ROAD REPAIR AND ACCOUNTABILITY ACT OF 2017
PROJECT BASELINE AGREEMENT

12-0S080 Rte 22, Maintenance Facility Multi-Asset & TMS

Resolution SHOPP-P-2526-03B
(to be completed by CTC)

1. FUNDING PROGRAM

- ☐ Active Transportation Program
- ☐ Local Partnership Program (Competitive)
- ☐ Solutions for Congested Corridors Program
- ☑ State Highway Operation and Protection Program
- ☐ Trade Corridor Enhancement Program

2. PARTIES AND DATE

2.1 This Project Baseline Agreement (Agreement) effective on December 4, 2025 (will be completed by CTC), is made by and between the California Transportation Commission (Commission), the California Department of Transportation (Caltrans), the Project Applicant, Caltrans, and the Implementing Agency, Caltrans, sometimes collectively referred to as the "Parties".

3. RECITAL

3.1 Whereas at its 3/22/2024 meeting the Commission approved the State Highway Operation and Protection Program and included in this program of projects the 12-0S080 Rte 22, Maintenance Facility Multi-Asset & TMS, the parties are entering into this Project Baseline Agreement to document the project cost, schedule, scope and benefits, as detailed on the Project Programming Request Form attached hereto as ***Exhibit A***, the Project Report attached hereto as ***Exhibit B***, the Performance Metrics Form, if applicable, attached hereto as ***Exhibit C***, as the baseline for project monitoring by the Commission.

3.2 The undersigned Project Applicant certifies that the funding sources cited are committed and expected to be available; the estimated costs represent full project funding; and the scope and description of benefits is the best estimate possible.

4. GENERAL PROVISIONS

The Project Applicant, Implementing Agency, and Caltrans agree to abide by the following provisions:

4.1 To meet the requirements of the Road Repair and Accountability Act of 2017 (Senate Bill [SB] 1, Chapter 5, Statutes of 2017) which provides the first significant, stable, and on-going increase in state transportation funding in more than two decades.

4.2 To adhere, as applicable, to the provisions of the Commission:

- ☐ Resolution _____, "Adoption of Program of Projects for the Active Transportation Program", dated _____
- ☐ Resolution _____, "Adoption of Program of Projects for the Local Partnership Program", dated _____
- ☐ Resolution _____, "Adoption of Program of Projects for the Solutions for Congested Corridors Program", dated _____
- ■ Resolution G-24-34, "Adoption of Program of Projects for the State Highway Operation and Protection Program", dated 3/22/2024
- ☐ Resolution _____, "Adoption of Program of Projects for the Trade Corridor Enhancement Program", dated _____

4.3 All signatories agree to adhere to the Commission's Guidelines. Any conflict between the programs will be resolved at the discretion of the Commission.

4.4 All signatories agree to adhere to the Commission's SB 1 Accountability and Transparency Guidelines and policies, and program and project amendment processes.

4.5 Caltrans agrees to secure funds for any additional costs of the project.

4.6 Caltrans agrees to report to Caltrans on a quarterly basis; on the progress made toward the implementation of the project, including scope, cost, schedule, and anticipated benefits/performance metric outcomes.

4.7 Caltrans agrees to prepare program progress reports on a on a semi-annual basis and include information appropriate to assess the current state of the overall program and the current status of each project identified in the program report.

4.8 Caltrans agrees to submit a timely Completion Report and Final Delivery Report as specified in the Commission's SB 1 Accountability and Transparency Guidelines.

4.9 Caltrans agrees to submit a timely Project Performance Analysis as specified in the Commission's SB 1 Accountability and Transparency Guidelines.

4.10 All signatories agree to maintain and make available to the Commission and/or its designated representative, all work related documents, including without limitation engineering, financial and other data, and methodologies and assumptions used in the determination of project benefits and performance metric outcomes during the course of the project, and retain those records for six years from the date of the final closeout of the project. Financial records will be maintained in accordance with Generally Accepted Accounting Principles.

4.11 The Inspector General of the Independent Office of Audits and Investigations has the right to audit the project records, including technical and financial data, of the Department of Transportation, the Project Applicant, the Implementing Agency, and any consultant or sub-consultants at any time during the course of the project and for six years from the date of the final closeout of the project, therefore all project records shall be maintained and made available at the time of request. Audits will be conducted in accordance with Generally Accepted Government Auditing Standards.

5. SPECIFIC PROVISIONS AND CONDITIONS

5.1 Project Schedule and Cost
See Project Programming Request Form, attached as Exhibit A.

5.2 Project Scope
See Project Report or equivalent, attached as Exhibit B. At a minimum, the attachment shall include the cover page, evidence of approval, executive summary, and a link to or electronic copy of the full document.

5.3 Performance Metrics
See Performance Metrics Form, if applicable, attached as Exhibit C.

5.4 Additional Provisions and Conditions *(Please attach an additional page if additional space is needed.)*

Attachments:

Exhibit A: Project Programming Request Form
Exhibit B: Project Report
Exhibit C: Performance Metrics Form *(if applicable)*

SIGNATURE PAGE
TO
PROJECT BASELINE AGREEMENT

Project Name: 12-0S080 Rte 22, Maintenance Facility Multi-Asset & TMS

Resolution: SHOPP-P-2526-03B

(to be completed by CTC)

N/A

Date

N/A

Project Applicant

Date

N/A

N/A

Implementing Agency

10/13/2025

Date

Lan Zhou

District Director

California Department of Transportation

11/17/25

Date

Dina El-Tawansy

Director

California Department of Transportation

12/09/2025

Date

Tanisha Taylor

Executive Director

California Transportation Commission

12-0S080 - BA Signature Page

Final Audit Report 2025-11-17

Created:	2025-11-14
By:	Ayana Webb (s152747@dot.ca.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAA2E4Xi24IGB1qjk-ueqRopbEHZERBg4S1

"12-0S080 - BA Signature Page" History

Document created by Ayana Webb (s152747@dot.ca.gov)
2025-11-14 - 3:42:07 PM GMT- IP address: 149.136.17.246

Document emailed to Steven Keck (steven.keck@dot.ca.gov) for signature
2025-11-14 - 3:42:38 PM GMT

Email viewed by Steven Keck (steven.keck@dot.ca.gov)
2025-11-15 - 7:10:53 AM GMT- IP address: 146.75.154.0

Document e-signed by Steven Keck (steven.keck@dot.ca.gov)
Signature Date: 2025-11-17 - 3:36:21 PM GMT - Time Source: server- IP address: 149.136.17.248

Agreement completed.
2025-11-17 - 3:36:21 PM GMT

Baseline agreement information was extracted from Caltrans' project data systems. Project description, funding and performance measures are from CTIPS. Project delivery milestones are from PRSM. All information is current and accurate.

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

BASELINE AGREEMENT

Date:	10/23/25 10:17:04 AM

District	EA	Project ID	PPNO	Project Manager
12	0S080	1219000088	2982	LINDO, JARED L

County	Route	Begin Postmile	End Postmile	Implementing Agency	
ORA	22	R 12.1	R 13.2	PA&ED	Caltrans
				PS&E	Caltrans
				Right of Way	Caltrans
				Construction	Caltrans

Project Nickname

12-0S080 Rte 22, Maintenance Facility & TMS

Location/Description

In and near the cities of Santa Ana and Orange, from west of Cambridge Street to Route 55; also at the Orange Maintenance Station at 691 South Tustin Street. Upgrade and install new Transportation Management System (TMS) elements, construct guardrail, reconstruct buildings at the Orange Maintenance Station, construct bicycle and pedestrian improvements, install Zero Emission Vehicle (ZEV) chargers, and construct stormwater treatment Best Management Practices (BMPs).

Legislative Districts

Assembly:	68, 69	Senate:	34, 37	Congressional:	46

PERFORMANCE MEASURES

	Primary Asset	Good	Fair	Poor	New	Total	Units
Existing Condition	Transportation Management Systems (Elements)	0.0	0.0	0.0		0	Each
Programmed Condition	Transportation Management Systems (Elements)	11.0	0.0	0.0	0.0	11	Each

Project Milestone	Actual	Planned
Project Approval and Environmental Document Milestone	12/08/23	
Right of Way Certification Milestone		01/22/26
Ready to List for Advertisement Milestone		06/26/26
Begin Construction Milestone (Approve Contract)		01/15/27

FUNDING (Allocated amounts are shaded)

Component	Fiscal Year	SHOPP					Total
PA&ED	22/23	1,383					1,383
PS&E	23/24	3,832					3,832
RW Support							0
Const Support	25/26	5,330					5,330
RW Capital							0
Const Capital	25/26	45,020					45,020
Total		55,565					55,565

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

Memorandum

To: RICHARD STONE
SHOPP Office Chief
Division of Financial Programming
DISTRICT DIRECTORS
DIVISION CHIEFS

Date: October 23, 2025

File: 12-0S080- 1219000088
Ora-22 – R12.1/R13.164

From: JARED LINDO
Project Manager
District 12

Subject: **BASELINE AGREEMENT CLARIFICATION MEMORANDUM**

This memorandum is written to accompany the SB-1 Baseline Agreement (BA) for this Major Capital SHOPP project on SR-22 in Orange County. The purpose of this memorandum is to clarify the cost and performance values shown in the Project Report's Table No. 1 Project Overview information(page 7 0f 95) has been changed through the approved Project Change Requests(PCR) process to amend the programmed costs and performance. The updated costs and performance are explained and documented in PCR Doc ID 6802 was approved at the June 2025 CTC meeting and reflected in the CTIPs database accordingly. Please refer to attachment PCR Document ID 6802 for a detailed breakdown of the changes after the Project report was approved on December 8, 2023.

The delivery schedule within the Project Report only shows the MONTH/YEAR of target delivery. This clarification memo provides the actual and target milestone dates that include the DAY/MONTH/YEAR as shown in the table below.

Milestone Actual and Target Dates:			
PA&ED (Actual) (M200)	R/W Cert (M410)	RTL (M460)	Approve Contract (M500)
12/8/2023	1/22/2026	6/26/2026	1/15/2027

If you have any further questions, please contact me at 949-279-9367.

Attachment

12 - ORA - 22 – R12.1/R13.2
EA# 12-0S0800 – Project# 1219000088 – PPNO 2982
Program Code 20.10.201.315 – Multi-Asset
November 2023

Project Report
For Project Approval

On Route (State Route) 22

Between 0.2 Mile West of Cambridge St Overcrossing

And Route 22/55 Separation

I have reviewed the right-of-way information contained in this report and the right-of-way data sheet attached hereto, and find the data to be complete, current and accurate:

JENNIFER PHAM
Office Chief
Office of Right of Way and Right of Way Engineering

APPROVAL RECOMMENDED:

MONTASHEEMA AFROZE
Chief, Design Branch D

JARED LINDO
Project Manager

CONCURRED:

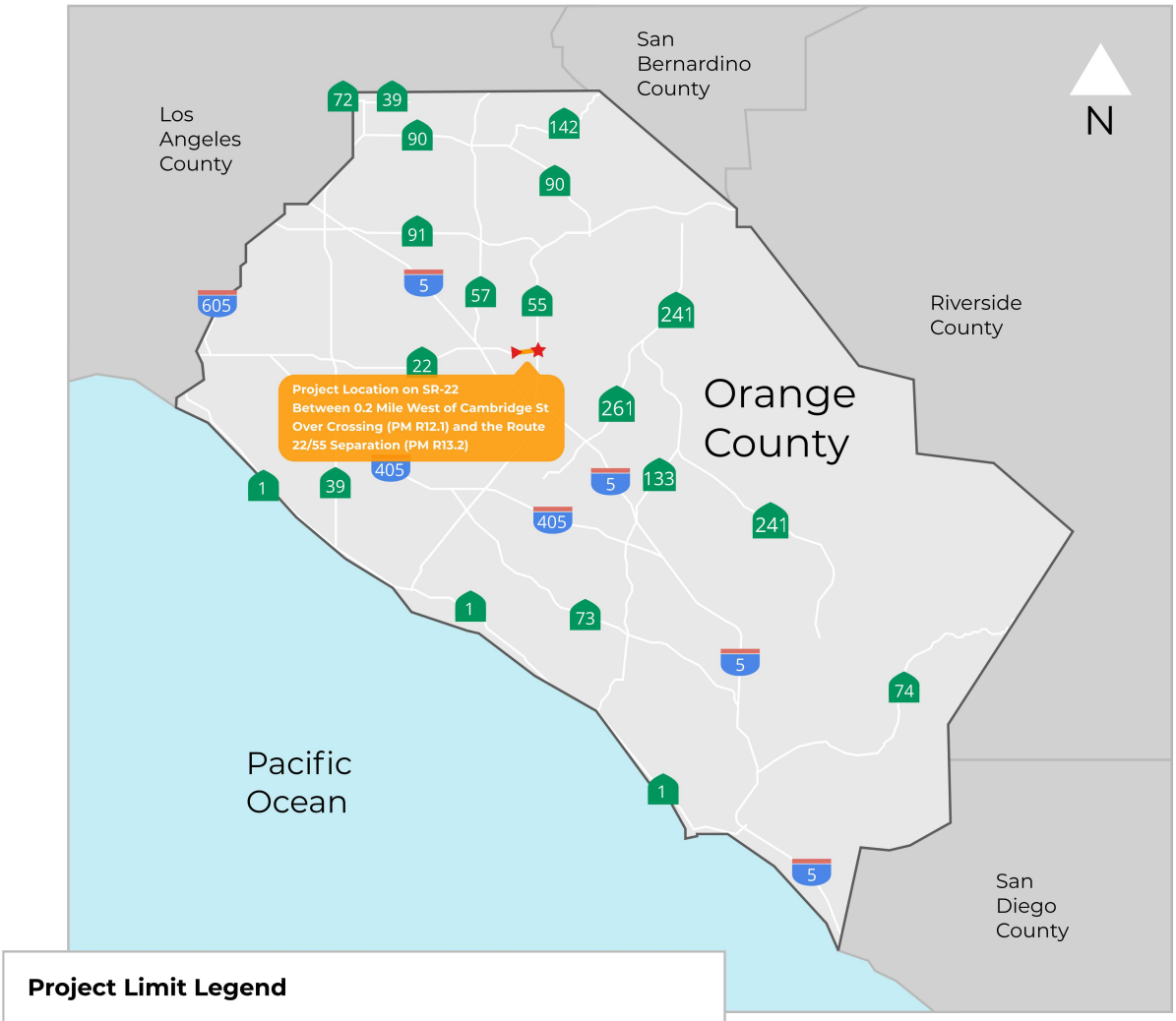
ADNAN MAIAH
Deputy District Director
Strategic Portfolio Management

PROJECT APPROVED:

MATTHEW CUGINI 12-8-2023
MATTHEW CUGINI DATE
Deputy District Director
Project Delivery

MARIO ORSO
Acting District Director

Vicinity Map



Project Limit Legend

- Project Location on SR-22
- ▲ Begins 0.2 Mile West of Cambridge St Overcrossing (PM R12.1)
- ★ Ends at the Route 22/55 Separation (PM R13.2)

