION ZONES PRIOR TO FINAL ACCEPTANCE OF VDS.

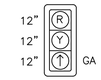
## LEGEND (THIS SHEET ONLY)

- VIDEO DETECTION CAMERA
- INTERNALLY ILLUMINATED STREET NAME SIGN
- VIDEO DETECTION ZONE
- BICYCLE DETECTION LOOP

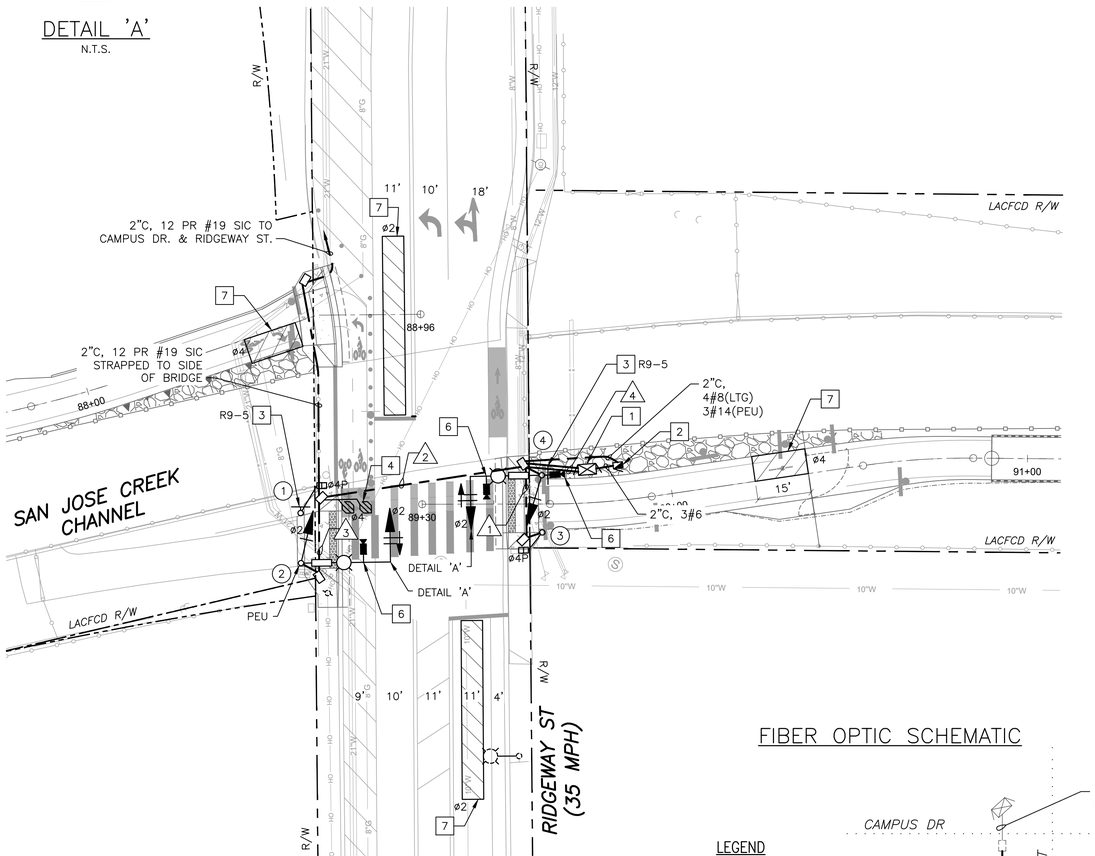
## CONDUCTOR SCHEDULE

| AWG OR CABLE | PHASE NO. | POLE | NUMBER OF CONDUCTORS RUN NUMBERS 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|
| 12 CSC VEH PED / 3 CSC PPB | 4P – | (1) | – – | 1 – | – – | 1 – |
| | 2 4P | (2) | – – | 1 1 | 1 1 | 1 1 |
| | 4P – | (3) | 1 – | – – | – – | 1 – |
| | 2 4P | (4) | – – | – – | – – | 1 1 |
| | TOTAL CABLES | | 1 – | 2 1 | 1 1 | 4 2 |
| NO. 12 | I.I.S.N.S. | | – | 2 | 2 | 2 |
| NO. 10 | LUMINAIRES | | – | 2 | 2 | 2 |
| | VIDEO CABLE | | – | 2 | 2 | 3 |
| 12 PR #19 | INTERCONNECT CABLE | | – | 1 | – | 1 |
| CONDUIT SIZE | | | 2" | 3" | 2" | 3"3" |

ALL CONDUITS AND CONDUCTORS ARE NEW, UNLESS OTHERWISE NOTED.



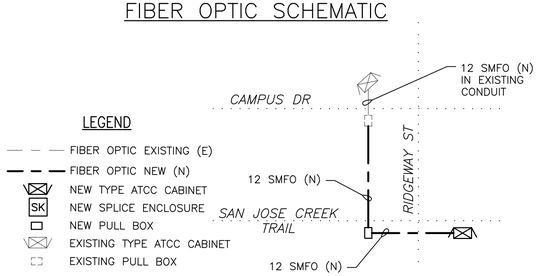

DETAIL 'A'
N.T.S.

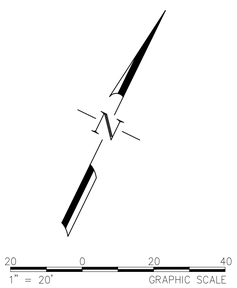



## PROPOSED SIGN LEGEND (THIS SHEET ONLY):

R9–5
(12"x18")

## FIBER OPTIC SCHEMATIC




ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428–58072 / SAN JOSE CREEK BIKEWAY

TRAFFIC SIGNAL INSTALLATION PLAN
RIDGEWAY STREET
AND SAN JOSE CREEK BIKEWAY

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

T104

SCALE AS SHOWN
DATE

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: C. STRAYER
REVIEWED: C. STRAYER

SHT. 76 OF 95 SHTS

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|


alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

FEHR & PEERS
600 Wilshire Boulevard Suite 1050 Los Angeles, CA 90017 (213) 261-3050


PRELIMINARY

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.


Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

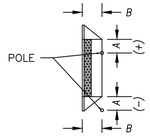

C:\Users\jschmidt\OneDrive - Fehr & Peers\Documents\LA-3404 SJ Creek\90_Submittal\3404-TS.dwg 12/11/2024 17:03

FF - 374 AD

## POLE AND EQUIPMENT SCHEDULE

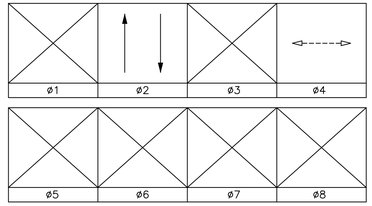
| POLE NO. | SIGNAL STANDARD | | | SIGNAL MOUNTING | | | PED PUSH BUTTONS | | | | LED LUM WATAGE | PLACEMENT DIMENSIONS | | I.I.S.N.S. LEGEND |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DESCRIPTION | SIG MA | LUM ARM | POLE VEHICLE | MAST ARM VEHICLE | POLE PED | ø | TYPE | QUAD | ARROW | | "A" | "B" | |
| 1 | 1–A | – | – | – | – | SP–1–T | 4 | APS | S | → | – | 2' | 12.5' | |
| 2 | 24–3–100 | 35' | 15' | SV–1–T | MAS | – | 4 | APS | S | ← | 110W | 5.5' | 9' | SJ CREEK TRAIL |
| 3 | 1–A | – | – | – | – | SP–1–T | – | – | – | – | – | 0' | 11' | |
| 4 | 19–3–100 | 25' | 15' | SV–1–T | MAS | – | 4 | APS | N | → | 110W | 0' | 11' | SJ CREEK TRAIL |

ALL EQUIPMENT IS NEW, UNLESS OTHERWISE NOTED.
NEW LED LUMINAIRES TO BE ERL1 0 14 C5 30 A GRAY G L OR APPROVED EQUAL.




POLE PLACEMENT DETAIL

## PROPOSED SIGNAL PHASE DIAGRAM




## PROJECT NOTES (THIS SHEET ONLY):

1. INSTALL QUAD–ACIA MODEL 170 CONTROLLERS IN TYPE 332 CABINET WITH HAYES 2400 OR EQUIVALENT EXTERNAL MODEM AND CABLE ASSEMBLIES C20S AND C2S WIRED TO THE TBO CONNECTOR INSIDE THE CABINET.
2. INSTALL TESCO 26000 PEDESTAL WITH (1) 100A–240V–3P MAIN BREAKER, (1) 30A–120V–2P BREAKER, (1) 50A–120V–1P BREAKER FOR METERED SIGNALS, (1) 30A–120V–2P BREAKER FOR UNMETERED LIGHTING AND (1) 15A–120V–1P BREAKER FOR METERED IISNS. INSTALL TESCO UPS 1400XL UNINTERRUPTED POWER SUPPLY MOUNTED IN AN EXTERNAL CABINET & ATTACHED TO THE TESCO 26000 PEDESTAL.
3. FURNISH AND INSTALL SIGN ON TRAFFIC SIGNAL POLE.
4. FURNISH AND INSTALL BIKE DETECTOR LOOP.
5. FURNISH AND INSTALL MODEL 721 EVP OPTICAL DETECTOR UNITS ON SIGNAL MAST ARM AS SHOWN.
6. INSTALL CITY FURNISHED VIDEO DETECTION CAMERA AND CABLE ON MAST ARM PER MANUFACTURER'S RECOMMENDATION, COMPLETE. VIDEO CAMERA TO BE ITERIS MODEL RZ–4 WITH WIDE DYNAMIC RANGE TECHNOLOGY OR APPROVED EQUAL.
7. CONTRACTOR SHALL COORDINATE WITH MANUFACTURER FOR THE ADJUSTMENT OF DETECTION ZONES. DOT ENGINEER SHALL APPROVE DETECTION ZONES PRIOR TO FINAL ACCEPTANCE OF VDS.

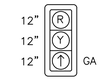
## LEGEND (THIS SHEET ONLY)

- VIDEO DETECTION CAMERA
- INTERNALLY ILLUMINATED STREET NAME SIGN
- VIDEO DETECTION ZONE
- BICYCLE DETECTION LOOP

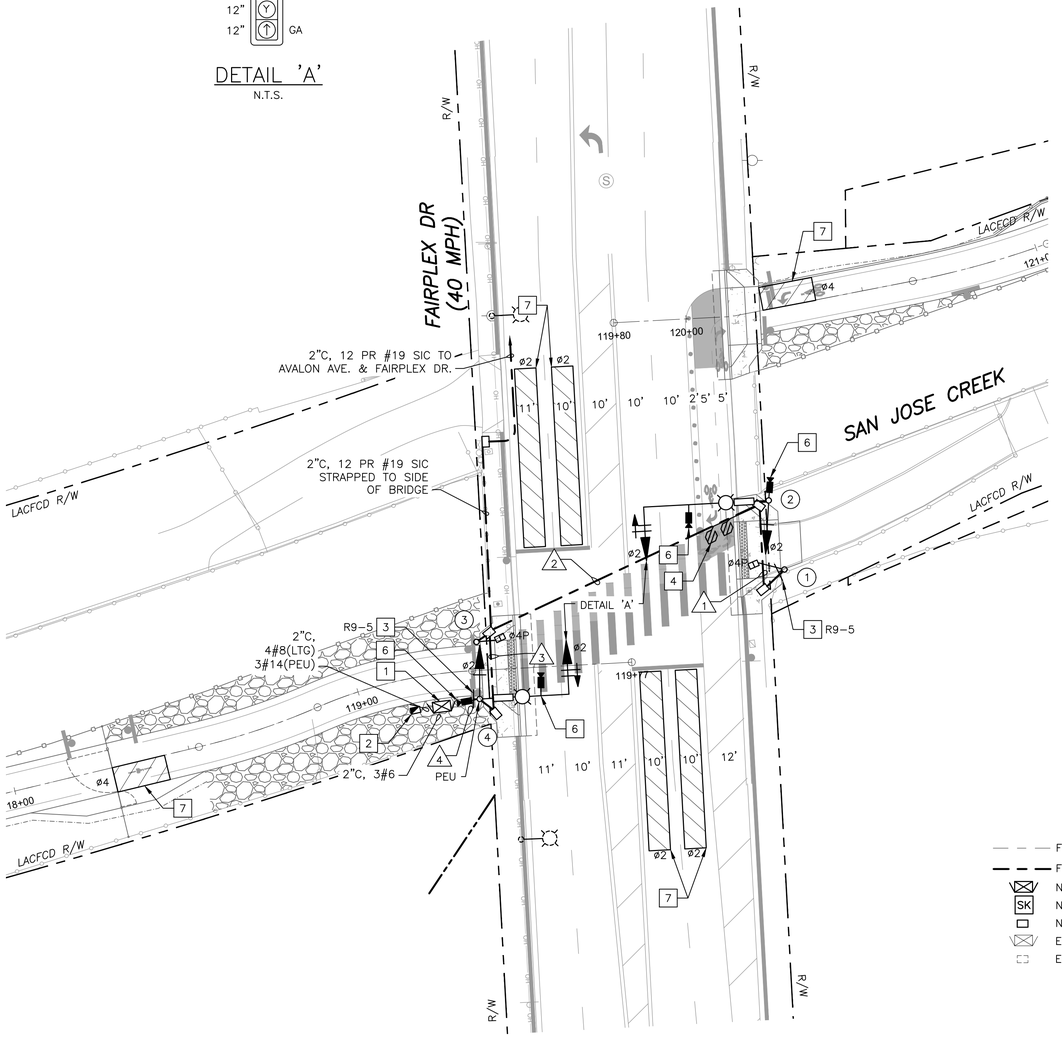
## CONDUCTOR SCHEDULE

| AWG OR CABLE | PHASE NO. | POLE | NUMBER OF CONDUCTORS RUN NUMBERS 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|
| 12 CSC VEH PED / 3 CSC PPB | 4P / 4P | 1 | 1 / 1 | 1 / 1 | 1 / 1 | 1 / 1 |
| | 2 / 4P | 2 | – / 1 | 1 / 1 | 1 / 1 | 1 / 1 |
| | 4P / – | 3 | – / – | – / – | 1 / – | 1 / – |
| | 2 / 4P | 4 | – / – | – / – | – / 1 | 1 / 1 |
| | TOTAL CABLES | | 1 / 1 | 2 / 2 | 3 / 2 | 4 / 3 |
| NO. 12 | I.I.S.N.S. | | – | 2 | 2 | 2 |
| NO. 10 | LUMINAIRES | | – | 2 | 2 | 2 |
| | VIDEO CABLE | | – | 2 | 2 | 3 |
| 12 PR #19 | INTERCONNECT CABLE | | – | – | 1 | 1 |
| CONDUIT SIZE | | | 2" | 3" | 2" | 3"3" |

ALL CONDUITS AND CONDUCTORS ARE NEW, UNLESS OTHERWISE NOTED.



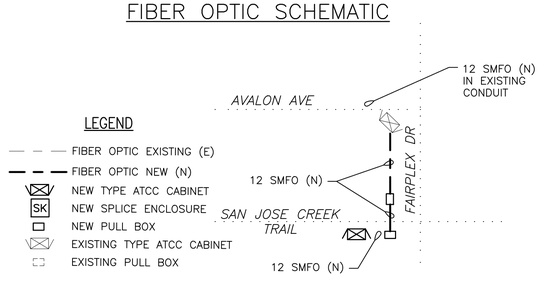

DETAIL 'A'
N.T.S.

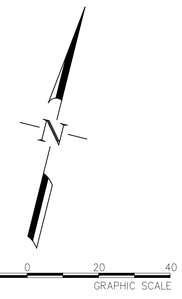



## PROPOSED SIGN LEGEND (THIS SHEET ONLY):

R9–5
(12"x18")

## FIBER OPTIC SCHEMATIC




ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428–58072 / SAN JOSE CREEK BIKEWAY

TRAFFIC SIGNAL INSTALLATION PLAN
FAIRPLEX DRIVE
AND SAN JOSE CREEK BIKEWAY

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

T105

SCALE AS SHOWN
DATE

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: C. STRAYER
REVIEWED: C. STRAYER

SHT. 77 OF 95 SHTS

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

PRELIMINARY

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.


alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

FEHR & PEERS
600 Wilshire Boulevard Suite 1050 Los Angeles, CA 90017 (213) 261-3050

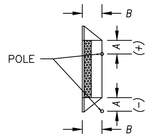

C:\Users\jschmidt\OneDrive - Fehr & Peers\Documents\LA-3404 SJ Creek\90_Submittal\3404-TS.dwg 12/11/2024 17:03

FF - 374 AE

## POLE AND EQUIPMENT SCHEDULE

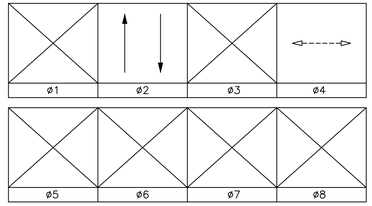
| POLE NO. | SIGNAL STANDARD | | | SIGNAL MOUNTING | | | PED PUSH BUTTONS | | | | LED LUM WATAGE | PLACEMENT DIMENSIONS | | I.I.S.N.S. LEGEND |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DESCRIPTION | SIG MA | LUM ARM | POLE VEHICLE | MAST ARM VEHICLE | POLE PED | ø | TYPE | QUAD | ARROW | | "A" | "B" | |
| (1) | 1–A | – | – | – | – | SP–1–T | 4 | APS | S | → | – | 0.5' | 9.5' | |
| (2) | 24–3–100 | 35' | 15' | SV–1–T | MAS–2 | – | 4 | APS | S | ← | 110W | 1.5' | 9.5' | SJ CREEK TRAIL |
| (3) | 1–A | – | – | – | – | SP–1–T | – | — | – | – | – | 0.5' | 9.5' | |
| (4) | 19–3–100 | 25' | 15' | SV–1–T | MAS–2 | – | 4 | APS | N | → | 110W | 0' | 9' | SJ CREEK TRAIL |

ALL EQUIPMENT IS NEW, UNLESS OTHERWISE NOTED.
NEW LED LUMINAIRES TO BE ERL1 0 14 C5 30 A GRAY G L OR APPROVED EQUAL.




POLE PLACEMENT DETAIL

## PROPOSED SIGNAL PHASE DIAGRAM




## PROJECT NOTES (THIS SHEET ONLY):

1. INSTALL QUAD–ACIA MODEL 170 CONTROLLERS IN TYPE 332 CABINET WITH HAYES 2400 OR EQUIVALENT EXTERNAL MODEM AND CABLE ASSEMBLIES C2OS AND C2S WIRED TO THE TBO CONNECTOR INSIDE THE CABINET.
2. INSTALL TESCO 26000 PEDESTAL WITH (1) 100A–240V–3P MAIN BREAKER, (1) 30A–120V–2P BREAKER, (1) 50A–120V–1P BREAKER FOR METERED SIGNALS, (1) 30A–120V–2P BREAKER FOR UNMETERED LIGHTING AND (1) 15A–120V–1P BREAKER FOR METERED IISNS. INSTALL TESCO UPS 1400XL UNINTERRUPTED POWER SUPPLY MOUNTED IN AN EXTERNAL CABINET & ATTACHED TO THE TESCO 26000 PEDESTAL.
3. FURNISH AND INSTALL SIGN ON TRAFFIC SIGNAL POLE.
4. FURNISH AND INSTALL BIKE DETECTOR LOOP.
5. FURNISH AND INSTALL MODEL 721 EVP OPTICAL DETECTOR UNITS ON SIGNAL MAST ARM AS SHOWN.
6. INSTALL CITY FURNISHED VIDEO DETECTION CAMERA AND CABLE ON MAST ARM PER MANUFACTURER'S RECOMMENDATION, COMPLETE. VIDEO CAMERA TO BE ITERIS MODEL RZ–4 WITH WIDE DYNAMIC RANGE TECHNOLOGY OR APPROVED EQUAL.
7. CONTRACTOR SHALL COORDINATE WITH MANUFACTURER FOR THE ADJUSTMENT OF DETECTION ZONES. DOT ENGINEER SHALL APPROVE DETECTION ZONES PRIOR TO FINAL ACCEPTANCE OF VDS.

## LEGEND (THIS SHEET ONLY)

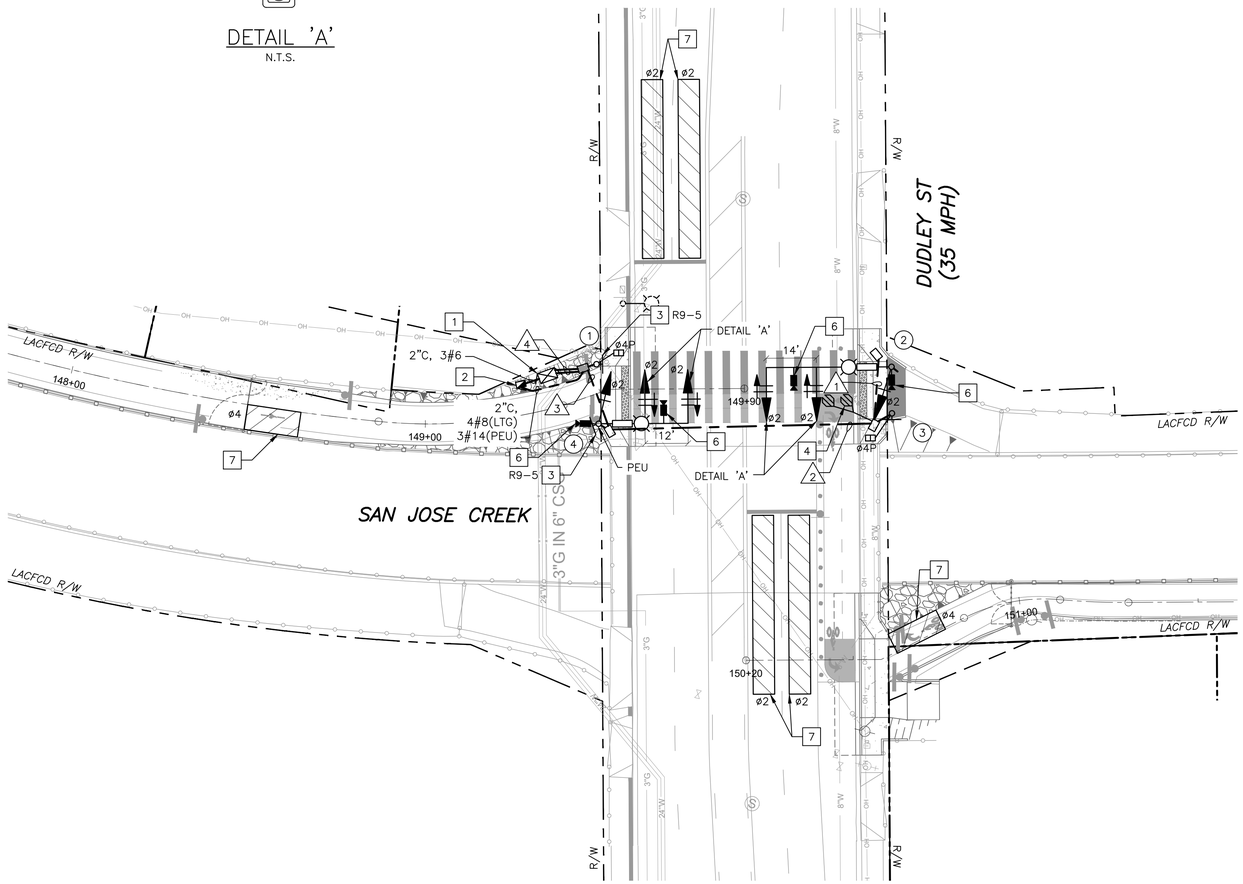
- VIDEO DETECTION CAMERA
- INTERNALLY ILLUMINATED STREET NAME SIGN
- VIDEO DETECTION ZONE
- BICYCLE DETECTION LOOP

DETAIL 'A'
N.T.S.

## CONDUCTOR SCHEDULE

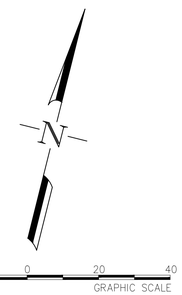
| AWG OR CABLE | PHASE NO. | POLE | NUMBER OF CONDUCTORS RUN NUMBERS 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|
| 12 CSC VEH PED / 3 CSC PPB | 4P / 4P | (1) | – / – | – / – | – / – | 1 / 1 |
| | 2 / 4P | (2) | 1 / 1 | 1 / 1 | 1 / 1 | 1 / 1 |
| | 4P / – | (3) | – / – | 1 / – | 1 / – | 1 / – |
| | 2 / 4P | (4) | – / – | – / – | 1 / 1 | 1 / 1 |
| | TOTAL CABLES | | 1 / 1 | 2 / – | 3 / 2 | 4 / 3 |
| NO. 12 | I.I.S.N.S. | | 2 | 2 | 2 | 2 |
| NO. 10 | LUMINAIRES | | 2 | 2 | 2 | 2 |
| | VIDEO CABLE | | 2 | 2 | 2 | 2 |
| CONDUIT SIZE | | | 2" | 3" | 2" | 3"/3" |

ALL CONDUITS AND CONDUCTORS ARE NEW, UNLESS OTHERWISE NOTED.




## PROPOSED SIGN LEGEND (THIS SHEET ONLY):

R9–5
(12"x18")




ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428–58072 / SAN JOSE CREEK BIKEWAY

TRAFFIC SIGNAL INSTALLATION PLAN
DUDLEY STREET
AND SAN JOSE CREEK BIKEWAY

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

T106

SCALE AS SHOWN
DATE
DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: C. STRAYER
REVIEWED: C. STRAYER
SHT. 78 OF 95 SHTS

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|


alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

FEHR & PEERS
600 Wilshire Boulevard Suite 1050 Los Angeles, CA 90017 (213) 261-3050


PRELIMINARY

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

C:\Users\jschmidt\OneDrive - Fehr & Peers\Documents\LA-3404 SJ Creek\90_Submittal\3404-T5.dwg 12/11/2024 17:03

FF - 374 AF

## STREET LIGHT GENERAL NOTES:

1. ALL WORK AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, ("GREEN BOOK"), LATEST EDITION, ANY SUPPLEMENTS OR REVISIONS AND THESE CITY STANDARDS. IN THE EVENT OF A CONFLICT BETWEEN THE STANDARD SPECIFICATIONS AND THE CITY STANDARDS, THE STANDARD SPECIFICATIONS SHALL PREVAIL.

2. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT AT 811 AT LEAST TWO (2) WORKING DAYS BEFORE ANY EXCAVATIONS ARE PERFORMED.

3. SIDEWALKS SIDEWALKS SHALL BE SAWCUT AND REMOVED AS REQUIRED. AFTER NSTALLATION OF THE STREETLIGHT, THE CONCRETE SIDEWALK SHALL BE REPLACED TO MATCH EXISTING SIDEWALK. THE CONTRACTOR SHALL PERFORM CONCRETE WORK.

4. ALL STREET LIGHT LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE CITY ENGINEER BEFORE CONSTRUCTION. ALL REMOVALS WITHIN EXISTING IMPROVEMENTS SHALL BE ACCOMPLISHED BY SAW CUTTING UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

5. FINAL ACCEPTANCE WILL BE BASED ON ALL NECESSARY EXCAVATION, REMOVALS AND/OR REPLACEMENT NECESSARY TO RESTORE ADJACENT GROUNDS TO AS NEAR ORIGINAL CONDITION AS POSSIBLE. ALL SPOILS SHALL BE REMOVED FROM THE JOB SITE ON THE SAME DAY OF EXCAVATION.

6. THE LOCATIONS OF ALL PULL BOXES, CONDUIT AND OTHER EQUIPMENT SHOWN ON THIS PLAN ARE APPROXIMATE AND MAY BE CHANGED TO SUIT FIELD CONDITIONS AS DIRECTED BY THE CITY.

7. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL EXISTING UNDERGROUND UTILITIES, WHETHER OR NOT THEY ARE SHOWN ON THESE PLANS. THE CONTRACTOR SHALL CONTACT USA 811 AT LEAST 48 HOURS BEFORE BEGINNING WORK. WHERE MARKINGS ARE NEAR PROPOSED FOUNDATIONS, THE CONTRACTOR SHALL LOCATE UNDERGROUND UTILITIES BY POTHOLING PRIOR TO EXCAVATING.

8. NEW PULL BOXES SHALL NOT BE PLACED WITHIN DRIVEWAY AND CURB RAMP AREAS.

9. ALL EXISTING ELECTRICAL EQUIPMENT TO REMAIN THAT IS DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AT CONTRACTORS EXPENSE AND AT THE UNIVERSITY'S REPRESENTATIVE DISCRETION AND REQUIRES AN INSPECTION PRIOR TO COVERING.

## CONDUIT AND CONDUCTORS:

1. CONDUIT SHALL BE SCHEDULE 80 PVC, 1.5 INCHES IN DIAMETER, UNLESS OTHERWISE NOTED. CONDUIT SHALL BE PLACED TO A DEPTH OF NOT LESS THAN 30 INCHES NOR MORE THAN 60 INCHES BELOW THE FLOWLINE GRADE, EXCEPT THAT CONDUIT PLACED BEHIND A CURB SHALL NOT BE LESS THAN 14 INCHES NOR MORE THAN 36 INCHES BELOW TOP OF CURB. CONDUIT TERMINATING IN STREET LIGHTING STANDARDS SHALL NOT BE TRANSPOSED AND SHALL TERMINATE AS NEAR THE DOOR OR HAND HOLE OF THE STANDARD AS POSSIBLE WITH THE END OF THE CONDUIT BELOW, BUT WITHIN 1 INCH OF THE LOWER EDGE OF THE DOOR. THE PROLONGATION OF THE CONDUIT SHALL PASS THROUGH THE DOOR OPENING.

2. ALL ROADWAY CROSSINGS SHALL BE RIGID METALLIC, 1.5 INCHES IN DIAMETER, UNLESS OTHERWISE NOTED. ALL CONDUIT ENDS SHALL BE REAMED TO REMOVE BURRS AND ROUGH EDGES. ALL METALLIC CONDUITS SHALL BE PROVIDED WITH THREADED CONDUIT GROUND BUSHINGS.

3. CONDUIT TO BE INSTALLED BEHIND CURB WITHIN CITY RIGHT-OF-WAY IN A STRAIGHT LINE RUN FROM POLE TO POLE, POLE TO PULL BOX OR FROM PULL BOX TO PULL BOX, UNLESS OTHERWISE NOTED. BELL BUSHINGS SHALL TERMINATE ALL PVC SCHEDULE 80 CONDUITS.

4. STRANDED NO. 8 CONDUCTORS SHALL BE USED IN ALL STREET LIGHTING CIRCUITS. ALL WIRE INSIDE EACH STREET LIGHT POLE SHALL BE NO. 10 SOLID WIRE. ALL CONDUCTORS SHALL BE NEW COPPER WITH TYPE THHN INSULATION, EXCEPT THAT THE GROUNDING CONDUCTOR SHALL BE A NO. 8 AWG SOLID WIRE WITH NO INSULATION. ALL SPLICES SHALL BE TREATED AS IF THE SPLICE IS FOR HIGH-VOLTAGE, SERIES-CIRCUIT LIGHTING. THE SPLICES SHALL BE WATERPROOF AND USE RUBBER TAPE, VINYL CHLORIDE TAPE AND 3M SCOTCHKOTE SEALER OR APPROVED EQUAL.

## PULL BOXES:

1. ALL PULL BOXES SHALL BE CONSTRUCTED FROM CONCRETE AND BE STATE NUMBER 5: OVERALL LENGTH = 28"; OVERALL WIDTH = 18". THE COVERS SHALL BE R-SERIES COMPOSITE LID AND BE 23.25" IN LENGTH AND 13.75" IN WIDTH. PULL BOX COVERS SHALL BE INSCRIBED WITH THE LEGEND "STREET LIGHTING". THERE SHALL BE BOLT DOWN KIT FOR THE COVER. (CHRISTY N30BOX, N30R WITH N90 BOLT DOWN FROM OLDCASTLE PRECAST OR APPROVED EQUAL.) CONCRETE SURROUNDING THE PULL BOX IS NOT REQUIRED FOR BOXES PLACED BEHIND THE CURB. THE SPACING BETWEEN BOXES SHALL NOT EXCEED 150 FEET WITHOUT INTERVENING POLES.

2. PULL BOXES ADJACENT TO STREET LIGHT POLES SHALL NOT BE REQUIRED UNLESS REQUESTED BY THE CITY ENGINEER. ALL PULL BOXES SHALL BE INSTALLED 6" TO 12" BEHIND THE CURB AND NO MORE THAN 4 FEET FROM THE LIGHT STANDARD OR AS DIRECTED BY THE CITY ENGINEER. ALL INSTALLED PULL BOXES SHALL BE SHOWN ON ALL PLANS SUBMITTED.

3. PULL BOXES ADJACENT TO EDISON COMPANY SERVICE POINTS SHALL BE PROVIDED WITH A 5/8" DIAMETER COPPER GROUND ROD EIGHT (8) FEET LONG. CONDUIT RUNS LONGER THAN FIVE HUNDRED (500) FEET IN LENGTH SHALL HAVE ADDITIONAL GROUND RODS INSTALLED AS REQUIRED.

## PULL BOXES (CONTINUED):

4. PULL BOXES SHALL BE INSTALLED AT THE LOCATIONS SHOWN ON THE PLANS. THEY SHALL BE APPROXIMATELY EQUALLY SPACED, BUT NOT OVER 150 FEET APART. IT SHALL BE AT THE OPTION OF THE CONTRACTOR, AT ITS OWN EXPENSE AND SUBJECT TO THE APPROVAL OF THE ENGINEER, TO INSTALL ADDITIONAL PULL BOXES THAT IT MAY DESIRE TO FACILITATE THE WORK. THE BOTTOM OF THE PULL BOX SHALL REST FIRMLY ON A 12-INCH THICK BED OF 1 INCH CRUSHED ROCK BASE EXTENDING 6 INCHES BEYOND THE OUTSIDE EDGES OF THE PULL BOX. GROUT ALL PULL BOX BOTTOMS. ALLOW FOR DRAINAGE BY PROVIDING A ½" HOLE.

5. ALL PULL BOXES SHALL HAVE MCCAIN VANDAL RESISTANT INSERT OR APPROVED EQUAL, INSTALLED AND FURNISHED BY THE CONTRACTOR.

## SERVICE AND FUSING:

1. SERVICE CABINET SHALL BE MANUFACTURED FROM 12 GAUGE ANODIZED ALUMINUM. MAXIMUM WIDTH OF SERVICE CABINET SHALL BE TWELVE (12) INCHES AND MAXIMUM DEPTH SHALL BE NINE (9) INCHES, UNLESS OTHERWISE NOTED. SERVICE SHALL BE WELDED CONSTRUCTION. CABINET SHALL HAVE A BEST LOCK WITH A RED CORE INSTALLED.

2. ALL CIRCUIT BREAKERS SHALL BE INSTALLED IN A VERTICAL POSITION, HANDLE UP FOR "ON", HANDLE DOWN FOR "OFF". ALL CONNECTIONS TO CIRCUIT BREAKERS SHALL BE BY A COMPRESSION LUG OR MACHINE SCREW. THERE SHALL BE NO PLUG-IN TYPE CIRCUIT BREAKERS. ALL CIRCUIT BREAKERS SHALL BE INDUSTRIAL GRADE, WESTINGHOUSE QUICKLAG C OR APPROVED EQUAL. THE SERVICE CABINET SHALL BE COMPLETELY PREWIRED AT THE FACTORY.

3. ALL RISERS/SWEEPS AT SERVICE POLES SHALL BE 3" INCHES IN DIAMETER AND INSTALLED AT LEAST THREE INCHES ABOVE GRADE. RISER/SWEEP SHALL MEET EDISON COMPANY REQUIREMENTS. THE QUADRANT LOCATIONS SHALL BE AS DIRECTED BY THE EDISON COMPANY.

4. EACH STREET LIGHT SHALL HAVE A FUSE HOLDER INSTALLED IN THE BASE OF THE POLE. THE FUSE HOLDER SHALL BE A TRON WATERPROOF HEB-AA MCGRAW-EDISON TYPE OR APPROVED EQUAL WITH AN EIGHT (8)-AMP FUSE FOR A 70-WATT LAMP, A TEN (10)-AMP FUSE FOR A 100-WATT LAMP AND A FIFTEEN (15)-AMP FUSE FOR 200-WATT LAMPS.

## BONDING AND GROUNDING:

1. METALLIC CONDUIT, NONMETALLIC CONDUIT GROUNDING WIRE, SERVICE EQUIPMENT AND ANCHOR BOLTS THAT FORM A CONTINUOUS SYSTEM SHALL BE EFFECTIVELY GROUNDED. BONDING AND GROUNDING JUMPERS SHALL BE NO. 8 SOLID COPPER WIRE.

2. FOR BONDING PURPOSES IN ALL NONMETALLIC TYPE CONDUITS, A BARE NO. 8 SOLID COPPER WIRE SHALL BE RUN CONTINUOUSLY IN ALL CIRCUITS.

3. BONDING OF LIGHT STANDARDS SHALL BE ACCOMPLISHED BY MEANS OF A NO. 8 SOLID BONDING WIRE ATTACHED FROM A GROUNDING BUSHING OR FROM THE CONTINUOUS GROUNDING WIRE TO A FOUNDATION BOLT.

## LUMINAIRES:

1. ALL LUMINAIRES SHALL BE INSTALLED WITH INDIVIDUAL PHOTOELECTRIC CONTROLS MANUFACTURED BY RIPLEY LIGHTING CONTROLS (RD8645) OR APPROVED EQUAL.

2. THE CONTRACTOR SHALL PROVIDE THE CITY WITH ONE (1) SPARE LUMINAIRE OF THE SAME TYPE AND MANUFACTURE AS INSTALLED FOR EVERY FIVE (5) THE CONTRACTOR INSTALLS.

3. AFTER INSTALLATION IS COMPLETE AND THE SERVING UTILITY HAS ENERGIZED THE CIRCUIT,THE SYSTEM WILL BE BURN TESTED FOR SEVENTY-TWO (72) HOURS PRIOR TO CITY ACCEPTANCE.

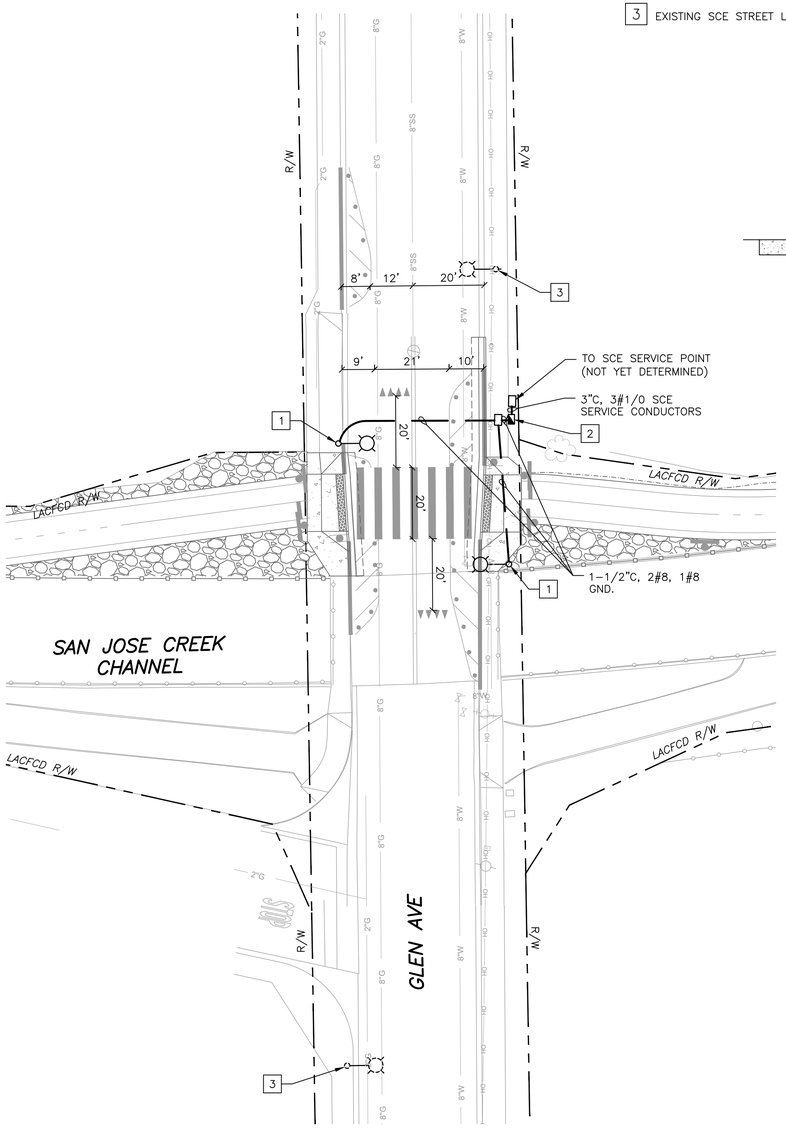
## SALVAGED MATERIALS:

1. THE BALANCE OF ALL OR ANY NUMBER OF THE STREET LIGHT POLES TO BE REMOVED BY THE CONTRACTOR OR FROM THIS PROJECT SHALL BE DELIVERED TO THE CITY YARD LOCATION AS DESIGNATED BY THE SIGNAL/LIGHTING SUPERVISOR OR SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE DECISION ON THIS ITEM SHALL BE MADE BY THE CITY ENGINEER. (RD8645) OR APPROVED EQUAL.

2. ALL EXCAVATION MATERIALS NOT TO BE RE-USED AS BACKFILL MATERIALS, SUCH AS BROKEN SIDEWALK, REMOVED LIGHT POLE FOUNDATIONS EXCESS FILL MATERIALS SHALL BE DISPOSED OF BY THE CONTRACTOR.

## LEGEND

- RELOCATED EXISTING STREET LIGHT.
- EXISTING STREET LIGHT.
- STREET LIGHT PULL BOX.
- EXISTING STREET LIGHT PULL BOX.
- EXISTING STREET LIGHT CONDUIT.
- PROPOSED STREET LIGHT CONDUIT.

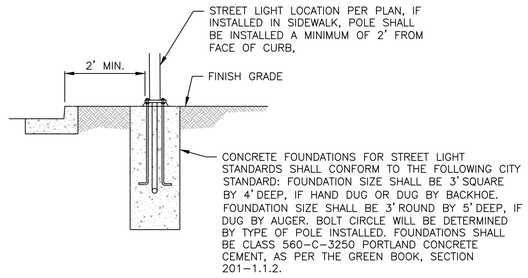



## CONSTRUCTION NOTES (THIS SHEET ONLY):

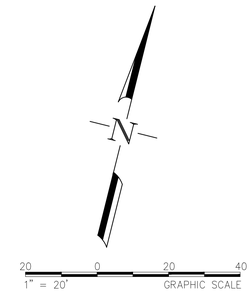
1. FURNISHED AND INSTALL 26'-6" TALL AMERON CONTEMPORARY SERIES 6B1 OCTAGONAL STREET LIGHT POLE WITH ANCHOR BASE AND 6' MAST ARM. POLES SHALL BE CENTRIFUGALLY SPUN REINFORCED PORTLAND CEMENT CONCRETE. POLES SHALL BE COATED WITH ANTI-GRAFFITI COATING. COLORING SHALL BE AMERON COLOR #37 – BLACK & WHITE EXPOSED. LUMINAIRES SHALL BE 36W LED POWER/DOOR LUMINAIRE AS MANUFACTURED BY GE CURRENT MODEL: ERLC 0 05 C5 30 A GRAY GL OR APPROVED EQUAL. HAND HOLES SHALL FACE ONCOMING TRAFFIC.

2. SERVICES SHALL BE AN UNMETERED TESCO 26000 COMPLETE WITH THE FOLLOWING: (1) 100 AMP 2-POLE MAIN DISCONNECT, FOUR (4) 30-AMP SINGLE POLE CIRCUIT BREAKERS, TWO (2) 30-AMP MAGNETIC CONTACTORS, AN AUTO/TEST SWITCH AND AN INTERNALLY MOUNTED PHOTOELECTRIC CONTROL SOCKET WITH A "DELAY TYPE" PHOTOELECTRIC CELL.

3. EXISTING SCE STREET LIGHT TO REMAIN.




STREET LIGHT FOUNDATION DETAIL
NOT TO SCALE




ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

GLEN AVENUE
STREET LIGHTING PLAN

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

T107

SCALE AS SHOWN
DATE

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: C. STRAYER
REVIEWED: C. STRAYER

SHT. 79 OF 95 SHTS

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

PRELIMINARY


alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

FEHR & PEERS
600 Wilshire Boulevard Suite 1050 Los Angeles, CA 90017 (213) 261-3050



CALL BEFORE YOU DIG
Under Ground Service Alert of Southern California
Call: TOLL FREE
1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

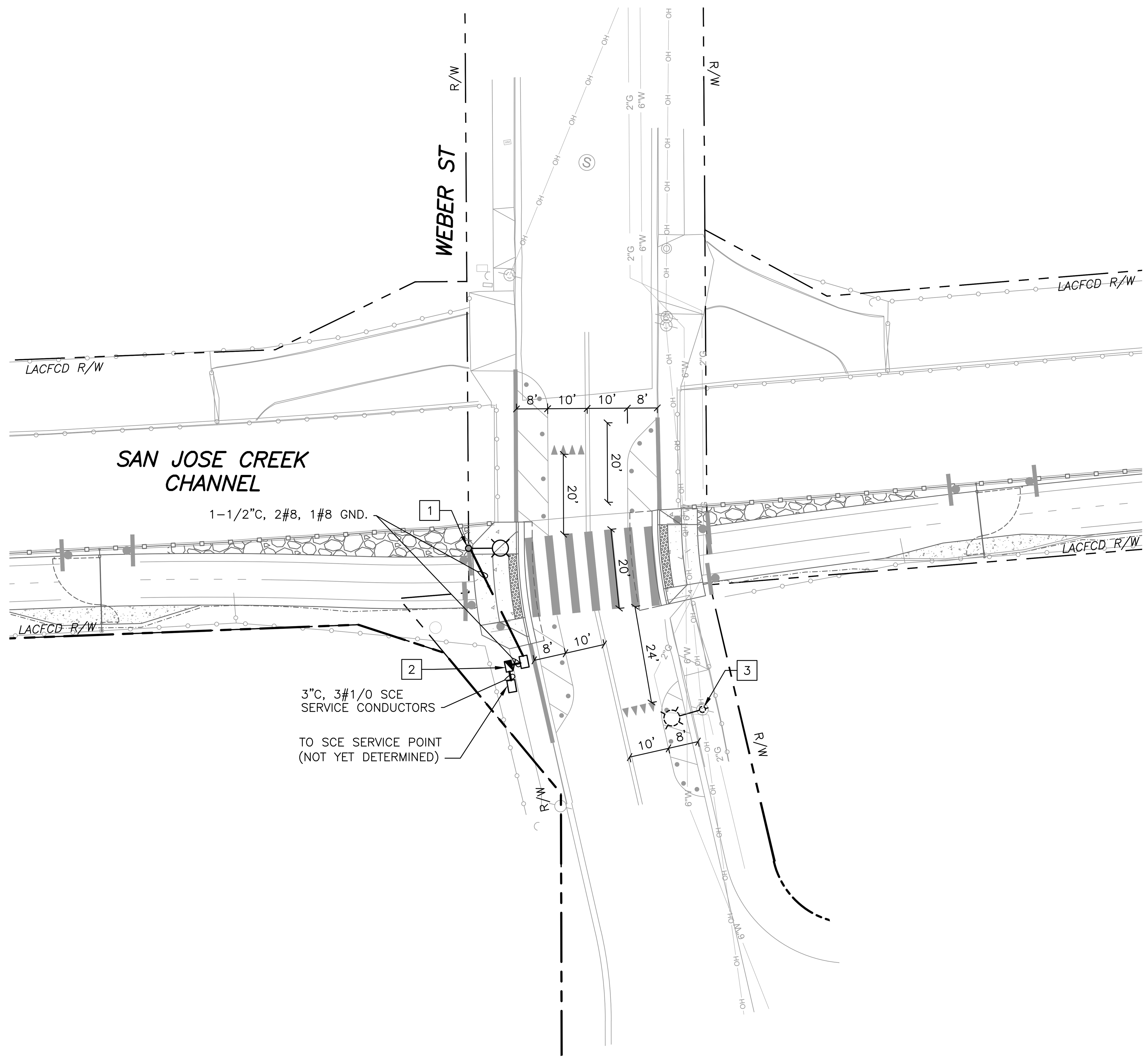

C:\Users\jschmidt\OneDrive - Fehr & Peers\Documents\LA-3404 SJ Creek\90_Submittal\3404-LT6.dwg 12/11/2024 17:03

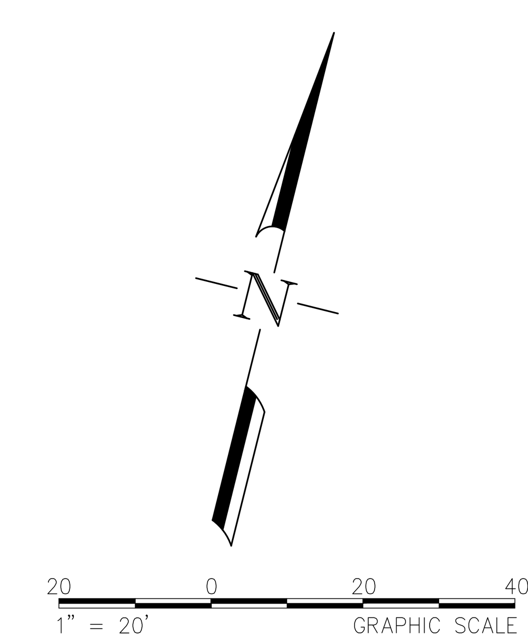
FE - 442 AA

NOTE:
SEE SHEET 79 FOR STREET LIGHTING GENERAL NOTES AND LEGEND.

## CONSTRUCTION NOTES (THIS SHEET ONLY):

1. FURNISHED AND INSTALL 26'–6" TALL AMERON CONTEMPORARY SERIES 6B1 OCTAGONAL STREET LIGHT POLE WITH ANCHOR BASE AND 6' MAST ARM. POLES SHALL BE CENTRIFUGALLY SPUN REINFORCED PORTLAND CEMENT CONCRETE. POLES SHALL BE COATED WITH ANTI–GRAFFITI COATING. COLORING SHALL BE AMERON COLOR #37 – BLACK & WHITE EXPOSED. LUMINAIRES SHALL BE 36W LED POWER/DOOR LUMINAIRE AS MANUFACTURED BY GE CURRENT MODEL: ERLC 0 05 C5 30 A GRAY GL OR APPROVED EQUAL. HAND HOLES SHALL FACE ONCOMING TRAFFIC. SEE SHEET 79 FOR FOUNDATION DETAIL.
2. SERVICES SHALL BE AN UNMETERED TESCO 26000 COMPLETE WITH THE FOLLOWING: (1) 100 AMP 2–POLE MAIN DISCONNECT, FOUR (4) 30–AMP SINGLE POLE CIRCUIT BREAKERS, TWO (2) 30–AMP MAGNETIC CONTACTORS, AN AUTO/TEST SWITCH AND AN INTERNALLY MOUNTED PHOTOELECTRIC CONTROL SOCKET WITH A "DELAY TYPE" PHOTOELECTRIC CELL.
3. EXISTING SCE STREET LIGHT TO REMAIN.




90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

T108


Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG


PRELIMINARY


alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

FEHR & PEERS
600 Wilshire Boulevard Suite 1050
Los Angeles, CA 90017 (213) 261-3050


| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

ACCEPTED

BY: ______________ DATE: ________
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: ______________ DATE: ________
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428–58072 / SAN JOSE CREEK BIKEWAY

WEBER STREET
STREET LIGHTING PLAN

| SCALE AS SHOWN | DESIGNED: | PVT ENG | SHT. 80 |
|---|---|---|---|
| DATE | DRAWN: | PVT ENG | OF |
| | CHECKED: | C. STRAYER | 95 SHTS |
| | REVIEWED: | C. STRAYER | |

C:\Users\jschmidt\OneDrive – Fehr & Peers\Documents\LA–3404 SJ Creek\90_Submittal\3404–LTG.dwg 12/11/2024 17:03

FE - 442 AB

# GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE 2023 CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD), THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARDS PLANS AND SPECIFICATIONS (2018 EDITION), AND SPECIAL PROVISIONS, AND ALL ADDENDUM THERETO.

2. ALL PAVEMENT STRIPING, MARKINGS AND LEGENDS SHALL BE THERMOPLASTIC (MINIMUM 0.15" THICK) UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL PROVIDE AND INSTALL RAISED PAVEMENT MARKERS FOR ALL STRIPING. STRIPING, MARKINGS, AND LEGENDS SHALL CONFORM TO THE LATEST CALTRANS STANDARD PLANS A20A THRU A20D AND A24D THRU A24F.

3. EXISTING STRIPING AND PAVEMENT MARKINGS THAT ARE IN CONFLICT WITH PROPOSED STRIPING AND PAVEMENT MARKINGS SHALL BE REMOVED BY WET SAND BLASTING OR GRINDING AND DISPOSED OF PER SECTIONS 15-2.02 (B&C) AND 15-2.03 OF THE STATE STANDARD SPECIFICATIONS. BLACK OUT IS NOT PERMITTED. ALL DAMAGED PAVEMENT DU TO REMOVALS SHALL BE REPAIRED AS NECESSARY TO MAINTAIN A SMOOTH AND UNIFORM SURFACE OR AS DIRECTED BY CITY ENGINEER.

4. TEMPORARY STRIPING, MARKINGS AND TABS SHALL BE APPLIED ON STREET WITH PAVEMENT SURFACE COURSE REPLACEMENTS PRIOR TO OPENING STREET TO THE PUBLIC. IN NO CASE SHALL A NEWLY (BASED OR FINAL) PAVED STREET OPEN TO THE PUBLIC BE LEFT UNSTRIPED OVERNIGHT. PERMENANT STRIPING & MARKING SHALL BE INSTALLED BETWEEN TEN (10) TO FIFTEEN (15) CALENDAR DAYS AFTER INSTALLING THE FINAL PAVEMENT SURFACE.

5. ALL TEMPORARY PAVEMENT MARKERS/TABS SHALL BE REMOVED AT THE CONCLUSION OF THE PROJECT.

6. ALL SIGNING, STRIPING AND PAVEMENT MARKINGS SHALL BE CAT-TRACKED AND APPROVED BY THE CITY TRAFFIC ENGINEER OR AUTHORIZED REPRESENTATIVE PRIOR TO FINAL INSTALLATION.

7. PRIOR TO FINAL ACCEPTANCE OF STREET IMPROVEMENTS, ALL PAVEMENT STRIPING AND STENCILING WITHIN THE PERIMETER OF THE CONSTRUCTION AREA SHALL BE RESTORED TO LIKE NEW CONDITION, IN MANNER MEETING THE APPROVAL OF THE CITY ENGINEER.

8. THE CONTRACTOR SHALL RESTRIPE EXISTING AND CURB MARKINGS OBLITERATED BY NEW CONSTRUCTION WHETHER OR NOT SHOWN ON PLANS AT NO COST TO THE CITY.

9. ALL EXISTING SIGNS ARE TO REMAIN UNLESS OTHERWISE NOTED.

10. CLEARANCE FROM THE FINISHED GRADE TO THE BASE OF ALL SIGNS SHALL BE 7 FEET MINIMUM.

11. ALL SIGNS SHALL MEET THE 2014 CA MUTCD REQUIREMENTS AND SHALL HAVE 3M DIAMOND GRADE REFLECTIVE SHEETING (OR APPROVED EQUAL) AND 3M 1160 ANTI-GRAFFITI FILM (OR APPROVED EQUAL).

12. TRAFFIC SIGNAL LOOPS SHALL BE INSTALLED AND FUNCTIONAL WITHIN FIVE (5) CALENDAR DAYS OF INSTALLING FINAL PAVEMENT SURFACE.

13. THE CONTRACTOR SHALL FURNISH AND INSTALL TYPE D 2-WAY BLUE REFLECTIVE PAVEMENT MARKERS AT ALL FIRE HYDRANTS WITHIN THE PROJECT LIMITS PER THE 2014 CA MUTCD.

14. ALL SIGNS WITHIN THE PHILLIPS RANCH AREA MUST HAVE WOOD FRAME. WOOD SPECS SHALL BE 3/8" CDX PLYWOOD BACKING WITH ROUNDED OVER EDGES. 1.75"X1.75" FRAME MATERIAL ROUGH SAWN REDWOOD, STAINED A DARK BROWN AND SEALED WITH A CLEAR SEALER. SIGN SHALL BE MOUNTED ON 4"X4"X12' ROUGH SAWN REDWOOD POST OR ON EXISTING POST/LUMINAIRE AS SHOWN.

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

PRELIMINARY

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

T109

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

FEHR & PEERS
600 Wilshire Boulevard Suite 1050 Los Angeles, CA 90017 (213) 261-3050

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

GENERAL NOTES
SIGNING & STRIPING PLAN

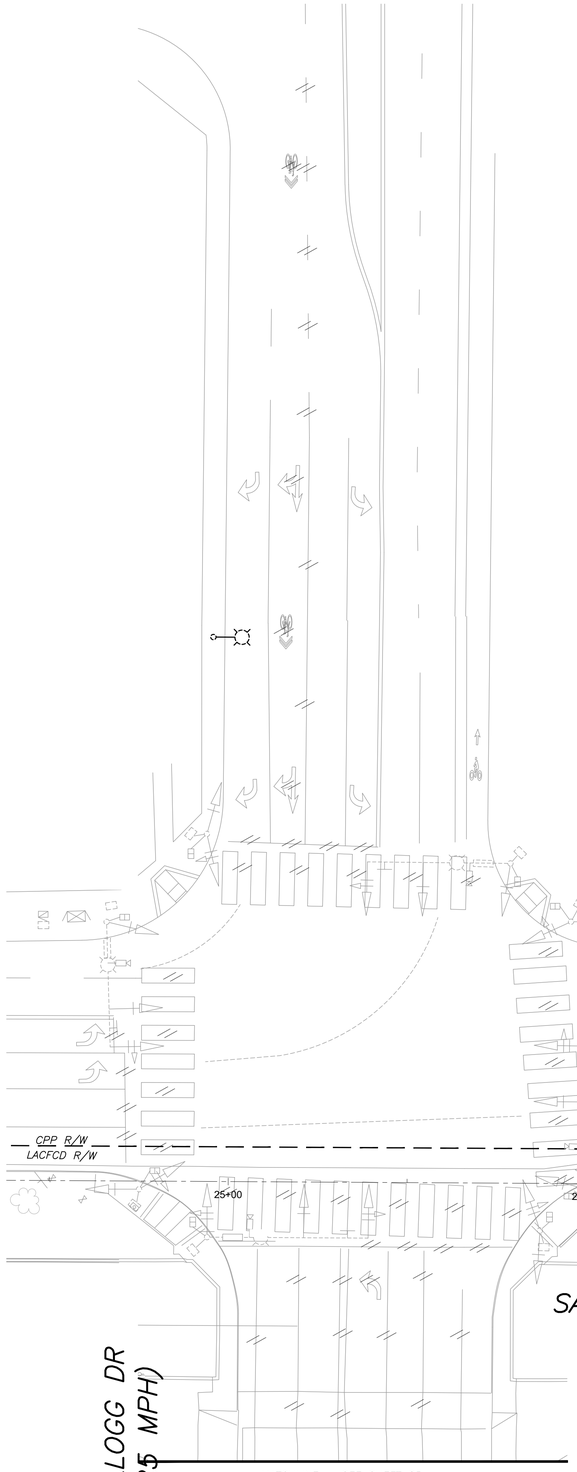
SCALE AS SHOWN
DATE

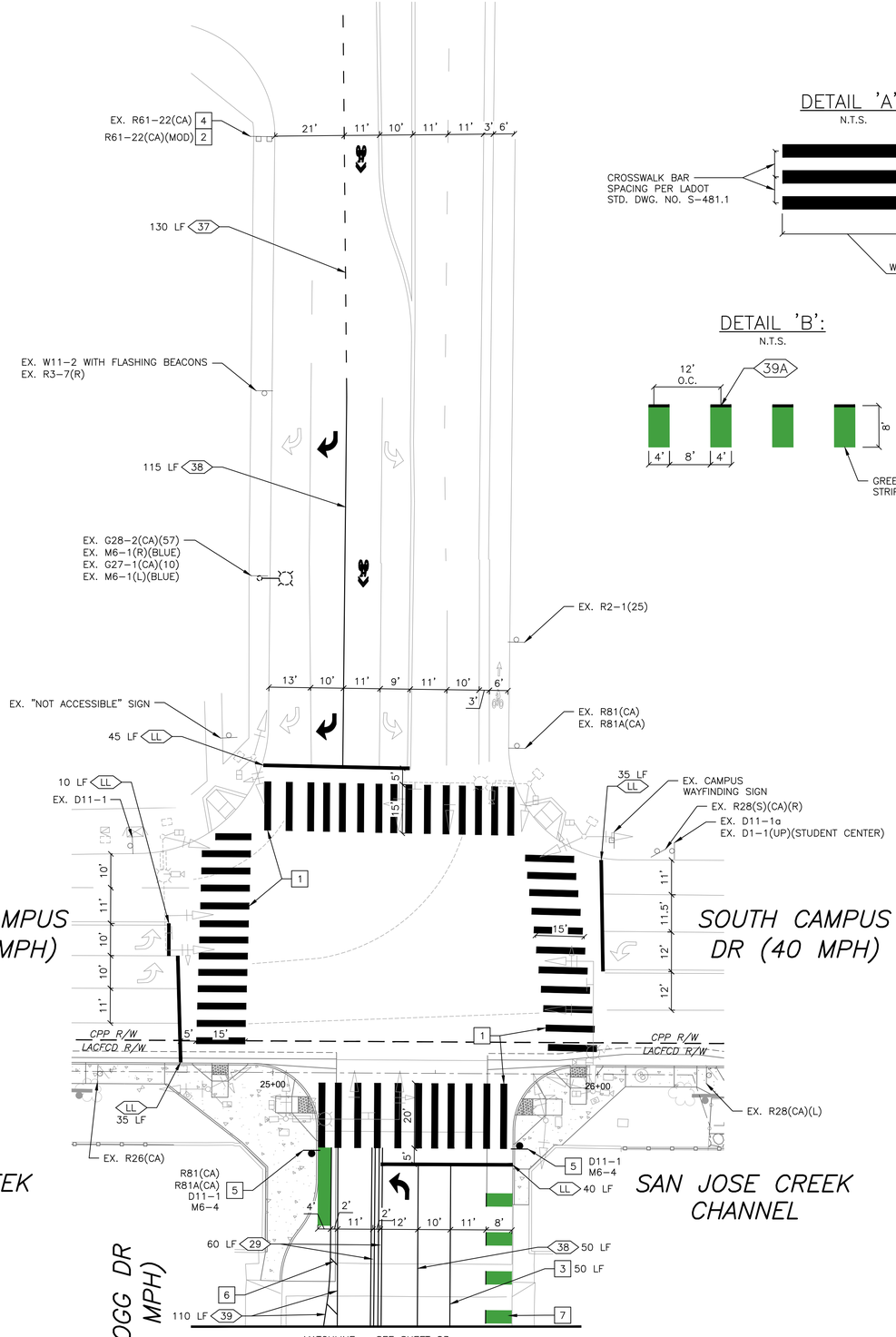
DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: C. STRAYER
REVIEWED: C. STRAYER

SHT. 81 OF 95 SHTS

C:\Users\jschmidt\OneDrive - Fehr & Peers\Documents\LA-3404 SJ Creek\90_Submittal\3404-SS.dwg 12/11/2024 17:03

FJ - 204 AA



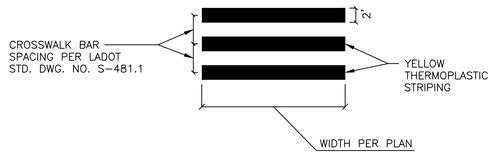




## PROPOSED SIGN LEGEND (THIS SHEET ONLY):

R61–22(MOD)(CA) · R81(CA) · R81A(CA) · D11–1 · M6–4

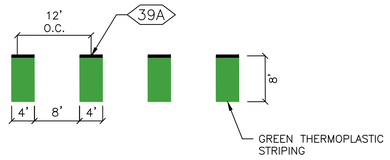
## DETAIL 'A':

N.T.S.




## DETAIL 'B':

N.T.S.

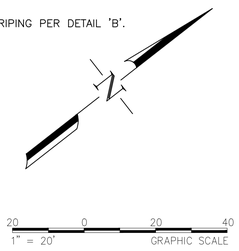



## LEGEND (THIS SHEET ONLY):

- REMOVE EXISTING PAVEMENT STRIPE, ARROW, OR LEGEND (BY GRINDING)
- R/C — INSTALL NEW RED CURB.
- INSTALL TYPE IV (L)/(R) PAVEMENT ARROW PER CALTRANS STANDARD PLAN A24A.
- INSTALL BIKE LANE SYMBOL WITH PERSON PER CALTRANS STANDARD PLAN A24C.
- XX — INSTALL PAVEMENT STRIPING PER CALTRANS STRIPING DETAILS. SEE CALTRANS STANDARD PLANS A20A THRU A24F.
- LL — INSTALL 12" WHITE THERMOPLASTIC LIMIT LINE.
- CONFORM TO EXISTING STRIPING.
- INSTALL NEW ROADSIDE SIGN AND POST.
- EXISTING ROADSIDE SIGN TO REMAIN.
- INSTALL RAISED BIKE LANE SEPARATION. MATERIAL TBD.

## PROJECT NOTES (THIS SHEET ONLY):

1. INSTALL 2' WIDE CROSSWALK BARS, LAYOUT PER LADOT STD. DWG. NO. S–481.1.
2. INSTALL NEW ROADSIDE SIGN ON EXISTING POST.
3. INSTALL 6" WHITE STRIPE
4. REMOVE ROADSIDE SIGN ON EXISTING POST
5. INSTALL NEW ROADSIDE SIGN AND POST.
6. INSTALL 6" WHITE STRIPE AT 45 DEGREE ANGLE SPACED AT 15' O.C.
7. INSTALL GREEN BIKE CONFLICT STRIPING PER DETAIL 'B'.



20 0 20 40
1" = 20' GRAPHIC SCALE

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428–58072 / SAN JOSE CREEK BIKEWAY

KELLOGG DRIVE
SIGNING & STRIPING PLAN

SCALE AS SHOWN

DATE

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: C. STRAYER
REVIEWED: C. STRAYER

SHT. 82 OF 95 SHTS

T110

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

REMOVAL PLAN
1"=20'

PROPOSED PLAN
1"=20'

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
(213) 489-7443 | altago.com

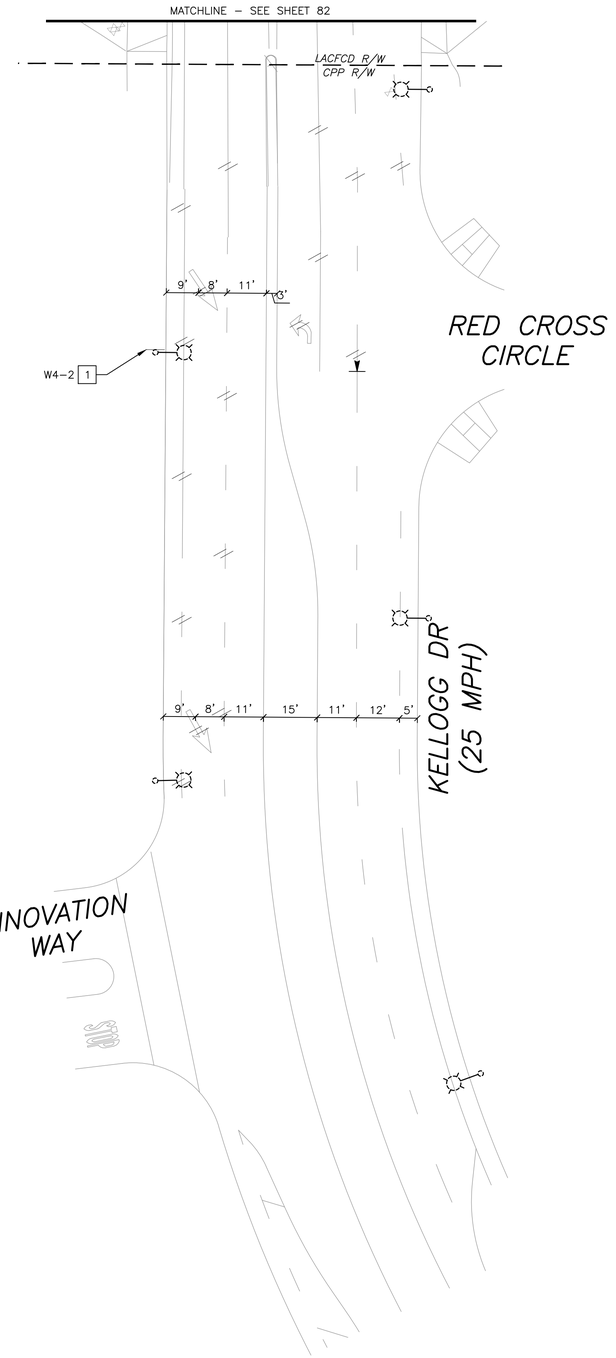
FEHR & PEERS
600 Wilshire Boulevard Suite 1050 Los Angeles, CA 90017 (213) 261-3050

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

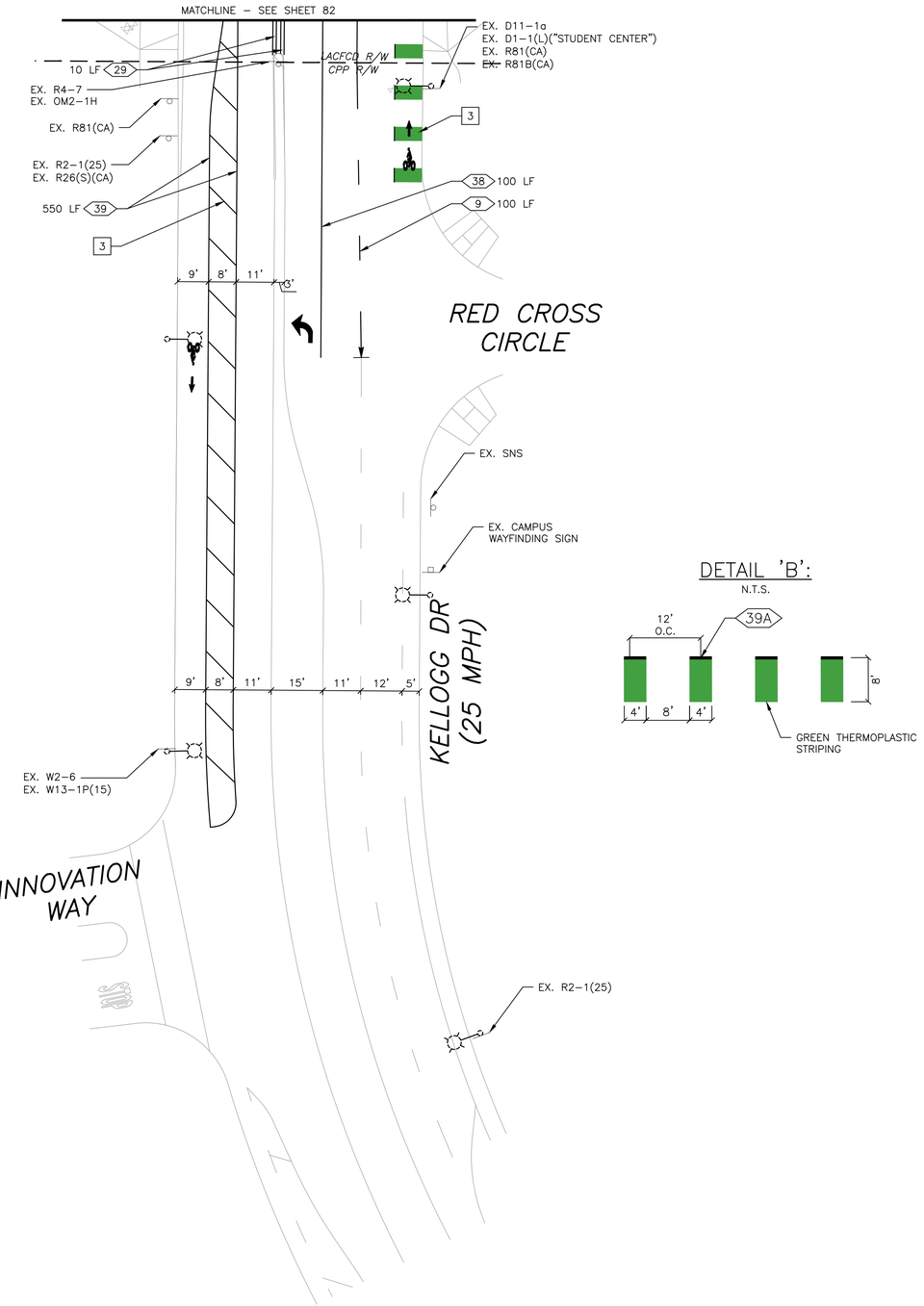
Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

C:\Users\jschmidt\OneDrive - Fehr & Peers\Documents\LA-3404 SJ Creek\90_Submittal\3404-SS.dwg 12/11/2024 17:03

FJ - 204 AB




REMOVAL PLAN
1"=20'




PROPOSED PLAN
1"=20'

## DETAIL 'B':
N.T.S.



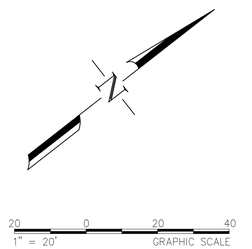

## PROPOSED SIGN CHART (THIS SHEET ONLY):

## LEGEND (THIS SHEET ONLY):

- REMOVE EXISTING PAVEMENT STRIPE, ARROW, OR LEGEND (BY GRINDING)
- R/C — INSTALL NEW RED CURB.
- INSTALL TYPE IV (L)/(R) PAVEMENT ARROW PER CALTRANS STANDARD PLAN A24A.
- INSTALL BIKE LANE SYMBOL WITH PERSON PER CALTRANS STANDARD PLAN A24C.
- XX — INSTALL PAVEMENT STRIPING PER CALTRANS STRIPING DETAILS. SEE CALTRANS STANDARD PLANS A20A THRU A24F.
- LL — INSTALL 12" WHITE THERMOPLASTIC LIMIT LINE.
- CONFORM TO EXISTING STRIPING.
- INSTALL NEW ROADSIDE SIGN AND POST.
- EXISTING ROADSIDE SIGN TO REMAIN.
- INSTALL RAISED BIKE LANE SEPARATION. MATERIAL TBD.

## PROJECT NOTES (THIS SHEET ONLY):

1. REMOVE SIGN FROM EXISTING STREET LIGHT POLE.
2. INSTALL 6" WHITE STRIPE AT 45 DEGREE ANGLE SPACED AT 15' O.C.
3. INSTALL GREEN BIKE CONFLICT STRIPING PER DETAIL 'B'.




ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

KELLOGG DRIVE
SIGNING & STRIPING PLAN

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

T111

SCALE AS SHOWN
DATE

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: C. STRAYER
REVIEWED: C. STRAYER

SHT. 83 OF 95 SHTS

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

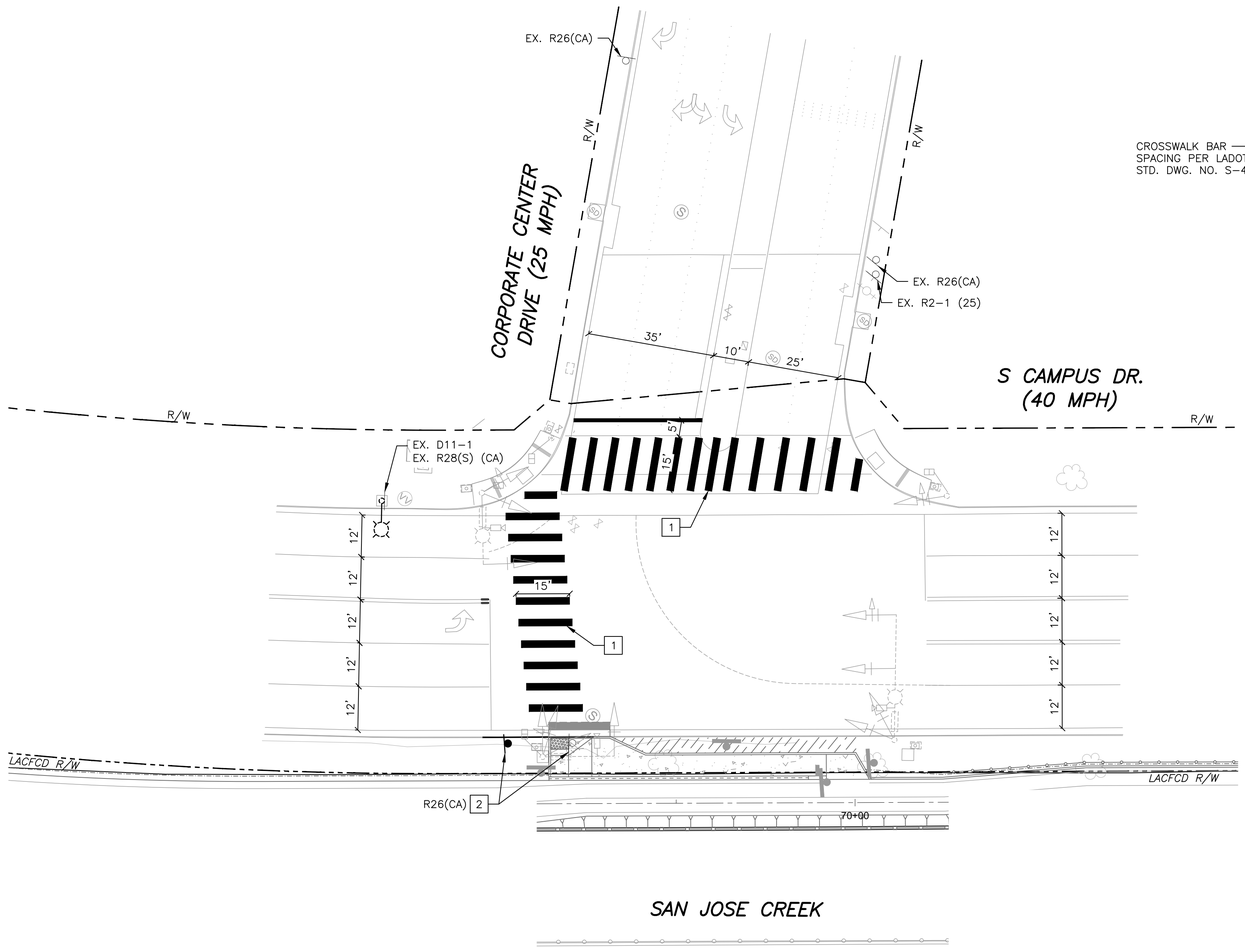
PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

FEHR & PEERS
600 Wilshire Boulevard Suite 1050 Los Angeles, CA 90017 (213) 261-3050

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

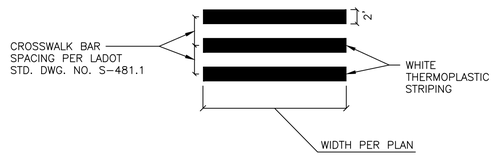
C:\Users\jschmidt\OneDrive - Fehr & Peers\Documents\LA-3404 SJ Creek\90_Submittal\3404-SS.dwg 12/11/2024 17:03




SAN JOSE CREEK

PROPOSED PLAN
1"=20'

DETAIL 'A':
N.T.S.




## PROPOSED SIGN CHART (THIS SHEET ONLY):

## LEGEND (THIS SHEET ONLY):

- REMOVE EXISTING PAVEMENT STRIPE, ARROW, OR LEGEND (BY GRINDING)
- R/C — INSTALL NEW RED CURB.
- INSTALL TYPE IV (L)/(R) PAVEMENT ARROW PER CALTRANS STANDARD PLAN A24A.
- INSTALL BIKE LANE SYMBOL WITH PERSON PER CALTRANS STANDARD PLAN A24C.
- XX — INSTALL PAVEMENT STRIPING PER CALTRANS STRIPING DETAILS. SEE CALTRANS STANDARD PLANS A20A THRU A24F.
- LL — INSTALL 12" WHITE THERMOPLASTIC LIMIT LINE.
- CONFORM TO EXISTING STRIPING.
- INSTALL NEW ROADSIDE SIGN AND POST.
- EXISTING ROADSIDE SIGN TO REMAIN.
- INSTALL RAISED BIKE LANE SEPARATION. MATERIAL TBD.

## PROJECT NOTES (THIS SHEET ONLY):

1. INSTALL 2' WIDE CROSSWALK BARS, LAYOUT PER LADOT STD. DWG. NO. S-481.1.
2. RELOCATE EXISTING SIGN AND POST.

20 0 20 40
1" = 20' GRAPHIC SCALE

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

CORPORATE CENTER DRIVE
SIGNING & STRIPING PLAN

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

T112

SCALE AS SHOWN
DATE

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: C. STRAYER
REVIEWED: C. STRAYER

SHT. 84 OF 95 SHTS

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

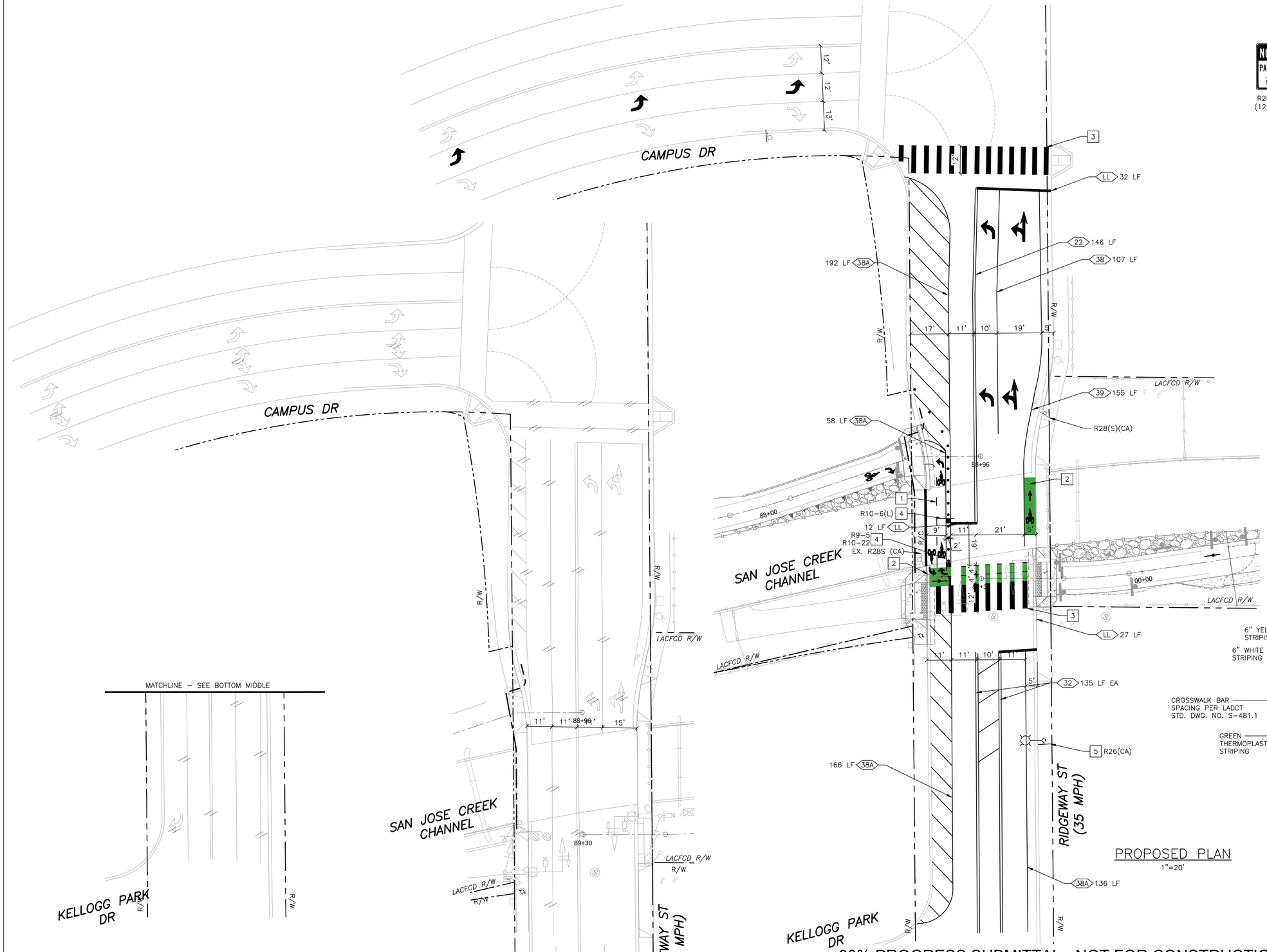
PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

FEHR & PEERS
600 Wilshire Boulevard Suite 1050 Los Angeles, CA 90017 (213) 261-3050

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

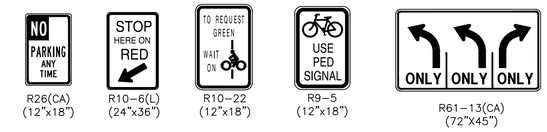
C:\Users\jschmidt\OneDrive - Fehr & Peers\Documents\LA-3404 SJ Creek\90_Submittal\3404-SS.dwg 12/11/2024 17:03




REMOVAL PLAN
1"=20'

PROPOSED PLAN
1"=20'

## PROPOSED SIGN CHART (THIS SHEET ONLY):




R26(CA) (12"x18") | R10-6(L) (24"x36") | R10-22 (12"x18") | R9-5 (12"x18") | R61-13(CA) (72"X45")

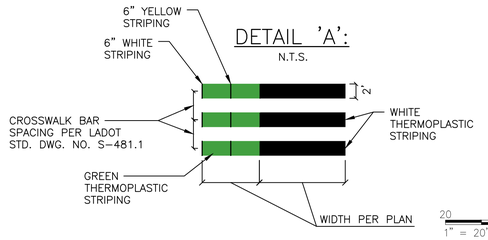
## LEGEND (THIS SHEET ONLY):

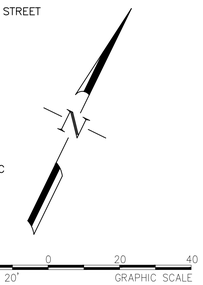
- REMOVE EXISTING PAVEMENT STRIPE, ARROW, OR LEGEND (BY GRINDING)
- R/C — INSTALL NEW RED CURB.
- INSTALL TYPE IV (L)/(R) PAVEMENT ARROW PER CALTRANS STANDARD PLAN A24A.
- INSTALL BIKE LANE SYMBOL WITH PERSON PER CALTRANS STANDARD PLAN A24C.
- XX — INSTALL PAVEMENT STRIPING PER CALTRANS STRIPING DETAILS. SEE CALTRANS STANDARD PLANS A20A THRU A24F.
- LL — INSTALL 12" WHITE THERMOPLASTIC LIMIT LINE.
- CONFORM TO EXISTING STRIPING.
- INSTALL NEW ROADSIDE SIGN AND POST.
- EXISTING ROADSIDE SIGN TO REMAIN.
- INSTALL RAISED BIKE LANE SEPARATION. MATERIAL TBD.

## PROJECT NOTES (THIS SHEET ONLY):

1. INSTALL 4" YELLOW BROKEN STRIPE, 3' STRIPE WITH 9' GAP, PER 2014 CA MUTCD REV 8 FIGURE 9C-2.
2. INSTALL GREEN THERMOPLASTIC STRIPING.
3. INSTALL 2' WIDE CROSSWALK BARS, LAYOUT PER LADOT STD. DWG. NO. S-481.1. INCLUDE CONFLICT STRIPING NEXT TO CROSSWALK BARS PER DETAIL 'A' THIS SHEET.
4. INSTALL NEW ROADSIDE SIGN AND POST.
5. INSTALL NEW ROADSIDE SIGN ON EXISTING STREET LIGHT.

## DETAIL 'A':
N.T.S.




90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

T113

ACCEPTED
BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED
BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

RIDGEWAY STREET
SIGNING & STRIPING PLAN

| SCALE AS SHOWN | DESIGNED: | PVT ENG | SHT. 85 |
|---|---|---|---|
| DATE | DRAWN: | PVT ENG | OF |
| | CHECKED: | C. STRAYER | 95 SHTS |
| | REVIEWED: | C. STRAYER | |

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

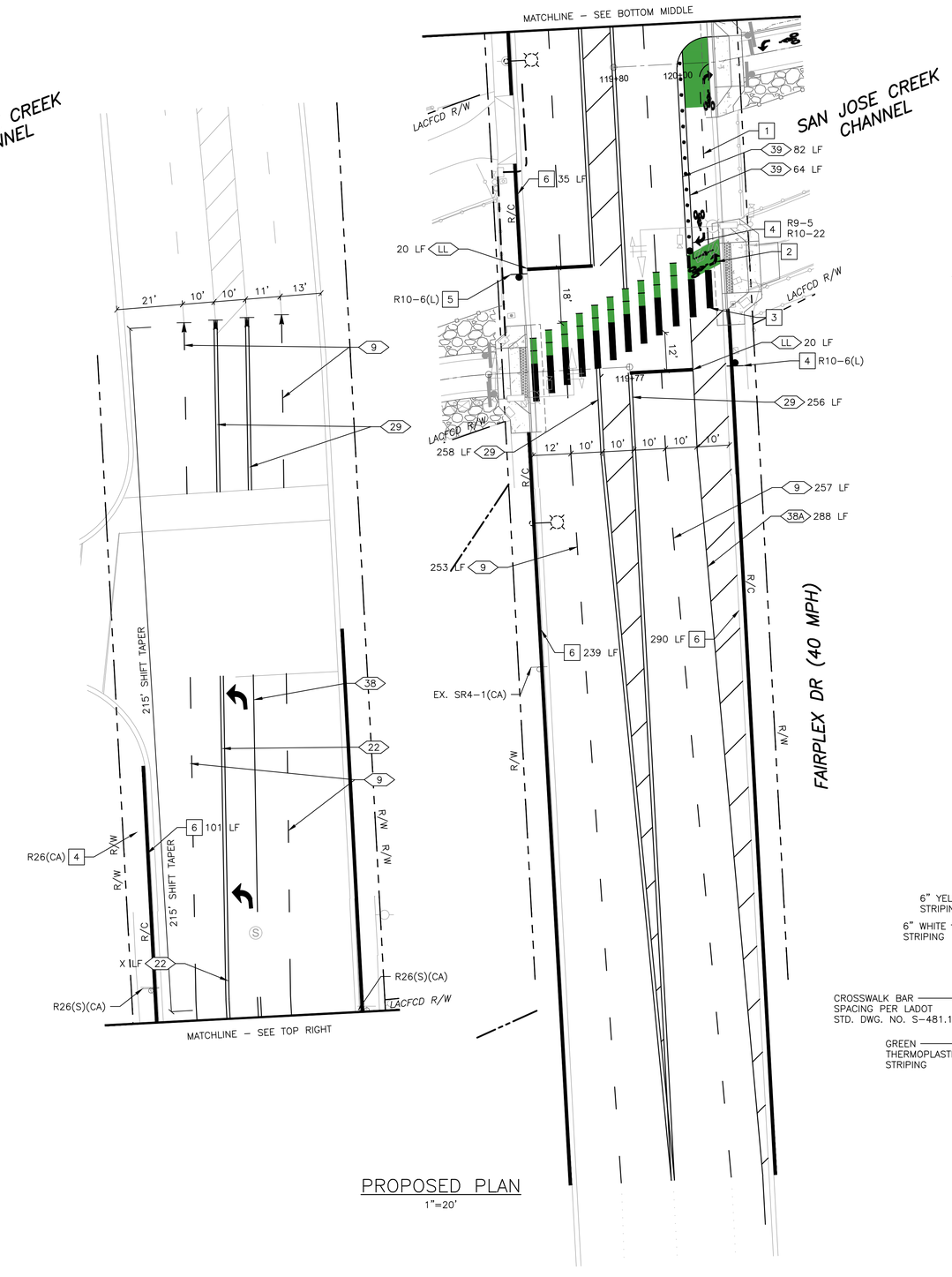
FEHR PEERS
600 Wilshire Boulevard Suite 1050
Los Angeles, CA 90017
(213) 261-3050

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

C:\Users\jschmidt\OneDrive – Fehr & Peers\Documents\LA-3404 SJ Creek\90_Submittal\3404-SS.dwg 12/11/2024 17:03

FJ - 204 AE

REMOVAL PLAN
1"=20'




PROPOSED PLAN
1"=20'

## PROPOSED SIGN CHART (THIS SHEET ONLY):

R26(CA) (12"x18") | R10-6(L) (24"x36") | R10-22 (12"x18") | R9-5 (12"x18")

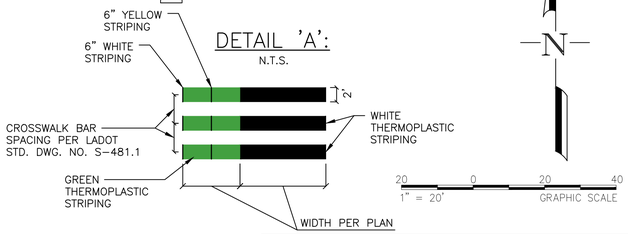
## LEGEND (THIS SHEET ONLY):

- REMOVE EXISTING PAVEMENT STRIPE, ARROW, OR LEGEND (BY GRINDING)
- R/C — INSTALL NEW RED CURB.
- INSTALL TYPE IV (L)/(R) PAVEMENT ARROW PER CALTRANS STANDARD PLAN A24A.
- INSTALL BIKE LANE SYMBOL WITH PERSON PER CALTRANS STANDARD PLAN A24C.
- XX — INSTALL PAVEMENT STRIPING PER CALTRANS STRIPING DETAILS. SEE CALTRANS STANDARD PLANS A20A THRU A24F.
- LL — INSTALL 12" WHITE THERMOPLASTIC LIMIT LINE.
- CONFORM TO EXISTING STRIPING.
- INSTALL NEW ROADSIDE SIGN AND POST.
- EXISTING ROADSIDE SIGN TO REMAIN.
- INSTALL RAISED BIKE LANE SEPARATION. MATERIAL TBD.
- INSTALL BICYCLE LOOP DETECTOR SYMBOL PER CALTRANS STANDARD PLAN A24C.

## PROJECT NOTES (THIS SHEET ONLY):

1. INSTALL 4" YELLOW BROKEN STRIPE, 3' STRIPE WITH 9' GAP, PER 2014 CA MUTCD REV 8 FIGURE 9C-2.
2. INSTALL GREEN THERMOPLASTIC STRIPING.
3. INSTALL 2' WIDE CROSSWALK BARS, LAYOUT PER LADOT STD. DWG. NO. S-481.1. INCLUDE CONFLICT STRIPING NEXT TO CROSSWALK BARS PER DETAIL 'A' THIS SHEET.
4. INSTALL NEW ROADSIDE SIGN AND POST.
5. INSTALL NEW ROADSIDE SIGN ON EXISTING STREET LIGHT.
6. INSTALL RED CURB, LENGTH PER PLAN.

DETAIL 'A':
N.T.S.




N

1" = 20' GRAPHIC SCALE (20 0 20 40)

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

FAIRPLEX DRIVE
SIGNING & STRIPING PLAN

SCALE AS SHOWN
DATE

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: C. STRAYER
REVIEWED: C. STRAYER

SHT. 86 OF 95 SHTS

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

T114

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

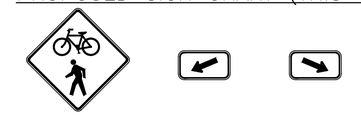
FEHR & PEERS
600 Wilshire Boulevard Suite 1050 Los Angeles, CA 90017 (213) 261-3050

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

C:\Users\jschmidt\OneDrive - Fehr & Peers\Documents\LA-3404 SJ Creek\90_Submittal\3404-SS.dwg 12/11/2024 17:04

FJ - 204 AF

## PROPOSED SIGN CHART (THIS SHEET ONLY):



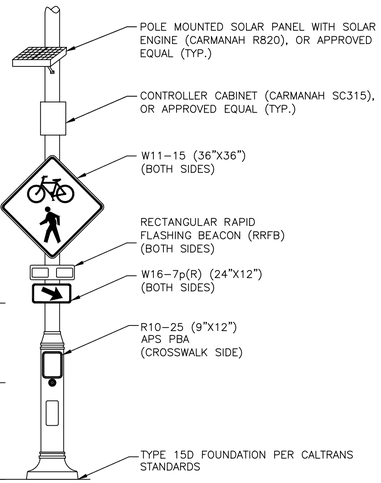
W11-15 | W16-7P(L) | W16-7P(R)

## LEGEND (THIS SHEET ONLY):

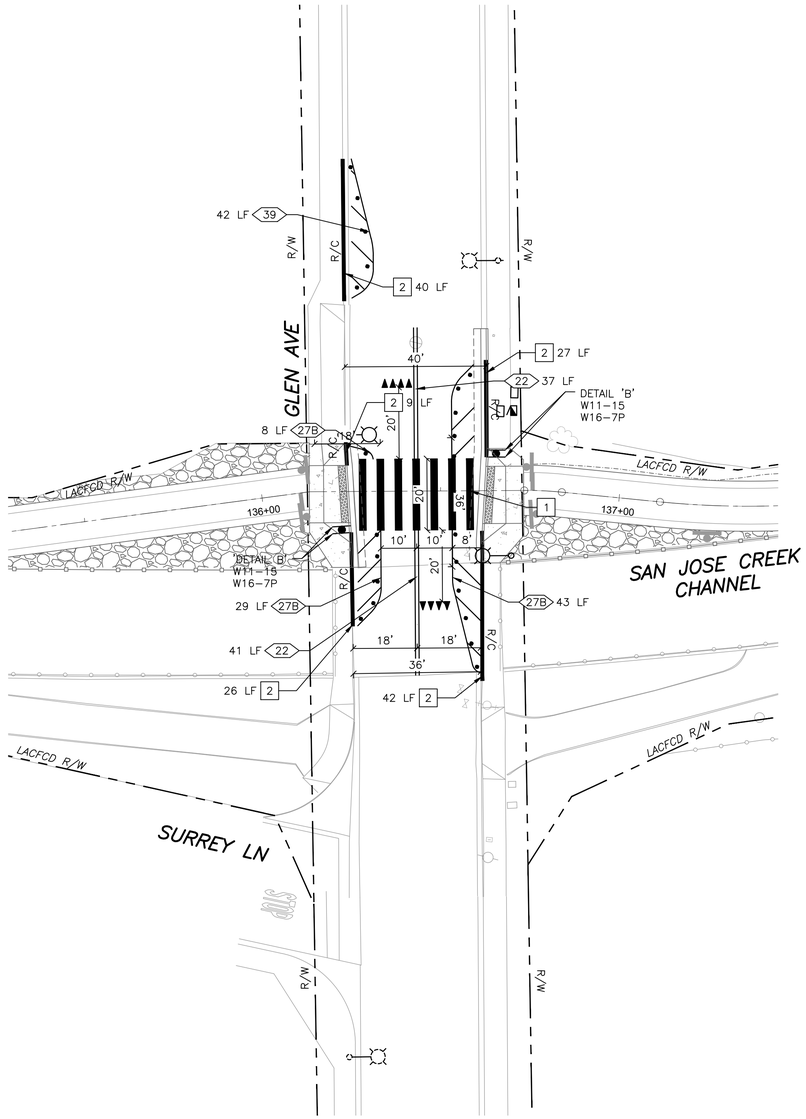
- REMOVE EXISTING PAVEMENT STRIPE, ARROW, OR LEGEND (BY GRINDING)
- R/C — INSTALL NEW RED CURB.
- XX — INSTALL PAVEMENT STRIPING PER CALTRANS STRIPING DETAILS. SEE CALTRANS STANDARD PLANS A20A THRU A24F.
- LL — INSTALL 12" WHITE THERMOPLASTIC LIMIT LINE.
- CONFORM TO EXISTING STRIPING.
- INSTALL NEW ROADSIDE SIGN AND POST.
- EXISTING ROADSIDE SIGN TO REMAIN.
- INSTALL RAISED BIKE LANE SEPARATION. MATERIAL TBD.
- INSTALL YIELD LINES.

## PROJECT NOTES (THIS SHEET ONLY):

1. INSTALL 2' WIDE CROSSWALK BARS, LAYOUT PER LADOT STD. DWG. NO. S-481.1.
2. INSTALL RED CURB, LENGTH PER PLAN.

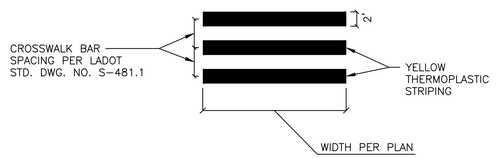


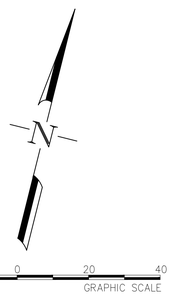

DETAIL 'B'
BI-DIRECTIONAL RECTANGULAR RAPID FLASHING BEACON
N.T.S.




PROPOSED PLAN
1"=20'

## DETAIL 'A':
N.T.S.




ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

GLEN AVENUE
SIGNING & STRIPING PLAN

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

T115

SCALE AS SHOWN
DATE

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: C. STRAYER
REVIEWED: C. STRAYER

SHT. 87 OF 95 SHTS

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

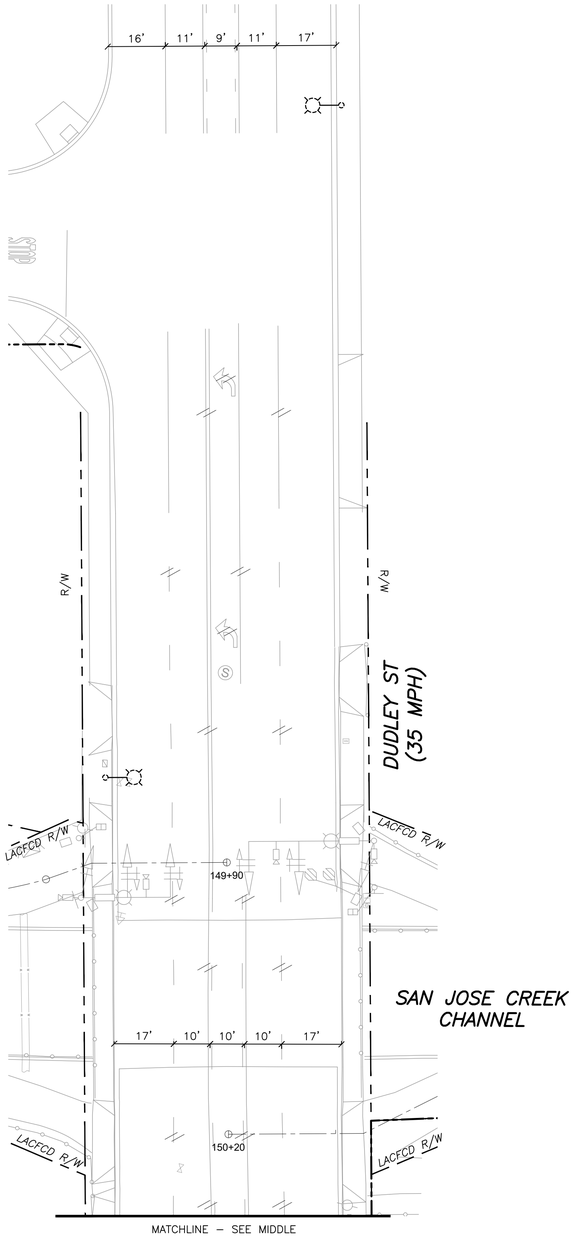

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

FEHR & PEERS
600 Wilshire Boulevard Suite 1050 Los Angeles, CA 90017 (213) 261-3050

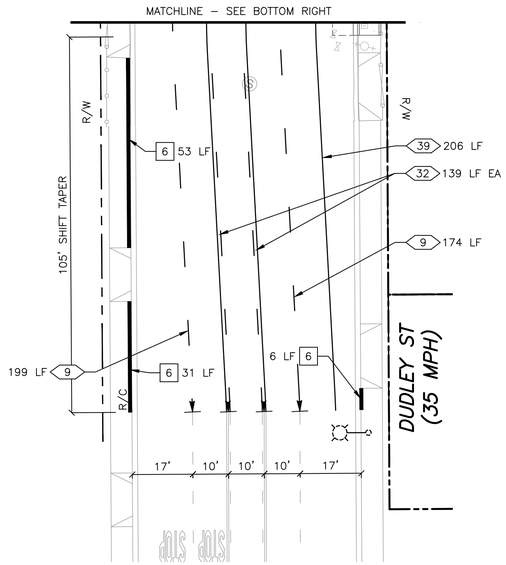

PRELIMINARY


Underground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

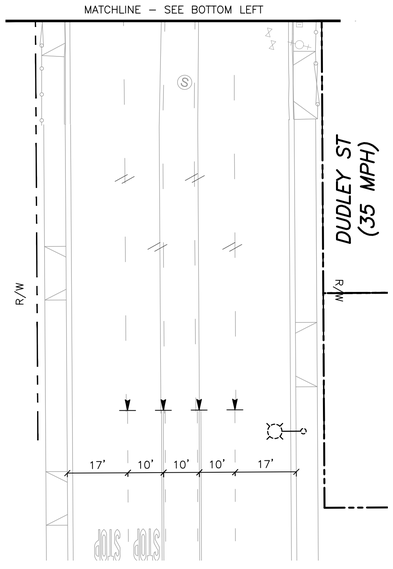

C:\Users\jschmidt\OneDrive - Fehr & Peers\Documents\LA-3404 SJ Creek\90_Submittal\3404-SS.dwg 12/11/2024 17:04



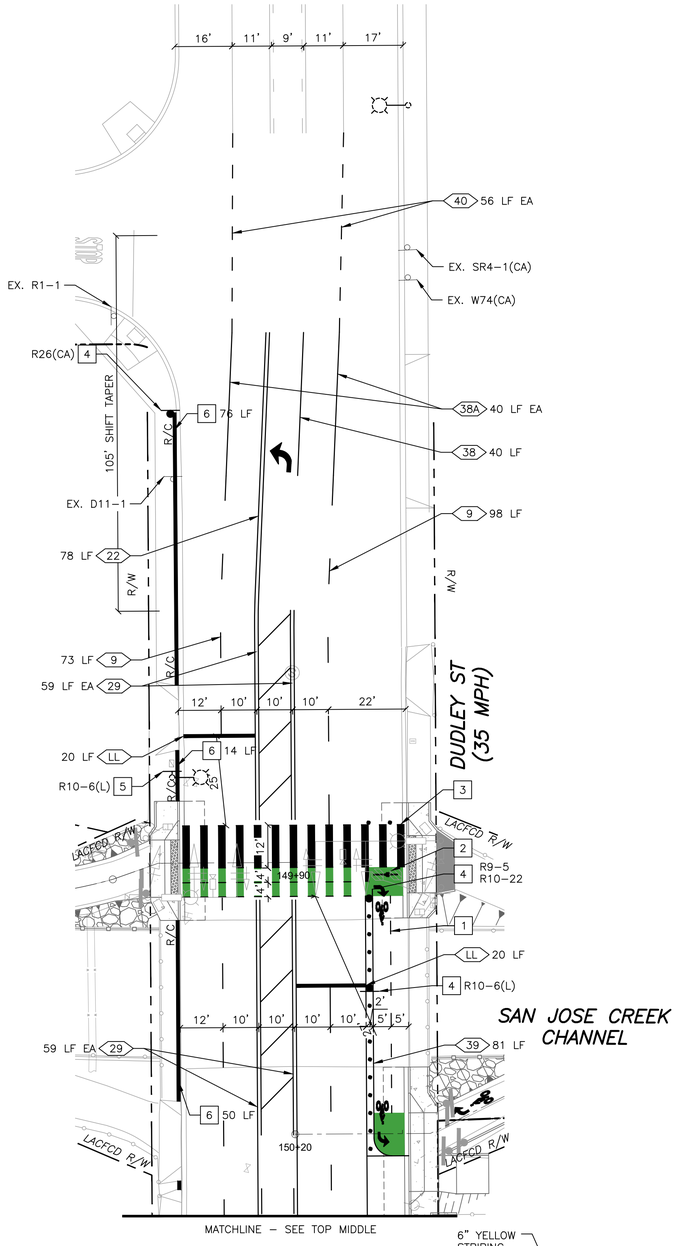

REMOVAL PLAN
1"=20'




PROPOSED PLAN
1"=20'




REMOVAL PLAN
1"=20'




PROPOSED PLAN
1"=20'

## PROPOSED SIGN CHART (THIS SHEET ONLY):

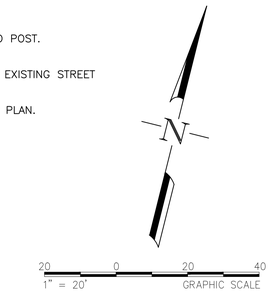
| R26(CA) (12"x18") | R10-6(L) (24"x36") | R10-22 (12"x18") | R9-5 (12"x18") |
|---|---|---|---|
| NO PARKING ANY TIME | STOP HERE ON RED | TO REQUEST GREEN WAIT ON | USE PED SIGNAL |

## LEGEND (THIS SHEET ONLY):

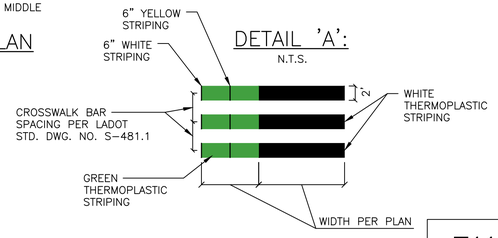
- REMOVE EXISTING PAVEMENT STRIPE, ARROW, OR LEGEND (BY GRINDING)
- R/C — INSTALL NEW RED CURB.
- INSTALL TYPE IV (L)/(R) PAVEMENT ARROW PER CALTRANS STANDARD PLAN A24A.
- INSTALL BIKE LANE SYMBOL WITH PERSON PER CALTRANS STANDARD PLAN A24C.
- INSTALL BICYCLE LOOP DETECTOR SYMBOL PER CALTRANS STANDARD PLAN A24C.
- XX — INSTALL PAVEMENT STRIPING PER CALTRANS STRIPING DETAILS. SEE CALTRANS STANDARD PLANS A20A THRU A24F.
- LL — INSTALL 12" WHITE THERMOPLASTIC LIMIT LINE.
- CONFORM TO EXISTING STRIPING.
- INSTALL NEW ROADSIDE SIGN AND POST.
- EXISTING ROADSIDE SIGN TO REMAIN.
- INSTALL RAISED BIKE LANE SEPARATION. MATERIAL TBD.
- INSTALL BICYCLE LOOP DETECTOR SYMBOL PER CALTRANS STANDARD PLAN A24C.

## PROJECT NOTES (THIS SHEET ONLY):

1. INSTALL 4" YELLOW BROKEN STRIPE, 3' STRIPE WITH 9' GAP, PER 2014 CA MUTCD REV 8 FIGURE 9C-2.
2. INSTALL GREEN THERMOPLASTIC STRIPING.
3. INSTALL 2' WIDE CROSSWALK BARS, LAYOUT PER LADOT STD. DWG. NO. S-481.1. INCLUDE CONFLICT STRIPING NEXT TO CROSSWALK BARS PER DETAIL 'A' THIS SHEET.
4. INSTALL NEW ROADSIDE SIGN AND POST.
5. INSTALL NEW ROADSIDE SIGN ON EXISTING STREET LIGHT.
6. INSTALL RED CURB, LENGTH PER PLAN.




## DETAIL 'A':
N.T.S.




ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

DUDLEY STREET
SIGNING & STRIPING PLAN

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

T116

SCALE AS SHOWN
DATE

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: C. STRAYER
REVIEWED: C. STRAYER

SHT. 88 OF 95 SHTS

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

PRELIMINARY

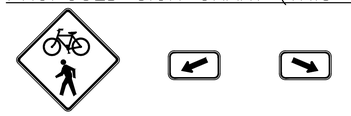
alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

FEHR & PEERS
600 Wilshire Boulevard Suite 1050 Los Angeles, CA 90017 (213) 261-3050

C:\Users\jschmidt\OneDrive - Fehr & Peers\Documents\LA-3404 SJ Creek\90_Submittal\3404-SS.dwg 12/11/2024 17:04

FJ - 204 AH

## PROPOSED SIGN CHART (THIS SHEET ONLY):



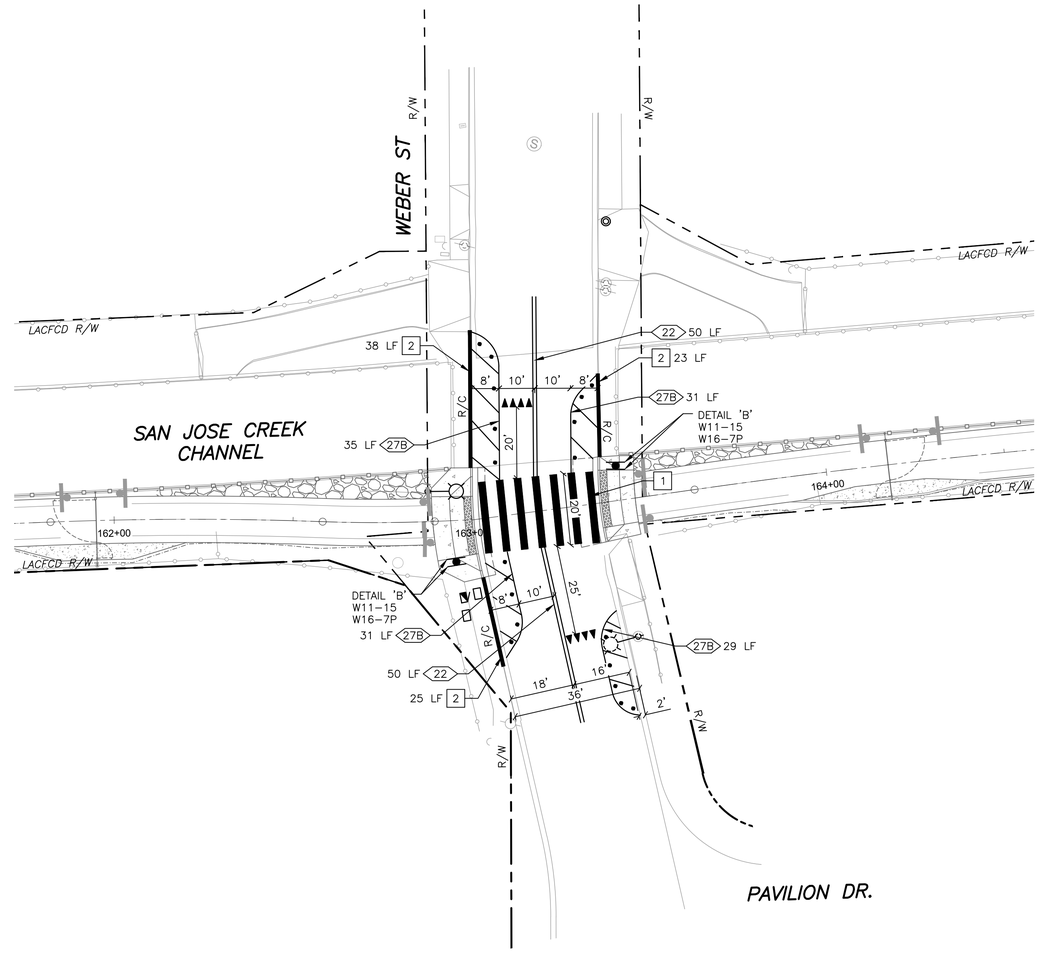
W11-15 W16-7P(L) W16-7P(R)

## LEGEND (THIS SHEET ONLY):

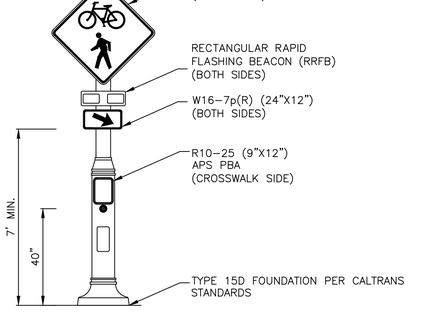
- REMOVE EXISTING PAVEMENT STRIPE, ARROW, OR LEGEND (BY GRINDING)
- R/C — INSTALL NEW RED CURB.
- XX — INSTALL PAVEMENT STRIPING PER CALTRANS STRIPING DETAILS. SEE CALTRANS STANDARD PLANS A20A THRU A24F.
- LL — INSTALL 12" WHITE THERMOPLASTIC LIMIT LINE.
- CONFORM TO EXISTING STRIPING.
- INSTALL NEW ROADSIDE SIGN AND POST.
- EXISTING ROADSIDE SIGN TO REMAIN.
- INSTALL RAISED BIKE LANE SEPARATION. MATERIAL TBD.

## PROJECT NOTES (THIS SHEET ONLY):

1. INSTALL 2' WIDE CROSSWALK BARS, LAYOUT PER LADOT STD. DWG. NO. S-481.1.
2. INSTALL RED CURB, LENGTH PER PLAN.

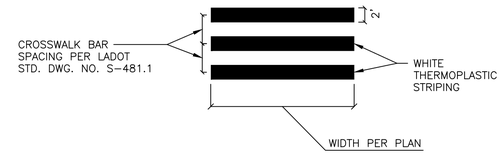


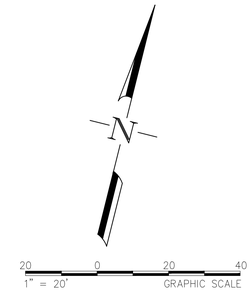

PROPOSED PLAN
1"=20'




DETAIL 'B'
BI-DIRECTIONAL RECTANGULAR RAPID FLASHING BEACON
N.T.S.

DETAIL 'A':
N.T.S.




ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

WEBER STREET
SIGNING & STRIPING PLAN

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

T117

SCALE AS SHOWN
DATE

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: C. STRAYER
REVIEWED: C. STRAYER

SHT. 89 OF 95 SHTS

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

PRELIMINARY

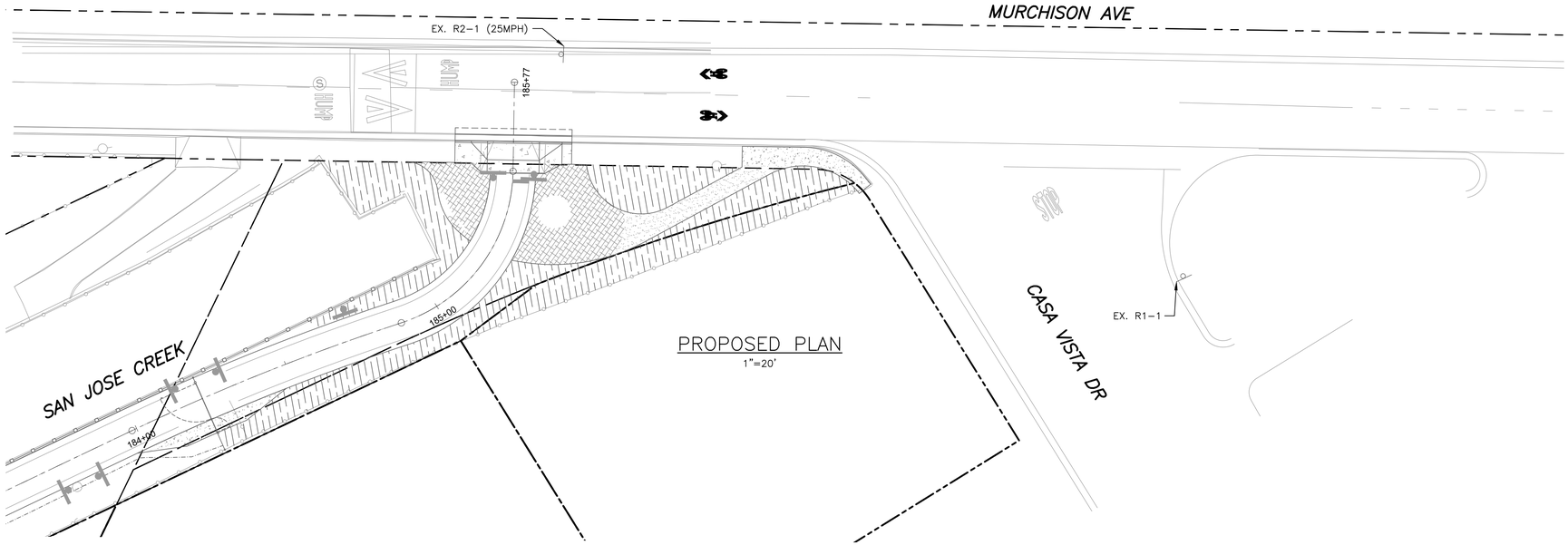
alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

FEHR & PEERS
600 Wilshire Boulevard Suite 1050 Los Angeles, CA 90017 (213) 261-3050

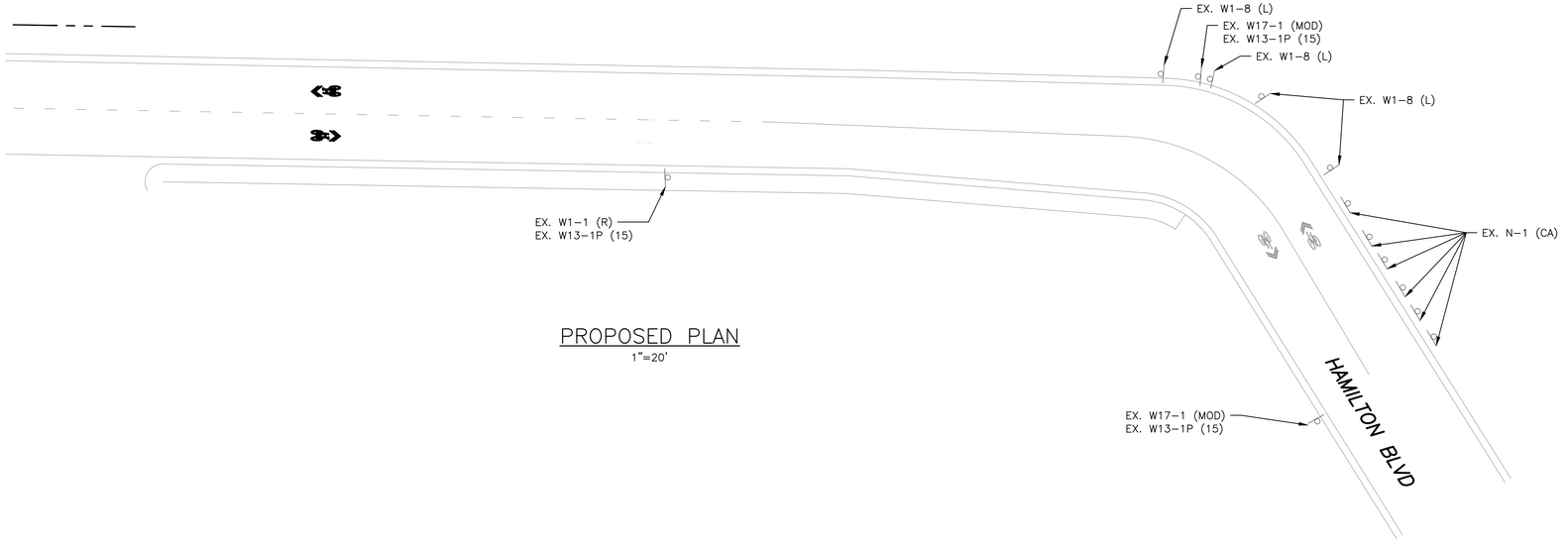
Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

C:\Users\jschmidt\OneDrive - Fehr & Peers\Documents\LA-3404 SJ Creek\90_Submittal\3404-SS.dwg 12/11/2024 17:04

FJ - 204 AI




PROPOSED PLAN
1"=20'



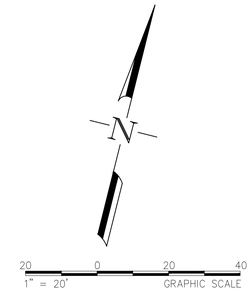

PROPOSED PLAN
1"=20'

## PROPOSED SIGN CHART (THIS SHEET ONLY):

## LEGEND (THIS SHEET ONLY):

- REMOVE EXISTING PAVEMENT STRIPE, ARROW, OR LEGEND (BY GRINDING)
- R/C — INSTALL NEW RED CURB.
- XX — INSTALL PAVEMENT STRIPING PER CALTRANS STRIPING DETAILS. SEE CALTRANS STANDARD PLANS A20A THRU A24F.
- LL — INSTALL 12" WHITE THERMOPLASTIC LIMIT LINE.
- CONFORM TO EXISTING STRIPING.
- INSTALL NEW ROADSIDE SIGN AND POST.
- EXISTING ROADSIDE SIGN TO REMAIN.
- INSTALL RAISED BIKE LANE SEPARATION. MATERIAL TBD.

## PROJECT NOTES (THIS SHEET ONLY):




ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

MURCHISON AVE
SIGNING & STRIPING PLAN

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

T118

SCALE AS SHOWN

DATE

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: C. STRAYER
REVIEWED: C. STRAYER

SHT. 90 OF 95 SHTS

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

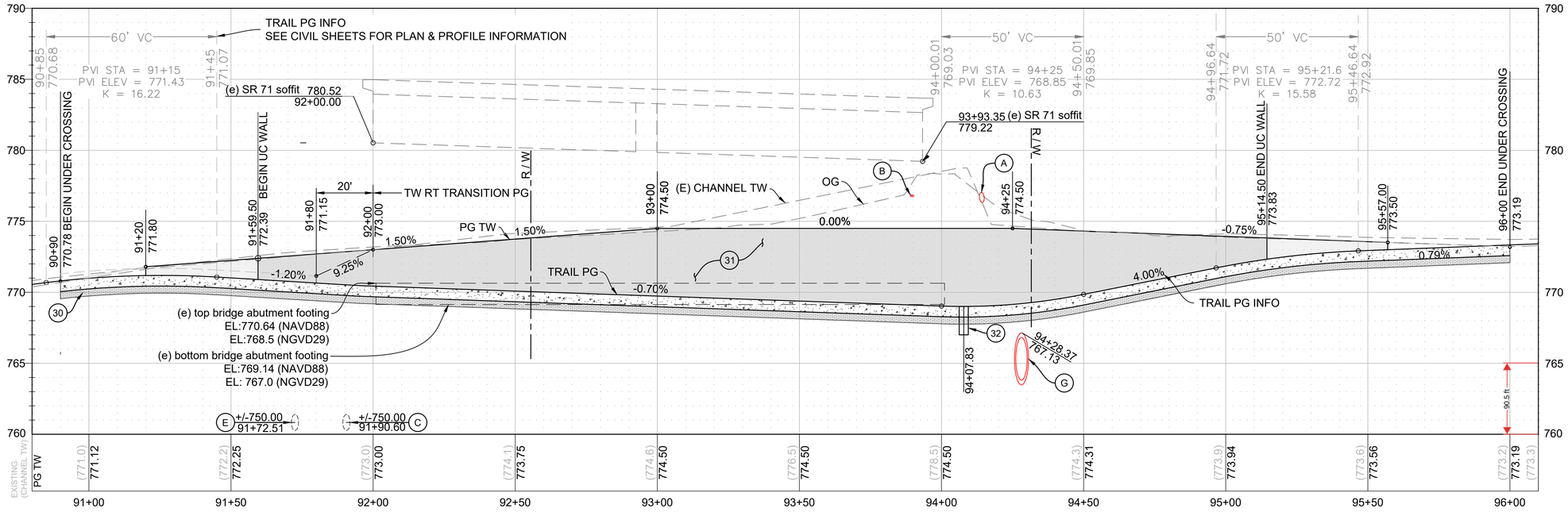
PRELIMINARY

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

FEHR & PEERS
600 Wilshire Boulevard Suite 1050 Los Angeles, CA 90017 (213) 261-3050

C:\Users\jschmidt\OneDrive - Fehr & Peers\Documents\LA-3404 SJ Creek\90_Submittal\3404-SS.dwg 12/11/2024 17:04

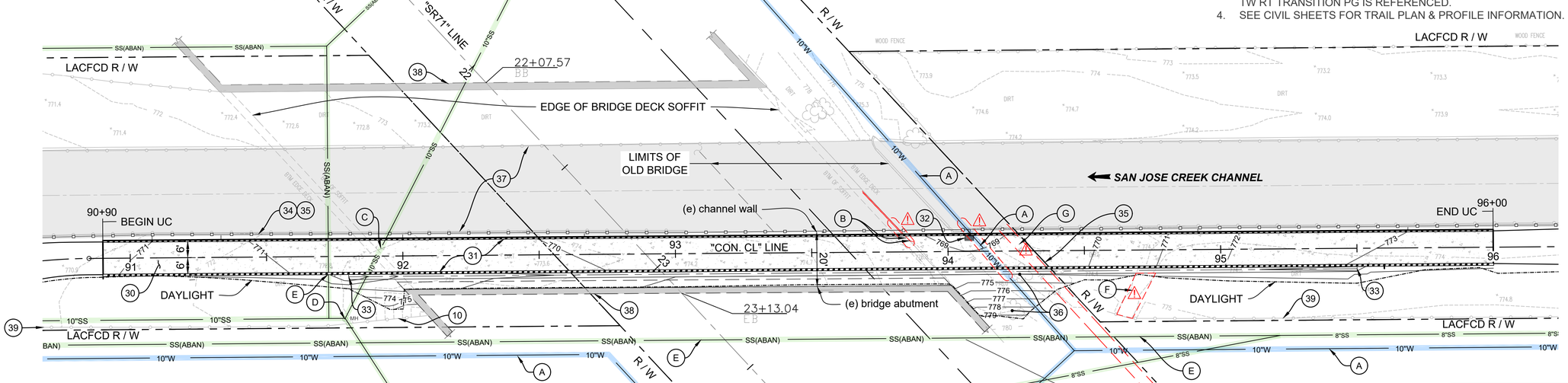
FJ - 204 AJ




NOTES:
(N) FENCING ON CHANNEL WALL NOT SHOWN FOR CLARITY.

WALL PROFILE
SCALE: 1"= 20' H
1" = 4' V

WALL NOTES:
1. WALL EXPANSION JOINTS AT 96'-0" O.C. TYP.
2. LEFT WALL FOLLOWS TW PG ENTIRE LEGNTH
3. RIGHT WALL FOLLOWS TW PG ENTIRE LENGTH EXCEPT WHERE TW RT TRANSITION PG IS REFERENCED.
4. SEE CIVIL SHEETS FOR TRAIL PLAN & PROFILE INFORMATION.




PLAN
SCALE: 1"= 20'

NORTH

CONSTRUCTION NOTES:

30 CONSTRUCT 0.75' PCC TRAIL OVER 0.5' CL II AG. BASE
31 CONSTRUCT PCC UNDERCROSSING WALLS
32 CONSTRUCT DRAINAGE INLET (SEE DRAINAGE PLANS)
33 CONSTRUCT DRAINAGE GUTTER
34 CONSTRUCT CHAINLINK FENCE - TYPE CL-3.5
35 REMOVE (E) CL FENCE - SEE CIVIL PLANS
36 REMOVE TREE
37 (E) CHANNEL WALL - PROTECT IN PLACE
38 (E) BR. ABUT. (SR-71) - PROTECT IN PLACE
39 (E) CHAINLINK FENCE - PROTECT IN PLACE

UTILITY NOTES:

⚠ A (E) 10" WATER MAIN (DEPTH & TRAJECTORY UNKNOWN AT TRAIL CROSSING, POTHOLE TO VERIFY & COORDINATE WITH ENGINEER)
⚠ B (E) ELEC. CONDUIT (2" & 3.5") (DEPTH & TRAJECTORY UNKNOWN AT TRAIL CROSSING, POTHOLE TO VERIFY & COORDINATE WITH ENGINEER)
C (E) SS 10" VCP - PROTECT IN PLACE
D (E) SS MH - PROTECT IN PLACE
E (E) SS 10" VCP (ABANDONED) - PROTECT IN PLACE
⚠ F (E) DRAINAGE SWALE - SEE DRAINAGE PLANS
⚠ G (E) RCP STORM DRAIN (DEPTH UNKNOWN AT TRAIL CROSSING, POTHOLE TO VERIFY & COORDINATE WITH ENGINEER) SEE RECORD DRAWINGS & DRAINAGE PLANS FOR MORE INFORMATION.

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

S100

PRELIMINARY

BENGAL ENGINEERING INC

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION
CIP 428-58072 / SAN JOSE CREEK BIKEWAY

# SR 71 UNDERCROSSING PLAN & PROFILE

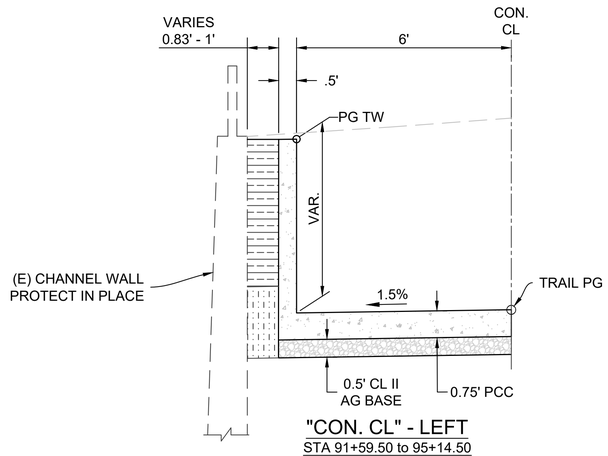
SCALE AS SHOWN
DATE

DESIGNED:
DRAWN:
CHECKED:
REVIEWED:

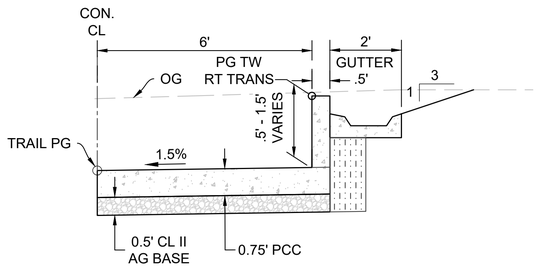
SHT. ____ OF 80 SHTS

FA-2263 CF

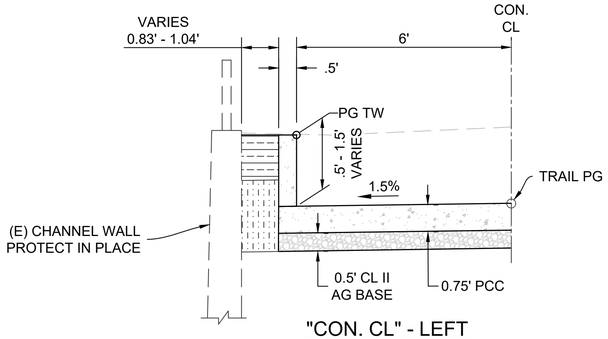
E:\Bengal\ALTA - Pomona SJC MUB - Documents\CAD\Production Drawings\SJC-Layout - 95.dwg 05/16/2025 12:06



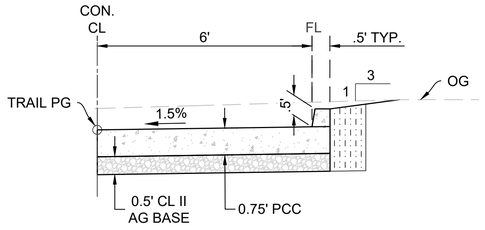

"CON. CL" - LEFT
STA 91+59.50 to 95+14.50
SCALE: 1"= 2-0"



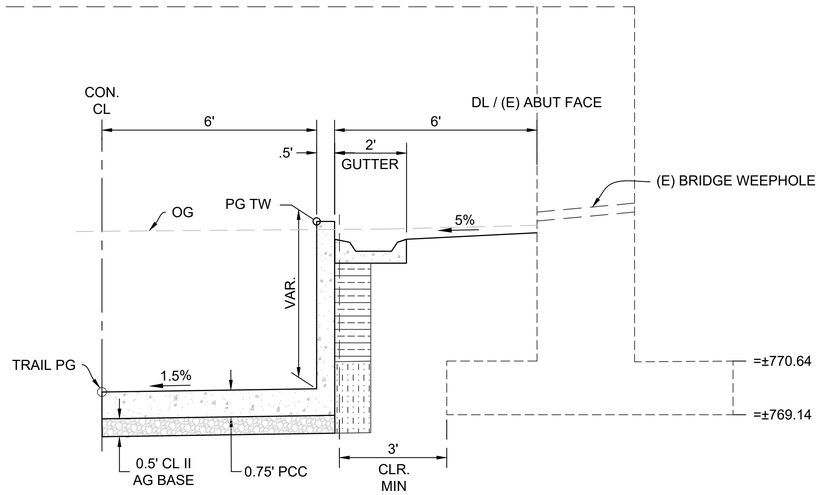

"CON. CL" - RIGHT
STA 91+80 to 92+00
& 95+14.50 to 95+57
SCALE: 1"= 2-0"




"CON. CL" - LEFT
STA 91+20 to 91+59.50
& STA 95+14.5 to 95+57
SCALE: 1"= 2-0"




"CON. CL" - RIGHT
STA 91+20 to 91+80
SCALE: 1"= 2-0"



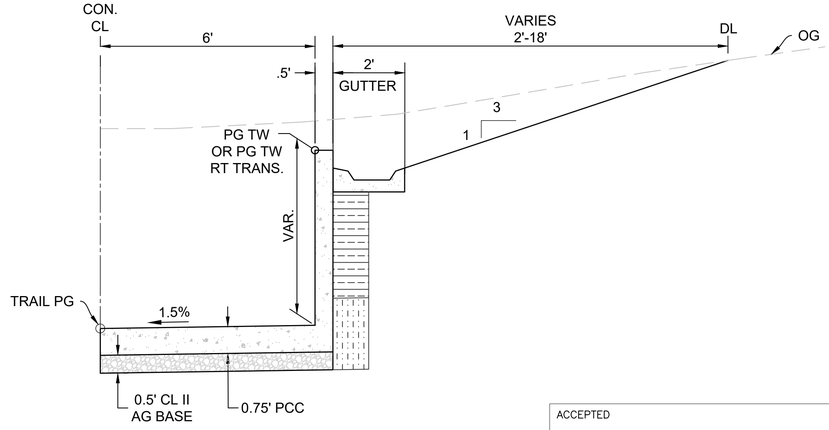

"CON. CL" - RIGHT
STA 92+00 to 94+00
SCALE: 1"= 2-0"




"CON. CL" - LEFT
STA 90+90 to 91+20
& STA 95+57 to 96+00
SCALE: 1"= 2-0"




"CON. CL" - RIGHT
STA 90+90 to 91+20
& STA 95+57 to 96+00
SCALE: 1"= 2-0"




"CON. CL" - RIGHT
STA 91+80 to 92+00
& STA 94+00 to 95+14.50
SCALE: 1"= 2-0"

LEGEND:

- PCC
- CLASS II AGGREGATE BASE
- STRUCTURE BACKFILL (SLURRY CEMENT)
- PERVIOUS BACKFILL MATERIAL

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

# SR 71 UNDERCROSSING TYPICAL SECTIONS

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

S101

PRELIMINARY

BENGAL ENGINEERING INC

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

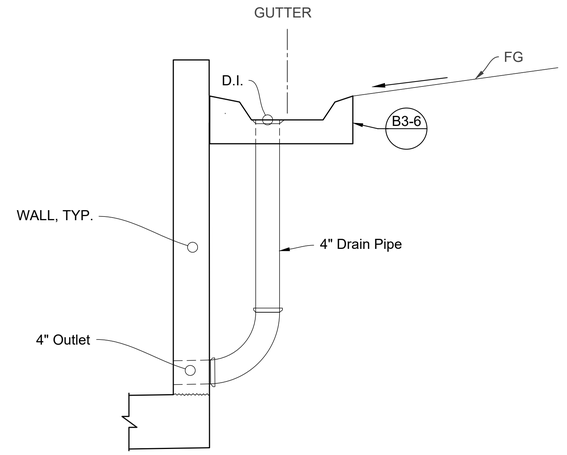
SCALE AS SHOWN
DATE

DESIGNED:
DRAWN:
CHECKED:
REVIEWED:

SHT. ___ OF 80 SHTS

FA-2263 CF

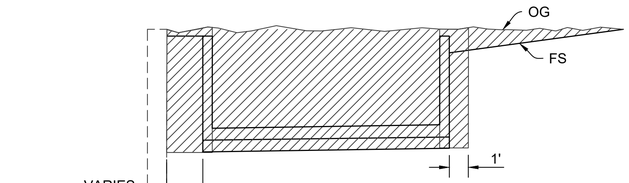
C:\Bengal\ALTA - Pomona SJC MUB - Documents\CADD\Production Drawings\SJC-Layout - 95.dwg 05/16/2025 12:08



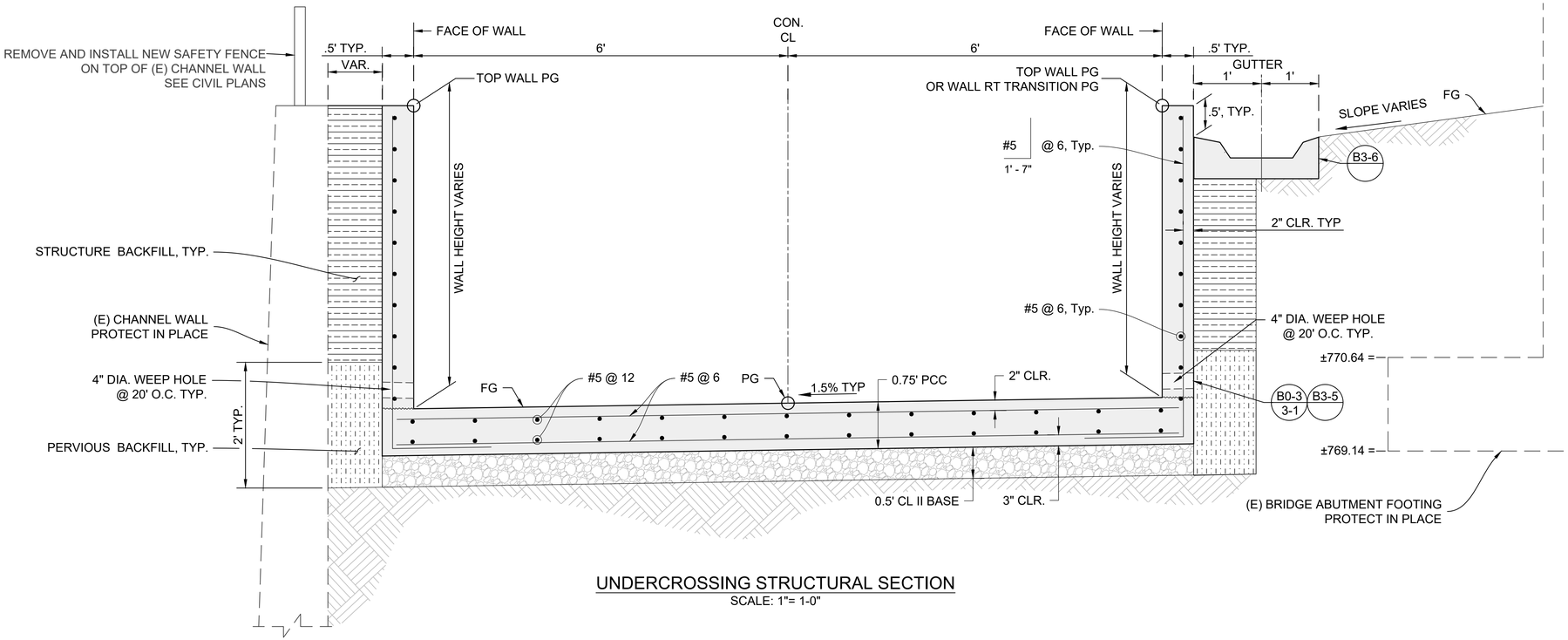

WALL DRAINAGE NOTES:

1. SEE CALTRANS STD B3-6 FOR MORE INFORMATION.
2. SPACED 40' O.C. - ENTIRE LENGTH OF GUTTER.
3. GUTTER PROFILE TO MATCH WALL PROFILE EXCEPT FROM STA 93+00 & 94+25 GUTTER PROFILE WILL SLOPE AT 1%.

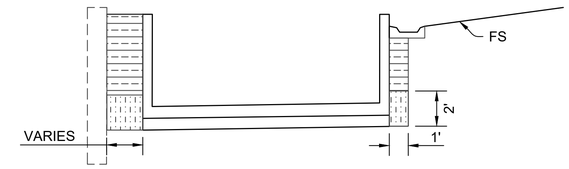
## GUTTER DRAINAGE DETAIL
SCALE: 1"= 1-0"




## LIMITS OF PAYMENT FOR EXCAVATION
NO SCALE




## UNDERCROSSING STRUCTURAL SECTION
SCALE: 1"= 1-0"




## LIMITS OF PAYMENT FOR BACKFILL
NO SCALE

LEGEND

- STRUCTURE EXCAVATION
- STRUCTURE BACKFILL (SLURRY CEMENT)
- PERVIOUS BACKFILL MATERIAL

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

**SR 71 UNDERCROSSING STRUCTURAL SECTION**

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

S102

SCALE AS SHOWN

DATE

DESIGNED:
DRAWN:
CHECKED:
REVIEWED:

SHT. ____ OF 80 SHTS

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

PRELIMINARY

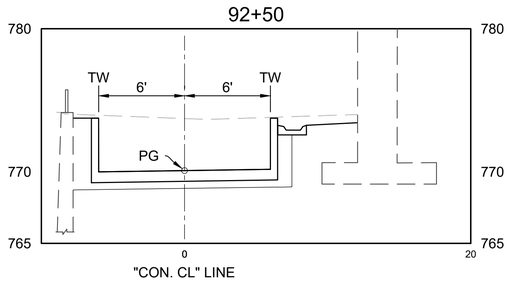
BENGAL ENGINEERING INC.

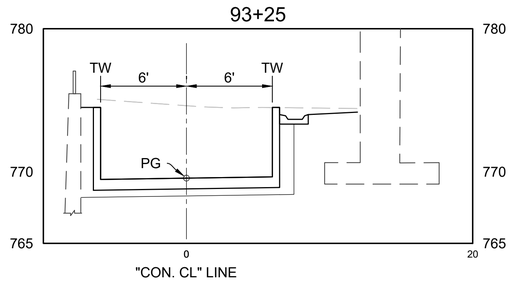
alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

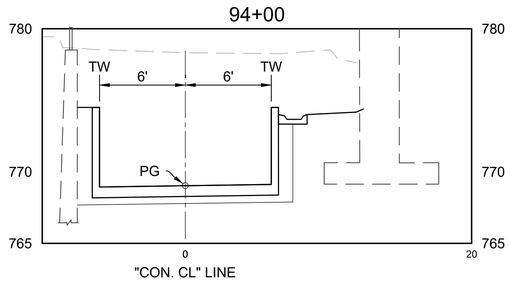
Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

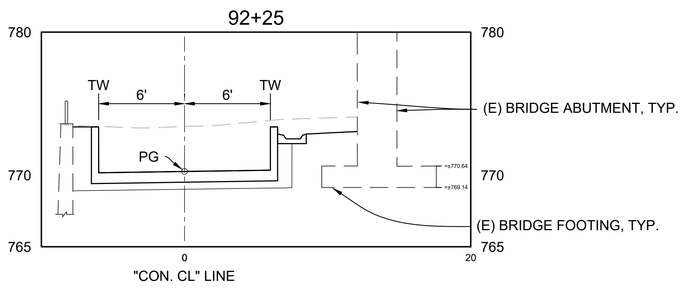
F:\Bengal\ALTA - Pomona SJC MUB - Documents\CAD\Production Drawings\SJC-Layout - 95.dwg 05/16/2025 12:09

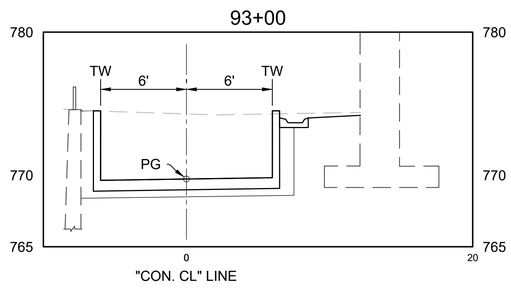
FA-2263 CF

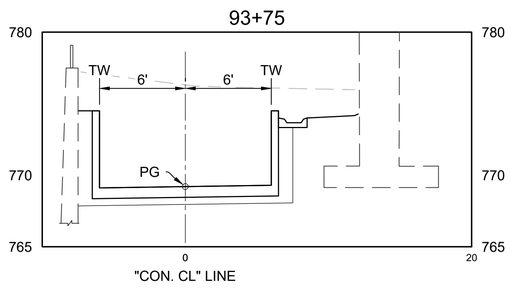


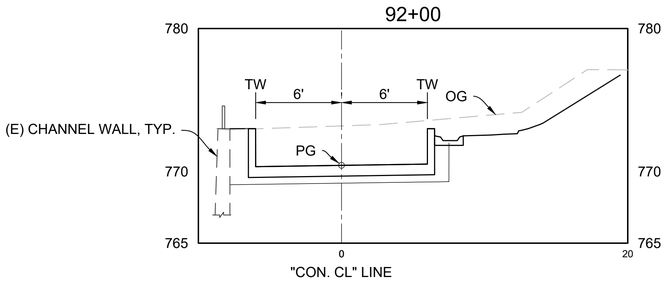



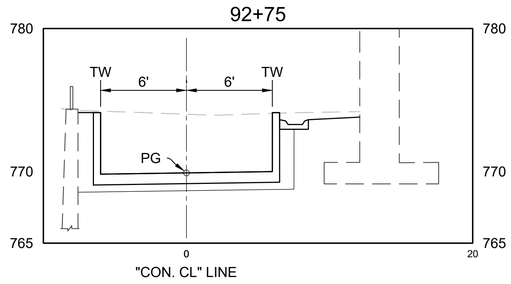



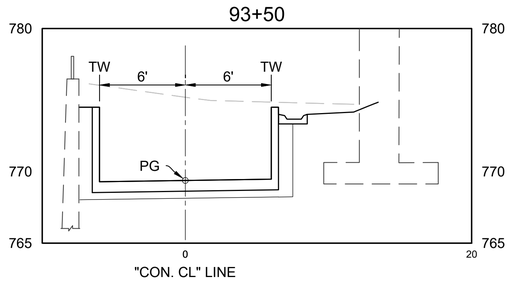




## UNDERCROSSING TRAIL CROSS SECTIONS

SCALE: 1"= 5-0" H&V

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

**SR 71 UNDERCROSSING TRAIL CROSS SECTIONS**

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

S102

SCALE AS SHOWN

DATE

DESIGNED:
DRAWN:
CHECKED:
REVIEWED:

SHT. ____ OF 80 SHTS

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

PRELIMINARY

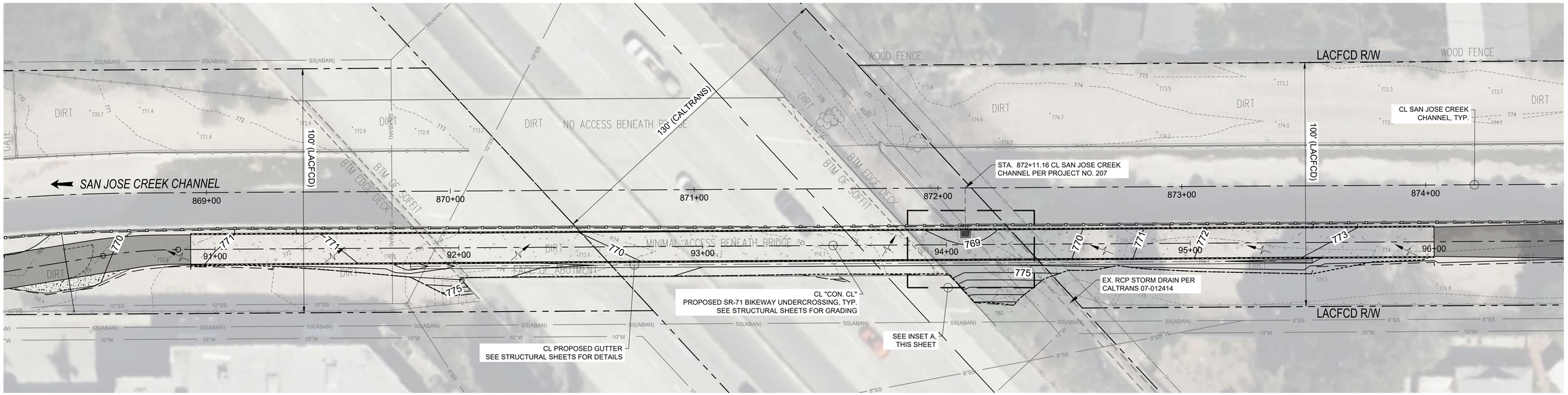
BENGAL ENGINEERING INC.

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

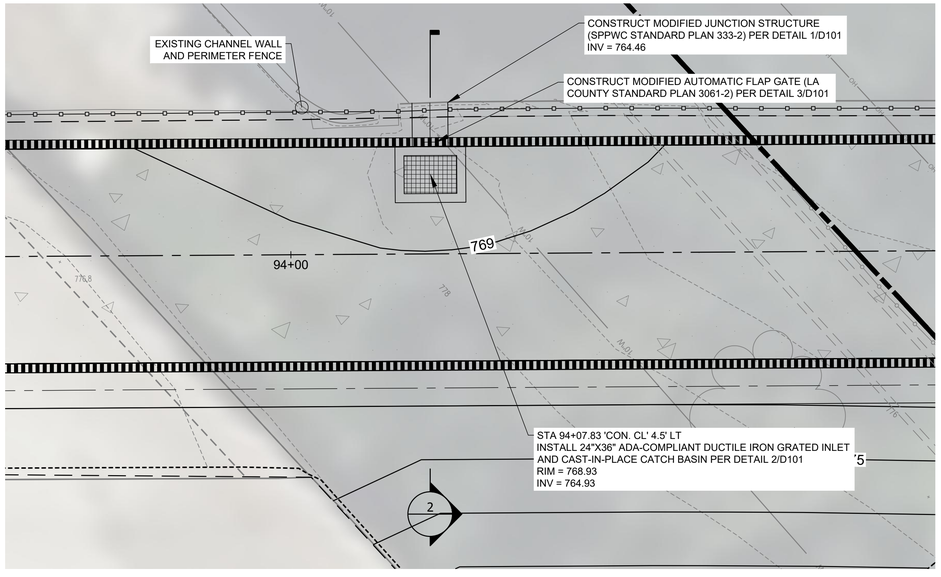
F:\Bengal\ALTA - Pomona SJC MUB - Documents\CAD\Production Drawings\SJC-Layout - 95.dwg 05/16/2025 12:09

FA-2263 CF



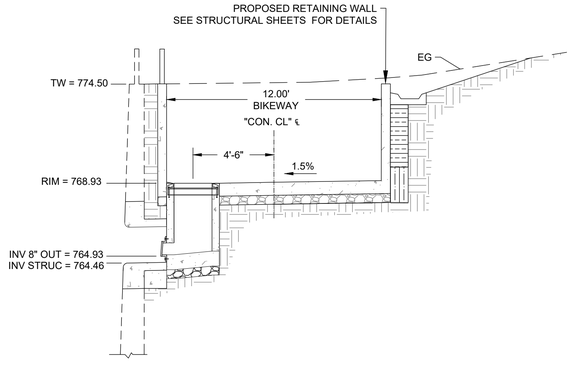

## DRAINAGE PLAN

SCALE 1" = 20'




1 INSET A

SCALE: 1" = 4'




2 SECTION VIEW: BIKEWAY INLET

SCALE: 1" = 4'

4' 2' 0 4' 8'

HORIZ: 1" = 4'

20' 10' 0 20' 40'

HORIZ: 1" = 20'

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

D100

ACCEPTED

BY: _____ DATE: _____

RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____

ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

SR-71 UNDERCROSSING DRAINAGE PLAN

SCALE AS SHOWN

DATE 12.10.2024

DESIGNED: PVT ENG
DRAWN: PVT ENG
CHECKED: C. SEMLOW
REVIEWED: C. SEMLOW

SHT. 94 OF 95 SHTS

REVISIONS | DATE | INITIAL

PRELIMINARY

CRAFTWATER SCIENCE • STRATEGY • ENGINEERING

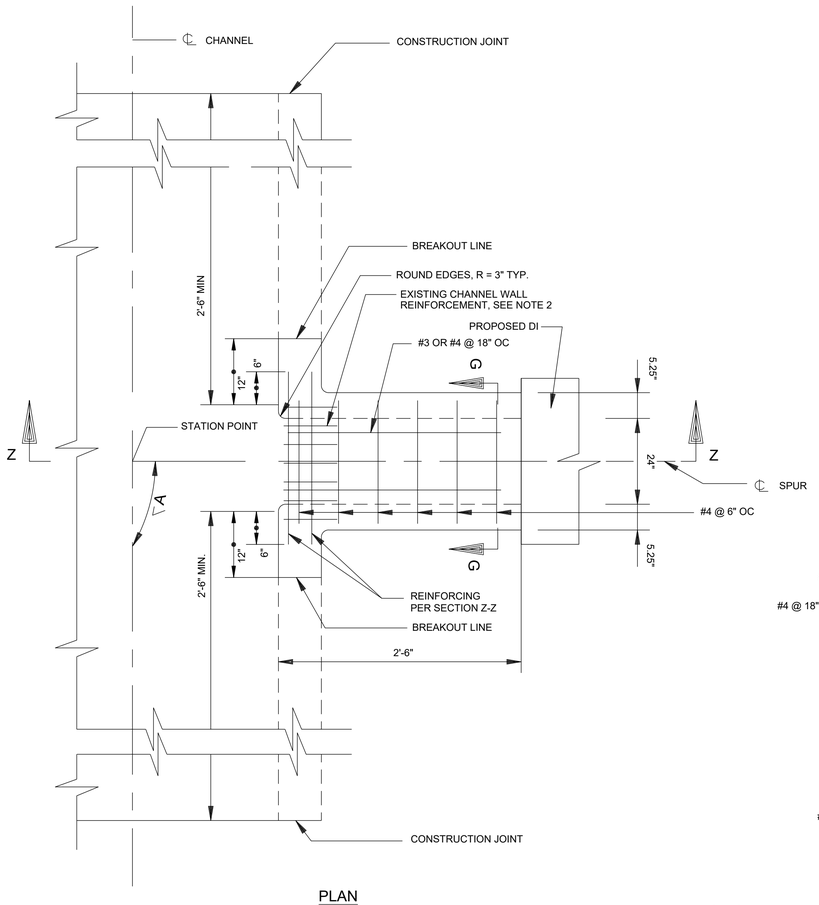
alta

617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

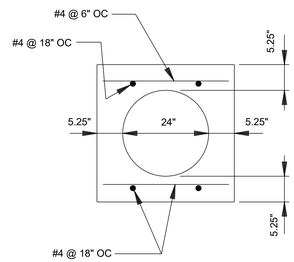
Under Ground Service Alert of Southern California
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

P:\City of Pomona\22-005 San Jose Creek Multi-Use Bikeway\CAD\FINAL PLOTS\2022-171_C-DRAINAGE-PLAN.dwg 12/10/2024 10:29

FC-381 AA



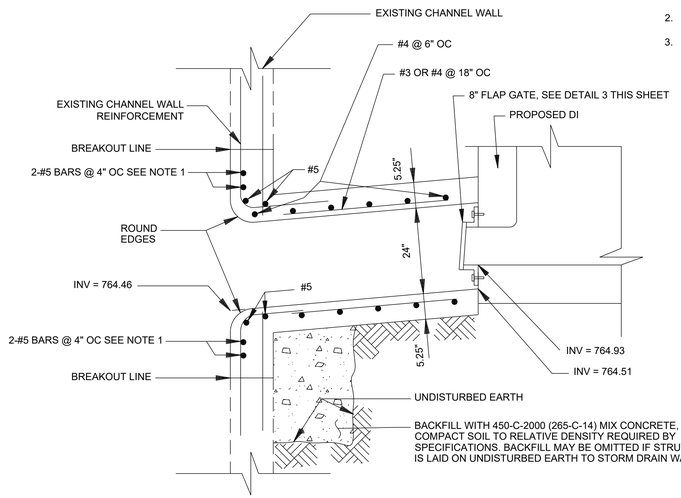

PLAN




SECTION G-G

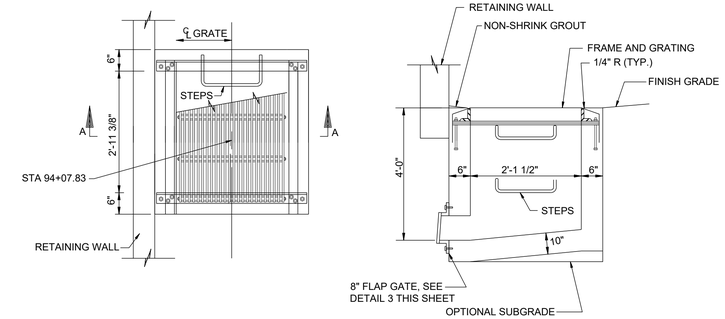
NOTES:

1. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 40, (ASTM A 615M, GRADE 300), AND SHALL TERMINATE 1 1/2" CLEAR OF CONCRETE SURFACE UNLESS OTHERWISE SHOWN.
2. EXISTING CHANNEL WALL REINFORCEMENT SHALL BE CUT IN CENTER OF OPENING AND BENT INTO TOP AND BOTTOM OF JUNCTION STRUCTURE.
3. FLOOR OF STRUCTURE SHALL BE STEEL-TROWELED TO THE SPRING LINE.




SECTION Z-Z

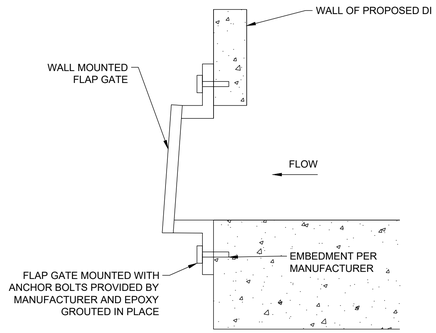
1 JUNCTION STRUCTURE DETAIL
NTS




NOTES:

1. SEE SPPWC STANDARD PLAN 303-4 FOR CONSTRUCTION NOTES.
2. PROVIDE ADA FRAME AND GRATING PER SPPWC STANDARD PLAN 311.
3. PROVIDE STEEL STEPS PER SPPWC STANDARD PLAN 635.

2 DRAIN INLET DETAIL
NTS




NOTE:

FLAP GATE SHALL BE FLAT BACK AND MEET THE REQUIREMENTS OF THE ADDITIONAL PROVISIONS OF THE LA COUNTY "GRAY BOOK".

3 FLAP GATE DETAIL
NTS

90% PROGRESS SUBMITTAL - NOT FOR CONSTRUCTION

D101

ACCEPTED

BY: _____ DATE: _____
RENE GUERRERO, PUBLIC WORKS DIRECTOR

RECOMMENDED

BY: _____ DATE: _____
ARNOLD DICHOSA, P.E., RCE NO. 86038, CITY ENGINEER

CITY OF POMONA
PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION

CIP 428-58072 / SAN JOSE CREEK BIKEWAY

SR-71 UNDERCROSSING
DRAINAGE DETAILS

| SCALE | DESIGNED: | PVT ENG | SHT. 95 |
|---|---|---|---|
| AS SHOWN | DRAWN: | PVT ENG | OF |
| DATE | CHECKED: | C. SEMLOW | 95 SHTS |
| 12.10.2024 | REVIEWED: | C. SEMLOW | |

| △ | REVISIONS | DATE | INITIAL |
|---|---|---|---|

PRELIMINARY

CRAFTWATER
SCIENCE • STRATEGY • ENGINEERING

alta
617 W 7th Street, #1103 | Los Angeles, CA 90017
213-489-7443 | altago.com

Under Ground Service Alert of Southern California
Call: TOLL FREE
1-800
227-2600
TWO WORKING DAYS BEFORE YOU DIG

P:\City of Pomona\22-005 San Jose Creek Multi-Use Bikeway\CAD\FINAL PLOTS\2022-171_C-DRAINAGE-PLAN.dwg 12/10/2024 10:29

FC-381 AB

Geosyntec
consultants

# As-built SR-71 Bridge Plans, dated October 1972

1210-1(73)48
U57-1(3)
U058-3(1)

| DIST. | COUNTY | ROUTE | POST MILES—TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 71 | R0.0/1.2 | 507 | 602 |

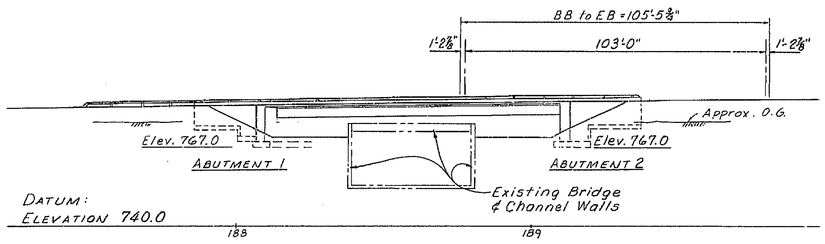
BRIDGE ENGINEER — REGISTERED CIVIL ENGINEER & BUILDING OFFICIAL

ASSISTANT STATE HIGHWAY ENGINEER — REGISTERED CIVIL ENGINEER & BUILDING OFFICIAL

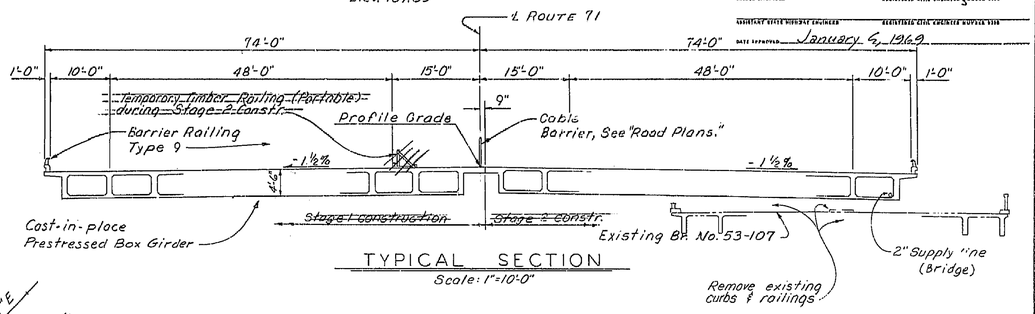
DATE APPROVED January 6, 1969

## PROFILE GRADE

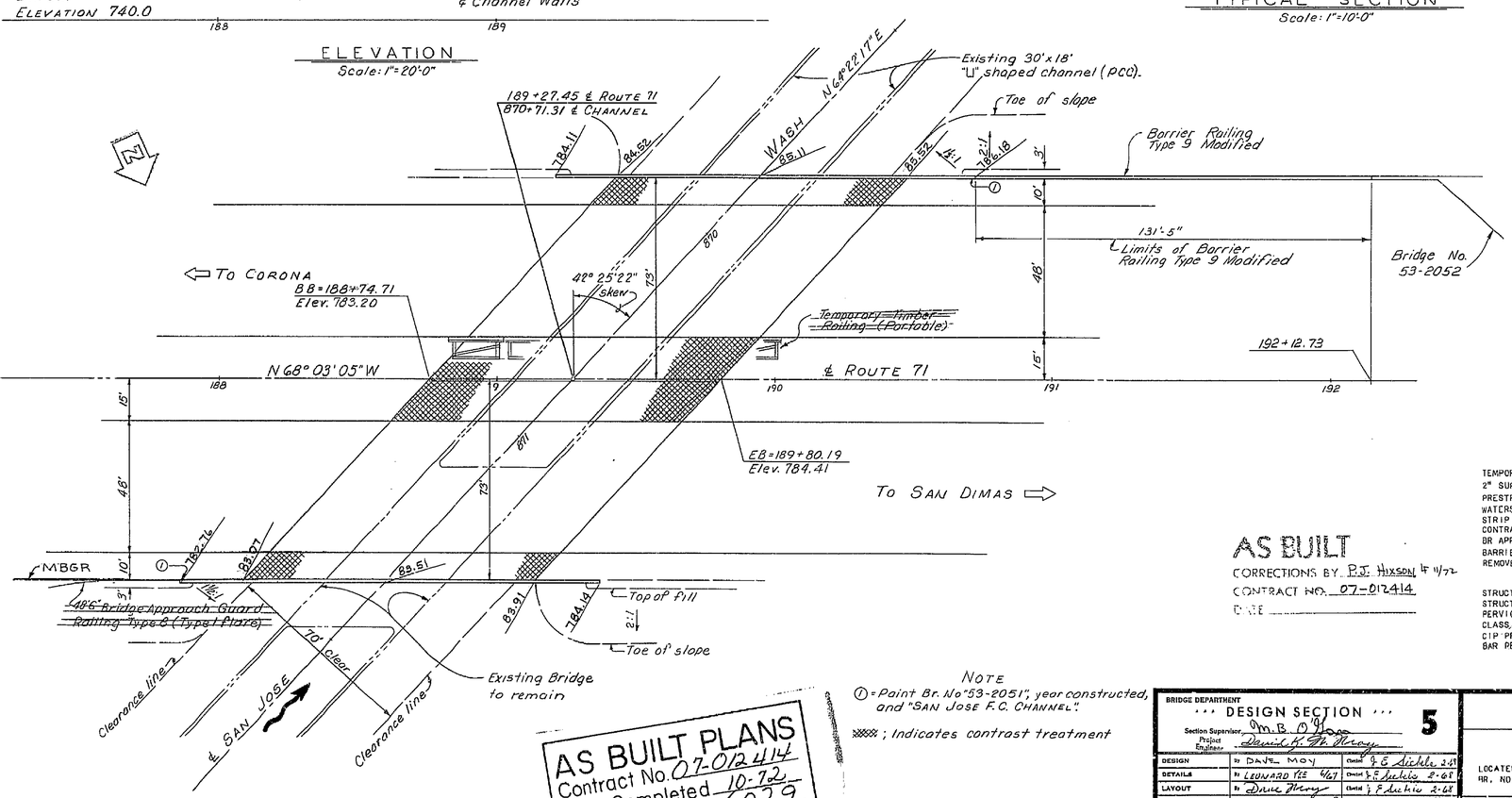
-0.49% — 182+100 BVC, Elev. 787.35 — 1,100' VC Rate of change = .226% per Sta. — +2.0% — 193+100 EVC, Elev. 789.65




## ELEVATION
Scale: 1"=20'-0"




## TYPICAL SECTION
Scale: 1"=10'-0"




## PLAN
Scale: 1"=20'-0"

## INDEX TO PLANS


| SHEET NO. | TITLE |
|---|---|
| 1. | General Plan |
| 2. | Grid Grades |
| 3. | Foundation Plan |
| 4. | Abutment Layout |
| 5. | Abutment Details |
| 6. | Typical Section |
| 7. | Girder Layout |
| 8. | Barrier Railing Type 9 |
| 9. | Bridge Approach Guard Railing Type 8 (Layout) |
| 10. | Bridge Approach Guard Railing Type 8 (Details) |
| 11. | Log of Test Borings |


Standard Plans dated February, 1968

| | |
|---|---|
| A62-B.2 | Excavation & Backfill Bridges and Walls |
| B3-1 | Retaining Wall-Type 1 H=4'-30' |
| B3-8 | Retaining Wall Details No. 1 |
| B7-1 | Box Girder Details No. 1 |
| B11-30 | Temporary Railings |
| B11-43 | Barrier Railing Details For Types 9, 10, 11 & 12 |

APPROXIMATE QUANTITIES

| | |
|---|---|
| TEMPORARY RAILING (PORTABLE) | 12 EA |
| 2" SUPPLY LINE (BRIDGE) | 172 LF |
| PRESTRESSING CIP CONCRETE | LUMP SUM |
| WATERSTOPS | 190 LF |
| STRIP WATERSTOPS | 414 LF |
| CONTRAST TREATMENT | 585 SY |
| BR APPR GUARD RAILING (TYPE 8) | 49 LF |
| BARRIER RAILING (TYPE 9) | 658 LF |
| REMOVE PORTIONS OF BRIDGE | LUMP SUM |

FINAL QUANTITIES

| | |
|---|---|
| STRUCTURE EXCAVATION (BRIDGE) | 1,010 CY |
| STRUCTURE BACKFILL (BRIDGE) | 995 CY |
| PERVIOUS BACKFILL MATERIAL | 135 CY |
| CLASS "A" CONCRETE (BRIDGE) | 675 CY |
| CIP PRESTRESSED CONCRETE (3500 PSI.) | 990 CY |
| BAR REINFORCING STEEL (BRIDGE) | 222,000 LBS |

AS BUILT
CORRECTIONS BY P.J. Hixson 4 11/72
CONTRACT NO. 07-012414
DATE

AS BUILT PLANS
Contract No. 07-012414
Date Completed 10-72
Document No. 6029

NOTE
① = Point Br. No "53-2051", year constructed, and "SAN JOSE F.C. CHANNEL".
▨ ; Indicates contrast treatment

FOR GENERAL NOTES SEE "Foundation Plan"

LIVE LOADING HS20-44 AND ALTERNATIVE

BRIDGE DEPARTMENT — DESIGN SECTION 5
Section Supervisor: M.B. Oliver
Project Engineer: David K. H. Murray

| | | | |
|---|---|---|---|
| DESIGN | By DAVE MOY | Checked | J. E. Sickle 2-68 |
| DETAILS | By LEONARD TEE 4/67 | Checked | J. E. Sickle 2-68 |
| LAYOUT | By Dave Moy | Checked | J. E. Sickle 2-68 |
| QUANTITIES | By G.N. STEVENSON 4/68 | Checked | C.P. BARDUES 4/68 |
| SPECIFICATIONS | By Bates 4/68 | Field and Bridge Engineer | Brown 4/68 |

Approval Recommended by: M. J. Overland, Bridge Engineer — Registered Civil Engr. License No. 7869

STATE OF CALIFORNIA
HIGHWAY TRANSPORTATION AGENCY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

# SAN JOSE F.C. CHANNEL BRIDGE

LOCATED AT THE CROSSING OF WEST HOLT AVE. OVER SAN JOSE WASH BR. NO. 53-107 IN THE CITY OF POMONA IN LOS ANGELES COUNTY.

## GENERAL PLAN

| BRIDGE NO. | POST MILE | DRAWING NO. | SHEET | OF |
|---|---|---|---|---|
| 53-2051 | 0.4 | 532051-1 | 1 | 11 |

WO 012411
CU 07212

Disregard prints bearing earlier revision dates →

REVISION DATES (PRELIMINARY STAGE ONLY)

X-6-72 | 8-7-72 | 12-5-72 | 2-7-73 | 5-1-73 | 8-7-73

I HEREBY CERTIFY THAT THIS IS A TRUE AND ACCURATE COPY OF THE ABOVE DOCUMENT TAKEN UNDER MY DIRECTION AND CONTROL ON THIS DATE IN SACRAMENTO, CALIFORNIA PURSUANT TO AUTHORIZATION BY THE DIRECTOR OF TRANSPORTATION.

DATE 10/26/73 SIGNATURE James E. Cichocki TITLE Writer

MICROFILM – STATE OF CALIFORNIA – DEPARTMENT OF PUBLIC WORKS – MICROFILM

ClibPDF - www.fastio.com

| DIST. | COUNTY | ROUTE | POST MILES—TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 71 | R0.0/1.2 | 508 | 602 |

M.B. O'Hara
DESIGN SECTION SUPERVISOR — REGISTERED CIVIL ENGINEER NO. 8200
DATE APPROVED January 6, 1969

No AS BUILT
CORRECTIONS BY P.J. HIXSON 4/11/72
CONTRACT NO. 07-012414
DATE

Note: Elevations are figured @ 10' station along ℄ Rte. 71
These elevations do not include camber.

AS BUILT PLANS
Contract No. 07-012414
Date Completed 10-72
Document No. 6029

BRIDGE DEPARTMENT
DESIGN SECTION 5
Project Engineer Dave Hoy
DESIGN: Dave Hoy
Checked J E Siebels 3-68
DETAILS: By F. Yee 3-68
Checked J E Siebels 3-68
QUANTITIES: By G.H.S. 5-68
Checked C.P.B. 5-68

STATE OF CALIFORNIA
TRANSPORTATION AGENCY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

SAN JOSE F.C. CHANNEL BRIDGE

GRID GRADES

BRIDGE NO. 53-2051 | POST MILE 0.4 | DRAWING NO. 532051-7 | SHEET 2 OF 11

Disregard prints bearing earlier revision dates

REVISION DATES (PRELIMINARY STAGE ONLY)

WO
CU

506

I HEREBY CERTIFY THAT THIS IS A TRUE AND ACCURATE COPY OF THE ABOVE DOCUMENT TAKEN UNDER MY DIRECTION AND CONTROL ON THIS DATE IN SACRAMENTO, CALIFORNIA PURSUANT TO AUTHORIZATION BY THE DIRECTOR OF TRANSPORTATION.