This project report has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

Sara Dabzadeh — 12/04/2023

REGISTERED CIVIL ENGINEER — *DATE*

Table of Contents

Abbreviations and Acronym List

AADT	Annual Average Daily Traffic
ADT	Average Daily Traffic
AC	Asphalt Concrete
ADA	Americans with Disabilities Act
ADL	Aerially Deposited Lead
APS	Accessible Pedestrian Signal
BMP	Best Management Practices
BR	Bridge
Caltrans	California Department of Transportation
CCTV	Closed Caption Television
CE	Categorical Exemption/Exclusion
CEQA	California Environmental Quality Act
CF	Cubic Feet
CHP	California Highway Patrol
CMS	Changeable Message Sign
COZEEP	Construction Zone Enforcement Enhancement Program
CS	Complete Streets
CSDD	Complete Streets Decision Document
DED	Draft Environmental Document
EA	Expenditure Authorization/Each/ Environmental Assessment
EB	Eastbound
ED	Environmental Document
EIR	Environmental Impact Report
EIS	Environmental Impact Study
EV	Electric Vehicle
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
HCM	Highway Capacity Manual
HDM	Highway Design Manual
HD	High Definition
HMA	Hot Mix Asphalt
HOV	High Occupancy Vehicle
HQ	Headquarters
I-X	Interstate X
ICM	Integrated Corridor Management
ICMS	Integrated Corridor Management System
IIJA	Infrastructure Investment and Jobs Act
IP	Internet Protocol
IS	Initial Study
IT	Information Technology
LA	Los Angeles County
LB	Pound
LED	Light-Emitting Diode
LEED	Leadership in Energy and Environmental Design
LF	Linear Feet
LS	Lump Sum
MND	Mitigated Negative Declaration
MUTCD	Manual on Uniform Traffic Control Devices
MVP	Maintenance Vehicle Pullout
N/A	Not Applicable
NADR	Noise Abatement Decision Report
NB	Northbound
ND	Negative Declaration
NEMA	National Electrical Manufacturers Association
NEPA	National Environmental Policy Act
No.	Number
NPDES	National Pollutant Discharge Elimination System
NSR	Noise Study Report
OC	Overcrossing
OCTA	Orange County Transportation Authority
ORA	Orange County
PAED	Project Approval & Environmental Documentation
PCC	Portland Cement Concrete
PCMS	Portable Changeable Message Sign
PCR	Project Change Request
PDT	Project Development Team
PDPM	Project Development Procedures Manual
PIR	Project Initiation Report
PM	Post Mile/Particulate Matter
PPA	Power Purchase Agreement
PPNO	Planning and Programming Number
PR	Project Report
PS	Project Studies
PS&E	Plans, Specifications, and Estimate
PSR	Project Studies Report
RTL	Ready To List
RW	Right-of-Way
SB	Southbound/Senate Bill
SBD	San Bernardino County
SHOPP	State Highway Operation Protection Program
SQFT	Square Feet
SQYD	Square Yard
SR	State Route
STGA	Significant Trash Generating Area
STIP	State Transportation Improvement Program
SWDR	Storm Water Data Report
SWPPP	Storm Water Pollution Prevention Plan
TASAS	Traffic Accident and Surveillance Analysis System
TSAR	TASAS Selective Record Retrieval
TDM	Transportation Demand Management
TCE	Temporary Construction Easement
TCR	Transportation Concept Report
TMP	Transportation Management Plan
TMS	Traffic Management System
TMT	Transportation Management Team
UC	Undercrossing
VA	Value Analysis
VAR	Various/Varies
VMS	Video Management System
WB	Westbound
ZNE	Zero Net Energy

1. INTRODUCTION

Project Description:

This multi-asset project is located on SR-22, from 0.2 mile west of Cambridge Street Overcrossing (PM R12.1) to Route 22/55 separation (PM R13.2), in the cities of Orange and Santa Ana, in Orange County. The project location map is included in Attachment A.

This project proposes to improve Traffic Management System (TMS) elements, partially reconstruct the Caltrans District 12 Orange Maintenance Facility, add Complete Streets (CS) elements, and install Treatment Best Management Practices (BMP). The scope of work includes:

- installing video detection systems and surveillance cameras on existing traffic poles at Tustin St
- upgrading CCTV cameras to HD CCTV cameras at Cambridge St and the Maintenance Facility
- installing yellow reflective back plates at traffic signal heads at Tustin St
- reconstructing the office building, equipment storage, and wash rack at the Maintenance Facility
- partially repaving and resurfacing the parking lot, increasing parking, adding EV charging stations and bike racks at the Maintenance Facility
- constructing a decanting station with an access road off the Maintenance Facility
- upgrading crosswalks to ladder style, upgrading ped-Xing signage to new standards, upgrading APS pushbuttons to touch-free, upgrading pedestrian signals to display countdown, and adding wall-mounted LED lights (under a bridge) at Tustin St
- installing trash capture housing devices at existing drainage inlets between Cambridge St and the SR-22/SR-55 Interchange

This multi-asset project is state and federally funded through the 2022 SHOPP (program code 20.10.201.315) and Infrastructure Investment & Jobs Act (IIJA). The project will be delivered in the 2025/2026 FY – See Table 1 for details.

For funding, final design, and construction purposes, this project will be split into two contracts in PS&E to be advertised and bid separately. Recent bids in the district indicate that separating building and roadway assets will likely lead to more competitive bids, as it is expected to reduce the amount of work to be subcontracted and increase the number of bidders. Additionally, IIJA safety funding will augment the roadway scope in PS&E.

Table No. 1 Project Overview

Project Limits	12-ORA-22, PM R12.1/R13.2	
Number of Alternatives	2 (Build and No Build Alternative)	
	Current Cost Estimate:	**Escalated Cost Estimate:**
Capital Outlay Support	$7,935,000	$8,513,000
Capital Outlay Construction	$23,305,000	$25,776,000
Capital Outlay Right-of-Way	$0	$0
Funding Source	20.10.201.315	
Funding Year	2025/2026 Fiscal Year	
Type of Facility	10-Lane Freeway and Maintenance Facility	
Number of Structures	3, Maintenance Office Building, Equipment Storage, Wash Rack	
SHOPP Project Output	13 Field Elements, Refer to SHOPP Performance Measures Report (Attachment M)	
Environmental Determination or Document	Categorical Exemption (CEQA)/ Categorical Exclusion (NEPA)	
Legal Description	In Orange County, In Orange and Santa Ana, At the Orange Maintenance Facility At 691 Tustin St, And From 0.2 Mile West of Cambridge St Overcrossing to Route 22/55 Separation.	
Project Development Category	Category 5, PDPM Chapter 8, Section 5	

2. RECOMMENDATION

It is recommended that the project be approved based on the build alternative and that the project proceeds to the design phase.

3. BACKGROUND

Project History

The Project Initiation Report (PIR) was approved in June 2021. The initial scope for reconstructing the maintenance office, equipment storage, and wash rack has been validated. Scoping decisions were deferred to the current phase for reconstructing the warehouse, fueling station, and material bins, contingent on funding availability. Thus, combining reconstruction and renovation strategies was explored to include more structures. Per discussion with the principal stakeholders, the Maintenance Facility Staff, it was concluded to persist with fully reconstructing the initial three buildings to best meet the operational needs of the field maintenance staff.

Caltrans and the Santa Ana Regional Water Quality Control Board (SARWQCB) are still negotiating requirements for the decanting station's dewatering strategy, which may surpass the design phase of this project. Currently, the scope consists of a decanting pad with a settling basin. The scope may be reduced to a concrete pad with bin storage areas and allow for future expansion of the decanting station once the dewatering solution is approved.

The TMS improvements have been adjusted to include an additional HD CCTV camera overlooking the Maintenance Facility and the SR-22/ SR-55 interchange. Also, Smart Lighting is removed from the scope and will be addressed at the corridor level in future projects.

The CS elements have been adjusted to defer the ladder crosswalk only at Tustin St Off-Ramp, as a preventive maintenance project, EA# 12-0U180, will begin construction in February 2024 to address this scope comprehensively beforehand. See Complete Streets Decision Document (CSDD) Revalidation in Attachment K.

In March 2023, this project qualified for IIJA funding under stormwater mitigation and sustainability. The added scope is installing trash capture housing devices along SR-22 and EV fast chargers at the Maintenance Facility.

Community Interaction

There is no involvement with local agencies and the public for work within the perimeter of the maintenance facility. There will be coordination with the storage facility (CubeSmart) adjacent to the maintenance facility, which shares the access road to Tustin St. There will be coordination and permitting with the city of Orange for the TMS and Complete Street improvements at the Tustin St On/Off-Ramps. Prior to construction, there will be coordination with the cities of Orange and Santa Ana, CHP, and emergency responders, for Traffic handling and detours.

Existing Facility

The Orange Maintenance Facility was built in 1970 and consisted of the Maintenance Office and Equipment Storage buildings; And was later expanded to include the following facilities: Warehouse, Shop Building, Material Bins, Storage Yard, Radio Shop, Wash Rack, Fueling Station, and Trailers.

Within the project limits, SR-22 is an 8 to 10-lane freeway divided by a median concrete barrier and terminates into SR-55 as four 2-lane connectors. The mainline is paved with Portland Cement Concrete (PCC)

and the shoulders, ramps, and connectors are paved with asphalt concrete (AC).

At the Tustin St interchange, the EB off-ramp consists of two lanes near the exit at the mainline and then widens at the intersection to three lanes consisting of one left turn lane, one left/straight/right lane, and one right turn lane. The WB on-ramp is a direct 3-lane on-ramp at the Tustin St intersection, and merges to a single-lane entrance ramp at the mainline. Ramp metering systems and traffic monitoring stations are available at this interchange.

There are five bridges within and near the project limits: Cambridge St Overcrossing (BR No. 55 0383), Tustin Ave Overcrossing (BR No. 55 0384L), Tustin Ave Undercrossing (BR No. 55 0385R), EB SR-22/NB SR-55 Connector Separation (BR No. 55 0939G), NB SR-55/WB SR-22 Connector Undercrossing (BR No. 55 0336). There are retaining walls along the mainline at Cambridge St OC and the SR-22/SR-55 connectors.

4. Purpose and Need

Purpose:
This project will transform the Orange Maintenance Facility into a high-performance facility that meets current occupancy needs. It will modernize TMS solutions and enhance complete street elements at SR-22 and intersecting roads to improve the flow of all modes of transit. It will install trash capture devices along SR-22 to improve stormwater pollution mitigation.

Need:
The Orange Maintenance Facility staff are operating in deteriorated building conditions. This segment of SR-22 is operating with disconnected infrastructure technology and modes of transit. Also, this segment of SR-22 is categorized as a Significant Trash Generating Area (STGA).

4A. Problem, Deficiencies, Justification

Upgrades to the Orange Maintenance Facility have not been a departmental priority and consequently, maintenance has been repeatedly deferred since its construction in 1970. Thus, the facility is insufficient in space, function, structure, energy performance, and gender inclusion (restrooms and lockers). The Orange Maintenance Facility provides services to SR-22 and SR-55 and must be brought to current standards and a state of good repair to meet the staff safety and the route's operational needs.

The TMS elements are using outdated technology that lacks improved accuracy and intelligence. This segment of the SR-22 is between the I-5/SR-22/SR-57 interchange and the SR-22/SR-55 interchange, and updated technology is integral to managing high volumes of merging and diverging traffic.

The complete street elements at the SR-22 intersection with Tustin St need to be upgraded to current standards. Both streets connect communities separated by the SR-22, and multi-modal features are necessary for social equity, safety, and sustainability.

The drainage elements do not have substantial trash removal BMPs. This segment of SR-22 runs through a highly urbanized area, which generates significant amounts of trash in parts of the mainline and ramps within proximity to Tustin St, and trash capture systems are vital to meet stormwater runoff quality standards.

4B. Regional and System Planning

This project is listed under the 2023 SHOPP Ten-Year Project Book, which prioritizes projects that contribute most to the overall health of the State Highway System based on the California Transportation Asset Management Plan (TAMP), developed in collaboration with FHWA, Commissions, and Local stakeholders.

This project is in line with the 2014 District System Management Plan (DSMP) that aims to enhance the safety, sustainability, and efficiency of transportation systems by prioritizing multi-modality and transportation demand management (TDM) over capacity additions. This project is also in line with the Caltrans 2019 Statewide Trash Implementation Plan that adopts the State Water Board Trash Control Amendments to preserve surface waters.

Coordination among other ongoing projects on SR-22 and SR-55 is critical to minimize scope conflicts and manage construction in overlapping regions. Multi-Asset Project 0R32U proposes landscaping and irrigation systems surrounding the decanting station. Close collaboration is underway to avoid damage to the new plants and irrigation systems during construction and staging. See the projects listed in Table 2 for more information.

Table No. 2 Project Coordination

EA	Route	Project Limit Begin/End (PM)	Project Description	Start/End Construction
0Q320	SR-22	R10.7/R12.7	Safety Project, Median, Signs, & Lighting	02/2022 – 09/2024
0U180	SR-22	R3.3/R13.2	Non-Mainline Preventive Maintenance Project, Pavement, Signs, Delineation, TMS	02/2024 – 12/2024
0S190	SR-22	R11.6/R12.5	Westbound Widening Project, to accommodate an auxiliary lane & lengthen the drop lane	10/2024 – 09/2026
0R670	SR-55	6.0/R17.8	Safety Project, Lighting, Median, Signs, Delineation, Drainage	01/2025 – 01/2026
0T460	SR-55	0.2/R17.8	Middle Mile Broadband Project, Add Fiber Optic and Supporting Elements	01/2025 – 01/2026
0R32U	SR-55	0.2/R17.8	Multi-Asset Project, Pavement, Signs, TMS, Bridge, Drainage, Stormwater, ZEV Stations	07/2026 – 11/2026
0K720	SR-55	10.5/R17.8	OCTAxCaltrans, Increases Capacity & Improves Operations	12/2025 – 01/2028
0U850	SR-55	R6.4/S17.8	Bridge Maintenance, Deck Overlay, Drainage, & Lighting	11/2028 – 04/2029

4C. Traffic

Current Traffic

The 2020 traffic volumes on SR-22 within the project vicinity are shown below. Due to the temporary decline in traffic volumes from the COVID-19 pandemic, more recent data was not used.

Table No. 3 2020 Traffic Volumes

		Back			Ahead		
PM	Location	Peak Hour Volume	Peak Month ADT	Vehicle AADT	Peak Hour Volume	Peak Month ADT	Vehicle AADT
R11.825	SR-22 at Glassell St	13,000	175,000	166,100	13,500	182,000	163,900
R12.866	SR-22 at Tustin St	13,500	182,000	163,900	10,600	144,000	139,500
R13.164	SR-22 to SR-55	10,600	144,000	139,500	-	-	-
12.967	SR-55 at SR-22	19,300	244,000	259,600	21,100	266,000	271,900

Collision Analysis

The TASAS Table B data are summarized below, which includes collisions that occurred during the three-year period from April 1st, 2019 and March 31st, 2022 along EB and WB SR-22. As shown in Table 4 below, the actual collision rates for SR-22 are lower than the statewide average for similar facilities.

Table No. 4 TASAS Table B Collision Rates

		No. of Collisions			Actual Rates			Statewide Average Rates		
Begin/End (PM)	**Route**	**Fat[1]**	**F+I[2]**	**Tot[3]**	**Fat**	**F+I**	**Tot**	**Fat**	**F+I**	**Tot**
R12.100/R13.163	SR-22	1	56	175	0.006	0.32	0.99	0.007	0.41	1.24

Notes:
1 – Fatal Collisions
2 – Fatal Collisions plus Injury
3 – All Reported Collisions
Accident Rates: # of accidents / million vehicle miles

The TASAS TSAR data, visualized below, characterizes collisions that occurred in the same three-year period within the project limits. Most collisions happened during usual roadway conditions, clear weather, and dry pavement.

Figure No. 1 Types of Collision

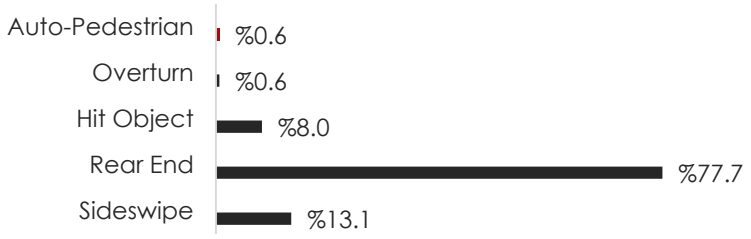


Figure No. 2 Roadway Lighting Conditions

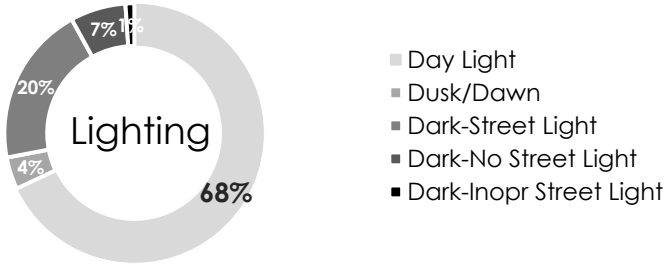


Figure No. 3 Side of Highway

The video detection system this project installs at the WB SR-22 Tustin St On-Ramp is expected to provide data that can be used to alleviate collision rates in that direction. Also, the video detection systems at the Tustin St intersection, the ladder crosswalks, and the wall-mounted lighting will help increase the visibility of pedestrian crossings and is expected to reduce auto-pedestrian collisions.