DATE 10/26/73 SIGNATURE [signature] TITLE SK KING

ClibPDF - www.fastio.com

| DIST. | COUNTY | ROUTE | POST MILES—TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 71 | R0.0/1.2 | 509 | 602 |

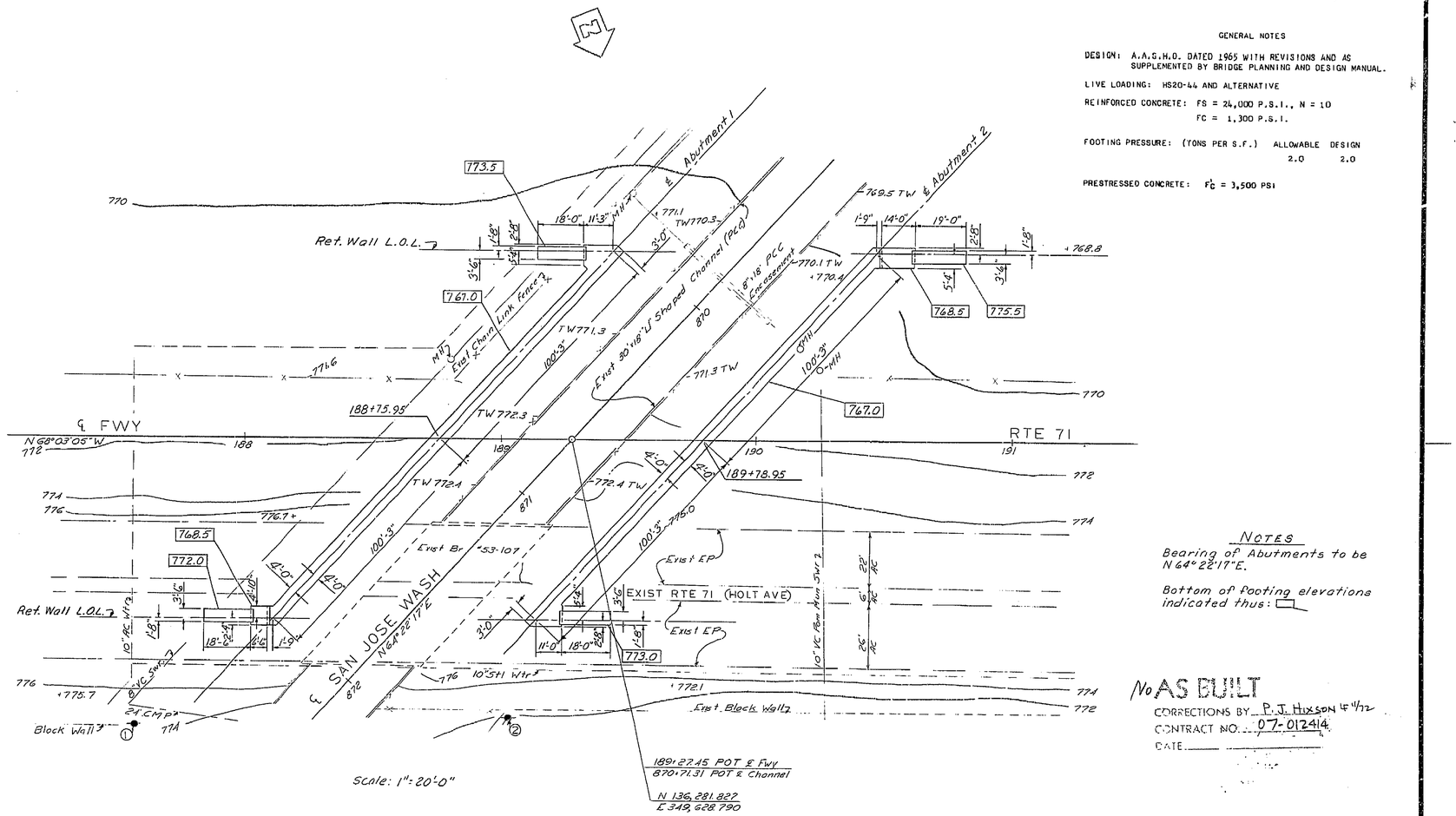
DESIGN EL. ...ION ENGINEER — P.E. 24... REGISTERED CIVIL ENGINEER No. #200

DATE APPROVED January 6, 1969

## UTILITIES

① PP" 10423456 E
1 Guy Wire NW to E elev 786
1 Guy Wire NW to SE to E elev 796
3 Wires NW to SE to E elev 816

② PP No Number
1 Guy Wire SE to E elev 792
Tel Cable NW to NE to E elev 798
1 Guy Wire NW to E elev 802
3 Wires NW to E elev 802
3 Wires NE to E elev 809
3 Wires NW to SE to E elev 812




Scale: 1"=20'-0"

## GENERAL NOTES

DESIGN: A.A.S.H.O. DATED 1965 WITH REVISIONS AND AS SUPPLEMENTED BY BRIDGE PLANNING AND DESIGN MANUAL.

LIVE LOADING: HS20-44 AND ALTERNATIVE

REINFORCED CONCRETE: FS = 24,000 P.S.I., N = 10
FC = 1,300 P.S.I.

FOOTING PRESSURE: (TONS PER S.F.) ALLOWABLE 2.0 DESIGN 2.0

PRESTRESSED CONCRETE: $F'_C$ = 3,500 PSI

## NOTES

Bearing of Abutments to be N 64° 22' 17" E.

Bottom of footing elevations indicated thus: □

No AS BUILT
CORRECTIONS BY P. J. Hixson 4-4-72
CONTRACT NO. 07-012414
DATE

AS BUILT PLANS
Contract No. 07-012414
Date Completed 10-72
Document No. 6029

## BENCH MARKS

BM# 17-21 Elev 768.31
Fd std ca. sur. mon "BM 17-21 1952 RE 63" in well, 11" dn on the approx ℄ Rosecrans St 130 south of Holt Ave (LACo "17-21-1963)

BM# 16-F-65 Elev 766.5±
Set chis knob in west curb of Rosecrans St; 200' north of ℄ Valley Blvd

Note: + Denotes spot elevations
TW Denotes top of wall elevations

CONTOURS CHECKED & VERIFIED IN FIELD
Date 6-21-66
Rpt. P.H. B.

| | DRAWN | CHECKED |
|---|---|---|
| DATE | 8-1-67 | 8-11-67 |
| By | L. Kolbus | D. H. M. M. |

| BRIDGE DEPARTMENT DESIGN SECTION | | | STATE OF CALIFORNIA DEPARTMENT OF PUBLIC WORKS DIVISION OF HIGHWAYS |
|---|---|---|---|
| Project Engineer Dave Hung | | | SAN JOSE F C CHANNEL BRIDGE |
| DESIGN | By Dave Hung | | FOUNDATION PLAN |
| | Checked T. E. Sachs | 2-68 | |
| DETAILS | By LEONARD YEE | 8/67 | |
| | Checked W. S. Sachs | 2-68 | |
| QUANTITIES | By G H S | 5-67 | BRIDGE NO. 53-2051 POST MILE 0.1 DRAWING NO. 53 2051 - 2 SHEET 3 OF 11 |
| | Checked C P B | 5-67 | |

Disregard prints bearing earlier revision dates

REVISION DATES (PRELIMINARY STAGE ONLY): 7/24, 8/1/71, 9/1/71

WO
CU

I HEREBY CERTIFY THAT THIS IS A TRUE AND ACCURATE COPY OF THE ABOVE DOCUMENT TAKEN UNDER MY DIRECTION AND CONTROL ON THIS DATE IN SACRAMENTO, CALIFORNIA PURSUANT TO AUTHORIZATION BY THE DIRECTOR OF TRANSPORTATION.

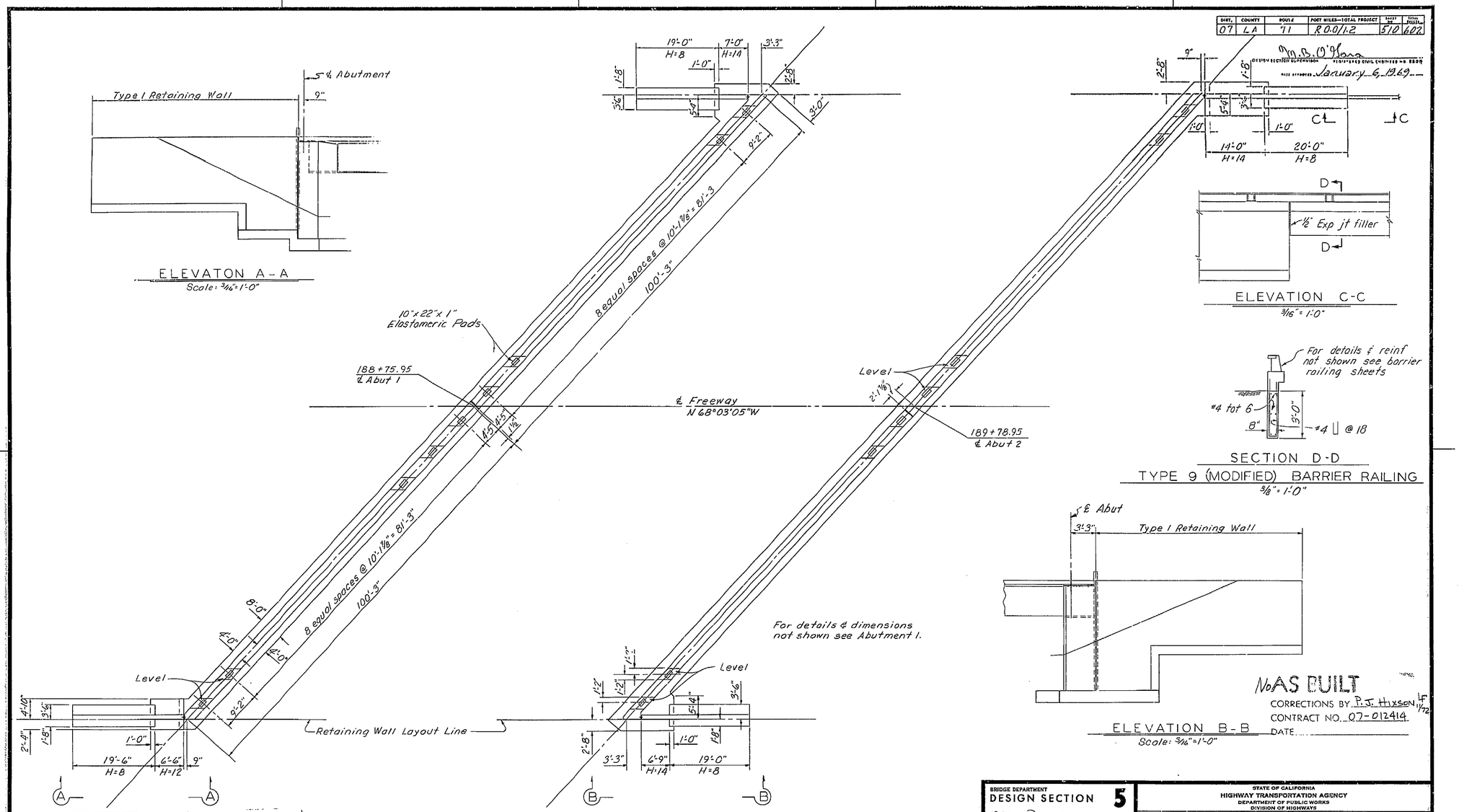
DATE 10/26/73 SIGNATURE [illegible] TITLE SR. ENGR

ClibPDF - www.fastio.com



SCALE 1" = 50' MICROFILM - STATE OF CALIFORNIA - DEPARTMENT OF PUBLIC WORKS - MICROFILM

| DIST. | COUNTY | ROUTE | POST MILES—TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 71 | R0.0/1.2 | 510 | 602 |




No AS BUILT
CORRECTIONS BY P.J. Hixson LF 11/72
CONTRACT NO. 07-012414
DATE

AS BUILT PLANS
Contract No. 07-012414
Date Completed 10-72
Document No. 6029

BRIDGE DEPARTMENT
DESIGN SECTION 5
Project Engineer Dave Hoey

| | | |
|---|---|---|
| DESIGN | By Dave Hoey | |
| | Checked J. E. Seebeler | 2-68 |
| DETAILS | By Leonard Yee | 9/67 |
| | Checked J. E. Seebeler | 2-68 |
| QUANTITIES | By G.H.S. | 5-68 |
| | Checked C.P.B. | 5-68 |

STATE OF CALIFORNIA
HIGHWAY TRANSPORTATION AGENCY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

SAN JOSE F C CHANNEL BRIDGE

ABUTMENT LAYOUT

| BRIDGE NO. | POST MILE | DRAWING NO. | SHEET | OF |
|---|---|---|---|---|
| 53-2051 | 0.4 | 53 2051-3 | 4 | 11 |

REVISION DATES (PRELIMINARY STAGE ONLY)
Disregard prints bearing earlier revision dates → 8/21

WO
CU

THE HEBY CERTIFY THAT THIS IS A TRUE AND ACCURATE COPY OF THE ABOVE DOCUMENT TAKEN UNDER MY DIRECTION AND CONTROL ON THIS DATE IN SACRAMENTO, CALIFORNIA PURSUANT TO AUTHORIZATION BY THE DIRECTOR OF TRANSPORTATION.

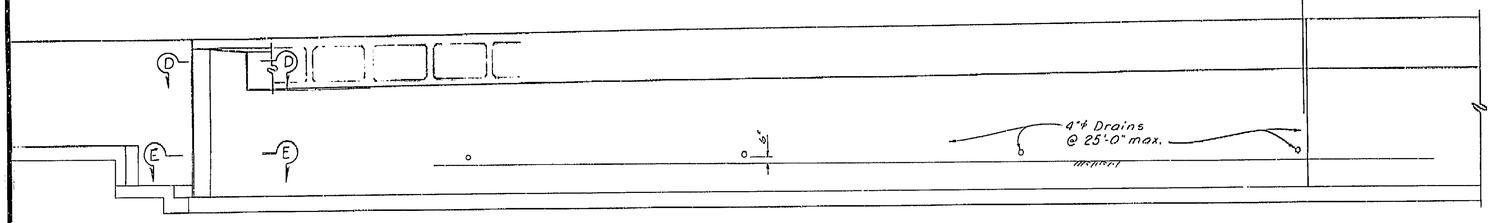
DATE 10/26/73 SIGNATURE [signature] TITLE SR. KING

ClibPDF - www.fastio.com

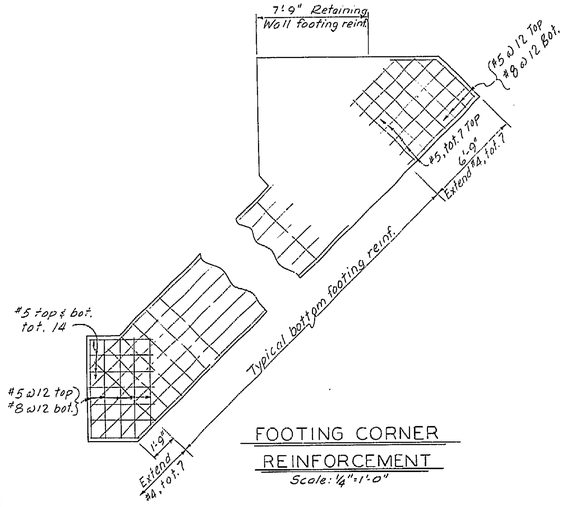
| DIST. | COUNTY | ROUTE | POST MILES—TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 71 | R0.0/12 | 511 | 602 |

DESIGN SECTION SUPERVISOR — REGISTERED CIVIL ENGINEER NO. 6200

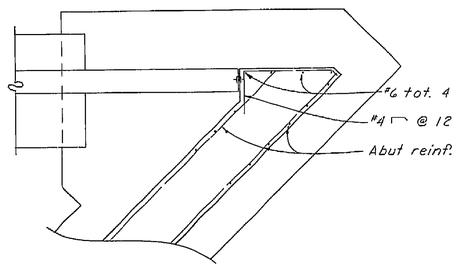
DATE APPROVED January 6, 1969

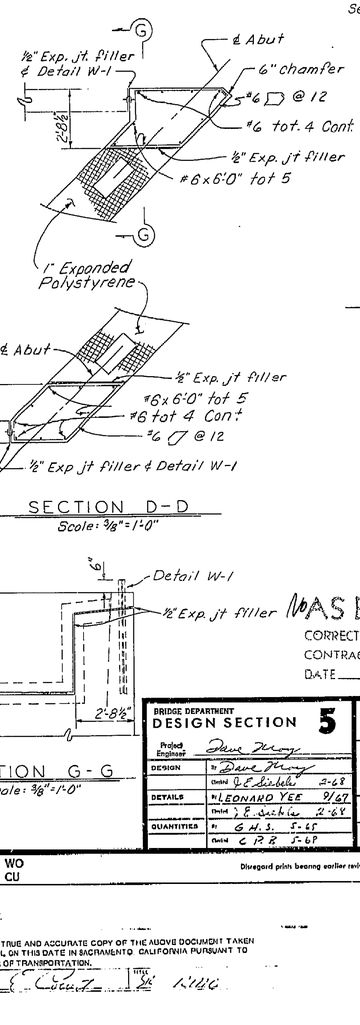



ELEVATION
Scale: 3/16"=1'-0"

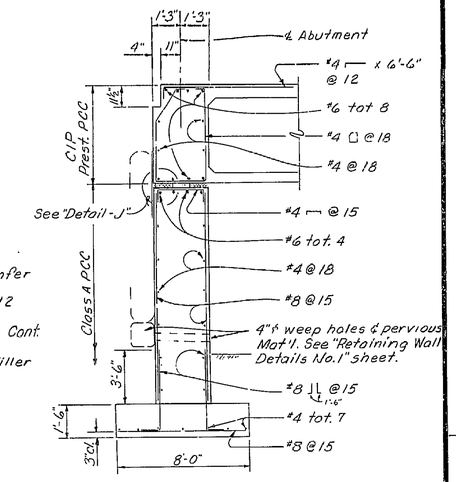



FOOTING CORNER REINFORCEMENT
Scale: 1/4"=1'-0"

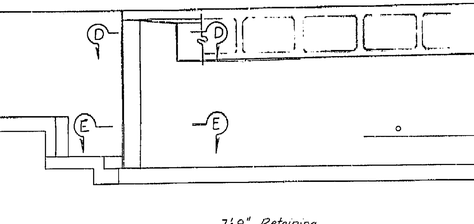


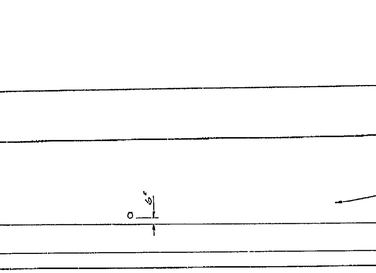

SECTION D-D
Scale: 3/8"=1'-0"



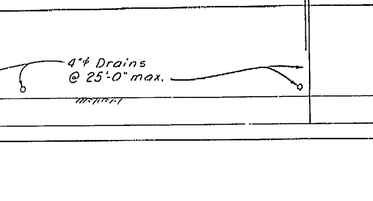

ABUTMENT SECTION
Scale: 3/8"=1'-0"



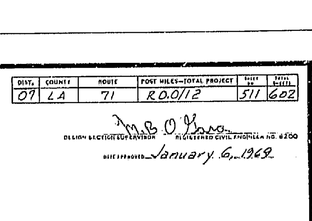

SECTION NEAR ℄ FREEWAY
No Scale




SECTION E-E
Scale: 3/8"=1'-0"




SECTION G-G
Scale: 3/8"=1'-0"




DETAIL - J
No Scale

AS BUILT
CORRECTIONS BY P.J. Hixson 4-1-72
CONTRACT NO. 07-012914
DATE

| BRIDGE DEPARTMENT DESIGN SECTION 5 | | |
|---|---|---|
| Project Engineer | Dave Hung | |
| DESIGN | By Dave Hung | |
| | Checked D.E. Sinclair 2-68 | |
| DETAILS | By LEONARD YEE 9/67 | |
| | Checked D.E. Sinclair 2-68 | |
| QUANTITIES | By G.H.S. 5-68 | |
| | Checked C.R.B. 5-68 | |

STATE OF CALIFORNIA
TRANSPORTATION AGENCY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

SAN JOSE FC CHANNEL BRIDGE

ABUTMENT DETAILS

| BRIDGE NO. | POST MILE | DRAWING NO. | SHEET | OF |
|---|---|---|---|---|
| 53-2051 | 0.4 | 58207-4 | 5 | 11 |

REVISIONS DATED (PRELIMINARY STAGE ONLY)
11/15/67 | 3/4/68 X 8/21

Disregard prints bearing earlier revision dates →

WO
CU

511

AS BUILT PLANS
Contract No. 07-012414
Date Completed 10-72
Document No. 6029

I HEREBY CERTIFY THAT THIS IS A TRUE AND ACCURATE COPY OF THE ABOVE DOCUMENT TAKEN UNDER MY DIRECTION AND CONTROL ON THIS DATE IN SACRAMENTO, CALIFORNIA PURSUANT TO AUTHORIZATION BY THE DIRECTOR OF TRANSPORTATION.

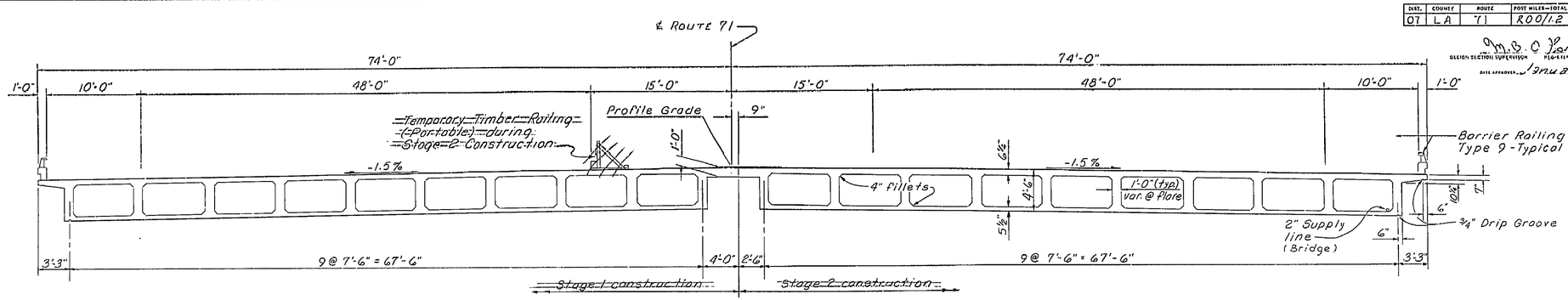
DATE 10/26/73 SIGNATURE [signature] TITLE [illegible]

ClibPDF - www.fastio.com

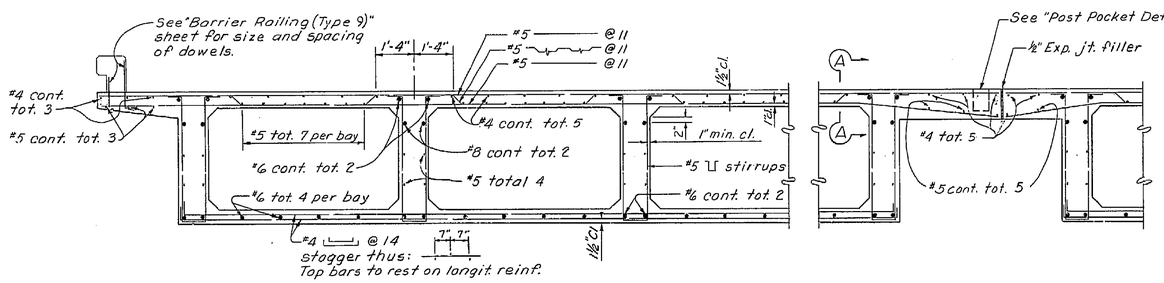
| DIST. | COUNTY | ROUTE | POST MILES—TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 71 | R00/1.2 | 512 | 602 |

DESIGN SECTION SUPERVISOR — REGISTERED CIVIL ENGINEER NO. 8200

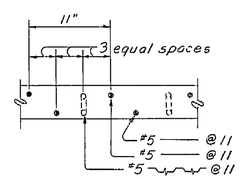
DATE APPROVED January 6, 1969



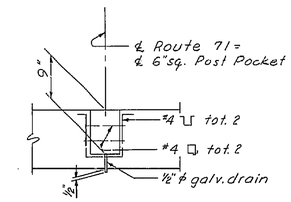

TYPICAL SECTION
Scale: 3/16" = 1'-0"



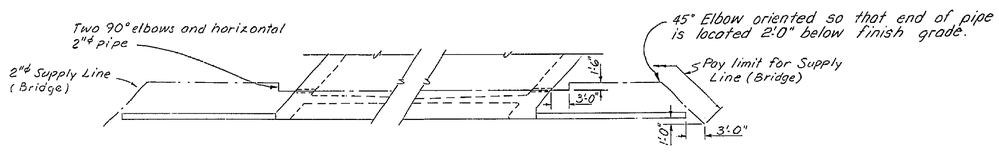

PART SECTION
Scale: 1/2" = 1'-0"




SECTION A - A




POST POCKET DETAIL
Scale: None




PART PLAN - SUPPLY LINE (BRIDGE)
Scale: 1" = 10'-0"

Note: Place 6"ϕ openings thru diaphragm and abutments. Seal opening at abutments after structure has been stressed.

AS BUILT
CORRECTIONS BY P.J. Hixson 4/11/72
CONTRACT NO. 07-012414
DATE

AS BUILT PLANS
Contract No. 07-012414
Date Completed 10-72
Document No. 6029

BRIDGE DEPARTMENT
DESIGN SECTION 5
Project Engineer Dave Hoey

| | | |
|---|---|---|
| DESIGN | By Dave Hoey | |
| | Checked F. E. Sickels | 2-68 |
| DETAILS | By LEONARD YEE | 8/67 |
| | Checked F. E. Sickels | 2-68 |
| QUANTITIES | By G. H. S. | 5-68 |
| | Checked C. P. B. | 5-68 |

STATE OF CALIFORNIA
TRANSPORTATION AGENCY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

SAN JOSE FC CHANNEL BRIDGE

TYPICAL SECTION

| BRIDGE NO. | POST MILE | DRAWING NO. | SHEET | OF |
|---|---|---|---|---|
| 53-2051 | 0.4 | 53 2051-5 | 6 | 11 |

Disregard prints bearing earlier revision dates

REVISION DATES (PRELIMINARY STAGE ONLY)

WO
CU

I HEREBY CERTIFY THAT THIS IS A TRUE AND ACCURATE COPY OF THE ABOVE DOCUMENT TAKEN UNDER MY DIRECTION AND CONTROL ON THIS DATE IN SACRAMENTO, CALIFORNIA PURSUANT TO AUTHORIZATION BY THE DIRECTOR OF TRANSPORTATION.

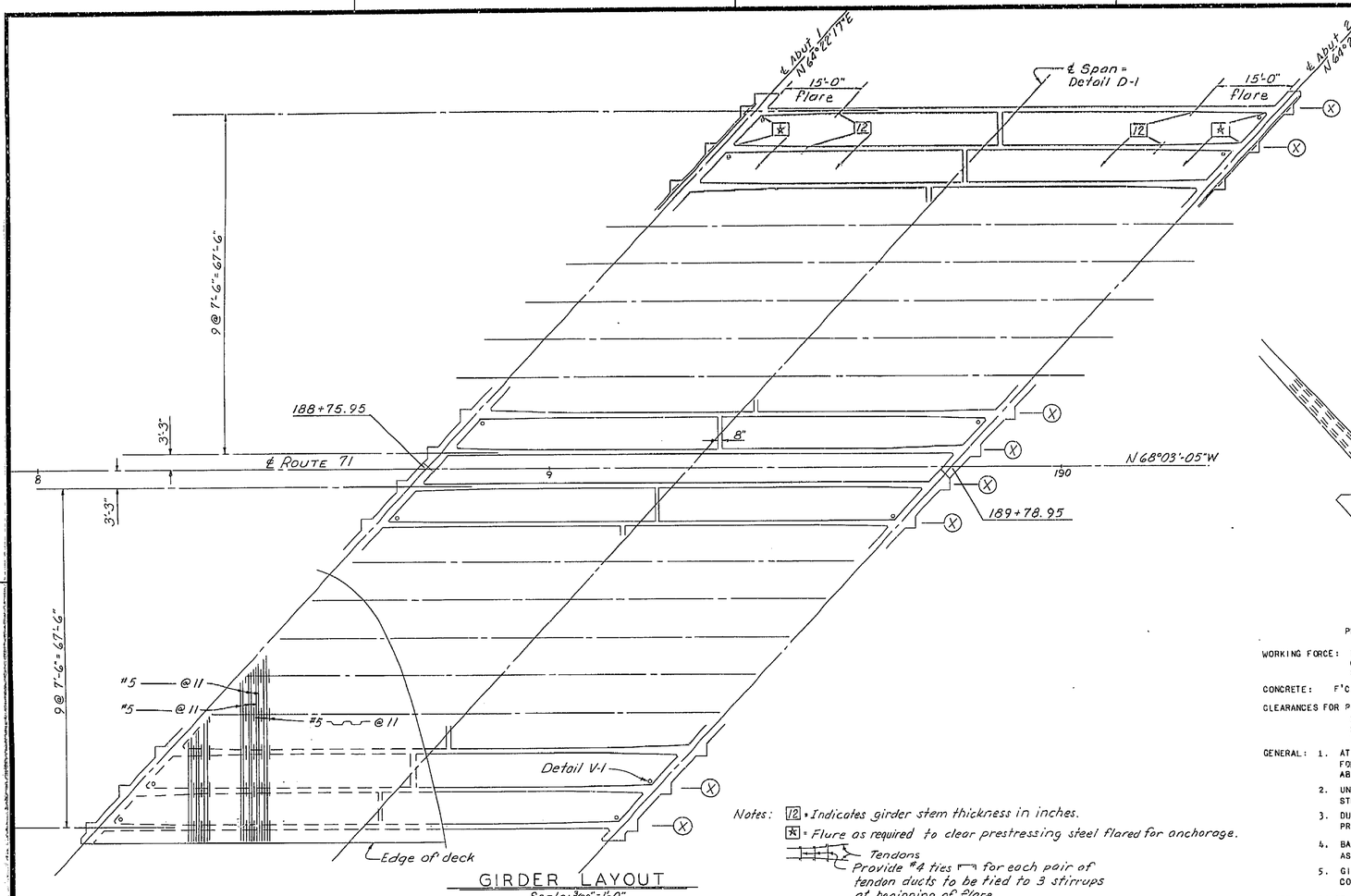
DATE 10/26/73 SIGNATURE Amer E. Cornet TITLE

512

ClibPDF - www.fastio.com

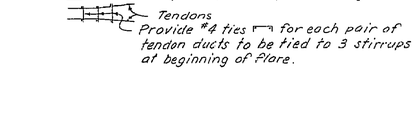
| DIST. | COUNTY | ROUTE | POST MILES—TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 71 | R00/12 | 513 | 602 |

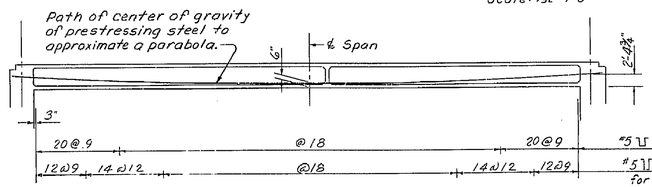
R.B. O'Hara
REGISTERED CIVIL ENGINEER NO. 8705
DATE APPROVED January 6, 1969



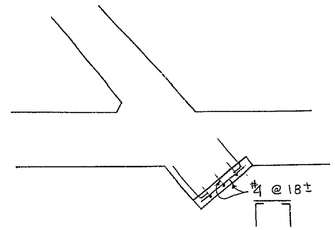

GIRDER LAYOUT
Scale: 3/32" = 1'-0"

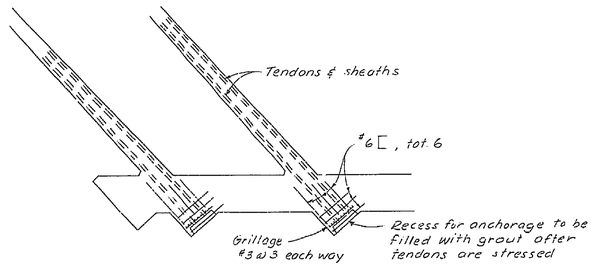
Notes: 12 = Indicates girder stem thickness in inches.
* = Flare as required to clear prestressing steel flared for anchorage.




LONGITUDINAL SECTION
Scale: 3/32" = 1'-0"




PART PLAN
No Scale

PRESTRESSING NOTES

WORKING FORCE: THE TOTAL FORCE PER BRIDGE AT ℄ SPAN REMAINING AFTER LOSSES, INCLUDING THOSE DUE TO CREEP AND SHRINKAGE OF CONCRETE AND CREEP OF STEEL HAVE OCCURRED SHALL EQUAL 21,400,000 LBS TOTAL FOR BRIDGE.

CONCRETE: F'c = 3,500 PSI @ 28 DAYS; F'ci = 3,500 PSI @ TIME OF STRESSING

CLEARANCES FOR POST-TENSIONED UNITS:
1. HORIZONTAL CLEARANCE BETWEEN UNITS = 2 1/2" MIN.
2. UNITS MAY BE BUNDLED VERTICALLY IN GROUPS OF 3 MAX.
3. VERTICAL CLEARANCE BETWEEN BUNDLED UNITS = 3" MIN.

GENERAL:
1. AT THE CONTRACTOR'S OPTION THE PRESTRESSING FORCE MAY VARY ± 5% FROM THE THEORETICAL FORCE PER GIRDER PROVIDED THE TOTAL FORCE IS OBTAINED AND IS DISTRIBUTED SYMMETRICALLY ABOUT THE ℄ OF THE TYPICAL SECTION.
2. UNITS ARE TO BE TENSIONED A FEW AT A TIME IN EACH GIRDER TO MINIMIZE STRESS DIFFERENTIALS. STRESSING SEQUENCE SUBJECT TO APPROVAL OF THE ENGINEER.
3. DURING STRESSING OPERATIONS, THE ELONGATION SHALL BE CONTINUOUSLY COMPARED WITH GAGE PRESSURE TO CHECK AGAINST TENDON BLOCKAGE AND EXCESSIVE FRICTION.
4. BAR REINFORCEMENT INTERFERING WITH THE PRESTRESSING TENDON ALIGNMENT SHALL BE ADJUSTED AS DIRECTED BY THE ENGINEER.
5. GIRDER STEMS SHALL BE FLARED AS NECESSARY NEAR ANCHORAGE TO PROVIDE A MINIMUM OF 2" CONCRETE COVERING THE DUCTS.

CAMBER: TO BE CAST PARABOLIC WITH CAMBER AT ℄ SPAN = 1/2" ABOVE PROFILE GRADE.

AS BUILT
CORRECTIONS BY P. J. Hixson 4 '72
CONTRACT NO. 07-012414
DATE

AS BUILT PLANS
Contract No. 07-012414
Date Completed 10-72
Document No. 6029

| BRIDGE DEPARTMENT DESIGN SECTION 5 | | |
|---|---|---|
| Project Engineer: Dave Zung | | |
| DESIGN | By Dave Zung | |
| | Checked F. E. Siebels | 2-68 |
| DETAILS | By LEONARD YEE | 8/67 |
| | Checked D. E. Siebels | 2-68 |
| QUANTITIES | By G.H.S. | 5-68 |
| | Checked C.P.B. | 5-68 |

STATE OF CALIFORNIA
HIGHWAY TRANSPORTATION AGENCY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

SAN JOSE F.C. CHANNEL BRIDGE

GIRDER LAYOUT

| BRIDGE NO. | POST MILE | DRAWING NO. | SHEET | OF |
|---|---|---|---|---|
| 53-2051 | 0.4 | 53 20 51-6 | 7 | 11 |

REVISION DATES (PRELIMINARY STAGE ONLY)
4/4/69 | 7/X | 8/21

Disregard prints bearing earlier revision dates →

WO
CU

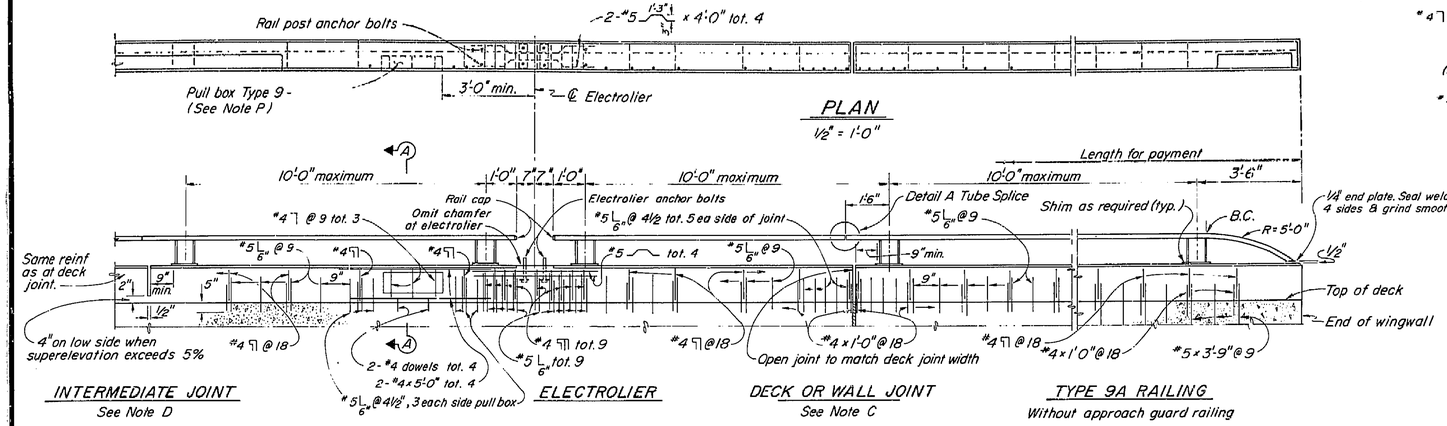
513

I HEREBY CERTIFY THAT THIS IS A TRUE AND ACCURATE COPY OF THE ABOVE DOCUMENT TAKEN UNDER MY DIRECTION AND CONTROL ON THIS DATE IN SACRAMENTO, CALIFORNIA PURSUANT TO AUTHORIZATION BY THE DIRECTOR OF TRANSPORTATION.
DATE 10/26/73 SIGNATURE [illegible] TITLE [illegible]

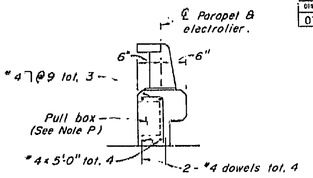
MICROFILM - STATE OF CALIFORNIA - DEPARTMENT OF PUBLIC WORKS - MICROFILM
SCALE 1"= 50'
SCALE 1"= 20'
ClibPDF - www.fastio.com

| DIST. | COUNTY | ROUTE | POST MILES—TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 71 | R0.0/1.2 | 514 | 602 |

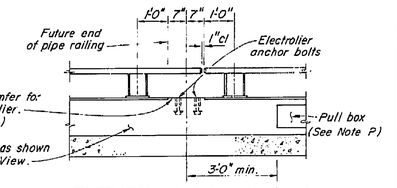
DATE APPROVED: January. 6, 1969



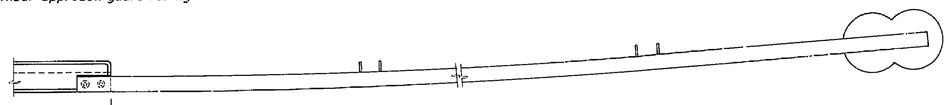

## PLAN
½" = 1'-0"



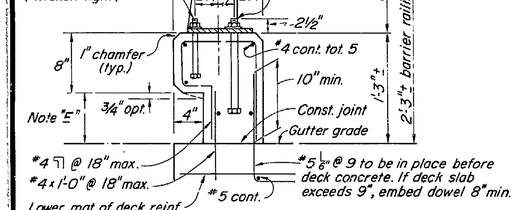

## SECTION A-A
¾" = 1'-0"



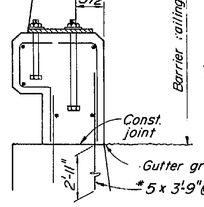

## FUTURE ELECTROLIER
½" = 1'-0"




## TYPE 9A RAILING
With Bridge Approach Guard Railing

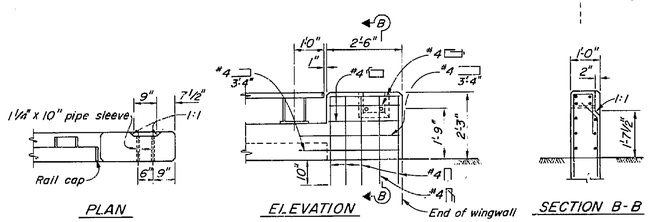



## TYPE 9
Conc. : 1.05 cu. ft. per lineal foot.
Reinforcing : 8.7 lbs. per lineal foot.




## TYPE 9A
Conc. : 1.05 cu. ft. per lineal foot.
Reinf : 10.5 lbs. per lineal foot.

Type 9A details are similar to Type 9 except as noted.




## METAL BEAM GUARD RAIL ANCHORAGE
½" = 1'-0"

Note : For Metal Beam Guard Rail connection details see STANDARD PLANS.

A. Tubing shall be bent to fit horizontal curve when radius is less than 950'.
B. Posts shall be normal to railing.
C. Tube splice shall be located in the tube spanning deck joints. Increase joint width in tube to match deck opening and increase sleeve length correspondingly.
D. Open intermediate joints in concrete shall be located at ℄ piers, abutments or bents and at uniform spacing (40'-0" max.)
E. Dimensions will vary with cross slope.
F. Construct 3" deep x 12" wide overflow scupper 2" above deck at low points in grade.
G. Walls are to be backfilled before railing is placed.
H. Clearance to reinforcing steel in curb and railing to be 1". Longitudinal reinforcement to stop at all joints.
J. High strength rods threaded both ends with 2 nuts and washers (all galv.) may be substituted for high strength anchor bolts.
K. Torque rail to post nuts to 175 ft. lbs.
L. Tubing shall be continuous over not less than 2 intermediate posts, with a minimum length of 2 panels, except as noted.
M. All exposed corners shall be ground smooth.
N. Galvanize rail assembly after fabrication.
O. Locate pull box near mid-point between posts, but not in same panel as deck joints or electroliers
P. Reinforcement is shown for Type 9 pull box. If Type 9A pull box is to be used refer to "Type 9A Pull Box" sheet.

STANDARD DRAWING
Nov. 1968 ADOPTED
DESIGN DETAILS CHECKED

No AS BUILT
CORRECTIONS BY P.J. Hixson 4F 11/72
CONTRACT NO. 07-012414
DATE

5/68 — STATE OF CALIFORNIA TRANSPORTATION AGENCY DEPARTMENT OF PUBLIC WORKS DIVISION OF HIGHWAYS — XS-9-84

SAN JOSE F.C. CHANNEL BRIDGE

BARRIER RAILING TYPE 9 SHEET 1

| BRIDGE NO. | POST MILE | DRAWING NO. | SHEET | OF |
|---|---|---|---|---|
| 53-2051 | 0.4 | 53205-9 | 8 | 11 |

WO
CU
Disregard prints bearing earlier revision dates

REVISION DATES

AS BUILT PLANS
Contract No. 07-012414
Date Completed 10-72
Document No. 6029

I HEREBY CERTIFY THAT THIS IS A TRUE AND ACCURATE COPY OF THE ABOVE DOCUMENT TAKEN UNDER MY DIRECTION AND CONTROL ON THIS DATE IN SACRAMENTO, CALIFORNIA PURSUANT TO AUTHORIZATION BY THE DIRECTOR OF TRANSPORTATION.
DATE 10/26/73 SIGNATURE [illegible] TITLE [illegible]

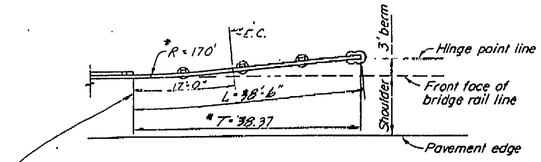
MICROFILM - STATE OF CALIFORNIA - DEPARTMENT OF PUBLIC WORKS - MICROFILM

ClibPDF - www.fastio.com

| DIST. | COUNTY | ROUTE | POST MILES—TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 71 | R0.0/1.2 | 515 | 602 |

BY JOE FAUNCE — TRAFFIC ENGINEER — FILE 1165

DATE APPROVED January 6, 1969

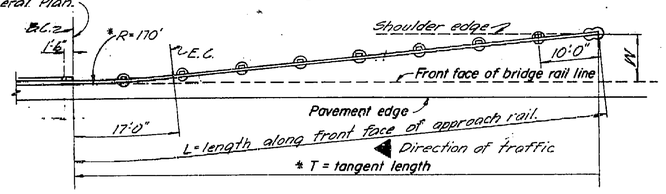



| TYPE 1 FLARE | | |
|---|---|---|
| L | * T | W |
| 38'-6" | 38.36 | 3' |
| 48'-6" | 48.31 | 4' |
| 58'-6" | 58.26 | 5' |
| 68'-6" | 68.21 | 6' |
| 78'-6" | 78.16 | 7' |
| 88'-6" | 88.11 | 8' |

Begin flare @ end of wingwall or as shown on General Plan.

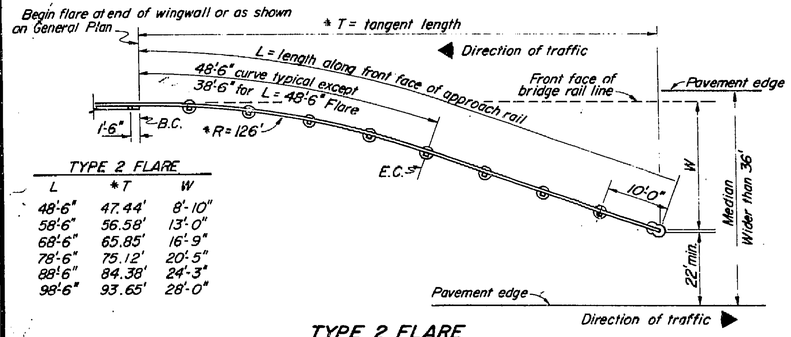
## TYPE 1 FLARE

Full shoulder width on bridge




## TYPE 1 FLARE

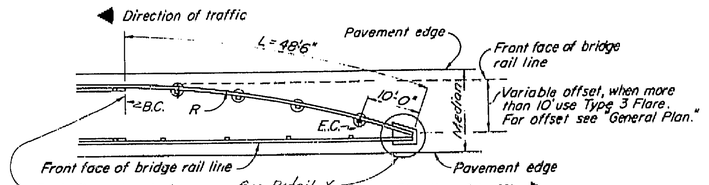
Reduced shoulder width on bridge (right or left)




| TYPE 2 FLARE | | |
|---|---|---|
| L | * T | W |
| 48'-6" | 47.44' | 8'-10" |
| 58'-6" | 56.58' | 13'-0" |
| 68'-6" | 65.85' | 16'-9" |
| 78'-6" | 75.12' | 20'-5" |
| 88'-6" | 84.38' | 24'-3" |
| 98'-6" | 93.65' | 28'-0" |

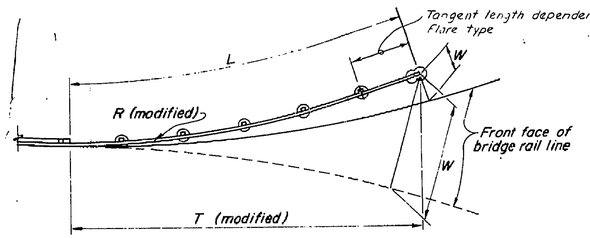
## TYPE 2 FLARE

Approach rail in median



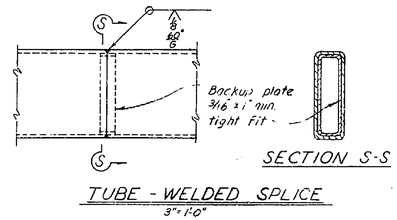

## TYPE 4 FLARE

Approach rail in median




## FLARE LAYOUT ON CURVED ROADWAY

Note : W is radial to front face of bridge rail line
Railing shown for roadway curve to left



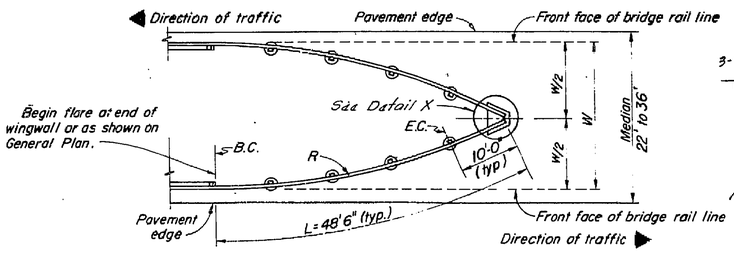

SECTION S-S

TUBE - WELDED SPLICE

3" = 1'-0"

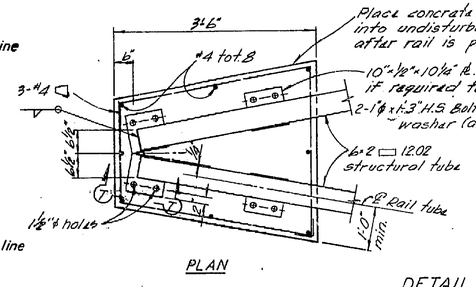
Notes :

A. Tubing shall be shop bent or fabricated to fit horizontal curves of less than 950' radius.
B. Posts shall be vertical and spaced at 10'-0" c.c. max.
C. Top of rail elevations to be determined by the Engineer unless shown on the plans.
D. Torque rail to post nuts to 175 ft. lbs.
E. No more than one tube splice per panel is permitted.
F. All exposed edges shall be ground smooth.
G. Galvanize rail assembly after fabrication.
H. For details not shown see "Barrier Railing" sheet.
J. Front face of bridge rail line is parallel or concentric to pavement edge.
K. Dimensions marked * are valid for tangent roadway alignment only. Modify for curved roadway.
L. R for Type 3 & 4 Flare must be calculated for each offset.




## TYPE 3 FLARE

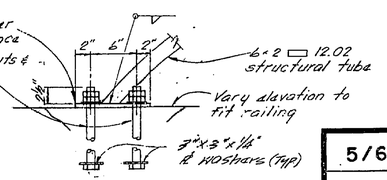
Approach rail in median




PLAN

DETAIL X

No Scale




SECTION T-T

No AS BUILT
CORRECTIONS BY P.J. Hasson 4-11-72
CONTRACT NO. 07-012414
DATE

STANDARD DRAWING

| | | | |
|---|---|---|---|
| Submitted by | | Date | 4-68 |
| DESIGN DETAILS | | Date | 4-68 |
| | | Date | 5-68 |
| Approved for Recommendation | | Date | 5-68 |

STATE OF CALIFORNIA
TRANSPORTATION AGENCY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

5/68 — XS-9-87

SAN JOSE F.C. CHANNEL BRIDGE

BRIDGE APPROACH GUARD RAILING TYPE 8 (LAYOUT)

| BRIDGE NO. | POST MILE | DRAWING NO. | SHEET | OF |
|---|---|---|---|---|
| 55-203T | 0.4 | 53235-9 | 9 | 11 |

REVISION DATES: 5/14/69 11/16/70

WO
CU

Disregard prints bearing earlier revision dates →

AS BUILT PLANS
Contract No. 07-012414
Date Completed 10-72
Document No. 6029

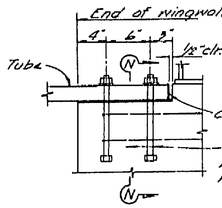
I HEREBY CERTIFY THAT THIS IS A TRUE AND ACCURATE COPY OF THE ABOVE DOCUMENT TAKEN UNDER MY DIRECTION AND CONTROL ON THIS DATE IN SACRAMENTO, CALIFORNIA PURSUANT TO AUTHORIZATION BY THE DIRECTOR OF TRANSPORTATION.

DATE 10/26/73 SIGNATURE [illegible] TITLE M. KING

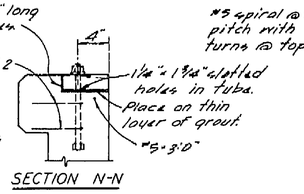
MICROFILM - STATE OF CALIFORNIA - DEPARTMENT OF PUBLIC WORKS - MICROFILM
SCALE 1" = 50'
SCALE 1" = 30'
SCALE 1" = 20'
SCALE 1" = 20'
ClibPDF - www.fastio.com

| DIST. | COUNTY | ROUTE | POST MILES—TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | SCL | 7-1 | R0.0/1.2 | 516 | 602 |

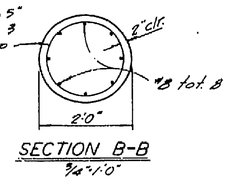
CHIEF ENGINEER — DATE APPROVED: January 6, 1969



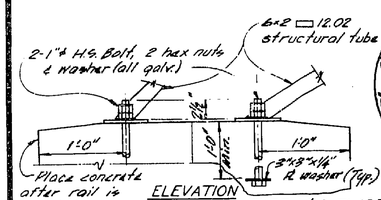

DETAIL B
1½"=1'-0"



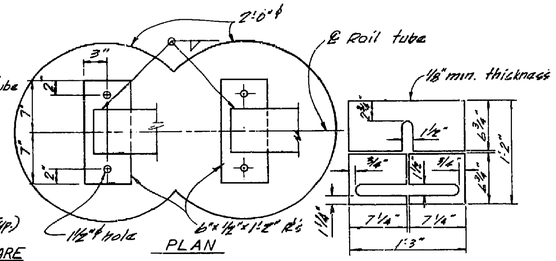

SECTION N-N




SECTION B-B
3/4"=1'-0"



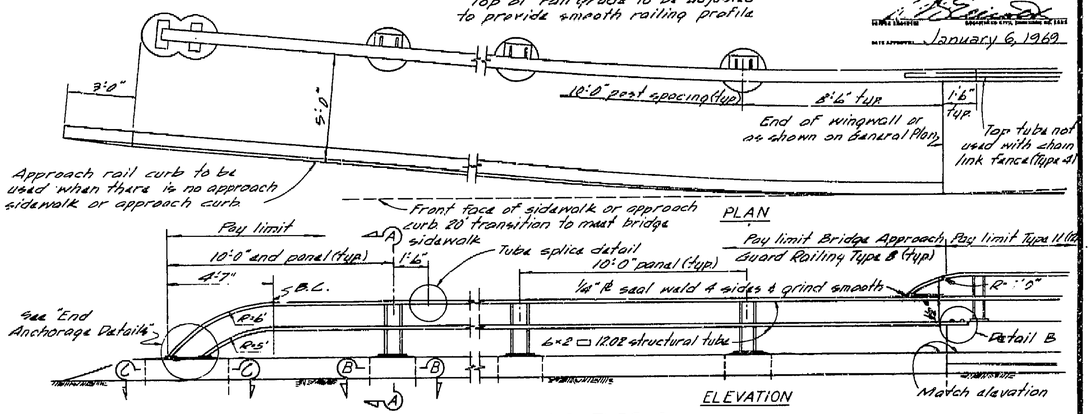

END ANCHORAGE DETAILS
1½"=1'-0"







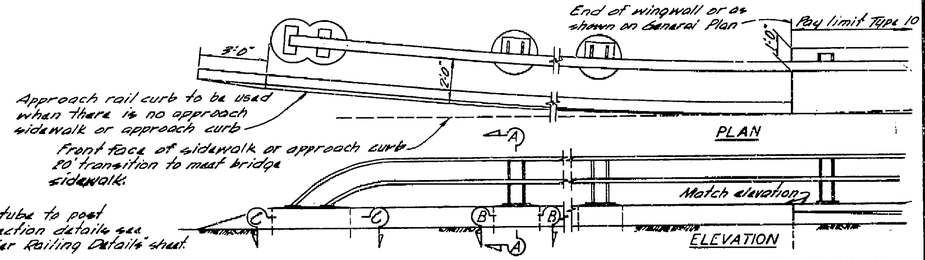
SHIM DETAILS
1½"=1'-0"




PLAN

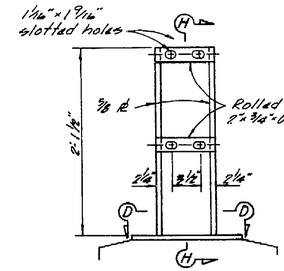
BRIDGE APPROACH GUARD RAILING TYPE 8
⅜"=1'-0"

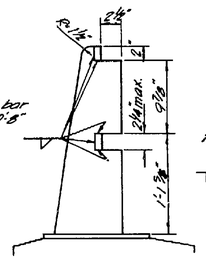
CONNECT TO TYPE 11 (12)



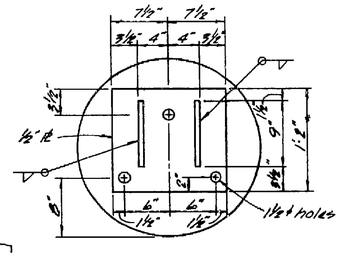

PLAN

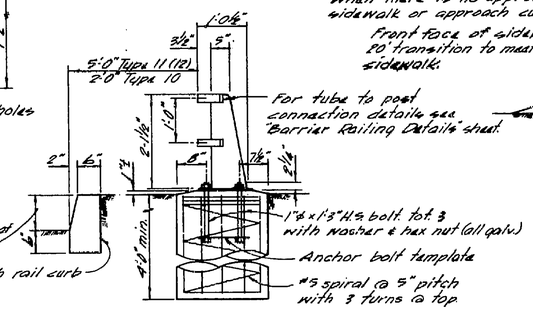
CONNECT TO TYPE 10



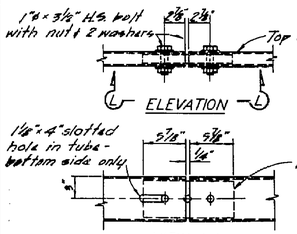



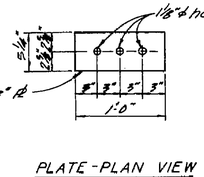

RAIL POST DETAILS
1½"=1'-0"



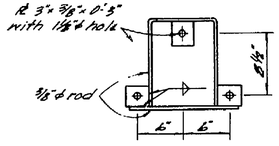




SECTION A-A
3/4"=1'-0"

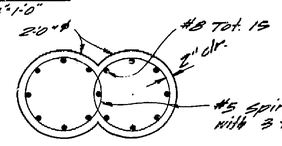



TUBE SPLICE DETAILS
1½"=1'-0"




ANCHOR BOLT TEMPLATE
1½"=1'-0"




SECTION C-C
Scale: 3/4"=1'-0"

NO AS BUILT
CORRECTIONS BY P.J. Hixson LT W/m
CONTRACT NO. 07-017414
DATE

| 5/68 | STATE OF CALIFORNIA TRANSPORTATION AGENCY DEPARTMENT OF PUBLIC WORKS DIVISION OF HIGHWAYS | XS-9-83 |
|---|---|---|

SAN JOSE F.C. CHANNEL BRIDGE

BRIDGE APPROACH GUARD RAILING TYPE 8 (DETAILS)

| BRIDGE NO. 33-2051 | POST MILE 0.4 | DRAWING NO. 33205I-10 | SHEET 10 | OF 11 |
|---|---|---|---|---|

DESIGNED BY — DRAWN — CHECKED — QUANTITY — APPROVED — DATE — (PRELIMINARY STAGE ONLY)

WO
CU

Disregard prints bearing earlier revision dates

AS BUILT PLANS
Contract No. 07-012414
Date Completed 10-72
Document No. 6029

I HEREBY CERTIFY THAT THIS IS A TRUE AND ACCURATE COPY OF THE ABOVE DOCUMENT TAKEN UNDER MY DIRECTION AND CONTROL ON THIS DATE IN SACRAMENTO, CALIFORNIA PURSUANT TO AUTHORIZATION BY THE DIRECTOR OF TRANSPORTATION.

DATE 10/20/72 SIGNATURE [illegible] TITLE Sr. Engr.

MICROFILM – STATE OF CALIFORNIA – DEPARTMENT OF PUBLIC WORKS – MICROFILM

ClibPDF - www.fastio.com

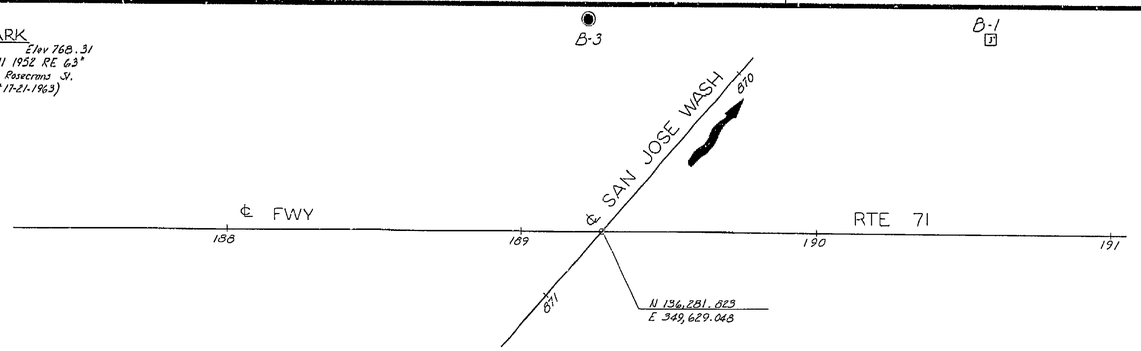
| FED. ROAD DIV. NO. | STATE | F.A. PROJECT NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| 7 | CALIF. | | | |

| DIST. | COUNTY | ROUTE | POSTMILE | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 71 | R4.2 | 577 | 602 |

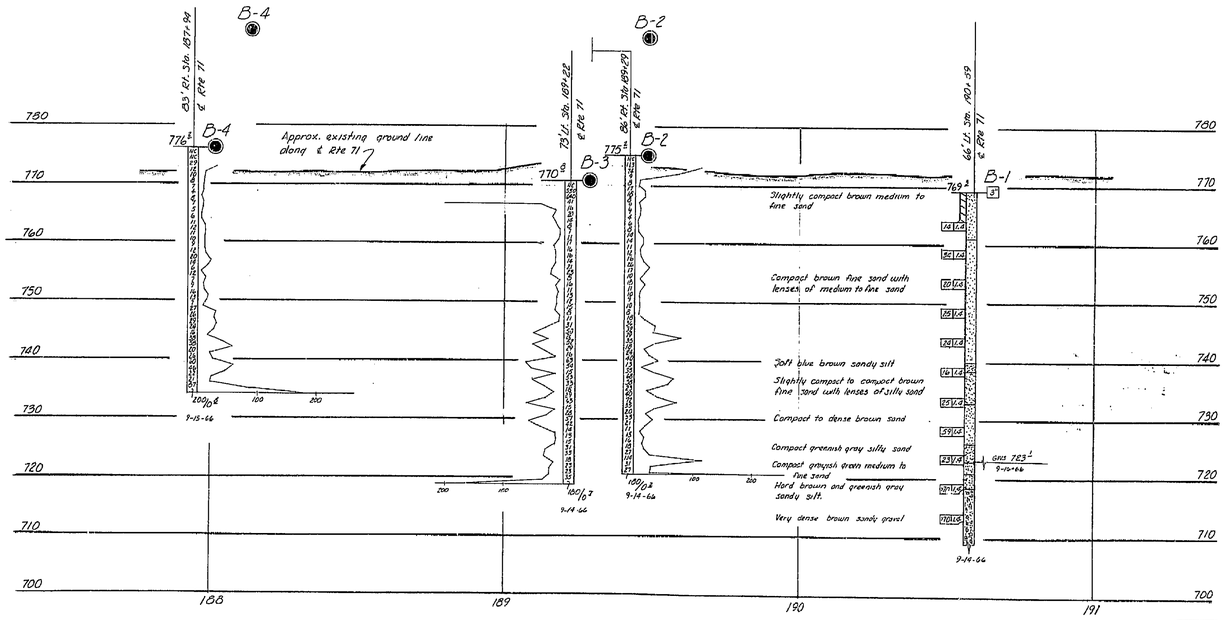
W. B. O'Hara
DESIGN ENGINEER — REGISTERED CIVIL ENGINEER
DATE APPROVED January 6, 1969

BENCH MARK

BM# 17-21 Elev 768.31
Fd std. co. sur. mon. "BM 17-21 1952 RE 63" in well 11" dn. on the approx. E Rosecrans St. 130' south of Holt Ave (LA Co #17-21-1963)




PLAN
Scale 1" = 20'




PROFILE
Scale Vert 1" = 10'
Horiz 1" = 20'

INFORMATION ON ACTUAL FOUNDATION CONDITIONS ENCOUNTERED IS ON FILE IN BRIDGE GEOLOGY SECTION

LEGEND OF BORING OPERATIONS

- Penetrometer
- 2½" Core Penetrometer
- Sampler boring (dry)
- Rotary boring (dry)
- Auger boring (dry)
- Jet boring
- Core boring
- Test pit

LEGEND OF EARTH MATERIALS

- Gravel
- Sand
- Silt
- Clay
- Sandy Clay or Clayey Silt
- Peat, Humus, Organic Matter
- Fill Material
- Igneous Rock
- Sedimentary Rock
- Metamorphic Rock
- Sandy Silt or Silty Sand

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS

Diagram showing the basis for the estimation of grain size distribution used in determining limitations of class names.

Triangular diagram showing percentages of gravel, sand and fines (silt and clay) to indicate the texture symbols "G" for gravel, "S" for sand, "M" for silt, "C" for clay, "Gravelly Sand", "Sandy Gravel", "Gravelly Silt", "Silty Gravel", "Gravelly Silty Clay", "Sandy Silt", "Silty Sand", "Clayey Sand", "Silty Clay", "Sandy Clay", "Clay and Silt" and "Silt and Gravel". Refer to Standard Grade Size Limits.

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

| | |
|---|---|
| FIELD STUDY | by R. CORDALL 7-'66 |
| DRAWN | by M. MURRAY 7-'66 |
| CHECKED | by R. CORDALL 11-'66 |

Approved Recommended for: Carl E. Hoff 1968
Engineering Geologist

BRIDGE DEPARTMENT
ENGINEERING GEOLOGY SECTION

AS BUILT PLANS
Contract No. 07-012414
Date Completed 10-72
Document No. 6029

Charge 07213
W.A. 012411

Disregard prints bearing earlier numbers →

PREL. DRAWING NO. PR= 91-1

| SHEET | OF |
|---|---|
| 11 | 11 |

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

# SAN JOSE F.C. CHANNEL BRIDGE

## LOG OF TEST BORINGS

| SCALE | BRIDGE | FILE | DRAWING |
|---|---|---|---|
| As Noted | 53-2051 | | 53205/-1- |

I HEREBY CERTIFY THAT THIS IS A TRUE AND ACCURATE COPY OF THE ABOVE DOCUMENT TAKEN UNDER MY DIRECTION AND CONTROL ON THIS DATE IN SACRAMENTO, CALIFORNIA PURSUANT TO AUTHORIZATION BY THE DIRECTOR OF TRANSPORTATION.

DATE 10/26/72 | SIGNATURE [illegible] | TITLE [illegible]

MICROFILM - STATE OF CALIFORNIA - DEPARTMENT OF PUBLIC WORKS - MICROFILM
SCALE 1" = 50'
SCALE 1" = 20'
ClibPDF - www.fastio.com

Geosyntec consultants

# SR-71 Bridge Widening Plan

# PRELIMINARY PLANS

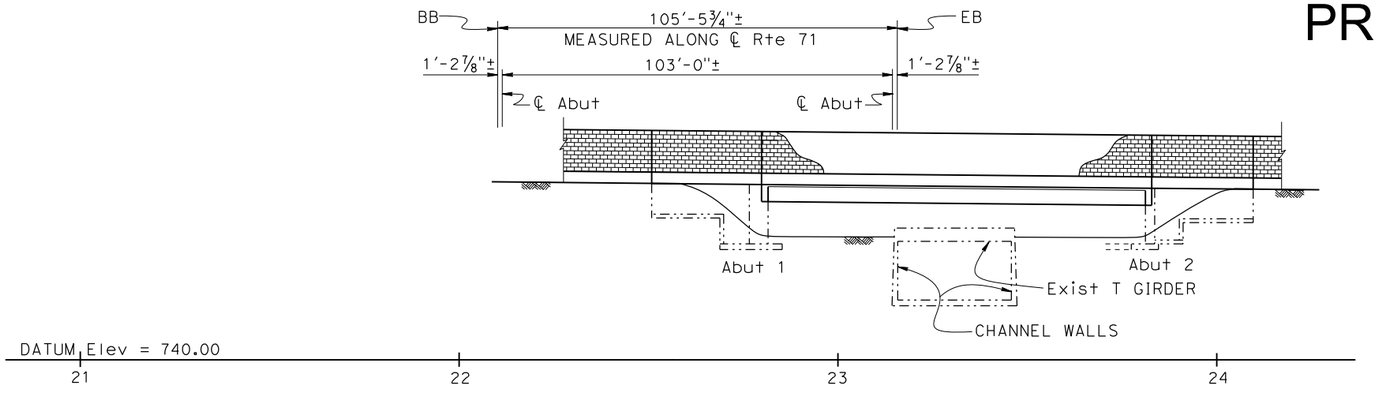
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| | | | | | |

REGISTERED CIVIL ENGINEER _____ X DATE

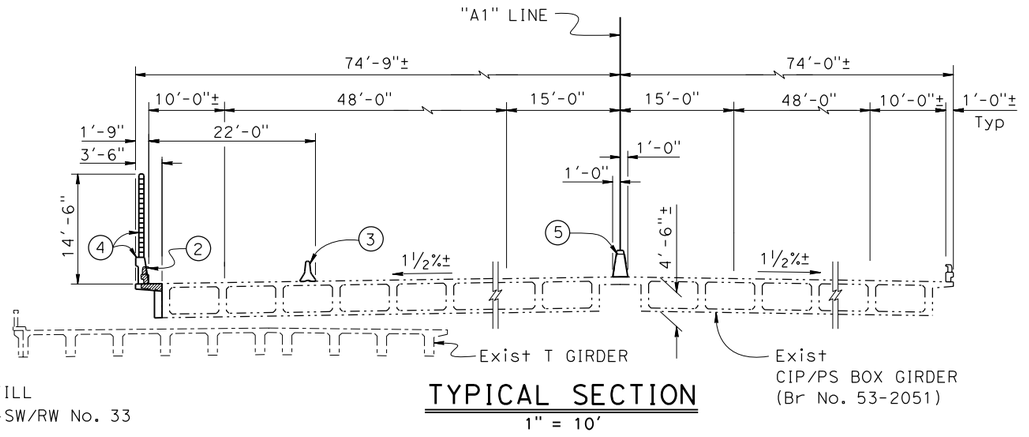
PLANS APPROVAL DATE

RICHARD E. SCHENDEL
No. C 64259
Exp. 06-30-23
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

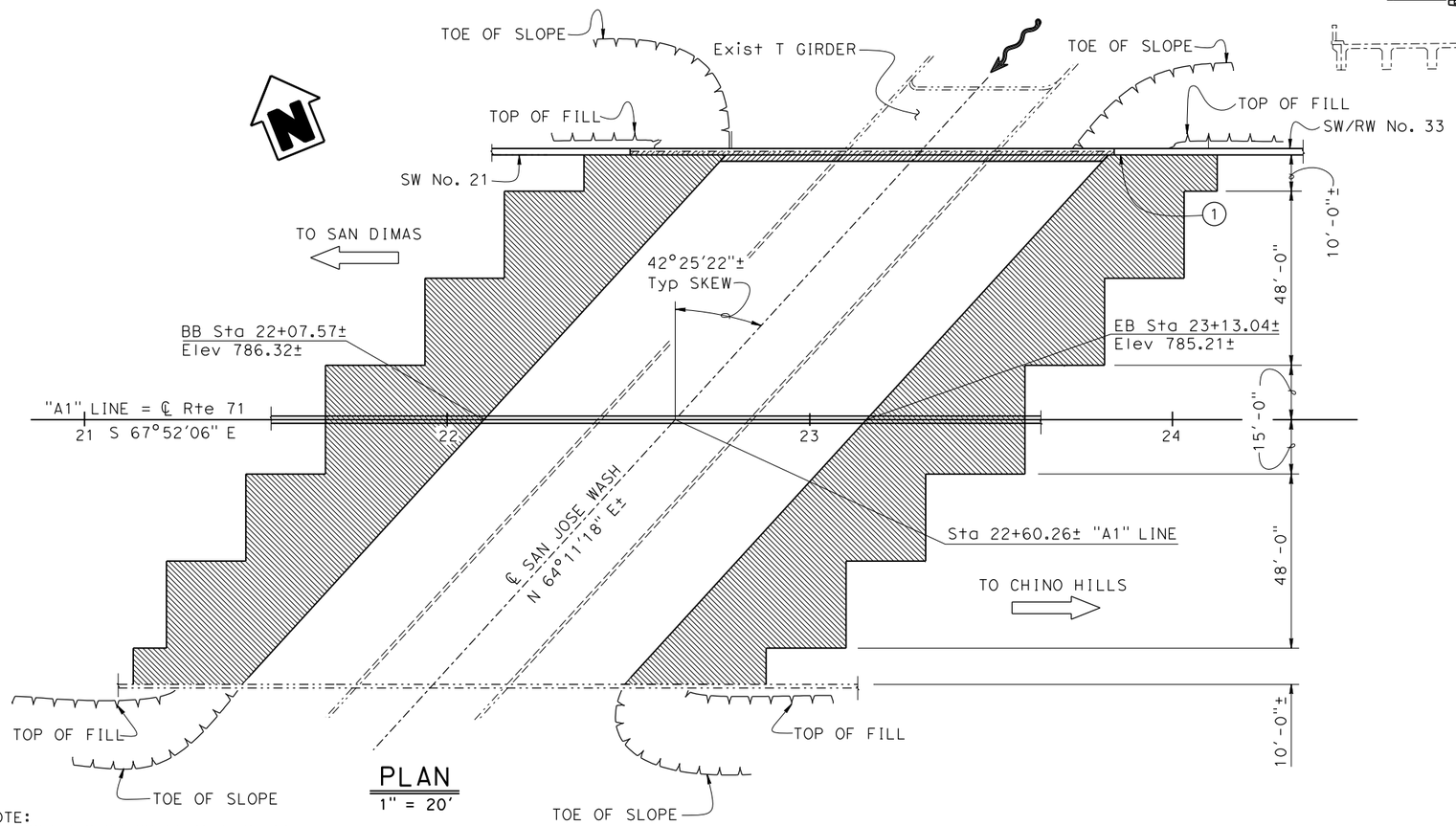
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.




## MIRRORED ELEVATION
1" = 20'




## TYPICAL SECTION
1" = 10'




## PLAN
1" = 20'

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

## TRAFFIC NOTES

VEHICULAR TRAFFIC:
1. ___ New alignment. No traffic at the site.
2. ___ Traffic will be detoured away from the site.
3. _x_ Traffic will be carried on the structure.
   Stage construction _x_ will _x_ will not be required.

NOTES:

(1) Paint "San Jose F.C. Channel BRIDGE
Br No. 53-2051
1972"

(2) Exist Barrier Railing Type 9, Typ. Salvage metal railing.

(3) Temporary Barrier System, see Roadway Plans.

(4) Concrete Barrier Type 842 (Mod) with Sound Wall

(5) Concrete Barrier Type 60MA
(Replace Exist Concrete Barrier Type 60A)

LEGEND:
- Indicates existing structure
- Indicates bridge removal (portion)
- Indicates limits of remove existing PCC/HMA pavement and place new Structure Approach Type R (30)

Mike Pope
BRANCH CHIEF

| | | | | | |
|---|---|---|---|---|---|
| DESIGN | BY Juan Torres Jr. | CHECKED X | | | |
| DETAILS | BY Jinli Guo | CHECKED X | LAYOUT | BY Jinli Guo | CHECKED Juan Torres Jr. |
| QUANTITIES | BY X | CHECKED X | SPECIFICATIONS | BY X | PLANS AND SPECS COMPARED X |

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 18

BRIDGE No. 53-2051
POST MILE R1.03

**SAN JOSE F.C. CHANNEL BRIDGE (MODIFY)**

**GENERAL PLAN**

STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REVISION 9/27/2021)

DATE PLOTTED => 3/16/2022 TIME PLOTTED => 5:03:28 PM
FILE => ...\07-210614\53-2051\son jose.dgn USERNAME =>

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3603
PROJECT NUMBER & PHASE: 07180003511
COUNTY/ROUTE: LA/71
CONTRACT No.: 210614

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

| REVISION DATES | | | | SHEET | OF |
|---|---|---|---|---|---|
| 10/4/21 | | 03/16/22 | 03/01/22 | 1 | X |

Geosyntec
consultants

# Boring Logs Near SR-71 Bridge and San Jose Creek Channel Intersection

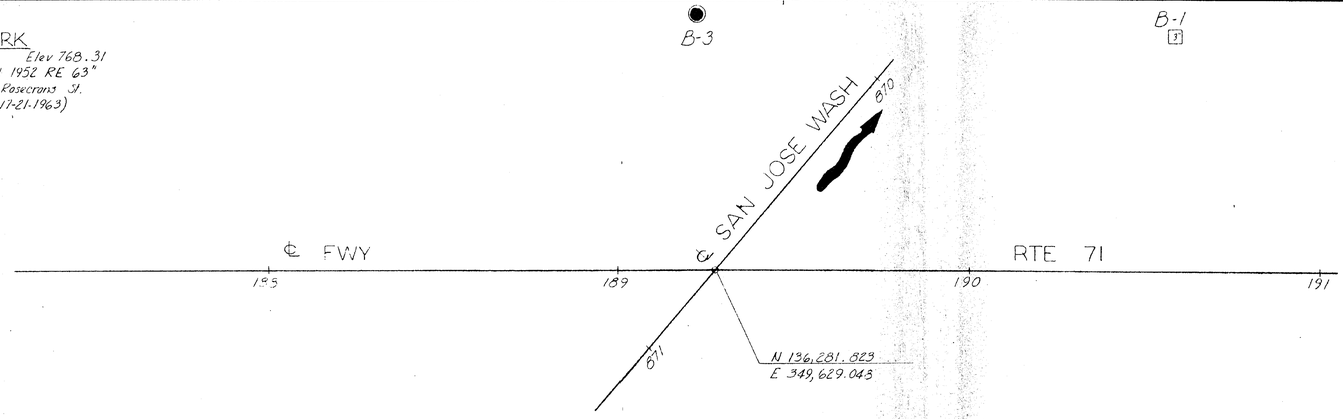
| FED. ROAD DIV. NO. | STATE | F. A. PROJECT NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| 7 | CALIF. | | | |

| DIST. | COUNTY | ROUTE | SECTION | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 07 | LA | 71 | R0.0/1.2 | 517 | 602 |

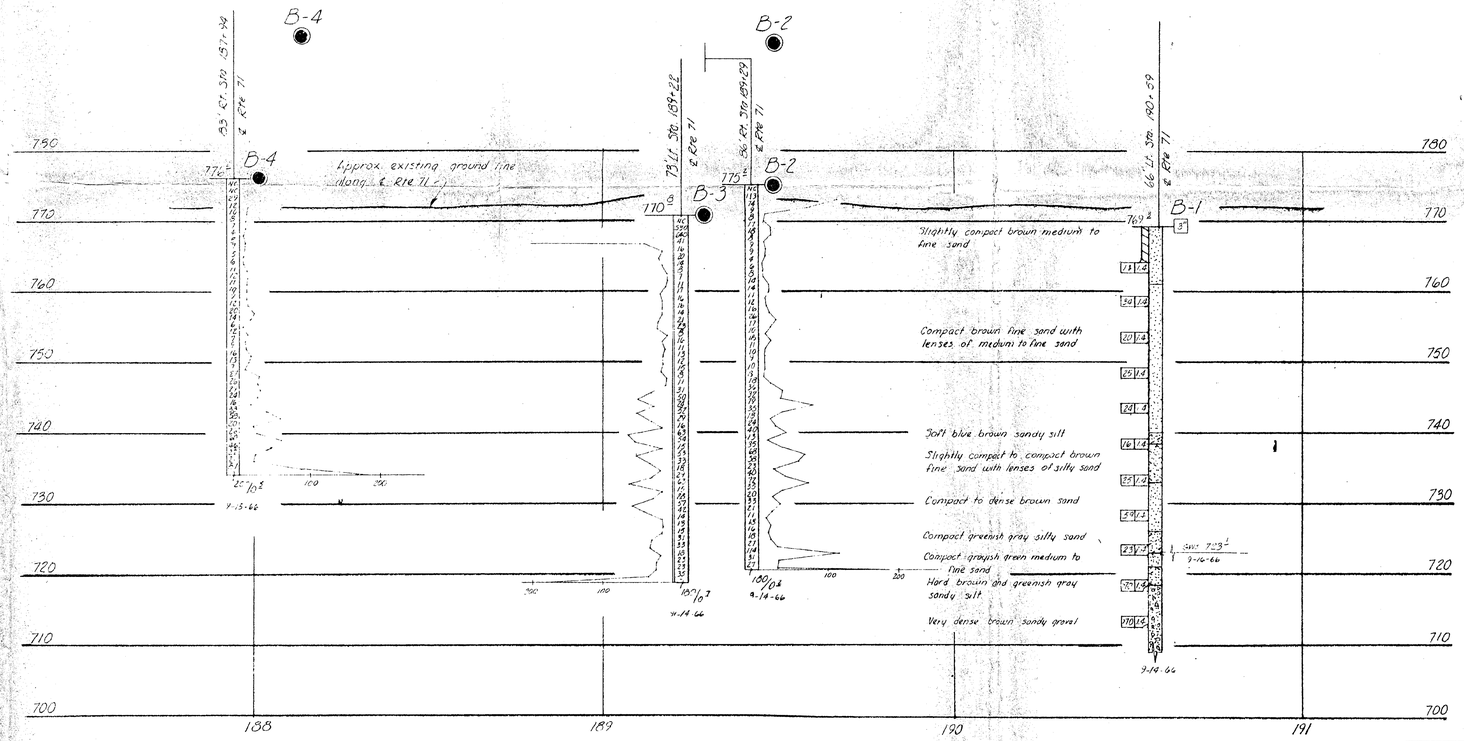
M. B. O'Hara
REGISTERED CIVIL ENGINEER NO. 8200
DATE APPROVED January 6, 1969

## BENCH MARK

BM # 17-21 Elev 768.31
Fd. std. co. sur. mon. "BM 17-21 1952 RE 63" in well 11" dn. on the approx. ℄ Rosecrans St. 130' south of Holt Ave (LA Co # 17-21-1963)




PLAN
Scale 1" = 20'




PROFILE
Scale Vert. 1" = 10'
Horiz. 1" = 20'

AS BUILT No Corrections This Sheet
CORRECTIONS BY P. J. HIXSON
CONTRACT NO. 07-012414(503)

SEP 15 1972

LEGEND OF BORING OPERATIONS

- PENETROMETER
- 2½" CONE PENETROMETER
- SAMPLER BORING (DRY)
- ROTARY BORING (WET)
- AUGER BORING (DRY)
- JET BORING
- CORE BORING
- TEST PIT
- PENETRATION BORING
- ROTARY BORING
- 1" SOIL TUBE

LEGEND OF EARTH MATERIALS

- GRAVEL
- SAND
- SILT
- CLAY
- SANDY CLAY OR CLAYEY SAND
- SANDY SILT OR SILTY SAND
- SILTY CLAY OR CLAYEY SILT
- FEAT. MATTER ORGANIC MATTER
- FILL MATERIAL
- IGNEOUS ROCK
- SEDIMENTARY ROCK
- METAMORPHIC ROCK

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

| | |
|---|---|
| FIELD STUDY | By R. CORBALEY 9-15-66 |
| DRAWN | By M. ALLREAD 9-27-66 |
| CHECKED | By [illegible] |

BRIDGE DEPARTMENT
ENGINEERING GEOLOGY SECTION

| SHEET | OF |
|---|---|
| 11 | 11 |

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

SAN JOSE F.C. CHANNEL BRIDGE

LOG OF TEST BORINGS

| SCALE As Noted | BRIDGE 53-2051 | FILE | DRAWING 532051-11 |
|---|---|---|---|

Charge 07213
W.A. 012411

Disregard prints bearing earlier numbers → PREL. DRAWING NO. PR- 8/21

Geosyntec
consultants

# Boring Logs Near SR-71 Bridge and San Jose Creek Channel Intersection Ridgeway St and SR-71 Intersection

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| DDDD | CCCC | RRRR | PPPP | ???? | #### |

6-30-21
CERTIFIED ENGINEERING GEOLOGIST DATE

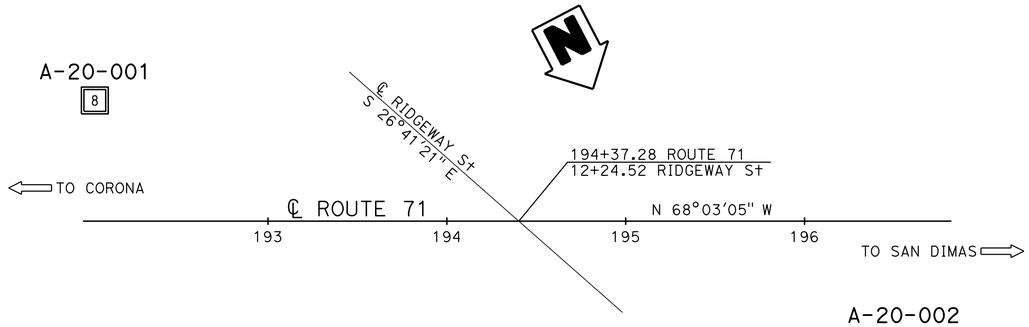
PROFESSIONAL GEOLOGIST
Tooraj Panah
No. 9038
Exp. 09-30-22
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

MM/DD/YYYY
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

## BENCH MARK

BM #56198 Elev 798.17
N 1846252.65
E 6622697.07
NAVD88




PLAN
1" = 40'

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (2010 Edition).

See 2018 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.

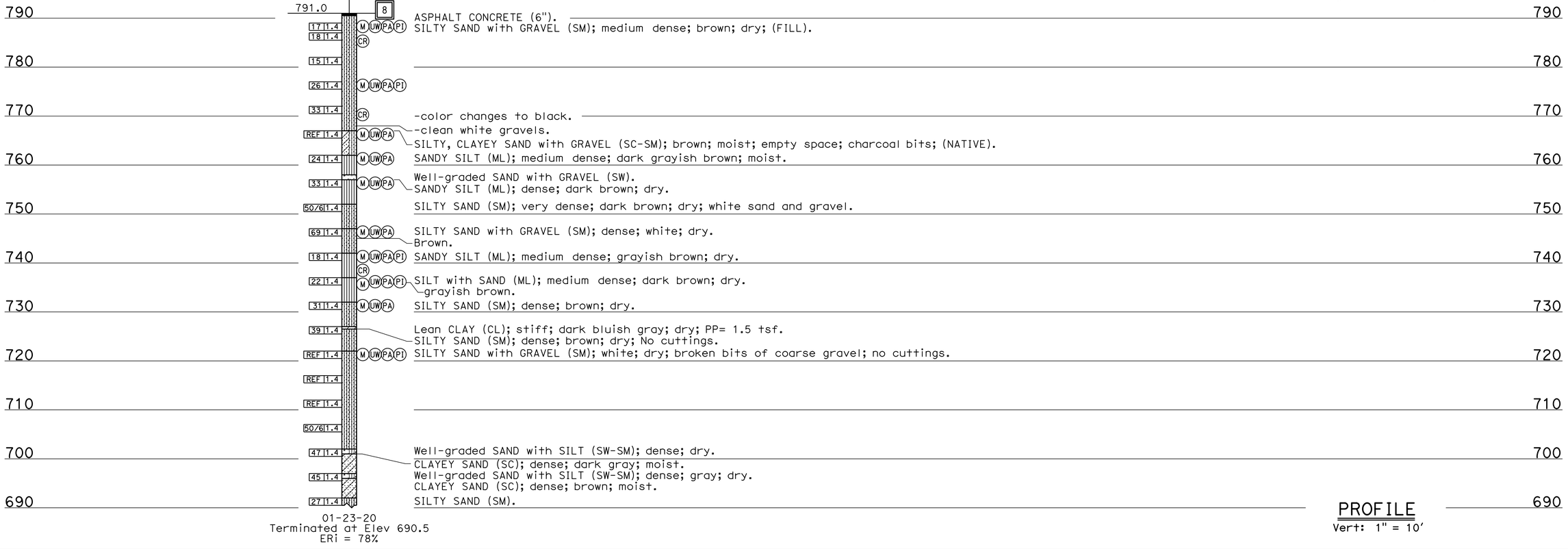
BOREHOLE LOCATION TABLE

| HOLE ID | ℄ ROUTE 71 | | |
|---|---|---|---|
| | Station | Offset (Ft) | Rt/Lt |
| A-20-001 | 192+03.16 | 67.49 | Lt |
| A-20-002 | 196+54.21 | 69.63 | Rt |

NOTE:
Groundwater was not encountered during field investigation.