5. ALTERNATIVES

5A. Viable Alternatives

Alternative 1 is the build alternative, and proposes the following improvements as shown in Attachment B:

TMS Improvements

- Upgrading 1 CCTV camera to HD CCTV camera at Cambridge St OC
- Adding 1 HD CCTV camera on the existing pole at the SR-22/SR-55 junction overlooking the Orange Maintenance Facility and surrounding connectors
- Installing video detection system with safety analytics at the Tustin St On-Ramp (2 cameras mounted on existing intersection signal poles)
- Installing PTZ (Pan-Tilt-Zoom) surveillance cameras at the Tustin St On-Ramp (2 cameras mounted on existing intersection signal poles)
- Installing non-PTZ queue monitoring cameras at the Tustin St On-Ramp (1 camera mounted on the existing ramp entrance pole and 1 camera mounted on the existing ramp merging signal pole)
- Installing PTZ surveillance cameras at the Tustin St On-Ramp (1 camera mounted on existing ramp merging signal pole)
- Installing video detection system with safety analytics at the Tustin St Off-Ramp intersection (4 cameras mounted on existing intersection signal poles)
- Installing PTZ surveillance cameras at the Tustin St Off-Ramp Intersection, (1 camera mounted on existing intersection signal pole)
- Installing yellow reflective back plates at the Tustin St On-Ramp signal heads (8 back plates for the intersection, 2 back plates for the ramp entrance, and 7 back plates at the ramp merging point)
- Installing yellow reflective back plates at the Tustin St Off-Ramp signal heads (17 back plates for the intersection)

Maintenance Facility Improvements

- Reconstructing and expanding the maintenance office from 5,878 sqft to 15,330 sqft. The new office space will consist of 2 buildings to house maintenance and region crews separately. The new offices will be designed to LEED silver standards and will be zero net energy (ZNE) buildings. New solar panels will be installed. Low-carbon materials will be

used. Water-efficient fixtures will be installed. User comfort will be promoted by indoor environmental quality.

- Reconstructing the equipment storage building of 7,900 sqft. There will be 6 equipment storage bays and 6 storage rooms. The equipment storage will also be designed to ZNE standards. The updated bays will be larger to improve safety. There will be additional air, water, and power lines for future use. The storage space will be secured and weatherproof.
- Reconstructing and expanding the wash rack from 628 sqft to 2,194 sqft. The wash rack will be covered to meet Stormwater and Regional Water Quality Control Board standards.
- Constructing a decanting site of 6,160 sqft. This will be in the in-field area between the EB SR-22/SR-55 connectors and the SR-55 mainline. It consists of a decanting pad (concrete pad with 2ft tall containment walls), which drains to a settling basin (concrete basin lined with a geo-membrane). The settling basin has a protective lining to prevent the percolation of vactor liquids into ground waters. The existing access roads from the Orange Maintenance Facility will be extended with Hot Mix Asphalt to the decanting site (Decanting Road).
- Performing site development at the Orange Maintenance Facility. This consists of partially repaving and resurfacing the lot, modifying sub-surface infrastructure, relocating the generator, reconfiguring the parking, adding covered parking with solar panels, updating and adding EV chargers (10 level II changers and 2 DC fast chargers), installing bike racks, xeriscaping, and constructing an ADA compliant pedestrian access route from Tustin St to the offices.

Complete Street Improvements

- Updating crosswalks to enhanced visibility ladder crosswalks at the Tustin St On-Ramp (2 at the on-ramp).
- Update ped-Xing signage (8 at Tustin St On-Ramp), APS pushbuttons (touch-free), and pedestrian countdowns (2 pushbuttons and displays at the Tustin St On-Ramp and 6 pushbuttons and displays at the Tustin St Off-Ramp).
- Installing 6 wall-mounted LED lights at Tustin Ave UC (BR No. 55 0385R).

Stormwater Mitigation

- Installing 17 trash capture housing devices at existing drainage inlets on SR-22 between Cambridge St OC (BR No. 55 0383) to the SR-22/SR-55 Interchange.

Design Standard Risk Assessment

This project proposes to maintain the existing nonstandard features within the project limits as this project does not alter the existing roadway

geometry. Also, no new non-standard design features are expected to be added during PS&E. If any new non-standard features are introduced during the PS&E phase, a Design Standard Decision Document (DSDD) will be prepared.

5B. Rejected Alternatives

Alternative 2 is the No Build Alternative which retains the existing conditions. This alternative does not satisfy the purpose and need of the project and is not recommended.

6. CONSIDERATIONS REQUIRING DISCUSSION

6A. Hazardous Waste

A site investigation is required for this project to investigate the presence or absence of ADL, hazardous waste, and hazardous material at the locations where soil disturbance occurs throughout the project in paved and unpaved areas, as well as at the building reconstruction location for identifying materials such as lead-based paint and asbestos.

During the early PS&E phase, Design should submit a written request to Environmental Engineering to conduct hazardous waste and ADL investigations.

6B. Value Analysis

A value analysis (VA) was performed for the project since the total project cost estimate is over $25,000,000. The study identified savings of $1.5 million by using a pre-engineered equipment storage facility and $20,000 by reducing parking islands. See Attachment L for the VA Study Summary Sheet.

6C. Resource Conservation

The salvaging and recycling of hardware and building materials will be determined during the design phase.

6D. Right-of-Way Issues

Right-of-Way Acquisitions

All proposed work is within the state's right of way and the acquisition of fee, permanent easements, or temporary construction easements are not needed. Additionally, Mitigation and Compliance Cost Estimates (MCCEs) will not be required as there are no environmental permits or mitigation that are Right of Way cost obligations associated with this project. See Attachment E - The Right-of-Way Data Sheet.

Railroad Involvement
There are no railroad crossings or tracks within the project limits. As a result, no railroad involvement is necessary.

Airspace Lease Areas
There is no potential for future airspace development with high land values within the project limits and there are no active airspace lease areas within the project limits.

Relocation Impact Studies
It has been determined there are no impacts to owners, tenants, businesses or persons in possession of real property to be acquired who would qualify for relocation assistance benefits or entitlements under the Uniform Relocation Assistance and Real Property Act of 1970. Therefore, a Relocation Impact Document is not needed.

Right of Way Utility Relocations
Existing utility facilities have been reviewed and shown on plan sheets. They are not in conflict with the construction of the project and will remain in place. No public utility relocations are required. No test holes are needed to meet Caltrans' policy regarding high-priority utilities and no test holes are needed to determine utility conflicts.

6E. Environmental Compliance
The Federal Highway Administration (FHWA) and Caltrans have renewed the agreements which authorize Caltrans' continued participation in the National Environmental Policy Act (NEPA) Assignment Program. The memoranda of understanding (MOUs) authorize Caltrans assumption of NEPA responsibilities under 23 USC 327 and 23 USC 326. The 326 MOU was signed on April 18, 2022, for a five-year term; the 327 MOU became effective May 27, 2022, for a 10-year term. This project is Categorically Exempt under the California Environmental Quality Act (CEQA) and Categorically Excluded under the National Environmental Policy Act (NEPA).

The required Environmental Document for this project is a Categorical Exemption (CE) under the California Environmental Quality Act (CEQA) and a Categorical Exclusion (CE) in accordance with the requirements of the National Environmental Policy Act (NEPA).

The Environmental documentation is attached as Attachment D.

6F. Air Quality Conformity
According to the Code of Federal Regulations (CFR) Title 40 Section 93.126, table 2, this project is exempt from Particulate Matter (PM) conformity analysis.

6G. Climate Change/Greenhouse Gas Emissions Analysis
Construction greenhouse gas emission for the TMS improvement work was calculated using the Caltrans Construction Emission Tool (CAL-CET) 2021 and for reconstruction of the maintenance facility was calculated using the California Emission Estimator Model (CalEEMod). The total estimated Carbon Dioxide equivalent (CO2e) emission from the construction of this project would be 452 Metric tons during the estimated construction period. The result is obtained by applying mitigation factors.

Construction work will generate fugitive dust emissions and construction equipment emissions, which can be controlled by compliance with Caltrans Standard Specification in Section 14-9 (2023) and South Coast Air Quality Management District (SCAQMD) Rules and regulation during construction.

6H. Title VI Considerations
Caltrans, under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

6I. Noise Abatement Decision Report
The proposed project does not involve addition of lane; thus, according to FHWA 23CFR772, this project does not qualify as a Type I project. Therefore, traffic noise study is not needed.

6J. NPDES Stormwater Compliance
This project is under jurisdiction of Santa Ana Regional Water Quality Control Board (RWQCB) and within the boundaries of Santiago Creek Watershed, Lower Santiago Creek Sub-watershed with Hydrologic Unit Code 180702030902, and San Diego Creek Watershed, Peters Canyon Wash Sub-watershed with Hydrologic Unit Code 180702040101. Within the project limits, the receiving water body is identified as Santiago Creek, Reach 1, but is not identified as a 303(d) listed for impaired receiving water body on the 2020/2022 California Integrated Report.

State Water Resources Control Board (SWRCB) adopted the Statewide Trash Provisions (SWRCB Resolution No. 2015-0019) to address the adverse impacts from trash on the beneficial uses of surface waters in California. The Trash Provisions establish a statewide water quality objective for trash and prohibition of the discharge of trash to surface waters of the state, or the deposition of trash where it may be discharged into surface waters of the state. To comply with the Statewide Trash Provisions, Caltrans has developed and submitted a Statewide Trash Implementation Plan that summarized the measures that will be taken to comply with the specific trash requirements. The Statewide Trash Implementation Plan identifies Caltrans Significant Trash Generating Areas (STGA) in each Caltrans District. STGA's within the project limits are on SR-22 between N. Cambridge St undercrossing and intersection of SR-22/SR-55 as well as along northbound of SR-55 to westbound of SR-22 connector. To meet the Caltrans Statewide Trash Implementation Plan, the project will incorporate Full Trash Capture devices within the STGAs in the project limits in complying with the SWRCB Trash Provisions. Specific locations to treat STGA areas must be detailed out in PS&E phases.

This project must conform to all applicable water quality regulations and/or permit requirements of the State Water Resources Control Board (SWRCB) and the local Santa Ana Regional Water Quality Control Board (RWQCB), including, but not limited to, the Caltrans Statewide NPDES Permit (Order No. 2022-0033-DWQ, NPDES CAS000003), the Statewide NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2022-0057-DWQ, NPDES No. CAS000002), the Caltrans Storm Water Management Plan , and any subsequent revision and/or additional requirements at the time of construction. Should dewatering be required, dewatering must comply with Santa Ana Regional Water Quality Control Board's Order R8-2020-006, NPDES Permit No. CAG998001 for general water discharge requirements for discharges to surface waters that pose an insignificant (De Minimus) threat to water quality, or subsequent permit.

The construction and operation of the proposed decanting basin under this project is subject to the approval of the Santa Ana RWQCB as well as the Caltrans NPDES Permit (Order No. 2022-0033-DWQ, NPDES No. CAS000003). During PS&E phase, a formal request to the Santa Ana RWQCB will be submitted to meet Caltrans NPDES Permit requirements and guidance for the operation of a decanting basin. A Facility Pollution Prevention Plan (FPPP) will be prepared and approved by the Maintenance Storm Water Coordinator for the facility. The FPPP is a plan that identifies the functional activities specific to a maintenance facility, applicable BMPs, and other

procedures utilized by facility personnel to control the discharges as well as to operate the decanting basin at the proposed location.

The total disturbed soil area is 1.72 acres. Therefore, this project requires incorporation of Treatment BMP(s) and the preparation of a Storm Water Pollution Prevention Program (SWPPP). A Long Form Storm Water Data Report (SWDR) is prepared for this project; The signed coversheet is included as Attachment H.

7. OTHER CONSIDERATIONS AS APPROPRIATE

7A. Transportation Management Plan

A Transportation Management Plan (TMP) datasheet is prepared to balance construction windows with traffic congestion and ensure worker safety (Attachment I). The TMP will include the following:

- Public Information
- Portable Changeable Message Signs
- Incident Management via CHP and Traffic Surveillance
- Lane Closure Charts
- Speed Reduction Zones
- Connector and Ramp Closures
- Demand Management
- Alternative Route Strategies via Streets and Traffic Control Officers
- Maintain Traffic

7B. Stage Construction

The construction working days are approximately 250. Detailed stage construction plans will be developed in the PS&E stage.

There will be temporary access restrictions to facilities that remain in place at the Orange Maintenance Facility, such as the Warehouse and Shop Building. The Tustin St access road will be closed overnight and during the weekend for resurfacing the pavement and constructing the pedestrian walkway.

There will be temporary lane closures and barriers near the edge of travel way on the SR-22 mainline and connectors to install trash capture housing devices. This also includes an HOV lane on WB SR-22. There will be temporary lane closures and detours at the SR-22 On/Off-Ramps to Tustin St to construct TMS and complete street elements.

8. FUNDING, PROGRAMMING AND ESTIMATE

Funding

This project was programmed in the 2022 SHOPP cycle under the Transportation Management Systems Program. This project is scheduled to RTL in the 25/26 fiscal year. This project is eligible for Federal-aid funding including the Federal Infrastructure Investments Jobs Act (IIIJA) Funding.

Programming

The following table shows the project funding consisting of approved 2022 SHOPP Funds, IIJA Funds and proposed SHOPP Variance. A PCR has been submitted to the December CTC meeting for approval of SHOPP Variance capital to fund the current project estimate.

Table No. 5 Project Funding

Fund Source	Fiscal Year Estimate				
20.10.201.315	22/23	23/24	24/25	25/26	Total
Component	In thousands of dollars ($1,000)				
PA&ED Support	$1,383				$1,383
PS&E Support		$3,220			$3,220
Right-of-Way Support					
Construction Support				$3,910	$3,910
Support Subtotal	$1,383	$3,220		$3,910	**$8,513**
Right-of-Way					
Construction				$25,800	$25,800
Capital Subtotal				$25,800	**$25,800**
Total	$1,383	$3,220		$29,710	**$34,313**

The support to capital cost ratio is 33%.
The support cost escalation rate for FY 23/24 is 3.2%, and for FY 24/25 through FY 25/26 is 3.5%.
The capital cost escalation rate for FY 23/24 is 3.2%, for FY 24/25 is 4.89%, and for FY 25/26 is 3.8%.

Estimate

The cost estimate is included in Attachment C. A Project Change Request (PCR) has been submitted and is pending HQ approval to increase the project budget and reflect increased unit costs due to the inflation cost of labor and materials. Another PCR will be initiated in PS&E to split the project into two contracts and advertise the building and roadway work separately in anticipation of reducing subcontracting costs and increasing the number of bidders. Additional cost reduction strategies will be considered in PS&E, such as a Power Purchase Agreement (PPA) to meet ZNE goals, open plan offices to reduce square footage, and attached or two-story offices for building envelope optimization. Finally, a PCR has been submitted and is pending HQ approval for safety elements to augment the roadway scope of work in PS&E.

9. DELIVERY SCHEDULE

Table No. 7 Project Schedule

Project Milestones		Milestone Date (Month/Day/Year)	Milestone Designation (Target/Actual)
PROGRAM PROJECT	M015	April 2022	Actual
BEGIN ENVIRONMENTAL	M020	July 2022	Actual
PA&ED	M200	November 2023	Target
PS&E TO DOE	M377	November 2025	Target
RIGHT OF WAY CERTIFICATION	M410	January 2026	Target
READY TO LIST	M460	February 2026	Target
HEADQUARTERS ADVERTISE	M480	April 2026	Target
AWARD	M495	August 2026	Target
APPROVE CONTRACT	M500	September 2026	Target
CONTRACT ACCEPTANCE	M600	February 2029	Target
END PROJECT EXPENDITURES	M800	April 2031	Target
FINAL PROJECT CLOSEOUT	M900	January 2032	Target

10. RISKS

The project risk register is included in Attachment J. The risk register includes the identified risks, quantitative risk assessment, response strategies, and risk impacts. The project risk register uses a quantitative risk analysis approach that ranks risks into high, medium, and low-risk categories based on their probability of occurrence and impact on schedule and cost. These risks should be monitored and updated during the entire project development process.

11. EXTERNAL AGENCY COORDINATION

Federal Highway Administration (FHWA)

The project is an Assigned Project in accordance with the current FHWA and Caltrans Joint Stewardship and Oversight Agreement. It is exempt from FHWA review and oversight since SR-22 is not on the Interstate System.

Local Agency

The project requires coordination and permitting with the Cities of Orange and Santa Ana for lane closures, traffic handling, detours, and updates to the traffic management systems and complete street elements. More specifically, for any work within the city RW, it may be required to obtain an encroachment permit.

12. PROJECT REVIEWS

Scoping Team Field Review *PDT* Date *02/07/2023*
HQ SHOPP Program Advisor *Robert Navarro* Date *09/05/2023*
District Maintenance *Ben Nanjappa* Date *10/03/2023*
Project Manager *Jared Lindo* Date *10/10/2023*
District Safety Review *Thuan Nguyen* Date *09/27/2023*
Constructability Review *Dat Pham* Date *10/06/2023*

13. PROJECT PERSONNEL

Name	Title	Phone #
Jared Lindo	Project Manager, Office of Program & Project Management	949-279-9367
Larry Vietti	Maintenance Manager I, Office of South Region/Maintenance Support	714-231-6285
Montasheema Afroze	Branch Chief, Office of Design D	949-473-3951
Sara Dabzadeh	Project Engineer, Office of Design D	657-328-6616
Ben Nanjappa	Branch Chief, Office of Maintenance Engineering	949-279-8840
Smita Deshpande	Branch Chief, Office of Environmental Planning	657-328-6151
Frank Thomas	Branch Chief – Architectural, Office of Transportation Architecture	916-639-5957
Brannon Anand	Acting Branch Chief – Electrical, Office of Electrical, Mechanical, Water & Wastewater Engineering	916-476-0261
Christopher Faria	Branch Chief – Mechanical, Office of Electrical, Mechanical, Water & Wastewater Engineering	916-752-9825
Juan Torres Jr.	Acting Branch Chief – Water Resources, Office of Electrical, Mechanical, Water & Wastewater Engineering	916-227-8061
Sean Samuel	Branch Chief – Structural, Office of Transportation Architecture	916-227-8547
Reza Aurasteh	Branch Chief, Office of Environmental Engineering	657-328-6138
Arvin Cuevas	Branch Chief, Office of NPDES/Storm Water	657-328-6149
Evangelina Washington	Branch Chief, Office of R/W P&M, Acquisition, and Project Coordination	657-328-6349
Mervin Fullenwider	Branch Chief, Office of Electrical Design	619-936-9040
Pauline Nguyen	Branch Chief, Office of Traffic Signals / Ramp Metering / Census	949-279-9168
Roger Banos	Branch Chief, Office of Electrical Systems	949-279-9052
Christopher Le	Branch Chief, Office of Design B, Utility Engineering, & District Design Liaison	657-328-6113
Phi Dinh	Branch Chief, Office of Hydraulics	657-328-6172
Dat Pham	Branch Chief, Office of Construction Administration	949-279-8586
Cesar Sanchez	Structure Design Liaison, Office of Bridge Design South	916-639-5923
Jose Hernandez	Branch Chief, Office of Traffic Operations	949-279-9062
William Owen	Branch Chief, Office of Geophysics & Geology	916-227-0227

14. ATTACHMENTS (Number of Pages)

A. Location Map (1)
B. Plan Sheets (16)
C. Cost Estimate (10)
D. Environmental Documentation (4)
E. Right-of-Way Data Sheet (5)
F. Utility Plan Sheets (6)
G. Utility Management Matrix (3)
H. Storm Water Data Report Signed Cover Sheet (1)
I. Traffic Management Plan Data Sheet (3)
J. Risk Register (2)
K. Complete Streets Decision Document Revalidation (4)
L. Value Analysis Study Summary Sheet (2)
M. SHOPP Performance Outputs (1)

Total Number of Pages (58)

ATTACHMENT A

Location Map

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	ORA	22	R12.1/R13.2	1	XX

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
X-X	TYPICAL CROSS SECTIONS
X	KEY MAP AND LINE INDEX
XX-XX	LAYOUTS
XX-XX	PROFILES AND SUPERELEVATION DIAGRAMS
XX-XX	CONSTRUCTION DETAILS
XX-XX	TEMPORARY WATER POLLUTION CONTROL PLANS
XX-XX	CONTOUR GRADING PLANS
XX-XX	DRAINAGE PLANS, PROFILES, DETAILS AND QUANTITIES
XX-XX	UTILITY PLANS
XX	CONSTRUCTION AREA SIGNS
XX-XX	MOTORIST INFORMATION PLANS
XX-XX	STAGE CONSTRUCTION PLANS
XX-XX	TRAFFIC HANDLING PLANS AND QUANTITIES
XX-XX	PAVEMENT DELINEATION PLANS, DETAILS AND QUANTITIES
XX-XX	SIGN PLANS, DETAILS AND QUANTITIES
XX-XX	SUMMARY OF QUANTITIES
XX-XX	SOUND WALL PLANS
XX-XX	LANDSCAPE PLANS
XX-XX	ELECTRICAL PLANS
XX-XX	REVISED STANDARD PLANS

STRUCTURE PLANS

XX-XXX	NAME OF BRIDGE, Br No. XX-XXXX
XXX-XXX	NAME OF BRIDGE, BR No. XX-XXXXX

THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

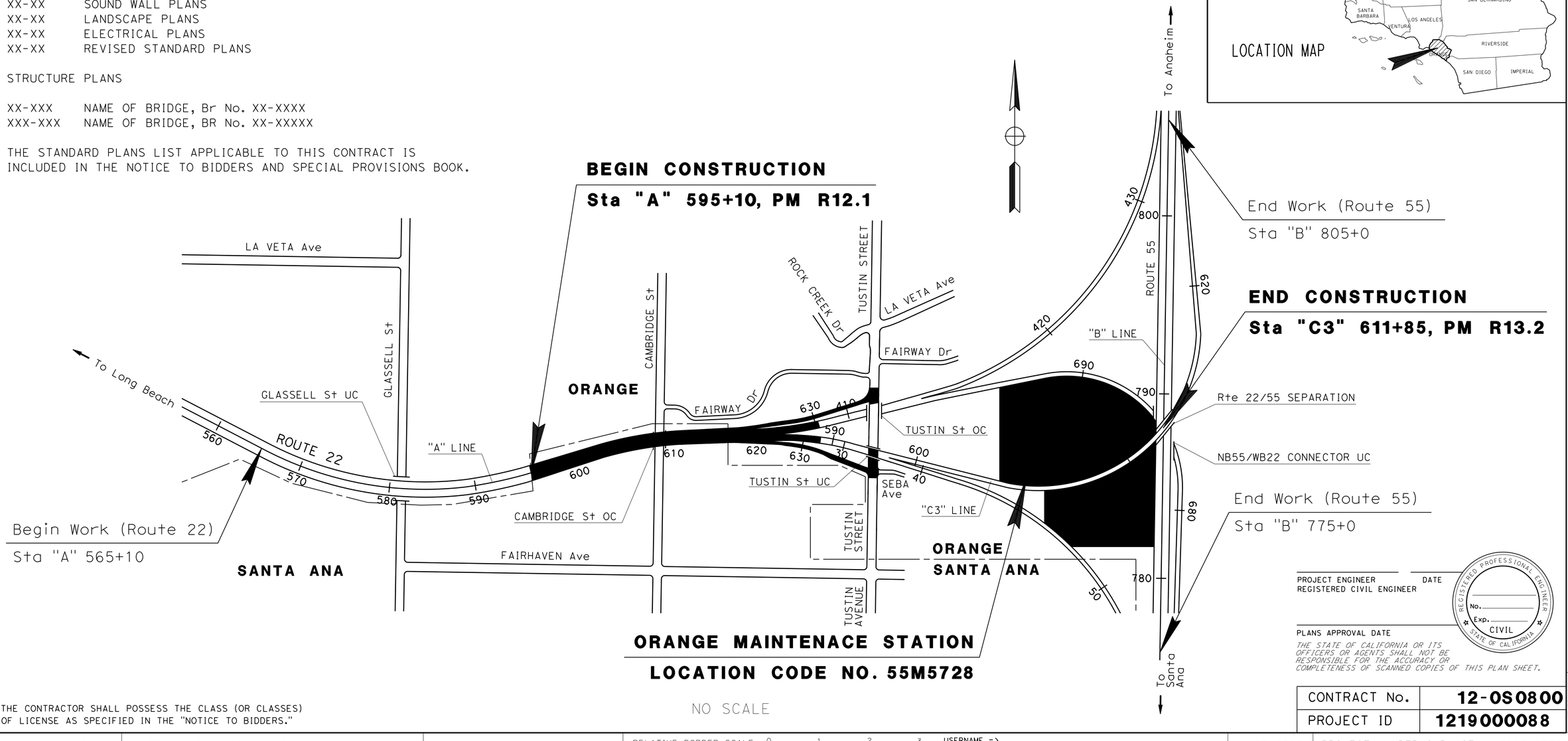
BUILDING CONSTRUCTION AND CONSTRUCTION ON

STATE HIGHWAY

IN ORANGE COUNTY
IN ORANGE AND SANTA ANA
AT THE ORANGE MAINTENANCE FACILITY AT 691 S TUSTIN ST
AND FROM 0.2 MILE WEST OF CAMBRIDGE STREET
OVERCROSSING TO ROUTE 22/55 SEPARATION

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 202X

LOCATION MAP



BEGIN CONSTRUCTION

Sta "A" 595+10, PM R12.1

Begin Work (Route 22)

Sta "A" 565+10

End Work (Route 55)

Sta "B" 805+0

END CONSTRUCTION

Sta "C3" 611+85, PM R13.2

End Work (Route 55)

Sta "B" 775+0

ORANGE MAINTENACE STATION

LOCATION CODE NO. 55M5728

NO SCALE

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

PROJECT ENGINEER — DATE
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — 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.

CONTRACT No.	12-0S0800
PROJECT ID	1219000088

PROJECT MANAGER: JARED LINDO
DESIGN MANAGER: MONTASHEEMA AFROZE

LAST REVISION: 00-00-00
DATE PLOTTED => 10/26/2023
TIME PLOTTED => 1:24:10 PM

BORDER LAST REVISED 9/17/2018 | CALTRANS WEB SITE IS: HTTP//WWW.DOT.CA.GOV/ | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | USERNAME => DGN FILE => ...\1219000088ab001.dgn | UNIT 0000 | PROJECT NUMBER & PHASE 12190000880

ATTACHMENT B

Plan Sheets

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	ORA	22	R12.1/R13.2		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL 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.

NOTES:

DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.

PAVEMENT CLIMATE REGION

SOUTH COAST

TYPICAL PAVEMENT STRUCTURAL SECTIONS:

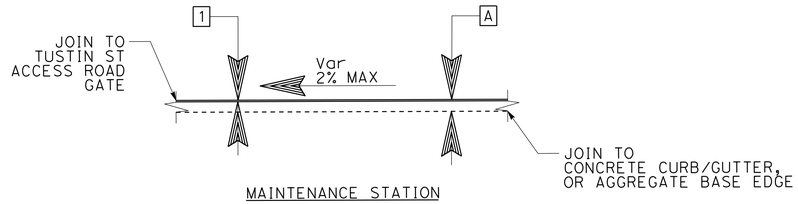
[1] 0.17′ HOT MIX ASPHALT
0.17′ COLD PLANE ASPHALT PAVEMENT

[2] 0.35′ HOT MIX ASPHALT
0.85′ CLASS 2 AGGREGATE BASE

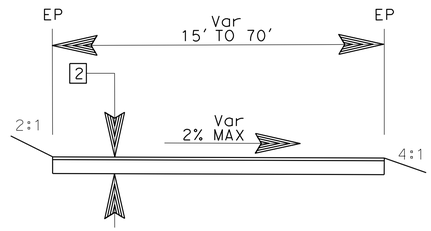
[3] 0.50′ STRUCTURAL CONCRETE
0.33′ CLASS 2 AGGREGATE BASE

[4] 0.33′ JOINTED PLANE CONCRETE PAVEMENT
0.50′ CLASS 2 AGGREGATE BASE
GEOMEMBRANE

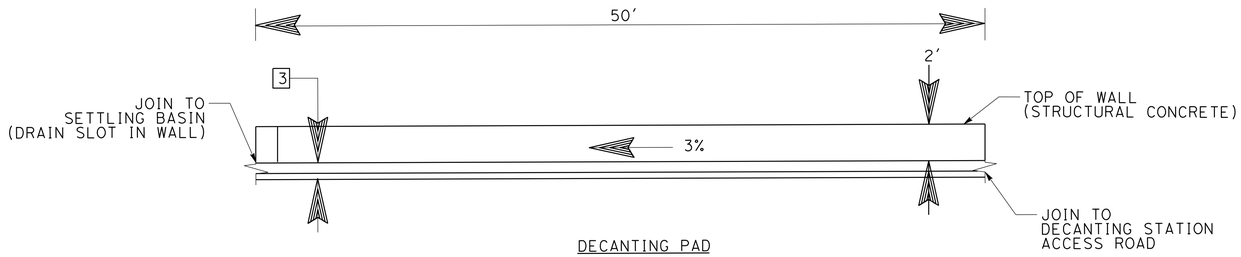
[A] Exist
0.17′ ASPHALT CONCRETE
0.50′ AGGREGATE BASE



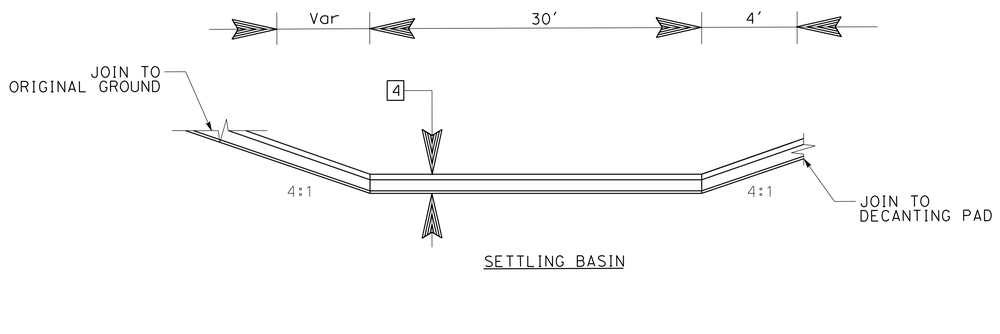
MAINTENANCE STATION
LOT REPAVING



DECANTING STATION
ACESS ROAD



DECANTING PAD



SETTLING BASIN

TYPICAL CROSS SECTIONS

NO SCALE

X-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

FUNCTIONAL SUPERVISOR: MONTASHEEMA AFROZE
CALCULATED-DESIGNED BY:
CHECKED BY:
REVISED BY: SARA DABZADEH
DATE REVISED: XXXXXXX

LAST REVISION
DATE PLOTTED => 10/26/2023
TIME PLOTTED => 11:58:55 AM

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	ORA	22	R12.1/R13.2		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL 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.