N 1845940.223
E 6623086.957

A-20-001
8
791.0




ASPHALT CONCRETE (6").
SILTY SAND with GRAVEL (SM); medium dense; brown; dry; (FILL).
-color changes to black.
-clean white gravels.
SILTY, CLAYEY SAND with GRAVEL (SC-SM); brown; moist; empty space; charcoal bits; (NATIVE).
SANDY SILT (ML); medium dense; dark grayish brown; moist.
Well-graded SAND with GRAVEL (SW).
SANDY SILT (ML); dense; dark brown; dry.
SILTY SAND (SM); very dense; dark brown; dry; white sand and gravel.
SILTY SAND with GRAVEL (SM); dense; white; dry.
Brown.
SANDY SILT (ML); medium dense; grayish brown; dry.
SILT with SAND (ML); medium dense; dark brown; dry.
grayish brown.
SILTY SAND (SM); dense; brown; dry.
Lean CLAY (CL); stiff; dark bluish gray; dry; PP= 1.5 tsf.
SILTY SAND (SM); dense; brown; dry; No cuttings.
SILTY SAND with GRAVEL (SM); white; dry; broken bits of coarse gravel; no cuttings.
Well-graded SAND with SILT (SW-SM); dense; dry.
CLAYEY SAND (SC); dense; dark gray; moist.
Well-graded SAND with SILT (SW-SM); dense; gray; dry.
CLAYEY SAND (SC); dense; brown; moist.
SILTY SAND (SM).

01-23-20
Terminated at Elev 690.5
ERi = 78%

PROFILE
Vert: 1" = 10'

| ENGINEERING SERVICES | | GEOTECHNICAL SERVICES | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X | BRIDGE No. 53-2052 | RIDGEWAY STREET UC |
|---|---|---|---|---|---|---|
| FUNCTIONAL SUPERVISOR: | DRAWN BY: Shumei Jiang | FIELD INVESTIGATION BY: | | | POST MILE R0.92 | LOG OF TEST BORINGS 1 OF 3 |
| NAME: Christopher Harris | CHECKED BY: Deepa Wathugala | NAME: Henry Jones | | | | |

OGS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REVISION 12/13/2019)
DATE PLOTTED => 30-JUN-2021 TIME PLOTTED => 16:38
FILE => ridgeway street uc1of3.dgn USERNAME => s132428
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3
UNIT: 3650
PROJECT NUMBER & PHASE: 07160001131 CONTRACT No.: 07-326204
DISREGARD PRINTS BEARING EARLIER REVISION DATES
REVISION DATES: 6-28-21 | 6-29-21 | | |
SHEET X OF X

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| DDDD | CCCC | RRRR | PPPP | ???? | #### |

6-30-21
CERTIFIED ENGINEERING GEOLOGIST DATE

PROFESSIONAL GEOLOGIST
Tooraj Panah
No. 9038
Exp. 09-30-22
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

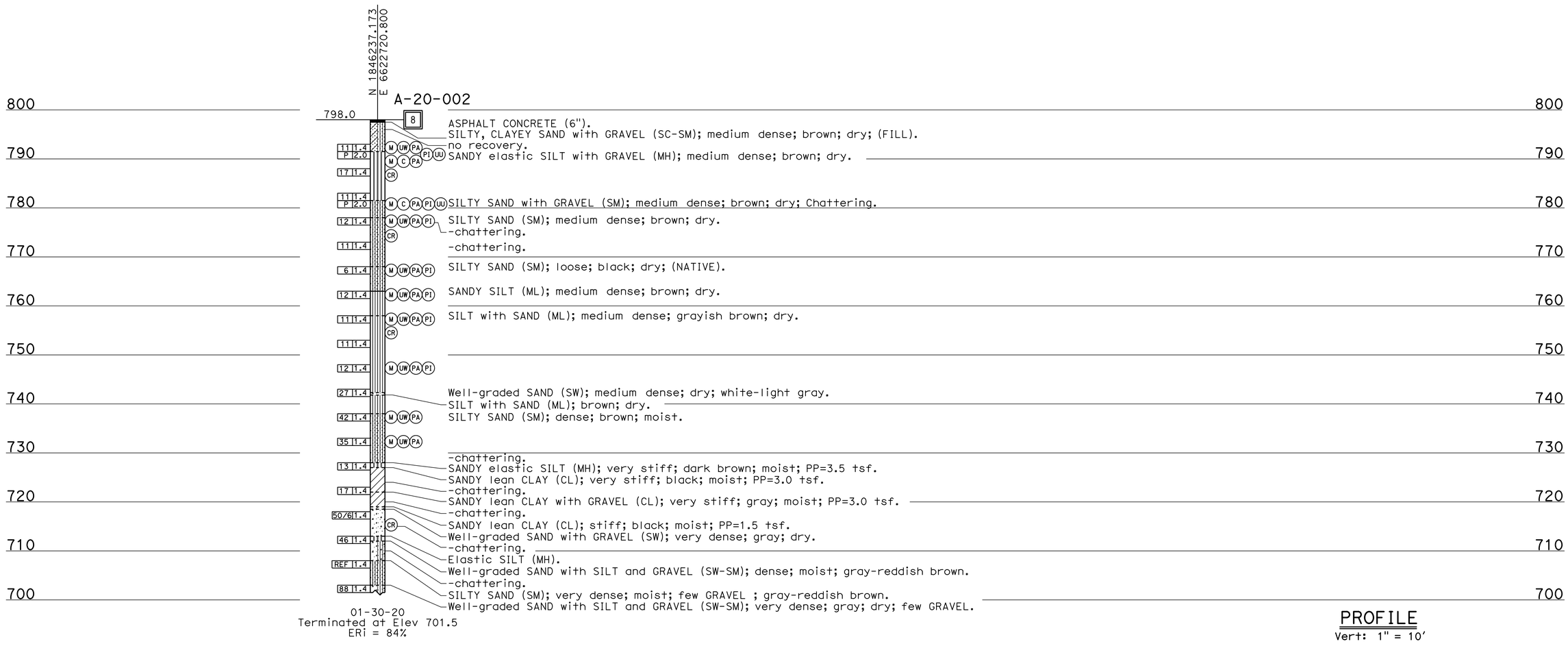
MM/DD/YYYY
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (2010 Edition).

See 2018 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.

FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 1 OF 3"




01-30-20
Terminated at Elev 701.5
ERi = 84%

PROFILE
Vert: 1" = 10'

| ENGINEERING SERVICES | | GEOTECHNICAL SERVICES | STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN | BRIDGE No. | RIDGEWAY STREET UC |
|---|---|---|---|---|---|---|
| FUNCTIONAL SUPERVISOR: | DRAWN BY: Shumei Jiang | FIELD INVESTIGATION BY: | | DESIGN BRANCH X | 53-2052 | LOG OF TEST BORINGS 2 OF 3 |
| NAME: Christopher Harris | CHECKED BY: Deepa Wathugala | NAME: Henry Jones | | | POST MILE R0.92 | |

OGS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REVISION 12/13/2019)
DATE PLOTTED => 30-JUN-2021 TIME PLOTTED => 16:38
FILE => ridgeway street uc2of3.dgn USERNAME => s132428
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3
UNIT: 3650
PROJECT NUMBER & PHASE: 07160001131 CONTRACT No.: 07-326204
DISREGARD PRINTS BEARING EARLIER REVISION DATES →

| REVISION DATES | | | | SHEET | OF |
|---|---|---|---|---|---|
| 6-28-21 | 6-30-21 | | | X | X |

| Dist. | County | Route | Postmile | Sheet No. | Total Sheets |
|---|---|---|---|---|---|
| 07 | LA | 71 | 12.9/13.2 | 531 | 602 |

M. B. O'Gara
DISTRICT BRIDGE ENGINEER — REGISTERED CIVIL ENGINEER NO. 8300
Date approved: January 6, 1969

| Dist. | County | Route | Post Mile-Total Project | Sheet No. | Total Sheets |
|---|---|---|---|---|---|
| 07 | LA | 71 | | | |

DIVISION OF ENGINEERING SERVICES - GEOTECHNICAL SERVICES

As-Built Log of Test Borings sheet is considered an informational document only. As such, the State of California registration seal with signature, license number and registration certificate expiration date confirm that this is a true and accurate copy of the original document. It does not attest to the accuracy or validity of the information contained in the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.

6-30-21
CERTIFIED ENGINEERING GEOLOGIST — DATE

Tooraj Panah
No. 9038
Exp. 09-30-22
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

# RIDGEWAY STREET UC

## LOG OF TEST BORINGS 3 OF 3

| UNIT: 3650 | CONTRACT No. | BRIDGE No. |
|---|---|---|
| PROJ. No. & PHASE: 07160001131 | 07-326204 | 53-2052 |
| AS-BUILT VERT DATUM: X | CONVERSION: X | Sheet / of |

NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA

B-4

B-2

℄ ROSECRANS

N 136,472.439
E 349,155.912

℄ RTE 71

B-6

B-3

B-1

B-5

PLAN
Scale 1" = 20'

INFORMATION ON ACTUAL FOUNDATION CONDITIONS ENCOUNTERED IS ON FILE IN BRIDGE GEOLOGY SECTION

BENCH MARK

BM 17.21 Elev 768.31
Fd. Std co. sur. mon. "BM 17-21 1952 RE 6.3" in well, 11" dn on the approx. ℄ Rosecrans St 130' South of Holt Ave.
B.M. Summary 3-A LA-71 Feb 1965.

LEGEND OF BORINGS OPERATIONS

PENETRATION BORING

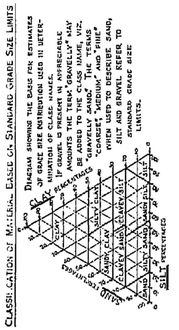
1" SOIL TUBE

ROTARY BORING

LEGEND OF EARTH MATERIALS

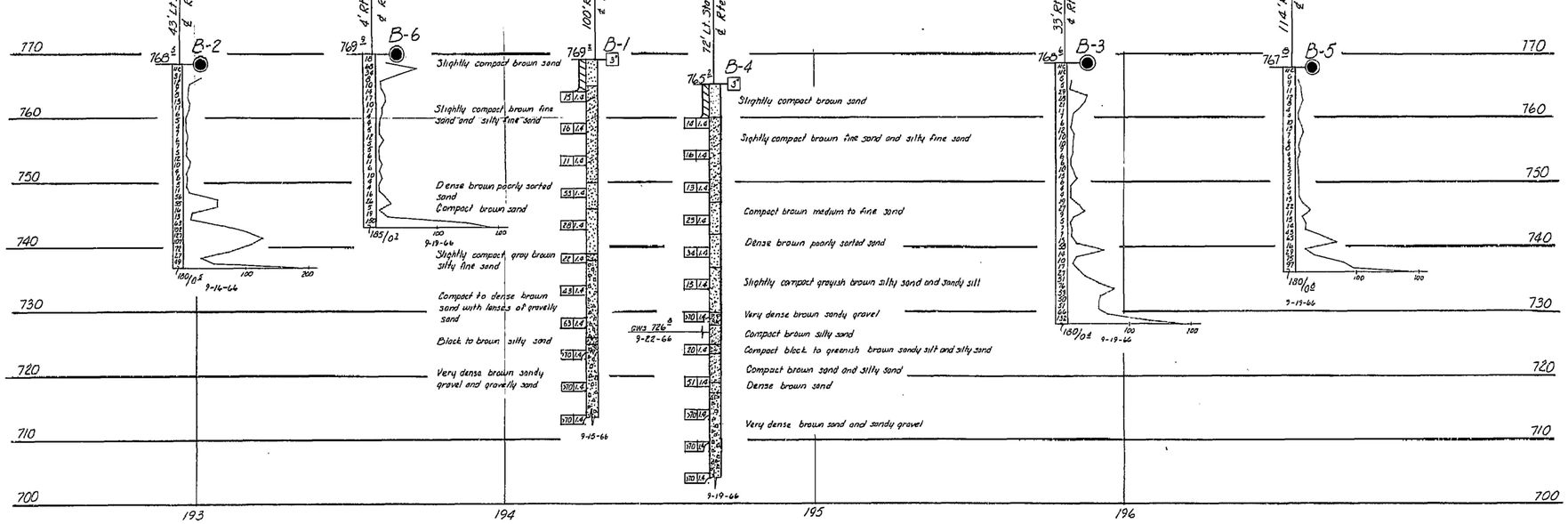
GRAVEL · SAND · SILT · CLAY · SANDY CLAY OR CLAYEY SAND · SANDY SILT OR SILTY SAND · SILTY CLAY OR CLAYEY SILT · PEAT AND ORGANIC MATTER · FILL MATERIAL · IGNEOUS ROCK · SEDIMENTARY ROCK · METAMORPHIC ROCK

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS




NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

PROFILE
Scale Vert 1"=10'
Horiz 1"= 20'




AS BUILT PLANS
Contract No. 07-012414
Date Completed 10-72
Document No. 6029

| SHEET | OF |
|---|---|
| 14 | 14 |

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

ROSECRANS STREET UNDERCROSSING

LOG OF TEST BORINGS

| SCALE As Noted | BRIDGE 53-2052 | FILE | DRAWING 58252-14 |
|---|---|---|---|

CHECKED By R. GORDAN 6-12-66
Approval Recommended C. E. Hall
Engineering Geologist

BRIDGE DEPARTMENT
ENGINEERING GEOLOGY SECTION

Charge 07213
W.A. 012411

Disregard prints bearing earlier numbers →

PREL. DRAWING NO. PR-

| LOGGED BY | BEGIN DATE | COMPLETION DATE | BOREHOLE LOCATION (Lat/Long or North/East and Datum) | HOLE ID |
|---|---|---|---|---|
| **Henry Jones** | **1-21-20** | **1-23-20** | **34° 3' 53" / 117° 47' 50"** | **A-20-001** |
| DRILLING CONTRACTOR | | | BOREHOLE LOCATION (Offset, Station, Line) | SURFACE ELEVATION |
| **Caltrans** | | | | **791.0 ft** |
| DRILLING METHOD | | | DRILL RIG | BOREHOLE DIAMETER |
| **Hollow-Stem Auger** | | | **Acker AD2** | **8 in** |
| SAMPLER TYPE(S) AND SIZE(S) (ID) | | | SPT HAMMER TYPE | HAMMER EFFICIENCY, ERi |
| **SPT, Bulk** | | | **Automatic** | **78%** |
| BOREHOLE BACKFILL AND COMPLETION | | | GROUNDWATER READINGS DURING DRILLING AFTER DRILLING (DATE) | TOTAL DEPTH OF BORING |
| **Cement Grout** | | | **Not encountered.** | **100.5 ft** |

| ELEVATION (ft) | DEPTH (ft) | Material Graphics | DESCRIPTION | Sample Location | Sample Number | Blows per 6 in. | Blows per foot | Recovery (%) | RQD (%) | Moisture Content (%) | Dry Unit Weight (pcf) | Shear Strength (tsf) | Drilling Method | Casing Depth | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | | ASPHALT CONCRETE (0.5). | | | | | | | | | | | | |
| | 1 | | SILTY SAND with GRAVEL (SM); medium dense; brown; dry; (FILL). | | | | | | | | | | | | |
| 789.00 | 2 | | | | 1 | 16<br>8<br>9 | 17 | | | | | | | | |
| | 3 | | | | | | | | | | | | | | |
| 787.00 | 4 | | | | 2 | 6<br>7<br>11 | 18 | | | | | | | | |
| | 5 | | | | | | | | | | | | | | At 5' a Bulk Sample was collected. |
| 785.00 | 6 | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | |
| 783.00 | 8 | | | | | | | | | | | | | | |
| | 9 | | | | 3 | 5<br>5<br>10 | 15 | | | | | | | | |
| 781.00 | 10 | | | | | | | | | | | | | | |
| | 11 | | | | | | | | | | | | | | |
| 779.00 | 12 | | | | | | | | | | | | | | |
| | 13 | | | | | | | | | | | | | | |
| 777.00 | 14 | | | | 4 | 11<br>16<br>10 | 26 | | | | | | | | |
| | 15 | | | | | | | | | | | | | | |
| 775.00 | 16 | | | | | | | | | | | | | | |
| | 17 | | | | | | | | | | | | | | |
| 773.00 | 18 | | | | | | | | | | | | | | |
| | 19 | | | | 5 | 10<br>14<br>19 | 33 | | | | | | | | |
| 771.00 | 20 | | | | | | | | | | | | | | At 20' a Bulk Sample was collected. |
| | 21 | | Color changes to black. | | | | | | | | | | | | |
| 769.00 | 22 | | | | | | | | | | | | | | |
| | 23 | | Clean white gravels. | | | | | | | | | | | | |
| 767.00 | 24 | | SILTY, CLAYEY SAND with GRAVEL (SC-SM); brown; moist; empty space; charcoal bits. | | 6 | | | | | | | | | | |
| | 25 | | | | | | | | | | | | | | |

*(continued)*

5 BR - STANDARD A-20-001.GPJ CALTRANS LIBRARY (FEB 2013).GLB 5/26/20

Department of Transportation
Division of Engineering Services
Geotechnical Services
Office of Geotechnical Design - South 1

| REPORT TITLE | | | | HOLE ID |
|---|---|---|---|---|
| **BORING RECORD** | | | | **A-20-001** |
| DIST. | COUNTY | ROUTE | POSTMILE | PROJECT ID |
| **07** | **LA** | **71** | **0.9/0.9** | **0716000113** |
| PROJECT OR BRIDGE NAME | | | | |
| **Ridgeway Street UC @ SR71** | | | | |
| BRIDGE NUMBER | PREPARED BY | | DATE | SHEET |
| **53-2052** | **D. Wathugala** | | **5-21-20** | **1 of 4** |

| ELEVATION (ft) | DEPTH (ft) | Material Graphics | DESCRIPTION | Sample Location | Sample Number | Blows per 6 in. | Blows per foot | Recovery (%) | RQD (%) | Moisture Content (%) | Dry Unit Weight (pcf) | Shear Strength (tsf) | Drilling Method | Casing Depth | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 25 | | SILTY, CLAYEY SAND with GRAVEL (SC-SM) *(continued)*. | | | 5 - - | | | | | | | | | |
| 765.00 | 26 | | | | | | | | | | | | | | |
| | 27 | | | | | | | | | | | | | | |
| 763.00 | 28 | | | | | | | | | | | | | | |
| | 29 | | SANDY SILT (ML); medium dense; dark grayish brown; moist. | | 7 | 6 9 15 | 24 | | | | | | | | |
| 761.00 | 30 | | | | | | | | | | | | | | |
| | 31 | | | | | | | | | | | | | | |
| 759.00 | 32 | | | | | | | | | | | | | | |
| | 33 | | Well-graded SAND with GRAVEL (SW). | | | | | | | | | | | | |
| 757.00 | 34 | | SANDY SILT (ML); dense; dark brown; dry. | | 8 | 12 17 16 | 33 | | | | | | | | |
| | 35 | | | | | | | | | | | | | | |
| 755.00 | 36 | | | | | | | | | | | | | | |
| | 37 | | | | | | | | | | | | | | |
| 753.00 | 38 | | | | | | | | | | | | | | |
| | 39 | | SILTY SAND (SM); very dense; dark brown; dry; white sand and gravel. | | 9 | 48 50 - | -50 | | | | | | | | |
| 751.00 | 40 | | | | | | | | | | | | | | |
| | 41 | | | | | | | | | | | | | | |
| 749.00 | 42 | | | | | | | | | | | | | | |
| | 43 | | | | | | | | | | | | | | |
| 747.00 | 44 | | SILTY SAND with GRAVEL (SM); dense; white; dry. | | 10 | 26 44 25 | 69 | | | | | | | | |
| | 45 | | | | | | | | | | | | | | |
| 745.00 | 46 | | Brown. | | | | | | | | | | | | |
| | 47 | | | | | | | | | | | | | | |
| 743.00 | 48 | | | | | | | | | | | | | | |
| | 49 | | SANDY SILT (ML); medium dense; grayish brown; dry. | | 11 | 4 8 10 | 18 | | | | | | | | |
| 741.00 | 50 | | | | | | | | | | | | | | At 50' a Bulk Sample was collected. |
| | 51 | | | | | | | | | | | | | | |
| 739.00 | 52 | | | | | | | | | | | | | | |
| | 53 | | | | | | | | | | | | | | |
| 737.00 | 54 | | SILT with SAND (ML); medium dense; dark brown; dry. | | 12 | | 22 | | | | | | | | |
| | 55 | | | | | | | | | | | | | | |

*(continued)*

5 BR - STANDARD A-20-001.GPJ CALTRANS LIBRARY (FEB 2013).GLB 5/26/20

Department of Transportation
Division of Engineering Services
Geotechnical Services
Office of Geotechnical Design - South 1

| REPORT TITLE | | | | HOLE ID |
|---|---|---|---|---|
| **BORING RECORD** | | | | **A-20-001** |
| DIST. | COUNTY | ROUTE | POSTMILE | PROJECT ID |
| **07** | **LA** | **71** | **0.9/0.9** | **0716000113** |
| PROJECT OR BRIDGE NAME | | | | |
| **Ridgeway Street UC @ SR71** | | | | |
| BRIDGE NUMBER | PREPARED BY | | DATE | SHEET |
| **53-2052** | **D. Wathugala** | | **5-21-20** | **2 of 4** |

| ELEVATION (ft) | DEPTH (ft) | Material Graphics | DESCRIPTION | Sample Location | Sample Number | Blows per 6 in. | Blows per foot | Recovery (%) | RQD (%) | Moisture Content (%) | Dry Unit Weight (pcf) | Shear Strength (tsf) | Drilling Method | Casing Depth | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 55 | | Grayish brown. SILT with SAND (ML) *(continued)*. | | | 6 10 12 | | | | | | | | | |
| 735.00 | 56 | | | | | | | | | | | | | | |
| | 57 | | | | | | | | | | | | | | |
| 733.00 | 58 | | | | | | | | | | | | | | |
| | 59 | | SILTY SAND (SM); dense; brown; dry. | | 13 | 11 17 14 | 31 | | | | | | | | |
| 731.00 | 60 | | | | | | | | | | | | | | |
| | 61 | | | | | | | | | | | | | | |
| 729.00 | 62 | | | | | | | | | | | | | | |
| | 63 | | | | | | | | | | | | | | |
| 727.00 | 64 | | | | 14 | 10 19 20 | 39 | | | | | | | | |
| | 65 | | Lean CLAY (CL); stiff; dark bluish gray; dry; pp= 1.5 tsf. SILTY SAND (SM); dense; brown; dry. | | | | | | | | | | | | No cuttings |
| 725.00 | 66 | | | | | | | | | | | | | | |
| | 67 | | | | | | | | | | | | | | |
| 723.00 | 68 | | | | | | | | | | | | | | |
| | 69 | | SILTY SAND with GRAVEL (SM); white; dry; broken bits of coarse gravel; no cuttings. | | 15 | 50 - - | | | | | | | | | No cuttings |
| 721.00 | 70 | | | | | | | | | | | | | | |
| | 71 | | | | | | | | | | | | | | |
| 719.00 | 72 | | | | | | | | | | | | | | |
| | 73 | | | | | | | | | | | | | | |
| 717.00 | 74 | | | | 16 | 50 - - | | | | | | | | | |
| | 75 | | | | | | | | | | | | | | |
| 715.00 | 76 | | | | | | | | | | | | | | |
| | 77 | | | | | | | | | | | | | | |
| 713.00 | 78 | | | | | | | | | | | | | | |
| | 79 | | | | 17 | 50 - - | | | | | | | | | |
| 711.00 | 80 | | | | | | | | | | | | | | |
| | 81 | | | | | | | | | | | | | | |
| 709.00 | 82 | | | | | | | | | | | | | | |
| | 83 | | | | | | | | | | | | | | |
| 707.00 | 84 | | | | 18 | | -50 | | | | | | | | |
| | 85 | | | | | | | | | | | | | | |

*(continued)*

Department of Transportation
Division of Engineering Services
Geotechnical Services
Office of Geotechnical Design - South 1

| REPORT TITLE | | | | HOLE ID |
|---|---|---|---|---|
| **BORING RECORD** | | | | **A-20-001** |
| DIST. | COUNTY | ROUTE | POSTMILE | PROJECT ID |
| **07** | **LA** | **71** | **0.9/0.9** | **0716000113** |
| PROJECT OR BRIDGE NAME | | | | |
| **Ridgeway Street UC @ SR71** | | | | |
| BRIDGE NUMBER | PREPARED BY | | DATE | SHEET |
| **53-2052** | **D. Wathugala** | | **5-21-20** | **3 of 4** |

5 BR - STANDARD A-20-001.GPJ CALTRANS LIBRARY (FEB 2013).GLB 5/26/20

| ELEVATION (ft) | DEPTH (ft) | Material Graphics | DESCRIPTION | Sample Location | Sample Number | Blows per 6 in. | Blows per foot | Recovery (%) | RQD (%) | Moisture Content (%) | Dry Unit Weight (pcf) | Shear Strength (tsf) | Drilling Method | Casing Depth | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 85 | | SILTY SAND with GRAVEL (SM) *(continued)*. | | | 40 50 - | | | | | | | | | |
| 705.00 | 86 | | | | | | | | | | | | | | |
| | 87 | | | | | | | | | | | | | | |
| 703.00 | 88 | | Well-graded SAND with SILT (SW-SM); dense; dry. | | | | | | | | | | | | |
| | 89 | | CLAYEY SAND (SC); dense; dark gray; moist. | | 19 | 22 23 24 | 47 | | | | | | | | |
| 701.00 | 90 | | | | | | | | | | | | | | |
| | 91 | | | | | | | | | | | | | | |
| 699.00 | 92 | | | | | | | | | | | | | | |
| | 93 | | Well-graded SAND with SILT (SW-SM); dense; gray; dry. | | | | | | | | | | | | |
| 697.00 | 94 | | | | 20 | 24 27 18 | 45 | | | | | | | | |
| | 95 | | CLAYEY SAND (SC); dense; brown; moist. | | | | | | | | | | | | |
| 695.00 | 96 | | | | | | | | | | | | | | |
| | 97 | | | | | | | | | | | | | | |
| 693.00 | 98 | | SILTY SAND (SM). | | | | | | | | | | | | |
| | 99 | | | | 21 | 15 12 15 | 27 | | | | | | | | |
| 691.00 | 100 | | | | | | | | | | | | | | |
| | 101 | | Bottom of borehole at 100.5 ft bgs | | | | | | | | | | | | |
| 689.00 | 102 | | This Boring Record was developed in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (2010) except as noted on the Soil or Rock Legend or below. | | | | | | | | | | | | |
| | 103 | | | | | | | | | | | | | | |
| 687.00 | 104 | | | | | | | | | | | | | | |
| | 105 | | | | | | | | | | | | | | |
| 685.00 | 106 | | | | | | | | | | | | | | |
| | 107 | | | | | | | | | | | | | | |
| 683.00 | 108 | | | | | | | | | | | | | | |
| | 109 | | | | | | | | | | | | | | |
| 681.00 | 110 | | | | | | | | | | | | | | |
| | 111 | | | | | | | | | | | | | | |
| 679.00 | 112 | | | | | | | | | | | | | | |
| | 113 | | | | | | | | | | | | | | |
| 677.00 | 114 | | | | | | | | | | | | | | |
| | 115 | | | | | | | | | | | | | | |

5 BR - STANDARD A-20-001.GPJ CALTRANS LIBRARY (FEB 2013).GLB 5/26/20

Department of Transportation
Division of Engineering Services
Geotechnical Services
Office of Geotechnical Design - South 1

| REPORT TITLE | | | | HOLE ID |
|---|---|---|---|---|
| **BORING RECORD** | | | | **A-20-001** |
| DIST. | COUNTY | ROUTE | POSTMILE | PROJECT ID |
| **07** | **LA** | **71** | **0.9/0.9** | **0716000113** |
| PROJECT OR BRIDGE NAME | | | | |
| **Ridgeway Street UC @ SR71** | | | | |
| BRIDGE NUMBER | PREPARED BY | | DATE | SHEET |
| **53-2052** | **D. Wathugala** | | **5-21-20** | **4 of 4** |

| LOGGED BY | BEGIN DATE | COMPLETION DATE | BOREHOLE LOCATION (Lat/Long or North/East and Datum) | HOLE ID |
|---|---|---|---|---|
| **Henry Jones** | **1-28-20** | **1-30-20** | **34° 3' 55" / 117° 47' 54"** | **A-20-002** |
| DRILLING CONTRACTOR | | | BOREHOLE LOCATION (Offset, Station, Line) | SURFACE ELEVATION |
| **Caltrans** | | | | |
| DRILLING METHOD | | | DRILL RIG | BOREHOLE DIAMETER |
| **Hollow-Stem Auger** | | | **Dietrich 25** | **8 in** |
| SAMPLER TYPE(S) AND SIZE(S) (ID) | | | SPT HAMMER TYPE | HAMMER EFFICIENCY, ERi |
| **SPT, Brass, Bulk** | | | **Automatic** | **84%** |
| BOREHOLE BACKFILL AND COMPLETION | | | GROUNDWATER READINGS DURING DRILLING AFTER DRILLING (DATE) | TOTAL DEPTH OF BORING |
| **Cement Grout** | | | **Not encountered.** | **96.5 ft** |

| ELEVATION (ft) | DEPTH (ft) | Material Graphics | DESCRIPTION | Sample Location | Sample Number | Blows per 6 in. | Blows per foot | Recovery (%) | RQD (%) | Moisture Content (%) | Dry Unit Weight (pcf) | Shear Strength (tsf) | Drilling Method | Casing Depth | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | | ASPHALT CONCRETE (0.5). | | | | | | | | | | | | |
| | 1 | | SILTY, CLAYEY SAND with GRAVEL (SC-SM); medium dense; brown; dry; (FILL). | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | At 2' no recovery. |
| | 3 | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | |
| | 5 | | | | 1 | 9<br>7<br>4 | 11 | | | | | | | | |
| | 6 | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | At 6.5' Sandy Elastic SILT with GRAVEL in MCAL sample. |
| | 8 | | | | | | | | | | | | | | At 8' a Bulk Sample was collected. |
| | 9 | | | | | | | | | | | | | | |
| | 10 | | | | 2 | 5<br>8<br>9 | 17 | | | | | | | | |
| | 11 | | | | | | | | | | | | | | |
| | 12 | | | | | | | | | | | | | | |
| | 13 | | | | | | | | | | | | | | |
| | 14 | | | | | | | | | | | | | | |
| | 15 | | | | 3 | 5<br>6<br>5 | 11 | | | | | | | | |
| | 16 | | | | | | | | | | | | | | |
| | 17 | | | | | | | | | | | | | | At 16.5' chattering. |
| | 18 | | | | | | | | | | | | | | |
| | 19 | | | | | | | | | | | | | | |
| | 20 | | | | 4 | 5<br>5<br>7 | 12 | | | | | | | | |
| | 21 | | | | | | | | | | | | | | Chattering. |
| | 22 | | | | | | | | | | | | | | |
| | 23 | | | | | | | | | | | | | | At 23' a Bulk Sample was collected. |
| | 24 | | SILTY, CLAYEY SAND with GRAVEL (SC-SM); brown; moist. | | | | | | | | | | | | |
| | 25 | | | | | | | | | | | | | | |

*(continued)*

Department of Transportation
Division of Engineering Services
Geotechnical Services
Office of Geotechnical Design - South 1

| REPORT TITLE | | | | HOLE ID |
|---|---|---|---|---|
| **BORING RECORD** | | | | **A-20-002** |
| DIST. | COUNTY | ROUTE | POSTMILE | PROJECT ID |
| **07** | **LA** | **71** | **0.9/0.9** | **0716000113** |
| PROJECT OR BRIDGE NAME | | | | |
| **Ridgeway Street UC @ SR71** | | | | |
| BRIDGE NUMBER | PREPARED BY | | DATE | SHEET |
| **53-2052** | **D. Wathugala** | | **5-22-20** | **1 of 4** |

5 BR - STANDARD A-20-002_6.GPJ CALTRANS LIBRARY (FEB 2013).GLB 5/22/20

| ELEVATION (ft) | DEPTH (ft) | Material Graphics | DESCRIPTION | Sample Location | Sample Number | Blows per 6 in. | Blows per foot | Recovery (%) | RQD (%) | Moisture Content (%) | Dry Unit Weight (pcf) | Shear Strength (tsf) | Drilling Method | Casing Depth | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 25 | | SILTY, CLAYEY SAND with GRAVEL (SC-SM) *(continued)*. | | 5 | 5<br>4<br>7 | 11 | | | | | | | | Chattering. |
| | 29 | | SILTY SAND (SM); loose; black; dry. | | 6 | 3<br>3<br>3 | 6 | | | | | | | | |
| | 34 | | SANDY SILT (ML); medium dense; brown; dry. | | 7 | 4<br>5<br>7 | 12 | | | | | | | | |
| | 39 | | SILT with SAND (ML); medium dense; grayish brown; dry. | | 8 | 5<br>5<br>6 | 11 | | | | | | | | |
| | 42 | | | | | | | | | | | | | | At 42' a Bulk Sample was collected. |
| | 45 | | | | 9 | 3<br>5<br>6 | 11 | | | | | | | | |
| | 50 | | | | 10 | 8<br>6<br>6 | 12 | | | | | | | | |
| | 55 | | | | | | | | | | | | | | |

*(continued)*

Department of Transportation
Division of Engineering Services
Geotechnical Services
Office of Geotechnical Design - South 1

| REPORT TITLE | | | | HOLE ID |
|---|---|---|---|---|
| **BORING RECORD** | | | | **A-20-002** |
| DIST. | COUNTY | ROUTE | POSTMILE | PROJECT ID |
| **07** | **LA** | **71** | **0.9/0.9** | **0716000113** |
| PROJECT OR BRIDGE NAME | | | | |
| **Ridgeway Street UC @ SR71** | | | | |
| BRIDGE NUMBER | PREPARED BY | | DATE | SHEET |
| **53-2052** | **D. Wathugala** | | **5-22-20** | **2 of 4** |

5 BR - STANDARD A-20-002_6.GPJ CALTRANS LIBRARY (FEB 2013).GLB 5/22/20

| ELEVATION (ft) | DEPTH (ft) | Material Graphics | DESCRIPTION | Sample Location | Sample Number | Blows per 6 in. | Blows per foot | Recovery (%) | RQD (%) | Moisture Content (%) | Dry Unit Weight (pcf) | Shear Strength (tsf) | Drilling Method | Casing Depth | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 55 | | Well-graded SAND (SW); medium dense; dry; white-light gray. | | 11 | 7<br>12<br>15 | 27 | | | | | | | | |
| | 56 | | SILT with SAND (ML); brown; dry. | | | | | | | | | | | | |
| | 57 | | | | | | | | | | | | | | |
| | 58 | | | | | | | | | | | | | | |
| | 59 | | SILTY SAND (SM); dense; brown; moist. | | | | | | | | | | | | |
| | 60 | | | | 12 | 12<br>19<br>23 | 42 | | | | | | | | |
| | 61 | | | | | | | | | | | | | | |
| | 62 | | | | | | | | | | | | | | At 62' a Bulk Sample was collected. |
| | 63 | | | | | | | | | | | | | | |
| | 64 | | | | | | | | | | | | | | Chattering. |
| | 65 | | | | 13 | 9<br>15<br>20 | 35 | | | | | | | | |
| | 66 | | | | | | | | | | | | | | |
| | 67 | | | | | | | | | | | | | | |
| | 68 | | | | | | | | | | | | | | |
| | 69 | | SANDY elastic SILT (MH); very stiff; dark brown; moist; pp=3.5 tsf. | | | | | | | | | | | | Chattering. |
| | 70 | | SANDY lean CLAY (CL); very stiff; black; moist; pp=3.0 tsf. | | 14 | 5<br>5<br>8 | 13 | | | | | | | | |
| | 71 | | | | | | | | | | | | | | |
| | 72 | | | | | | | | | | | | | | |
| | 73 | | | | | | | | | | | | | | |
| | 74 | | | | | | | | | | | | | | Chattering. |
| | 75 | | | | 15 | 5<br>6<br>11 | 17 | | | | | | | | |
| | 76 | | SANDY lean CLAY with GRAVEL (CL); very stiff; gray; moist; pp=3.0 tsf. | | | | | | | | | | | | |
| | 77 | | | | | | | | | | | | | | |
| | 78 | | | | | | | | | | | | | | Chattering. |
| | 79 | | SANDY lean CLAY (CL); stiff; black; moist; pp=1.5 tsf. | | | | | | | | | | | | |
| | 80 | | Well-graded SAND with GRAVEL (SW); very dense; gray; dry. | | 16 | 30<br>50<br>- | -50 | | | | | | | | |
| | 81 | | | | | | | | | | | | | | |
| | 82 | | | | | | | | | | | | | | At 82' a Bulk Sample was collected. |
| | 83 | | | | | | | | | | | | | | Chattering. |
| | 84 | | Elastic SILT (MH). | | | | | | | | | | | | |
| | 85 | | | | | | | | | | | | | | |

*(continued)*

5 BR - STANDARD A-20-002_6.GPJ CALTRANS LIBRARY (FEB 2013).GLB 5/22/20

Department of Transportation
Division of Engineering Services
Geotechnical Services
Office of Geotechnical Design - South 1

| REPORT TITLE | | | | HOLE ID |
|---|---|---|---|---|
| **BORING RECORD** | | | | **A-20-002** |
| DIST. | COUNTY | ROUTE | POSTMILE | PROJECT ID |
| **07** | **LA** | **71** | **0.9/0.9** | **0716000113** |
| PROJECT OR BRIDGE NAME | | | | |
| **Ridgeway Street UC @ SR71** | | | | |
| BRIDGE NUMBER | PREPARED BY | | DATE | SHEET |
| **53-2052** | **D. Wathugala** | | **5-22-20** | **3 of 4** |

| ELEVATION (ft) | DEPTH (ft) | Material Graphics | DESCRIPTION | Sample Location | Sample Number | Blows per 6 in. | Blows per foot | Recovery (%) | RQD (%) | Moisture Content (%) | Dry Unit Weight (pcf) | Shear Strength (tsf) | Drilling Method | Casing Depth | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 85 | | Well-graded SAND with SILT and GRAVEL (SW-SM); dense; moist; gray-reddish brown. | | 17 | 8<br>11<br>35 | 46 | | | | | | | | |
| | 86 | | | | | | | | | | | | | | |
| | 87 | | | | | | | | | | | | | | |
| | 88 | | | | | | | | | | | | | | Chattering. |
| | 89 | | SILTY SAND (SM); very dense; moist; few GRAVEL ; gray-reddish brown. | | | | | | | | | | | | |
| | 90 | | | | 18 | 50<br>-<br>- | | | | | | | | | 1.5" GRAVEL at tip. |
| | 91 | | | | | | | | | | | | | | |
| | 92 | | | | | | | | | | | | | | |
| | 93 | | | | | | | | | | | | | | |
| | 94 | | Well-graded SAND with SILT and GRAVEL (SW-SM); very dense; gray; dry; few GRAVEL. | | | | | | | | | | | | |
| | 95 | | | | 19 | 17<br>41<br>47 | 88 | | | | | | | | 1" GRAVEL at top. |
| | 96 | | | | | | | | | | | | | | Could not advance the auger. |
| | 97 | | Bottom of borehole at 96.5 ft bgs | | | | | | | | | | | | |
| | 98 | | This Boring Record was developed in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (2010) except as noted on the Soil or Rock Legend or below. | | | | | | | | | | | | |
| | 99 | | | | | | | | | | | | | | |
| | 100 | | | | | | | | | | | | | | |
| | 101 | | | | | | | | | | | | | | |
| | 102 | | | | | | | | | | | | | | |
| | 103 | | | | | | | | | | | | | | |
| | 104 | | | | | | | | | | | | | | |
| | 105 | | | | | | | | | | | | | | |
| | 106 | | | | | | | | | | | | | | |
| | 107 | | | | | | | | | | | | | | |
| | 108 | | | | | | | | | | | | | | |
| | 109 | | | | | | | | | | | | | | |
| | 110 | | | | | | | | | | | | | | |
| | 111 | | | | | | | | | | | | | | |
| | 112 | | | | | | | | | | | | | | |
| | 113 | | | | | | | | | | | | | | |
| | 114 | | | | | | | | | | | | | | |
| | 115 | | | | | | | | | | | | | | |

Department of Transportation
Division of Engineering Services
Geotechnical Services
Office of Geotechnical Design - South 1

| REPORT TITLE | | | | HOLE ID |
|---|---|---|---|---|
| **BORING RECORD** | | | | **A-20-002** |
| DIST. | COUNTY | ROUTE | POSTMILE | PROJECT ID |
| **07** | **LA** | **71** | **0.9/0.9** | **0716000113** |
| PROJECT OR BRIDGE NAME | | | | |
| **Ridgeway Street UC @ SR71** | | | | |
| BRIDGE NUMBER | PREPARED BY | | DATE | SHEET |
| **53-2052** | **D. Wathugala** | | **5-22-20** | **4 of 4** |

5 BR - STANDARD A-20-002_6.GPJ CALTRANS LIBRARY (FEB 2013).GLB 5/22/20

Geosyntec consultants

# APPENDIX B – Geophysical Survey Report

SubSurface Surveys
& Associates, Inc.
An Applied Geophysical Company

2075 Corte Del Nogal, Suite W
Carlsbad, CA 92011

Office: (760) 476-0492
Fax: (760) 476-0493

March 20, 2024

Project/Invoice No. 24-147

**Geosyntec**
3530 Hyland Ave, Suite 100
Costa Mesa, California

Attn: **Brian Gin**

Re: Geophysical Investigation Report, 690 Ridgeway Street & Laurel Avenue, Pomona, CA

This report is to present the results of our geophysical survey carried out at 690 Ridgeway Street & Laurel Avenue, Pomona, CA (Figure 1). The survey was performed on March 15, 2024, and its purpose was to detect and delineate, insofar as possible, all pipes, conduits, utilities, and other underground drilling obstructions in the immediate vicinity of two (2) proposed boreholes and one alternate drilling location.

A combination of electromagnetic induction (EM), magnetometry, ground penetrating radar (GPR), and utility locators with line tracing capabilities were brought to the field in anticipation of use.

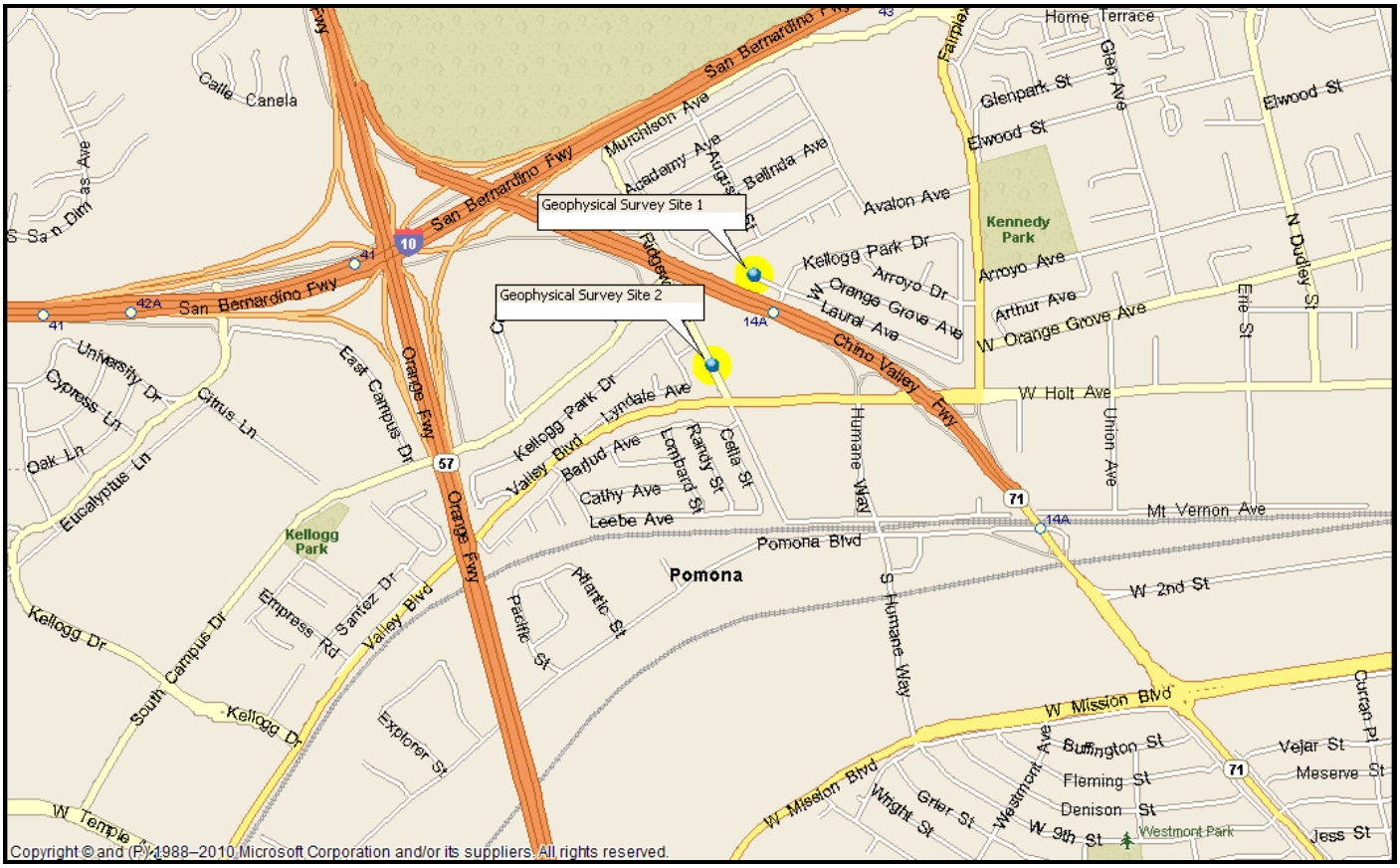



**FIGURE 1. Site location map.**

**Survey Design** – The locations of the proposed boreholes were indicated in the field by the client.

For this particular site and for all survey objectives the best use of time was achieved by systematically free-traversing with the instruments while simply monitoring them manually, continuously, and in real-time to determine which responses were significant and due to true subsurface targets, and which were due to other non-target or above-ground features and must be ignored (examples being false GPR anomalies from uneven surfaces). In these situations, the free-traversing method is advantageous in that it allows for relatively quick detection of true anomalous objects which, in turn, facilitates the opportunity to immediately reinvestigate them further for clarification and confirmation. In this manner, the EM device, magnetic gradiometer, and GPR were traversed systematically over and around each borehole in multiple, organized directions. Additional traverses were always taken for detailing and confirmation where anomalous conditions were found.

In addition, the line tracers were used to impress signals onto pipes, generally through accessible risers and tracer wires when present, to delineate the lines' locations and orientations. The instruments were also used in passive mode, configured to detect 60 Hz electrical signals and other common radio-frequency signals found in active electrical and communication lines.

A Fischer TW-6 M-Scope was used for the EM sampling. A Sensors & Software Noggin Ground Penetrating Radar unit with a 500 MHz antenna produced the radar images. The magnetic gradiometer was a Schonstedt GA-52, and a RD 8200 and RIDGID SR-60 SeekTech utility locator rounded out the tools applied.

**Brief Description of the Geophysical Methods Applied** – The TW-6 M-Scope device energizes the ground by producing an alternating primary magnetic field with AC current in a transmitting coil. If conducting materials are within the area of influence of the primary field, AC eddy currents are induced to flow in the conductors. A receiving coil senses the secondary magnetic field produced by these eddy currents, and outputs the response as anomalous conditions. The strength of the secondary field is a function of the conductivity of the object; say a pipe, tank or cluster of drums, its size, and its depth and position relative to the instrument's two coils. Conductive objects, to a depth of approximately 7 feet below ground surface (bgs) for the M-Scope are sensed. The device is also somewhat focused; that is, it is more sensitive to conductors below the instrument than they are to conductors off to the side.

The magnetic gradiometer has two flux gate magnetic fixed sensors that are passed closely to and over the ground. When not in close proximity to a magnetic object, that is, only in the earth's field, the instrument emits a sound signal at a low frequency. When the instrument passes over a buried iron or steel object, so that locally there is a high magnetic gradient, the frequency of the emitted sound increases. The frequency is a function of the gradient between the two sensors.

The GPR instrument beams energy into the ground from its transducer/antenna, in the form of electromagnetic waves. A portion of this energy is reflected back to the antenna at a boundary in the subsurface across which there is an electrical contrast. The instrument produces a continuous record of the reflected energy as the antenna is traversed across the ground surface. The greater the electrical contrast, the higher the amplitude of the returned energy. The radar wave travels at a velocity unique to the material properties of the ground being investigated, and when these velocities are known, the two-way travel times can be converted to depth. The depth of penetration and image resolution produced are a function of ground electrical conductivity and dielectric constant.

The line locator is used to passively detect energized high voltage electric lines and electrical conduit (50-60 Hz), VLF signals (14-22 kHz), as well as to actively trace other utilities. Where risers are present, the utility locator transmitter can be connected directly to the object, and a signal (9.8-82 kHz) is sent traveling along the conductor, pipe, conduit, etc. In the absence of a riser, the transmitter can be used to impress an input signal on the utility by induction. In either case, the receiver unit is tuned to the input signal, and is used to actively trace the signal along the pipe's surface projection.

**Interpretation and Conclusions** – The interpretation took place in real time as the survey progressed, and accordingly, the findings of our investigation were marked on the ground cover at the site with spray paint, were reported directly to the client's representative, and are further documented with site photographs of the borehole locations (Figures 2-3). Note that the borehole locations in each photograph are labeled according to Geosyntec's numbering scheme and are presented in alphanumeric order.

Items detected within the survey areas were marked in coordinated standard colors including red for electric, green for sewer or storm drain, blue for water, yellow for natural gas, and white for utilities of unknown type. At the conclusion of the survey, the boreholes were positioned in order to provide adequate clearance from detected obstructions. In their final locations, they were marked in white with a yellow "SSS", to indicate that they had been checked by company personnel.

**General Limitations, Cautions, and Further Recommendations** - It should be understood that nearly all work sites possess conditions or configurations limiting the effectiveness of both geophysical instruments and the surveying techniques in which they are deployed. Additionally, when such is not performing optimally it can often times occur unknowing to the instrument operator. Consequently, the detection of buried objects in all circumstances **cannot be guaranteed**. Such geophysical limitations are numerous and difficult to predict beforehand, but may include such things as rebar-reinforced ground cover or aboveground metallic structures interfering with metal detection, abrupt changes in ground cover type disrupting radar signal, aboveground obstacles preventing full instrument traverses or restricting traverses to one direction only, nearby powerlines or EM transmitters interfering with instrument electronics, highly conductive background soil conditions limiting GPR penetration, non-metallic targets with geo-electrical properties similar to soil, nearby buried objects shielding true targets from detection, tracing signal jumping from the target pipe to nearby non-target conduits, and inaccessible risers, cleanouts, valve boxes, and manholes. If one or more geophysical instrument is rendered ineffective and cannot be utilized, the quality of the survey can be somewhat degraded.

For the above reasons, and in the interest of maximum safety, we encourage our clients to take advantage of Underground Service Alert (USA), Dig Alert, or other similar services, when possible. Furthermore, we recommend hand-auguring and the use of a drilling method known as air knifing or vacuum extraction, when feasible or if applicable to this project. These methods may significantly limit damage to underground pipes, conduits, and utilities that might not have been detectable during this survey. Please bear in mind, that geophysical surveying is only one of several levels of protection that is available to our clients.

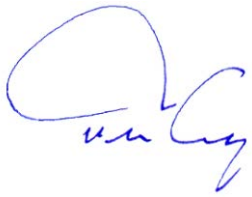
SubSurface Surveys may include maps in some reports. While they are an accurate general representation of the site and our findings, they are not of engineering quality (i.e., measured and mapped by a licensed land surveyor).

SubSurface Surveys and Associates makes no guarantee either expressed or implied regarding the accuracy

of the findings and interpretations present. And, in no event will SubSurface Surveys and Associates be liable for any direct, indirect, special, incidental, or consequential damages resulting from interpretations and opinions presented herewith.

All data generated on this project are in confidential file in this office and are available for review by authorized persons at any time. The opportunity to participate in this investigation is very much appreciated. Please call, if there are questions.

William Donnelly
Staff Geophysicist, SubSurface Surveys



Travis Crosby
Senior Geophysicist, SubSurface Surveys
CA State Geophysics Registration GP1044

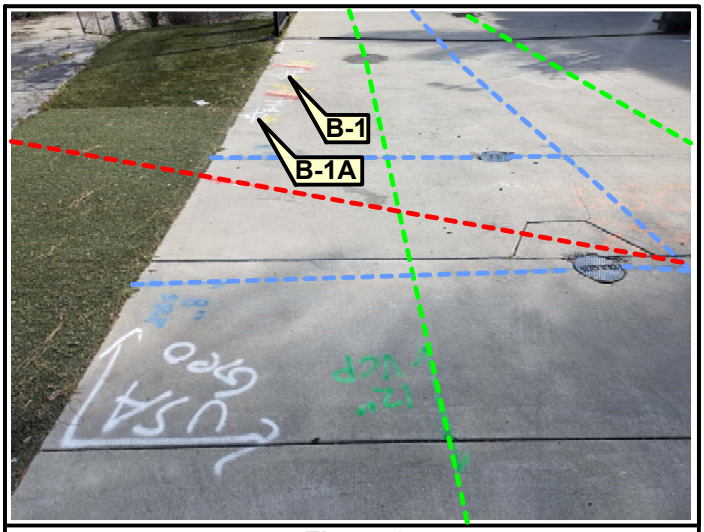



*Figure 2*

*Figure 3*

**No Photo**

**No Photo**

**No Photo**

**No Photo**

| | | | |
|---|---|---|---|
| Sub Surface Surveys | SITE: **690 Ridgeway Street & Laurel Avenue Pomona, CA** | TITLE: **Borehole Photographs** | SURVEY DATE: **March 15, 2024** |
| | | PREPARED FOR: **Geosyntec** | SSS PROJECT NO: **24-147** |

# APPENDIX C – Boring Logs

Geosyntec consultants
3530 Hyland Ave
Suite 100
Costa Mesa, CA 92626
Tel: (714) 969-0800
Fax: (714) 969-0820

**PROJECT** San Jose Creek Multi-Use Bikeway
**PROJECT LOCATION** Pomona, CA
**PROJECT NUMBER** SC1303

# KEY SHEET - CLASSIFICATIONS AND SYMBOLS

GS FORM: KEY/SYMBOLS 01/04

## EMPIRICAL CORRELATIONS WITH STANDARD PENETRATION RESISTANCE N60 VALUES *

| | N60 VALUE * (BLOWS/FT) | CONSISTENCY | UNCONFINED COMPRESSIVE STRENGTH (TONS/SQ FT) |
|---|---|---|---|
| FINE GRAINED SOILS | 0 - 2 | VERY SOFT | <0.25 |
| | 3 - 4 | SOFT | 0.25 - 0.50 |
| | 5 - 8 | FIRM | 0.50 - 1.00 |
| | 9 - 15 | STIFF | 1.00 - 2.00 |
| | 16 - 30 | VERY STIFF | 2.00 - 4.00 |
| | 31 - 50 | HARD | >4.00 |
| | >50 | VERY HARD | |

| | N60 VALUE * (BLOWS/FT) | RELATIVE DENSITY |
|---|---|---|
| COARSE GRAINED SOILS | 0 - 4 | VERY LOOSE |
| | 5 - 10 | LOOSE |
| | 11 - 30 | MEDIUM DENSE |
| | 31 - 50 | DENSE |
| | >50 | VERY DENSE |

* ASTM D 1586; NUMBER OF BLOWS OF 140 POUND HAMMER FALLING 30 INCHES TO DRIVE A 2 IN. O.D., 1.4 IN. I.D. SAMPLER ONE FOOT, CORRECTED FOR HAMMER EFFICIENCY.

## UNIFIED SOIL CLASSIFICATION AND SYMBOL CHART

| MAJOR DIVISIONS | | | SYMBOLS | DESCRIPTIONS |
|---|---|---|---|---|
| COARSE GRAINED SOILS — MORE THAN 50% OF MATERIAL COARSER THAN NO. 200 SIEVE SIZE | GRAVEL AND GRAVELLY SOILS — MORE THAN 50% OF COARSE FRACTION RETAINED ON NO.4 SIEVE | CLEAN GRAVELS — LITTLE OR NO FINES | GW | WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES |
| | | | GP | POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES |
| | | GRAVELS WITH FINES — APPRECIABLE AMOUNT OF FINES | GM | SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES |
| | | | GC | CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES |
| | SAND AND SANDY SOILS — MORE THAN 50% OF COARSE FRACTION PASSING NO.4 SIEVE | CLEAN SANDS — LITTLE OR NO FINES | SW | WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES |
| | | | SP | POORLY GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES |
| | | SANDS WITH FINES — APPRECIABLE AMOUNT OF FINES | SM | SILTY SANDS, SAND-SILT MIXTURES |
| | | | SC | CLAYEY SANDS, SAND-CLAY MIXTURES |
| FINE GRAINED SOILS — MORE THAN 50% OF MATERIAL FINER THAN NO. 200 SIEVE SIZE | SILTS AND CLAYS | LIQUID LIMIT LESS THAN 50 | ML | INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY |
| | | | CL | INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS |
| | | | OL | ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY |
| | SILTS AND CLAYS | LIQUID LIMIT GREATER THAN 50 | MH | INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILT |
| | | | CH | INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS |
| | | | OH | ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS |
| HIGHLY ORGANIC SOILS | | | PT | PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENT |

NOTE: DUAL SYMBOLS USED FOR BORDERLINE CLASSIFICATIONS

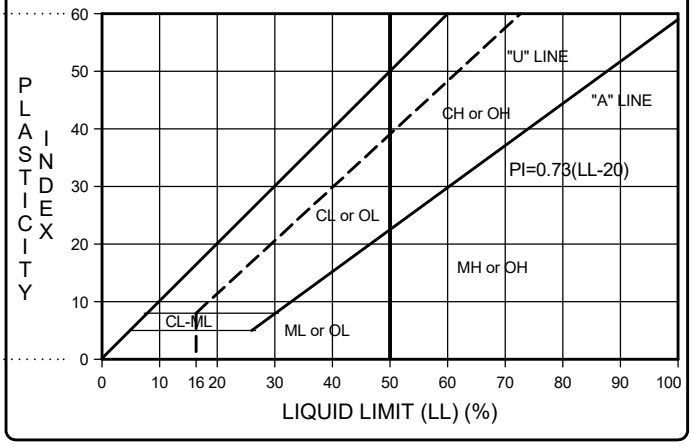
## PARTICLE SIZE IDENTIFICATION

| USCS (SOILS ONLY) * | | SEDIMENTARY (ROCK ONLY) | |
|---|---|---|---|
| BOULDER | >300 mm | BOULDER | >256 mm |
| COBBLE | 75 - 300 mm | COBBLE | 64 - 256 mm |
| GRAVEL: COARSE | 20 - 75 mm | PEBBLE | 4 - 64 mm |
| GRAVEL: FINE | 4.75 - 20 mm | GRANULE | 2 - 4 mm |
| | | SAND: V. COARSE | 1 - 2 mm |
| SAND: COARSE | 2 - 4.75 mm | SAND: COARSE | 0.5 - 1 mm |
| SAND: MEDIUM | 0.42 - 2 mm | SAND: MEDIUM | 0.25 - 0.5 mm |
| SAND: FINE | 0.074 - 0.42 mm | SAND: FINE | 0.125 - 0.25 mm |
| | | SAND: V. FINE | 0.063 - 0.125 mm |
| SILT/CLAY | <0.074 mm | SILT | 0.004 - 0.063 mm |
| | | CLAY | <0.004 mm |

* WELL GRADED - HAVING WIDE RANGE OF GRAIN SIZES AND APPRECIABLE AMOUNTS OF ALL INTERMEDIATE PARTICLE SIZES
* POORLY GRADED - PREDOMINANTLY ONE GRAIN SIZE, OR HAVING A RANGE OF SIZES WITH SOME INTERMEDIATE SIZES MISSING

PERCENTAGE OF PARTICLE TYPE IN DECREASING ORDER OF PARTICLE SIZE (GRAVEL,SAND,FINES), BASED ON VISUAL OBSERVATION

## PLASTICITY CHART




## OTHER MATERIAL SYMBOLS

- Conglomerate
- Sandstone
- Silty Sandstone
- Clayey Sandstone
- Sandy Siltstone
- Siltstone
- Claystone
- Clayey Siltstone/ Silty Claystone
- Sandy Claystone
- Granitic/Intrusive
- Volcanic/Extrusive
- Metamorphic
- Limestone
- Dolomite
- Glacial Till
- Landslide Debris
- Marker Bed
- Artificial Fill
- Refuse
- Concrete/Asphalt

## WELL SYMBOLS

- CONCRETE
- GROUT
- BENTONITE SEAL
- TRANSITION SAND
- SAND PACK
- GRAVEL PACK
- NATIVE/SLUFF
- CENTRALIZER

## SAMPLE TYPE AND OTHER SYMBOLS

- BULK SAMPLE
- STANDARD PENETRATION TEST
- MODIFIED CALIFORNIA SAMPLE
- CORE SAMPLE
- SHELBY TUBE
- DRIVE SAMPLE

- Water Level at Time Drilling, or as Shown
- Static Water Level
- Pump Inlet
- Loss of Drilling Fluid
- MSL: Mean Sea Level
- AGS: Above Ground Surface
- BGS: Below Ground Surface
- BTOC: Below Top of Casing
- HSA: Hollow Stem Auger

Geosyntec consultants
3530 Hyland Ave
Suite 100
Costa Mesa, CA 92626
Tel: (714) 969-0800
Fax: (714) 969-0820

GS FORM: GEOTECH2 01/04

# BOREHOLE LOG

**BORING** B-1 **SHEET** 1 OF 2
**START DRILL DATE** 04/15/2024 **ELEVATION DATA:**
**FINISH DRILL DATE** 04/15/2024 **GROUND SURF.** 768
**LOCATION** Pomona, CA **DATUM** AMSL
**PROJECT** San Jose Creek Multi-Use Bikeway
**NUMBER** SC1303

DESCRIPTION: 1) Soil Name (USCS) 2) Color 3) Moisture 4) Grain Size 5) Percentage [Gravel,Sand,Fines] 6) Density/Consistency 7) Plasticity 8) Other (Mineral Content, Discoloration, Odor, etc.)

COMMENTS: 1) Rig Behavior 2) Air Monitoring 3) Pocket Pen 4) Tor Vane

| DEPTH (ft-bgs) | ELEVATION (ft) | DESCRIPTION | GRAPHIC LOG | SAMPLE NO. | TYPE | BLOWS PER 6" | N VALUE | RECOVERY (%) | PID READING (ppm) | TIME (00:00) | COMMENTS | DRY DENSITY (pcf) | MAX. DRY DENSITY (pcf) | PERCENT FINES (%) | PERCENT GRAVEL (%) | MOIST. CONTENT (%) | OPT. MOIST. CONTENT (%) | ATTERBERG LIMITS: LIQUID LIMIT | ATTERBERG LIMITS: PLASTIC LIMIT | ATTERBERG LIMITS: PLASTICITY INDEX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 6" Concrete | | | | | | | | | | | | | | | | | | |
| | 767 | **Fill**:Silty SAND (SM): reddish brown; moist; fine to medium grained sand; medium dense; with gravel. | | BB-1 | | | | | | | | | | | | | | | | |
| | 766 | | | | | | | | | | Piece of concrete blocking hand augur, advanced HSA with concrete bit slowly. Had to use crowbar in upper 2'-3' during hand auguring. Turned HSA to break up rocks for hand augured. | | | | | | | | | | |
| | 765 | 1" dia. piece of concrete. | | | | | | | | | | | | | | | | | | |
| | 764 | 1" dia piece of asphalt. | | | | | | | | | | | | | | | | | | |
| 5 | 763 | | | S-1 | | 5<br>6<br>10 | 16 | 100 | | 9:38 | Turn HSA to break up rocks for hand augured. | | | | | | | | | |
| | 762 | | | | | | | | | | | | | | | | | | | |
| | 761 | | | S-2 | | 16<br>50/4" | | 83 | | | Grinding noise from rig. | | | | | | | | | |
| | 760 | 2 1/2" greyish rock piece in rings. | | | | | | | | | | | | | | | | | | |
| | 759 | | | S-3 | | 16<br>8<br>7 | 15 | 0 | | | | | | | | | | | | |
| 10 | 758 | **Native**:Sandy Silty CLAY (CL-ML): greyish brown; moist; fine grained sand; firm; with gravel. | | S-4 | | 4<br>5<br>7 | | 100 | | | | 105.3 | | 68.0 | | 19.9 | | 27 | 20 | 7 |
| | 757 | | | | | | | | | | | | | | | | | | | |
| | 756 | Trace gravel. | | S-5 | | 2<br>3<br>7 | 9 | 100 | | | | | | | | | | | | |
| | 755 | | | | | | | | | | | | | | | | | | | |
| | 754 | | | | | | | | | | | | | | | | | | | |
| 15 | 753 | No gravel | | S-6 | | 5<br>8<br>11 | | 72 | | | | | | | | | | | | |
| | 752 | | | | | | | | | | | | | | | | | | | |
| | 751 | | | | | | | | | | | | | | | | | | | |
| | 750 | | | | | | | | | | | | | | | | | | | |
| | 749 | | | | | | | | | | | | | | | | | | | |
| 20 | 748 | | | | | | | | | | | | | | | | | | | |
| | 747 | SILT with sand (ML): light brown; moist; low plasticity; firm; with silt seams. | | S-7 | | 2<br>3<br>5 | 8 | 100 | | 10:10 | | | | | | | | 33 | 25 | 8 |
| | 746 | | | | | | | | | | | | | | | | | | | |
| | 745 | | | | | | | | | | | | | | | | | | | |
| | 744 | | | | | | | | | | | | | | | | | | | |
| 25 | 743 | | | S-8 | | 4<br>7<br>11 | | 94 | | | | 96.5 | | 76.1 | | 24.7 | | | | |
| | 742 | | | | | | | | | | | | | | | | | | | |
| | 741 | | | | | | | | | | | | | | | | | | | |
| | 740 | | | | | | | | | | | | | | | | | | | |
| | 739 | | | | | | | | | | | | | | | | | | | |
| 30 | 738 | | | | | | | | | | | | | | | | | | | |

**CONTRACTOR** BC2 Environmental
**EQUIPMENT** CME-95
**DRILL MTHD** HSA
**DIAMETER** 8- in.
**LOGGER** B. Gin
**REVIEWER** J. Kocijan P.E., G.E.

**LAT.:** 34.063986
**LONG.:** 117.797060
**COORDINATE SYSTEM:** WGS84

**NOTES:** Borehole backfilled with grout and patched with cement. Hammer ETR is 84.4% , measured on 5/4/2024. Logging of soils was completed in general accordance with ASTM D2488 and ASTM D1586. Coordinates and surface elevations were estimated from Google Earth.

SEE KEY SHEET FOR SYMBOLS AND ABBREVIATIONS

Geosyntec consultants
3530 Hyland Ave
Suite 100
Costa Mesa, CA 92626
Tel: (714) 969-0800
Fax: (714) 969-0820

GS FORM: GEOTECH2 01/04

# BOREHOLE LOG

**BORING** B-1 **SHEET** 2 OF 2
**START DRILL DATE** 04/15/2024 **ELEVATION DATA:**
**FINISH DRILL DATE** 04/15/2024 **GROUND SURF.** 768
**LOCATION** Pomona, CA **DATUM** AMSL
**PROJECT** San Jose Creek Multi-Use Bikeway
**NUMBER** SC1303

DESCRIPTION
1) Soil Name (USCS) 6) Density/Consistency
2) Color 7) Plasticity
3) Moisture 8) Other (Mineral Content, Discoloration, Odor, etc.)
4) Grain Size
5) Percentage [Gravel,Sand,Fines]

COMMENTS
1) Rig Behavior
2) Air Monitoring
3) Pocket Pen
4) Tor Vane

| DEPTH (ft-bgs) | ELEVATION (ft) | DESCRIPTION | GRAPHIC LOG | SAMPLE NO. | TYPE | BLOWS PER 6" | N VALUE | RECOVERY (%) | PID READING (ppm) | TIME (00:00) | COMMENTS | LAB: DRY DENSITY (pcf) | LAB: MAX. DRY DENSITY (pcf) | LAB: PERCENT FINES (%) | LAB: PERCENT GRAVEL (%) | LAB: MOIST. CONTENT (%) | LAB: OPT. MOIST. CONTENT (%) | LAB: ATTERBERG LIMITS: LIQUID LIMIT | LAB: ATTERBERG LIMITS: PLASTIC LIMIT | LAB: ATTERBERG LIMITS: PLASTICITY INDEX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 737 | | | S-9 | | 2<br>2<br>7 | 9 | 100 | | 10:20 | | | | 80.9 | | | | | | |
| | 736 | | | | | | | | | | | | | | | | | | | |
| | 735 | | | | | | | | | | | | | | | | | | | |
| | 734 | | | | | | | | | | | | | | | | | | | |
| 35 | 733 | Sandy lean CLAY (CL): light brown; moist; fine grained sand; low plasticity; very stiff. | | S-10 | | 4<br>6<br>10 | | 100 | | 10:33 | PP=2.5 tsf and 2.0 tsf. | | | | | | | | | |
| | 732 | | | | | | | | | | | | | | | | | | | |
| | 731 | | | | | | | | | | | | | | | | | | | |
| | 730 | | | | | | | | | | | | | | | | | | | |
| | 729 | | | | | | | | | | | | | | | | | | | |
| 40 | 728 | Lean CLAY(CL): orangish brown; moist; low plasticity; very stiff. | | S-11 | | 5<br>7<br>9 | 16 | 100 | | | | | | | | | | | | |
| | 727 | | | | | | | | | | | | | | | | | | | |
| | 726 | | | | | | | | | | | | | | | | | | | |
| | 725 | | | | | | | | | | | | | | | | | | | |
| | 724 | | | | | | | | | | | | | | | | | | | |
| 45 | 723 | Lean CLAY (CL): dark grey; moist; medium to high plasticity, very hard, mottled blue flecks in sample. | | S-12A | | 3<br>7 | | 100 | | | PP = 1.5 tsf. | | | | | | | 43 | 23 | 20 |
| | 722 | | | S-12 | | 11 | | | | | | 91.2 | | | | 24.3 | | 33 | 22 | 11 |
| | 721 | | | | | | | | | | | | | | | | | | | |
| | 720 | | | | | | | | | | | | | | | | | | | |
| | 719 | | | | | | | | | | | | | | | | | | | |
| 50 | 718 | Lean CLAY (CL): light grey; moist; low plasticity, hard. | | S-13 | | 5<br>21<br>16 | 37 | 100 | | | | | | | | | | 33 | 22 | 11 |
| | 717 | Poorly-graded SAND (SP): light grey, moist, coarse grain, dense. | | | | | | | | | | | | | | | | | | |
| | 716 | Borehole terminated at 51'6" feet below the ground surface. No groundwater encountered. | | | | | | | | | | | | | | | | | | |
| | 715 | | | | | | | | | | | | | | | | | | | |
| | 714 | | | | | | | | | | | | | | | | | | | |
| 55 | 713 | | | | | | | | | | | | | | | | | | | |
| | 712 | | | | | | | | | | | | | | | | | | | |
| | 711 | | | | | | | | | | | | | | | | | | | |
| | 710 | | | | | | | | | | | | | | | | | | | |
| | 709 | | | | | | | | | | | | | | | | | | | |
| 60 | 708 | | | | | | | | | | | | | | | | | | | |

**CONTRACTOR** BC2 Environmental
**EQUIPMENT** CME-95
**DRILL MTHD** HSA
**DIAMETER** 8- in.
**LOGGER** B. Gin
**REVIEWER** J. Kocijan P.E., G.E.

**LAT.:** 34.063986
**LONG.:** 117.797060
**COORDINATE SYSTEM:** WGS84

**NOTES:** Borehole backfilled with grout and patched with cement. Hammer ETR is 84.4% , measured on 5/4/2024. Logging of soils was completed in general accordance with ASTM D2488 and ASTM D1586. Coordinates and surface elevations were estimated from Google Earth.

SEE KEY SHEET FOR SYMBOLS AND ABBREVIATIONS

Geosyntec consultants
3530 Hyland Ave
Suite 100
Costa Mesa, CA 92626
Tel: (714) 969-0800
Fax: (714) 969-0820

GS FORM: GEOTECH2 01/04

# BOREHOLE LOG

**BORING** B-2 **SHEET** 1 OF 2
**START DRILL DATE** 04/16/2024 **ELEVATION DATA:**
**FINISH DRILL DATE** 04/16/2024 **GROUND SURF.** 775
**LOCATION** Pomona, CA **DATUM** AMSL
**PROJECT** San Jose Creek Multi-Use Bikeway
**NUMBER** SC1303

DESCRIPTION: 1) Soil Name (USCS) 2) Color 3) Moisture 4) Grain Size 5) Percentage [Gravel,Sand,Fines] 6) Density/Consistency 7) Plasticity 8) Other (Mineral Content, Discoloration, Odor, etc.)

COMMENTS: 1) Rig Behavior 2) Air Monitoring 3) Pocket Pen 4) Tor Vane

| DEPTH (ft-bgs) | ELEVATION (ft) | DESCRIPTION | GRAPHIC LOG | SAMPLE NO. | TYPE | BLOWS PER 6" | N VALUE | RECOVERY (%) | PID READING (ppm) | TIME (00:00) | COMMENTS | DRY DENSITY (pcf) | MAX. DRY DENSITY (pcf) | PERCENT FINES (%) | PERCENT GRAVEL (%) | MOIST. CONTENT (%) | OPT. MOIST. CONTENT (%) | ATTERBERG LIMITS: LIQUID LIMIT | ATTERBERG LIMITS: PLASTIC LIMIT | ATTERBERG LIMITS: PLASTICITY INDEX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 6" Asphalt | | | | | | | | | | | | | | | | | | |
| | 774 | **Fill**:Silty SAND (SM): dark reddish brown; moist; fine to medium grained sand; loose. | | BB-1 | | | | | | | | | | | | | | | | |
| | 773 | | | | | | | | | | | | | | | | | | | |
| | 772 | | | | | | | | | | | | | | | | | | | |
| | 771 | | | | | | | | | | | | | | | | | | | |
| 5 | 770 | | | S-1 | | 4<br>4<br>5 | | | | | | | | | | | | | | |
| | 769 | | | | | | | | | | | | | | | | | | | |
| | 768 | **Native**:Clayey SAND (SC): yellowish brown; moist; fine to medium grained sand; loose. | | S-2 | | 3<br>3<br>3 | 6 | 100 | | 9:20 | | | | | | | | | | |
| | 767 | Trace gravel, approx. 1" in diameter. | | S-3 | | 5<br>8<br>10 | | 66 | | | | | | | | | | | | |
| | 766 | | | | | | | | | | | | | | | | | | | |
| 10 | 765 | No gravel. | | S-4 | | 3<br>3<br>3 | 6 | 100 | | 9:30 | | | | | | | | | | |
| | 764 | | | S-5 | | 5<br>7<br>8 | | 100 | | | | 105.4 | | | | 18.3 | | 30 | 22 | 8 |
| | 763 | | | | | | | | | | | | | | | | | | | |
| | 762 | Clayey SAND (SC): yellowish brown; moist; fine to medium grained; medium dense. | | | | | | | | | | | | | | | | | | |
| | 761 | | | | | | | | | | | | | | | | | | | |
| 15 | 760 | Becomes trace gravel. | | S-6 | | 5<br>7<br>7 | 14 | 100 | | | | | | 44.5 | | | | | | |
| | 759 | | | | | | | | | | | | | | | | | | | |
| | 758 | | | | | | | | | | | | | | | | | | | |
| | 757 | | | | | | | | | | | | | | | | | | | |
| | 756 | | | | | | | | | | | | | | | | | | | |
| 20 | 755 | No gravel. | | S-7 | | 7<br>15<br>17 | | | | | Driller only placed 11 rings into MC Sampler. | | | | | | | | | |
| | 754 | | | | | | | | | | | | | | | | | | | |
| | 753 | | | | | | | | | | | | | | | | | | | |
| | 752 | | | | | | | | | | | | | | | | | | | |
| | 751 | | | | | | | | | | | | | | | | | | | |
| 25 | 750 | | | S-8 | | 7<br>13<br>19 | 32 | 95 | | 10:19 | | | | | | | | | | |
| | 749 | | | | | | | | | | | | | | | | | | | |
| | 748 | | | | | | | | | | | | | | | | | | | |
| | 747 | | | | | | | | | | | | | | | | | | | |
| | 746 | | | | | | | | | | | | | | | | | | | |
| 30 | 745 | | | | | | | | | | | | | | | | | | | |

**CONTRACTOR** BC2 Environmental
**EQUIPMENT** CME-95
**DRILL MTHD** HSA
**DIAMETER** 8- in.
**LOGGER** B. Gin
**REVIEWER** J. Kocijan P.E., G.E.

**LAT.:** 34.064692
**LONG.:** 117.794730
**COORDINATE SYSTEM:** WGS84

**NOTES:** Borehole backfilled with grout and patched with asphalt. Hammer ETR is 84.4% , measured on 5/4/2024. Logging of soils was completed in general accordance with ASTM D2488 and ASTM D1586. Coordinates and surface elevations were estimated from Google Earth.

SEE KEY SHEET FOR SYMBOLS AND ABBREVIATIONS

Geosyntec consultants
3530 Hyland Ave
Suite 100
Costa Mesa, CA 92626
Tel: (714) 969-0800
Fax: (714) 969-0820

GS FORM: GEOTECH2 01/04

# BOREHOLE LOG

**BORING** B-2 **SHEET** 2 OF 2
**START DRILL DATE** 04/16/2024 **ELEVATION DATA:**
**FINISH DRILL DATE** 04/16/2024 **GROUND SURF.** 775
**LOCATION** Pomona, CA **DATUM** AMSL
**PROJECT** San Jose Creek Multi-Use Bikeway
**NUMBER** SC1303

| DEPTH (ft-bgs) | ELEVATION (ft) | DESCRIPTION | GRAPHIC LOG | SAMPLE NO. | TYPE | BLOWS PER 6" | N VALUE | RECOVERY (%) | PID READING (ppm) | TIME (00:00) | COMMENTS | DRY DENSITY (pcf) | MAX. DRY DENSITY (pcf) | PERCENT FINES (%) | PERCENT GRAVEL (%) | MOIST. CONTENT (%) | OPT. MOIST. CONTENT (%) | ATTERBERG LIMITS: LIQUID LIMIT | ATTERBERG LIMITS: PLASTIC LIMIT | ATTERBERG LIMITS: PLASTICITY INDEX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1) Soil Name (USCS) 6) Density/Consistency<br>2) Color 7) Plasticity<br>3) Moisture 8) Other (Mineral Content, Discoloration, Odor, etc.)<br>4) Grain Size<br>5) Percentage [Gravel,Sand,Fines] | | | | | | | | | 1) Rig Behavior<br>2) Air Monitoring<br>3) Pocket Pen<br>4) Tor Vane | | | | | | | | | |
| | 744 | Becomes trace gravel. | | S-9 | | 8<br>8<br>10 | | | | | | 91.2 | | | | 24.3 | | | | |
| | 743 | | | | | | | | | | | | | | | | | | | |
| | 742 | | | | | | | | | | | | | | | | | | | |
| | 741 | | | | | | | | | | | | | | | | | | | |
| 35 | 740 | | | S-10 | | 9<br>12<br>8 | 20 | 100 | | 10:32 | | | | | | | | | | |
| | 739 | | | | | | | | | | | | | | | | | | | |
| | 738 | Becomes reddish brown and yellowish brown. | | | | | | | | | | | | | | | | | | |
| | 737 | | | | | | | | | | | | | | | | | | | |
| | 736 | | | | | | | | | | | | | | | | | | | |
| 40 | 735 | | | S-11 | | | | | | | | | | 73.7 | | | | 32 | 21 | 11 |
| | 734 | Lean CLAY with sand (CL): yellowish and grayish brown, moist, fine grained sand, low plasticity. | | | | | | | | | | | | | | | | | | |
| | 733 | | | | | | | | | | | | | | | | | | | |
| | 732 | | | | | | | | | | | | | | | | | | | |
| | 731 | | | | | | | | | | | | | | | | | | | |
| 45 | 730 | | | S-12 | | 12<br>25<br>20 | 45 | 100 | | 11:00 | | | | 11.7 | | | | | | |
| | 729 | Poorly graded sand with silt (SP): yellowish and reddish brown; moist, medium to coarse grained sand; dense, with gravel. | | | | | | | | | | | | | | | | | | |
| | 728 | Very dense, trace gravel | | S-13 | | 24<br>34<br>30 | | 100 | | 11:22 | | | | | | | | | | |
| | 727 | | | | | | | | | | | | | | | | | | | |
| | 726 | Becomes loose. | | S-14 | | 4<br>4<br>6 | 10 | 100 | | | | | | | | | | | | |
| 50 | 725 | Clayey SAND (SC): gray; moist, fine to medium grained sand; medium dense; with gravel about 1" dia. | | S-15 | | 5<br>7<br>24 | | | | 11:40 | | | | | | | | | | |
| | 724 | | | | | | | | | | | | | | | | | | | |
| | 723 | Borehole terminated at 51' 6" feet below the ground surface. No groundwater encountered. | | | | | | | | | | | | | | | | | | |
| | 722 | | | | | | | | | | | | | | | | | | | |
| | 721 | | | | | | | | | | | | | | | | | | | |
| 55 | 720 | | | | | | | | | | | | | | | | | | | |
| | 719 | | | | | | | | | | | | | | | | | | | |
| | 718 | | | | | | | | | | | | | | | | | | | |
| | 717 | | | | | | | | | | | | | | | | | | | |
| | 716 | | | | | | | | | | | | | | | | | | | |
| 60 | 715 | | | | | | | | | | | | | | | | | | | |

**CONTRACTOR** BC2 Environmental
**EQUIPMENT** CME-95
**DRILL MTHD** HSA
**DIAMETER** 8- in.
**LOGGER** B. Gin
**REVIEWER** J. Kocijan P.E., G.E.

**LAT.:** 34.064692
**LONG.:** 117.794730
**COORDINATE SYSTEM:** WGS84

**NOTES:** Borehole backfilled with grout and patched with asphalt. Hammer ETR is 84.4% , measured on 5/4/2024. Logging of soils was completed in general accordance with ASTM D2488 and ASTM D1586. Coordinates and surface elevations were estimated from Google Earth.

SEE KEY SHEET FOR SYMBOLS AND ABBREVIATIONS

# APPENDIX D – Hammer Efficiency Report

## SPT CAL

# SPT HAMMER ENERGY MEASUREMENTS

**Prepared by;**

**SPT CAL**
**5512 Belem Dr**
**Chino Hills, CA 91709**

**909-730-2161**
**bc@sptcal.com**

Prepared for;

BC2 Environmental
1150 West Trenton Ave
Orange, CA 92867

714.744.2990
Date: 05/04/24

Project Title: BC2 Rig-6 CME 95
Project Description: Orange

### Energy Transfer Ratio = 84.4% @ 43.2 blows per minute

Hammer Energy Measurements were performed per ASTM D4633 using an approved and calibrated SPT Analyzer from Pile Dynamics, Inc., meeting the criteria of ASTM D4633-05 and per the process defined in ASTM D4633-05. The process and equipment requirements followed per ASTM D4633-05 meet the criteria of ASTM D4633-16.

# PRESENTATION OF SPT ANALYZER TEST DATA

## 1. Introduction

This report presents the results of SPT Hammer Energy Measurements recorded with an SPT Analyzer from Pile Dynamics carried out on May 04, 2024, in Orange, California.

## 2. Field Equipment and Procedures

The drill used is a truck-mounted CME 95 with an attached CME Automatic Hammer known to BC2 as Rig 6.

The CME Automatic Hammer uses a 140-lb. weight dropped 30” onto an anvil above the borehole. The drill rod connects the anvil to a split spoon-type soil sampler inside an 8” o.d. hollow stem auger at the designated sample depth. After a seeding blow, the sampler is driven 18”. The number of blows required to penetrate the last 12" is referred to as the “N value,” which is related to soil strength.

The first recording was taken at 5’ below ground surface and then every 5’ to a final recording at 25’.

## 3. Instrumentation

An SPT Analyzer from Pile Dynamics was used to record and process the data. The raw data was stored directly in the analyzer's computer, and subsequent analysis was conducted in the office with PDA-W  and PDIPlot software. The measurements and analysis were conducted in general accordance with the ASTM D4945 and ASTM D6066 test standards.

The SPT Analyzer is fully compliant with the minimum digital sampling frequency requirements of ASTM D4633-05 (50 kHz) and EN ISO 22476-3:2005 (100 kHz), as well as with the low-pass filter (cutoff frequency of 5000 Hz instead of 3000 Hz) requirements of ASTM D4633-05. All equipment and analysis also conform to ASTM D6066.

A 2' instrumented section of NWJ rod, with two sets of accelerometers and strain transducers mounted on opposite sides of the drill rod, was placed below the anvil. It measured the strain and acceleration of every hammer blow. The SPT Analyzer then calculated the amount of energy transferred to the rod by measuring force and velocity.

## 4. Observations

The drill rig motor is diesel-fueled with an electronically modulated throttle. The drill and sample equipment looked to be well-operated and well-maintained.

## 5. Results

Results from the SPT Hammer Energy Measurements are summarized below. It shows the Energy Transfer Ratio (ETR) at each sampling depth. ETR is the ratio of the measured maximum transferred energy to the rated energy of the hammer, which is the product of the weight of the hammer times the height of the fall. 140 lb x 30” = 4200 lb-in = 0.350 kip-ft.

### Energy Transfer Ratio = 84.4% @ 43.2 blows per minute

N60=(ETR/60)N

| Depth | ETR% | BPM |
|---:|---:|---:|
| 5 | 84.4 | 42.6 |
| 10 | 83.9 | 43.5 |
| 15 | 84.2 | 43.9 |
| 20 | 85.0 | 44.2 |
| 25 | 84.7 | 41.6 |
| **Average** | **84.4** | **43.2** |

If you have any questions, please do not hesitate to call or email.

Thank you,

Brian Serl
Calibration Engineer
SPT CAL
909-730-2161
bc@sptcal.com

Geosyntec consultants

# APPENDIX E – Analytical Soil Testing

eurofins | Environment Testing



# ANALYTICAL REPORT

## PREPARED FOR

Attn: Brian Gin
Geosyntec Consultants Inc
3530 Hyland Avenue
Suite 100
Costa Mesa, California 92626

Generated 6/3/2024 8:19:32 AM

## JOB DESCRIPTION

SC1303 SJC Bikeway Path

## JOB NUMBER

570-185066-1

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin CA 92780

See page two for job notes and contact information.



my EOL

## Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

## Authorization

Generated
6/3/2024 8:19:32 AM

Authorized for release by
Stephen Nowak, Project Manager I
Stephen.Nowak@et.eurofinsus.com
(714)895-5494

# Table of Contents

Cover Page . . . . . 1
Table of Contents . . . . . 3
Definitions/Glossary . . . . . 4
Case Narrative . . . . . 5
Detection Summary . . . . . 6
Client Sample Results . . . . . 7
Surrogate Summary . . . . . 14
QC Sample Results . . . . . 15
QC Association Summary . . . . . 28
Lab Chronicle . . . . . 30
Certification Summary . . . . . 31
Method Summary . . . . . 32
Sample Summary . . . . . 33
Chain of Custody . . . . . 34
Receipt Checklists . . . . . 35

# Definitions/Glossary

Client: Geosyntec Consultants Inc
Job ID: 570-185066-1
Project/Site: SC1303 SJC Bikeway Path

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| F1 | MS and/or MSD recovery exceeds control limits. |
| F2 | MS/MSD RPD exceeds control limits |

### Metals

| Qualifier | Qualifier Description |
|---|---|
| F1 | MS and/or MSD recovery exceeds control limits. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

**Job Narrative**
**570-185066-1**

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

**Receipt**
The samples were received on 5/17/2024 3:10 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.7°C.

**GC/MS VOA**
Method 8260B: Spike compounds were inadvertently injected less during the extraction process for the matrix spike duplicate (MSD); therefore, matrix spike duplicate recovery is outside control limits for preparation batch 570-442518 and analytical batch 570-442487. Also, the matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 570-442518 and analytical batch 570-442487 was outside control limits. The associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) recoveries were within acceptance limits.
The associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits too.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

**Diesel Range Organics**
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

**Metals**
Method 6010B: The post digestion spike % recovery for Selenium associated with batch 570-445207 was outside of control limits. The associated sample is: (320-112126-A-15-H PDS ^2).