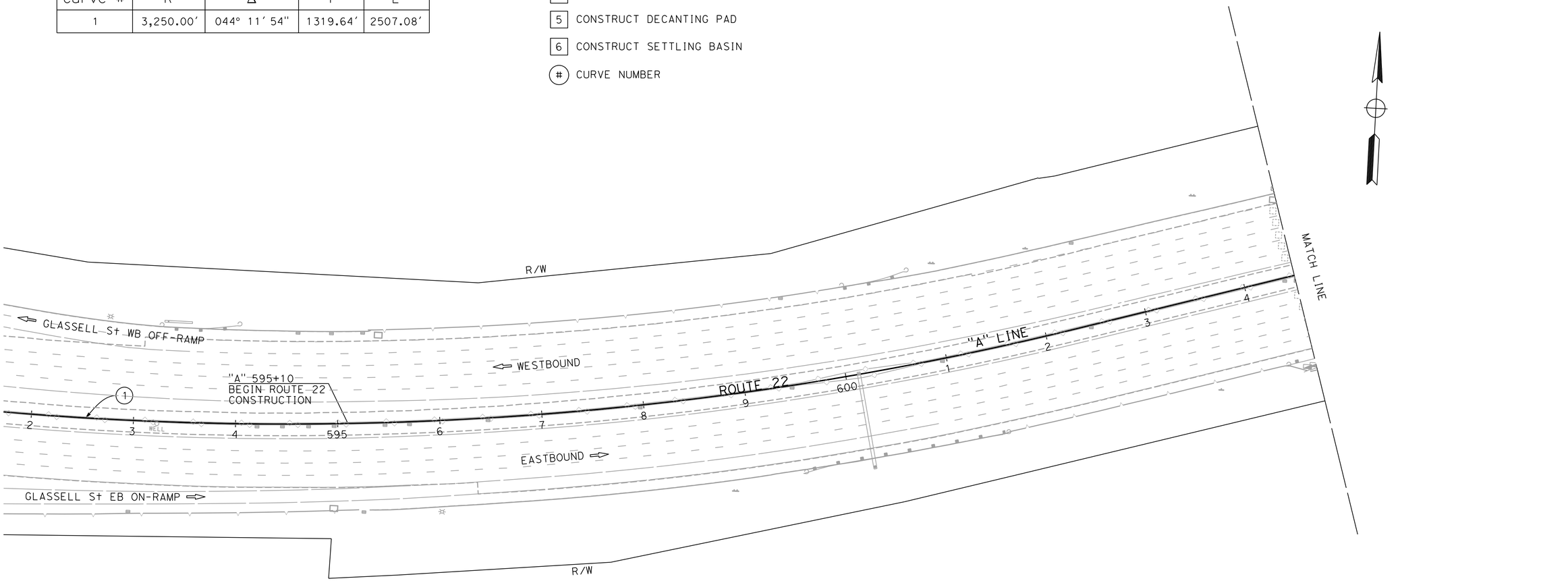
NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR BUILDING EMOLITION AND SITE PLANS, SEE APS PLANS.
3. FOR ELECTRICAL WORK, SEE ELECTRICAL PLANS.

LEGEND:

- COLD PLANE AND OVERLAY ASPHALT CONCRETE PAVEMENT
- EXCAVATE AND PAVE PARKING SURFACE
- EXCAVATE AND PAVE SIDEWALK
- [1] INSTALL TRASH CAPTURE DEVICES
- [2] UPDATE CROSSWALK TO YELLOW THERMOPLASTIC LADDER CROSSWALK
- [3] UPDATE PEDESTRIAN SIGNAGE TO NEW STANDARDS
- [4] CONSTRUCT DECANTING ROAD
- [5] CONSTRUCT DECANTING PAD
- [6] CONSTRUCT SETTLING BASIN
- (#) CURVE NUMBER

CURVE DATA				
Curve #	R	Δ	T	L
1	3,250.00′	044° 11′ 54″	1319.64′	2507.08′



LAYOUT

SCALE: 1" = 50′ **L-1**

CALCULATED-DESIGNED BY

CHECKED BY

FUNCTIONAL SUPERVISOR: MONTASHEEMA AFROZE

REVISED BY: SARA DABZADEH

DATE REVISED: XXXXXXX

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION DATE PLOTTED => 10/26/2023
TIME PLOTTED => 1:37:06 PM

BORDER LAST REVISED 8/5/2020

USERNAME =>
DGN FILE => ...\1219000088ea001.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2995

PROJECT NUMBER & PHASE 12190000880

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR ADDITIONAL NOTES AND LEGENDS, SEE L-1.

CURVE DATA				
Curve #	R	Δ	T	L
2	3000.00′	014° 36′ 40"	384.60′	765.03′

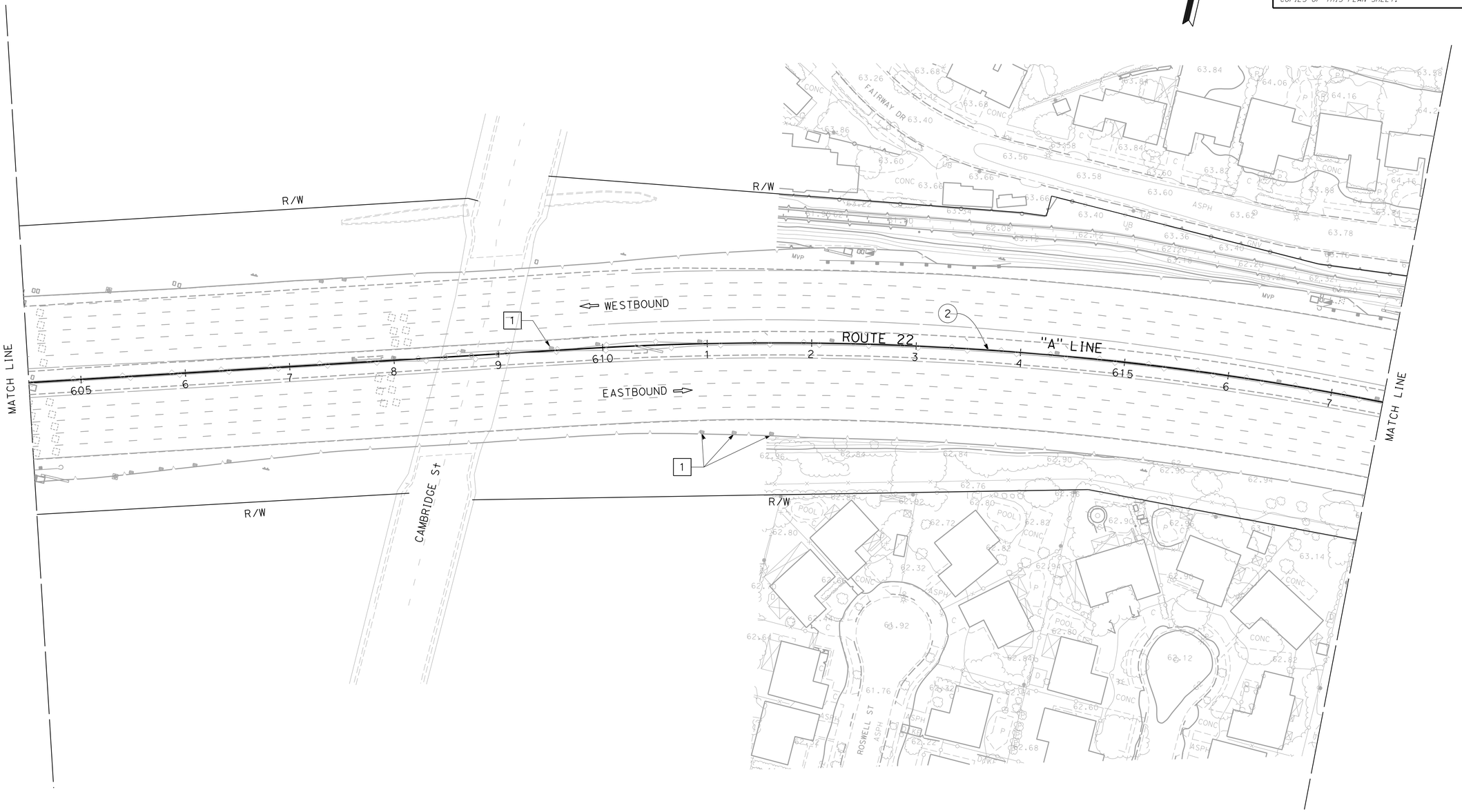
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	ORA	22	R12.1/R13.2		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL 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.



LAYOUT

SCALE: 1" = 50′ **L-2**

REVISED BY | DATE REVISED
SARA DABZADEH | XXXXXXX
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: MONTASHEEMA AFROZE
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION | DATE PLOTTED => 10/26/2023 TIME PLOTTED => 13:17:16 PM

BORDER LAST REVISED 8/5/2020 | USERNAME => DGN FILE => ...\1219000088ea002.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2995 | PROJECT NUMBER & PHASE 12190000880

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR ADDITIONAL NOTES AND LEGENDS, SEE L-1.

CURVE DATA				
Curve #	R	Δ	T	L
3	3280.00′	002° 51′ 52"	82.01′	163.98′
4	2167.00′	011° 38′ 56"	221.05′	440.58′
5	3476.00′	011° 22′ 36"	346.23′	690.19′
6	3500.00′	011° 22′ 13"	348.43′	694.57′
7	2000.00′	017° 25′ 40"	306.54′	608.35′
8	1976.00′	017° 25′ 51"	302.91′	601.15′
9	1115.00′	016° 28′ 27"	161.41′	320.59′

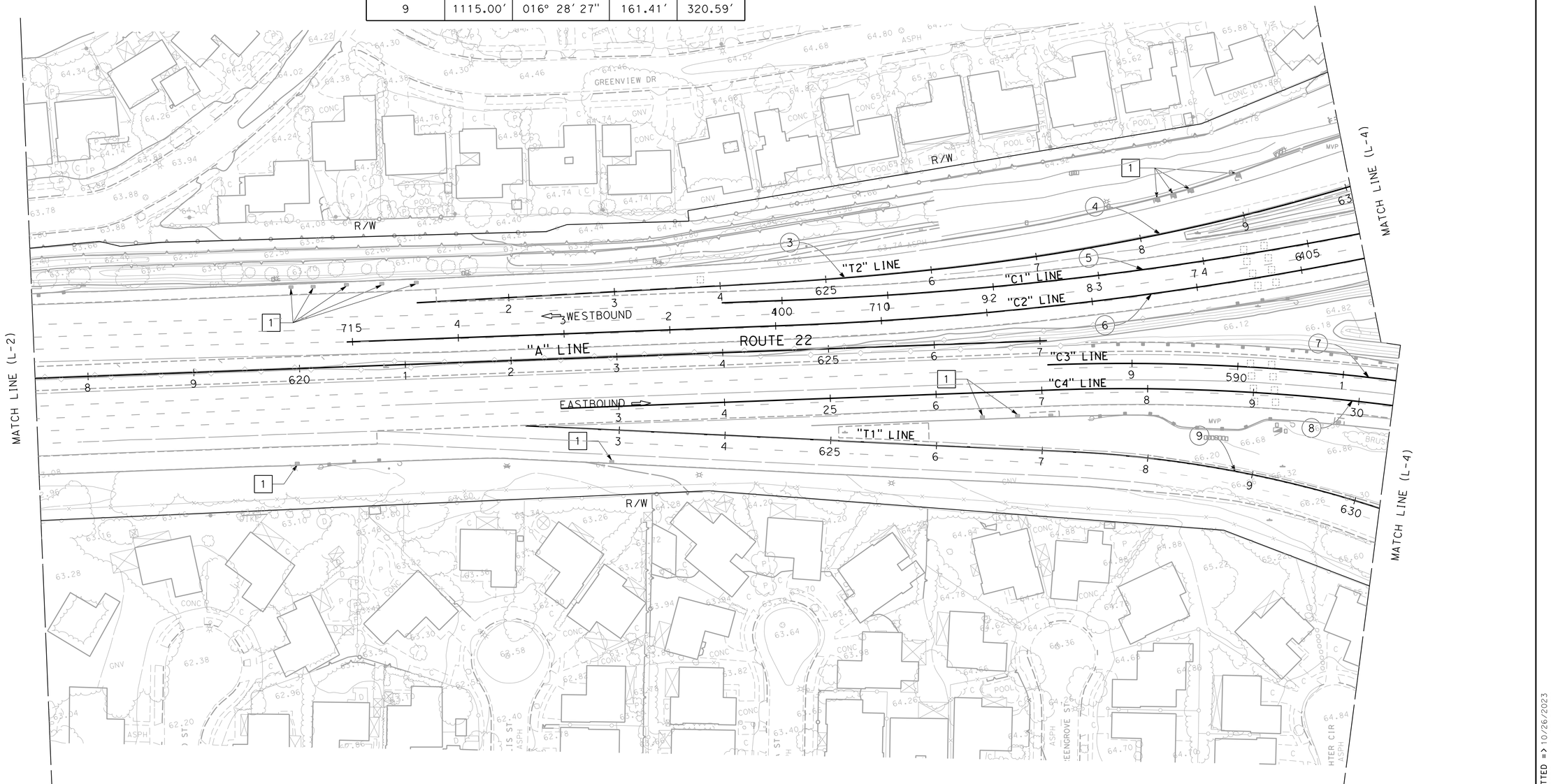
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	ORA	22	R12.1/R13.2		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL 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.



LAYOUT

SCALE: 1" = 50′ **L-3**

REVISED BY | DATE REVISED
CALCULATED-DESIGNED BY
CHECKED BY
SARA DABZADEH | XXXXXXX
FUNCTIONAL SUPERVISOR
MONTASHEEMA AFROZE
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION | DATE PLOTTED => 10/26/2023
TIME PLOTTED => 1:37:25 PM

BORDER LAST REVISED 8/5/2020 | USERNAME => DGN FILE => ...\1219000088ea003.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2995 | PROJECT NUMBER & PHASE 12190000880

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR ADDITIONAL NOTES AND LEGENDS, SEE L-1.

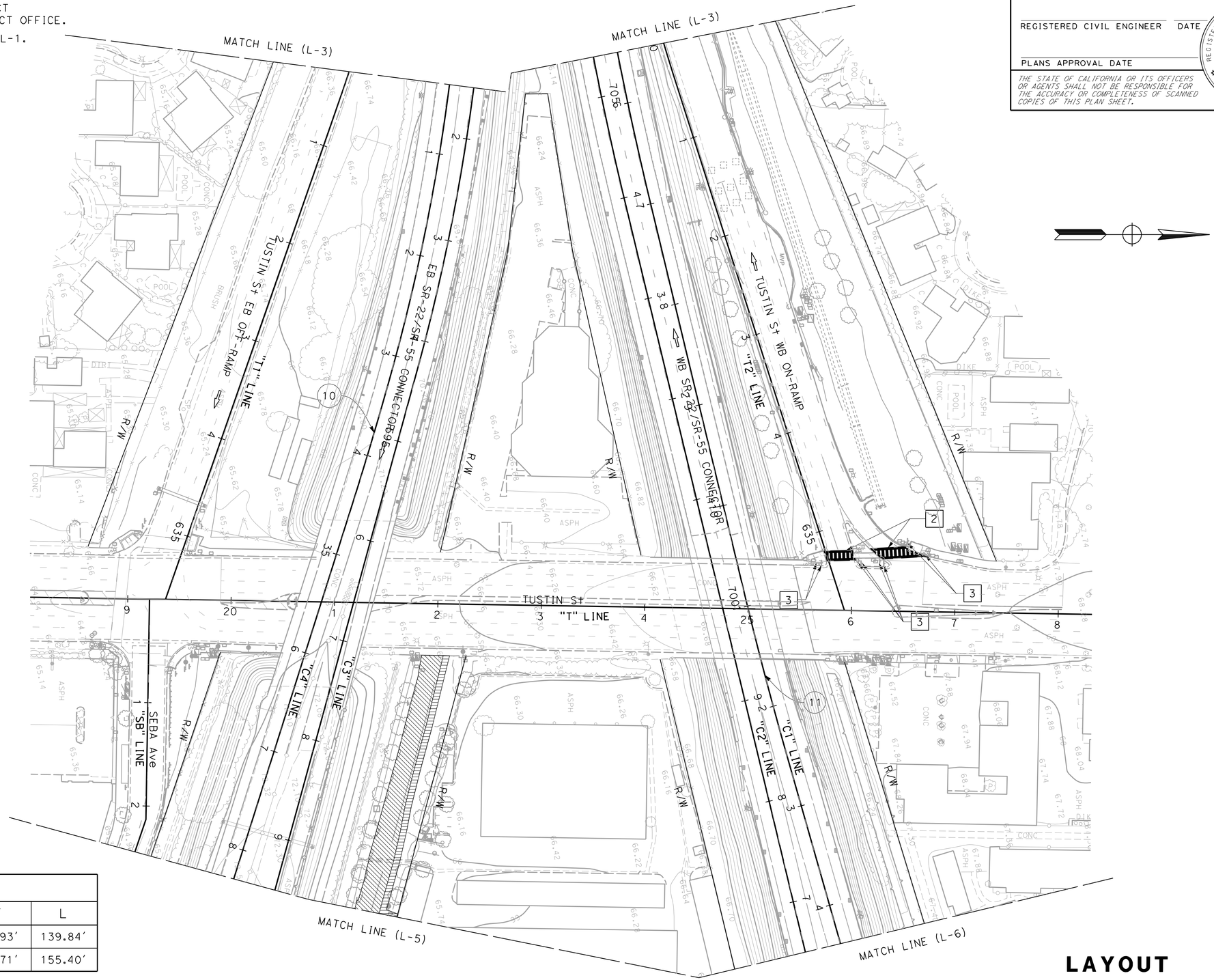
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	ORA	22	R12.1/R13.2		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL 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.



CURVE DATA				
Curve #	R	Δ	T	L
10	3500.00′	002° 17′ 21"	69.93′	139.84′
11	3750.00′	002° 22′ 28"	77.71′	155.40′

LAYOUT

SCALE: 1" = 50′ **L-4**

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: SARA DABZADEH
CHECKED BY: XXXXXXX
FUNCTIONAL SUPERVISOR: MONTASHEEMA AFROZE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION: DATE PLOTTED => 10/26/2023 TIME PLOTTED => 13:37:38 PM

BORDER LAST REVISED 8/5/2020 | USERNAME => DGN FILE => ...\1219000088ea004.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2995 | PROJECT NUMBER & PHASE 12190000880

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR ADDITIONAL NOTES AND LEGENDS, SEE L-1.

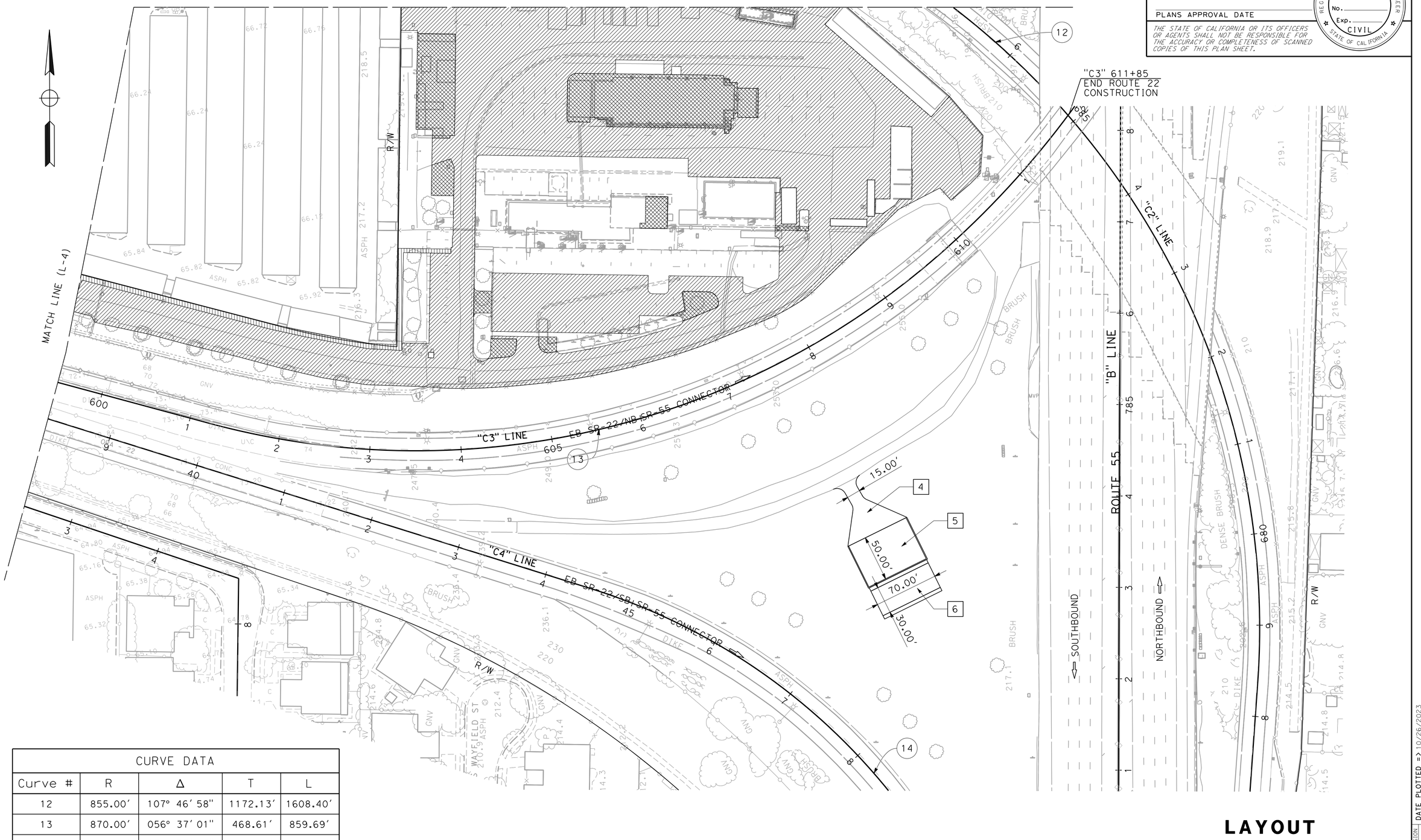
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	ORA	22	R12.1/R13.2		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL 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.



CURVE DATA				
Curve #	R	Δ	T	L
12	855.00′	107° 46′ 58"	1172.13′	1608.40′
13	870.00′	056° 37′ 01"	468.61′	859.69′
14	680.00′	071° 35′ 13"	490.31′	849.61′

LAYOUT

SCALE: 1" = 50′ **L-5**

REVISED BY	DATE REVISED
SARA DABZADEH	XXXXXXX

CALCULATED-DESIGNED BY

CHECKED BY

FUNCTIONAL SUPERVISOR: MONTASHEEMA AFROZE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION

DATE PLOTTED => 10/26/2023
TIME PLOTTED => 11:37:55 PM

BORDER LAST REVISED 8/5/2020

USERNAME =>
DGN FILE => ...\1219000088ea005.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

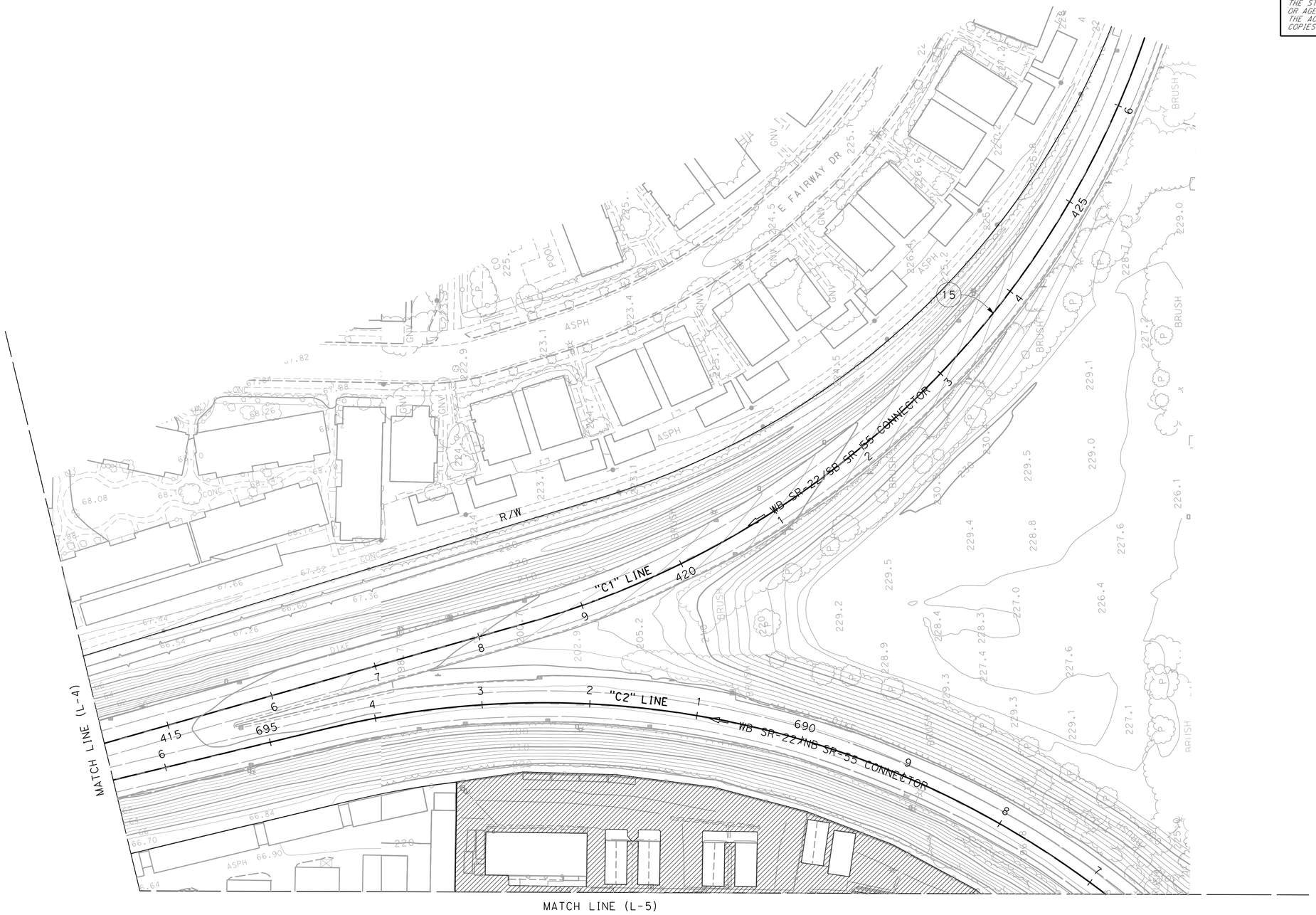
UNIT 2995

PROJECT NUMBER & PHASE 12190000880

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR ADDITIONAL NOTES AND LEGENDS, SEE L-1.

CURVE DATA				
Curve #	R	Δ	T	L
15	853.00′	070° 51′ 15"	606.80′	1054.85′



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	ORA	22	R12.1/R13.2		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — 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.

LAYOUT

SCALE: 1" = 50′ **L-6**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

FUNCTIONAL SUPERVISOR: MONTASHEEMA AFROZE

CALCULATED-DESIGNED BY: SARA DABZADEH

CHECKED BY: XXXXXXX

REVISED BY | DATE REVISED

DATE PLOTTED => 10/26/2023
TIME PLOTTED => 1:38:01 PM

LAST REVISION

BORDER LAST REVISED 8/5/2020

USERNAME =>
DGN FILE => ...\1219000088ea006.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2995

PROJECT NUMBER & PHASE 12190000880

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	22	R12.1/R13.2		

REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. ELECTRICAL — 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.

NOTES: (THIS SHEET ONLY)

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT DISTRICT OFFICE.

ANNOTATIONS: (THIS SHEET ONLY)

1 INSTALL WALL MOUNTED LIGHTING.

MODIFYING LIGHTING SYSTEMS

SCALE: 1" = 50'

E-1

APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR: MERVIN FULLENWIDER

CALCULATED-DESIGNED BY: RUMER CALACHAN

CHECKED BY: MERVIN FULLENWIDER

REVISED BY | DATE REVISED

LAST REVISION: DATE PLOTTED => 26-OCT-2023
00-00-00 TIME PLOTTED => 11:09

BORDER LAST REVISED 7/2/2010

USERNAME => s151009
DGN FILE => 0S080 Layout 1 SR-22 Bridge Lighting.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 3024

PROJECT NUMBER & PHASE 12190000880

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	22	R12.1/R13.2		

REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. ELECTRICAL 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.

NOTES: (THIS SHEET ONLY)

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT DISTRICT OFFICE.

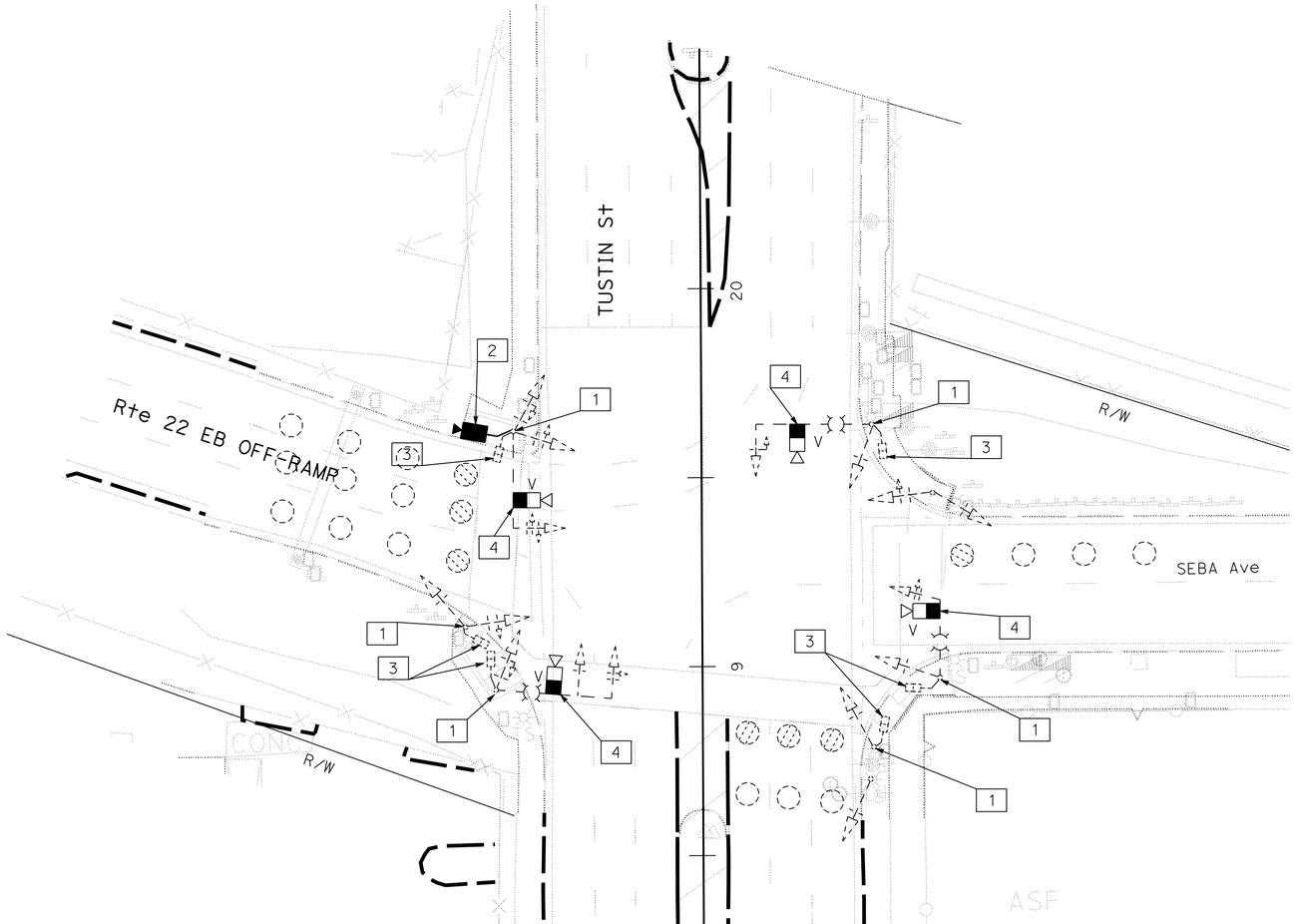
ANNOTATIONS: (THIS SHEET ONLY)

1 RC ALL EXISTING PUSH BUTTON ASSEMBLIES.
INSTALL ACCESSIBLE PEDESTRIAN SIGNALS WITH 9" X 12" SIGN R10-3J (CA).

2 INSTALL TYPE 2 (PTZ) CAMERA ON EXISTING POLE.

3 RC EXISTING PEDESTRIAN SIGNAL FACE MODULE.
INSTALL LED COUNTDOWN PEDESTRIAN SIGNAL FACE MODULE.

4 INSTALL TYPE 1 CAMERA.



MODIFYING SIGNAL AND LIGHTING SYSTEMS

SCALE: 1" = 20'

E-2

APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR: MERVIN FULLENWIDER

CALCULATED-DESIGNED BY: RUMER CALACHAN

CHECKED BY: MERVIN FULLENWIDER

REVISED BY

DATE REVISED

LAST REVISION DATE PLOTTED => 26-OCT-2023
TIME PLOTTED => 11:09

BORDER LAST REVISED 7/2/2010

USERNAME => s151009
DGN FILE => 0S080 Layout 2 EB Off-Ramp - Bassam.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 3024

PROJECT NUMBER & PHASE 12190000880

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	22	R12.1/R13.2		

REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. ELECTRICAL 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.