Method 7471A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 570-443404 and analytical batch 570-444134 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

# Detection Summary

Client: Geosyntec Consultants Inc
Job ID: 570-185066-1
Project/Site: SC1303 SJC Bikeway Path

## Client Sample ID: SS-1 — Lab Sample ID: 570-185066-1

| Analyte | Result | Qualifier | RL | | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 3.41 | | 3.26 | | mg/Kg | 2 | | 6010B | Total/NA |
| Barium | 66.2 | | 2.17 | | mg/Kg | 2 | | 6010B | Total/NA |
| Beryllium | 0.457 | | 0.435 | | mg/Kg | 2 | | 6010B | Total/NA |
| Chromium | 31.5 | | 1.09 | | mg/Kg | 2 | | 6010B | Total/NA |
| Cobalt | 11.2 | | 2.17 | | mg/Kg | 2 | | 6010B | Total/NA |
| Copper | 23.6 | | 2.17 | | mg/Kg | 2 | | 6010B | Total/NA |
| Lead | 7.91 | | 2.17 | | mg/Kg | 2 | | 6010B | Total/NA |
| Nickel | 17.8 | | 2.17 | | mg/Kg | 2 | | 6010B | Total/NA |
| Vanadium | 54.4 | | 4.35 | | mg/Kg | 2 | | 6010B | Total/NA |
| Zinc | 56.8 | | 4.35 | | mg/Kg | 2 | | 6010B | Total/NA |

## Client Sample ID: SS-2 — Lab Sample ID: 570-185066-2

| Analyte | Result | Qualifier | RL | | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 5.88 | | 2.94 | | mg/Kg | 2 | | 6010B | Total/NA |
| Barium | 72.8 | | 1.96 | | mg/Kg | 2 | | 6010B | Total/NA |
| Chromium | 26.5 | | 0.980 | | mg/Kg | 2 | | 6010B | Total/NA |
| Cobalt | 8.98 | | 1.96 | | mg/Kg | 2 | | 6010B | Total/NA |
| Copper | 19.3 | | 1.96 | | mg/Kg | 2 | | 6010B | Total/NA |
| Lead | 6.10 | | 1.96 | | mg/Kg | 2 | | 6010B | Total/NA |
| Nickel | 14.3 | | 1.96 | | mg/Kg | 2 | | 6010B | Total/NA |
| Vanadium | 45.2 | | 3.92 | | mg/Kg | 2 | | 6010B | Total/NA |
| Zinc | 45.4 | | 3.92 | | mg/Kg | 2 | | 6010B | Total/NA |

This Detection Summary does not include radiochemical test results.

## Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

**Client Sample ID: SS-1**
**Date Collected: 05/15/24 11:45**
**Date Received: 05/17/24 15:10**

**Lab Sample ID: 570-185066-1**
**Matrix: Solid**

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| 1,1,1-Trichloroethane | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | F2 | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | F2 F1 | 9.8 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| 1,1,2-Trichloroethane | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| 1,1-Dichloroethane | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| 1,1-Dichloroethene | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| 1,1-Dichloropropene | ND | F2 F1 | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| 1,2,3-Trichlorobenzene | ND | F2 F1 | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| 1,2,3-Trichloropropane | ND | F2 F1 | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| 1,2,4-Trichlorobenzene | ND | F2 F1 | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| 1,2,4-Trimethylbenzene | ND | F2 F1 | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | F2 F1 | 9.8 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| 1,2-Dibromoethane | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| 1,2-Dichlorobenzene | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| 1,2-Dichloroethane | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| 1,2-Dichloropropane | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| 1,3,5-Trimethylbenzene | ND | F2 F1 | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| 1,3-Dichlorobenzene | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| 1,3-Dichloropropane | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| 1,4-Dichlorobenzene | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| 2,2-Dichloropropane | ND | F2 F1 | 4.9 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| 2-Butanone (MEK) | ND | F2 F1 | 20 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| 2-Chlorotoluene | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| 2-Hexanone | ND | F2 F1 | 20 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| 4-Chlorotoluene | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | F2 F1 | 20 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| Acetone | ND | F2 | 20 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| Benzene | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| Bromobenzene | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| Bromochloromethane | ND | F2 F1 | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| Bromodichloromethane | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| Bromoform | ND | F2 F1 | 4.9 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| Bromomethane | ND | F2 F1 | 20 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| cis-1,2-Dichloroethene | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| cis-1,3-Dichloropropene | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| Carbon disulfide | ND | F2 F1 | 9.8 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| Carbon tetrachloride | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| Chlorobenzene | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| Chloroethane | ND | F2 F1 | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| Chloroform | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| Chloromethane | ND | F2 F1 | 20 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| Dibromochloromethane | ND | F2 F1 | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| Dibromomethane | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| Dichlorodifluoromethane | ND | F2 F1 | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| Ethylbenzene | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| Isopropylbenzene | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| Methylene Chloride | ND | F2 F1 | 9.8 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| Methyl-t-Butyl Ether (MTBE) | ND | F2 F1 | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |

## Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Client Sample ID: SS-1**
**Date Collected: 05/15/24 11:45**
**Date Received: 05/17/24 15:10**

**Lab Sample ID: 570-185066-1**
**Matrix: Solid**

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND | F2 F1 | 9.8 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| n-Butylbenzene | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| N-Propylbenzene | ND | F2 F1 | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| o-Xylene | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| m,p-Xylene | ND | F2 F1 | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| p-Isopropyltoluene | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| sec-Butylbenzene | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| Styrene | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| trans-1,2-Dichloroethene | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| trans-1,3-Dichloropropene | ND | F2 F1 | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| tert-Butylbenzene | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| Tetrachloroethene | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| Toluene | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| Trichloroethene | ND | F2 F1 | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| Trichlorofluoromethane | ND | F2 F1 | 9.8 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| Vinyl acetate | ND | F2 | 9.8 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| Vinyl chloride | ND | F2 F1 | 0.98 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |
| Xylenes, Total | ND | F2 F1 | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 20:40 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *98* | | *32 - 179* | *05/20/24 18:42* | *05/20/24 20:40* | *1* |
| *4-Bromofluorobenzene (Surr)* | *101* | | *80 - 120* | *05/20/24 18:42* | *05/20/24 20:40* | *1* |
| *Dibromofluoromethane (Surr)* | *96* | | *58 - 147* | *05/20/24 18:42* | *05/20/24 20:40* | *1* |
| *Toluene-d8 (Surr)* | *100* | | *80 - 120* | *05/20/24 18:42* | *05/20/24 20:40* | *1* |

**Client Sample ID: SS-2**
**Date Collected: 05/16/24 11:02**
**Date Received: 05/17/24 15:10**

**Lab Sample ID: 570-185066-2**
**Matrix: Solid**

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 9.9 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| 1,1-Dichloroethane | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| 1,1-Dichloroethene | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| 1,1-Dichloropropene | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| 1,2,3-Trichloropropane | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 9.9 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| 1,2-Dibromoethane | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| 1,2-Dichlorobenzene | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| 1,2-Dichloroethane | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| 1,2-Dichloropropane | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| 1,3-Dichlorobenzene | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| 1,3-Dichloropropane | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| 1,4-Dichlorobenzene | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |

## Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Client Sample ID: SS-2**
**Date Collected: 05/16/24 11:02**
**Date Received: 05/17/24 15:10**

**Lab Sample ID: 570-185066-2**
**Matrix: Solid**

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2,2-Dichloropropane | ND | | 5.0 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| 2-Butanone (MEK) | ND | | 20 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| 2-Chlorotoluene | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| 2-Hexanone | ND | | 20 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| 4-Chlorotoluene | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 20 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Acetone | ND | | 20 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Benzene | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Bromobenzene | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Bromochloromethane | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Bromodichloromethane | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Bromoform | ND | | 5.0 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Bromomethane | ND | | 20 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| cis-1,2-Dichloroethene | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Carbon disulfide | ND | | 9.9 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Carbon tetrachloride | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Chlorobenzene | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Chloroethane | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Chloroform | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Chloromethane | ND | | 20 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Dibromochloromethane | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Dibromomethane | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Dichlorodifluoromethane | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Ethylbenzene | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Isopropylbenzene | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Methylene Chloride | ND | | 9.9 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Methyl-t-Butyl Ether (MTBE) | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Naphthalene | ND | | 9.9 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| n-Butylbenzene | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| N-Propylbenzene | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| o-Xylene | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| m,p-Xylene | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| p-Isopropyltoluene | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| sec-Butylbenzene | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Styrene | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| trans-1,2-Dichloroethene | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| trans-1,3-Dichloropropene | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| tert-Butylbenzene | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Tetrachloroethene | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Toluene | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Trichloroethene | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Trichlorofluoromethane | ND | | 9.9 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Vinyl acetate | ND | | 9.9 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Vinyl chloride | ND | | 0.99 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| Xylenes, Total | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/21/24 00:16 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *99* | | *32 - 179* | *05/20/24 18:42* | *05/21/24 00:16* | *1* |
| *4-Bromofluorobenzene (Surr)* | *104* | | *80 - 120* | *05/20/24 18:42* | *05/21/24 00:16* | *1* |

Client: Geosyntec Consultants Inc
Job ID: 570-185066-1
Project/Site: SC1303 SJC Bikeway Path

## Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Client Sample ID: SS-2**
**Lab Sample ID: 570-185066-2**
**Date Collected: 05/16/24 11:02**
**Matrix: Solid**
**Date Received: 05/17/24 15:10**

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *Dibromofluoromethane (Surr)* | 97 | | 58 - 147 | 05/20/24 18:42 | 05/21/24 00:16 | 1 |
| *Toluene-d8 (Surr)* | 100 | | 80 - 120 | 05/20/24 18:42 | 05/21/24 00:16 | 1 |

## Method: SW846 8015B - Diesel Range Organics (DRO) (GC)

**Client Sample ID: SS-1**
**Date Collected: 05/15/24 11:45**
**Date Received: 05/17/24 15:10**

**Lab Sample ID: 570-185066-1**
**Matrix: Solid**

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| C6 as C6 | ND | | 4.9 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 10:56 | 1 |
| C7 as C7 | ND | | 4.9 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 10:56 | 1 |
| C8 as C8 | ND | | 4.9 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 10:56 | 1 |
| C9-C10 | ND | | 4.9 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 10:56 | 1 |
| C11-C12 | ND | | 4.9 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 10:56 | 1 |
| C13-C14 | ND | | 4.9 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 10:56 | 1 |
| C15-C16 | ND | | 4.9 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 10:56 | 1 |
| C17-C18 | ND | | 4.9 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 10:56 | 1 |
| C19-C20 | ND | | 4.9 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 10:56 | 1 |
| C21-C22 | ND | | 4.9 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 10:56 | 1 |
| C23-C24 | ND | | 4.9 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 10:56 | 1 |
| C25-C28 | ND | | 4.9 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 10:56 | 1 |
| C29-C32 | ND | | 4.9 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 10:56 | 1 |
| C33-C36 | ND | | 4.9 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 10:56 | 1 |
| C37-C40 | ND | | 4.9 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 10:56 | 1 |
| C41-C44 | ND | | 4.9 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 10:56 | 1 |
| C6-C44 | ND | | 4.9 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 10:56 | 1 |
| Diesel Range Organics [C10-C28] | ND | | 4.9 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 10:56 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *n-Octacosane (Surr)* | *98* | | *60 - 138* | *05/29/24 14:16* | *06/02/24 10:56* | *1* |

**Client Sample ID: SS-2**
**Date Collected: 05/16/24 11:02**
**Date Received: 05/17/24 15:10**

**Lab Sample ID: 570-185066-2**
**Matrix: Solid**

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| C6 as C6 | ND | | 4.8 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 11:17 | 1 |
| C7 as C7 | ND | | 4.8 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 11:17 | 1 |
| C8 as C8 | ND | | 4.8 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 11:17 | 1 |
| C9-C10 | ND | | 4.8 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 11:17 | 1 |
| C11-C12 | ND | | 4.8 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 11:17 | 1 |
| C13-C14 | ND | | 4.8 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 11:17 | 1 |
| C15-C16 | ND | | 4.8 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 11:17 | 1 |
| C17-C18 | ND | | 4.8 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 11:17 | 1 |
| C19-C20 | ND | | 4.8 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 11:17 | 1 |
| C21-C22 | ND | | 4.8 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 11:17 | 1 |
| C23-C24 | ND | | 4.8 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 11:17 | 1 |
| C25-C28 | ND | | 4.8 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 11:17 | 1 |
| C29-C32 | ND | | 4.8 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 11:17 | 1 |
| C33-C36 | ND | | 4.8 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 11:17 | 1 |
| C37-C40 | ND | | 4.8 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 11:17 | 1 |
| C41-C44 | ND | | 4.8 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 11:17 | 1 |
| C6-C44 | ND | | 4.8 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 11:17 | 1 |
| Diesel Range Organics [C10-C28] | ND | | 4.8 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 11:17 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *n-Octacosane (Surr)* | *95* | | *60 - 138* | *05/29/24 14:16* | *06/02/24 11:17* | *1* |

## Method: SW846 6010B - Metals (ICP)

**Client Sample ID: SS-1**
**Date Collected: 05/15/24 11:45**
**Date Received: 05/17/24 15:10**

**Lab Sample ID: 570-185066-1**
**Matrix: Solid**

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | | 10.9 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:01 | 2 |
| **Arsenic** | **3.41** | | 3.26 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:01 | 2 |
| **Barium** | **66.2** | | 2.17 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:01 | 2 |
| **Beryllium** | **0.457** | | 0.435 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:01 | 2 |
| Cadmium | ND | | 0.435 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:01 | 2 |
| **Chromium** | **31.5** | | 1.09 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:01 | 2 |
| **Cobalt** | **11.2** | | 2.17 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:01 | 2 |
| **Copper** | **23.6** | | 2.17 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:01 | 2 |
| **Lead** | **7.91** | | 2.17 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:01 | 2 |
| Molybdenum | ND | | 4.35 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:01 | 2 |
| **Nickel** | **17.8** | | 2.17 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:01 | 2 |
| Selenium | ND | | 3.26 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:01 | 2 |
| Silver | ND | | 2.17 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:01 | 2 |
| Thallium | ND | | 10.9 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:01 | 2 |
| **Vanadium** | **54.4** | | 4.35 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:01 | 2 |
| **Zinc** | **56.8** | | 4.35 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:01 | 2 |

**Client Sample ID: SS-2**
**Date Collected: 05/16/24 11:02**
**Date Received: 05/17/24 15:10**

**Lab Sample ID: 570-185066-2**
**Matrix: Solid**

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | | 9.80 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:03 | 2 |
| **Arsenic** | **5.88** | | 2.94 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:03 | 2 |
| **Barium** | **72.8** | | 1.96 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:03 | 2 |
| Beryllium | ND | | 0.392 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:03 | 2 |
| Cadmium | ND | | 0.392 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:03 | 2 |
| **Chromium** | **26.5** | | 0.980 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:03 | 2 |
| **Cobalt** | **8.98** | | 1.96 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:03 | 2 |
| **Copper** | **19.3** | | 1.96 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:03 | 2 |
| **Lead** | **6.10** | | 1.96 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:03 | 2 |
| Molybdenum | ND | | 3.92 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:03 | 2 |
| **Nickel** | **14.3** | | 1.96 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:03 | 2 |
| Selenium | ND | | 2.94 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:03 | 2 |
| Silver | ND | | 1.96 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:03 | 2 |
| Thallium | ND | | 9.80 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:03 | 2 |
| **Vanadium** | **45.2** | | 3.92 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:03 | 2 |
| **Zinc** | **45.4** | | 3.92 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 19:03 | 2 |

Client: Geosyntec Consultants Inc
Job ID: 570-185066-1
Project/Site: SC1303 SJC Bikeway Path

## Method: SW846 7471A - Mercury (CVAA)

**Client Sample ID: SS-1**
**Lab Sample ID: 570-185066-1**
**Date Collected: 05/15/24 11:45**
**Matrix: Solid**
**Date Received: 05/17/24 15:10**

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.0868 | | mg/Kg | | 05/22/24 17:20 | 05/24/24 10:55 | 1 |

**Client Sample ID: SS-2**
**Lab Sample ID: 570-185066-2**
**Date Collected: 05/16/24 11:02**
**Matrix: Solid**
**Date Received: 05/17/24 15:10**

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.0801 | | mg/Kg | | 05/22/24 17:20 | 05/24/24 10:57 | 1 |

# Surrogate Summary

Client: Geosyntec Consultants Inc
Project/Site: SC1303 SJC Bikeway Path

Job ID: 570-185066-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Matrix: Solid**

**Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|---|---|---|---|---|---|
| | | DCA | BFB | DBFM | TOL |
| Lab Sample ID | Client Sample ID | (32-179) | (80-120) | (58-147) | (80-120) |
| 570-185066-1 | SS-1 | 98 | 101 | 96 | 100 |
| 570-185066-1 MS | SS-1 | 97 | 103 | 97 | 104 |
| 570-185066-1 MSD | SS-1 | 98 | 105 | 97 | 102 |
| 570-185066-2 | SS-2 | 99 | 104 | 97 | 100 |
| LCS 570-442518/1-A | Lab Control Sample | 91 | 104 | 95 | 102 |
| LCSD 570-442518/2-A | Lab Control Sample Dup | 93 | 103 | 96 | 104 |
| MB 570-442518/3-A | Method Blank | 96 | 101 | 96 | 98 |

**Surrogate Legend**

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

## Method: 8015B - Diesel Range Organics (DRO) (GC)

**Matrix: Solid**

**Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) |
|---|---|---|
| | | OTCSN1 |
| Lab Sample ID | Client Sample ID | (60-138) |
| 570-185066-1 | SS-1 | 98 |
| 570-185066-1 MS | SS-1 | 96 |
| 570-185066-1 MSD | SS-1 | 97 |
| 570-185066-2 | SS-2 | 95 |
| LCS 570-445390/2-A | Lab Control Sample | 96 |
| LCSD 570-445390/3-A | Lab Control Sample Dup | 98 |
| MB 570-445390/1-A | Method Blank | 97 |

**Surrogate Legend**

OTCSN = n-Octacosane (Surr)

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 570-442518/3-A**
**Matrix: Solid**
**Analysis Batch: 442487**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 442518**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| 1,1,1-Trichloroethane | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 10 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| 1,1-Dichloropropene | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| 1,2,3-Trichloropropane | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| 1,2,4-Trimethylbenzene | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 10 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| 1,2-Dibromoethane | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| 1,3,5-Trimethylbenzene | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| 1,3-Dichloropropane | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| 2,2-Dichloropropane | ND | | 5.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| 2-Butanone (MEK) | ND | | 20 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| 2-Chlorotoluene | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| 2-Hexanone | ND | | 20 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| 4-Chlorotoluene | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 20 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| Acetone | ND | | 20 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| Benzene | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| Bromobenzene | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| Bromochloromethane | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| Bromodichloromethane | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| Bromoform | ND | | 5.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| Bromomethane | ND | | 20 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| cis-1,3-Dichloropropene | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| Carbon disulfide | ND | | 10 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| Carbon tetrachloride | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| Chlorobenzene | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| Chloroethane | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| Chloroform | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| Chloromethane | ND | | 20 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| Dibromochloromethane | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| Dibromomethane | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| Dichlorodifluoromethane | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| Ethylbenzene | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| Isopropylbenzene | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| Methylene Chloride | ND | | 10 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 570-442518/3-A**
**Matrix: Solid**
**Analysis Batch: 442487**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 442518**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methyl-t-Butyl Ether (MTBE) | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| Naphthalene | ND | | 10 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| n-Butylbenzene | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| N-Propylbenzene | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| o-Xylene | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| m,p-Xylene | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| p-Isopropyltoluene | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| sec-Butylbenzene | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| Styrene | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| trans-1,3-Dichloropropene | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| tert-Butylbenzene | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| Tetrachloroethene | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| Toluene | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| Trichloroethene | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| Trichlorofluoromethane | ND | | 10 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| Vinyl acetate | ND | | 10 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| Vinyl chloride | ND | | 1.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |
| Xylenes, Total | ND | | 2.0 | | ug/Kg | | 05/20/24 18:42 | 05/20/24 19:57 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *96* | | *32 - 179* | *05/20/24 18:42* | *05/20/24 19:57* | *1* |
| *4-Bromofluorobenzene (Surr)* | *101* | | *80 - 120* | *05/20/24 18:42* | *05/20/24 19:57* | *1* |
| *Dibromofluoromethane (Surr)* | *96* | | *58 - 147* | *05/20/24 18:42* | *05/20/24 19:57* | *1* |
| *Toluene-d8 (Surr)* | *98* | | *80 - 120* | *05/20/24 18:42* | *05/20/24 19:57* | *1* |

**Lab Sample ID: LCS 570-442518/1-A**
**Matrix: Solid**
**Analysis Batch: 442487**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 442518**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 50.0 | 53.87 | | ug/Kg | | 108 | 80 - 125 |
| 1,1,1-Trichloroethane | 50.0 | 46.82 | | ug/Kg | | 94 | 78 - 130 |
| 1,1,2,2-Tetrachloroethane | 50.0 | 50.82 | | ug/Kg | | 102 | 80 - 124 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 50.0 | 48.67 | | ug/Kg | | 97 | 73 - 130 |
| 1,1,2-Trichloroethane | 50.0 | 53.55 | | ug/Kg | | 107 | 80 - 123 |
| 1,1-Dichloroethane | 50.0 | 49.51 | | ug/Kg | | 99 | 79 - 124 |
| 1,1-Dichloroethene | 50.0 | 49.26 | | ug/Kg | | 99 | 74 - 132 |
| 1,1-Dichloropropene | 50.0 | 46.39 | | ug/Kg | | 93 | 78 - 130 |
| 1,2,3-Trichlorobenzene | 50.0 | 51.28 | | ug/Kg | | 103 | 80 - 123 |
| 1,2,3-Trichloropropane | 50.0 | 49.61 | | ug/Kg | | 99 | 79 - 120 |
| 1,2,4-Trichlorobenzene | 50.0 | 53.98 | | ug/Kg | | 108 | 80 - 125 |
| 1,2,4-Trimethylbenzene | 50.0 | 51.00 | | ug/Kg | | 102 | 80 - 124 |
| 1,2-Dibromo-3-Chloropropane | 50.0 | 44.11 | | ug/Kg | | 88 | 67 - 120 |
| 1,2-Dibromoethane | 50.0 | 53.18 | | ug/Kg | | 106 | 80 - 120 |
| 1,2-Dichlorobenzene | 50.0 | 52.28 | | ug/Kg | | 105 | 80 - 120 |
| 1,2-Dichloroethane | 50.0 | 45.42 | | ug/Kg | | 91 | 77 - 120 |
| 1,2-Dichloropropane | 50.0 | 51.24 | | ug/Kg | | 102 | 80 - 126 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 570-442518/1-A**
**Matrix: Solid**
**Analysis Batch: 442487**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 442518**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| 1,3,5-Trimethylbenzene | 50.0 | 53.87 | | ug/Kg | | 108 | 80 - 121 |
| 1,3-Dichlorobenzene | 50.0 | 53.38 | | ug/Kg | | 107 | 80 - 120 |
| 1,3-Dichloropropane | 50.0 | 50.65 | | ug/Kg | | 101 | 80 - 120 |
| 1,4-Dichlorobenzene | 50.0 | 50.40 | | ug/Kg | | 101 | 80 - 120 |
| 2,2-Dichloropropane | 50.0 | 47.60 | | ug/Kg | | 95 | 73 - 135 |
| 2-Butanone (MEK) | 50.0 | 47.87 | | ug/Kg | | 96 | 67 - 136 |
| 2-Chlorotoluene | 50.0 | 52.93 | | ug/Kg | | 106 | 80 - 120 |
| 2-Hexanone | 50.0 | 53.50 | | ug/Kg | | 107 | 70 - 137 |
| 4-Chlorotoluene | 50.0 | 50.76 | | ug/Kg | | 102 | 80 - 121 |
| 4-Methyl-2-pentanone (MIBK) | 50.0 | 48.39 | | ug/Kg | | 97 | 74 - 124 |
| Acetone | 50.0 | 50.46 | | ug/Kg | | 101 | 61 - 142 |
| Benzene | 50.0 | 49.02 | | ug/Kg | | 98 | 80 - 120 |
| Bromobenzene | 50.0 | 52.45 | | ug/Kg | | 105 | 80 - 120 |
| Bromochloromethane | 50.0 | 50.60 | | ug/Kg | | 101 | 80 - 120 |
| Bromodichloromethane | 50.0 | 50.70 | | ug/Kg | | 101 | 80 - 125 |
| Bromoform | 50.0 | 48.48 | | ug/Kg | | 97 | 74 - 138 |
| Bromomethane | 50.0 | 50.08 | | ug/Kg | | 100 | 58 - 136 |
| cis-1,2-Dichloroethene | 50.0 | 51.38 | | ug/Kg | | 103 | 80 - 124 |
| cis-1,3-Dichloropropene | 50.0 | 48.51 | | ug/Kg | | 97 | 80 - 123 |
| Carbon disulfide | 50.0 | 48.51 | | ug/Kg | | 97 | 68 - 128 |
| Carbon tetrachloride | 50.0 | 45.84 | | ug/Kg | | 92 | 75 - 140 |
| Chlorobenzene | 50.0 | 52.23 | | ug/Kg | | 104 | 80 - 120 |
| Chloroethane | 50.0 | 48.40 | | ug/Kg | | 97 | 76 - 137 |
| Chloroform | 50.0 | 48.05 | | ug/Kg | | 96 | 80 - 121 |
| Chloromethane | 50.0 | 48.28 | | ug/Kg | | 97 | 74 - 133 |
| Dibromochloromethane | 50.0 | 52.40 | | ug/Kg | | 105 | 80 - 132 |
| Dibromomethane | 50.0 | 49.56 | | ug/Kg | | 99 | 80 - 120 |
| Dichlorodifluoromethane | 50.0 | 46.56 | | ug/Kg | | 93 | 63 - 146 |
| Ethylbenzene | 50.0 | 53.10 | | ug/Kg | | 106 | 80 - 120 |
| Isopropylbenzene | 50.0 | 57.13 | | ug/Kg | | 114 | 80 - 122 |
| Methylene Chloride | 50.0 | 48.49 | | ug/Kg | | 97 | 74 - 120 |
| Methyl-t-Butyl Ether (MTBE) | 50.0 | 48.54 | | ug/Kg | | 97 | 79 - 123 |
| Naphthalene | 50.0 | 48.59 | | ug/Kg | | 97 | 79 - 121 |
| n-Butylbenzene | 50.0 | 52.74 | | ug/Kg | | 105 | 79 - 131 |
| N-Propylbenzene | 50.0 | 54.32 | | ug/Kg | | 109 | 80 - 122 |
| o-Xylene | 50.0 | 52.42 | | ug/Kg | | 105 | 80 - 120 |
| m,p-Xylene | 100 | 104.8 | | ug/Kg | | 105 | 80 - 120 |
| p-Isopropyltoluene | 50.0 | 53.09 | | ug/Kg | | 106 | 80 - 126 |
| sec-Butylbenzene | 50.0 | 52.23 | | ug/Kg | | 104 | 80 - 125 |
| Styrene | 50.0 | 54.55 | | ug/Kg | | 109 | 80 - 120 |
| trans-1,2-Dichloroethene | 50.0 | 51.88 | | ug/Kg | | 104 | 75 - 123 |
| trans-1,3-Dichloropropene | 50.0 | 50.86 | | ug/Kg | | 102 | 80 - 124 |
| tert-Butylbenzene | 50.0 | 53.17 | | ug/Kg | | 106 | 80 - 124 |
| Tetrachloroethene | 50.0 | 54.48 | | ug/Kg | | 109 | 80 - 122 |
| Toluene | 50.0 | 49.57 | | ug/Kg | | 99 | 80 - 120 |
| Trichloroethene | 50.0 | 51.55 | | ug/Kg | | 103 | 80 - 127 |
| Trichlorofluoromethane | 50.0 | 47.82 | | ug/Kg | | 96 | 70 - 144 |
| Vinyl acetate | 50.0 | 48.85 | | ug/Kg | | 98 | 71 - 125 |
| Vinyl chloride | 50.0 | 53.83 | | ug/Kg | | 108 | 79 - 133 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 (Surr) | 91 | | 32 - 179 |
| 4-Bromofluorobenzene (Surr) | 104 | | 80 - 120 |
| Dibromofluoromethane (Surr) | 95 | | 58 - 147 |
| Toluene-d8 (Surr) | 102 | | 80 - 120 |

**Lab Sample ID: LCSD 570-442518/2-A**
**Matrix: Solid**
**Analysis Batch: 442487**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 442518**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | | 50.0 | 55.14 | | ug/Kg | | 110 | 80 - 125 | 2 | 20 |
| 1,1,1-Trichloroethane | | | 50.0 | 48.12 | | ug/Kg | | 96 | 78 - 130 | 3 | 20 |
| 1,1,2,2-Tetrachloroethane | | | 50.0 | 53.12 | | ug/Kg | | 106 | 80 - 124 | 4 | 20 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | | | 50.0 | 49.85 | | ug/Kg | | 100 | 73 - 130 | 2 | 20 |
| 1,1,2-Trichloroethane | | | 50.0 | 55.55 | | ug/Kg | | 111 | 80 - 123 | 4 | 20 |
| 1,1-Dichloroethane | | | 50.0 | 51.05 | | ug/Kg | | 102 | 79 - 124 | 3 | 20 |
| 1,1-Dichloroethene | | | 50.0 | 50.50 | | ug/Kg | | 101 | 74 - 132 | 2 | 20 |
| 1,1-Dichloropropene | | | 50.0 | 47.68 | | ug/Kg | | 95 | 78 - 130 | 3 | 20 |
| 1,2,3-Trichlorobenzene | | | 50.0 | 51.96 | | ug/Kg | | 104 | 80 - 123 | 1 | 20 |
| 1,2,3-Trichloropropane | | | 50.0 | 51.76 | | ug/Kg | | 104 | 79 - 120 | 4 | 20 |
| 1,2,4-Trichlorobenzene | | | 50.0 | 54.45 | | ug/Kg | | 109 | 80 - 125 | 1 | 20 |
| 1,2,4-Trimethylbenzene | | | 50.0 | 52.30 | | ug/Kg | | 105 | 80 - 124 | 3 | 20 |
| 1,2-Dibromo-3-Chloropropane | | | 50.0 | 44.25 | | ug/Kg | | 89 | 67 - 120 | 0 | 20 |
| 1,2-Dibromoethane | | | 50.0 | 55.80 | | ug/Kg | | 112 | 80 - 120 | 5 | 20 |
| 1,2-Dichlorobenzene | | | 50.0 | 53.67 | | ug/Kg | | 107 | 80 - 120 | 3 | 20 |
| 1,2-Dichloroethane | | | 50.0 | 46.80 | | ug/Kg | | 94 | 77 - 120 | 3 | 20 |
| 1,2-Dichloropropane | | | 50.0 | 52.45 | | ug/Kg | | 105 | 80 - 126 | 2 | 20 |
| 1,3,5-Trimethylbenzene | | | 50.0 | 54.82 | | ug/Kg | | 110 | 80 - 121 | 2 | 20 |
| 1,3-Dichlorobenzene | | | 50.0 | 53.92 | | ug/Kg | | 108 | 80 - 120 | 1 | 20 |
| 1,3-Dichloropropane | | | 50.0 | 52.33 | | ug/Kg | | 105 | 80 - 120 | 3 | 20 |
| 1,4-Dichlorobenzene | | | 50.0 | 51.70 | | ug/Kg | | 103 | 80 - 120 | 3 | 20 |
| 2,2-Dichloropropane | | | 50.0 | 48.45 | | ug/Kg | | 97 | 73 - 135 | 2 | 20 |
| 2-Butanone (MEK) | | | 50.0 | 50.40 | | ug/Kg | | 101 | 67 - 136 | 5 | 20 |
| 2-Chlorotoluene | | | 50.0 | 53.66 | | ug/Kg | | 107 | 80 - 120 | 1 | 20 |
| 2-Hexanone | | | 50.0 | 56.43 | | ug/Kg | | 113 | 70 - 137 | 5 | 20 |
| 4-Chlorotoluene | | | 50.0 | 51.44 | | ug/Kg | | 103 | 80 - 121 | 1 | 20 |
| 4-Methyl-2-pentanone (MIBK) | | | 50.0 | 50.61 | | ug/Kg | | 101 | 74 - 124 | 4 | 20 |
| Acetone | | | 50.0 | 52.34 | | ug/Kg | | 105 | 61 - 142 | 4 | 23 |
| Benzene | | | 50.0 | 50.79 | | ug/Kg | | 102 | 80 - 120 | 4 | 20 |
| Bromobenzene | | | 50.0 | 53.75 | | ug/Kg | | 107 | 80 - 120 | 2 | 20 |
| Bromochloromethane | | | 50.0 | 52.40 | | ug/Kg | | 105 | 80 - 120 | 4 | 20 |
| Bromodichloromethane | | | 50.0 | 52.26 | | ug/Kg | | 105 | 80 - 125 | 3 | 20 |
| Bromoform | | | 50.0 | 49.49 | | ug/Kg | | 99 | 74 - 138 | 2 | 20 |
| Bromomethane | | | 50.0 | 51.64 | | ug/Kg | | 103 | 58 - 136 | 3 | 20 |
| cis-1,2-Dichloroethene | | | 50.0 | 52.32 | | ug/Kg | | 105 | 80 - 124 | 2 | 20 |
| cis-1,3-Dichloropropene | | | 50.0 | 50.11 | | ug/Kg | | 100 | 80 - 123 | 3 | 20 |
| Carbon disulfide | | | 50.0 | 50.04 | | ug/Kg | | 100 | 68 - 128 | 3 | 20 |
| Carbon tetrachloride | | | 50.0 | 47.76 | | ug/Kg | | 96 | 75 - 140 | 4 | 20 |
| Chlorobenzene | | | 50.0 | 53.87 | | ug/Kg | | 108 | 80 - 120 | 3 | 20 |
| Chloroethane | | | 50.0 | 51.00 | | ug/Kg | | 102 | 76 - 137 | 5 | 20 |
| Chloroform | | | 50.0 | 49.44 | | ug/Kg | | 99 | 80 - 121 | 3 | 20 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 570-442518/2-A**
**Matrix: Solid**
**Analysis Batch: 442487**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 442518**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloromethane | | | 50.0 | 49.33 | | ug/Kg | | 99 | 74 - 133 | 2 | 20 |
| Dibromochloromethane | | | 50.0 | 55.31 | | ug/Kg | | 111 | 80 - 132 | 5 | 20 |
| Dibromomethane | | | 50.0 | 51.95 | | ug/Kg | | 104 | 80 - 120 | 5 | 20 |
| Dichlorodifluoromethane | | | 50.0 | 49.34 | | ug/Kg | | 99 | 63 - 146 | 6 | 20 |
| Ethylbenzene | | | 50.0 | 53.92 | | ug/Kg | | 108 | 80 - 120 | 2 | 20 |
| Isopropylbenzene | | | 50.0 | 58.46 | | ug/Kg | | 117 | 80 - 122 | 2 | 20 |
| Methylene Chloride | | | 50.0 | 49.84 | | ug/Kg | | 100 | 74 - 120 | 3 | 20 |
| Methyl-t-Butyl Ether (MTBE) | | | 50.0 | 50.12 | | ug/Kg | | 100 | 79 - 123 | 3 | 20 |
| Naphthalene | | | 50.0 | 50.11 | | ug/Kg | | 100 | 79 - 121 | 3 | 20 |
| n-Butylbenzene | | | 50.0 | 53.21 | | ug/Kg | | 106 | 79 - 131 | 1 | 20 |
| N-Propylbenzene | | | 50.0 | 55.27 | | ug/Kg | | 111 | 80 - 122 | 2 | 20 |
| o-Xylene | | | 50.0 | 53.43 | | ug/Kg | | 107 | 80 - 120 | 2 | 20 |
| m,p-Xylene | | | 100 | 107.1 | | ug/Kg | | 107 | 80 - 120 | 2 | 20 |
| p-Isopropyltoluene | | | 50.0 | 53.78 | | ug/Kg | | 108 | 80 - 126 | 1 | 20 |
| sec-Butylbenzene | | | 50.0 | 52.99 | | ug/Kg | | 106 | 80 - 125 | 1 | 20 |
| Styrene | | | 50.0 | 55.49 | | ug/Kg | | 111 | 80 - 120 | 2 | 20 |
| trans-1,2-Dichloroethene | | | 50.0 | 52.63 | | ug/Kg | | 105 | 75 - 123 | 1 | 20 |
| trans-1,3-Dichloropropene | | | 50.0 | 52.42 | | ug/Kg | | 105 | 80 - 124 | 3 | 20 |
| tert-Butylbenzene | | | 50.0 | 54.78 | | ug/Kg | | 110 | 80 - 124 | 3 | 20 |
| Tetrachloroethene | | | 50.0 | 56.37 | | ug/Kg | | 113 | 80 - 122 | 3 | 20 |
| Toluene | | | 50.0 | 51.72 | | ug/Kg | | 103 | 80 - 120 | 4 | 20 |
| Trichloroethene | | | 50.0 | 53.29 | | ug/Kg | | 107 | 80 - 127 | 3 | 20 |
| Trichlorofluoromethane | | | 50.0 | 49.62 | | ug/Kg | | 99 | 70 - 144 | 4 | 20 |
| Vinyl acetate | | | 50.0 | 47.77 | | ug/Kg | | 96 | 71 - 125 | 2 | 20 |
| Vinyl chloride | | | 50.0 | 55.43 | | ug/Kg | | 111 | 79 - 133 | 3 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *93* | | *32 - 179* |
| *4-Bromofluorobenzene (Surr)* | *103* | | *80 - 120* |
| *Dibromofluoromethane (Surr)* | *96* | | *58 - 147* |
| *Toluene-d8 (Surr)* | *104* | | *80 - 120* |

**Lab Sample ID: 570-185066-1 MS**
**Matrix: Solid**
**Analysis Batch: 442487**

**Client Sample ID: SS-1**
**Prep Type: Total/NA**
**Prep Batch: 442518**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | F2 F1 | 49.7 | 46.06 | | ug/Kg | | 93 | 61 - 129 |
| 1,1,1-Trichloroethane | ND | F2 F1 | 49.7 | 43.24 | | ug/Kg | | 87 | 67 - 125 |
| 1,1,2,2-Tetrachloroethane | ND | F2 | 49.7 | 43.38 | | ug/Kg | | 87 | 20 - 164 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | F2 F1 | 49.7 | 46.03 | | ug/Kg | | 93 | 62 - 125 |
| 1,1,2-Trichloroethane | ND | F2 F1 | 49.7 | 46.41 | | ug/Kg | | 93 | 52 - 134 |
| 1,1-Dichloroethane | ND | F2 F1 | 49.7 | 45.54 | | ug/Kg | | 92 | 66 - 125 |
| 1,1-Dichloroethene | ND | F2 F1 | 49.7 | 46.75 | | ug/Kg | | 94 | 60 - 125 |
| 1,1-Dichloropropene | ND | F2 F1 | 49.7 | 43.14 | | ug/Kg | | 87 | 69 - 125 |
| 1,2,3-Trichlorobenzene | ND | F2 F1 | 49.7 | 32.19 | | ug/Kg | | 65 | 20 - 145 |
| 1,2,3-Trichloropropane | ND | F2 F1 | 49.7 | 41.59 | | ug/Kg | | 84 | 53 - 128 |
| 1,2,4-Trichlorobenzene | ND | F2 F1 | 49.7 | 34.97 | | ug/Kg | | 70 | 20 - 146 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 570-185066-1 MS**
**Matrix: Solid**
**Analysis Batch: 442487**

**Client Sample ID: SS-1**
**Prep Type: Total/NA**
**Prep Batch: 442518**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | ND | F2 F1 | 49.7 | 41.78 | | ug/Kg | | 84 | 51 - 129 |
| 1,2-Dibromo-3-Chloropropane | ND | F2 F1 | 49.7 | 34.24 | | ug/Kg | | 69 | 33 - 126 |
| 1,2-Dibromoethane | ND | F2 F1 | 49.7 | 46.03 | | ug/Kg | | 93 | 65 - 125 |
| 1,2-Dichlorobenzene | ND | F2 F1 | 49.7 | 40.12 | | ug/Kg | | 81 | 47 - 130 |
| 1,2-Dichloroethane | ND | F2 F1 | 49.7 | 40.42 | | ug/Kg | | 81 | 66 - 127 |
| 1,2-Dichloropropane | ND | F2 F1 | 49.7 | 44.95 | | ug/Kg | | 90 | 70 - 125 |
| 1,3,5-Trimethylbenzene | ND | F2 F1 | 49.7 | 44.75 | | ug/Kg | | 90 | 50 - 132 |
| 1,3-Dichlorobenzene | ND | F2 F1 | 49.7 | 41.10 | | ug/Kg | | 83 | 48 - 128 |
| 1,3-Dichloropropane | ND | F2 F1 | 49.7 | 44.66 | | ug/Kg | | 90 | 66 - 125 |
| 1,4-Dichlorobenzene | ND | F2 F1 | 49.7 | 39.47 | | ug/Kg | | 79 | 47 - 127 |
| 2,2-Dichloropropane | ND | F2 F1 | 49.7 | 43.39 | | ug/Kg | | 87 | 61 - 128 |
| 2-Butanone (MEK) | ND | F2 F1 | 49.7 | 42.42 | | ug/Kg | | 85 | 48 - 134 |
| 2-Chlorotoluene | ND | F2 F1 | 49.7 | 43.38 | | ug/Kg | | 87 | 54 - 127 |
| 2-Hexanone | ND | F2 F1 | 49.7 | 44.96 | | ug/Kg | | 90 | 48 - 136 |
| 4-Chlorotoluene | ND | F2 F1 | 49.7 | 41.22 | | ug/Kg | | 83 | 54 - 125 |
| 4-Methyl-2-pentanone (MIBK) | ND | F2 F1 | 49.7 | 41.67 | | ug/Kg | | 84 | 55 - 133 |
| Acetone | ND | F2 | 49.7 | 57.58 | | ug/Kg | | 88 | 30 - 175 |
| Benzene | ND | F2 F1 | 49.7 | 44.18 | | ug/Kg | | 89 | 70 - 125 |
| Bromobenzene | ND | F2 F1 | 49.7 | 42.51 | | ug/Kg | | 86 | 57 - 129 |
| Bromochloromethane | ND | F2 F1 | 49.7 | 44.85 | | ug/Kg | | 90 | 67 - 125 |
| Bromodichloromethane | ND | F2 F1 | 49.7 | 44.06 | | ug/Kg | | 89 | 64 - 130 |
| Bromoform | ND | F2 F1 | 49.7 | 40.35 | | ug/Kg | | 81 | 49 - 133 |
| Bromomethane | ND | F2 F1 | 49.7 | 45.41 | | ug/Kg | | 91 | 30 - 149 |
| cis-1,2-Dichloroethene | ND | F2 F1 | 49.7 | 46.35 | | ug/Kg | | 93 | 71 - 125 |
| cis-1,3-Dichloropropene | ND | F2 F1 | 49.7 | 42.24 | | ug/Kg | | 85 | 63 - 126 |
| Carbon disulfide | ND | F2 F1 | 49.7 | 46.16 | | ug/Kg | | 93 | 53 - 125 |
| Carbon tetrachloride | ND | F2 F1 | 49.7 | 42.89 | | ug/Kg | | 86 | 60 - 130 |
| Chlorobenzene | ND | F2 F1 | 49.7 | 44.21 | | ug/Kg | | 89 | 65 - 125 |
| Chloroethane | ND | F2 F1 | 49.7 | 45.68 | | ug/Kg | | 92 | 51 - 131 |
| Chloroform | ND | F2 F1 | 49.7 | 43.47 | | ug/Kg | | 87 | 70 - 125 |
| Chloromethane | ND | F2 F1 | 49.7 | 43.18 | | ug/Kg | | 87 | 43 - 125 |
| Dibromochloromethane | ND | F2 F1 | 49.7 | 45.96 | | ug/Kg | | 92 | 56 - 132 |
| Dibromomethane | ND | F2 F1 | 49.7 | 43.21 | | ug/Kg | | 87 | 67 - 127 |
| Dichlorodifluoromethane | ND | F2 F1 | 49.7 | 44.28 | | ug/Kg | | 89 | 47 - 127 |
| Ethylbenzene | ND | F2 F1 | 49.7 | 46.00 | | ug/Kg | | 93 | 64 - 125 |
| Isopropylbenzene | ND | F2 F1 | 49.7 | 49.07 | | ug/Kg | | 99 | 59 - 129 |
| Methylene Chloride | ND | F2 F1 | 49.7 | 44.88 | | ug/Kg | | 90 | 60 - 125 |
| Methyl-t-Butyl Ether (MTBE) | ND | F2 F1 | 49.7 | 42.68 | | ug/Kg | | 86 | 61 - 125 |
| Naphthalene | ND | F2 F1 | 49.7 | 31.77 | | ug/Kg | | 64 | 25 - 136 |
| n-Butylbenzene | ND | F2 F1 | 49.7 | 41.06 | | ug/Kg | | 83 | 35 - 135 |
| N-Propylbenzene | ND | F2 F1 | 49.7 | 45.88 | | ug/Kg | | 92 | 52 - 131 |
| o-Xylene | ND | F2 F1 | 49.7 | 44.83 | | ug/Kg | | 90 | 59 - 128 |
| m,p-Xylene | ND | F2 F1 | 99.4 | 91.05 | | ug/Kg | | 92 | 60 - 125 |
| p-Isopropyltoluene | ND | F2 F1 | 49.7 | 44.13 | | ug/Kg | | 89 | 46 - 132 |
| sec-Butylbenzene | ND | F2 F1 | 49.7 | 43.00 | | ug/Kg | | 87 | 47 - 131 |
| Styrene | ND | F2 F1 | 49.7 | 44.85 | | ug/Kg | | 90 | 58 - 128 |
| trans-1,2-Dichloroethene | ND | F2 F1 | 49.7 | 47.17 | | ug/Kg | | 95 | 67 - 125 |
| trans-1,3-Dichloropropene | ND | F2 F1 | 49.7 | 43.37 | | ug/Kg | | 87 | 59 - 132 |
| tert-Butylbenzene | ND | F2 F1 | 49.7 | 44.79 | | ug/Kg | | 90 | 53 - 126 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 570-185066-1 MS**
**Matrix: Solid**
**Analysis Batch: 442487**

**Client Sample ID: SS-1**
**Prep Type: Total/NA**
**Prep Batch: 442518**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | ND | F2 F1 | 49.7 | 49.27 | | ug/Kg | | 99 | 62 - 129 |
| Toluene | ND | F2 F1 | 49.7 | 44.79 | | ug/Kg | | 90 | 68 - 125 |
| Trichloroethene | ND | F2 F1 | 49.7 | 45.83 | | ug/Kg | | 92 | 41 - 169 |
| Trichlorofluoromethane | ND | F2 F1 | 49.7 | 44.96 | | ug/Kg | | 90 | 63 - 128 |
| Vinyl acetate | ND | F2 | 49.7 | 42.70 | | ug/Kg | | 86 | 20 - 154 |
| Vinyl chloride | ND | F2 F1 | 49.7 | 49.73 | | ug/Kg | | 100 | 59 - 125 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *97* | | *32 - 179* |
| *4-Bromofluorobenzene (Surr)* | *103* | | *80 - 120* |
| *Dibromofluoromethane (Surr)* | *97* | | *58 - 147* |
| *Toluene-d8 (Surr)* | *104* | | *80 - 120* |

**Lab Sample ID: 570-185066-1 MSD**
**Matrix: Solid**
**Analysis Batch: 442487**

**Client Sample ID: SS-1**
**Prep Type: Total/NA**
**Prep Batch: 442518**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | F2 F1 | 49.6 | 11.95 | F1 F2 | ug/Kg | | 24 | 61 - 129 | 118 | 23 |
| 1,1,1-Trichloroethane | ND | F2 F1 | 49.6 | 11.44 | F1 F2 | ug/Kg | | 23 | 67 - 125 | 116 | 20 |
| 1,1,2,2-Tetrachloroethane | ND | F2 | 49.6 | 11.29 | F2 | ug/Kg | | 23 | 20 - 164 | 117 | 40 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | F2 F1 | 49.6 | 11.89 | F1 F2 | ug/Kg | | 24 | 62 - 125 | 118 | 20 |
| 1,1,2-Trichloroethane | ND | F2 F1 | 49.6 | 12.96 | F1 F2 | ug/Kg | | 26 | 52 - 134 | 113 | 25 |
| 1,1-Dichloroethane | ND | F2 F1 | 49.6 | 12.35 | F1 F2 | ug/Kg | | 25 | 66 - 125 | 115 | 20 |
| 1,1-Dichloroethene | ND | F2 F1 | 49.6 | 12.58 | F1 F2 | ug/Kg | | 25 | 60 - 125 | 115 | 20 |
| 1,1-Dichloropropene | ND | F2 F1 | 49.6 | 11.08 | F1 F2 | ug/Kg | | 22 | 69 - 125 | 118 | 20 |
| 1,2,3-Trichlorobenzene | ND | F2 F1 | 49.6 | 5.884 | F1 F2 | ug/Kg | | 12 | 20 - 145 | 138 | 39 |
| 1,2,3-Trichloropropane | ND | F2 F1 | 49.6 | 11.31 | F1 F2 | ug/Kg | | 23 | 53 - 128 | 114 | 25 |
| 1,2,4-Trichlorobenzene | ND | F2 F1 | 49.6 | 6.790 | F1 F2 | ug/Kg | | 14 | 20 - 146 | 135 | 38 |
| 1,2,4-Trimethylbenzene | ND | F2 F1 | 49.6 | 8.787 | F1 F2 | ug/Kg | | 18 | 51 - 129 | 130 | 27 |
| 1,2-Dibromo-3-Chloropropane | ND | F2 F1 | 49.6 | ND | F1 F2 | ug/Kg | | 18 | 33 - 126 | 117 | 29 |
| 1,2-Dibromoethane | ND | F2 F1 | 49.6 | 12.64 | F1 F2 | ug/Kg | | 25 | 65 - 125 | 114 | 21 |
| 1,2-Dichlorobenzene | ND | F2 F1 | 49.6 | 8.646 | F1 F2 | ug/Kg | | 17 | 47 - 130 | 129 | 29 |
| 1,2-Dichloroethane | ND | F2 F1 | 49.6 | 11.71 | F1 F2 | ug/Kg | | 24 | 66 - 127 | 110 | 20 |
| 1,2-Dichloropropane | ND | F2 F1 | 49.6 | 11.87 | F1 F2 | ug/Kg | | 24 | 70 - 125 | 116 | 20 |
| 1,3,5-Trimethylbenzene | ND | F2 F1 | 49.6 | 10.25 | F1 F2 | ug/Kg | | 21 | 50 - 132 | 125 | 29 |
| 1,3-Dichlorobenzene | ND | F2 F1 | 49.6 | 8.451 | F1 F2 | ug/Kg | | 17 | 48 - 128 | 132 | 28 |
| 1,3-Dichloropropane | ND | F2 F1 | 49.6 | 12.19 | F1 F2 | ug/Kg | | 25 | 66 - 125 | 114 | 20 |
| 1,4-Dichlorobenzene | ND | F2 F1 | 49.6 | 8.769 | F1 F2 | ug/Kg | | 18 | 47 - 127 | 127 | 28 |
| 2,2-Dichloropropane | ND | F2 F1 | 49.6 | 11.16 | F1 F2 | ug/Kg | | 23 | 61 - 128 | 118 | 20 |
| 2-Butanone (MEK) | ND | F2 F1 | 49.6 | ND | F1 F2 | ug/Kg | | 26 | 48 - 134 | 106 | 24 |
| 2-Chlorotoluene | ND | F2 F1 | 49.6 | 9.830 | F1 F2 | ug/Kg | | 20 | 54 - 127 | 126 | 27 |
| 2-Hexanone | ND | F2 F1 | 49.6 | ND | F1 F2 | ug/Kg | | 24 | 48 - 136 | 115 | 28 |
| 4-Chlorotoluene | ND | F2 F1 | 49.6 | 9.159 | F1 F2 | ug/Kg | | 18 | 54 - 125 | 127 | 26 |
| 4-Methyl-2-pentanone (MIBK) | ND | F2 F1 | 49.6 | ND | F1 F2 | ug/Kg | | 27 | 55 - 133 | 103 | 23 |
| Acetone | ND | F2 | 49.6 | 29.30 | F2 | ug/Kg | | 31 | 30 - 175 | 65 | 30 |
| Benzene | ND | F2 F1 | 49.6 | 12.08 | F1 F2 | ug/Kg | | 24 | 70 - 125 | 114 | 20 |
| Bromobenzene | ND | F2 F1 | 49.6 | 10.20 | F1 F2 | ug/Kg | | 21 | 57 - 129 | 123 | 26 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 570-185066-1 MSD**
**Matrix: Solid**
**Analysis Batch: 442487**

**Client Sample ID: SS-1**
**Prep Type: Total/NA**
**Prep Batch: 442518**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND | F2 F1 | 49.6 | 13.10 | F1 F2 | ug/Kg | | 26 | 67 - 125 | 110 | 20 |
| Bromodichloromethane | ND | F2 F1 | 49.6 | 11.71 | F1 F2 | ug/Kg | | 24 | 64 - 130 | 116 | 20 |
| Bromoform | ND | F2 F1 | 49.6 | 10.49 | F1 F2 | ug/Kg | | 21 | 49 - 133 | 117 | 27 |
| Bromomethane | ND | F2 F1 | 49.6 | 25.88 | F2 | ug/Kg | | 52 | 30 - 149 | 55 | 31 |
| cis-1,2-Dichloroethene | ND | F2 F1 | 49.6 | 12.85 | F1 F2 | ug/Kg | | 26 | 71 - 125 | 113 | 20 |
| cis-1,3-Dichloropropene | ND | F2 F1 | 49.6 | 10.60 | F1 F2 | ug/Kg | | 21 | 63 - 126 | 120 | 20 |
| Carbon disulfide | ND | F2 F1 | 49.6 | 12.70 | F1 F2 | ug/Kg | | 26 | 53 - 125 | 114 | 20 |
| Carbon tetrachloride | ND | F2 F1 | 49.6 | 11.10 | F1 F2 | ug/Kg | | 22 | 60 - 130 | 118 | 20 |
| Chlorobenzene | ND | F2 F1 | 49.6 | 10.86 | F1 F2 | ug/Kg | | 22 | 65 - 125 | 121 | 22 |
| Chloroethane | ND | F2 F1 | 49.6 | 25.77 | F2 | ug/Kg | | 52 | 51 - 131 | 56 | 21 |
| Chloroform | ND | F2 F1 | 49.6 | 12.24 | F1 F2 | ug/Kg | | 25 | 70 - 125 | 112 | 20 |
| Chloromethane | ND | F2 F1 | 49.6 | 25.29 | F2 | ug/Kg | | 51 | 43 - 125 | 52 | 21 |
| Dibromochloromethane | ND | F2 F1 | 49.6 | 12.31 | F1 F2 | ug/Kg | | 25 | 56 - 132 | 116 | 24 |
| Dibromomethane | ND | F2 F1 | 49.6 | 12.39 | F1 F2 | ug/Kg | | 25 | 67 - 127 | 111 | 20 |
| Dichlorodifluoromethane | ND | F2 F1 | 49.6 | 25.10 | F2 | ug/Kg | | 51 | 47 - 127 | 55 | 20 |
| Ethylbenzene | ND | F2 F1 | 49.6 | 11.34 | F1 F2 | ug/Kg | | 23 | 64 - 125 | 121 | 22 |
| Isopropylbenzene | ND | F2 F1 | 49.6 | 11.25 | F1 F2 | ug/Kg | | 23 | 59 - 129 | 125 | 26 |
| Methylene Chloride | ND | F2 F1 | 49.6 | 13.43 | F1 F2 | ug/Kg | | 27 | 60 - 125 | 108 | 20 |
| Methyl-t-Butyl Ether (MTBE) | ND | F2 F1 | 49.6 | 11.53 | F1 F2 | ug/Kg | | 23 | 61 - 125 | 115 | 20 |
| Naphthalene | ND | F2 F1 | 49.6 | ND | F1 F2 | ug/Kg | | 19 | 25 - 136 | 109 | 32 |
| n-Butylbenzene | ND | F2 F1 | 49.6 | 8.340 | F1 F2 | ug/Kg | | 17 | 35 - 135 | 132 | 35 |
| N-Propylbenzene | ND | F2 F1 | 49.6 | 10.55 | F1 F2 | ug/Kg | | 21 | 52 - 131 | 125 | 27 |
| o-Xylene | ND | F2 F1 | 49.6 | 10.42 | F1 F2 | ug/Kg | | 21 | 59 - 128 | 125 | 24 |
| m,p-Xylene | ND | F2 F1 | 99.2 | 21.85 | F1 F2 | ug/Kg | | 22 | 60 - 125 | 123 | 24 |
| p-Isopropyltoluene | ND | F2 F1 | 49.6 | 9.621 | F1 F2 | ug/Kg | | 19 | 46 - 132 | 128 | 30 |
| sec-Butylbenzene | ND | F2 F1 | 49.6 | 9.247 | F1 F2 | ug/Kg | | 19 | 47 - 131 | 129 | 30 |
| Styrene | ND | F2 F1 | 49.6 | 10.05 | F1 F2 | ug/Kg | | 20 | 58 - 128 | 127 | 24 |
| trans-1,2-Dichloroethene | ND | F2 F1 | 49.6 | 13.12 | F1 F2 | ug/Kg | | 26 | 67 - 125 | 113 | 20 |
| trans-1,3-Dichloropropene | ND | F2 F1 | 49.6 | 11.64 | F1 F2 | ug/Kg | | 23 | 59 - 132 | 115 | 22 |
| tert-Butylbenzene | ND | F2 F1 | 49.6 | 9.942 | F1 F2 | ug/Kg | | 20 | 53 - 126 | 127 | 28 |
| Tetrachloroethene | ND | F2 F1 | 49.6 | 11.58 | F1 F2 | ug/Kg | | 23 | 62 - 129 | 124 | 21 |
| Toluene | ND | F2 F1 | 49.6 | 11.18 | F1 F2 | ug/Kg | | 23 | 68 - 125 | 120 | 20 |
| Trichloroethene | ND | F2 F1 | 49.6 | 11.80 | F1 F2 | ug/Kg | | 24 | 41 - 169 | 118 | 21 |
| Trichlorofluoromethane | ND | F2 F1 | 49.6 | 25.06 | F1 F2 | ug/Kg | | 51 | 63 - 128 | 57 | 20 |
| Vinyl acetate | ND | F2 | 49.6 | 10.67 | F2 | ug/Kg | | 22 | 20 - 154 | 120 | 40 |
| Vinyl chloride | ND | F2 F1 | 49.6 | 28.44 | F1 F2 | ug/Kg | | 57 | 59 - 125 | 54 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *98* | | *32 - 179* |
| *4-Bromofluorobenzene (Surr)* | *105* | | *80 - 120* |
| *Dibromofluoromethane (Surr)* | *97* | | *58 - 147* |
| *Toluene-d8 (Surr)* | *102* | | *80 - 120* |

## Method: 8015B - Diesel Range Organics (DRO) (GC)

**Lab Sample ID: MB 570-445390/1-A**
**Matrix: Solid**
**Analysis Batch: 446654**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 445390**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| C6 as C6 | ND | | 5.0 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 09:11 | 1 |
| C7 as C7 | ND | | 5.0 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 09:11 | 1 |
| C8 as C8 | ND | | 5.0 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 09:11 | 1 |
| C9-C10 | ND | | 5.0 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 09:11 | 1 |
| C11-C12 | ND | | 5.0 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 09:11 | 1 |
| C13-C14 | ND | | 5.0 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 09:11 | 1 |
| C15-C16 | ND | | 5.0 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 09:11 | 1 |
| C17-C18 | ND | | 5.0 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 09:11 | 1 |
| C19-C20 | ND | | 5.0 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 09:11 | 1 |
| C21-C22 | ND | | 5.0 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 09:11 | 1 |
| C23-C24 | ND | | 5.0 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 09:11 | 1 |
| C25-C28 | ND | | 5.0 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 09:11 | 1 |
| C29-C32 | ND | | 5.0 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 09:11 | 1 |
| C33-C36 | ND | | 5.0 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 09:11 | 1 |
| C37-C40 | ND | | 5.0 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 09:11 | 1 |
| C41-C44 | ND | | 5.0 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 09:11 | 1 |
| C6-C44 | ND | | 5.0 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 09:11 | 1 |
| Diesel Range Organics [C10-C28] | ND | | 5.0 | | mg/Kg | | 05/29/24 14:16 | 06/02/24 09:11 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *n-Octacosane (Surr)* | *97* | | *60 - 138* | *05/29/24 14:16* | *06/02/24 09:11* | *1* |

**Lab Sample ID: LCS 570-445390/2-A**
**Matrix: Solid**
**Analysis Batch: 446654**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 445390**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | | | 400 | 425.7 | | mg/Kg | | 106 | 80 - 130 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *n-Octacosane (Surr)* | *96* | | *60 - 138* |

**Lab Sample ID: LCSD 570-445390/3-A**
**Matrix: Solid**
**Analysis Batch: 446654**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 445390**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | | | 400 | 430.5 | | mg/Kg | | 108 | 80 - 130 | 1 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *n-Octacosane (Surr)* | *98* | | *60 - 138* |

## Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

**Lab Sample ID: 570-185066-1 MS**
**Matrix: Solid**
**Analysis Batch: 446654**

**Client Sample ID: SS-1**
**Prep Type: Total/NA**
**Prep Batch: 445390**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | ND | | 393 | 417.0 | | mg/Kg | | 106 | 43 - 165 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *n-Octacosane (Surr)* | *96* | | *60 - 138* |

**Lab Sample ID: 570-185066-1 MSD**
**Matrix: Solid**
**Analysis Batch: 446654**

**Client Sample ID: SS-1**
**Prep Type: Total/NA**
**Prep Batch: 445390**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics [C10-C28] | ND | | 388 | 413.0 | | mg/Kg | | 106 | 43 - 165 | 1 | 35 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *n-Octacosane (Surr)* | *97* | | *60 - 138* |

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 570-444414/1-A ^2**
**Matrix: Solid**
**Analysis Batch: 445207**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 444414**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | | 10.4 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 17:27 | 2 |
| Arsenic | ND | | 3.13 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 17:27 | 2 |
| Barium | ND | | 2.08 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 17:27 | 2 |
| Beryllium | ND | | 0.417 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 17:27 | 2 |
| Cadmium | ND | | 0.417 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 17:27 | 2 |
| Chromium | ND | | 1.04 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 17:27 | 2 |
| Cobalt | ND | | 2.08 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 17:27 | 2 |
| Copper | ND | | 2.08 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 17:27 | 2 |
| Lead | ND | | 2.08 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 17:27 | 2 |
| Molybdenum | ND | | 4.17 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 17:27 | 2 |
| Nickel | ND | | 2.08 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 17:27 | 2 |
| Selenium | ND | | 3.13 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 17:27 | 2 |
| Silver | ND | | 2.08 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 17:27 | 2 |
| Thallium | ND | | 10.4 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 17:27 | 2 |
| Vanadium | ND | | 4.17 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 17:27 | 2 |
| Zinc | ND | | 4.17 | | mg/Kg | | 05/28/24 07:43 | 05/28/24 17:27 | 2 |

**Lab Sample ID: LCS 570-444414/2-A ^2**
**Matrix: Solid**
**Analysis Batch: 445207**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 444414**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | | | 200 | 197.5 | | mg/Kg | | 99 | 80 - 120 |
| Arsenic | | | 200 | 197.5 | | mg/Kg | | 99 | 80 - 120 |
| Barium | | | 200 | 203.8 | | mg/Kg | | 102 | 80 - 120 |

## Method: 6010B - Metals (ICP) (Continued)

**Lab Sample ID: LCS 570-444414/2-A ^2**
**Matrix: Solid**
**Analysis Batch: 445207**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 444414**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Beryllium | 200 | 201.0 | | mg/Kg | | 101 | 80 - 120 |
| Cadmium | 200 | 199.4 | | mg/Kg | | 100 | 80 - 120 |
| Chromium | 200 | 205.4 | | mg/Kg | | 103 | 80 - 120 |
| Cobalt | 200 | 207.0 | | mg/Kg | | 104 | 80 - 120 |
| Copper | 200 | 210.2 | | mg/Kg | | 105 | 80 - 120 |
| Lead | 200 | 204.8 | | mg/Kg | | 102 | 80 - 120 |
| Molybdenum | 200 | 217.6 | | mg/Kg | | 109 | 80 - 120 |
| Nickel | 200 | 203.2 | | mg/Kg | | 102 | 80 - 120 |
| Selenium | 200 | 172.8 | | mg/Kg | | 86 | 80 - 120 |
| Silver | 100 | 101.8 | | mg/Kg | | 102 | 80 - 120 |
| Thallium | 200 | 196.6 | | mg/Kg | | 98 | 80 - 120 |
| Vanadium | 200 | 207.2 | | mg/Kg | | 104 | 80 - 120 |
| Zinc | 200 | 199.2 | | mg/Kg | | 100 | 80 - 120 |

**Lab Sample ID: LCSD 570-444414/3-A ^2**
**Matrix: Solid**
**Analysis Batch: 445207**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 444414**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | 192 | 194.8 | | mg/Kg | | 101 | 80 - 120 | 1 | 20 |
| Arsenic | 192 | 193.5 | | mg/Kg | | 101 | 80 - 120 | 2 | 20 |
| Barium | 192 | 194.0 | | mg/Kg | | 101 | 80 - 120 | 5 | 20 |
| Beryllium | 192 | 194.0 | | mg/Kg | | 101 | 80 - 120 | 4 | 20 |
| Cadmium | 192 | 192.7 | | mg/Kg | | 100 | 80 - 120 | 3 | 20 |
| Chromium | 192 | 194.4 | | mg/Kg | | 101 | 80 - 120 | 5 | 20 |
| Cobalt | 192 | 197.9 | | mg/Kg | | 103 | 80 - 120 | 5 | 20 |
| Copper | 192 | 201.9 | | mg/Kg | | 105 | 80 - 120 | 4 | 20 |
| Lead | 192 | 196.2 | | mg/Kg | | 102 | 80 - 120 | 4 | 20 |
| Molybdenum | 192 | 207.3 | | mg/Kg | | 108 | 80 - 120 | 5 | 20 |
| Nickel | 192 | 192.0 | | mg/Kg | | 100 | 80 - 120 | 6 | 20 |
| Selenium | 192 | 175.5 | | mg/Kg | | 91 | 80 - 120 | 2 | 20 |
| Silver | 96.2 | 98.81 | | mg/Kg | | 103 | 80 - 120 | 3 | 20 |
| Thallium | 192 | 188.6 | | mg/Kg | | 98 | 80 - 120 | 4 | 20 |
| Vanadium | 192 | 196.2 | | mg/Kg | | 102 | 80 - 120 | 5 | 20 |
| Zinc | 192 | 193.3 | | mg/Kg | | 101 | 80 - 120 | 3 | 20 |

**Lab Sample ID: 320-112126-A-15-I MS ^2**
**Matrix: Solid**
**Analysis Batch: 445207**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 444414**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | | 217 | 202.2 | | mg/Kg | | 93 | 75 - 125 |
| Arsenic | 4.06 | | 217 | 207.9 | | mg/Kg | | 94 | 75 - 125 |
| Barium | 36.3 | | 217 | 248.7 | | mg/Kg | | 98 | 75 - 125 |
| Beryllium | ND | | 217 | 210.4 | | mg/Kg | | 97 | 75 - 125 |
| Cadmium | ND | | 217 | 208.1 | | mg/Kg | | 96 | 75 - 125 |
| Chromium | 19.4 | | 217 | 233.3 | | mg/Kg | | 98 | 75 - 125 |
| Cobalt | 4.96 | | 217 | 216.1 | | mg/Kg | | 97 | 75 - 125 |
| Copper | 8.04 | | 217 | 224.1 | | mg/Kg | | 99 | 75 - 125 |

## Method: 6010B - Metals (ICP) (Continued)

**Lab Sample ID: 320-112126-A-15-I MS ^2**
**Matrix: Solid**
**Analysis Batch: 445207**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 444414**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Lead | 3.23 | | 217 | 213.5 | | mg/Kg | | 97 | 75 - 125 |
| Molybdenum | ND | | 217 | 229.3 | | mg/Kg | | 106 | 75 - 125 |
| Nickel | 12.1 | | 217 | 220.4 | | mg/Kg | | 96 | 75 - 125 |
| Selenium | ND | | 217 | 178.0 | | mg/Kg | | 82 | 75 - 125 |
| Silver | ND | | 109 | 105.9 | | mg/Kg | | 97 | 75 - 125 |
| Thallium | ND | | 217 | 201.9 | | mg/Kg | | 93 | 75 - 125 |
| Vanadium | 29.2 | | 217 | 246.3 | | mg/Kg | | 100 | 75 - 125 |
| Zinc | 27.3 | | 217 | 228.9 | | mg/Kg | | 93 | 75 - 125 |

**Lab Sample ID: 320-112126-A-15-J MSD ^2**
**Matrix: Solid**
**Analysis Batch: 445207**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 444414**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | | 185 | 168.3 | | mg/Kg | | 91 | 75 - 125 | 18 | 20 |
| Arsenic | 4.06 | | 185 | 180.6 | | mg/Kg | | 95 | 75 - 125 | 14 | 20 |
| Barium | 36.3 | | 185 | 220.0 | | mg/Kg | | 99 | 75 - 125 | 12 | 20 |
| Beryllium | ND | | 185 | 180.3 | | mg/Kg | | 97 | 75 - 125 | 15 | 20 |
| Cadmium | ND | | 185 | 177.9 | | mg/Kg | | 96 | 75 - 125 | 16 | 20 |
| Chromium | 19.4 | | 185 | 201.5 | | mg/Kg | | 98 | 75 - 125 | 15 | 20 |
| Cobalt | 4.96 | | 185 | 185.6 | | mg/Kg | | 98 | 75 - 125 | 15 | 20 |
| Copper | 8.04 | | 185 | 194.6 | | mg/Kg | | 101 | 75 - 125 | 14 | 20 |
| Lead | 3.23 | | 185 | 182.8 | | mg/Kg | | 97 | 75 - 125 | 15 | 20 |
| Molybdenum | ND | | 185 | 198.9 | | mg/Kg | | 107 | 75 - 125 | 14 | 20 |
| Nickel | 12.1 | | 185 | 190.4 | | mg/Kg | | 96 | 75 - 125 | 15 | 20 |
| Selenium | ND | | 185 | 152.4 | | mg/Kg | | 82 | 75 - 125 | 16 | 20 |
| Silver | ND | | 92.6 | 91.06 | | mg/Kg | | 98 | 75 - 125 | 15 | 20 |
| Thallium | ND | | 185 | 173.1 | | mg/Kg | | 93 | 75 - 125 | 15 | 20 |
| Vanadium | 29.2 | | 185 | 216.9 | | mg/Kg | | 101 | 75 - 125 | 13 | 20 |
| Zinc | 27.3 | | 185 | 200.7 | | mg/Kg | | 94 | 75 - 125 | 13 | 20 |

## Method: 7471A - Mercury (CVAA)

**Lab Sample ID: MB 570-443404/1-A**
**Matrix: Solid**
**Analysis Batch: 444134**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 443404**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.0801 | | mg/Kg | | 05/22/24 17:20 | 05/24/24 10:27 | 1 |

**Lab Sample ID: LCS 570-443404/2-A**
**Matrix: Solid**
**Analysis Batch: 444134**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 443404**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | | | 0.408 | 0.3615 | | mg/Kg | | 89 | 80 - 120 |

## Method: 7471A - Mercury (CVAA) (Continued)

**Lab Sample ID: LCSD 570-443404/3-A**
**Matrix: Solid**
**Analysis Batch: 444134**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 443404**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | | | 0.385 | 0.3512 | | mg/Kg | | 91 | 80 - 120 | 3 | 10 |

**Lab Sample ID: 570-185009-A-1-F MS**
**Matrix: Solid**
**Analysis Batch: 444134**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 443404**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | F1 | 0.377 | 0.2086 | F1 | mg/Kg | | 55 | 80 - 120 | | |

**Lab Sample ID: 570-185009-A-1-G MSD**
**Matrix: Solid**
**Analysis Batch: 444134**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 443404**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | F1 | 0.400 | 0.2205 | F1 | mg/Kg | | 55 | 80 - 120 | 6 | 20 |

## GC/MS VOA

### Analysis Batch: 442487

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 570-185066-1 | SS-1 | Total/NA | Solid | 8260B | 442518 |
| 570-185066-2 | SS-2 | Total/NA | Solid | 8260B | 442518 |
| MB 570-442518/3-A | Method Blank | Total/NA | Solid | 8260B | 442518 |
| LCS 570-442518/1-A | Lab Control Sample | Total/NA | Solid | 8260B | 442518 |
| LCSD 570-442518/2-A | Lab Control Sample Dup | Total/NA | Solid | 8260B | 442518 |
| 570-185066-1 MS | SS-1 | Total/NA | Solid | 8260B | 442518 |
| 570-185066-1 MSD | SS-1 | Total/NA | Solid | 8260B | 442518 |

### Prep Batch: 442518

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 570-185066-1 | SS-1 | Total/NA | Solid | 5030C | |
| 570-185066-2 | SS-2 | Total/NA | Solid | 5030C | |
| MB 570-442518/3-A | Method Blank | Total/NA | Solid | 5030C | |
| LCS 570-442518/1-A | Lab Control Sample | Total/NA | Solid | 5030C | |
| LCSD 570-442518/2-A | Lab Control Sample Dup | Total/NA | Solid | 5030C | |
| 570-185066-1 MS | SS-1 | Total/NA | Solid | 5030C | |
| 570-185066-1 MSD | SS-1 | Total/NA | Solid | 5030C | |

## GC Semi VOA

### Prep Batch: 445390

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 570-185066-1 | SS-1 | Total/NA | Solid | 3550C | |
| 570-185066-2 | SS-2 | Total/NA | Solid | 3550C | |
| MB 570-445390/1-A | Method Blank | Total/NA | Solid | 3550C | |
| LCS 570-445390/2-A | Lab Control Sample | Total/NA | Solid | 3550C | |
| LCSD 570-445390/3-A | Lab Control Sample Dup | Total/NA | Solid | 3550C | |
| 570-185066-1 MS | SS-1 | Total/NA | Solid | 3550C | |
| 570-185066-1 MSD | SS-1 | Total/NA | Solid | 3550C | |

### Analysis Batch: 446654

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 570-185066-1 | SS-1 | Total/NA | Solid | 8015B | 445390 |
| 570-185066-2 | SS-2 | Total/NA | Solid | 8015B | 445390 |
| MB 570-445390/1-A | Method Blank | Total/NA | Solid | 8015B | 445390 |
| LCS 570-445390/2-A | Lab Control Sample | Total/NA | Solid | 8015B | 445390 |
| LCSD 570-445390/3-A | Lab Control Sample Dup | Total/NA | Solid | 8015B | 445390 |
| 570-185066-1 MS | SS-1 | Total/NA | Solid | 8015B | 445390 |
| 570-185066-1 MSD | SS-1 | Total/NA | Solid | 8015B | 445390 |

## Metals

### Prep Batch: 443404

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 570-185066-1 | SS-1 | Total/NA | Solid | 7471A | |
| 570-185066-2 | SS-2 | Total/NA | Solid | 7471A | |
| MB 570-443404/1-A | Method Blank | Total/NA | Solid | 7471A | |
| LCS 570-443404/2-A | Lab Control Sample | Total/NA | Solid | 7471A | |
| LCSD 570-443404/3-A | Lab Control Sample Dup | Total/NA | Solid | 7471A | |
| 570-185009-A-1-F MS | Matrix Spike | Total/NA | Solid | 7471A | |
| 570-185009-A-1-G MSD | Matrix Spike Duplicate | Total/NA | Solid | 7471A | |

## Metals

### Analysis Batch: 444134

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 570-185066-1 | SS-1 | Total/NA | Solid | 7471A | 443404 |
| 570-185066-2 | SS-2 | Total/NA | Solid | 7471A | 443404 |
| MB 570-443404/1-A | Method Blank | Total/NA | Solid | 7471A | 443404 |
| LCS 570-443404/2-A | Lab Control Sample | Total/NA | Solid | 7471A | 443404 |
| LCSD 570-443404/3-A | Lab Control Sample Dup | Total/NA | Solid | 7471A | 443404 |
| 570-185009-A-1-F MS | Matrix Spike | Total/NA | Solid | 7471A | 443404 |
| 570-185009-A-1-G MSD | Matrix Spike Duplicate | Total/NA | Solid | 7471A | 443404 |

### Prep Batch: 444414

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 570-185066-1 | SS-1 | Total/NA | Solid | 3051A | |
| 570-185066-2 | SS-2 | Total/NA | Solid | 3051A | |
| MB 570-444414/1-A ^2 | Method Blank | Total/NA | Solid | 3051A | |
| LCS 570-444414/2-A ^2 | Lab Control Sample | Total/NA | Solid | 3051A | |
| LCSD 570-444414/3-A ^2 | Lab Control Sample Dup | Total/NA | Solid | 3051A | |
| 320-112126-A-15-I MS ^2 | Matrix Spike | Total/NA | Solid | 3051A | |
| 320-112126-A-15-J MSD ^2 | Matrix Spike Duplicate | Total/NA | Solid | 3051A | |

### Analysis Batch: 445207

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 570-185066-1 | SS-1 | Total/NA | Solid | 6010B | 444414 |
| 570-185066-2 | SS-2 | Total/NA | Solid | 6010B | 444414 |
| MB 570-444414/1-A ^2 | Method Blank | Total/NA | Solid | 6010B | 444414 |
| LCS 570-444414/2-A ^2 | Lab Control Sample | Total/NA | Solid | 6010B | 444414 |
| LCSD 570-444414/3-A ^2 | Lab Control Sample Dup | Total/NA | Solid | 6010B | 444414 |
| 320-112126-A-15-I MS ^2 | Matrix Spike | Total/NA | Solid | 6010B | 444414 |
| 320-112126-A-15-J MSD ^2 | Matrix Spike Duplicate | Total/NA | Solid | 6010B | 444414 |

# Lab Chronicle

Client: Geosyntec Consultants Inc
Project/Site: SC1303 SJC Bikeway Path

Job ID: 570-185066-1

## Client Sample ID: SS-1

**Date Collected: 05/15/24 11:45**
**Date Received: 05/17/24 15:10**

**Lab Sample ID: 570-185066-1**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5030C | | | 5.09 g | 5 mL | 442518 | 05/20/24 18:42 | B7TT | EET CAL 4 |
| Total/NA | Analysis | 8260B | | 1 | 5 g | 5 mL | 442487 | 05/20/24 20:40 | B7TT | EET CAL 4 |
| | Instrument ID: GCMSGGG | | | | | | | | | |
| Total/NA | Prep | 3550C | | | 10.29 g | 10 mL | 445390 | 05/29/24 14:16 | NV8K | EET CAL 4 |
| Total/NA | Analysis | 8015B | | 1 | 10 mL | 10 mL | 446654 | 06/02/24 10:56 | SP9M | EET CAL 4 |
| | Instrument ID: GC47 | | | | | | | | | |
| Total/NA | Prep | 3051A | | | 0.46 g | 50 mL | 444414 | 05/28/24 07:43 | RL6Q | EET CAL 4 |
| Total/NA | Analysis | 6010B | | 2 | | | 445207 | 05/28/24 19:01 | K1UV | EET CAL 4 |
| | Instrument ID: ICP11 | | | | | | | | | |
| Total/NA | Prep | 7471A | | | 0.48 g | 50 mL | 443404 | 05/22/24 17:20 | VCN7 | EET CAL 4 |
| Total/NA | Analysis | 7471A | | 1 | | | 444134 | 05/24/24 10:55 | ECX6 | EET CAL 4 |
| | Instrument ID: HG7 | | | | | | | | | |

## Client Sample ID: SS-2

**Date Collected: 05/16/24 11:02**
**Date Received: 05/17/24 15:10**

**Lab Sample ID: 570-185066-2**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5030C | | | 5.04 g | 5 mL | 442518 | 05/20/24 18:42 | B7TT | EET CAL 4 |
| Total/NA | Analysis | 8260B | | 1 | 5 g | 5 mL | 442487 | 05/21/24 00:16 | B7TT | EET CAL 4 |
| | Instrument ID: GCMSGGG | | | | | | | | | |
| Total/NA | Prep | 3550C | | | 10.38 g | 10 mL | 445390 | 05/29/24 14:16 | NV8K | EET CAL 4 |
| Total/NA | Analysis | 8015B | | 1 | 10 mL | 10 mL | 446654 | 06/02/24 11:17 | SP9M | EET CAL 4 |
| | Instrument ID: GC47 | | | | | | | | | |
| Total/NA | Prep | 3051A | | | 0.51 g | 50 mL | 444414 | 05/28/24 07:43 | RL6Q | EET CAL 4 |
| Total/NA | Analysis | 6010B | | 2 | | | 445207 | 05/28/24 19:03 | K1UV | EET CAL 4 |
| | Instrument ID: ICP11 | | | | | | | | | |
| Total/NA | Prep | 7471A | | | 0.52 g | 50 mL | 443404 | 05/22/24 17:20 | VCN7 | EET CAL 4 |
| Total/NA | Analysis | 7471A | | 1 | | | 444134 | 05/24/24 10:57 | ECX6 | EET CAL 4 |
| | Instrument ID: HG7 | | | | | | | | | |

**Laboratory References:**

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

# Accreditation/Certification Summary

Client: Geosyntec Consultants Inc
Project/Site: SC1303 SJC Bikeway Path

Job ID: 570-185066-1

## Laboratory: Eurofins Calscience

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| California | State | 3082 | 07-31-24 |

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 8260B | 5030C | Solid | 1,1,2-Trichloro-1,2,2-trifluoroethane |
| 8260B | 5030C | Solid | 1,1-Dichloropropene |
| 8260B | 5030C | Solid | 1,2,3-Trichlorobenzene |
| 8260B | 5030C | Solid | 1,2,4-Trimethylbenzene |
| 8260B | 5030C | Solid | 1,3,5-Trimethylbenzene |
| 8260B | 5030C | Solid | 1,3-Dichloropropane |
| 8260B | 5030C | Solid | 2,2-Dichloropropane |
| 8260B | 5030C | Solid | 2-Butanone (MEK) |
| 8260B | 5030C | Solid | 2-Chlorotoluene |
| 8260B | 5030C | Solid | 2-Hexanone |
| 8260B | 5030C | Solid | Acetone |
| 8260B | 5030C | Solid | Isopropylbenzene |
| 8260B | 5030C | Solid | p-Isopropyltoluene |
| 8260B | 5030C | Solid | Vinyl acetate |

# Method Summary

Client: Geosyntec Consultants Inc
Project/Site: SC1303 SJC Bikeway Path

Job ID: 570-185066-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260B | Volatile Organic Compounds (GC/MS) | SW846 | EET CAL 4 |
| 8015B | Diesel Range Organics (DRO) (GC) | SW846 | EET CAL 4 |
| 6010B | Metals (ICP) | SW846 | EET CAL 4 |
| 7471A | Mercury (CVAA) | SW846 | EET CAL 4 |
| 3051A | Preparation, Metals, Microwave Assisted | SW846 | EET CAL 4 |
| 3550C | Ultrasonic Extraction | SW846 | EET CAL 4 |
| 5030C | Purge and Trap | SW846 | EET CAL 4 |
| 7471A | Preparation, Mercury | SW846 | EET CAL 4 |

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

EET CAL 4 = Eurofins Calscience  Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

# Sample Summary

Client: Geosyntec Consultants Inc
Project/Site: SC1303 SJC Bikeway Path

Job ID: 570-185066-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 570-185066-1 | SS-1 | Solid | 05/15/24 11:45 | 05/17/24 15:10 |
| 570-185066-2 | SS-2 | Solid | 05/16/24 11:02 | 05/17/24 15:10 |

Loc 570
185066

eurofins

570-185066 Chain of Custody

**CHAIN-OF-CUSTODY RECORD**

DATE: 5/17/2024

PAGE: 1 OF 1

2841 Dow Avenue Suite 100, Tustin, CA 92780 • (714) 895-5494

For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

LABORATORY CLIENT: Geosyntec Consultants

ADDRESS: 3530 Hyland Ave. Ste. 100

CITY: Costa Mesa STATE: CA ZIP: 92626

TEL. (949) 645-2818 E-MAIL: BLin@geosyntec.com

CLIENT PROJECT NAME / NO: SJC Bikeway SC1303

P.O NO.:

PROJECT CONTACT: Brian Lin

ECI PROJECT #: ECI PROJECT #

GLOBAL ID:

LOG CODE:

SAMPLER(S): (PRINT) B. Lin

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

EDD:

☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:

6010B - CAM17/Title 22 FCP Metals
7470A/7471A Mercury
8260B - Routine Volatiles (Full Spike)
8015B - TPH C6-C44 Carbon Chain Characterization

**REQUESTED ANALYSES**

Please check box or fill in blank as needed

| LAB USE ONLY | SAMPLE ID | FIELD POINT ID | SAMPLING DATE | SAMPLING TIME | MATRIX | NO. OF CONT | Unpreserved | Preserved | Field Filtered | ☐ TPH(g) ☐ GRO | ☐ TPH(d) ☐ DRO | TPH ☐ C6-C36 ☒ C6-C44 | TPH ____ | BTEX / MTBE ☐ 8260 ☐ ____ | VOCs (8260) | Oxygenates (8260) | Prep (5035) ☐ En Core ☐ Terra Core | SVOCs (8270) | Pesticides (8081) | PCBs (8082) | PAHs ☐ 8270 ☐ 8270 SIM | T22 Metals ☐ 6010/747X ☐ 6020/747X | Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (1) | SS-1 | B-2 | 5/15/24 | 1145 | S | 1 | | | | | | X | | | X | | | | | | | X | |
| (2) | SS-2 | B-1 | 5/16/24 | 1102 | S | 1 | | | | | | X | | | X | | | | | | | X | |

| | | | |
|---|---|---|---|
| Relinquished by: (Signature) | Received by: (Signature/Affiliation) | Date: 05/17/2024 | Time: 1510 |
| Relinquished by: (Signature) | Received by: (Signature/Affiliation) | Date: | Time: |
| Relinquished by: (Signature) | Received by: (Signature/Affiliation) | Date: | Time: |

EC

4.6/4.7 SCIF

2014-07-01 Revision

# Login Sample Receipt Checklist

Client: Geosyntec Consultants Inc

Job Number: 570-185066-1

**Login Number: 185066**

**List Source: Eurofins Calscience**

**List Number: 1**

**Creator: Vitente, Precy**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

Geosyntec consultants

# APPENDIX F – Geotechnical Laboratory Results

**AP Engineering and Testing, Inc.**
DBE|MBE|SBE
2607 Pomona Boulevard | Pomona, CA 91768
t. 909.869.6316 | f. 909.869.6318 | www.aplaboratory.com

# PERCENT PASSING NO. 200 SIEVE

**ASTM D1140**

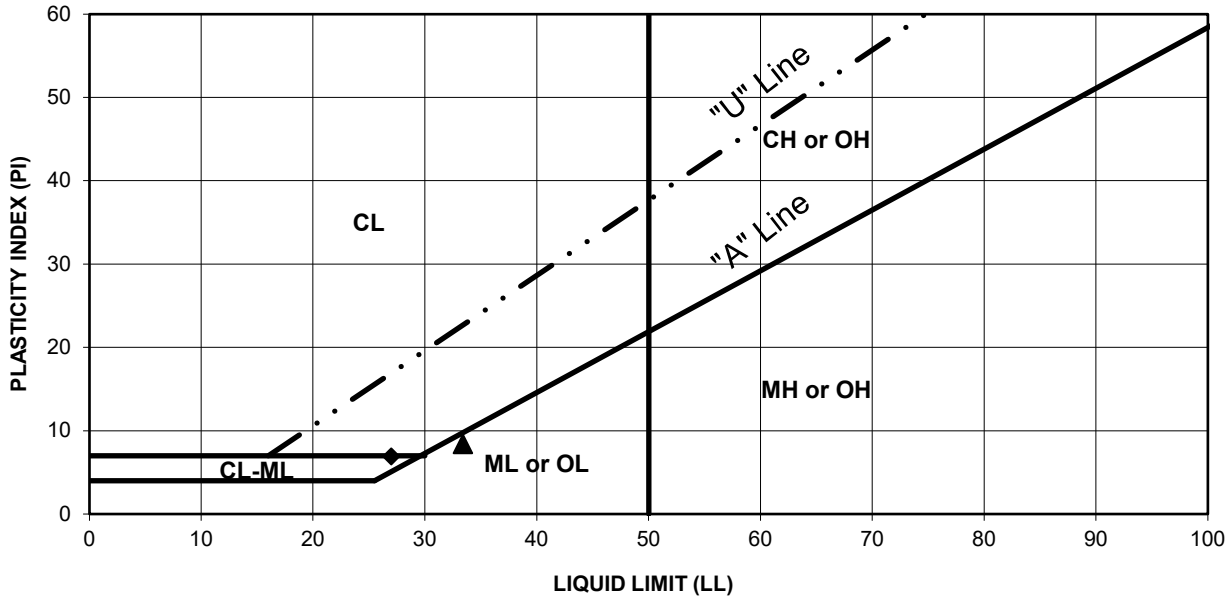
| | | | |
|---|---|---|---|
| Client: | Geosyntec Consultants, Inc. | AP Lab No.: | 24-0541 |
| Project Name: | SJC Bikeway | Test Date: | 05/28/24 |
| Project Number: | SC1303 | | |

| Boring No. | Sample No. | Depth (ft) | Percent Fines (%) |
|---|---|---|---|
| B-1 | S-4 | 10.5-11 | 68.0 |
| B-1 | S-8 | 26-26.5 | 76.1 |
| B-1 | S-9 | 30-31.5 | 80.9 |
| B-2 | S-6 | 15-16.5 | 44.5 |
| B-2 | S-11 | 40-41.5 | 73.7 |
| B-2 | S-12 | 45-46.5 | 11.7 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

**AP Engineering and Testing, Inc.**
DBE|MBE|SBE
2607 Pomona Boulevard | Pomona, CA 91768
t. 909.869.6316 | f. 909.869.6318 | www.aplaboratory.com

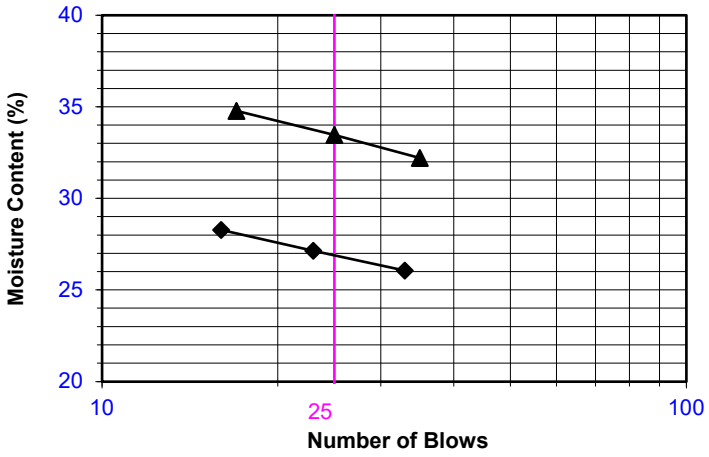
# ATTERBERG LIMITS
## ASTM D 4318

| | | | | | |
|---|---|---|---|---|---|
| **Client Name:** | Geosyntec Consultants, Inc. | Tested By: | DK | Date: | 05/29/24 |
| **Project Name:** | SJC Bikeway | Computed By: | JG | Date: | 05/30/24 |
| **Project No.:** | SC1303 | Checked By: | AP | Date: | 06/04/24 |




PROCEDURE USED

- ☐ Wet Preparation
- ☒ Dry Preparation
- ☒ Procedure A Multipoint Test
- ☐ Procedure B One-point Test

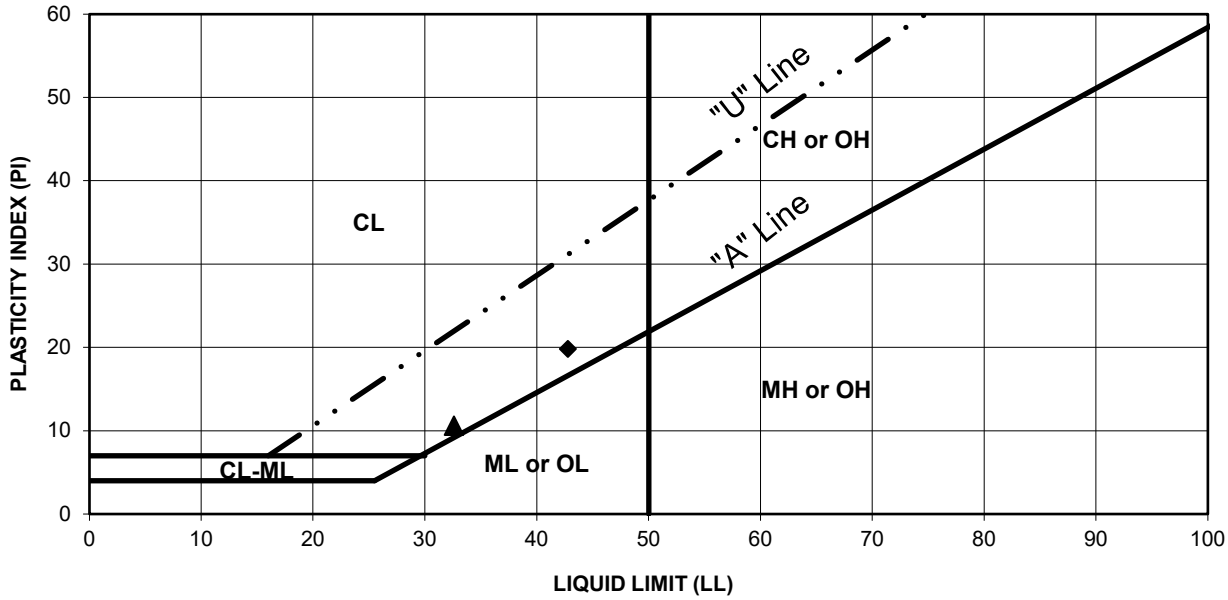



| Symbol | Boring Number | Sample Number | Depth (feet) | LL | PL | PI | Plasticity Chart Symbol |
|---|---|---|---|---|---|---|---|
| ♦ | B-1 | S-4 | 10.5-11 | 27 | 20 | 7 | CL-ML |
| ▲ | B-1 | S-7 | 20-21.5 | 33 | 25 | 8 | ML |

**AP Engineering and Testing, Inc.**
DBE|MBE|SBE
2607 Pomona Boulevard | Pomona, CA 91768
t. 909.869.6316 | f. 909.869.6318 | www.aplaboratory.com

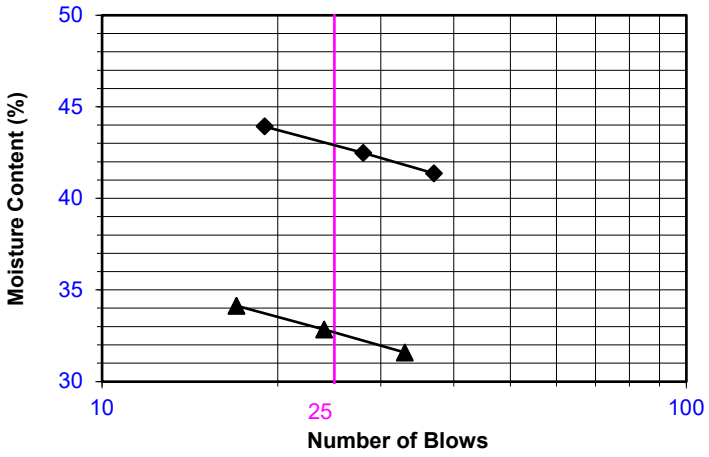
# ATTERBERG LIMITS
## ASTM D 4318

| | | | | | |
|---|---|---|---|---|---|
| **Client Name:** | Geosyntec Consultants, Inc. | Tested By: | DK | Date: | 05/29/24 |
| **Project Name:** | SJC Bikeway | Computed By: | JG | Date: | 05/30/24 |
| **Project No.:** | SC1303 | Checked By: | AP | Date: | 06/04/24 |




PROCEDURE USED

- ☐ Wet Preparation
- ☒ Dry Preparation
- ☒ Procedure A Multipoint Test
- ☐ Procedure B One-point Test

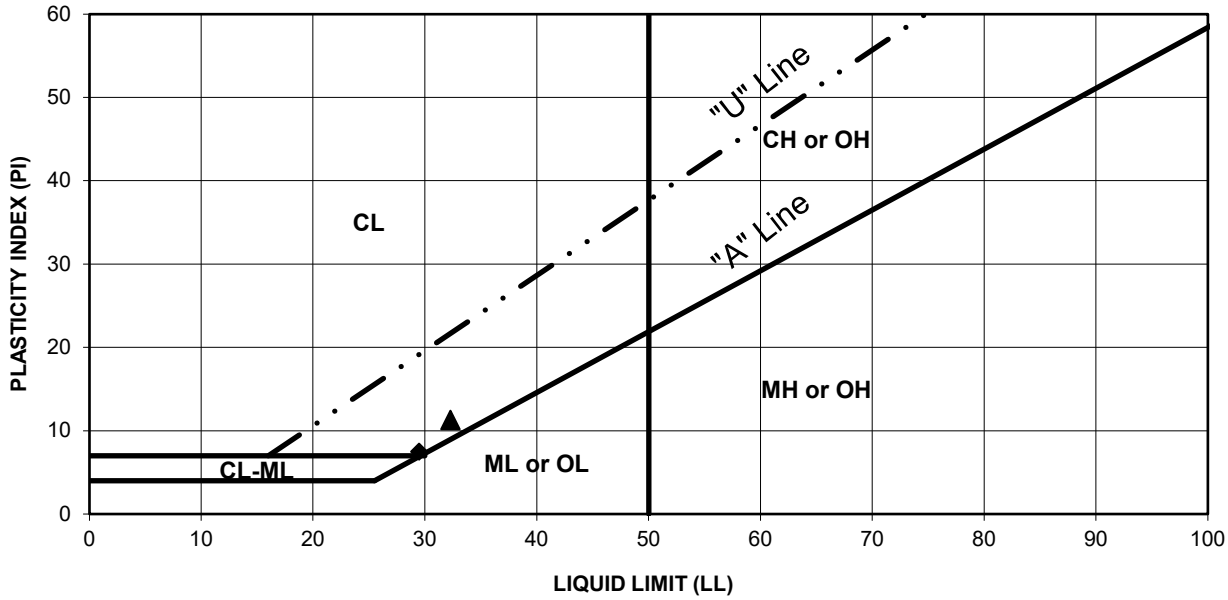



| Symbol | Boring Number | Sample Number | Depth (feet) | LL | PL | PI | Plasticity Chart Symbol |
|---|---|---|---|---|---|---|---|
| ♦ | B-1 | S-12A | 45.5-46 | 43 | 23 | 20 | CL |
| ▲ | B-1 | S-12 | 46-46.5 | 33 | 22 | 11 | CL |

**AP Engineering and Testing, Inc.**
DBE|MBE|SBE
2607 Pomona Boulevard | Pomona, CA 91768
t. 909.869.6316 | f. 909.869.6318 | www.aplaboratory.com

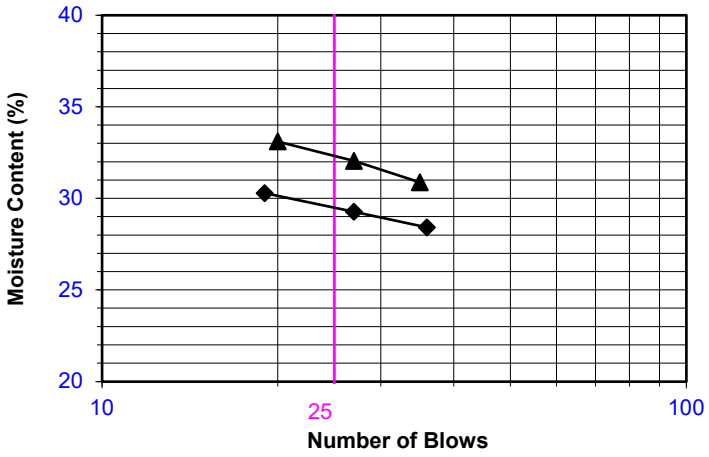
# ATTERBERG LIMITS
## ASTM D 4318

| | | | | | |
|---|---|---|---|---|---|
| **Client Name:** | Geosyntec Consultants, Inc. | Tested By: | DK | Date: | 05/29/24 |
| **Project Name:** | SJC Bikeway | Computed By: | JG | Date: | 05/30/24 |
| **Project No.:** | SC1303 | Checked By: | AP | Date: | 06/04/24 |




PROCEDURE USED

- ☐ Wet Preparation
- ☒ Dry Preparation
- ☒ Procedure A Multipoint Test
- ☐ Procedure B One-point Test




| Symbol | Boring Number | Sample Number | Depth (feet) | LL | PL | PI | Plasticity Chart Symbol |
|---|---|---|---|---|---|---|---|
| ♦ | B-2 | S-5 | 12-12.5 | 30 | 22 | 8 | CL |
| ▲ | B-2 | S-11 | 40-41.5 | 32 | 21 | 11 | CL |

# MOISTURE AND DENSITY TEST RESULTS

## ASTM D2216 and ASTM D7263 (Method B)

Client: Geosyntec Consultants, Inc.
Project Name: SJC Bikeway
Project No.: SC1303

AP Lab No.: 24-0541
Test Date: 05/28/24

| Boring No. | Sample No. | Sample Depth (ft.) | Moisture Content (%) | Dry Density (pcf) |
|---|---|---|---|---|
| B-1 | S-4 | 10.5-11 | 19.9 | 105.3 |
| B-1 | S-8 | 26-26.5 | 24.7 | 96.5 |
| B-1 | S-12 | 46-46.5 | 29.4 | 92.4 |
| B-2 | S-5 | 12-12.5 | 18.3 | 105.4 |
| B-2 | S-9 | 31-31.5 | 24.3 | 91.2 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

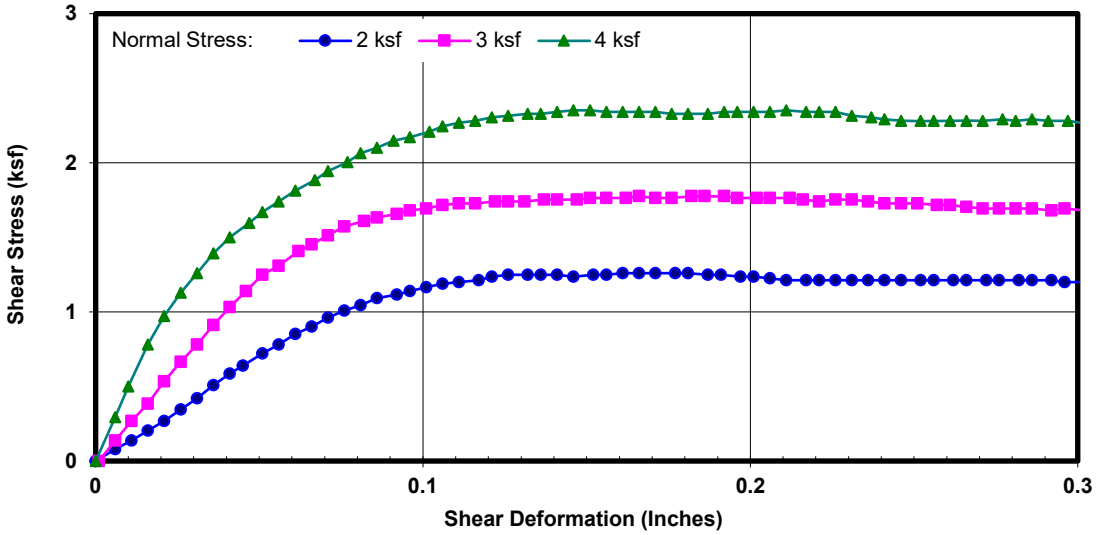
**AP Engineering and Testing, Inc.**
DBE|MBE|SBE
2607 Pomona Boulevard | Pomona, CA 91768
t. 909.869.6316 | f. 909.869.6318 | www.aplaboratory.com

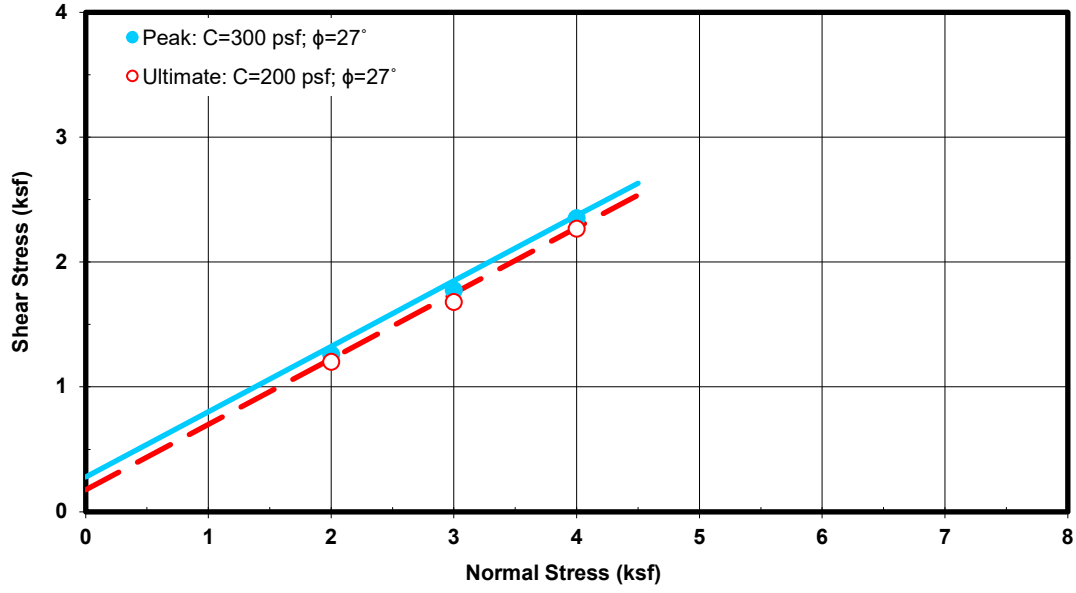
# DIRECT SHEAR TEST RESULTS
## ASTM D 3080

**Project Name:** SJC Bikeway
**Project No.:** SC1303
**Boring No.:** B-1
**Sample No.:** S-8 **Depth (ft):** 26-26.5
**Sample Type:** Mod. Cal.
**Soil Description:** Clay w/sand
**Test Condition:** Inundated **Shear Type:** Regular

**Tested By:** AP **Date:** 05/30/24
**Computed By:** JP **Date:** 06/04/24
**Checked by:** AP **Date:** 06/04/24

| Wet Unit Weight (pcf) | Dry Unit Weight (pcf) | Initial Moisture Content (%) | Final Moisture Content (%) | Initial Degree Saturation (%) | Final Degree Saturation (%) | Normal Stress (ksf) | Peak Shear Stress (ksf) | Ultimate Shear Stress (ksf) |
|---|---|---|---|---|---|---|---|---|
| 119.0 | 95.5 | 24.7 | 28.2 | 87 | 99 | 2 | 1.260 | 1.200 |
| | | | | | | 3 | 1.776 | 1.680 |
| | | | | | | 4 | 2.352 | 2.268 |



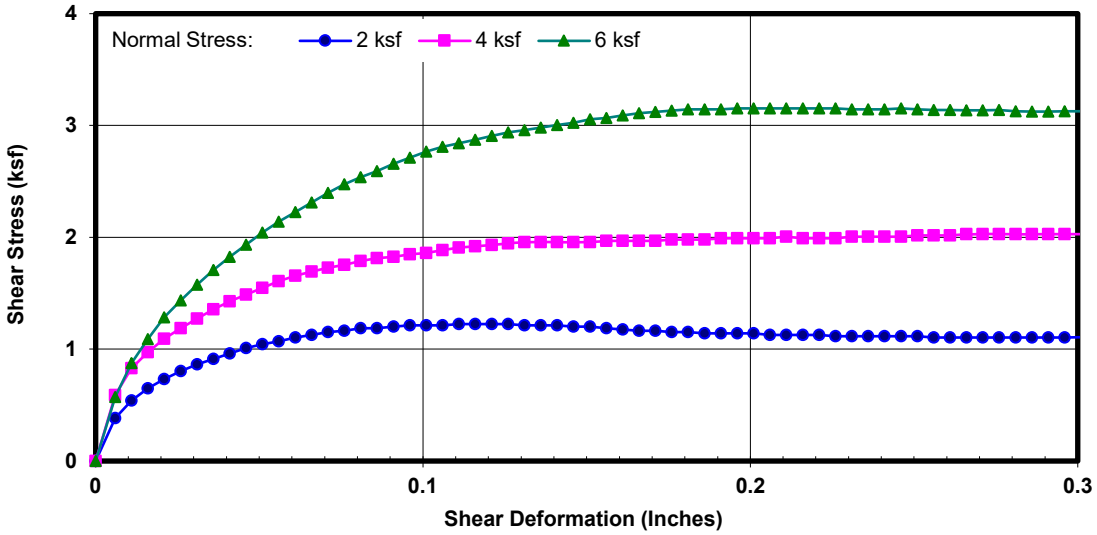
**AP Engineering and Testing, Inc.**
DBE|MBE|SBE
2607 Pomona Boulevard | Pomona, CA 91768
t. 909.869.6316 | f. 909.869.6318 | www.aplaboratory.com

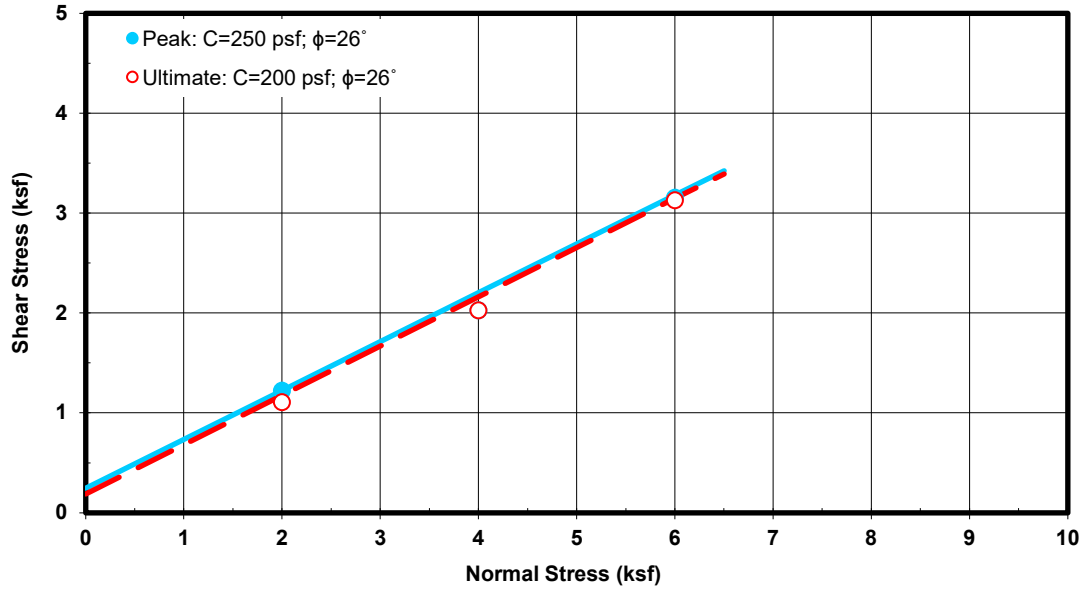
# DIRECT SHEAR TEST RESULTS
## ASTM D 3080

**Project Name:** SJC Bikeway
**Project No.:** SC1303
**Boring No.:** B-1
**Sample No.:** S-12 **Depth (ft):** 46-46.5
**Sample Type:** Mod. Cal.
**Soil Description:** Sandy Lean Clay
**Test Condition:** Inundated **Shear Type:** Regular

**Tested By:** AP **Date:** 05/30/24
**Computed By:** JP **Date:** 06/04/24
**Checked by:** AP **Date:** 06/04/24

| Wet Unit Weight (pcf) | Dry Unit Weight (pcf) | Initial Moisture Content (%) | Final Moisture Content (%) | Initial Degree Saturation (%) | Final Degree Saturation (%) | Normal Stress (ksf) | Peak Shear Stress (ksf) | Ultimate Shear Stress (ksf) |
|---|---|---|---|---|---|---|---|---|
| 120.6 | 93.1 | 29.4 | 29.9 | 98 | 100 | 2 | 1.224 | 1.106 |
| | | | | | | 4 | 2.028 | 2.028 |
| | | | | | | 6 | 3.154 | 3.128 |



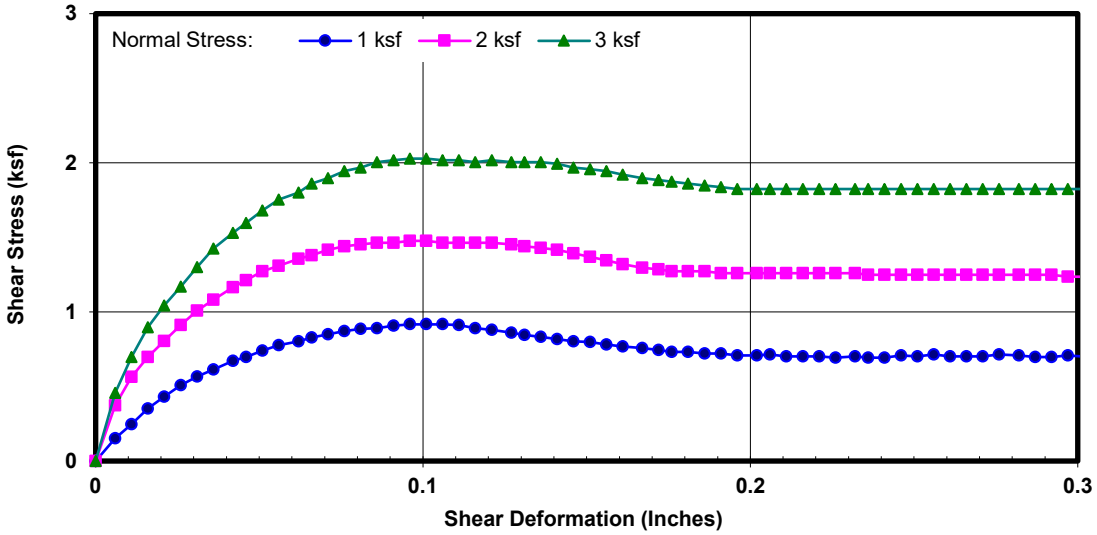
**AP Engineering and Testing, Inc.**
DBE|MBE|SBE
2607 Pomona Boulevard | Pomona, CA 91768
t. 909.869.6316 | f. 909.869.6318 | www.aplaboratory.com

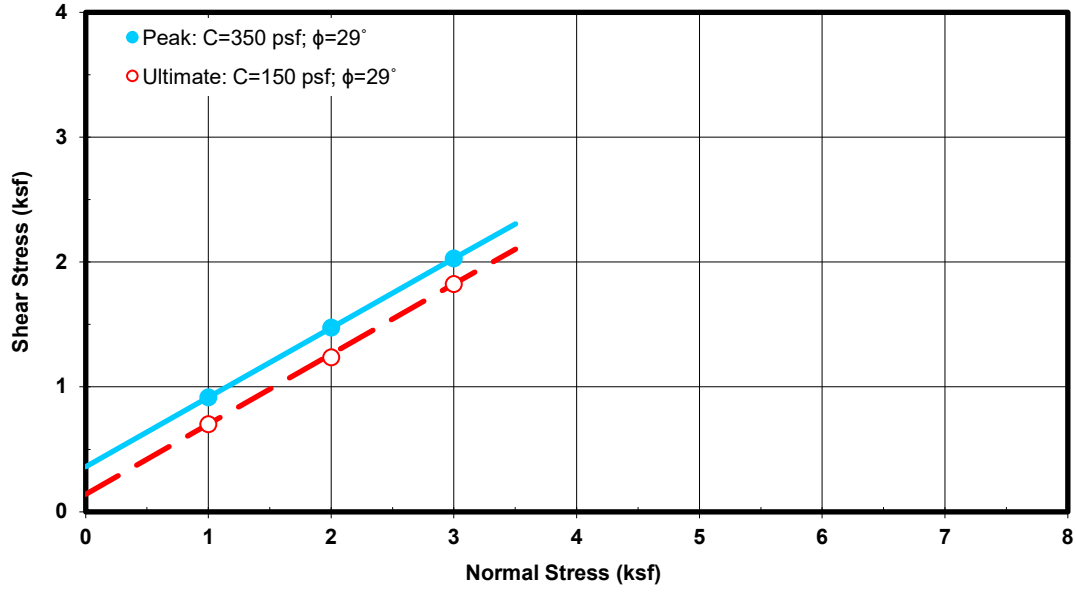
# DIRECT SHEAR TEST RESULTS
## ASTM D 3080

**Project Name:** SJC Bikeway
**Project No.:** SC1303
**Boring No.:** B-2
**Sample No.:** S-5 **Depth (ft):** 12-12.5
**Sample Type:** Mod. Cal.
**Soil Description:** Sandy Lean Clay
**Test Condition:** Inundated **Shear Type:** Regular

**Tested By:** AP **Date:** 05/30/24
**Computed By:** JP **Date:** 06/04/24
**Checked by:** AP **Date:** 06/04/24

| Wet Unit Weight (pcf) | Dry Unit Weight (pcf) | Initial Moisture Content (%) | Final Moisture Content (%) | Initial Degree Saturation (%) | Final Degree Saturation (%) | Normal Stress (ksf) | Peak Shear Stress (ksf) | Ultimate Shear Stress (ksf) |
|---|---|---|---|---|---|---|---|---|
| 125.4 | 106.0 | 18.3 | 21.6 | 84 | 99 | 1 | 0.917 | 0.702 |
| | | | | | | 2 | 1.476 | 1.236 |
| | | | | | | 3 | 2.028 | 1.824 |



**AP Engineering and Testing, Inc.**
DBE|MBE|SBE
2607 Pomona Boulevard | Pomona, CA 91768
t. 909.869.6316 | f. 909.869.6318 | www.aplaboratory.com

# CORROSION TEST RESULTS

Client Name: Geosyntec Consultants, Inc.
Project Name: SJC Bikeway
Project No.: SC1303

AP Job No.: 24-0541
Date: 05/28/24

| Boring No. | Sample No. | Depth (feet) | Soil Description | Minimum Resistivity (ohm-cm) | pH | Sulfate Content (ppm) | Chloride Content (ppm) |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| B-1 | BB-1 | 0.5-5 | Silty Sand w/gravel | 3,807 | 9.1 | 82 | 21 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

NOTES:
Resistivity Test and pH: California Test Method 643
Sulfate Content : California Test Method 417
Chloride Content : California Test Method 422
ND = Not Detectable
NA = Not Sufficient Sample
NR = Not Requested

**AP Engineering and Testing, Inc.**
DBE|MBE|SBE
2607 Pomona Boulevard | Pomona, CA 91768
t. 909.869.6316 | f. 909.869.6318 | www.aplaboratory.com

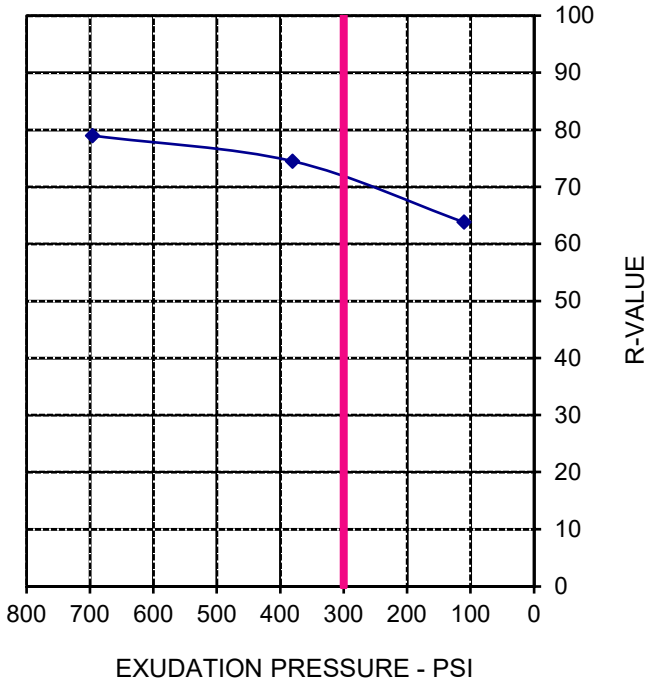
# R-VALUE TEST DATA

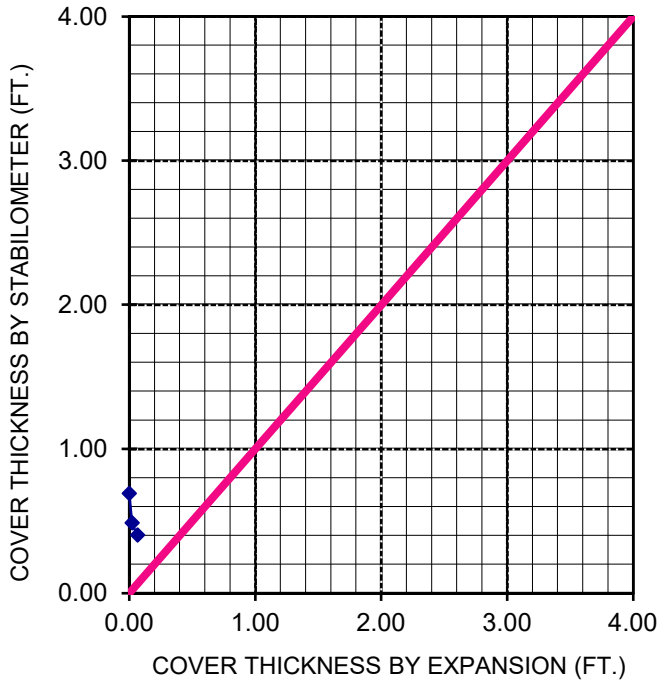
ASTM D2844

| | | | | | |
|---|---|---|---|---|---|
| Project Name: | San Jose Creek Multi-Use Bikeway | | Tested By: | ST | Date: 12/20/24 |
| Project Number: | SC1303 | | Computed By: | KM | Date: 12/21/24 |
| Boring No.: | P-2 | | Checked By: | AP | Date: 12/30/24 |
| Sample No.: | BB-1 | Depth (ft.): 0-3 | | | |
| Location: | N/A | | | | |
| Soil Description: | Silty Sand | | | | |

| Mold Number | G | I | H | |
|---|---|---|---|---|
| Water Added, g | 81 | 70 | 61 | |
| Compact Moisture(%) | 11.9 | 10.8 | 10.0 | |
| Compaction Gage Pressure, psi | 250 | 250 | 250 | |
| Exudation Pressure, psi | 110 | 380 | 696 | |
| Sample Height, Inches | 2.5 | 2.5 | 2.5 | |
| Gross Weight Mold, g | 2937 | 2936 | 2938 | |
| Tare Weight Mold, g | 1826 | 1817 | 1835 | |
| Net Sample Weight, g | 1112 | 1118 | 1103 | |
| Expansion, inchesx$10^{-4}$ | 0 | 7 | 20 | |
| Stability 2,000 (160 psi) | 16/32 | 12/22 | 10/18 | |
| Turns Displacement | 5.67 | 5.37 | 5.25 | |
| R-Value Uncorrected | 64 | 74 | 79 | |
| R-Value Corrected | 64 | 74 | 79 | |
| Dry Density, pcf | 120.4 | 122.3 | 121.5 | |
| Traffic Index | 8.0 | 8.0 | 8.0 | |
| G.E. by Stability | 0.69 | 0.49 | 0.40 | |
| G.E. by Expansion | 0.00 | 0.02 | 0.07 | |

| R-VALUE | | |
|---|---|---|
| | By Exudation: | 72 |
| | By Expansion: | *N/A |
| | At Equilibrium: (by Exudation) | 72 |
| Remarks | Gf = 1.34, and 0.4 % Retained on the ¾" *Not Applicable | |



**AP Engineering and Testing, Inc.**
DBE|MBE|SBE
2607 Pomona Boulevard | Pomona, CA 91768
t. 909.869.6316 | f. 909.869.6318 | www.aplaboratory.com

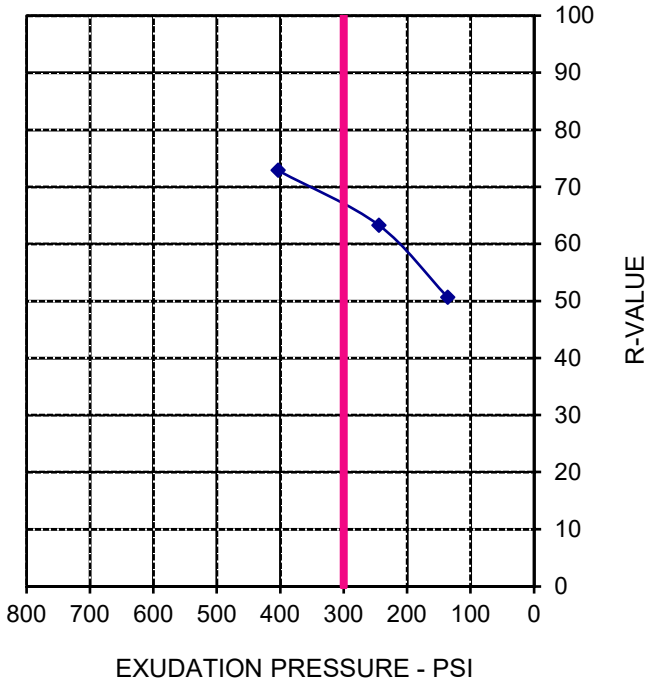
# R-VALUE TEST DATA

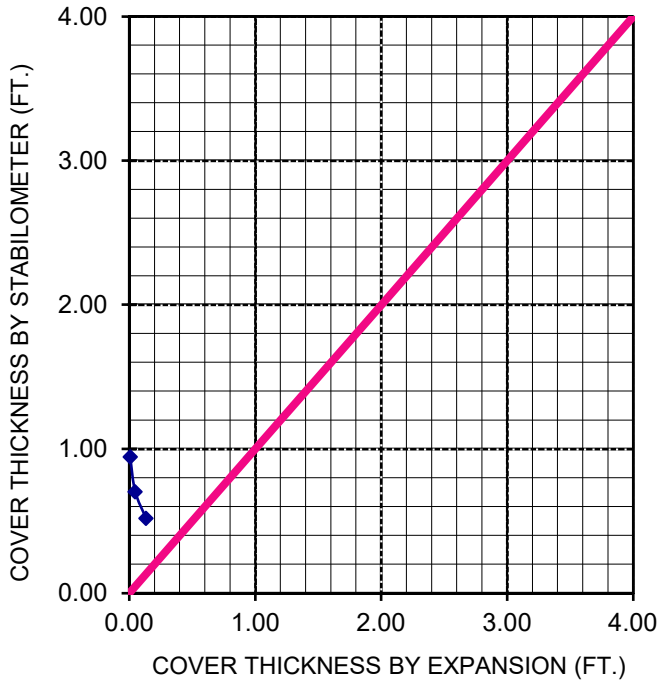
ASTM D2844

| | | | | | |
|---|---|---|---|---|---|
| Project Name: | San Jose Creek Multi-Use Bikeway | | Tested By: | ST | Date: 12/19/24 |
| Project Number: | SC1303 | | Computed By: | KM | Date: 12/20/24 |
| Boring No.: | P-4 | | Checked By: | AP | Date: 12/30/24 |
| Sample No.: | BB-1 | Depth (ft.): 0-3 | | | |
| Location: | N/A | | | | |
| Soil Description: | Silty Sand | | | | |

| Mold Number | D | E | F | |
|---|---|---|---|---|
| Water Added, g | 66 | 76 | 85 | |
| Compact Moisture(%) | 11.5 | 12.5 | 13.3 | |
| Compaction Gage Pressure, psi | 250 | 250 | 250 | |
| Exudation Pressure, psi | 403 | 245 | 136 | |
| Sample Height, Inches | 2.6 | 2.5 | 2.5 | |
| Gross Weight Mold, g | 3114 | 3056 | 2991 | |
| Tare Weight Mold, g | 1953 | 1963 | 1867 | |
| Net Sample Weight, g | 1160 | 1093 | 1123 | |
| Expansion, inchesx$10^{-4}$ | 40 | 14 | 2 | |
| Stability 2,000 (160 psi) | 10/26 | 16/36 | 24/54 | |
| Turns Displacement | 5.36 | 5.00 | 4.78 | |
| R-Value Uncorrected | 71 | 63 | 51 | |
| R-Value Corrected | 73 | 63 | 51 | |
| Dry Density, pcf | 121.3 | 117.7 | 120.1 | |
| Traffic Index | 8.0 | 8.0 | 8.0 | |
| G.E. by Stability | 0.52 | 0.70 | 0.94 | |
| G.E. by Expansion | 0.13 | 0.05 | 0.01 | |

| R-VALUE | | |
|---|---|---|
| | By Exudation: | 67 |
| | By Expansion: | *N/A |
| | At Equilibrium: (by Exudation) | 67 |
| Remarks | Gf = 1.34, and 0.3 % Retained on the ¾" *Not Applicable | |



**AP Engineering and Testing, Inc.**
DBE|MBE|SBE
2607 Pomona Boulevard | Pomona, CA 91768
t. 909.869.6316 | f. 909.869.6318 | www.aplaboratory.com

# R-VALUE TEST DATA

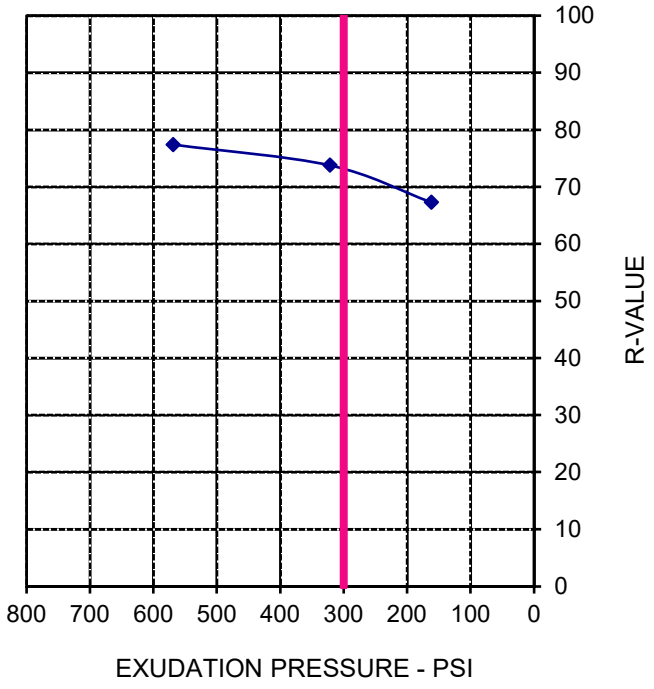
ASTM D2844

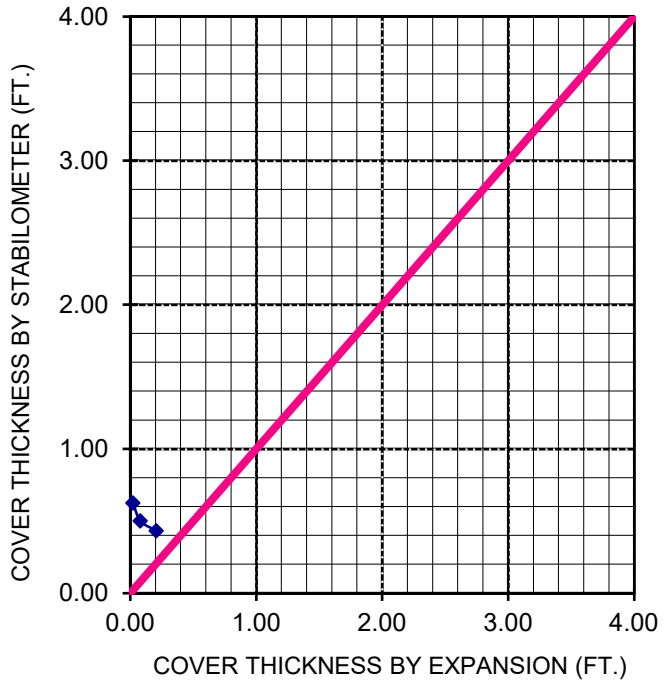
Project Name: San Jose Creek Multi-Use Bikeway
Project Number: SC1303
Boring No.: P-6
Sample No.: BB-1 Depth (ft.): 0-3
Location: N/A
Soil Description: Silty Sand

Tested By: ST Date: 12/20/24
Computed By: KM Date: 12/21/24
Checked By: AP Date: 12/30/24

| Mold Number | A | B | C | |
|---|---|---|---|---|
| Water Added, g | 95 | 85 | 74 | |
| Compact Moisture(%) | 12.6 | 11.6 | 10.5 | |
| Compaction Gage Pressure, psi | 250 | 250 | 250 | |
| Exudation Pressure, psi | 161 | 322 | 569 | |
| Sample Height, Inches | 2.5 | 2.6 | 2.6 | |
| Gross Weight Mold, g | 3071 | 3093 | 3096 | |
| Tare Weight Mold, g | 1965 | 1965 | 1966 | |
| Net Sample Weight, g | 1106 | 1128 | 1129 | |
| Expansion, inchesx$10^{-4}$ | 6 | 24 | 62 | |
| Stability 2,000 (160 psi) | 14/28 | 12/24 | 10/20 | |
| Turns Displacement | 5.73 | 5.46 | 5.41 | |
| R-Value Uncorrected | 67 | 72 | 76 | |
| R-Value Corrected | 67 | 74 | 77 | |
| Dry Density, pcf | 119.1 | 117.8 | 119.1 | |
| Traffic Index | 8.0 | 8.0 | 8.0 | |
| G.E. by Stability | 0.62 | 0.50 | 0.43 | |
| G.E. by Expansion | 0.02 | 0.08 | 0.21 | |

| R-VALUE | | |
|---|---|---|
| | By Exudation: | 73 |
| | By Expansion: | *N/A |
| | At Equilibrium: (by Exudation) | 73 |
| Remarks | Gf = 1.34, and 0.4 % Retained on the ¾" *Not Applicable | |



**AP Engineering and Testing, Inc.**
DBE|MBE|SBE
2607 Pomona Boulevard | Pomona, CA 91768
t. 909.869.6316 | f. 909.869.6318 | www.aplaboratory.com

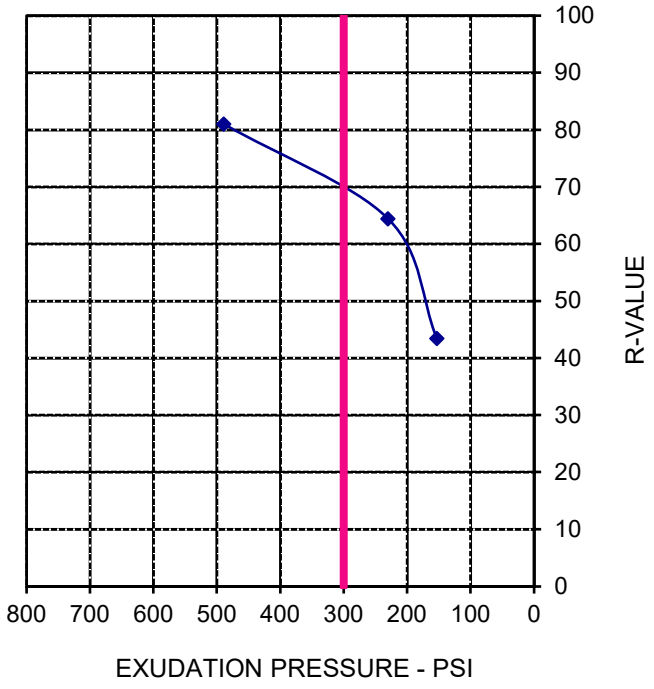
# R-VALUE TEST DATA

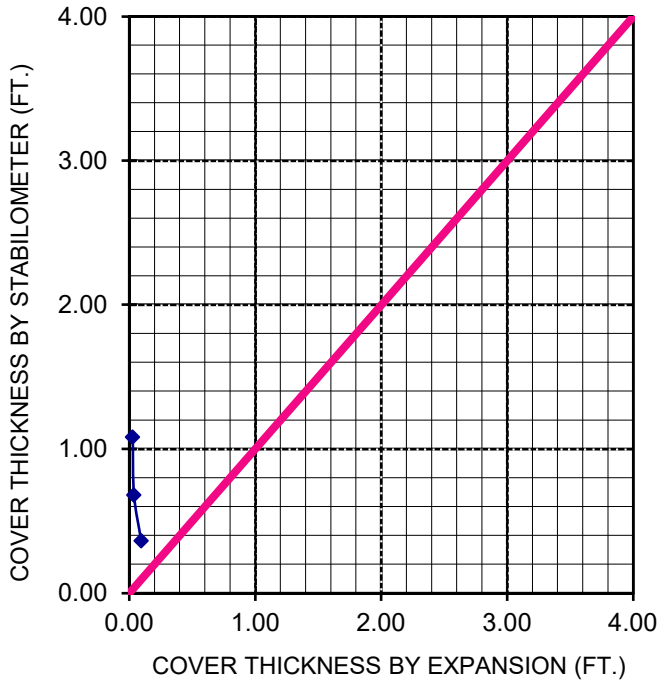
ASTM D2844

| | | | | | |
|---|---|---|---|---|---|
| Project Name: | San Jose Creek Multi-Use Bikeway | | Tested By: | ST | Date: 12/19/24 |
| Project Number: | SC1303 | | Computed By: | KM | Date: 12/20/24 |
| Boring No.: | P-8 | | Checked By: | AP | Date: 12/30/24 |
| Sample No.: | BB-1 | Depth (ft.): 0-3 | | | |
| Location: | N/A | | | | |
| Soil Description: | Silty Sand w/gravel | | | | |

| Mold Number | H | I | G | |
|---|---|---|---|---|
| Water Added, g | 68 | 63 | 56 | |
| Compact Moisture(%) | 11.4 | 10.9 | 10.2 | |
| Compaction Gage Pressure, psi | 250 | 250 | 250 | |
| Exudation Pressure, psi | 153 | 230 | 489 | |
| Sample Height, Inches | 2.5 | 2.5 | 2.6 | |
| Gross Weight Mold, g | 2978 | 2944 | 2976 | |
| Tare Weight Mold, g | 1835 | 1817 | 1826 | |
| Net Sample Weight, g | 1143 | 1127 | 1150 | |
| Expansion, inchesx$10^{-4}$ | 8 | 11 | 28 | |
| Stability 2,000 (160 psi) | 29/60 | 18/36 | 10/20 | |
| Turns Displacement | 5.43 | 4.76 | 4.50 | |
| R-Value Uncorrected | 43 | 64 | 80 | |
| R-Value Corrected | 43 | 64 | 81 | |
| Dry Density, pcf | 124.4 | 123.1 | 121.6 | |
| Traffic Index | 8.0 | 8.0 | 8.0 | |
| G.E. by Stability | 1.08 | 0.68 | 0.36 | |
| G.E. by Expansion | 0.03 | 0.04 | 0.09 | |

| R-VALUE | | |
|---|---|---|
| | By Exudation: | 70 |
| | By Expansion: | *N/A |
| | At Equilibrium: (by Exudation) | 70 |
| Remarks | Gf = 1.34, and 2.0 % Retained on the ¾" *Not Applicable | |



**AP Engineering and Testing, Inc.**
DBE|MBE|SBE
2607 Pomona Boulevard | Pomona, CA 91768
t. 909.869.6316 | f. 909.869.6318 | www.aplaboratory.com

# R-VALUE TEST DATA

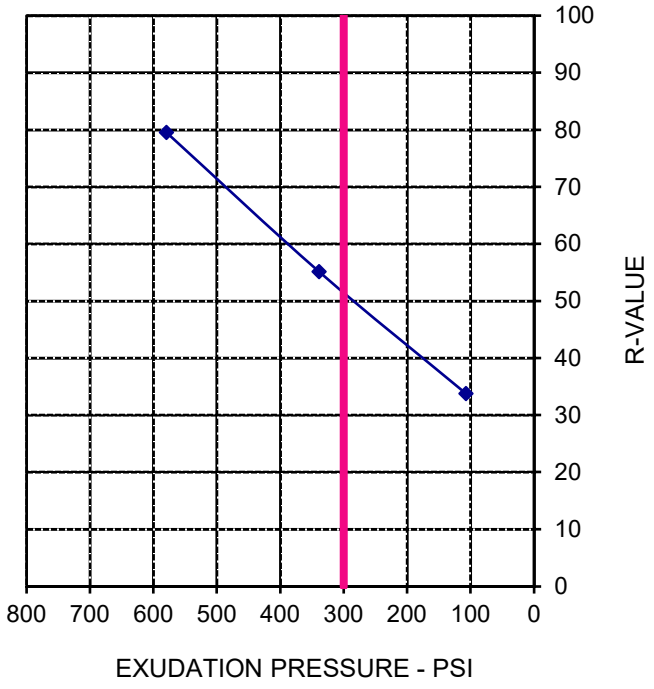
ASTM D2844

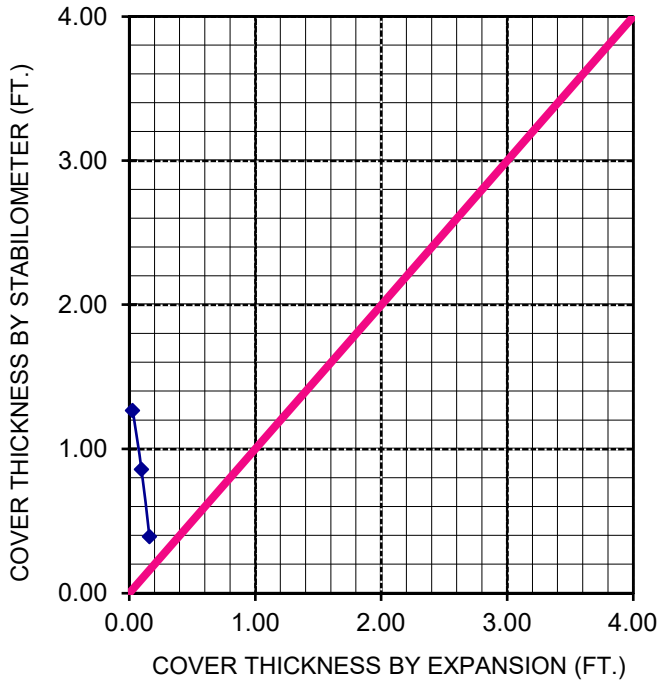
Project Name: San Jose Creek Multi-Use Bikeway
Project Number: SC1303
Boring No.: P-9
Sample No.: BB-1 Depth (ft.): 0-3
Location: N/A
Soil Description: Sandy Silt w/gravel

Tested By: ST Date: 12/19/24
Computed By: KM Date: 12/20/24
Checked By: AP Date: 12/30/24

| Mold Number | B | A | C | |
|---|---|---|---|---|
| Water Added, g | 22 | 30 | 46 | |
| Compact Moisture(%) | 9.8 | 10.6 | 12.1 | |
| Compaction Gage Pressure, psi | 250 | 250 | 250 | |
| Exudation Pressure, psi | 579 | 339 | 107 | |
| Sample Height, Inches | 2.5 | 2.5 | 2.5 | |
| Gross Weight Mold, g | 3081 | 3090 | 3080 | |
| Tare Weight Mold, g | 1965 | 1965 | 1966 | |
| Net Sample Weight, g | 1116 | 1125 | 1113 | |
| Expansion, inchesx$10^{-4}$ | 48 | 29 | 8 | |
| Stability 2,000 (160 psi) | 8/20 | 19/48 | 30/80 | |
| Turns Displacement | 4.51 | 4.75 | 4.90 | |
| R-Value Uncorrected | 80 | 55 | 34 | |
| R-Value Corrected | 80 | 55 | 34 | |
| Dry Density, pcf | 123.2 | 123.2 | 120.3 | |
| Traffic Index | 8.0 | 8.0 | 8.0 | |
| G.E. by Stability | 0.39 | 0.86 | 1.27 | |
| G.E. by Expansion | 0.16 | 0.10 | 0.03 | |

| R-VALUE | | |
|---|---|---|
| | By Exudation: | 51 |
| | By Expansion: | *N/A |
| | At Equilibrium: (by Exudation) | 51 |
| Remarks | Gf = 1.34, and 2.4 % Retained on the ¾" *Not Applicable | |



**AP Engineering and Testing, Inc.**
DBE|MBE|SBE
2607 Pomona Boulevard | Pomona, CA 91768
t. 909.869.6316 | f. 909.869.6318 | www.aplaboratory.com

# R-VALUE TEST DATA

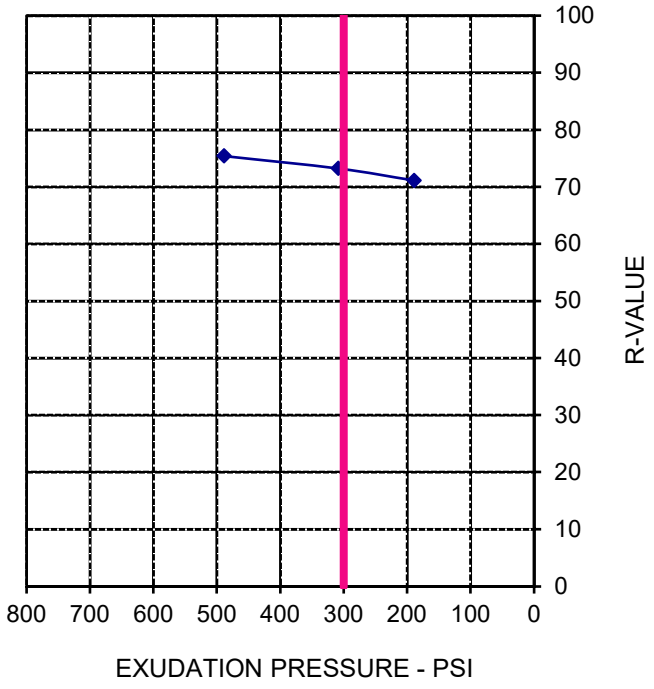
ASTM D2844

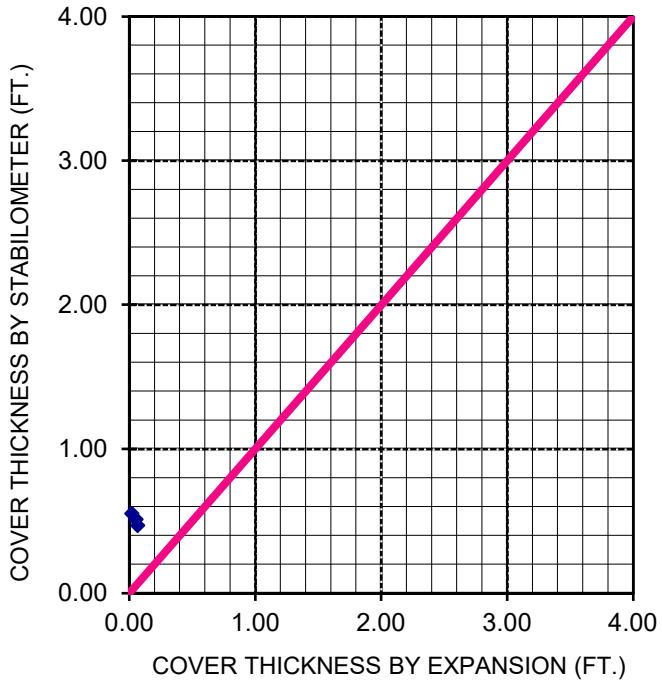
Project Name: San Jose Creek Multi-Use Bikeway
Project Number: SC1303
Boring No.: P-11
Sample No.: BB-1 Depth (ft.): 0-3
Location: N/A
Soil Description: Silty Sand

Tested By: ST Date: 12/20/24
Computed By: KM Date: 12/21/24
Checked By: AP Date: 12/30/24

| Mold Number | D | F | E | |
|---|---|---|---|---|
| Water Added, g | 61 | 55 | 53 | |
| Compact Moisture(%) | 12.3 | 11.7 | 11.5 | |
| Compaction Gage Pressure, psi | 250 | 250 | 250 | |
| Exudation Pressure, psi | 189 | 308 | 488 | |
| Sample Height, Inches | 2.5 | 2.5 | 2.5 | |
| Gross Weight Mold, g | 3054 | 2994 | 3075 | |
| Tare Weight Mold, g | 1953 | 1867 | 1963 | |
| Net Sample Weight, g | 1100 | 1126 | 1112 | |
| Expansion, inchesx$10^{-4}$ | 6 | 16 | 20 | |
| Stability 2,000 (160 psi) | 14/24 | 12/22 | 11/20 | |
| Turns Displacement | 5.75 | 5.73 | 5.70 | |
| R-Value Uncorrected | 71 | 73 | 75 | |
| R-Value Corrected | 71 | 73 | 75 | |
| Dry Density, pcf | 118.7 | 122.2 | 120.9 | |
| Traffic Index | 8.0 | 8.0 | 8.0 | |
| G.E. by Stability | 0.55 | 0.51 | 0.47 | |
| G.E. by Expansion | 0.02 | 0.05 | 0.07 | |

| R-VALUE | | |
|---|---|---|
| | By Exudation: | 73 |
| | By Expansion: | *N/A |
| | At Equilibrium: (by Exudation) | 73 |
| Remarks | Gf = 1.34, and 1.4 % Retained on the ¾" *Not Applicable | |



**AP Engineering and Testing, Inc.**
DBE|MBE|SBE
2607 Pomona Boulevard | Pomona, CA 91768
t. 909.869.6316 | f. 909.869.6318 | www.aplaboratory.com

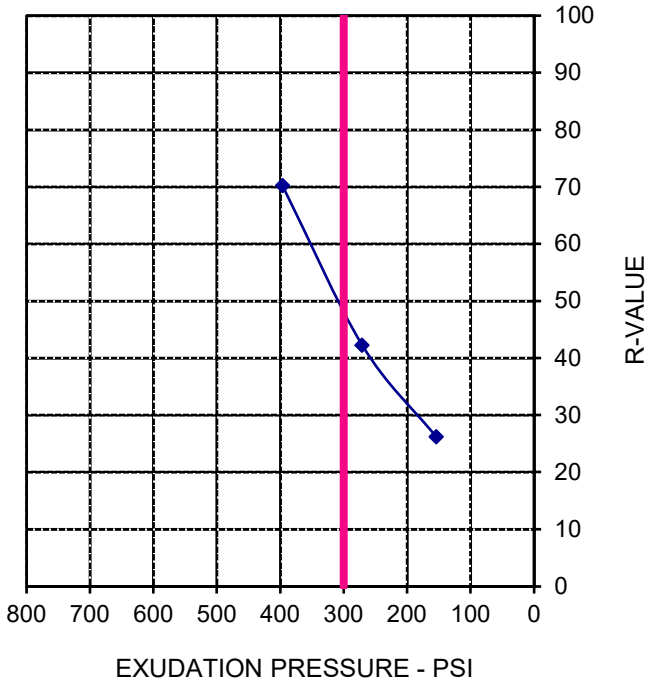
# R-VALUE TEST DATA

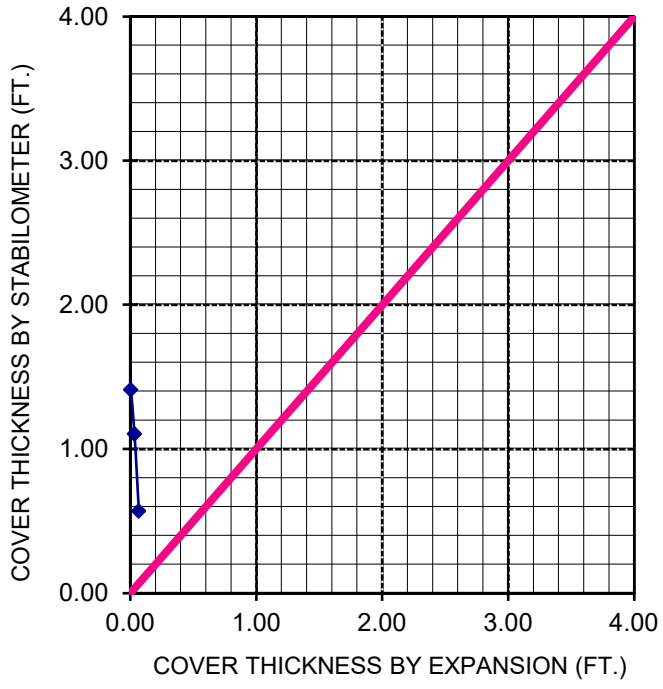
ASTM D2844

| | | | | | |
|---|---|---|---|---|---|
| Project Name: | San Jose Creek Multi-Use Bikeway | Tested By: | ST | Date: | 12/18/24 |
| Project Number: | SC1303 | Computed By: | KM | Date: | 12/19/24 |
| Boring No.: | P-12 | Checked By: | AP | Date: | 12/30/24 |
| Sample No.: | BB-1 | Depth (ft.): | 0-3 | | |
| Location: | N/A | | | | |
| Soil Description: | Sandy Silt w/gravel | | | | |

| Mold Number | D | E | F | |
|---|---|---|---|---|
| Water Added, g | 50 | 40 | 31 | |
| Compact Moisture(%) | 12.7 | 11.7 | 10.8 | |
| Compaction Gage Pressure, psi | 250 | 250 | 250 | |
| Exudation Pressure, psi | 154 | 271 | 396 | |
| Sample Height, Inches | 2.4 | 2.4 | 2.4 | |
| Gross Weight Mold, g | 3036 | 3054 | 2962 | |
| Tare Weight Mold, g | 1953 | 1963 | 1867 | |
| Net Sample Weight, g | 1082 | 1091 | 1095 | |
| Expansion, inchesx$10^{-4}$ | 1 | 10 | 20 | |
| Stability 2,000 (160 psi) | 36/88 | 28/62 | 13/26 | |
| Turns Displacement | 5.32 | 4.88 | 4.90 | |
| R-Value Uncorrected | 28 | 45 | 72 | |
| R-Value Corrected | 26 | 42 | 70 | |
| Dry Density, pcf | 121.3 | 123.3 | 124.8 | |
| Traffic Index | 8.0 | 8.0 | 8.0 | |
| G.E. by Stability | 1.41 | 1.10 | 0.57 | |
| G.E. by Expansion | 0.00 | 0.03 | 0.07 | |

| | | |
|---|---|---|
| R-VALUE | By Exudation: | 48 |
| | By Expansion: | *N/A |
| | At Equilibrium: (by Exudation) | 48 |
| Remarks | Gf = 1.34, and 3.8 % Retained on the ¾" *Not Applicable | |



**AP Engineering and Testing, Inc.**
DBE|MBE|SBE
2607 Pomona Boulevard | Pomona, CA 91768
t. 909.869.6316 | f. 909.869.6318 | www.aplaboratory.com

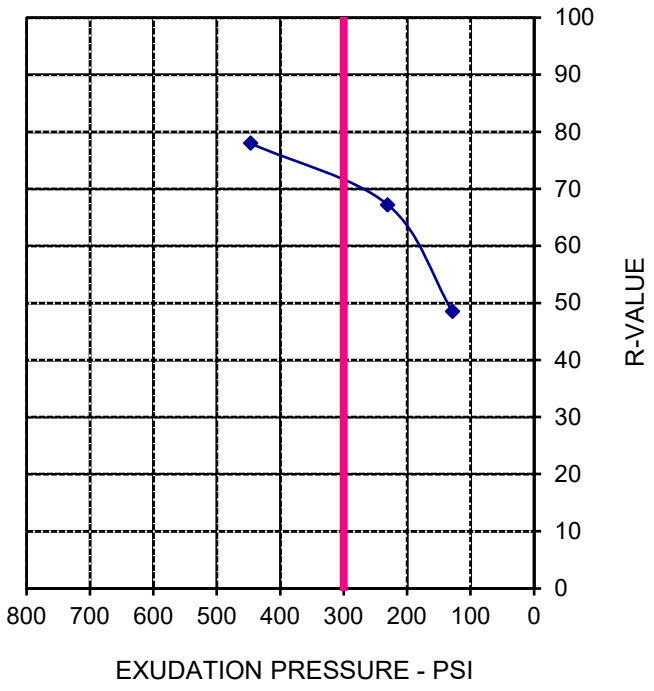
# R-VALUE TEST DATA

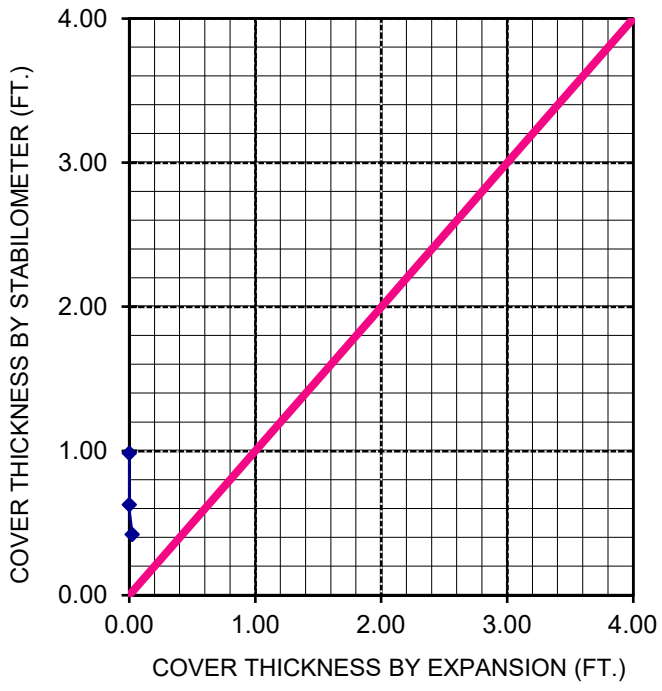
ASTM D2844

| | | | | | |
|---|---|---|---|---|---|
| Project Name: | San Jose Creek Multi-Use Bikeway | | Tested By: | ST | Date: 12/18/24 |
| Project Number: | SC1303 | | Computed By: | KM | Date: 12/19/24 |
| Boring No.: | P-16 | | Checked By: | AP | Date: 12/30/24 |
| Sample No.: | BB-1 | Depth (ft.): 0-3 | | | |
| Location: | N/A | | | | |
| Soil Description: | Silty Sand w/gravel | | | | |

| Mold Number | G | H | I | |
|---|---|---|---|---|
| Water Added, g | 55 | 46 | 35 | |
| Compact Moisture(%) | 10.6 | 9.7 | 8.6 | |
| Compaction Gage Pressure, psi | 250 | 250 | 250 | |
| Exudation Pressure, psi | 129 | 231 | 447 | |
| Sample Height, Inches | 2.3 | 2.3 | 2.3 | |
| Gross Weight Mold, g | 2911 | 2930 | 2917 | |
| Tare Weight Mold, g | 1826 | 1835 | 1817 | |
| Net Sample Weight, g | 1086 | 1095 | 1100 | |
| Expansion, inchesx$10^{-4}$ | 0 | 0 | 7 | |
| Stability 2,000 (160 psi) | 25/50 | 15/30 | 9/17 | |
| Turns Displacement | 4.77 | 4.47 | 5.11 | |
| R-Value Uncorrected | 54 | 71 | 80 | |
| R-Value Corrected | 49 | 67 | 78 | |
| Dry Density, pcf | 129.4 | 131.5 | 133.4 | |
| Traffic Index | 8.0 | 8.0 | 8.0 | |
| G.E. by Stability | 0.98 | 0.63 | 0.42 | |
| G.E. by Expansion | 0.00 | 0.00 | 0.02 | |

| | | |
|---|---|---|
| R-VALUE | By Exudation: | 72 |
| | By Expansion: | *N/A |
| | At Equilibrium: (by Exudation) | 72 |
| Remarks | Gf = 1.34, and 10.5 % Retained on the ¾" *Not Applicable | |



**AP Engineering and Testing, Inc.**
DBE|MBE|SBE
2607 Pomona Boulevard | Pomona, CA 91768
t. 909.869.6316 | f. 909.869.6318 | www.aplaboratory.com

# R-VALUE TEST DATA

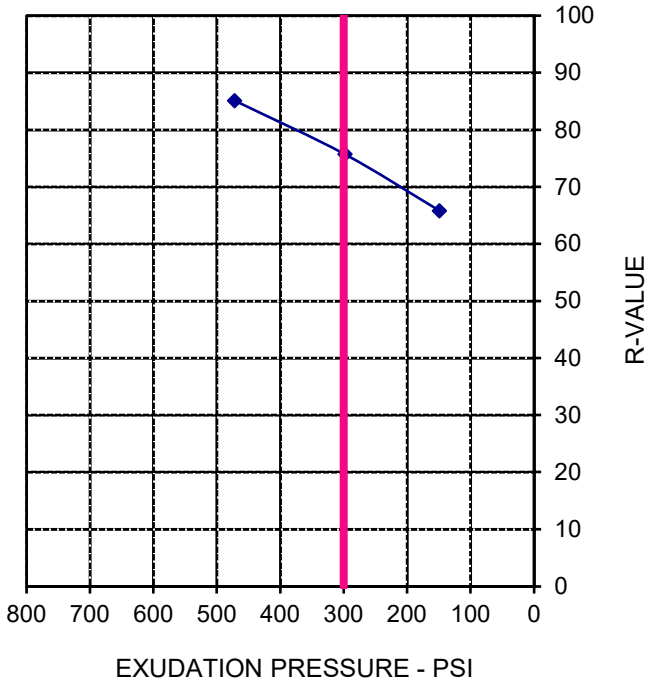
ASTM D2844

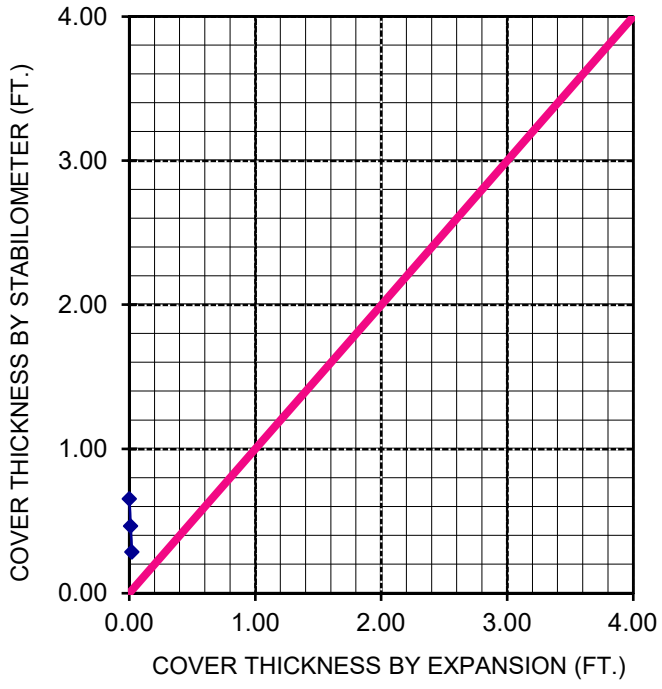
Project Name: San Jose Creek Multi-Use Bikeway
Project Number: SC1303
Boring No.: P-18
Sample No.: BB-1 Depth (ft.): 0-3
Location: N/A
Soil Description: Silty Sand w/gravel

Tested By: ST Date: 12/18/24
Computed By: KM Date: 12/19/24
Checked By: AP Date: 12/30/24

| Mold Number | B | C | A | |
|---|---|---|---|---|
| Water Added, g | 56 | 50 | 46 | |
| Compact Moisture(%) | 8.6 | 8.0 | 7.6 | |
| Compaction Gage Pressure, psi | 250 | 250 | 250 | |
| Exudation Pressure, psi | 149 | 298 | 472 | |
| Sample Height, Inches | 2.4 | 2.4 | 2.4 | |
| Gross Weight Mold, g | 3058 | 3064 | 3062 | |
| Tare Weight Mold, g | 1965 | 1967 | 1965 | |
| Net Sample Weight, g | 1093 | 1098 | 1097 | |
| Expansion, inchesx$10^{-4}$ | 0 | 3 | 6 | |
| Stability 2,000 (160 psi) | 17/30 | 12/21 | 7/12 | |
| Turns Displacement | 5.08 | 4.97 | 4.82 | |
| R-Value Uncorrected | 68 | 77 | 86 | |
| R-Value Corrected | 66 | 76 | 85 | |
| Dry Density, pcf | 127.1 | 128.3 | 128.7 | |
| Traffic Index | 8.0 | 8.0 | 8.0 | |
| G.E. by Stability | 0.65 | 0.46 | 0.28 | |
| G.E. by Expansion | 0.00 | 0.01 | 0.02 | |

| R-VALUE | | |
|---|---|---|
| | By Exudation: | 76 |
| | By Expansion: | *N/A |
| | At Equilibrium: (by Exudation) | 76 |
| Remarks | Gf = 1.34, and 9.9 % Retained on the ¾" *Not Applicable | |



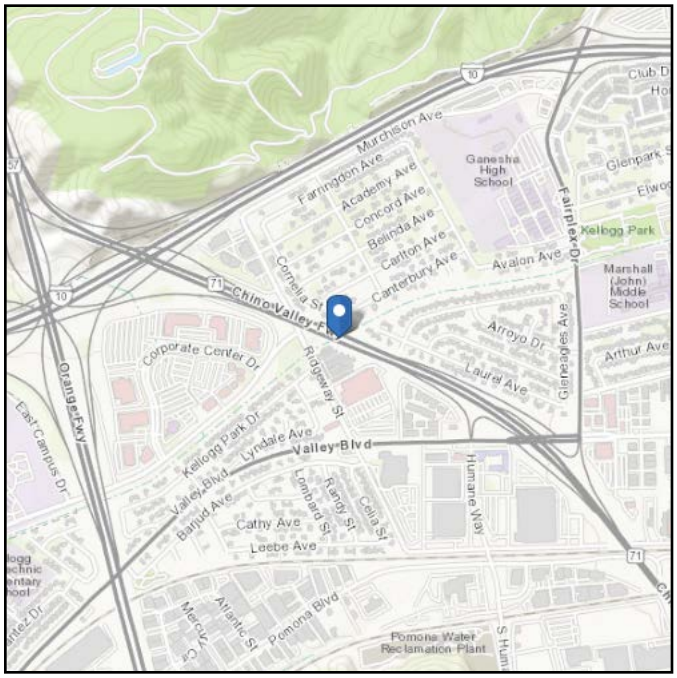



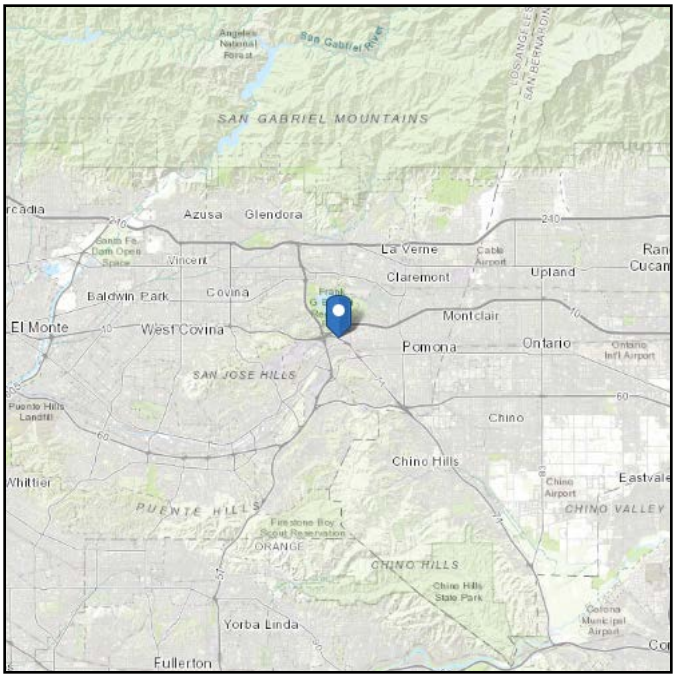
# APPENDIX G – ASCE 7 Hazard Report Output

# ASCE Hazards Report

**Address:**
No Address at This Location

| | | | |
|---|---|---|---|
| **Standard:** | ASCE/SEI 7-16 | **Latitude:** | 34.064372 |
| **Risk Category:** | II | **Longitude:** | -117.796128 |
| **Soil Class:** | D - Stiff Soil | **Elevation:** | 785.3178841295154 ft (NAVD 88) |



# Seismic

**Site Soil Class:** D - Stiff Soil

**Results:**

| | | | |
|---|---|---|---|
| $S_S$ : | 1.73 | $S_{D1}$ : | N/A |
| $S_1$ : | 0.628 | $T_L$ : | 8 |
| $F_a$ : | 1 | PGA : | 0.738 |
| $F_v$ : | N/A | $PGA_M$ : | 0.812 |
| $S_{MS}$ : | 1.73 | $F_{PGA}$ : | 1.1 |
| $S_{M1}$ : | N/A | $I_e$ : | 1 |
| $S_{DS}$ : | 1.153 | $C_v$ : | 1.446 |

Ground motion hazard analysis may be required. See ASCE/SEI 7-16 Section 11.4.8.

**Data Accessed:** Thu May 08 2025

**Date Source:** USGS Seismic Design Maps

The ASCE Hazard Tool is provided for your convenience, for informational purposes only, and is provided “as is” and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE standard.

In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential damages arising from or related to your use of, or reliance on, the Tool or any information obtained therein. To the fullest extent permitted by law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data provided by the ASCE Hazard Tool.

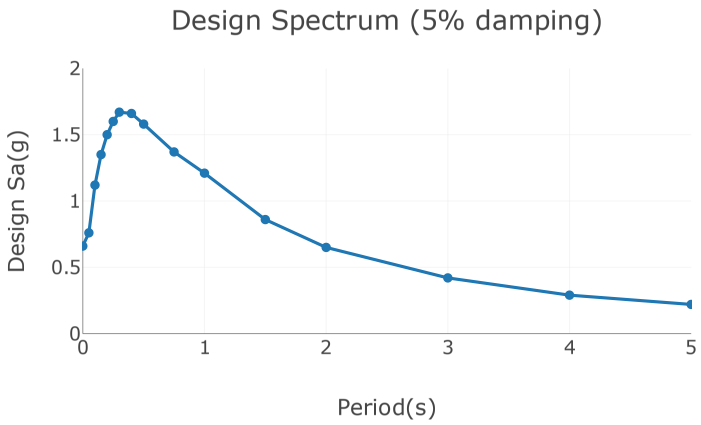
# APPENDIX H – Caltrans ARS Report Output

## ARS Online V4.0 results for Latitude: 34.064372° Longitude: -117.796128° Vs30: 250 m/s

**Return period: 975 years** *(5% damping)*

| Period(s) | Sa(g) | Near-fault amp | Design Sa(g) |
|---|---|---|---|
| 0 | 0.66 | 1 | 0.66 |
| 0.05 | 0.76 | 1 | 0.76 |
| 0.10 | 1.12 | 1 | 1.12 |
| 0.15 | 1.35 | 1 | 1.35 |
| 0.20 | 1.5 | 1 | 1.5 |
| 0.25 | 1.6 | 1 | 1.6 |
| 0.30 | 1.67 | 1 | 1.67 |
| 0.40 | 1.66 | 1 | 1.66 |
| 0.50 | 1.58 | 1 | 1.58 |
| 0.75 | 1.27 | 1.08 | 1.37 |
| 1.0 | 1.05 | 1.16 | 1.21 |
| 1.5 | 0.75 | 1.16 | 0.86 |
| 2.0 | 0.56 | 1.16 | 0.65 |
| 3.0 | 0.36 | 1.16 | 0.42 |
| 4.0 | 0.25 | 1.16 | 0.29 |
| 5.0 | 0.19 | 1.16 | 0.22 |
| 7.5 | 0.11 | 1.16 | 0.12 |
| 10.0 | 0.07 | 1.16 | 0.08 |

Copy table




Deaggregation Results

| Period(s) | $M_{mean}$ | $R_{mean}$(km) | ε |
|---|---|---|---|
| PGA | 6.75 | 13.46 | 1.21 |
| 1.0 | 7.25 | 17.22 | 1.11 |

**Note:** Peak ground acceleration (PGA) is equal to the spectral acceleration (Sa) at a period of 0.

$M_{mean}$ = Mean Moment Magnitude

$R_{mean}$ = Mean site-source distance

ε = number of standard deviations for logarithmic spectral acceleration

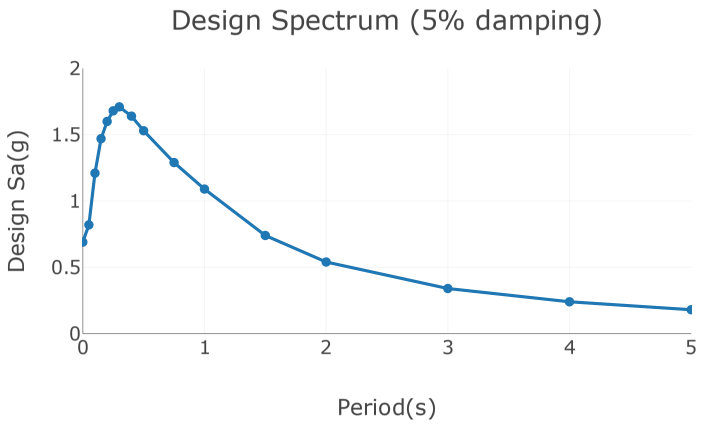
**New Analysis**

## ARS Online V4.0 results for Latitude: 34.064372° Longitude: -117.796128° Vs30: 310 m/s

**Return period: 975 years** *(5% damping)*

| Period(s) | Sa(g) | Near-fault amp | Design Sa(g) |
|---|---|---|---|
| 0 | 0.69 | 1 | 0.69 |
| 0.05 | 0.82 | 1 | 0.82 |
| 0.10 | 1.21 | 1 | 1.21 |
| 0.15 | 1.47 | 1 | 1.47 |
| 0.20 | 1.6 | 1 | 1.6 |
| 0.25 | 1.68 | 1 | 1.68 |
| 0.30 | 1.71 | 1 | 1.71 |
| 0.40 | 1.64 | 1 | 1.64 |
| 0.50 | 1.53 | 1 | 1.53 |
| 0.75 | 1.19 | 1.08 | 1.29 |
| 1.0 | 0.94 | 1.17 | 1.09 |
| 1.5 | 0.63 | 1.17 | 0.74 |
| 2.0 | 0.46 | 1.17 | 0.54 |
| 3.0 | 0.29 | 1.17 | 0.34 |
| 4.0 | 0.21 | 1.17 | 0.24 |
| 5.0 | 0.16 | 1.17 | 0.18 |
| 7.5 | 0.09 | 1.17 | 0.11 |
| 10.0 | 0.06 | 1.17 | 0.07 |

Copy table




Deaggregation Results

| Period(s) | $M_{mean}$ | $R_{mean}$(km) | ε |
|---|---|---|---|
| PGA | 6.77 | 12.87 | 1.17 |
| 1.0 | 7.25 | 16.52 | 1.07 |

**Note:** Peak ground acceleration (PGA) is equal to the spectral acceleration (Sa) at a period of 0.

$M_{mean}$ = Mean Moment Magnitude

$R_{mean}$ = Mean site-source distance

ε = number of standard deviations for logarithmic spectral acceleration

**New Analysis**

# Appendix E

Hydrology Report

# HYDROLOGY REPORT
# SAN JOSE CREEK MULTI-USE BIKEWAY PROJECT

June 29, 2023
Revised October 7, 2024

PRESENTED TO

**City of Pomona**

PRESENTED BY

**Craftwater Engineering, Inc.**
San Diego | Los Angeles
Tel 805.729.0943
www.craftwaterinc.com

## CONTENTS

Contents ..... ii
1 Introduction and Existing Conditions ..... 4
1.1 Project Background ..... 4
1.1.1 Project Goal and Objectives ..... 4
1.2 Existing Site Conditions ..... 4
1.2.1 Site View ..... 4
1.2.2 Storm Drain Data Review and Mapping ..... 8
1.2.3 Non-Stormwater Infrastructure ..... 9
1.2.4 Infiltration Feasibility ..... 9
1.2.5 Findings and Discussion ..... 10
2 Hydraulic and Hydrologic Analysis ..... 11
2.1 Existing Site Hydrology ..... 11
3 Lid Implementation Analysis ..... 26
3.1 BMP Modeling Setup and Assumptions ..... 26
3.1.1 Storage Volume and Footprint ..... 26
3.1.2 Infiltration Rate ..... 27
3.1.3 BMP Modeling Results and Considerations ..... 27
3.2 Additional LID Strategies ..... 28
4 State Route 71 Crossing Analysis ..... 31
4.1 Existing Site Conditions ..... 31
4.1.1 Flow Paths ..... 31
4.2 Hydrology Setup and Results ..... 32
4.2.1 Local Runoff ..... 32
4.2.2 Channel Impacts ..... 32
4.2.3 Results ..... 35
5 Conclusions ..... 41
Appendix A – Drainage Area Hydrographs ..... 42
Appendix B – LACFCD Design Storm Information ..... 43

**Figures**

***Figure 1-1***. Site Vicinity Map (Cal Poly Pomona to State Route 57 Crossing) ..... 5
***Figure 1-2***. Site Vicinity Map (State Route 57 Crossing to John F. Kennedy Park) ..... 6
***Figure 1-3***. Site Vicinity Map (John F. Kennedy Park to Murchison Avenue) ..... 7
***Figure 1-4.*** Existing Storm Drain Infrastructure at the San Jose Creek Bikeway Location ..... 8
***Figure 1-5***. Multiple pipes crossing the channel at various points. ..... 9
***Figure 1-6.*** Spatial Distribution of NRCS Soil Types at the San Jose Creek Bikeway Location ..... 10
***Figure 2-1.*** An example of a 24-Hour Design Storm ..... 11
***Figure 2-2***. Two Pipes Protrude into the Site for the Proposed Bikeway ..... 12
***Figure 2-3.*** All Drainage Areas for the San Jose Bikeway ..... 14
***Figure 2-4.*** Drainage Area 1 for the San Jose Bikeway ..... 15
***Figure 2-5.*** Drainage Area 2A for the San Jose Bikeway ..... 16
***Figure 2-6.*** Second part of Drainage Area 2A for the San Jose Bikeway ..... 17
***Figure 2-7***. Third part of Drainage Area 2A for the San Jose Bikeway ..... 18
***Figure 2-8***. Drainage Areas 2B, 2C, and 2D for the San Jose Bikeway ..... 19
***Figure 2-9***. Drainage Areas 3A and 3B for the San Jose Bikeway ..... 20
***Figure 2-10***. Drainage Area 3C for the San Jose Bikeway ..... 21
***Figure 2-11***. Drainage Area 4 for the San Jose Bikeway ..... 22
***Figure 2-12***. Drainage Areas 3A and 3B for the San Jose Bikeway ..... 23
***Figure 2-13***. Drainage Area 6 for the San Jose Bikeway ..... 24
***Figure 2-14***. Drainage Area 7 for the San Jose Bikeway ..... 25
***Figure 3-1.*** San Jose Creek Bikeway 30% Landscaping Plans for the trail entrance at Temple Avenue ..... 29
***Figure 3-2.*** San Jose Creek Bikeway 30% Plans between Glen Avenue and Dudley Street ..... 30
***Figure 4-1***. State Route 71 Crossing Clearance ..... 31
***Figure 4-2***. State Route 71 Crossing Drainage ..... 32
***Figure* 4-3:** Grading plan for Route 71 Crossing ..... 33
***Figure 4-4***: Area 3B Hydrocalc Results ..... 34
***Figures 4-5***: Area 3A Hydrocalc Results ..... 34
***Figure 4-6***: Existing Channel Design Flow WSE ..... 35
***Figure 4-7***. CheckMate® UltraFlex™ Inline Check Valve Schematic ..... 36
***Figure 4-8***. Sump Inlet Calculations ..... 36
***Figure 4-9***: Proposed Crossing Drainage Design, West of State Route 71 Crossing ..... 37
***Figure 4-10***. Proposed Crossing Drainage Design, East of State Route 71 Crossing ..... 38
***Figure 4-11***. Proposed Crossing Drainage Design Details 1 and 2 ..... 39
***Figure 4-12***. Proposed Crossing Drainage Design Details 3 through 5 ..... 40

**Tables**

**Table 1-1.** NRCS Soil Type Minimum Infiltration Rates ..... 9
**Table 2-1.** Drainage Areas and 85$^{th}$ Percentile Runoff Volumes ..... 13
**Table 3-1.** Access Road Area Available for Each Subdrainage Area ..... 26
**Table 3-2.** LID Footprint Required to Capture the 85$^{th}$ Percentile Storm, by Subdrainage Area ..... 27

# 1 INTRODUCTION AND EXISTING CONDITIONS

## 1.1 Project Background

The Active Transportation Program (ATP) was created by the California Transportation Commission and approved by the Senate in 2013 with an intent to encourage increased use of active modes of transportation, such as walking and biking. Funding was recently awarded to the City of Pomona for their San Jose Creek Bike Path Project, which aims to create a 3.5-mile stretch of multi-use bikeway from Cal Poly Pomona to residential Murchison Avenue. The project intends to consist of 13 different public access points, which will connect residents to 10 schools and 3 public parks. Project conception began in 2014, when the City of Pomona created their first Active Transportation Plan. This project was their number one priority highlighted in that plan. In addition to the bikeway design, Low-Impact Development (LID) strategies for stormwater runoff management were considered to improve drainage and flood patterns.