NOTES: (THIS SHEET ONLY)

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT DISTRICT OFFICE.

ANNOTATIONS: (THIS SHEET ONLY)

1 RC ALL EXISTING PUSH BUTTON ASSEMBLIES.
INSTALL ACCESSIBLE PEDESTRIAN SIGNALS WITH 9" X 12" SIGN R10-3J (CA).

2 INSTALL TYPE 2 (PTZ) CAMERA ON EXISTING POLE.

3 RC EXISTING PEDESTRIAN SIGNAL FACE MODULE.
INSTALL LED COUNTDOWN PEDESTRIAN SIGNAL FACE MODULE.

4 INSTALL TYPE 1 CAMERA.

MODIFYING SIGNAL AND LIGHTING SYSTEMS

SCALE: 1" = 20'

E-3

APPROVED FOR ELECTRICAL WORK ONLY

CALCULATED-DESIGNED BY
CHECKED BY
RUMER CALACHAN
MERVIN FULLENWIDER
REVISED BY
DATE REVISED

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
FUNCTIONAL SUPERVISOR
MERVIN FULLENWIDER

LAST REVISION 10-10-23
DATE PLOTTED => 26-OCT-2023
TIME PLOTTED => 11:09

BORDER LAST REVISED 7/2/2010
USERNAME => s151009
DGN FILE => 05080 Layout 3 WB On- Ramp - Bassam.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 3024
PROJECT NUMBER & PHASE 12190000880

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	22	R12.1/R13.2		

REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. ELECTRICAL — 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.

NOTES: (THIS SHEET ONLY)

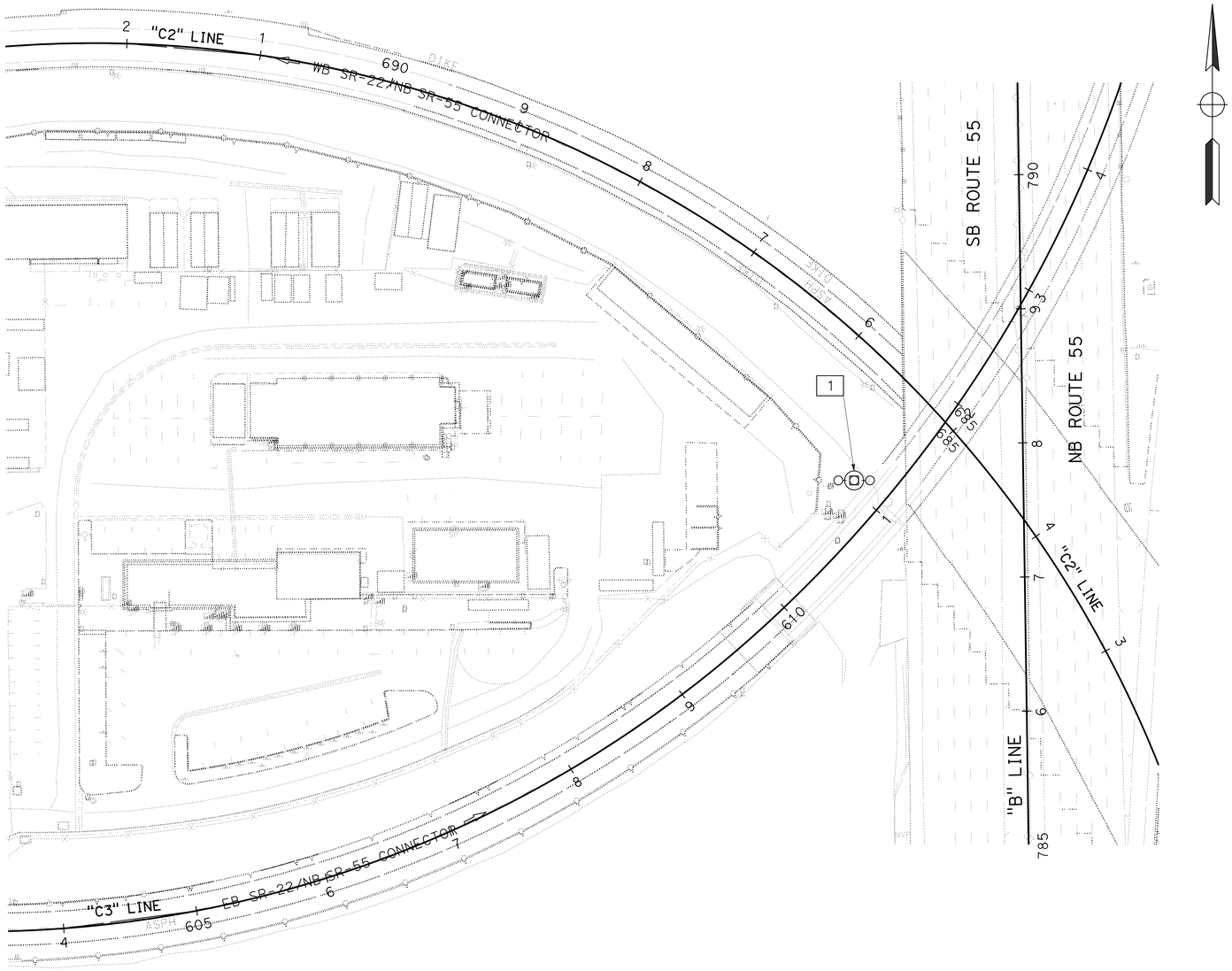
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT DISTRICT OFFICE.

ANNOTATIONS: (THIS SHEET ONLY)

1 INSTALL HD CCTV CAMERA ON EXISTING HIGH MAST CAMERA POLE RING.

LEGEND: (THIS SHEET ONLY)

EXISTING HIGH MAST CAMERA POLE WITH RING.



CAMERA SYSTEMS

SCALE: 1" = 50'

E-4

APPROVED FOR ELECTRICAL WORK ONLY

CALCULATED-DESIGNED BY	RUMER CALACHAN	REVISED BY	
CHECKED BY	MERVIN FULLENWIDER	DATE REVISED	
FUNCTIONAL SUPERVISOR	MERVIN FULLENWIDER		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 26-OCT-2023 | TIME PLOTTED => 11:09

BORDER LAST REVISED 7/2/2010 | USERNAME => s151009 | DGN FILE => OS080 Layout 4 - CCTV.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 3024 | PROJECT NUMBER & PHASE 12190000880

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	22	R12.1/R13.2		

REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. ELECTRICAL STATE OF CALIFORNIA

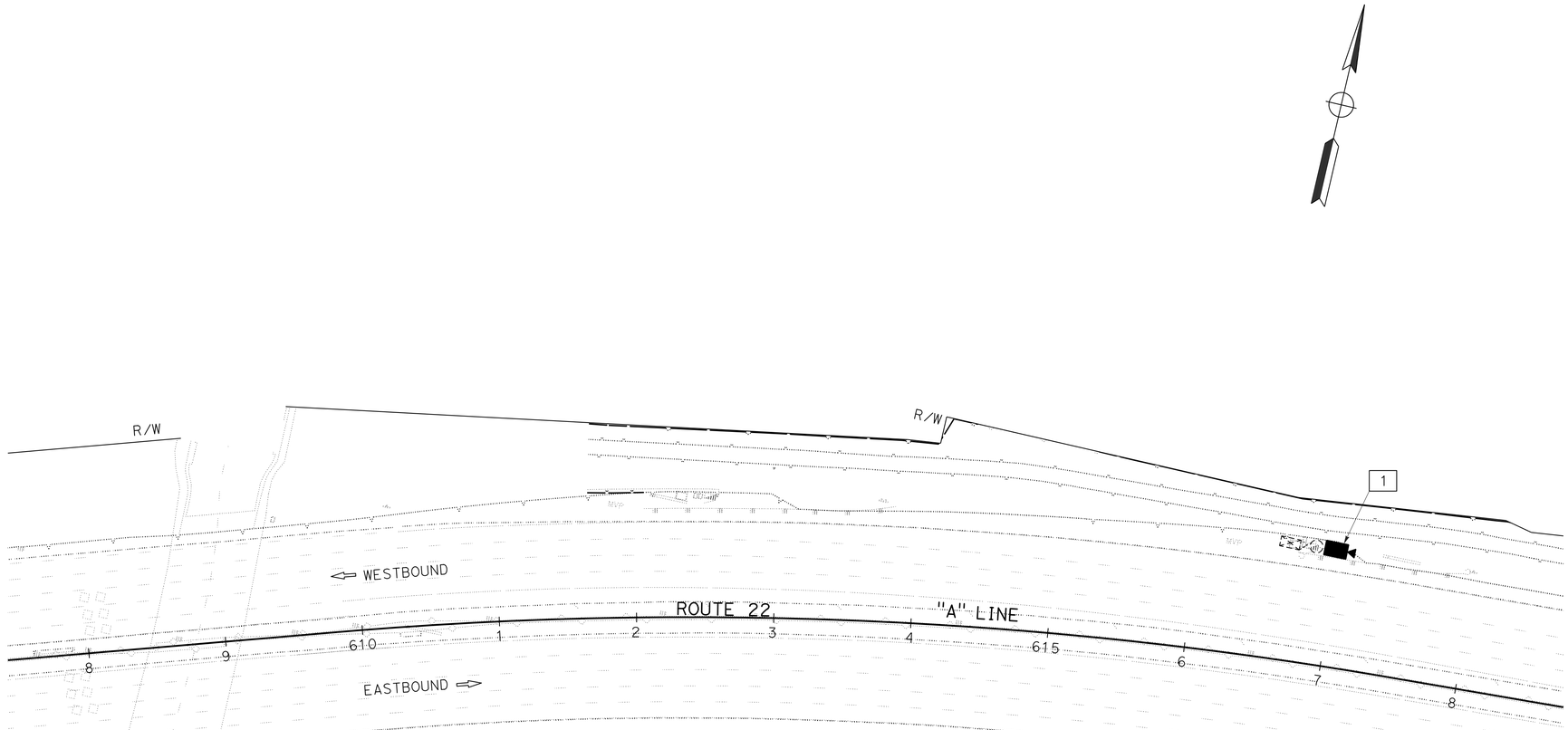
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES: (THIS SHEET ONLY)

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT DISTRICT OFFICE.

ANNOTATIONS: (THIS SHEET ONLY)

1 RC EXISTING CCTV CAMERA, INSTALL HD CCTV CAMERA.



CAMERA SYSTEMS

SCALE: 1" = 50'

E-5

APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR: MERVIN FULLENWIDER

CALCULATED-DESIGNED BY: RUMER CALACHAN

CHECKED BY: MERVIN FULLENWIDER

REVISED BY	DATE REVISED

LAST REVISION: DATE PLOTTED => 26-OCT-2023; TIME PLOTTED => 11:09

00-00-00

BORDER LAST REVISED 7/2/2010

USERNAME => s151009

DGN FILE => 0S080 Layout 5 Cambridge St OC CMS.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 3024

PROJECT NUMBER & PHASE 12190000880

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	22	R12.1/R13.2		

REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. ELECTRICAL 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.

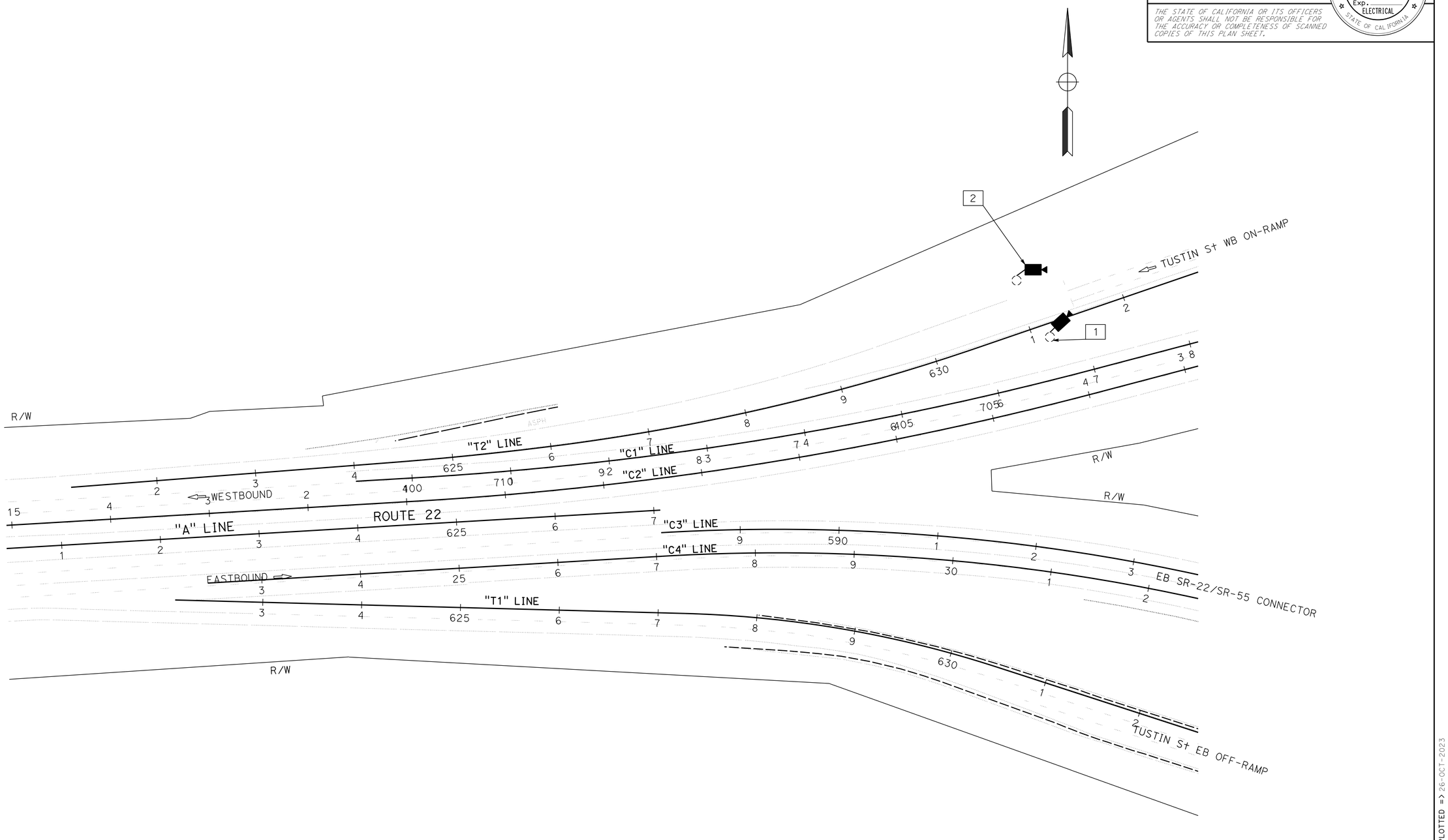
NOTES: (THIS SHEET ONLY)

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT DISTRICT OFFICE.