### 1.1.1 Project Goal and Objectives

The objective of this report is to provide the City of Pomona with project context and conceptual analyses that will ultimately guide the development of the 100% detailed design documents. Project constraints and potential options will be detailed in this report to present an array of options that will contribute to both water quality goals as well as other important project considerations and desired multi-benefit outcomes for the San Jose Creek Bikeway. These options can then be considered and weighed before proceeding with the ultimate design of the project by identifying the project configuration that best meets the desired outcome and contributes to water quality benefits in a cost-effective manner. This report includes a review of existing site conditions and context; analysis of hydrologic data relevant to the San Jose Creek Bikeway LID; modeling of the San Jose Creek Bikeway Drainage Area; an analysis of LID stormwater capture feasibility, and an analysis of the drainage impacts at the Route 71 freeway crossing.

## 1.2 Existing Site Conditions

### 1.2.1 Site View

The San Jose Creek Bikeway LID would be located at areas of runoff accumulation on approximately 3.5 miles of maintenance roads adjacent to the San Jose Creek. The side of the channel on which the bikeway will occupy alternates between certain subsections. The LID would likely be located on the sides of the bikeway closest to the channel. ***Figure 1-1***, ***Figure 1-2***, and ***Figure 1-3*** shows the Site Vicinity Maps. The proposed trail would connect residents to 10 different schools and 3 different parks. The two ends of the bikeway will also include entrance/exit areas with natural vegetation, signage, and benches.

John F. Kennedy Park will also be integrated into this project. A regional BMP may be installed at the park, with surface improvement and nature-based enhancements incorporated at a later date. More information on that can be found in the Stormwater Capture Study Technical Memorandum prepared by Craftwater.

Additionally, the State Route 71 freeway crossing does not currently have enough vertical clearance to allow for pedestrian or bicycle travel underneath and will require additional grading and drainage efforts. **Section 4** discusses this crossing in further detail.

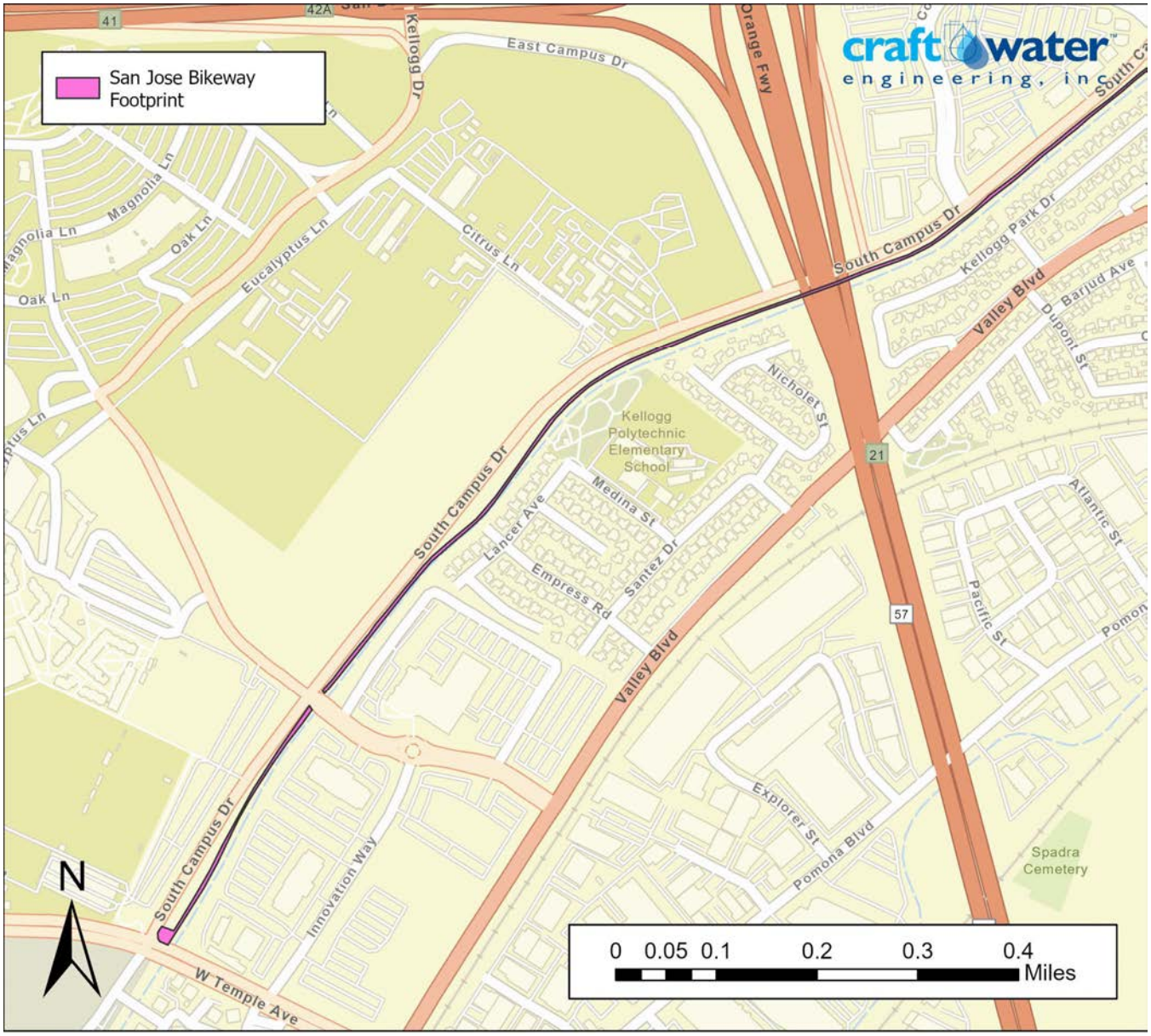



***Figure 1-1***. Site Vicinity Map (Cal Poly Pomona to State Route 57 Crossing)

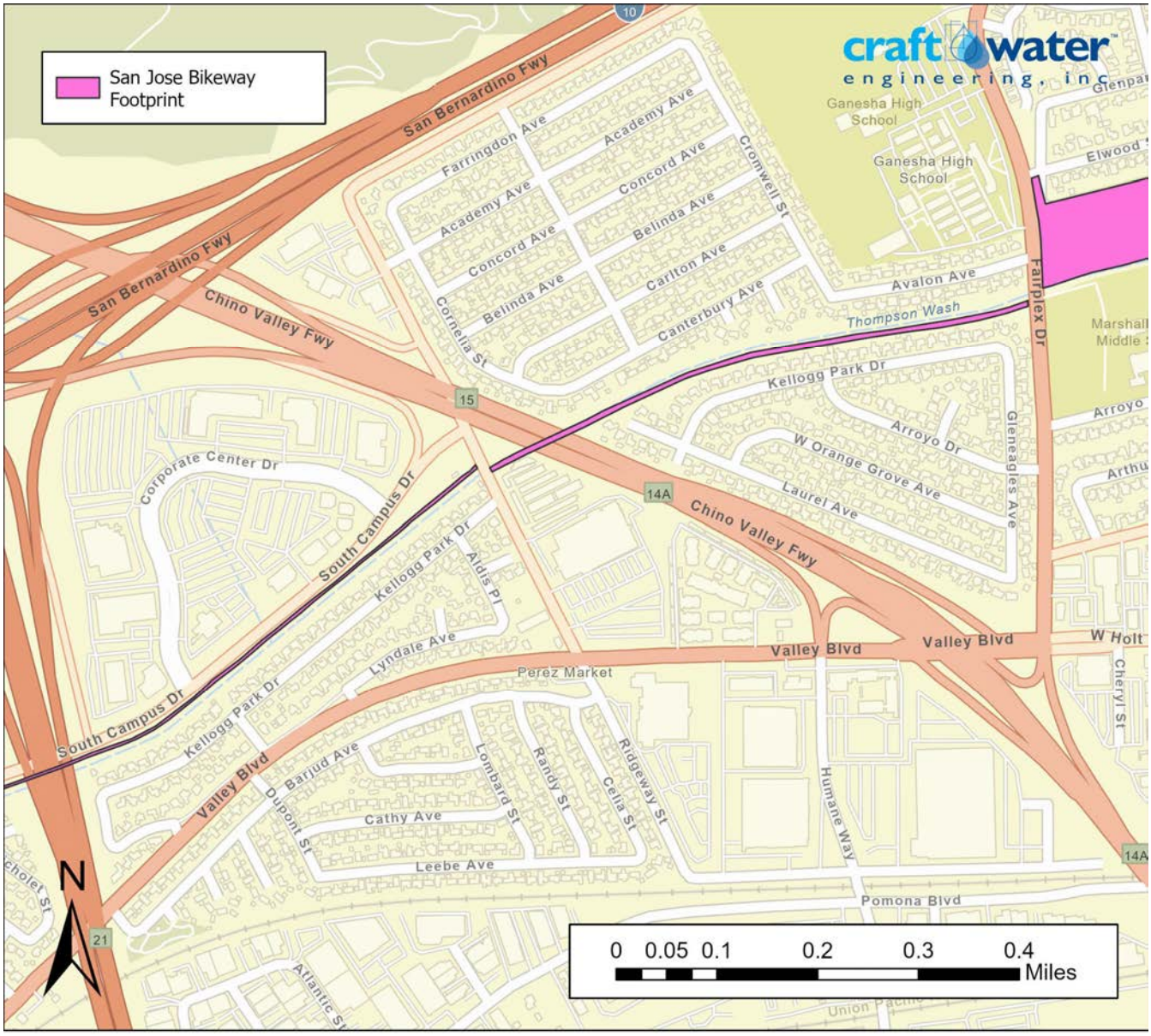



***Figure 1-2***. Site Vicinity Map (State Route 57 Crossing to John F. Kennedy Park)

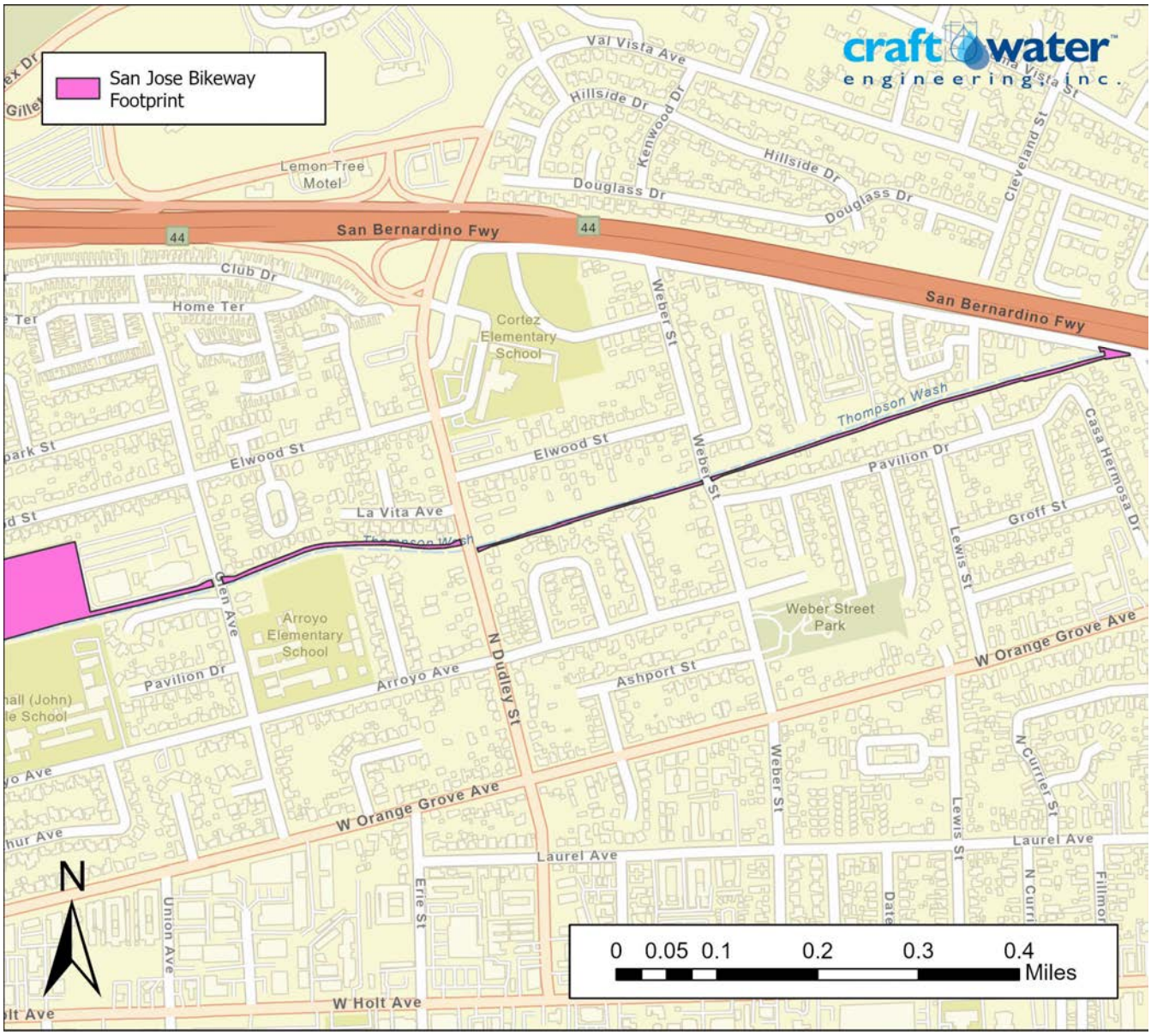



***Figure 1-3***. Site Vicinity Map (John F. Kennedy Park to Murchison Avenue)

### 1.2.2 Storm Drain Data Review and Mapping

Digital storm drain utility inventories made available by Los Angeles County Public Works were used to assess existing storm drain infrastructure relevant to the San Jose Creek Bikeway (***Figure 1-4***). Storm drain pipes and inlets are primarily located at nearby major street crossings before entering the channel within the maintenance road area. Strategically placed LID along the Trail could reduce and partially treat runoff that would normally enter these inlets.

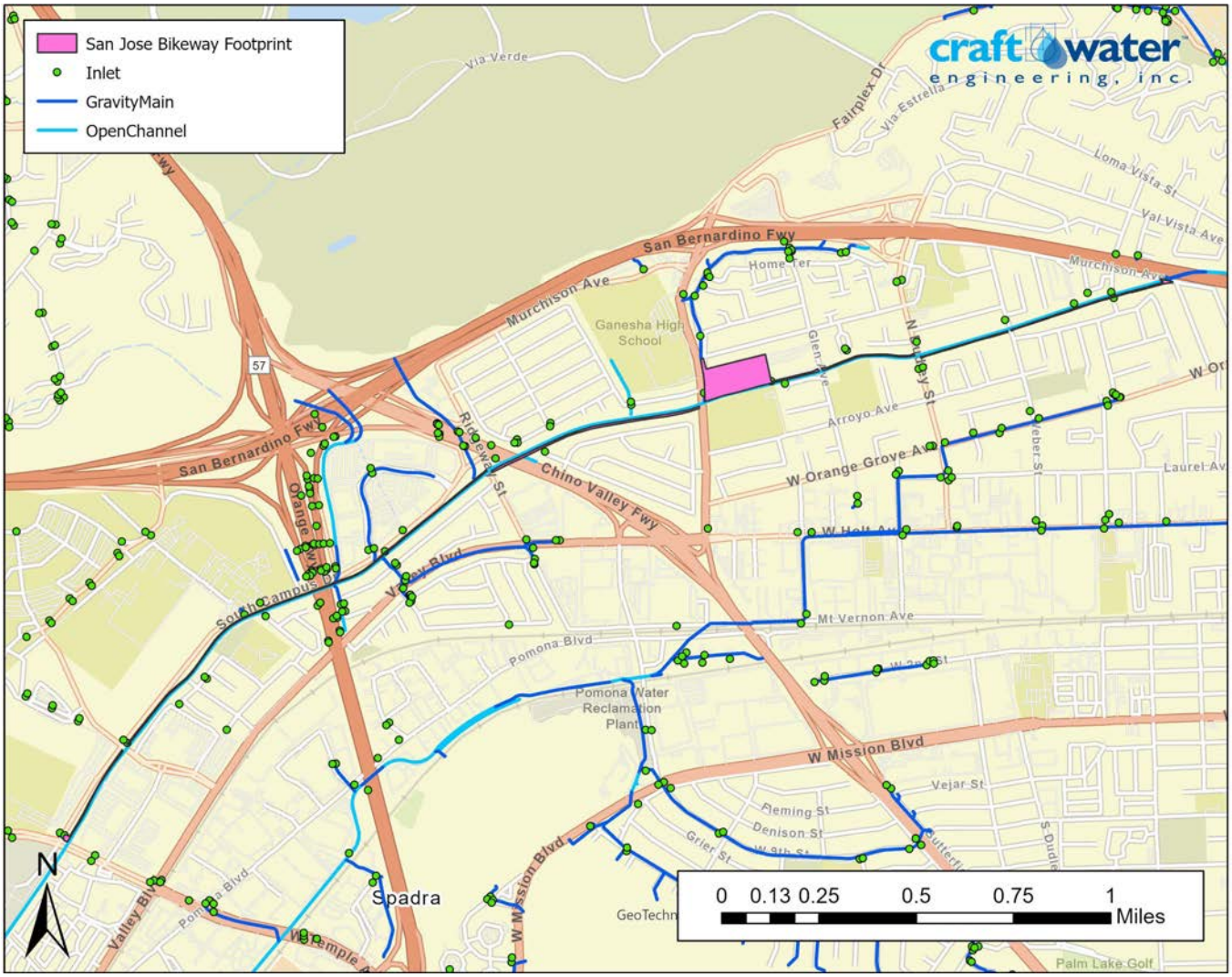



***Figure 1-4.*** Existing Storm Drain Infrastructure at the San Jose Creek Bikeway Location

### 1.2.3 Non-Stormwater Infrastructure

There are many oil, gas, and other pipes that run across the channel in various places along the proposed bikeway. While some simply intersect the channel walls on both ends, many run right into the edge of the maintenance road (***Figure 1-5***). When designing and constructing the Atwood Trail, extra care should be taken to prevent the puncture or weakening of these pipes. These pipes will likely be adjacent to LID, where a rupture would directly pollute the channel and potentially harm landscaping and pedestrians.

***Figure 1-5***. Multiple pipes crossing the channel at various points.

### 1.2.4 Infiltration Feasibility

An infiltration feasibility study of the San Jose Bikeway Project Site was conducted via a desktop analysis to determine potential infiltration rates for a San Jose Bikeway BMP.

#### *NRCS Custom Soil Resource Report*

NRCS Hydrologic Soil Type classifications were used to determine the infiltration potential for the San Jose Creek Bikeway LID. The USDA web soil survey tool was used to create a custom soil resource report to determine the Project's NRCS Hydrologic Soil type (***Figure 1-6***). The project location primarily contains NRCS Type A and Type B soil. **Table 1-1** lists the range of minimum infiltration rates based on NRCS soil type (Water Resources Engineering, Mays, 2019). Since the project site contains Type A and Type B soil, partial infiltration is possible. However, a site-specific geotechnical evaluation is recommended for further verification of this before final project sizing is defined.

**Table 1-1.** NRCS Soil Type Minimum Infiltration Rates

| NRCS Soil Type | Minimum Infiltration Rate(in/hr) |
|---|---|
| A | 0.30-0.45 |
| B | 0.15-0.30 |
| C | 0.05-0.15 |
| D | 0.0-0.05 |

While the minimum infiltration rate ranges indicate the likely feasibility for infiltration at this site, these alone do not provide a cap on potential performance. The custom soil resource report details the capacity of the most limiting layer to transmit water ($K_{sat}$) as moderately high, with a value anywhere between 0.57-1.98 in/hr. While these rates are still provided in ranges, this information reaffirms the project's infiltration feasibility.

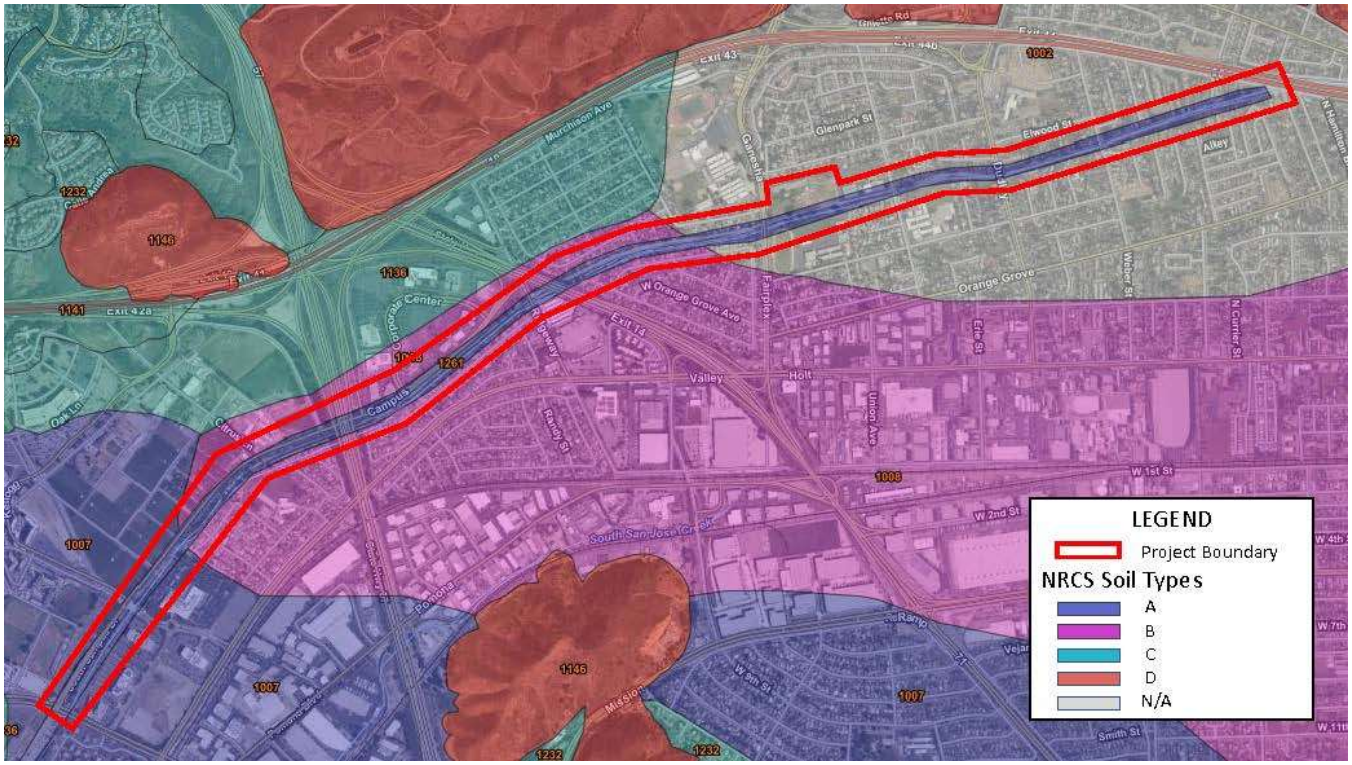



***Figure 1-6.*** Spatial Distribution of NRCS Soil Types at the San Jose Creek Bikeway Location

### 1.2.5 Findings and Discussion

Based on documented soil types the site is suitable for infiltration as indicated by its documented soil type and estimated hydraulic capacity. Although a portion of the area near the channel is of unknown soil type, the channel and adjacent walkways consistently remain as Soil Type A throughout the entire project site.

# 2 HYDRAULIC AND HYDROLOGIC ANALYSIS

## 2.1 Existing Site Hydrology

The drainage area delineations for the project site (***Figure 2-3***) were developed using drainage notes from an on-site visit and high-resolution Light Detection and Ranging (LiDAR) elevation data for verification of surface flow paths. The delineated drainage areas were used to determine the hydrology of the 85$^{th}$ percentile storm.

The Los Angeles County Hydrology Manual (HydroCalc 1.0.3) was used to determine runoff volume and flow rate associated with the 24-hour 85$^{th}$ percentile storm for the San Jose Bikeway Drainage Areas. To be conservative, WMMS 2.0 model was not used for the 85$_{th}$ percentile flow calculation because it tends to predict a lower runoff compared to HydroCalc. Inputs to HydroCalc were retrieved from the following sources:

- Drainage Area: delineated as described in below Section 2.1;
- Flow Path Length: the longest flow path of each drainage area was measured in ArcGIS;
- Flow Path Slope: the elevation drop along the flow path were taken from the LA County DEM. The elevation drop divided by flow path length gives the flow path slope;
- 85$_{th}$ percentile, 24-hour rainfall depth: the rainfall depth at the centroid of the drainage area was read and interpolated from the LA County Hydrology Map (https://pw.lacounty.gov/wrd/hydrologygis/);
- Soil type: the most common soil type of each drainage area was read from the online LA County Hydrology Map (https://pw.lacounty.gov/wrd/hydrologygis/);
- Design Storm Frequency: 85$_{th}$ percentile, 24-hour storm was selected as the design storm.

***Figure 2-1*** displays the 24-hour storm distribution.

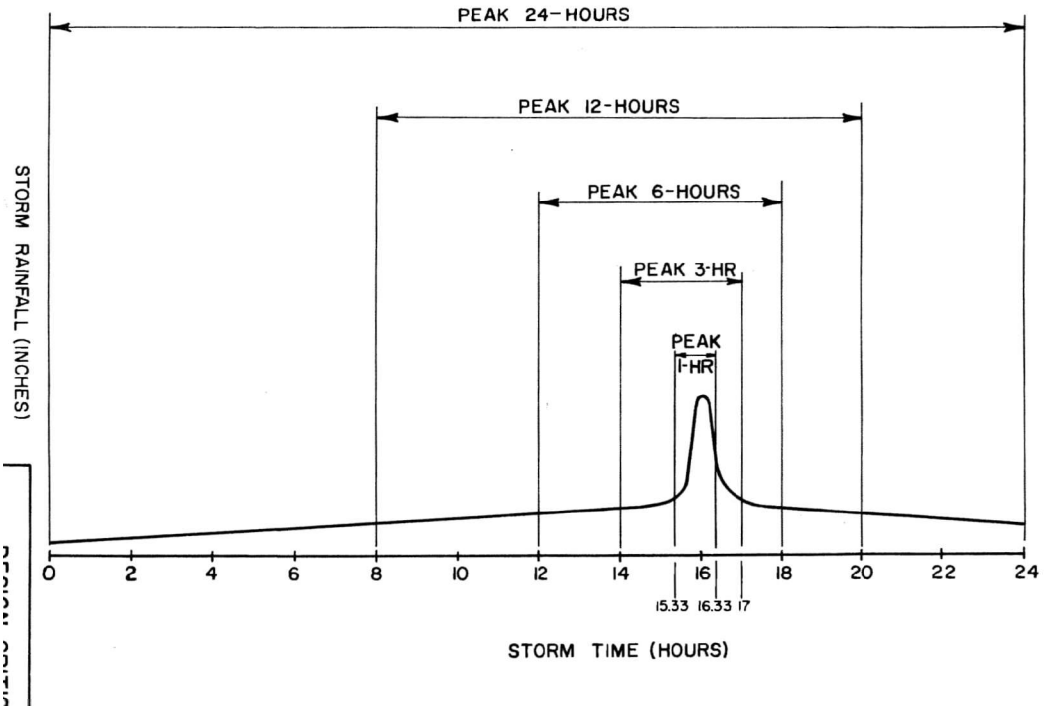



***Figure 2-1.*** An example of a 24-Hour Design Storm

**Table 2-1** details drainage area characteristics and total runoff volumes generated by the 85$^{th}$ Percentile Storm, which was 1.0 in. Hydrographs for each subdrainage area are in the appendix.

The San Jose Bikeway footprint is split into seven main drainage areas, separated by intersecting streets. Drainage within each of these sections typically flows into the channel, except for one small area where the elevations of the maintenance road crown in the middle, pushing half of the runoff away from the channel. A few of the drainage areas also have multiple flow paths, allowing them to be further split into subdrainage areas. All drainage areas contain the existing access road, and some include parkway areas that sloped towards the channel. ***Figure 2-3*** through ***Figure 2-14*** contain the subdrainage areas. Additionally, observations made during a site visit revealed a few key points of interest:

- There are two pipes that bring flow from an outside source into the maintenance road (***Figure 2-2***). The assumed drainage area to the pipes is based on site visit findings and is represented in Drainage Area 2B.
- State Route 71 has a portion of flow that is not captured by existing catch basins along the perimeter or the freeway that freely flows into the maintenance road. Those drainage areas are represented by Drainage Areas 3A and 3B.
- Much of John F. Kennedy Park slopes toward the channel, which is why Drainage Area 4 includes a good portion of the park.

***Figure 2-2***. Two Pipes Protrude into the Site for the Proposed Bikeway

**Table 2-1.** Drainage Areas and 85th Percentile Runoff Volumes

| Drainage Area | Drainage Direction | Drainage Area (Acres) | 85th Percentile Runoff (ft3) |
|---|---|---|---|
| 1 | Into Channel | 0.44 | 869.6 |
| 2A | Into Channel | 2.31 | 4,065.4 |
| 2B | Into Channel | 5.15 | 13,469.1 |
| 2C | Into Channel | 1.16 | 694.3 |
| 2D | Away from Channel | 0.03 | 28.2 |
| 3A | Into Channel | 0.59 | 969.4 |
| 3B | Into Channel | 0.64 | 1,215.3 |
| 3C | Into Channel | 1.76 | 3,917.9 |
| 4 | Into Channel | 1.54 | 5,360.6 |
| 5 | Into Channel | 0.63 | 1,241.8 |
| 6 | Into Channel | 0.46 | 934.8 |
| 7 | Into Channel | 0.95 | 2,120.1 |
| **TOTAL** | | **15.66** | **34,886.3** |

***Figure 2-3.*** All Drainage Areas for the San Jose Bikeway

***Figure 2-4.*** Drainage Area 1 for the San Jose Bikeway

***Figure 2-5.*** Drainage Area 2A for the San Jose Bikeway

***Figure 2-6.*** Second part of Drainage Area 2A for the San Jose Bikeway

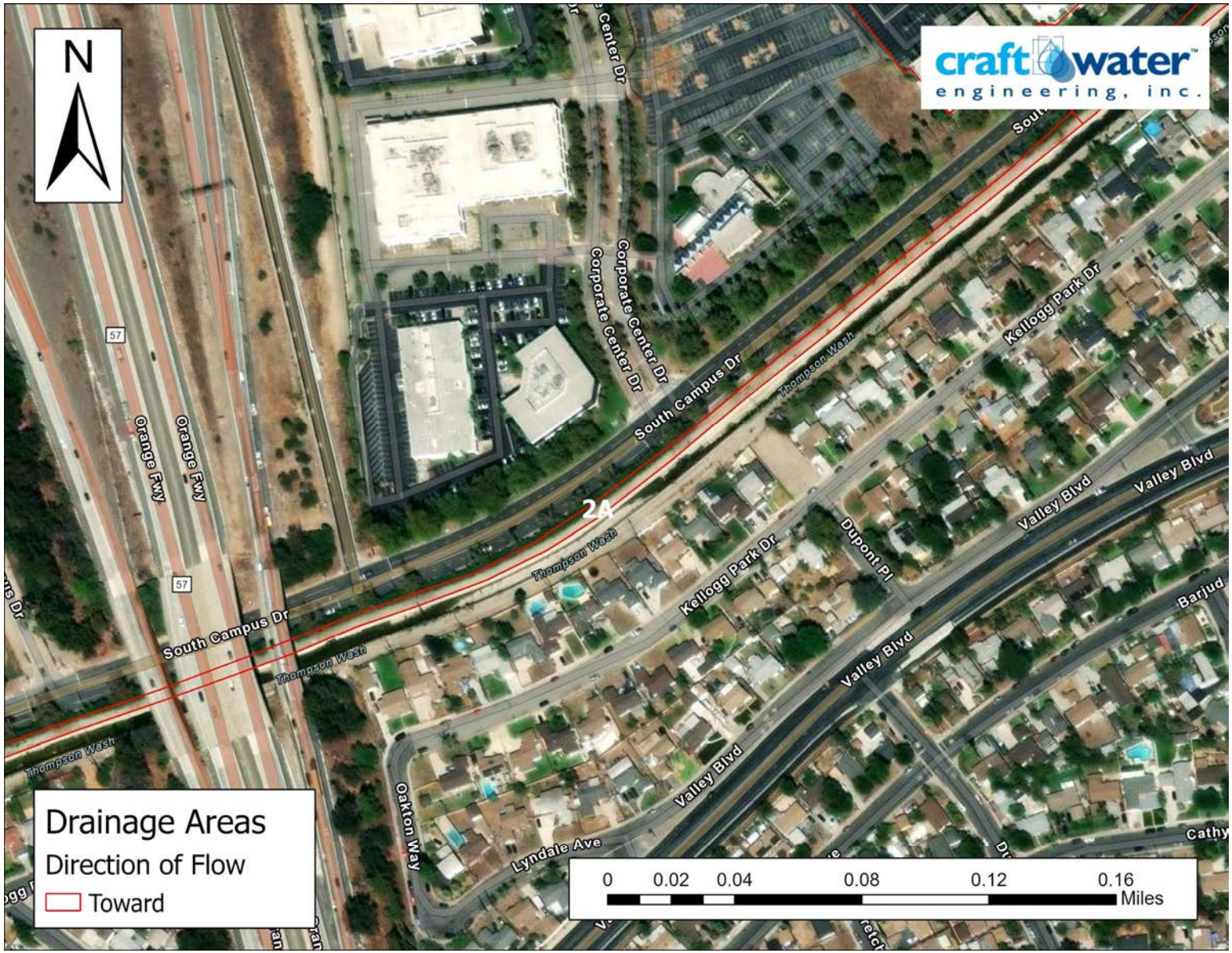



***Figure 2-7***. Third part of Drainage Area 2A for the San Jose Bikeway

***Figure 2-8***. Drainage Areas 2B, 2C, and 2D for the San Jose Bikeway

***Figure 2-9***. Drainage Areas 3A and 3B for the San Jose Bikeway

***Figure 2-10***. Drainage Area 3C for the San Jose Bikeway

***Figure 2-11***. Drainage Area 4 for the San Jose Bikeway

***Figure 2-12***. Drainage Areas 3A and 3B for the San Jose Bikeway

***Figure 2-13***. Drainage Area 6 for the San Jose Bikeway

***Figure 2-14***. Drainage Area 7 for the San Jose Bikeway

# 3 LID IMPLEMENTATION ANALYSIS

According to the EPA, LID is an approach to land development that works with nature to manage stormwater as close to its source as possible. In urban environments, LID is typically instituted on small scales as large areas for stormwater management are limited. A goal of this project is to implement LID strategies to the maximum extent feasible within the project limits to maintain or improve existing onsite stormwater conditions.

The most common examples of LID are installing stormwater best management practices (BMPs) such as bioretention gardens, infiltration basins, bioswales, and pervious pavement. These structural BMPs intercept and treat stormwater runoff. Sections 3.1 and 3.2 discuss the possibility of implementing BMPs as part of the project alongside the bikeway to minimize the total impervious surface area, provide basic treatment, and promote a naturalized aesthetic.

## 3.1 BMP Modeling Setup and Assumptions

BMP configurations were sized using the 24-Hour 85$^{th}$ Percentile runoff hydrographs generated for each subdrainage area. A 2 foot gravel depth below grade and 0.5 feet surface freeboard was assumed to simulate a bioretention or gravel infiltration BMP. A factor of 0.3 (30%) was used for gravel void space. During this modeling effort, multiple storage volumes were simulated to capture approximate BMP throughflow rates before arriving at a recommended size for the BMP. These efforts are detailed in the following subsections.

### 3.1.1 Storage Volume and Footprint

As previously mentioned, the portions of San Jose Bikeway alongside the channel are approximately 3.5 miles long. **Table 3-1** presents the access road area available for each subdrainage area. While a majority of the access road will be reserved for the bike trail, these values still serve as useful benchmarks for feasibility. BMPs would likely be located directly alongside the channel, but a wide variety of BMP channel configurations are possible (trapezoidal, box, etc.).

**Table 3-1.** Access Road Area Available for Each Subdrainage Area

| Drainage Area | Access Road Area (Acres) |
|---|---|
| 1 | 0.44 |
| 2A | 1.87 |
| 2B | 0.02 |
| 2C | 0.35 |
| 2D | 0.03 |
| 3A | 0.24 |
| 3B | 0.27 |
| 3C | 1.65 |
| 4 | 0.83 |
| 5 | 0.63 |
| 6 | 0.46 |
| 7 | 0.93 |

### 3.1.2 Infiltration Rate

Because there are no infiltration feasibility studies as of this date, an infiltration rate of 0.3 in/hr was used to model the BMP as a baseline estimate, since the LA County LID Requirements state that LID projects are not allowed in areas where the infiltration rate is less than 0.3 in/hr. This number is not far from the LA County Hydrology Map's soil classifications, which fall under Soil Types 3, 6, and 7. These correspond to Chino Silt Loam, Hanford Fine Sandy Loam, and Hanford Gravelly Sandy Loam, which have average infiltration rates of 0.2 in/hr, 0.6 in/hr, and 0.8 in/hr, respectively. Future infiltration studies should be conducted to verify infiltration rates.

### 3.1.3 BMP Modeling Results and Considerations

**Table 3-2** breaks down the required BMP footprint for each subdrainage area to treat the 85$^{th}$ percentile storm. As stated in Section 3.1, the storage depth was assumed to be 2 ft with an aboveground ponding depth of 0.5 feet. A gravel void space ratio estimate of 0.3 was used.

**Table 3-2.** LID Footprint Required to Capture the 85$^{th}$ Percentile Storm, by Subdrainage Area

| Subdrainage Area | LID Area Required (sq ft) | % of Area Required for LID |
|---|---|---|
| 1 | 519 | 2.7% |
| 2A | 2,409 | 3.0% |
| 2B | 8,028 | 921.5% |
| 2C | 414 | 2.7% |
| 2D | 17 | 1.3% |
| 3A | 575 | 5.5% |
| 3B | 725 | 6.2% |
| 3C | 2,336 | 3.3% |
| 4 | 3,198 | 8.8% |
| 5 | 741 | 2.7% |
| 6 | 558 | 2.8% |
| 7 | 1,265 | 3.1% |
| **Total** | **20,785** | **6.2%** |

Every subdrainage area, other than 2B and 4, require less than approximately 6% of the access road area to install LID that manages the 85$^{th}$ percentile storm. In some areas, there will be enough room in between the bike trail and the fencing for a thin (3 to 10 feet) wide stretch of LID such as a biofiltration strip or a gravel infiltration bed that runs adjacent to the trail that should accommodate the required LID area. Subdrainage areas 3A, 3B, 4, 5, 6, and 7 fall into this category. Other areas, such as Subdrainage Area 1, 2A, 2C, and 2D, might be limited in opportunities due to the width of the existing maintenance road. In these cases, the main opportunities to install BMPs would be located at the trail gates. ***Figure 3-1*** shows the current landscaping plans for Subdrainage Area 1, which incorporates potential LID strategies such as permeable pavers and bioswales at the trail entrance. ***Figure 3-2*** shows Drainage Area 5, which shows that there is a strip of space between the bike trail and the outside fence. The required 741 square feet of LID to capture the 85$^{th}$ percentile runoff would easily fit into this area. It is

currently shown that there is about 5 feet of extra space, which would only require approximately 150 feet length of, for example, a gravel strip. This would be able to fit between Stations 128 + 50 and 130 + 00, which also happens to be where the low point of the trail is in this section, reducing grading efforts and ensuring the capture of all on-site flows.

Subdrainage Area 2B is exceptionally large due to the offsite drainage that leads into it. Currently, there are two pipes that outlet runoff directly onto the maintenance road (see ***Figure 2-2***). In this scenario, no LID would be able to handle the runoff within the confines of the access road and the space that the bikeway will take up. Instead, the pipes would have to be extended directly into the channel. Subdrainage Area 4, meanwhile, is also large due to offsite drainage from John F. Kennedy Park. However, the City is considering the incorporation of a regional BMP at the park site, capturing the onsite runoff in addition to stormwater from the adjacent LACFCD storm drain. As such, the true amount of runoff that will end up in the bikeway and ensuing required LID area will be similar to the other portions of the bikeway, presenting it as a possible LID location as well.

## 3.2 Additional LID Strategies

In addition to the potential for BMP strips along the bikeway, the project does follow other LID strategies:

- ***Reduce or maintain existing impervious surfaces***

  The existing access road is impervious, just as the planned bike trail will be. There is ultimately no impervious area being added to the project. As a result, there is no BMP requirement to manage runoff since no major hydrological changes to the site will occur. Therefore, any partial capture by new BMP will improve stormwater conditions while supporting the project's main transportation goals.

- ***Maintain existing drainage patterns***

  While slight alterations to flow patterns might be made during the construction process the overall drainage patterns will be maintained.

- ***Runoff volume match***

  By maintaining existing impervious surfaces and drainage patterns, the existing site hydrology including runoff volume and rates are unchanged. The addition of landscaped areas where possible would decrease runoff volumes and rates.

Overall, the proposed San Jose Bikeway does little to change existing site hydrology which is in line with LID strategies.

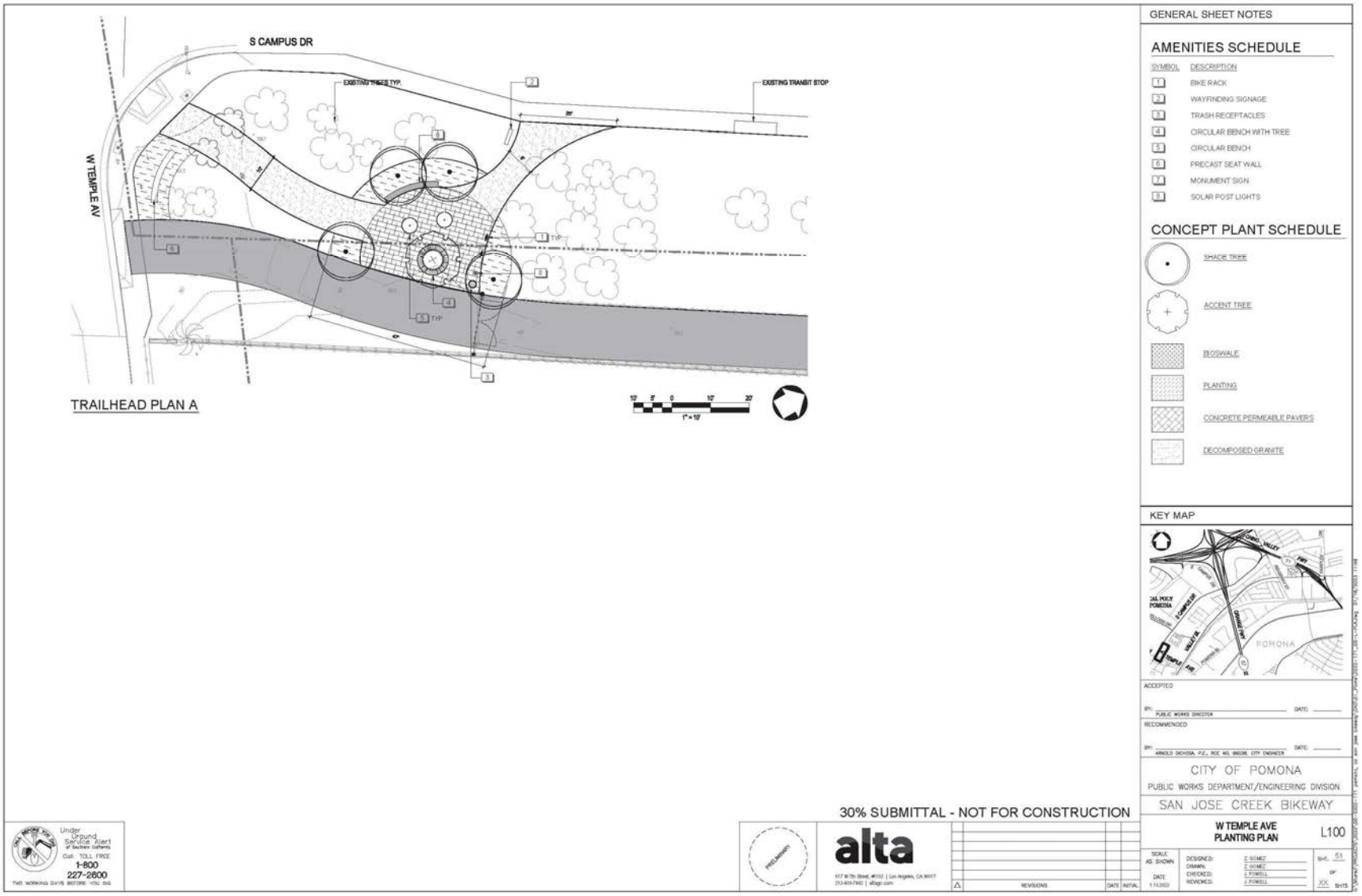



***Figure 3-1.*** San Jose Creek Bikeway 30% Landscaping Plans for the trail entrance at Temple Avenue

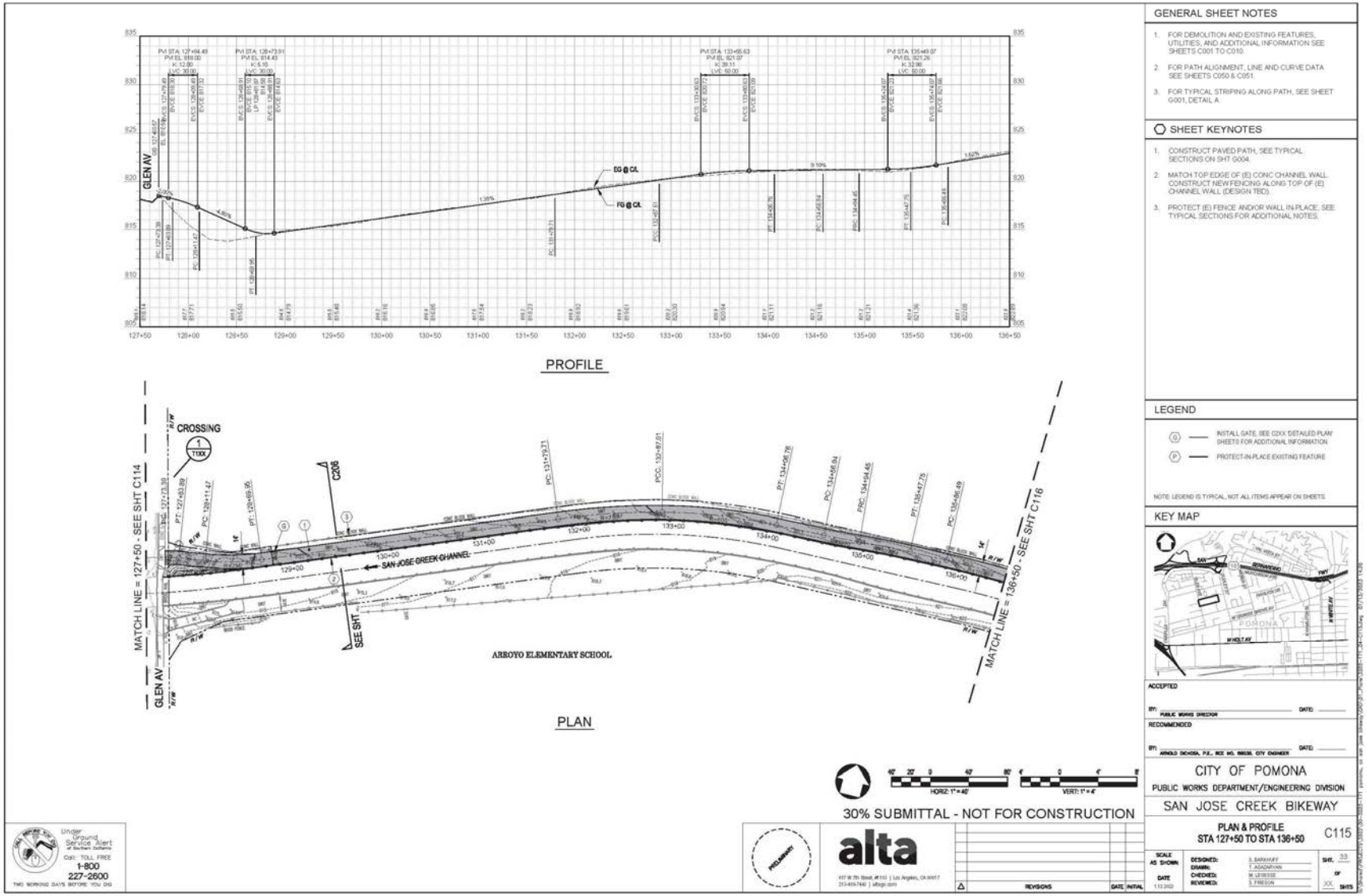



***Figure 3-2.*** San Jose Creek Bikeway 30% Plans between Glen Avenue and Dudley Street

# 4 STATE ROUTE 71 CROSSING ANALYSIS

## 4.1 Existing Site Conditions

The proposed San Jose Bikeway spans across two freeways – CA 57 and CA 71. At the State Route 71 crossing, there is currently very little vertical clearance. The height between the bottom of the freeway and the existing maintenance road reaches a minimum of approximately two feet (see ***Figure 4-1***). As a result, there will be significant grading efforts to ensure bikers have the safety of an unobstructed path. As currently proposed, the bikeway will slope down from either side of the freeway crossing, forming a sump at the middle. Drainage will need to be addressed to minimize the risk of inundation. Analysis on the drainage design will be discussed in the following sections.

***Figure 4-1***. State Route 71 Crossing Clearance

### 4.1.1 Flow Paths

As shown on the Drainage Area map in ***Figure 2-9***, there is offsite flow entering into this portion of the bikeway from State Route 71. Although there is existing stormwater infrastructure in place along the freeway, there is a break in the curb that allows water coming from the bridge to flow directly under and into the project site. Additionally, the parkway areas on the sides of the freeway south of the crossing slope towards the site, allowing runoff to flow into the site. Evidence of the flow paths was present at the site visit (See ***Figure 4-2***), necessitating the need for proper drainage at the base of the proposed sump.

***Figure 4-2***. State Route 71 Crossing Drainage

## 4.2 Hydrology Setup and Results

### 4.2.1 Local Runoff

The new grading design of the bike path as it crosses under route 71 creates a sump condition near STA 84+00.00 is shown in ***Figure 4-3***. The drainage area associated with the proposed state route 71 crossing includes areas 3A and 3B from ***Figure 2-9***, each being 0.24 and 0.27 acres respectively. Hydrocalc was utilized to model the expected rainfall and flowrate for each drainage area based on the existing site conditions present as well as the proposed grading design of the bike crossing. Utilizing the Los Angeles County hydrology map online tool, the determined assumptions were as follows: the 50yr two tenths rainfall is 6.8 in and the soil type for the area is defined as class 3. The results of the Hydrocalc model can be seen in ***Figure 4-4*** and ***Figures 4-5***. The 100-year design storm was modeled and the resulting peak flows were used to determine the hydraulic capacity needed by the proposed drainage system. Area 3A and 3B resulted in 0.84 CFS and 0.95 CFS respectively producing a total modeled flow of 1.79 CFS for the areas combined.

### 4.2.2 Channel Impacts

Existing hydraulics of the San Jose Creek Channel were also considered to determine if the runoff collected at the sump could drain freely via a direct pipe connection to the channel. Through correspondence with the Los Angeles County Flood Control District, it was determined that the design flow rate for the existing San Jose Creek channel when originally designed was 13,000 CFS. This information was utilized to determine the expected design flow depth within the channel. FHWA Hydraulic toolbox was utilized to model the channel flow under the design flow rate. The modeling results are shown in ***Figure 4-6***. The design flow water surface depth is at a height of 15.5 ft which is 3.5’ below the approximate channel wall height (based on available as-built information) of 19’. This high-water surface elevation needs to be considered for the proposed outlet of the new drainage system servicing the crossing. If the invert of the outlet is below the calculated water surface elevation, backflow prevention devices may be required.

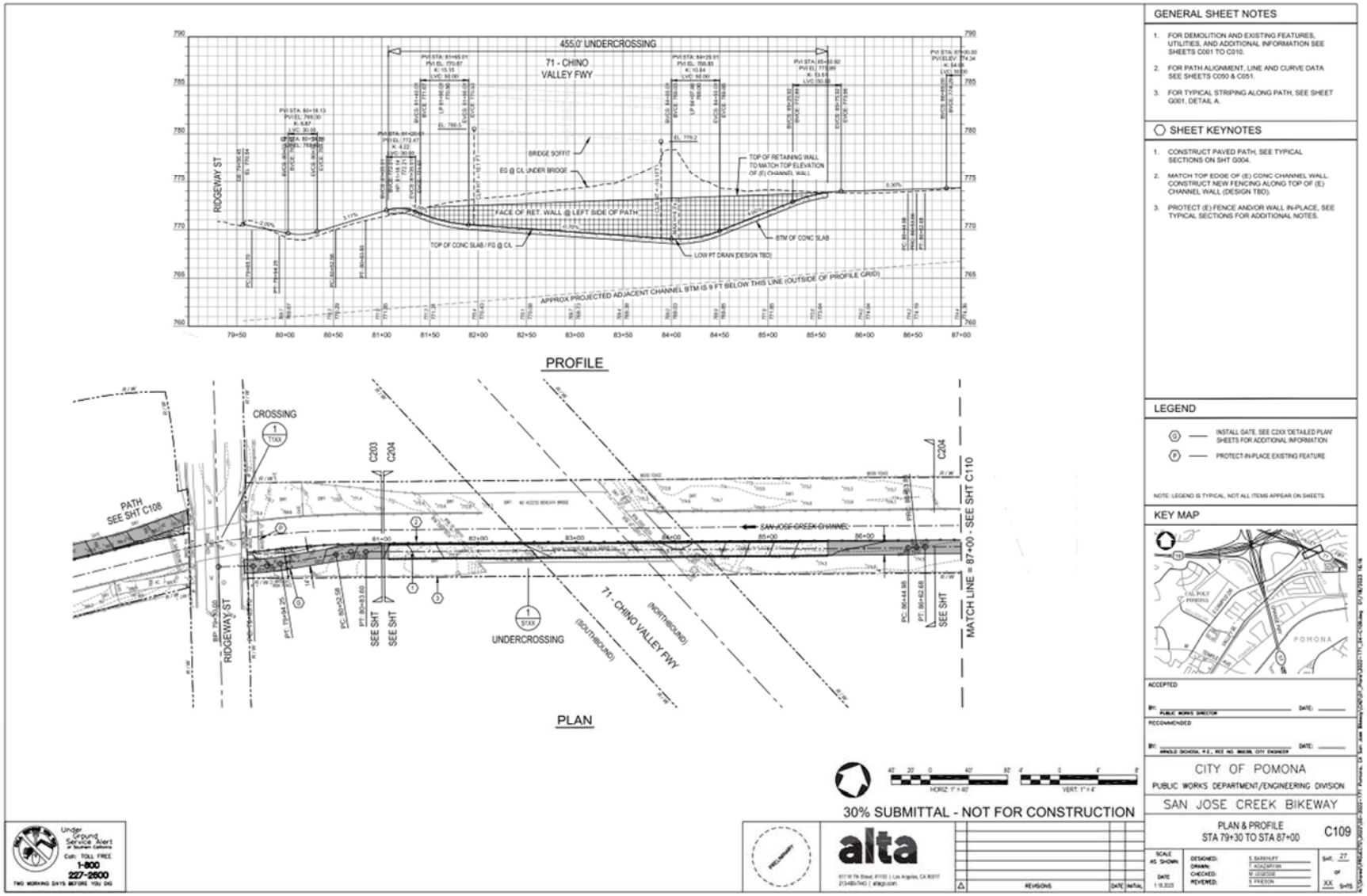



***Figure* 4-3:** Grading plan for Route 71 Crossing

**Peak Flow Hydrologic Analysis**

File location: W:/Projects/City of Pomona/22-005 San Jose Creek Multi-Use Bikeway/_DELIVERABLES/Hydrology Report/Figures/hydrocalc-71crossing/
Version: HydroCalc 1.0.3

| Input Parameters | |
|---|---|
| Project Name | San Jose Creek Bike Path |
| Subarea ID | 71 crossing - 3B |
| Area (ac) | 0.27 |
| Flow Path Length (ft) | 300.0 |
| Flow Path Slope (vft/hft) | 0.01 |
| 50-yr Rainfall Depth (in) | 6.8 |
| Percent Impervious | 0.6 |
| Soil Type | 3 |
| Design Storm Frequency | 100-yr |
| Fire Factor | 0 |
| LID | False |

| Output Results | |
|---|---|
| Modeled (100-yr) Rainfall Depth (in) | 7.6296 |
| Peak Intensity (in/hr) | 4.552 |
| Undeveloped Runoff Coefficient (Cu) | 0.5785 |
| Developed Runoff Coefficient (Cd) | 0.7714 |
| Time of Concentration (min) | 5.0 |
| Clear Peak Flow Rate (cfs) | 0.9481 |
| Burned Peak Flow Rate (cfs) | 0.9481 |
| 24-Hr Clear Runoff Volume (ac-ft) | 0.1011 |
| 24-Hr Clear Runoff Volume (cu-ft) | 4402.5082 |

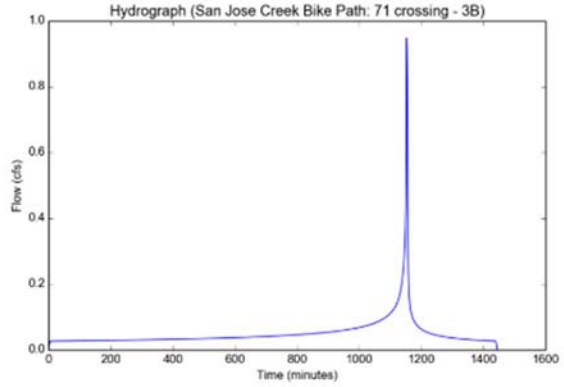


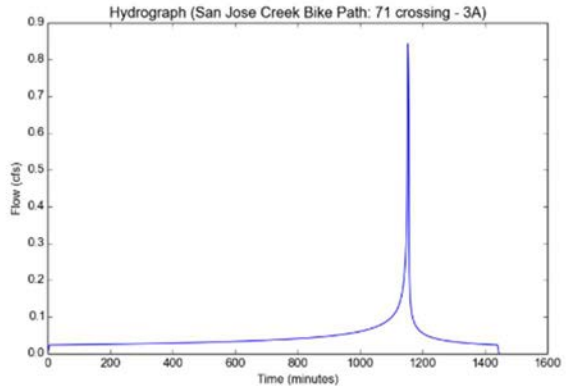

***Figure 4-4***: Area 3B Hydrocalc Results

**Peak Flow Hydrologic Analysis**

File location: W:/Projects/City of Pomona/22-005 San Jose Creek Multi-Use Bikeway/_DELIVERABLES/Hydrology Report/Figures/hydrocalc-71crossing
Version: HydroCalc 1.0.3

| Input Parameters | |
|---|---|
| Project Name | San Jose Creek Bike Path |
| Subarea ID | 71 crossing - 3A |
| Area (ac) | 0.24 |
| Flow Path Length (ft) | 300.0 |
| Flow Path Slope (vft/hft) | 0.01 |
| 50-yr Rainfall Depth (in) | 6.8 |
| Percent Impervious | 0.6 |
| Soil Type | 3 |
| Design Storm Frequency | 100-yr |
| Fire Factor | 0 |
| LID | False |

| Output Results | |
|---|---|
| Modeled (100-yr) Rainfall Depth (in) | 7.6296 |
| Peak Intensity (in/hr) | 4.552 |
| Undeveloped Runoff Coefficient (Cu) | 0.5785 |
| Developed Runoff Coefficient (Cd) | 0.7714 |
| Time of Concentration (min) | 5.0 |
| Clear Peak Flow Rate (cfs) | 0.8427 |
| Burned Peak Flow Rate (cfs) | 0.8427 |
| 24-Hr Clear Runoff Volume (ac-ft) | 0.0898 |
| 24-Hr Clear Runoff Volume (cu-ft) | 3913.3406 |




***Figures 4-5***: Area 3A Hydrocalc Results

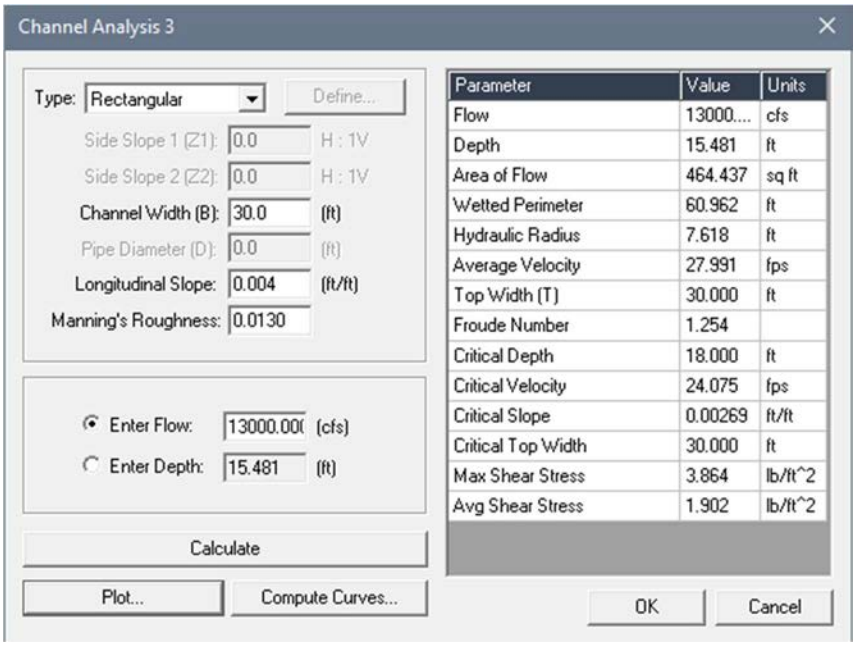



***Figure 4-6***: Existing Channel Design Flow WSE

### 4.2.3 Results

The proposed drainage system can be seen in ***Figure 4-9***. The high design WSE in the channel is high enough to require backflow prevention measures for the proposed drainage outlet pipes. As shown, both inline Tideflex© check valves (see ***Figure 4-7***) as well as outlet flap gates are recommended to prevent any backflow from the channel during very intense storm conditions. To handle the 100-year modeled runoff flow that will be directed towards the created sump (1.79 CFS), a 24”x24” drop inlet grate has been recommended to handle the flow. Under the proposed hydraulic conditions, accounting for 50% clogging, the results can be seen in . The ponding depth of 0.28’ informed the location of a secondary, redundant 24”x24” inlet. The secondary inlet is located horizontally to provide a grate elevation height that is 0.25’ above the proposed grate elevation of the primary sump inlet. Any ponding resulting from the primary sump inlet being overwhelmed or clogged will then be captured by the secondary inlet to prevent any further ponding.

Additionally, on the west side of the proposed crossing there is a trench drain that is recommended along the dripline from the above highway crossing overpass. Since a significant portion of the offsite runoff is coming off of the highway, the trench drain will be utilized to intercept that flow. This intercept drain will reduce the amount of flow that will ultimately reach the sump inlet and will provide further redundancy to reduce ponding at the sump location.

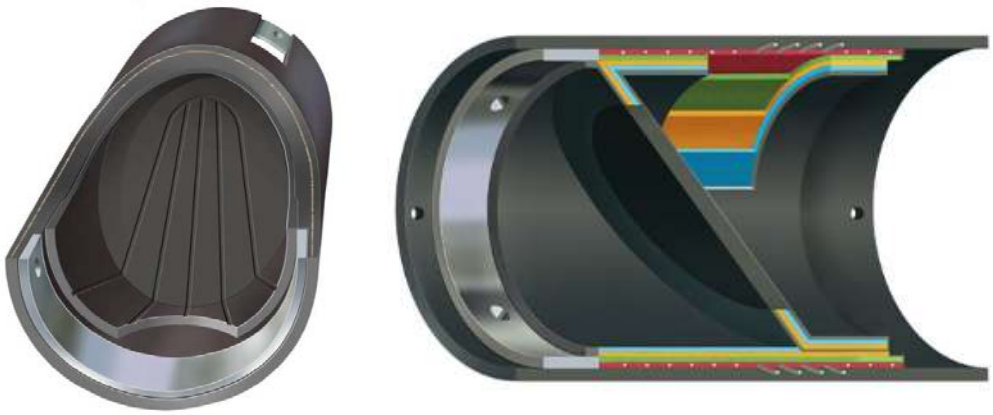


***Figure 4-7***. CheckMate® UltraFlex™ Inline Check Valve Schematic

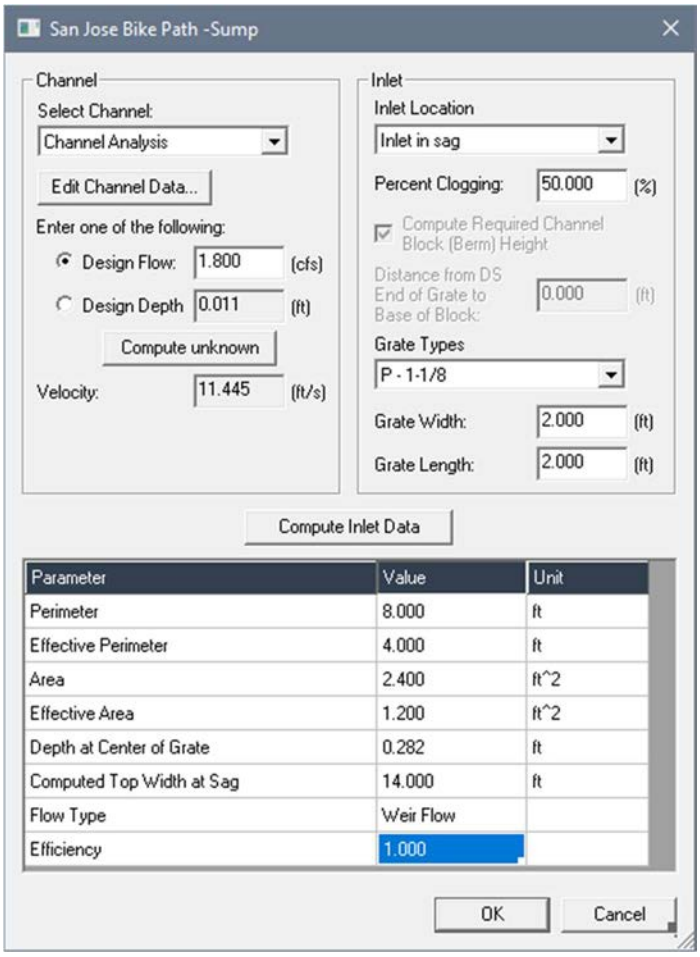



***Figure 4-8***. Sump Inlet Calculations

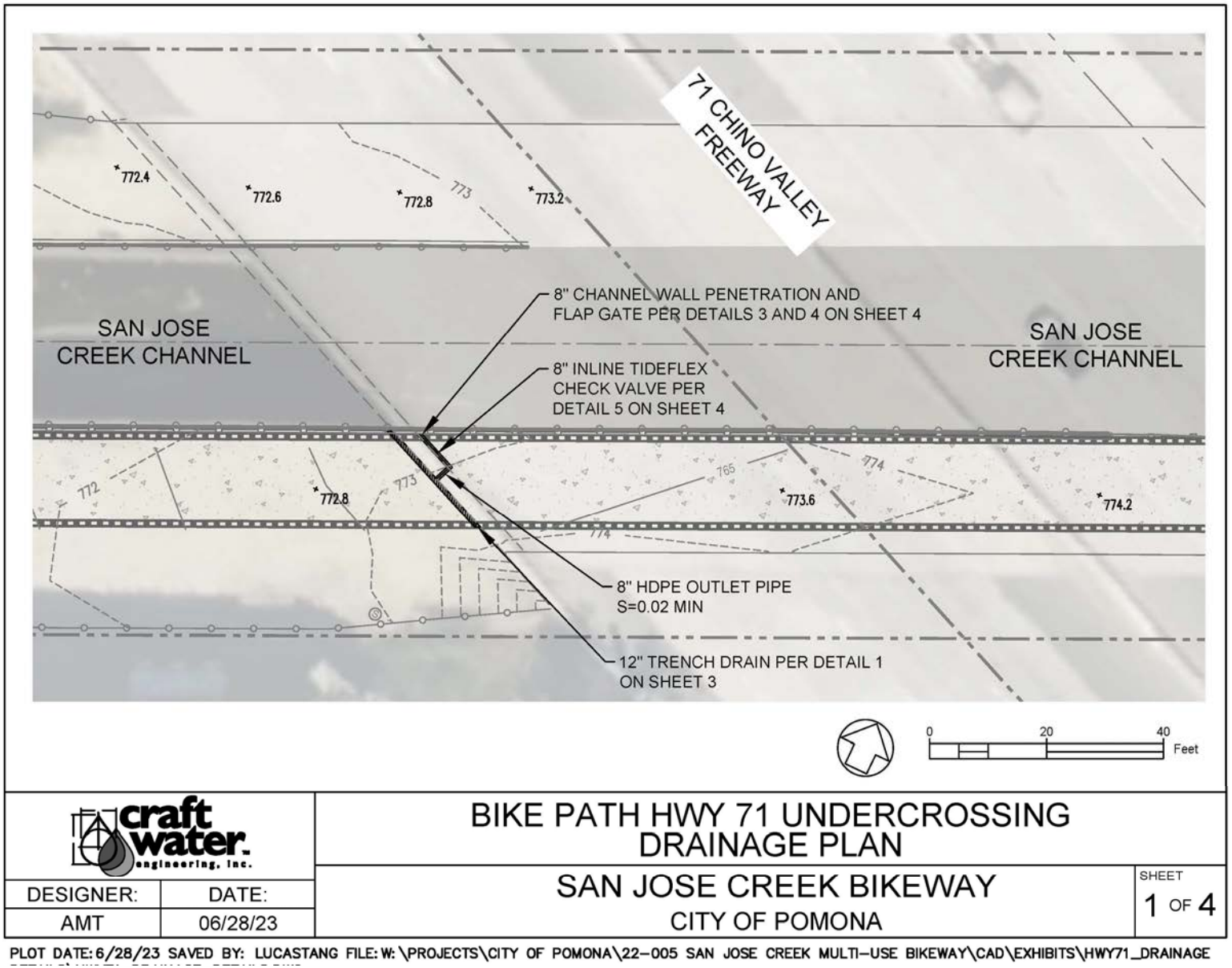



***Figure 4-9***: Proposed Crossing Drainage Design, West of State Route 71 Crossing

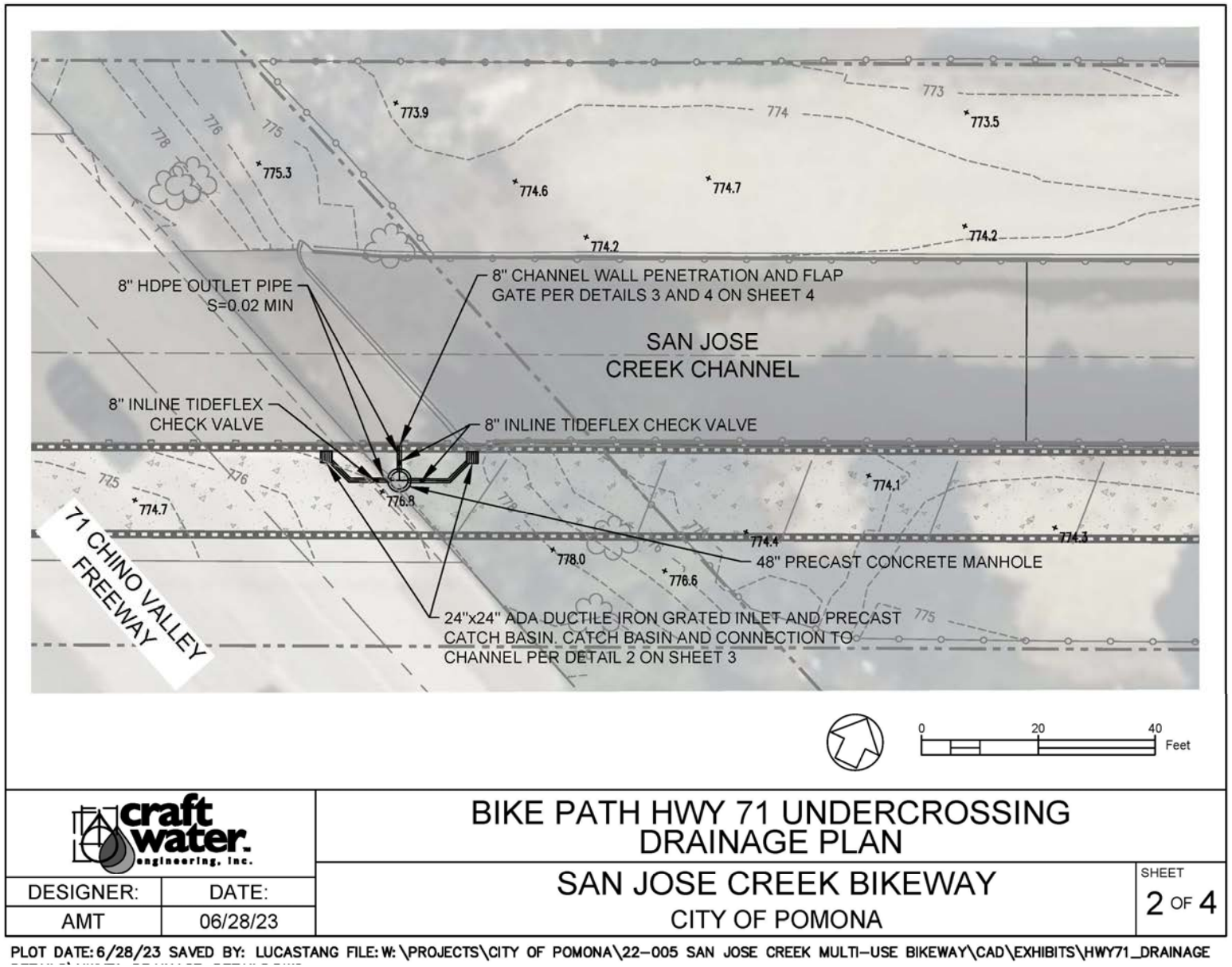



***Figure 4-10***. Proposed Crossing Drainage Design, East of State Route 71 Crossing

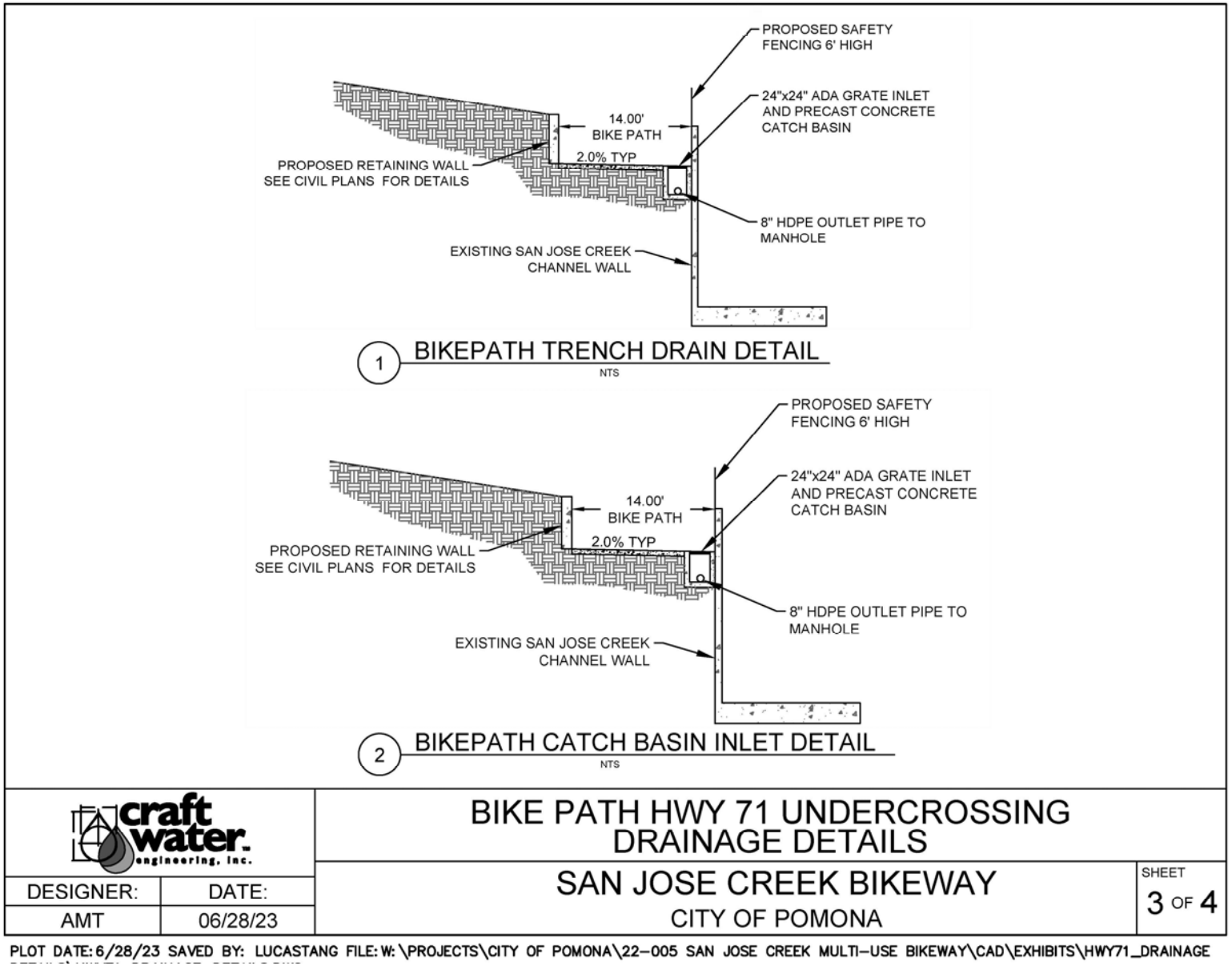



***Figure 4-11***. Proposed Crossing Drainage Design Details 1 and 2

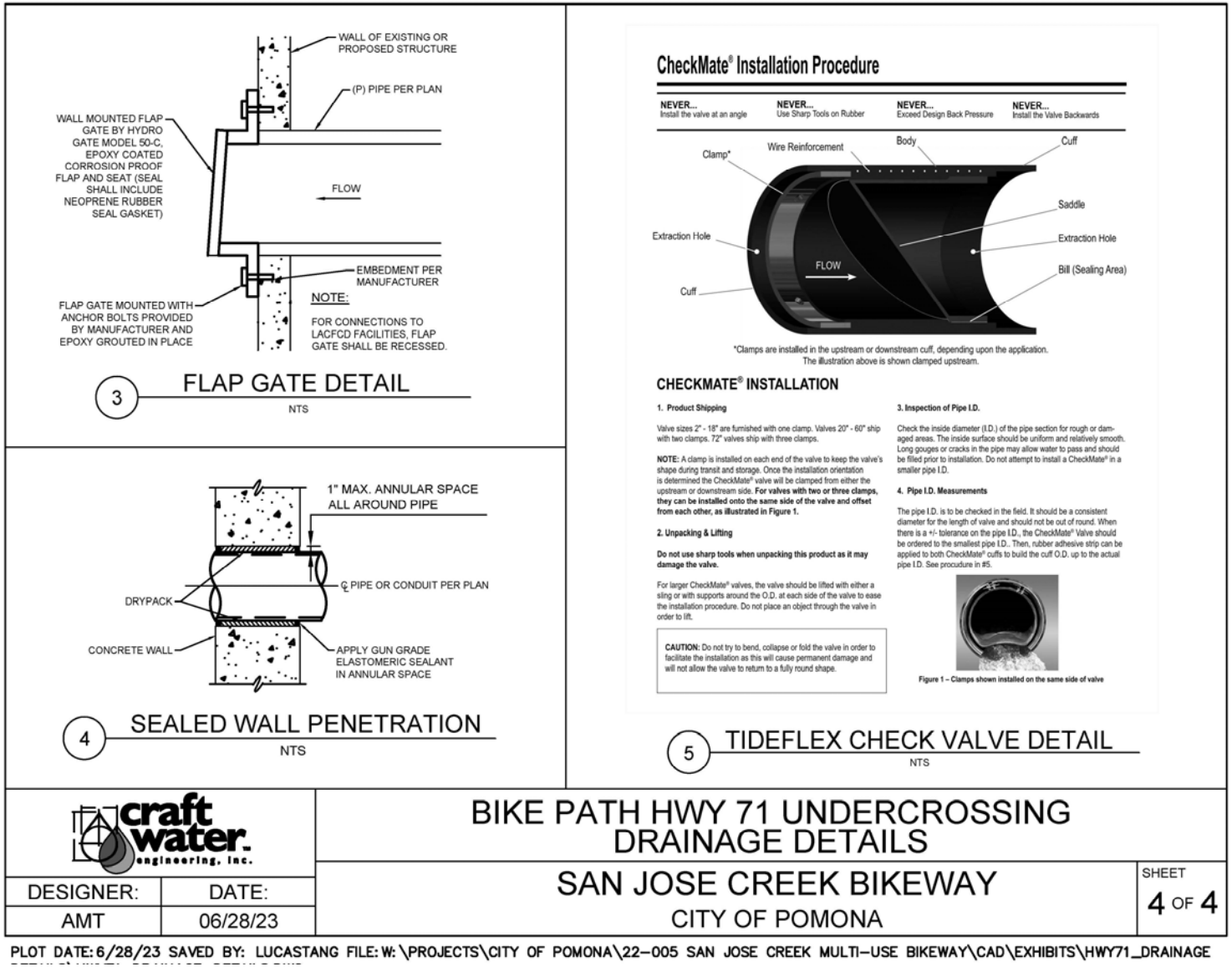



***Figure 4-12***. Proposed Crossing Drainage Design Details 3 through 5

# 5 CONCLUSIONS

This hydrology report was prepared for the San Jose Creek Bikeway Project to advance progress towards the implementation of LID as part of the project. Additionally, analysis on the State Route 71 crossing was also conducted to minimize the flooding risk in that portion of the proposed bike trail.

### *LID Implementation*

The existing site, stormwater utilities, geotechnical conditions, and hydrology were characterized to determine the feasibility of LID implementation and runoff management.

The primary issue preventing full-scale LID implementation is the trail's width. In several sections, the proposed bikeway takes up the entire width of the feasible footprint for the trail. However, there are other subdrainage areas that do have the space to accommodate LID implementation that could capture the 85$^{th}$ percentile storm runoff. Additionally, some of the sections without the space along the width of the trail could incorporate BMPs at the trail entrances, such as at the start of the trail at the Temple Avenue and Campus Drive intersection.

Although full-scale LID implementation is not attainable, it must also be noted that the proposed project does not severely alter existing hydrology. Since the existing access road is impervious soil any additional BMPs or landscaping will manage more runoff than existing conditions do. Therefore, BMPs should be constructed wherever feasible, with the primary opportunities for this being along the channel within drainage areas 3, 4, 5, 6 and 7.

In any case, further verification of infiltration rates should be conducted to confirm BMP feasibility. Project costs will vary depending on the final infiltration rate and should be weighed before further stages of design to determine which option best meets the water quality needs for the drainage area, ongoing maintenance options, and capital as well as full project costs.

### State Route 71 Crossing

Because there is inadequate vertical clearance underneath the State Route 71 freeway crossing, grading efforts are needed to allow cyclists and pedestrians to cross without obstruction. Due to the significant off-site runoff that this portion of the site receives, as well as the sump-like grading design for the bike path, analysis was conducted to design the necessary drainage infrastructure to ensure there will be minimal ponding. Analysis was done with Hydrocalc, where the 100-year design storm was modeled to generate a combined peak flow of 1.79 CFS.

Additionally, existing channel hydraulics were considered to determine if the runoff collected at the sump could drain freely to the channel. Coordination with the LACFCD also revealed that the 100-year design storm of 13,000 CFS resulted in a water height of 15.5 feet, establishing the need for a backflow preventer.

As a result of the analysis, two 24" x 24" drain inlets are recommended, with the runoff being directed into an 8" pipe that contains both a TIdeflex© check valve and a flap gate. Additionally, a trench drain is also proposed for the west side of the crossing to intercept flow from the highway and divert it into the channel before entering the sump.

# APPENDIX A – DRAINAGE AREA HYDROGRAPHS

# Peak Flow Hydrologic Analysis

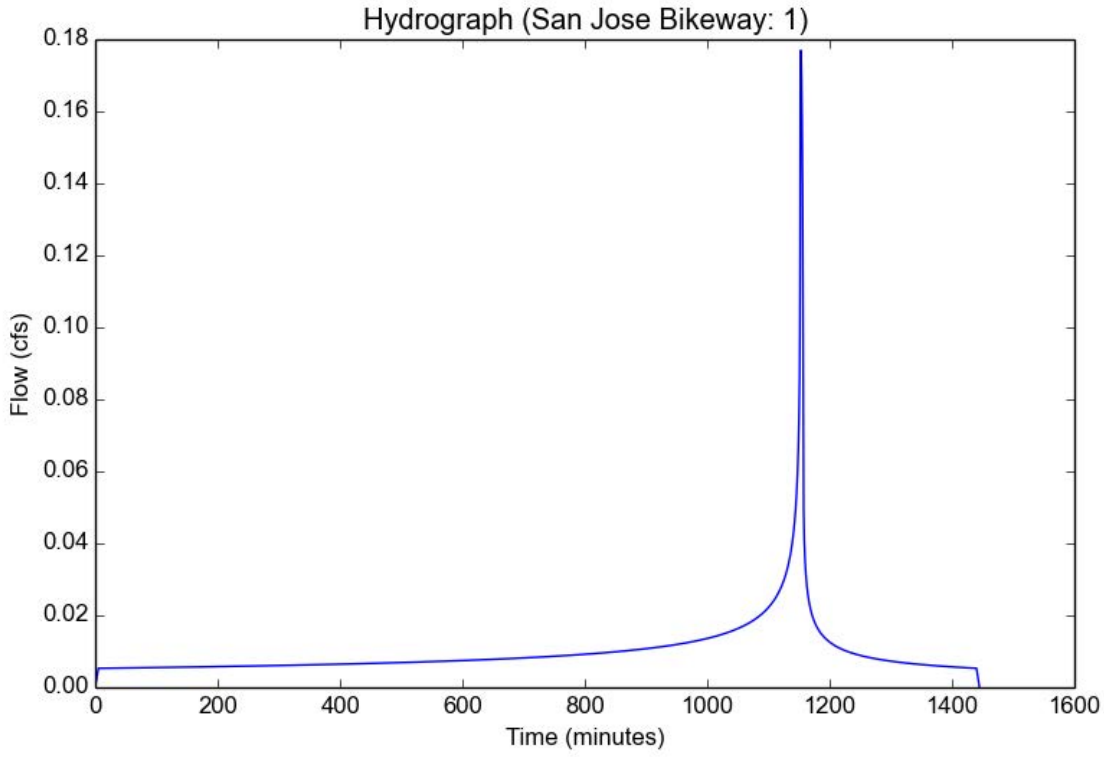
File location: C:/Users/LucasTang/OneDrive - revWater/Documents/ArcGIS/Projects/San Jose Bikeway/San Jose Bikeway Report.pdf
Version: HydroCalc 1.0.3

## Input Parameters

| | |
|---|---|
| Project Name | San Jose Bikeway |
| Subarea ID | 1 |
| Area (ac) | 0.440354446 |
| Flow Path Length (ft) | 14.0 |
| Flow Path Slope (vft/hft) | 0.012 |
| 85th Percentile Rainfall Depth (in) | 1.0 |
| Percent Impervious | 0.554377511 |
| Soil Type | 6 |
| Design Storm Frequency | 85th percentile storm |
| Fire Factor | 0 |
| LID | True |

## Output Results

| | |
|---|---|
| Modeled (85th percentile storm) Rainfall Depth (in) | 1.0 |
| Peak Intensity (in/hr) | 0.5966 |
| Undeveloped Runoff Coefficient (Cu) | 0.3916 |
| Developed Runoff Coefficient (Cd) | 0.6734 |
| Time of Concentration (min) | 5.0 |
| Clear Peak Flow Rate (cfs) | 0.1769 |
| Burned Peak Flow Rate (cfs) | 0.1769 |
| 24-Hr Clear Runoff Volume (ac-ft) | 0.02 |
| 24-Hr Clear Runoff Volume (cu-ft) | 869.6329 |



# Peak Flow Hydrologic Analysis

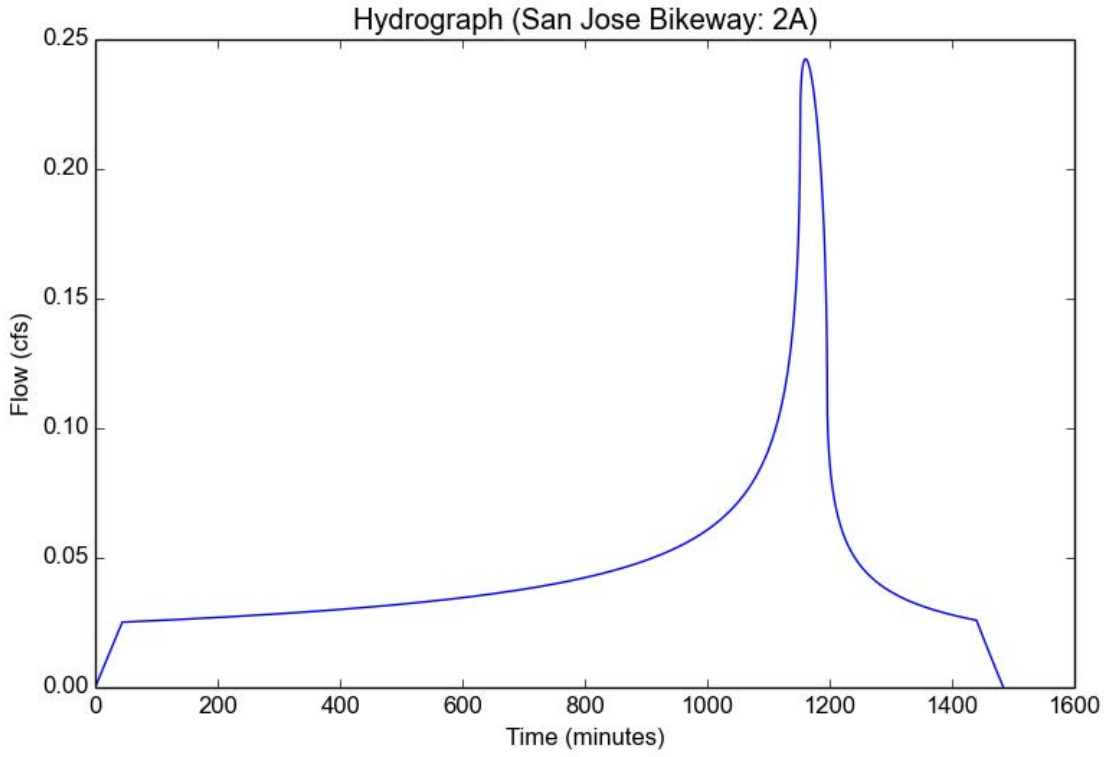
File location: C:/Users/LucasTang/OneDrive - revWater/Documents/ArcGIS/Projects/San Jose Bikeway/San Jose Bikeway Report.pdf
Version: HydroCalc 1.0.3

## Input Parameters

| | |
|---|---|
| Project Name | San Jose Bikeway |
| Subarea ID | 2A |
| Area (ac) | 2.307585815 |
| Flow Path Length (ft) | 647.78 |
| Flow Path Slope (vft/hft) | 0.0077 |
| 85th Percentile Rainfall Depth (in) | 1.0 |
| Percent Impervious | 0.486710115 |
| Soil Type | 6 |
| Design Storm Frequency | 85th percentile storm |
| Fire Factor | 0 |
| LID | True |

## Output Results

| | |
|---|---|
| Modeled (85th percentile storm) Rainfall Depth (in) | 1.0 |
| Peak Intensity (in/hr) | 0.2147 |
| Undeveloped Runoff Coefficient (Cu) | 0.1 |
| Developed Runoff Coefficient (Cd) | 0.4894 |
| Time of Concentration (min) | 44.0 |
| Clear Peak Flow Rate (cfs) | 0.2424 |
| Burned Peak Flow Rate (cfs) | 0.2424 |
| 24-Hr Clear Runoff Volume (ac-ft) | 0.0933 |
| 24-Hr Clear Runoff Volume (cu-ft) | 4065.4333 |



# Peak Flow Hydrologic Analysis

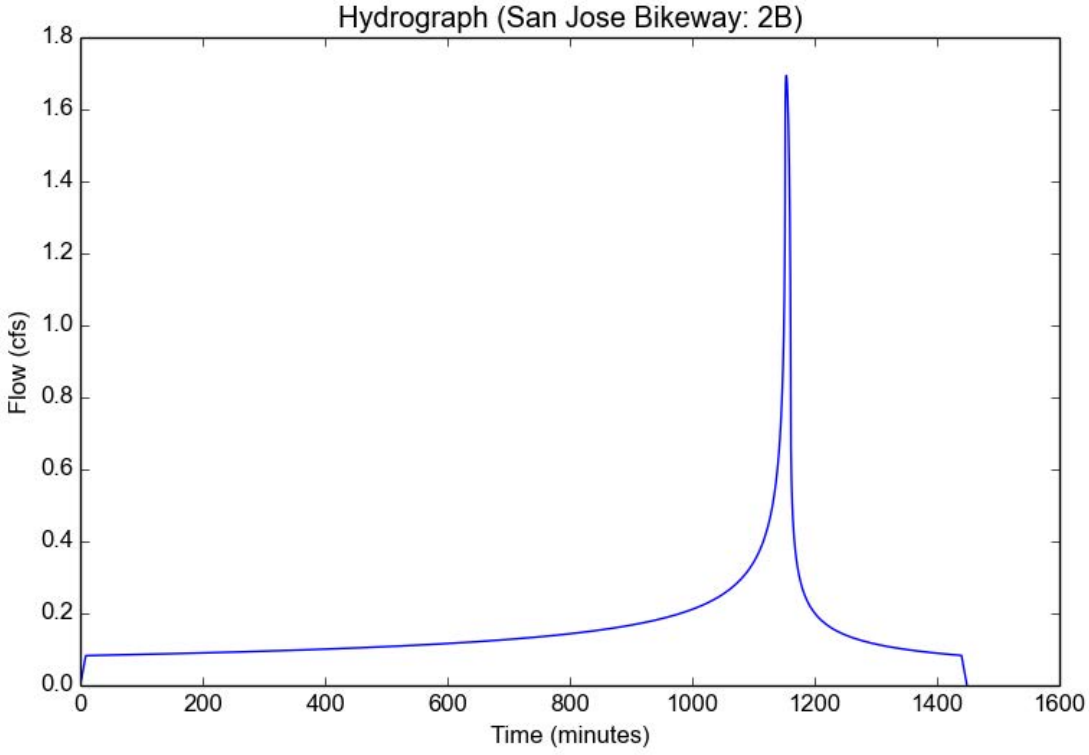
File location: C:/Users/LucasTang/OneDrive - revWater/Documents/ArcGIS/Projects/San Jose Bikeway/San Jose Bikeway Report.pdf
Version: HydroCalc 1.0.3

## Input Parameters

| | |
|---|---|
| Project Name | San Jose Bikeway |
| Subarea ID | 2B |
| Area (ac) | 5.154112157 |
| Flow Path Length (ft) | 130.1 |
| Flow Path Slope (vft/hft) | 0.043 |
| 85th Percentile Rainfall Depth (in) | 1.0 |
| Percent Impervious | 0.782386276 |
| Soil Type | 3 |
| Design Storm Frequency | 85th percentile storm |
| Fire Factor | 0 |
| LID | True |

## Output Results

| | |
|---|---|
| Modeled (85th percentile storm) Rainfall Depth (in) | 1.0 |
| Peak Intensity (in/hr) | 0.4526 |
| Undeveloped Runoff Coefficient (Cu) | 0.1 |
| Developed Runoff Coefficient (Cd) | 0.7259 |
| Time of Concentration (min) | 9.0 |
| Clear Peak Flow Rate (cfs) | 1.6934 |
| Burned Peak Flow Rate (cfs) | 1.6934 |
| 24-Hr Clear Runoff Volume (ac-ft) | 0.3092 |
| 24-Hr Clear Runoff Volume (cu-ft) | 13469.1132 |



# Peak Flow Hydrologic Analysis

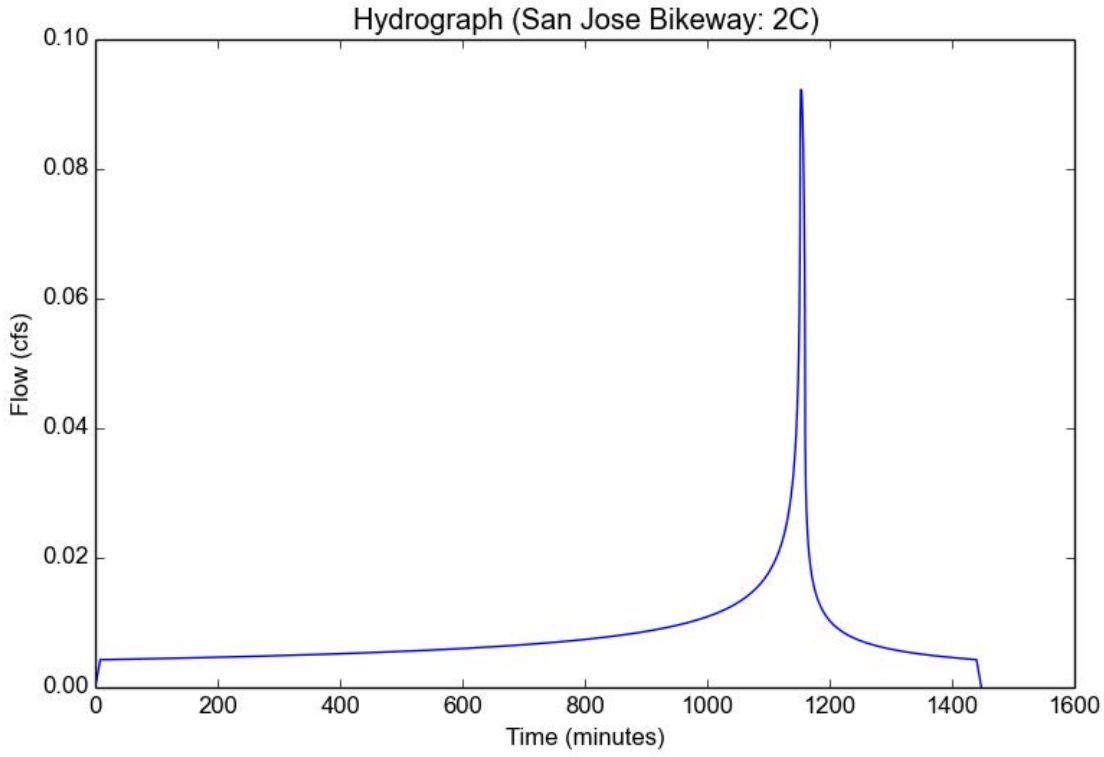
File location: C:/Users/LucasTang/OneDrive - revWater/Documents/ArcGIS/Projects/San Jose Bikeway/San Jose Bikeway Report.pdf
Version: HydroCalc 1.0.3

## Input Parameters

| | |
|---|---|
| Project Name | San Jose Bikeway |
| Subarea ID | 2C |
| Area (ac) | 1.155260601 |
| Flow Path Length (ft) | 14.0 |
| Flow Path Slope (vft/hft) | 0.01 |
| 85th Percentile Rainfall Depth (in) | 1.0 |
| Percent Impervious | 0.083690354 |
| Soil Type | 3 |
| Design Storm Frequency | 85th percentile storm |
| Fire Factor | 0 |
| LID | True |

## Output Results

| | |
|---|---|
| Modeled (85th percentile storm) Rainfall Depth (in) | 1.0 |
| Peak Intensity (in/hr) | 0.4784 |
| Undeveloped Runoff Coefficient (Cu) | 0.1 |
| Developed Runoff Coefficient (Cd) | 0.167 |
| Time of Concentration (min) | 8.0 |
| Clear Peak Flow Rate (cfs) | 0.0923 |
| Burned Peak Flow Rate (cfs) | 0.0923 |
| 24-Hr Clear Runoff Volume (ac-ft) | 0.0159 |
| 24-Hr Clear Runoff Volume (cu-ft) | 694.3448 |



# Peak Flow Hydrologic Analysis

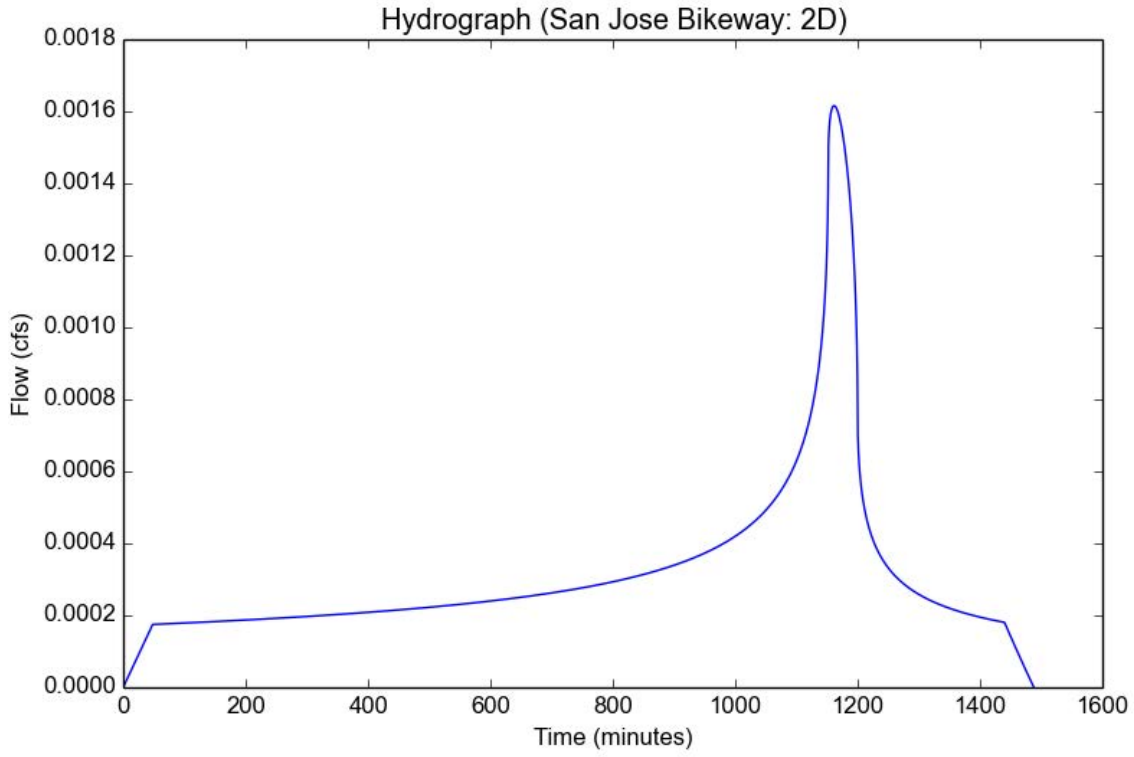
File location: C:/Users/LucasTang/OneDrive - revWater/Documents/ArcGIS/Projects/San Jose Bikeway/San Jose Bikeway Report.pdf
Version: HydroCalc 1.0.3

## Input Parameters

| | |
|---|---|
| Project Name | San Jose Bikeway |
| Subarea ID | 2D |
| Area (ac) | 0.028260819 |
| Flow Path Length (ft) | 507.0 |
| Flow Path Slope (vft/hft) | 0.017159763 |
| 85th Percentile Rainfall Depth (in) | 1.0 |
| Percent Impervious | 0.221801298 |
| Soil Type | 3 |
| Design Storm Frequency | 85th percentile storm |
| Fire Factor | 0 |
| LID | True |

## Output Results

| | |
|---|---|
| Modeled (85th percentile storm) Rainfall Depth (in) | 1.0 |
| Peak Intensity (in/hr) | 0.2061 |
| Undeveloped Runoff Coefficient (Cu) | 0.1 |
| Developed Runoff Coefficient (Cd) | 0.2774 |
| Time of Concentration (min) | 48.0 |
| Clear Peak Flow Rate (cfs) | 0.0016 |
| Burned Peak Flow Rate (cfs) | 0.0016 |
| 24-Hr Clear Runoff Volume (ac-ft) | 0.0006 |
| 24-Hr Clear Runoff Volume (cu-ft) | 28.2274 |



# Peak Flow Hydrologic Analysis

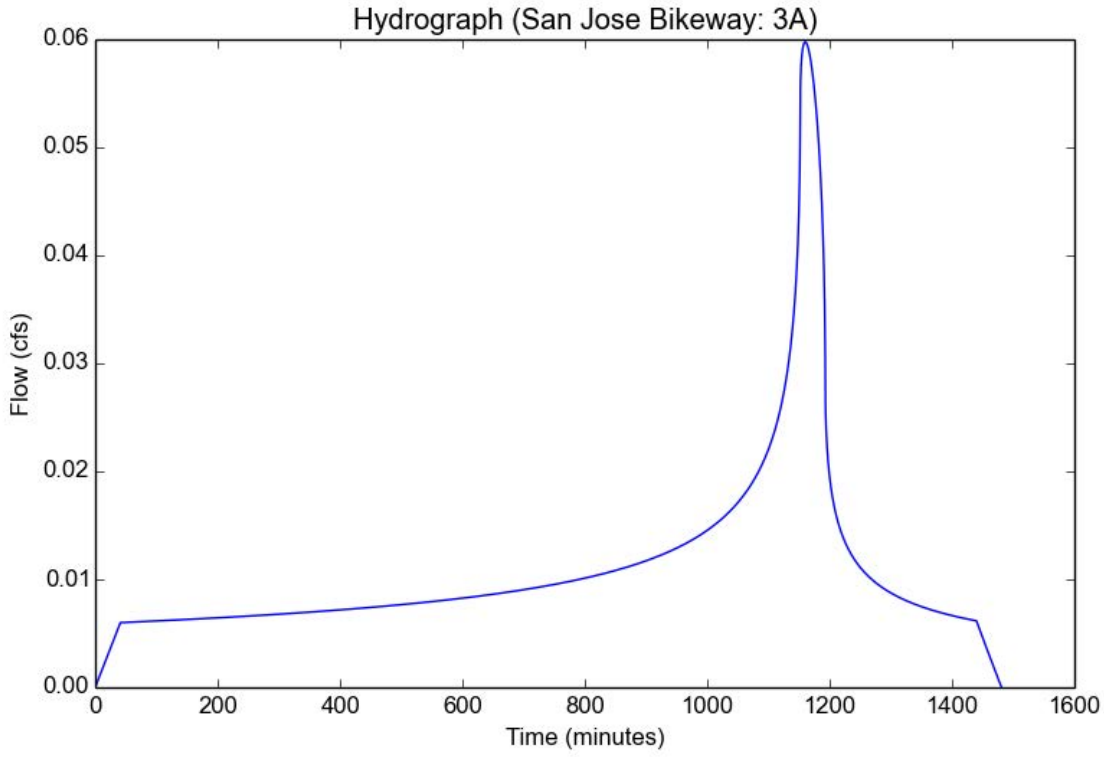
File location: C:/Users/LucasTang/OneDrive - revWater/Documents/ArcGIS/Projects/San Jose Bikeway/San Jose Bikeway Report.pdf
Version: HydroCalc 1.0.3

## Input Parameters

| | |
|---|---|
| Project Name | San Jose Bikeway |
| Subarea ID | 3A |
| Area (ac) | 0.589007029 |
| Flow Path Length (ft) | 550.0 |
| Flow Path Slope (vft/hft) | 0.0083 |
| 85th Percentile Rainfall Depth (in) | 1.0 |
| Percent Impervious | 0.44647937 |
| Soil Type | 3 |
| Design Storm Frequency | 85th percentile storm |
| Fire Factor | 0 |
| LID | True |

## Output Results

| | |
|---|---|
| Modeled (85th percentile storm) Rainfall Depth (in) | 1.0 |
| Peak Intensity (in/hr) | 0.2219 |
| Undeveloped Runoff Coefficient (Cu) | 0.1 |
| Developed Runoff Coefficient (Cd) | 0.4572 |
| Time of Concentration (min) | 41.0 |
| Clear Peak Flow Rate (cfs) | 0.0598 |
| Burned Peak Flow Rate (cfs) | 0.0598 |
| 24-Hr Clear Runoff Volume (ac-ft) | 0.0223 |
| 24-Hr Clear Runoff Volume (cu-ft) | 969.4444 |



# Peak Flow Hydrologic Analysis

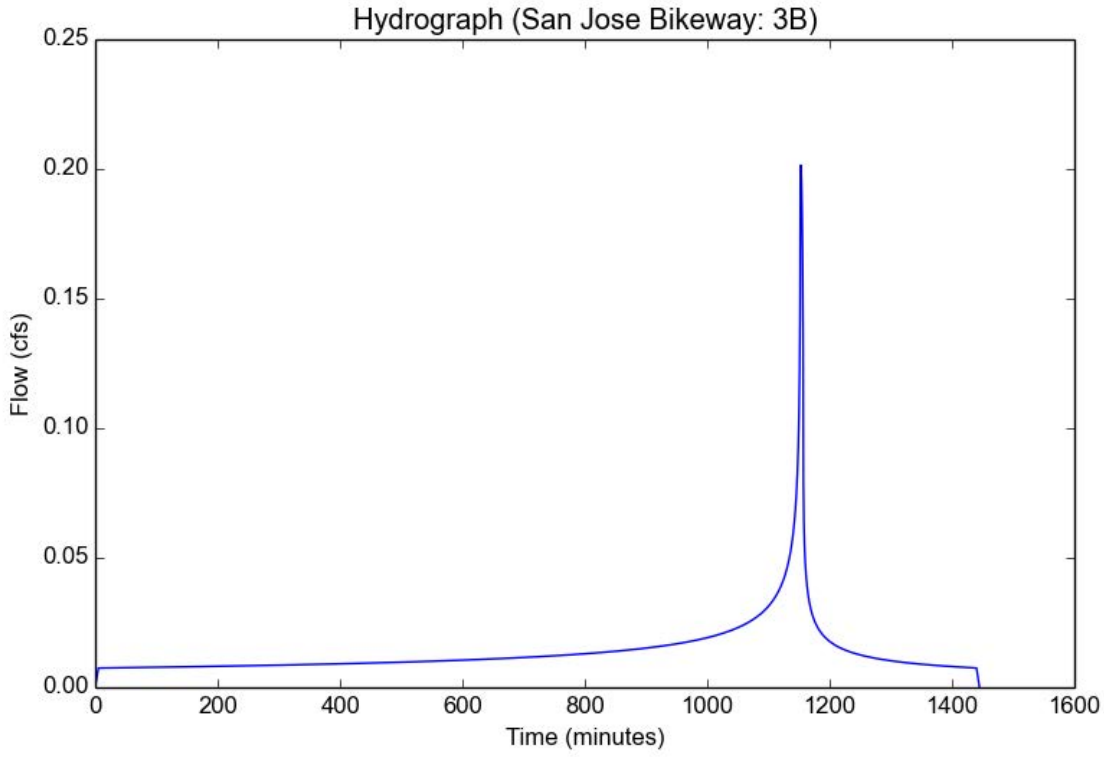
File location: C:/Users/LucasTang/OneDrive - revWater/Documents/ArcGIS/Projects/San Jose Bikeway/San Jose Bikeway Report.pdf
Version: HydroCalc 1.0.3

## Input Parameters

| | |
|---|---|
| Project Name | San Jose Bikeway |
| Subarea ID | 3B |
| Area (ac) | 0.643950651 |
| Flow Path Length (ft) | 45.0 |
| Flow Path Slope (vft/hft) | 0.08 |
| 85th Percentile Rainfall Depth (in) | 1.0 |
| Percent Impervious | 0.530280367 |
| Soil Type | 3 |
| Design Storm Frequency | 85th percentile storm |
| Fire Factor | 0 |
| LID | True |

## Output Results

| | |
|---|---|
| Modeled (85th percentile storm) Rainfall Depth (in) | 1.0 |
| Peak Intensity (in/hr) | 0.5966 |
| Undeveloped Runoff Coefficient (Cu) | 0.1 |
| Developed Runoff Coefficient (Cd) | 0.5242 |
| Time of Concentration (min) | 5.0 |
| Clear Peak Flow Rate (cfs) | 0.2014 |
| Burned Peak Flow Rate (cfs) | 0.2014 |
| 24-Hr Clear Runoff Volume (ac-ft) | 0.0279 |
| 24-Hr Clear Runoff Volume (cu-ft) | 1215.2689 |



# Peak Flow Hydrologic Analysis

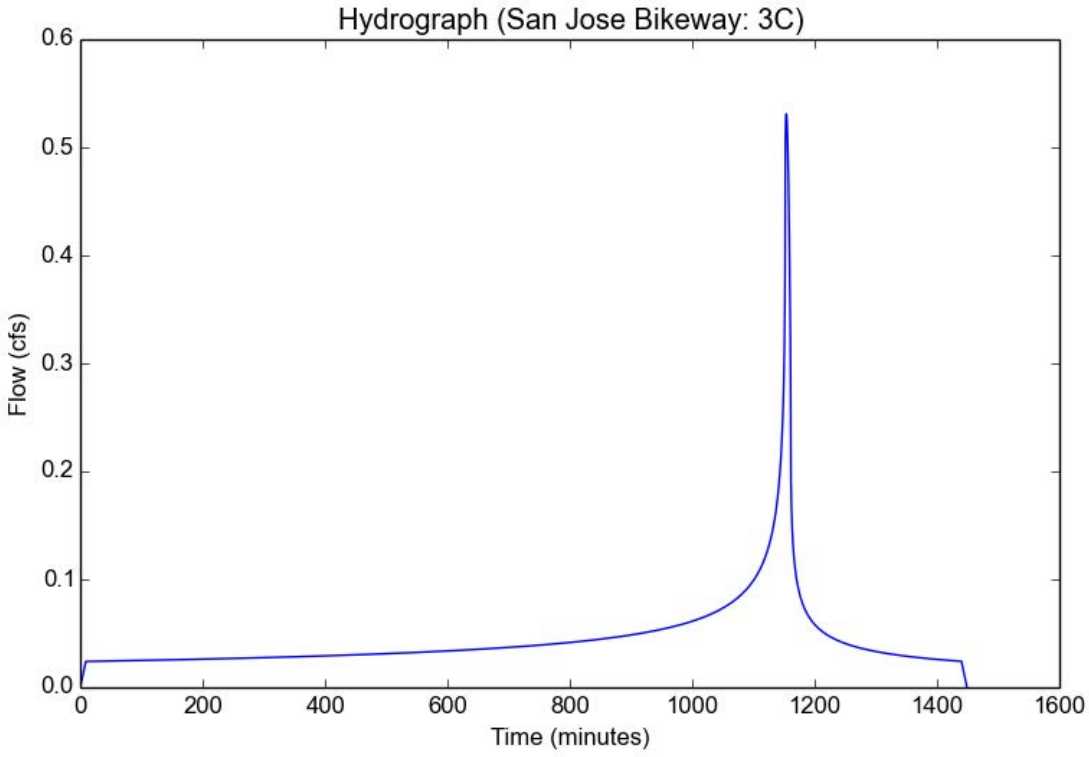
File location: C:/Users/LucasTang/OneDrive - revWater/Documents/ArcGIS/Projects/San Jose Bikeway/San Jose Bikeway Report.pdf
Version: HydroCalc 1.0.3

## Input Parameters

| | |
|---|---|
| Project Name | San Jose Bikeway |
| Subarea ID | 3C |
| Area (ac) | 1.757040835 |
| Flow Path Length (ft) | 131.0 |
| Flow Path Slope (vft/hft) | 0.058 |
| 85th Percentile Rainfall Depth (in) | 1.0 |
| Percent Impervious | 0.646922793 |
| Soil Type | 6 |
| Design Storm Frequency | 85th percentile storm |
| Fire Factor | 0 |
| LID | True |

## Output Results

| | |
|---|---|
| Modeled (85th percentile storm) Rainfall Depth (in) | 1.0 |
| Peak Intensity (in/hr) | 0.4526 |
| Undeveloped Runoff Coefficient (Cu) | 0.2419 |
| Developed Runoff Coefficient (Cd) | 0.6677 |
| Time of Concentration (min) | 9.0 |
| Clear Peak Flow Rate (cfs) | 0.531 |
| Burned Peak Flow Rate (cfs) | 0.531 |
| 24-Hr Clear Runoff Volume (ac-ft) | 0.0899 |
| 24-Hr Clear Runoff Volume (cu-ft) | 3917.9398 |



# Peak Flow Hydrologic Analysis

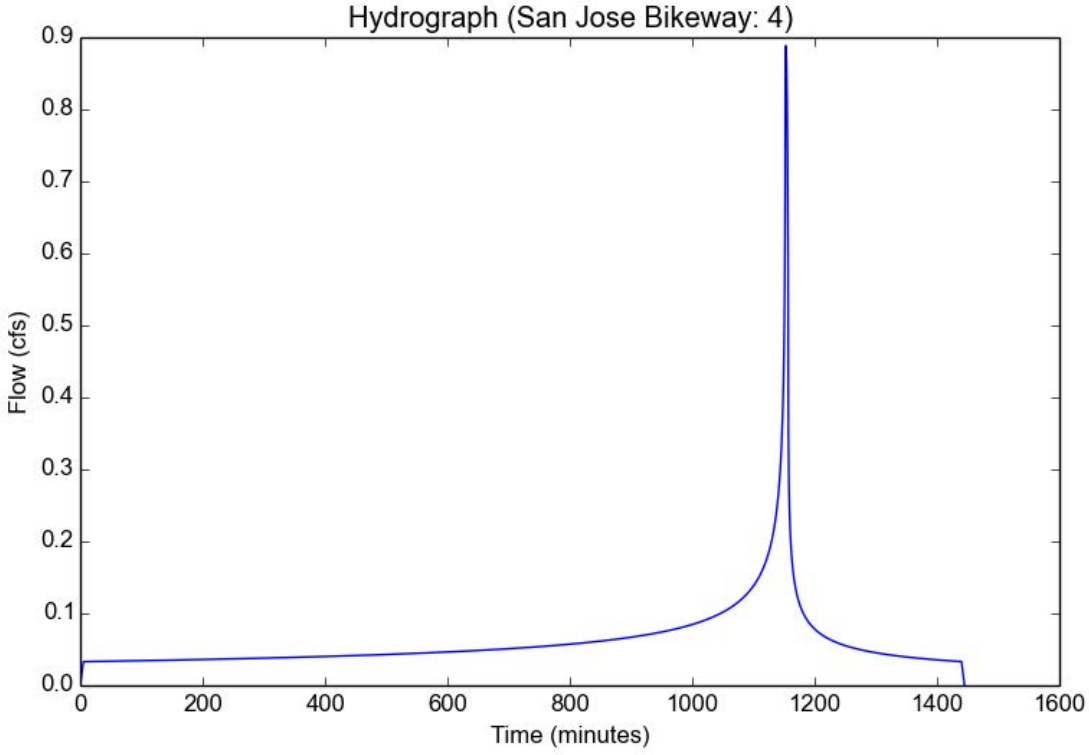
File location: C:/Users/LucasTang/OneDrive - revWater/Documents/ArcGIS/Projects/San Jose Bikeway/San Jose Bikeway Report.pdf
Version: HydroCalc 1.0.3

## Input Parameters

| | |
|---|---|
| Project Name | San Jose Bikeway |
| Subarea ID | 4 |
| Area (ac) | 3.542727391 |
| Flow Path Length (ft) | 20.0 |
| Flow Path Slope (vft/hft) | 0.01 |
| 85th Percentile Rainfall Depth (in) | 1.0 |
| Percent Impervious | 0.400392136 |
| Soil Type | 7 |
| Design Storm Frequency | 85th percentile storm |
| Fire Factor | 0 |
| LID | True |

## Output Results

| | |
|---|---|
| Modeled (85th percentile storm) Rainfall Depth (in) | 1.0 |
| Peak Intensity (in/hr) | 0.5966 |
| Undeveloped Runoff Coefficient (Cu) | 0.1 |
| Developed Runoff Coefficient (Cd) | 0.4203 |
| Time of Concentration (min) | 5.0 |
| Clear Peak Flow Rate (cfs) | 0.8884 |
| Burned Peak Flow Rate (cfs) | 0.8884 |
| 24-Hr Clear Runoff Volume (ac-ft) | 0.1231 |
| 24-Hr Clear Runoff Volume (cu-ft) | 5360.6065 |



# Peak Flow Hydrologic Analysis

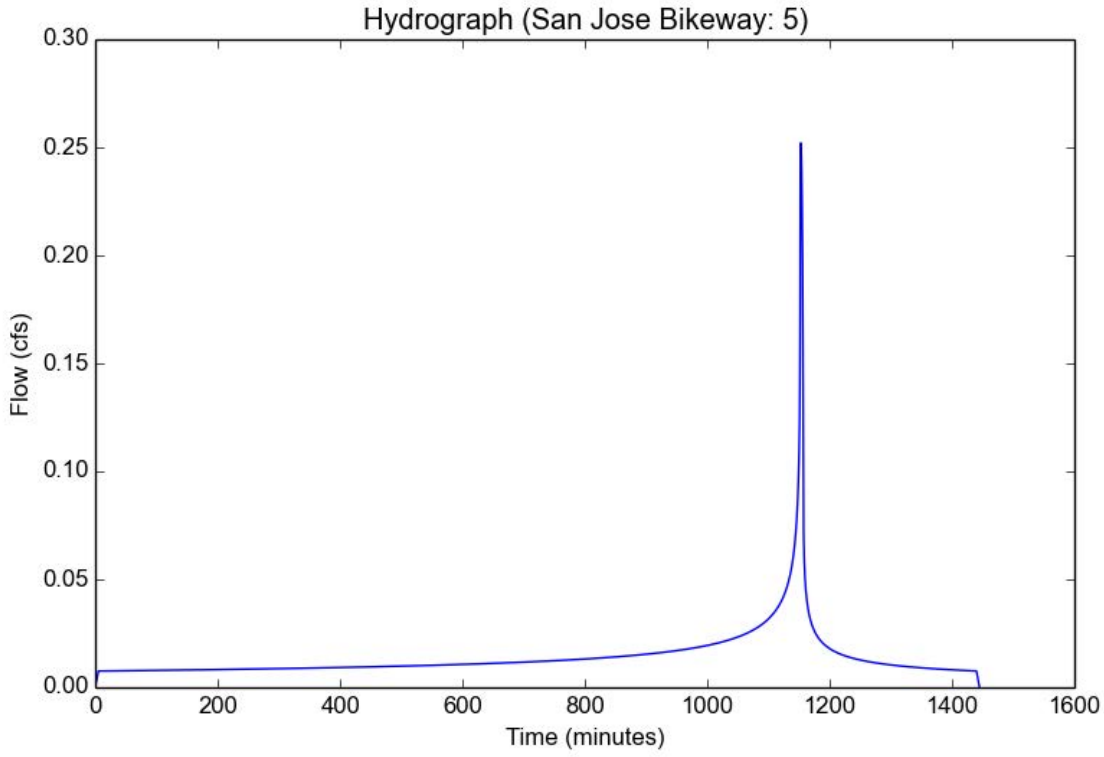
File location: C:/Users/LucasTang/OneDrive - revWater/Documents/ArcGIS/Projects/San Jose Bikeway/San Jose Bikeway Report.pdf
Version: HydroCalc 1.0.3

## Input Parameters

| | |
|---|---|
| Project Name | San Jose Bikeway |
| Subarea ID | 5 |
| Area (ac) | 0.625786795 |
| Flow Path Length (ft) | 20.0 |
| Flow Path Slope (vft/hft) | 0.005 |
| 85th Percentile Rainfall Depth (in) | 1.0 |
| Percent Impervious | 0.557733235 |
| Soil Type | 6 |
| Design Storm Frequency | 85th percentile storm |
| Fire Factor | 0 |
| LID | True |

## Output Results

| | |
|---|---|
| Modeled (85th percentile storm) Rainfall Depth (in) | 1.0 |
| Peak Intensity (in/hr) | 0.5966 |
| Undeveloped Runoff Coefficient (Cu) | 0.3916 |
| Developed Runoff Coefficient (Cd) | 0.6752 |
| Time of Concentration (min) | 5.0 |
| Clear Peak Flow Rate (cfs) | 0.2521 |
| Burned Peak Flow Rate (cfs) | 0.2521 |
| 24-Hr Clear Runoff Volume (ac-ft) | 0.0285 |
| 24-Hr Clear Runoff Volume (cu-ft) | 1241.7955 |



# Peak Flow Hydrologic Analysis

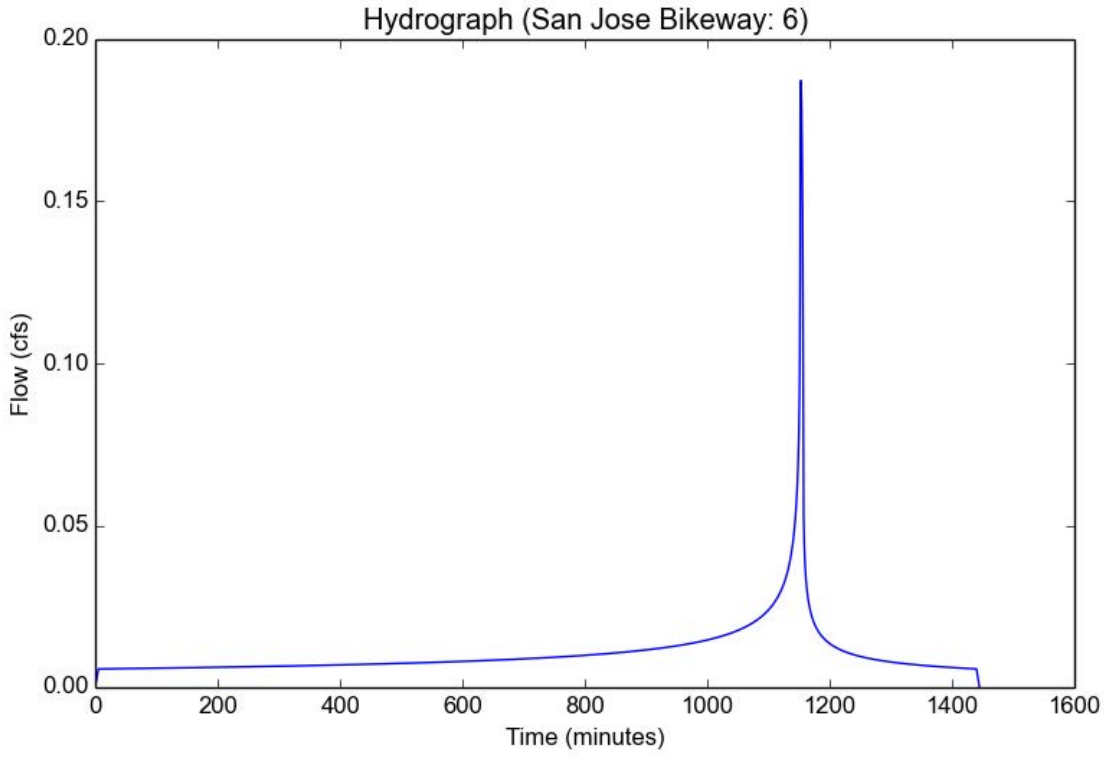
File location: C:/Users/LucasTang/OneDrive - revWater/Documents/ArcGIS/Projects/San Jose Bikeway/San Jose Bikeway Report.pdf
Version: HydroCalc 1.0.3

## Input Parameters

| | |
|---|---|
| Project Name | San Jose Bikeway |
| Subarea ID | 6 |
| Area (ac) | 0.457978523 |
| Flow Path Length (ft) | 20.0 |
| Flow Path Slope (vft/hft) | 0.04 |
| 85th Percentile Rainfall Depth (in) | 1.0 |
| Percent Impervious | 0.577760021 |
| Soil Type | 6 |
| Design Storm Frequency | 85th percentile storm |
| Fire Factor | 0 |
| LID | True |

## Output Results

| | |
|---|---|
| Modeled (85th percentile storm) Rainfall Depth (in) | 1.0 |
| Peak Intensity (in/hr) | 0.5966 |
| Undeveloped Runoff Coefficient (Cu) | 0.3916 |
| Developed Runoff Coefficient (Cd) | 0.6853 |
| Time of Concentration (min) | 5.0 |
| Clear Peak Flow Rate (cfs) | 0.1873 |
| Burned Peak Flow Rate (cfs) | 0.1873 |
| 24-Hr Clear Runoff Volume (ac-ft) | 0.0215 |
| 24-Hr Clear Runoff Volume (cu-ft) | 934.8405 |



# Peak Flow Hydrologic Analysis

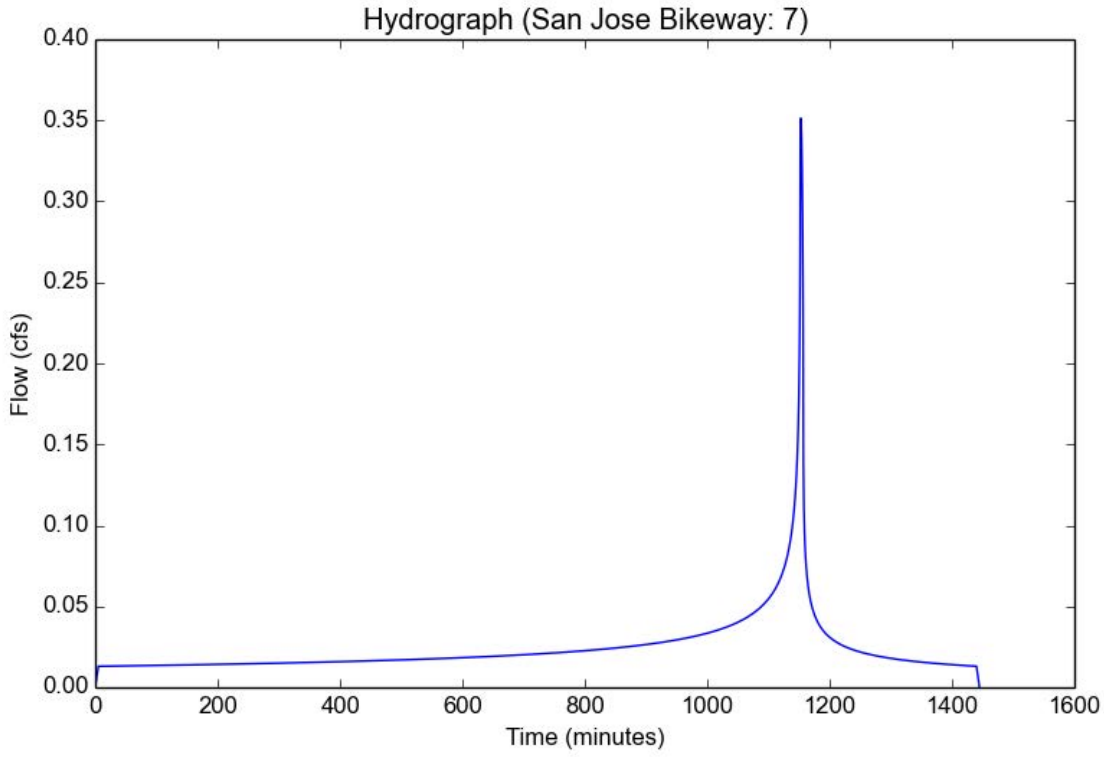
File location: C:/Users/LucasTang/OneDrive - revWater/Documents/ArcGIS/Projects/San Jose Bikeway/San Jose Bikeway Report.pdf
Version: HydroCalc 1.0.3

## Input Parameters

| | |
|---|---|
| Project Name | San Jose Bikeway |
| Subarea ID | 7 |
| Area (ac) | 0.952788945 |
| Flow Path Length (ft) | 9.0 |
| Flow Path Slope (vft/hft) | 0.01 |
| 85th Percentile Rainfall Depth (in) | 1.0 |
| Percent Impervious | 0.647630023 |
| Soil Type | 7 |
| Design Storm Frequency | 85th percentile storm |
| Fire Factor | 0 |
| LID | True |

## Output Results

| | |
|---|---|
| Modeled (85th percentile storm) Rainfall Depth (in) | 1.0 |
| Peak Intensity (in/hr) | 0.5966 |
| Undeveloped Runoff Coefficient (Cu) | 0.1 |
| Developed Runoff Coefficient (Cd) | 0.6181 |
| Time of Concentration (min) | 5.0 |
| Clear Peak Flow Rate (cfs) | 0.3514 |
| Burned Peak Flow Rate (cfs) | 0.3514 |
| 24-Hr Clear Runoff Volume (ac-ft) | 0.0487 |
| 24-Hr Clear Runoff Volume (cu-ft) | 2120.1223 |



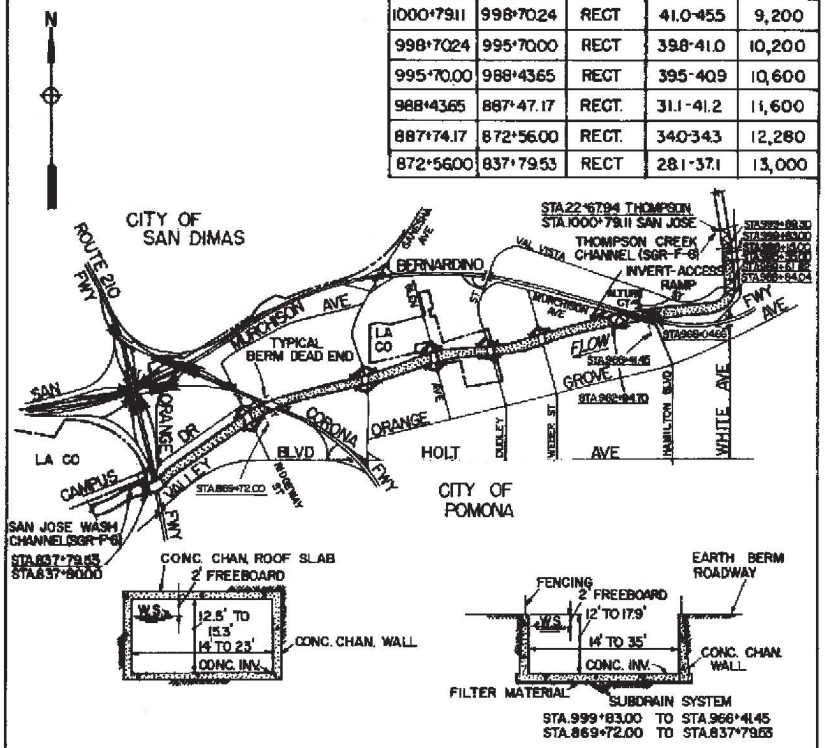
# APPENDIX B – LACFCD DESIGN STORM INFORMATION

CORPS OF ENGINEERS

SGR-F-7

DEPARTMENT OF THE ARMY

| DESIGN DATA | | | | |
|---|---|---|---|---|
| STA | TO STA | SECT | V | Q |
| 1000+79.11 | 998+70.24 | RECT | 41.0-45.5 | 9,200 |
| 998+70.24 | 995+70.00 | RECT | 39.8-41.0 | 10,200 |
| 995+70.00 | 988+43.65 | RECT | 39.5-40.9 | 10,600 |
| 988+43.65 | 887+47.17 | RECT. | 31.1-41.2 | 11,600 |
| 887+74.17 | 872+56.00 | RECT. | 34.0-34.3 | 12,280 |
| 872+56.00 | 837+79.53 | RECT | 28.1-37.1 | 13,000 |




TYPICAL COVERED SECTION
AS NOTED

TYPICAL OPEN SECTION
STA 1000+79.11 TO STA 837+79.53

LEGEND

- OPEN SECTION
- COVERED SECTION
- STREET BRIDGE
- TYPICAL BERM-ACCESS RAMP
- CONST. PROJECT LIMIT
- COUNTY OR CITY BOUNDARY

OPERATION AND MAINTENANCE MANUAL
LOS ANGELES COUNTY DRAINAGE AREA, CALIFORNIA

SAN JOSE WASH CHANNEL
THOMPSON CREEK TO NICHOLET ST

SCALE IN FEET
1000 0 1000 2000 3000 5000

OFFICE OF THE DISTRICT ENGINEER
LOS ANGELES, CALIFORNIA SGR-F-7

# Appendix F

Noise Modeling

# Surfacing Dirt Path - Average Noise Levels

**Project Name:** San Jose Creek Multi-Use Bikeway Project

**KEY:** Orange cells are for input.
Grey cells are intermediate calculations performed by the model.
Green cells are data to present in a written analysis (output).

| Location | Distance to Nearest Receptor in feet | Combined Predicted Noise Level (dBA $L_{eq}$) |
|---|---|---|
| Thresholds | | |
| Daytime Standard | 8 | 65.0 |
| Evening Standard | 8 | 65.0 |
| FTA daytime standard | 0 | 90.0 |
| Sensitive Receptors | | |
| NVSR 2 | 55 | 47.8 |
| NVSR 3 | 70 | 45.7 |
| NVSR 4 | 83 | 44.2 |
| NVSR 5 | 72 | 45.4 |
| NVSR 7 | 26 | 54.3 |
| NVSR 8 | 40 | 50.5 |
| NVSR 9 | 70 | 45.7 |
| NVSR 10 | 68 | 45.9 |
| NVSR 11 to NVSR 13 | 15 | 59.0 |
| NVSR 14 | 20 | 56.5 |

| Equipment[1] | Reference Emission Noise Levels (dBA $L_{max}$) at 50 feet[2] | Usage Factor[2] |
|---|---|---|
| Front End Loader | 52.6 | 0.4 |

| | |
|---|---|
| Ground Type | Hard |
| Source Height | 8 |
| Receiver Height | 5 |
| Ground Factor[3] | 0.00 |

| Predicted Noise Level [4] | dBA $L_{eq}$ at 50 feet[4] |
|---|---|
| Front End Loader | 48.6 |

| Combined Predicted Noise Level (dBA $L_{eq}$ at 50 feet) |
|---|
| 48.6 |

Sources:

[1] Where measured values are not available, noise levels based on the Construction Noise Control Specifiction 721.560 were used.

[2] Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

[3] Based on Figure 4-26 from the Federal Transit Noise and Vibration Impact Assessment, 2018 (pg 86).

[4] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2018 (pg 177).

$L_{eq}$(equip) = E.L.+10*log (U.F.) - 20*log (D/50) - 10*G*log (D/50)

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects (FTA 2018: pg 86); and

D = Distance from source to receiver.

Notes: NVSR = Noise and Vibration sensitve receptor

# Paving New Path - Average Noise Levels

**Project Name:** San Jose Creek Multi-Use Bikeway Project

**KEY:** Orange cells are for input.
Grey cells are intermediate calculations performed by the model.
Green cells are data to present in a written analysis (output).

| Location | Distance to Nearest Receptor in feet | Combined Predicted Noise Level (dBA $L_{eq}$) |
|---|---|---|
| Thresholds | | |
| Daytime Standard | 21 | 65.0 |
| Evening Standard | 21 | 65.0 |
| FTA daytime standard | 1 | 90.0 |
| Sensitive Receptors | | |
| NVSR 2 | 55 | 56.7 |
| NVSR 3 | 70 | 54.6 |
| NVSR 4 | 83 | 53.2 |
| NVSR 5 | 72 | 54.4 |
| NVSR 7 | 26 | 63.2 |
| NVSR 8 | 40 | 59.5 |
| NVSR 9 | 70 | 54.6 |
| NVSR 10 | 68 | 54.9 |
| NVSR 11 to NVSR 13 | 15 | 68.0 |
| NVSR 14 | 20 | 65.5 |

| Equipment[1] | Reference Emission Noise Levels (dBA $L_{max}$) at 50 feet[2] | Usage Factor[2] |
|---|---|---|
| Paver | 60.6 | 0.5 |

| | |
|---|---|
| Ground Type | Hard |
| Source Height | 8 |
| Receiver Height | 5 |
| Ground Factor[3] | 0.00 |

| Predicted Noise Level [4] | dBA $L_{eq}$ at 50 feet[4] |
|---|---|
| Paver | 57.6 |

**Combined Predicted Noise Level (dBA $L_{eq}$ at 50 feet)**

57.6

Sources:

[1] Where measured values are not available, noise levels based on the Construction Noise Control Specifiction 721.560 were used.

[2] Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

[3] Based on Figure 4-26 from the Federal Transit Noise and Vibration Impact Assessment, 2018 (pg 86).

[4] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2018 (pg 177).

$L_{eq}$(equip) = E.L.+10*log (U.F.) - 20*log (D/50) - 10*G*log (D/50)

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects (FTA 2018: pg 86); and

D = Distance from source to receiver.

Notes: NVSR = Noise and Vibration sensitve receptor

# Curb Cuts/Access Ramp Construction Maximum ($L_{max}$) Noise Levels

**Project Name:** San Jose Creek Multi-Use Bikeway Project

**KEY:** Orange cells are for input.
Grey cells are intermediate calculations performed by the model.
Green cells are data to present in a written analysis (output).

| Location | Distance to Nearest Receptor in feet | Combined Predicted Noise Level (dBA $L_{max}$) |
|---|---|---|
| Thresholds | | |
| Daytime Standard (900+ feet from I-10) | 89 | 85.0 |
| Daytime Standard (within 286 feet of I-10) | 50 | 90.0 |
| Sensitive Receptors | | |
| NVSR 1 | 170 | 79.4 |
| NVSR 5 | 85 | 85.4 |
| NVSR 8 | 40 | 91.9 |
| NVSR 9 | 80 | 85.9 |
| NVSR 11 + NVSR 12 | 15 | 100.5 |
| NVSR 14 | 25 | 96.0 |

| Equipment[1] | Reference Emission Noise Levels (dBA $L_{max}$) at 50 feet[2] |
|---|---|
| Concrete Saw | 90 |

| | |
|---|---|
| **Ground Type** | Hard |
| **Source Height** | 8 |
| **Receiver Height** | 5 |
| **Ground Factor[3]** | 0.00 |

| Predicted Noise Level [3] | dBA $L_{max}$ at 50 feet[3] |
|---|---|
| **Concrete Saw** | 90.0 |

| Combined Predicted Noise Level (dBA $L_{max}$ at 50 feet) |
|---|
| 90.0 |

Sources:

[1] Where measured values are not available, noise levels based on the Construction Noise Control Specifiction 721.560 were used.

[2] Based on Figure 4-26 from the Federal Transit Noise and Vibration Impact Assessment, 2018 (pg 86).

[3] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2018 (pg 177).

$L_{eq}(equip) = E.L.+10*\log(U.F.) - 20*\log(D/50) - 10*G*\log(D/50)$

Where: E.L. = Emission Level;

U.F.= Usage Factor, assumed to be 1 for the purposes of the calculation of maximum noise levels;

G = Constant that accounts for topography and ground effects (FTA 2018: pg 86); and

D = Distance from source to receiver.

Notes: NVSR = Noise and Vibration sensitve receptor

# Construction in SR 71 Underpass Area - Average Noise Levels

**Project Name:** San Jose Creek Multi-Use Bikeway Project

**KEY:** Orange cells are for input.

Grey cells are intermediate calculations performed by the model.

Green cells are data to present in a written analysis (output).

| Location | Distance to Nearest Receptor in feet | Combined Predicted Noise Level (dBA $L_{eq}$) |
|---|---|---|
| Thresholds | | |
| Daytime Standard | 110 | 65.0 |
| Evening Standard | 110 | 65.0 |
| FTA daytime standard | 12 | 90.0 |
| Sensitive Receptors | | |
| NVSR 6 | 119 | 64.1 |

| Equipment[1] | Reference Emission Noise Levels (dBA $L_{max}$) at 50 feet[2] | Usage Factor[2] |
|---|---|---|
| Backhoe | 78 | 0.4 |

| | |
|---|---|
| Ground Type | Soft |
| Source Height | 8 |
| Receiver Height | 5 |
| Ground Factor[3] | 0.63 |

| Predicted Noise Level [4] | dBA $L_{eq}$ at 50 feet[4] |
|---|---|
| Backhoe | 74.0 |

| Combined Predicted Noise Level (dBA $L_{eq}$ at 50 feet) |
|---|
| 74.0 |

Sources:

[1] Where measured values are not available, noise levels based on the Construction Noise Control Specifiction 721.560 were used.

[2] Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

[3] Based on Figure 4-26 from the Federal Transit Noise and Vibration Impact Assessment, 2018 (pg 86).

[4] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2018 (pg 177).

$L_{eq}(equip) = E.L.+10*\log(U.F.) - 20*\log(D/50) - 10*G*\log(D/50)$

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects (FTA 2018: pg 86); and

D = Distance from source to receiver.

Notes: NVSR = Noise and Vibration sensitve receptor

## Attenuation Calculations for Stationary Noise Sources

**KEY:** Orange cells are for input.
Grey cells are intermediate calculations performed by the model.
Green cells are data to present in a written analysis (output).

**Project Name:** Etiwanda Commerce Center

**STEP 1: Identify the noise source and enter the reference noise level (dBA and distance).** **STEP 2: Select the ground type (hard or soft), and enter the source and receiver heights.** **STEP 3: Select the distance to the receiver.**

| Noise Source/ID | Reference Noise Level | | | Attenuation Characteristics | | | | Attenuated Noise Level at Receptor | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | noise level (dBA) | @ | distance (ft) | Ground Type (soft/hard) | Source Height (ft) | Receiver Height (ft) | Ground Factor | noise level (dBA) | @ | distance (ft) |
| S76 Skid-Steer Loader | 77.0 | @ | 3 | hard | 3 | 5 | 0.00 | 52.6 | @ | 50 |
| Compact Paver | 85.0 | @ | 3 | hard | 3 | 5 | 0.00 | 60.6 | @ | 50 |
| Curb Cuts/Access Ramp Construction with Mitigation - 85 dBA Threshold | 80.0 | @ | 50 | hard | 3 | 5 | 0.00 | 85.0 | @ | 28 |
| Curb Cuts/Access Ramp Construction with Mitigation - 90 dBA Threshold | 80.0 | @ | 50 | hard | 3 | 5 | 0.00 | 89.9 | @ | 16 |
| Curb Cuts/Access Ramp Construction with Mitigation - 95 dBA Threshold | 80.0 | @ | 50 | hard | 3 | 5 | 0.00 | 94.9 | @ | 9 |

Notes:

Estimates of attenuated noise levels do not account for reductions from intervening barriers, including walls, trees, vegetation, or structures of any type.

Computation of the attenuated noise level is based on the equation presented on pg. 176 and 177 of FTA 2018.

Computation of the ground factor is based on the equation presentd in Table 4-26 on pg. 86 of FTA 2018, where the distance of the reference noise leve can be adjusted and the usage factor is not applied (i.e., the usage factor is equal to 1).

Sources:

Federal Transit Association (FTA). 2018 (September). Transit Noise and Vibration Impact Assessment. Washington, D.C. Available: <http://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf>Accessed: March 5, 2020.

| Equipment Description | Acoustical Usage Factor (%) | Spec 721.560 Lmax @ 50ft (dBA slow) | Actual Measured Lmax @ 50ft (dBA slow) | No. of Actual Data Samples (count) | Spec 721.560 LmaxCalc | Spec 721.560 Leq | Distance | Actual Measured LmaxCalc | Actual Measured Leq |
|---|---|---|---|---|---|---|---|---|---|
| Auger Drill Rig | 20 | 85 | 84 | 36 | 79.0 | 72.0 | 100 | 78.0 | 71.0 |
| Backhoe | 40 | 80 | 78 | 372 | 74.0 | 70.0 | 100 | 72.0 | 68.0 |
| Bar Bender | 20 | 80 | 80 | 0 | 74.0 | 67.0 | 100 | | |
| Blasting | 100 | 94 | 94 | 0 | 88.0 | | 100 | | |
| Boring Jack Power Unit | 50 | 80 | 83 | 1 | 74.0 | 71.0 | 100 | 77.0 | 74.0 |
| Chain Saw | 20 | 85 | 84 | 46 | 79.0 | 72.0 | 100 | 78.0 | 71.0 |
| Clam Shovel (dropping) | 20 | 93 | 87 | 4 | 87.0 | 80.0 | 100 | 81.0 | 74.0 |
| Compactor (ground) | 20 | 80 | 83 | 57 | 74.0 | 67.0 | 100 | 77.0 | 70.0 |
| Compressor (air) | 40 | 80 | 78 | 18 | 74.0 | 70.0 | 100 | 72.0 | 68.0 |
| Concrete Batch Plant | 15 | 83 | 83 | 0 | 77.0 | 68.7 | 100 | | |
| Concrete Mixer Truck | 40 | 85 | 79 | 40 | 79.0 | 75.0 | 100 | 73.0 | 69.0 |
| Concrete Pump Truck | 20 | 82 | 81 | 30 | 76.0 | 69.0 | 100 | 75.0 | 68.0 |
| Concrete Saw | 20 | 90 | 90 | 55 | 84.0 | 77.0 | 100 | 84.0 | 77.0 |
| Crane | 16 | 85 | 81 | 405 | 79.0 | 71.0 | 100 | 75.0 | 67.0 |
| Dozer | 40 | 85 | 82 | 55 | 79.0 | 75.0 | 100 | 76.0 | 72.0 |
| Drill Rig Truck | 20 | 84 | 79 | 22 | 78.0 | 71.0 | 100 | 73.0 | 66.0 |
| Drum Mixer | 50 | 80 | 80 | 1 | 74.0 | 71.0 | 100 | 74.0 | 71.0 |
| Dump Truck | 40 | 84 | 76 | 31 | 78.0 | 74.0 | 100 | 70.0 | 66.0 |
| Excavator | 40 | 85 | 81 | 170 | 79.0 | 75.0 | 100 | 75.0 | 71.0 |
| Flat Bed Truck | 40 | 84 | 74 | 4 | 78.0 | 74.0 | 100 | 68.0 | 64.0 |
| Front End Loader | 40 | 80 | 79 | 96 | 74.0 | 70.0 | 100 | 73.0 | 69.0 |
| Generator | 50 | 82 | 81 | 19 | 76.0 | 73.0 | 100 | 75.0 | 72.0 |
| Generator (<25KVA, VMS signs) | 50 | 70 | 73 | 74 | 64.0 | 61.0 | 100 | 67.0 | 64.0 |
| Gradall | 40 | 85 | 83 | 70 | 79.0 | 75.0 | 100 | 77.0 | 73.0 |
| Grader | 40 | 85 | 85 | 0 | 79.0 | 75.0 | 100 | | |
| Grapple (on Backhoe) | 40 | 85 | 87 | 1 | 79.0 | 75.0 | 100 | 81.0 | 77.0 |
| Horizontal Boring Hydr. Jack | 25 | 80 | 82 | 6 | 74.0 | 68.0 | 100 | 76.0 | 70.0 |
| Hydra Break Ram | 10 | 90 | 90 | 0 | 84.0 | 74.0 | 100 | | |
| Impact Pile Driver | 20 | 95 | 101 | 11 | 89.0 | 82.0 | 100 | 95.0 | 88.0 |
| Jackhammer | 20 | 85 | 89 | 133 | 79.0 | 72.0 | 100 | 83.0 | 76.0 |
| Man Lift | 20 | 85 | 75 | 23 | 79.0 | 72.0 | 100 | 69.0 | 62.0 |
| Mounted Impact Hammer (hoe ram) | 20 | 90 | 90 | 212 | 84.0 | 77.0 | 100 | 84.0 | 77.0 |
| Pavement Scarafier | 20 | 85 | 90 | 2 | 79.0 | 72.0 | 100 | 84.0 | 77.0 |
| Paver | 50 | 85 | 77 | 9 | 79.0 | 76.0 | 100 | 71.0 | 68.0 |
| Pickup Truck | 40 | 55 | 75 | 1 | 49.0 | 45.0 | 100 | 69.0 | 65.0 |

| Equipment Description | Acoustical Usage Factor (%) | Spec 721.560 Lmax @ 50ft (dBA slow) | Actual Measured Lmax @ 50ft (dBA slow) | No. of Actual Data Samples (count) | Spec 721.560 LmaxCalc | Spec 721.560 Leq | Distance | Actual Measured LmaxCalc | Actual Measured Leq |
|---|---|---|---|---|---|---|---|---|---|
| Pneumatic Tools | 50 | 85 | 85 | 90 | 79.0 | 76.0 | 100 | 79.0 | 76.0 |
| Pumps | 50 | 77 | 81 | 17 | 71.0 | 68.0 | 100 | 75.0 | 72.0 |
| Refrigerator Unit | 100 | 82 | 73 | 3 | 76.0 | 76.0 | 100 | 67.0 | 67.0 |
| Rivit Buster/chipping gun | 20 | 85 | 79 | 19 | 79.0 | 72.0 | 100 | 73.0 | 66.0 |
| Rock Drill | 20 | 85 | 81 | 3 | 79.0 | 72.0 | 100 | 75.0 | 68.0 |
| Roller | 20 | 85 | 80 | 16 | 79.0 | 72.0 | 100 | 74.0 | 67.0 |
| Sand Blasting (Single Nozzle) | 20 | 85 | 96 | 9 | 79.0 | 72.0 | 100 | 90.0 | 83.0 |
| Scraper | 40 | 85 | 84 | 12 | 79.0 | 75.0 | 100 | 78.0 | 74.0 |
| Shears (on backhoe) | 40 | 85 | 96 | 5 | 79.0 | 75.0 | 100 | 90.0 | 86.0 |
| Slurry Plant | 100 | 78 | 78 | 1 | 72.0 | 72.0 | 100 | 72.0 | 72.0 |
| Slurry Trenching Machine | 50 | 82 | 80 | 75 | 76.0 | 73.0 | 100 | 74.0 | 71.0 |
| Soil Mix Drill Rig | 50 | 80 | 80 | 0 | 74.0 | 71.0 | 100 | | |
| Tractor | 40 | 84 | 84 | 0 | 78.0 | 74.0 | 100 | | |
| Vacuum Excavator (Vac-truck) | 40 | 85 | 85 | 149 | 79.0 | 75.0 | 100 | 79.0 | 75.0 |
| Vacuum Street Sweeper | 10 | 80 | 82 | 19 | 74.0 | 64.0 | 100 | 76.0 | 66.0 |
| Ventilation Fan | 100 | 85 | 79 | 13 | 79.0 | 79.0 | 100 | 73.0 | 73.0 |
| Vibrating Hopper | 50 | 85 | 87 | 1 | 79.0 | 76.0 | 100 | 81.0 | 78.0 |
| Vibratory Concrete Mixer | 20 | 80 | 80 | 1 | 74.0 | 67.0 | 100 | 74.0 | 67.0 |
| Vibratory Pile Driver | 20 | 95 | 101 | 44 | 89.0 | 82.0 | 100 | 95.0 | 88.0 |
| Warning Horn | 5 | 85 | 83 | 12 | 79.0 | 66.0 | 100 | 77.0 | 64.0 |
| Welder / Torch | 40 | 73 | 74 | 5 | 67.0 | 63.0 | 100 | 68.0 | 64.0 |

## Traffic Noise Spreadsheet Calculator

**Project:** Pomona Bikeway

| Number | Name | Segment Description and Location From | To | Existing Conditions | Existing + Project Conditions | Δ Existing – Existing + Project |
|---|---|---|---|---|---|---|
| **Summary of Net Changes** | | | | | | |
| 1 | I-10 | N White Ave | N Dudley St | 82.4 | 84.5 | 2.1 |

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise leve

## Traffic Noise Spreadsheet Calculator

**Project:** Pomona Bikeway Project Existing Noise Levels

**Noise Level Descriptor:** CNEL
**Site Conditions:** Hard
**Traffic Input:** ADT
**Traffic K-Factor:**

| | Segment Description and Location | | | Input | | | | | | | | | | Output | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Distance to Directional Centerline, (feet)[4] | | Traffic Distribution Characteristics | | | | | | CNEL, (dBA)[5,6,7] | Distance to Contour, (feet)[3] | | | |
| Number | Name | From | To | ADT | Speed (mph) | Near | Far | % Auto | % Medium | % Heavy | % Day | % Eve | % Night | | 75 dBA | 70 dBA | 65 dBA | 60 dBA |
| **Existing Conditions** | | | | | | | | | | | | | | | | | | |
| 1 | I-10 | N White Ave | N Dudley St | 255,000 | 70 | 138 | 195 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 82.4 | 904 | 2859 | 9042 | 28594 |
| 1 | I-10 with Sound Wall | N White Ave | N Dudley St | 255,000 | 70 | 138 | 195 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 72.4 | 90 | 286 | 904 | 2859 |
| 2 | SR 71 | Pomona Valley Boulevard | I-10 interchange | 138,000 | 40 | 91 | 184 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 73.8 | 97 | 308 | 973 | 3076 |

r

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

| _id | X | Y | OBJECTID | DISTRICT | ROUTE | ROUTE_SFX | COUNTY | PM_PFX | PM | PM_SFX | ION_DESCR | BACK_PEAK_HOUR | BACK_PEAK_MADT | BACK_AADT | AHEAD_PEAK_HOUR | AHEAD_PEAK_MADT | AHEAD_AADT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2341 | -117.778 | 34.07282 | 2341 | 7 | 10 | | LA | | 44.185 | POMONA, DUDLEY | | 16000 | 266000 | 254000 | 16100 | 267000 | 255000 |
| 2342 | -117.778 | 34.07296 | 2342 | 7 | 10 | | LA | | 44.185 | POMONA, DUDLEY | | 16000 | 266000 | 254000 | 16100 | 267000 | 255000 |
| 2343 | -117.76 | 34.07112 | 2343 | 7 | 10 | | LA | | 45.277 | POMONA, WHITE A | | 16100 | 267000 | 255000 | 15600 | 258000 | 247000 |
| 2344 | -117.76 | 34.07124 | 2344 | 7 | 10 | | LA | | 45.277 | POMONA, WHITE A | | 16100 | 267000 | 255000 | 15600 | 258000 | 247000 |

Notes: AADTT = Annual Average Daily Truck Traffic
Source: DOT 2025

| Citation # | Citations | |
|---|---|---|
| 1 | Caltrans Technical Noise Supplement. 2009 (November). Table (5-11), Pg 5-60. | Caltrans Technical Noise Supplement. 2013 (September). Table (4-2), Pg 4-17. |
| 2 | Caltrans Technical Noise Supplement. 2009 (November). Equation (5-26), Pg 5-60. | Caltrans Technical Noise Supplement. 2013 (September). Equation (4-5), Pg 4-17. |
| 3 | Caltrans Technical Noise Supplement. 2009 (November). Equation (2-16), Pg 2-32. | FHWA 2004 TNM Version 2.5 |
| 4 | Caltrans Technical Noise Supplement. 2009 (November). Equation (5-11), Pg 5-47, 48. | FHWA 2004 TNM Version 2.5 |
| 5 | Caltrans Technical Noise Supplement. 2009 (November). Equation (2-26), Pg 2-55, 56. | Caltrans Technical Noise Supplement. 2013 (September). Equation (2-23), Pg 2-51, 52. |
| 6 | Caltrans Technical Noise Supplement. 2009 (November). Equation (2-27), Pg 2-57. | Caltrans Technical Noise Supplement. 2013 (September). Equation (2-24), Pg 2-53. |
| 7 | Caltrans Technical Noise Supplement. 2009 (November). Pg 2-53. | Caltrans Technical Noise Supplement. 2013 (September). Pg 2-57. |
| 8 | Caltrans Technical Noise Supplement. 2009 (November). Equation (5-7), Pg 5-45. | FHWA 2004 TNM Version 2.5 |
| 9 | Caltrans Technical Noise Supplement. 2009 (November). Equation (5-8), Pg 5-45. | FHWA 2004 TNM Version 2.5 |
| 10 | Caltrans Technical Noise Supplement. 2009 (November). Equation (5-9), Pg 5-45. | FHWA 2004 TNM Version 2.5 |
| 11 | Caltrans Technical Noise Supplement. 2009 (November). Equation (5-13), Pg 5-49. | FHWA 2004 TNM Version 2.5 |
| 12 | Caltrans Technical Noise Supplement. 2009 (November). Equation (5-14), Pg 5-49. | FHWA 2004 TNM Version 2.5 |
| 13 | Federal Highway Administration Traffic Noise Model Technical Manual. Report No. FHWA-PD-96-010. 1998 (January). Equation (16), Pg 67 | |
| 14 | Federal Highway Administration Traffic Noise Model Technical Manual. Report No. FHWA-PD-96-010. 1998 (January). Equation (20), Pg 69 | |
| 15 | Federal Highway Administration Traffic Noise Model Technical Manual. Report No. FHWA-PD-96-010. 1998 (January). Equation (18), Pg 69 | |

References

California Department of Transportation (Caltrans). 2009 (November). Technical Noise Supplement. Available: http://www.dot.ca.gov/hq/env/noise/pub/tens_complete.pdf. Accessed August 17, 2017.

California Department of Transportation (Caltrans). 2013 (September). Technical Noise Supplement. Available: http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013A.pdf. Accessed August 17, 2017.

Federal Highway Administration. 2004. Traffic Noise Model Version 2.5. Available: https://www.fhwa.dot.gov/environment/noise/traffic_noise_model/tnm_v25/. Accessed August 17, 2017.

# Distance Propagation Calculations for Stationary Sources of Ground Vibration

**KEY:** Orange cells are for input.

Grey cells are intermediate calculations performed by the model.

Green cells are data to present in a written analysis (output).

## STEP 1: Determine units in which to perform calculation.

— If vibration decibels (VdB), then use Table A and proceed to Steps 2A and 3A.

— If peak particle velocity (PPV), then use Table B and proceed to Steps 2B and 3B.

## STEP 2A: Identify the vibration source and enter the reference vibration level (VdB) and distance.

## STEP 3A: Select the distance to the receiver.

**Table A. Propagation of vibration decibels (VdB) with distance**

| Noise Source/ID | Reference Noise Level | | | Attenuated Noise Level at Receptor | | |
|---|---|---|---|---|---|---|
| | vibration level (VdB) | @ | distance (ft) | vibration level (VdB) | @ | distance (ft) |
| | | | | | | |

The Lv metric (VdB) is used to assess the likelihood for vibration to result in human annoyance.

## STEP 2B: Identify the vibration source and enter the reference peak particle velocity (PPV) and distance.

## STEP 3B: Select the distance to the receiver.

**Table B. Propagation of peak particle velocity (PPV) with distance**

| Noise Source/ID | Reference Noise Level | | | Attenuated Noise Level at Receptor | | |
|---|---|---|---|---|---|---|
| | vibration level | @ | distance (ft) | vibration level | @ | distance (ft) |
| Vibratory Roller | 0.053 | @ | 25 | 0.050 | @ | 26 |
| Vibratory Roller | 0.210 | @ | 25 | 0.293 | @ | 20 |

The PPV metric (in/sec) is used for assessing the likelihood for the potential of structural damage and RMS for perception

**Conversion From PPV (in/sec) to VdB/Lv**

Instructions: this sheet can be used to convert peak particle velocity (in/sec) values, typically used for construction vibration asessments to root-mean-square (RMS) velocity and VdB. The user inputs the reference or modeled PPV value to convert to vibration levels in vibration decibels (VdB)

**Key:** User Input

Model Output

| Equipment Modeled | PPV (in/sec) | VdB | RMS* |
|---|---|---|---|
| Vibratory Roller | 0.21 | 94 | 0.0525 |

**Equation 5-1:**

Vibration velocity level in decibels is defined as:

| | | |
|---|---|---|
| **Lv (VdB)** | **=** | **20*log (V/Vref)** |
| Lv | = | velocity level, VdB |
| V | = | rms velocity amplitude |
| Vref | = | 1X10^-6 in/sec |

Notes

*calculation applies crest factor of 4, per FTA 2018 pg 184

Source:

Federal Transit Administration (FTA). 2018 (September). Transit Noise and Vibration Impact Assessment Manual. Equation 5-1

Notes:
Computation of propagated vibration levels is based on the equations presented on pg.

Federal Transit Association (FTA). 2018 (September). Transit Noise and Vibration Impact Assessment Manual. FTA Report No. 0123. Washington, D.C. Accessed: December 20, 2020. Page Available:

https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf

# Appendix G

Transportation Memorandum

FEHR PEERS

# Memorandum

Date: December 22, 2023

To: Alta Planning + Design
City of Pomona

From: Baldwin Ngai and Miguel Núñez, Fehr & Peers

**Subject: Environmental Review for San Jose Multi-Use Bikeway Project**

*LA22-3404*

Fehr and Peers completed the environmental transportation review of the San Jose Multi-Use Bikeway Project (Project) in support of its construction. This memorandum presents the findings of the review in accordance with applicable policies, guidance, and procedures.

## Project Description

The Project consists of approximately 3.5 miles of off-road bike and pedestrian greenway along the San Jose Creek channel in the City of Pomona. Beginning at Temple Avenue, undercrossing State Route 57 (SR-57) and State Route 71 (SR-71) and ending south of Interstate 10 (I-10) at Murchison Avenue. In addition to the multi-use pathway, the Project will include access to the multi-use trail at 15 locations (with 9 at-grade street crossings), wayfinding and safety signage, features to reduce and capture stormwater runoff, and stormwater collection and drainage systems.

## Criteria for Determination of Transportation Impacts

Projects with the potential to result in direct or foreseeable indirect physical change in the environment are subject to the California Environmental Quality Act (CEQA), including activity directly undertaken by a public agency such as public works construction or improvements to existing public structures[1]. To provide a framework for application of the CEQA requirements, the Office of Planning and Research developed the *Guidelines for Implementation of the California Environmental Quality Act (State CEQA Guidelines or CEQA Guidelines)*. In addition to the City's Guidelines, the evaluation of a Project's potential transportation impacts should consider criteria

[1] California Public Resource Code section 21065

described per the State CEQA Guidelines, where a checklist of environmental issues as provided in Appendix G XVII is to be considered in determination of a project's potential environmental effects. Related to transportation, the checklist questions whether the project would,

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

The Project would be considered to result in significant transportation impacts if demonstrated to be inconsistent with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities; conflict or be inconsistent with CEQA Guidelines section 15064.3 (b); decrease the performance or safety of such facilities; or result in inadequate emergency access as evaluated by questions A through D within the State CEQA Guidelines Appendix G XVII.

## Consistency with Adopted Policies, Plans, or Programs

The City of Pomona has adopted the Transportation Study Guidelines for Vehicle Miles Traveled and Level of Service Assessment in October 2020 to outline methodologies for evaluation of a project's environmental transportation impacts and effects on the local transportation system. Per the City's Guidelines, and consistent with question A within Appendix G XVII of the CEQA Guidelines, active transportation and public transit projects would be considered to *result in a significant impact if the project conflicts with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.*

The Pomona Active Transportation Plan (ATP) was adopted in November 2012 to support the continued improvements of the City's bicycling and walking environment. The ATP is consistent with sustainability efforts recognized in the General Plan to reduce traffic, air pollution, energy consumption, and provide greater transportation options that enhance quality of life. The Plan identifies a list of projects to be prioritized in its implementation including the 3.5-mile length of San Jose Creek Bicycle Path from east of Temple Avenue to Casa Vista Drive with 15 access points to the grade-separated path connecting to other bikeways as well as key destinations within the City of Pomona. The improvements detailed in Exhibit 7-2 of the ATP includes the creation of a bicycle path separated from traffic along the San Jose Creek, intersection safety improvements for street crossings (9) and access points (15), as well as signage and striping improvements for wayfinding and safety purposes.

Adopted in 2014, the Mobility and Access chapter (Circulation Element) of the Pomona General Plan addresses circulation of pedestrians, bicycles, and motor vehicles, as well as the implications of public safety, environmental, and social equality issues related to transportation. Within the discussion of the City's bicycle circulation, expansion to the bikeway network is conceptualized to include construction of bike paths, bike lanes, and bike routes at various locations throughout the City. These bikeway facilities aim to provide a safe and effective method to connect activity centers and promote active transportation. To provide a framework for implementation, the General Plan outlines goals and policies related to regional and local transportation. Specifically for bicycle circulation, the Project would align with goals established to "develop a comprehensive bicycle network that connects local and regional commuter and recreation routes" and "Implement the Active Transportation Plan including installation of marked, on-street bike lanes along potential bike routes".

*The Project is consistent with the planned improvements identified by the adopted ATP and meets many of the goals and policies set forth in the City's General Plan. Therefore it would not conflict with an applicable program, plan, ordinance, or policy addressing the circulation system.*

## CEQA Guidelines Section 15064.3(b)

Since July 1, 2020, automobile delay, as measured by Level of Service (LOS), is no longer allowable in determining a project's effects on transportation under CEQA, and, instead, Vehicle Miles Traveled (VMT) was adopted as the metric to evaluate transportation impacts. Section 15064.3(b) of the State CEQA Guidelines outlines the criteria for analyzing transportation impacts of projects, which specifies that "*Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.*"

Consistent with guidance provided by the Governor's Office of Planning and Research in its *Technical Advisory on Evaluating Transportation Impacts in CEQA,* certain "projects that would not likely lead to a substantial or measurable increase in vehicle travel, and therefore generally should not require an induced travel analysis". Projects are generally considered likely to lead to an increase in vehicle travel if they include "addition of through lanes on existing or new highways, including general purpose lanes, HOV lanes, peak period lanes, auxiliary lanes, or lanes through grade-separated interchanges". Furthermore, OPR guidance lists project types which *do not* increase vehicle capacity and are not likely to lead to substantial increase in vehicle travel such as the following,

- Rehabilitation, maintenance, replacement, safety, and repair projects designed to improve the condition of existing transportation assets (e.g., highways; roadways; bridges; culverts; Transportation Management System field elements such as cameras, message signs, detection, or signals; tunnels; transit systems; and assets that serve bicycle and pedestrian facilities) and that do not add additional motor vehicle capacity
- Roadway shoulder enhancements to provide "breakdown space," dedicated space for use only by transit vehicles, to provide bicycle access, or to otherwise improve safety, but which will not be used as automobile vehicle travel lanes
- Addition of new or enhanced bike or pedestrian facilities on existing streets/highways or within existing public rights-of-way
- Addition of Class I bike paths, trails, multi-use paths, or other off-road facilities that serve non-motorized travel

*The Project would not increase roadway capacity for vehicle travel, and its implementation would improve connectivity of the existing active transportation network to facilitate alternative modes of transportation. Therefore, the Project is not likely to increase VMT and would result in less than significant impacts per CEQA Guidelines 15064.3(b).*

## Increase to Hazards from Geometric Design

The Project proposes improvements to facilitate pedestrian and bicycle movement along the existing San Jose Creek which would be designed according to all regulatory guidelines. On-street improvements would be implemented at several streets adjacent to the channel to increase access to the bikeway. Such improvements would vary for each street crossing location and would generally include signalized pedestrian and bicyclist crossings, striping for new crosswalks, striping of existing roadways for bike lanes, painting existing roadways with green-backed sharrows, and the reconstruction of existing curb ramps to meet ADA standards. Street improvements will be designed in accordance with the California Manual on Uniform Traffic Control Devices (CA-MUTCD) and applicable local design requirements and regulations. The Project does not propose any incompatible uses and is not expected to introduce new safety hazards at intersections or along roadway segments. The facilities would be designed to maximize user safety and reduce hazards, and the project design would be reviewed by the City of Pomona during the City's plan review process to ensure all applicable requirements are met. Therefore, *no substantial increase of hazards due to geometric design or incompatible use would occur.*

## Emergency Access

The Project would be designed according to all regulatory guidelines, including the CA-MUTCD and City of Pomona Standards, to maximize user safety and reduce hazards. Access to the multi-use bikeway would be provided by 15 entry/exit gates along the borders of the project site, and the project design would be reviewed by the City of Pomona during the City's plan review process

to ensure compliance with applicable emergency access requirements. Furthermore, the Project is an off-street facility with limited interaction with circulation elements where emergency service vehicles traverse. Where the Project creates new at-grade street crossings, traffic signals would be designed to incorporate emergency preemption equipment standard to the City of Pomona. Therefore, *no impacts to emergency access would occur*.

## Conclusion

The Project would result in less than significant transportation impacts as it would be consistent with adopted policies, plans, and programs related to pedestrian and bicycle facilities, would not increase single-occupancy vehicle travel, and would satisfy the consideration of key environmental issues as described by the CEQA Guidelines.