ANNOTATIONS: (THIS SHEET ONLY)

1 INSTALL TYPE 2 (NON-PTZ) CAMERA ON EXISTING POLE.

2 INSTALL TYPE 2 (PTZ) CAMERA ON EXISTING POLE.



CAMERA SYSTEMS

SCALE: 1" = 50'

E-6

APPROVED FOR ELECTRICAL WORK ONLY

CALCULATED-DESIGNED BY		
CHECKED BY		
REVISED BY	RUMER CALACHAN	
DATE REVISED	MERVIN FULLENWIDER	
FUNCTIONAL SUPERVISOR	MERVIN FULLENWIDER	
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	Caltrans®	

BORDER LAST REVISED 7/2/2010

USERNAME => s151009
DGN FILE => 0S080 Layout 6 - Cameras on WB On-Ramp.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 3024

PROJECT NUMBER & PHASE 12190000880

LAST REVISION DATE PLOTTED => 26-OCT-2023
00-00-00 TIME PLOTTED => 11:09

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF STRUCTURES

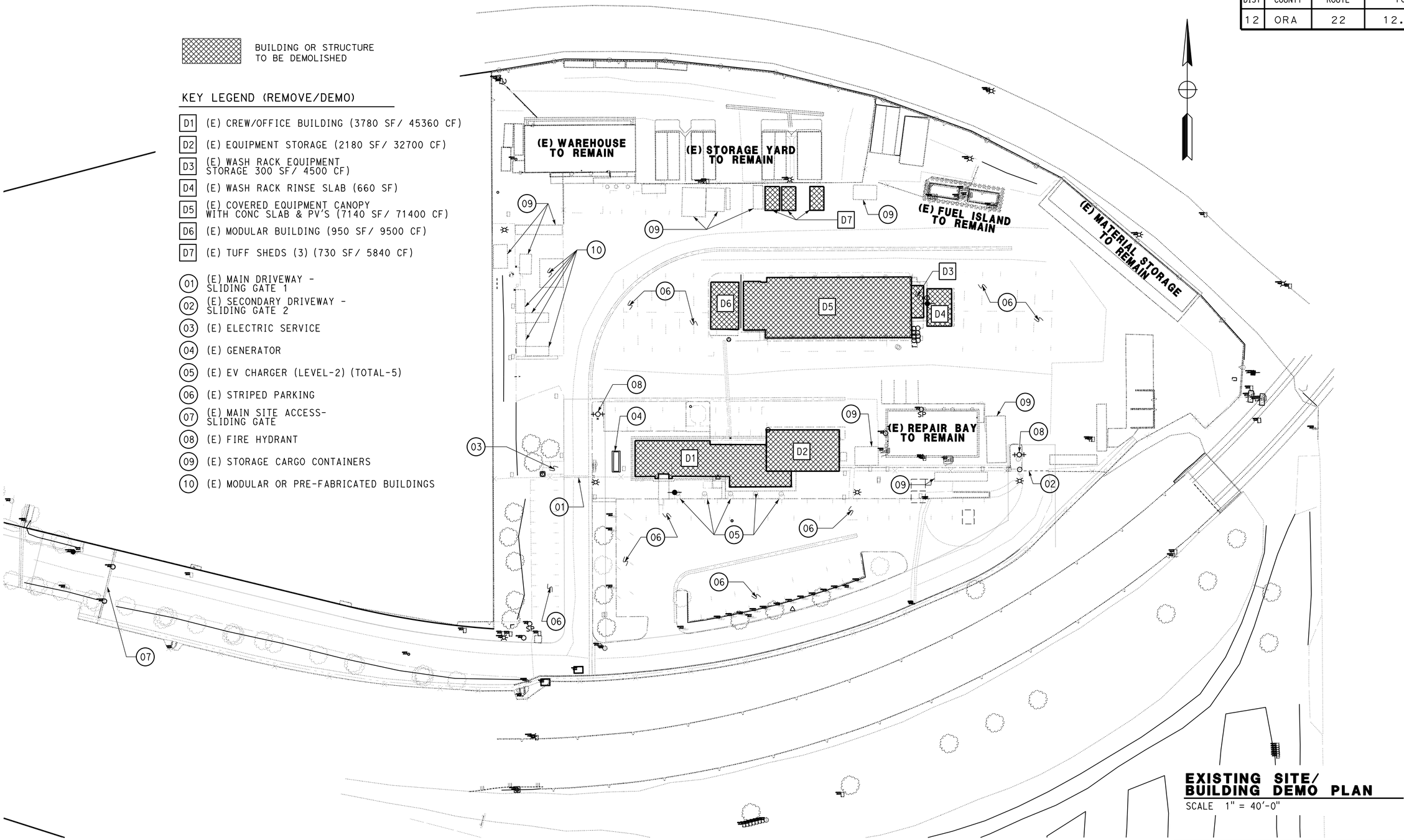
DIST	COUNTY	ROUTE	POST MILE
12	ORA	22	12.1/13.2

BUILDING OR STRUCTURE TO BE DEMOLISHED

KEY LEGEND (REMOVE/DEMO)

- D1 (E) CREW/OFFICE BUILDING (3780 SF/ 45360 CF)
- D2 (E) EQUIPMENT STORAGE (2180 SF/ 32700 CF)
- D3 (E) WASH RACK EQUIPMENT STORAGE 300 SF/ 4500 CF)
- D4 (E) WASH RACK RINSE SLAB (660 SF)
- D5 (E) COVERED EQUIPMENT CANOPY WITH CONC SLAB & PV'S (7140 SF/ 71400 CF)
- D6 (E) MODULAR BUILDING (950 SF/ 9500 CF)
- D7 (E) TUFF SHEDS (3) (730 SF/ 5840 CF)

- 01 (E) MAIN DRIVEWAY - SLIDING GATE 1
- 02 (E) SECONDARY DRIVEWAY - SLIDING GATE 2
- 03 (E) ELECTRIC SERVICE
- 04 (E) GENERATOR
- 05 (E) EV CHARGER (LEVEL-2) (TOTAL-5)
- 06 (E) STRIPED PARKING
- 07 (E) MAIN SITE ACCESS- SLIDING GATE
- 08 (E) FIRE HYDRANT
- 09 (E) STORAGE CARGO CONTAINERS
- 10 (E) MODULAR OR PRE-FABRICATED BUILDINGS



EXISTING SITE/ BUILDING DEMO PLAN

SCALE 1" = 40'-0"

PLANNING STUDY

DESIGNED BY	F. THOMAS	DATE	07/2023
DRAWN BY	G. EFE	DATE	07/2023
CHECKED BY	R. MILLER	DATE	07/2023
APPROVED	_	DATE	_

OTA DESIGN BRANCH 1

ORANGE MAINTENANCE STATION

BRIDGE NO. -	UNIT: 3584
SCALE: AS SHOWN	PROJECT NO. & PHASE: 12190000880

CONTRACT NO.: 12-0S080

USERNAME => s119326 DATE PLOTTED => 26-JUL-2023 TIME PLOTTED => 08:40

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 08-09-10)

FILE => sheet_a1_0_site plan-demov2.dgn

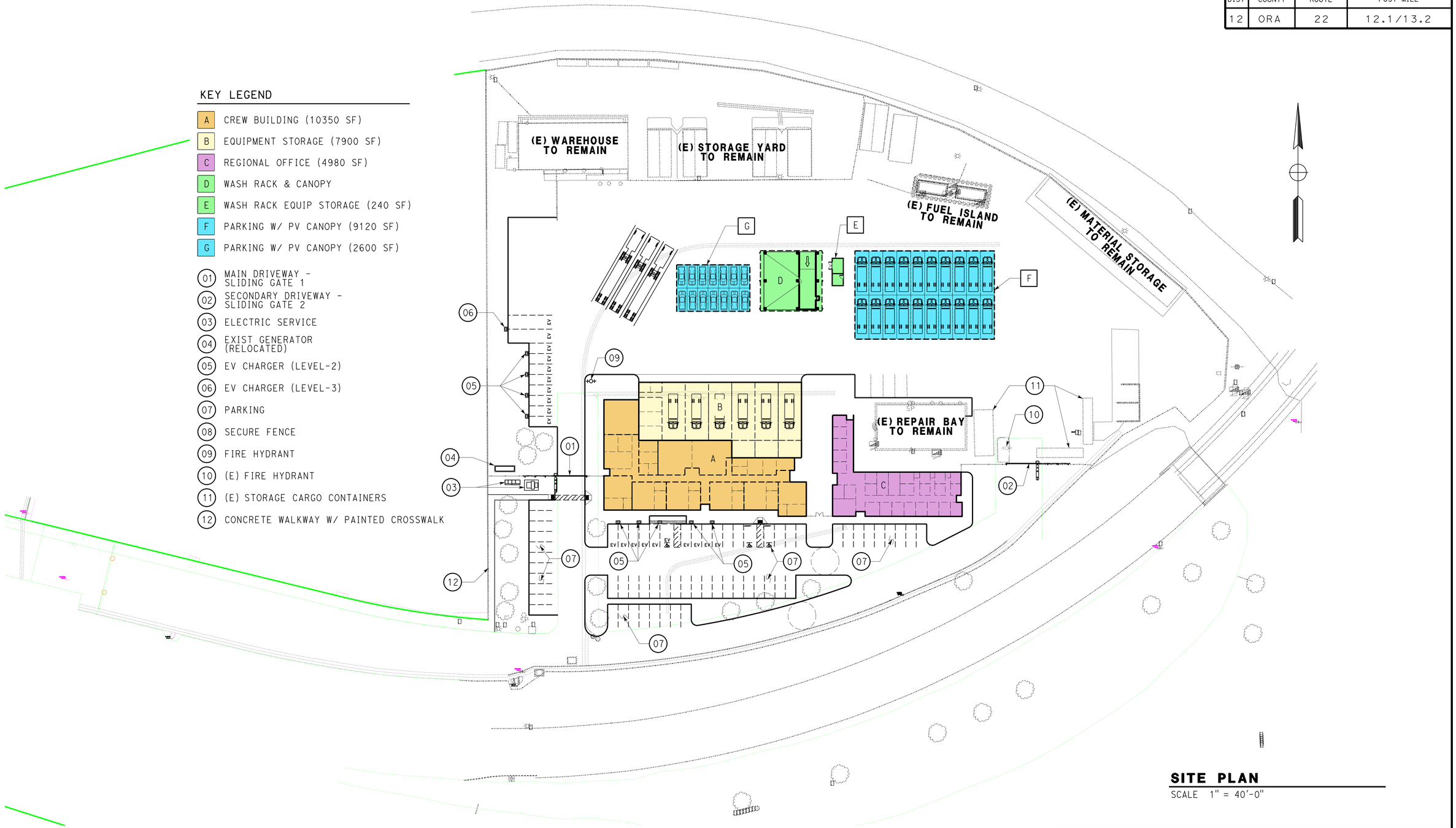
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF STRUCTURES

DIST	COUNTY	ROUTE	POST MILE
12	ORA	22	12.1/13.2

KEY LEGEND

- A CREW BUILDING (10350 SF)
- B EQUIPMENT STORAGE (7900 SF)
- C REGIONAL OFFICE (4980 SF)
- D WASH RACK & CANOPY
- E WASH RACK EQUIP STORAGE (240 SF)
- F PARKING W/ PV CANOPY (9120 SF)
- G PARKING W/ PV CANOPY (2600 SF)

- 01 MAIN DRIVEWAY - SLIDING GATE 1
- 02 SECONDARY DRIVEWAY - SLIDING GATE 2
- 03 ELECTRIC SERVICE
- 04 EXIST GENERATOR (RELOCATED)
- 05 EV CHARGER (LEVEL-2)
- 06 EV CHARGER (LEVEL-3)
- 07 PARKING
- 08 SECURE FENCE
- 09 FIRE HYDRANT
- 10 (E) FIRE HYDRANT
- 11 (E) STORAGE CARGO CONTAINERS
- 12 CONCRETE WALKWAY W/ PAINTED CROSSWALK



SITE PLAN
SCALE 1" = 40'-0"

DESIGNED BY F. THOMAS	DATE 07/2023	CONCEPT-1	PLANNING STUDY
DRAWN BY G. EFE	DATE 07/2023	OTA DESIGN BRANCH 1	ORANGE MAINTENANCE STATION
CHECKED BY R. MILLER	DATE 07/2023	BRIDGE NO. -	UNIT: 3584
APPROVED _	DATE _	SCALE: AS SHOWN	PROJECT NO. & PHASE: 12190000880

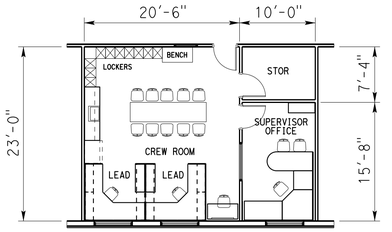
USERNAME => s119326 DATE PLOTTED => 26-JUL-2023 TIME PLOTTED => 08:11

FILE => sheet_a1_1_site plan-new.dgn

CONTRACT NO.: 12-0S080

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF STRUCTURES

DIST	COUNTY	ROUTE	POST MILE
12	ORA	22	12.1/13.2



A CREW ROOM PLAN (TYPICAL)
SCALE 1" = 10'-0"

KEY LEGEND

- A CREW BUILDING (10350 SF)
- B EQUIPMENT STORAGE (7900 SF)
- C REGIONAL OFFICE (4980 SF)
- D WASH RACK & CANOPY
- E WASH RACK EQUIP STORAGE (240 SF)
- F PARKING W/ PV CANOPY (9120 SF)
- G PARKING W/ PV CANOPY (2600 SF)

01 MAIN DRIVEWAY - SLIDING GATE 1
02 SECONDARY DRIVEWAY - SLIDING GATE 2
03 ELECTRIC SERVICE
04 EXIST GENERATOR (RELOCATED)
05 EV CHARGER (LEVEL-2)
06 EV CHARGER (LEVEL-3)
07 PARKING
08 SECURE FENCE
09 FIRE HYDRANT
10 (E) FIRE HYDRANT
11 (E) STORAGE CARGO CONTAINERS
12 CONCRETE WALKWAY W/ PAINTED CROSSWALK

SITE PLAN
SCALE 1" = 20'-0"

DESIGNED BY	F. THOMAS	DATE	07/2023
DRAWN BY	G. EFE	DATE	07/2023
CHECKED BY	R. MILLER	DATE	07/2023
APPROVED	-	DATE	-

CONCEPT-1

OTA DESIGN BRANCH 1

PLANNING STUDY

ORANGE MAINTENANCE STATION

BRIDGE NO. -	UNIT: 3584
SCALE: AS SHOWN	PROJECT NO. & PHASE: 12190000880

CONTRACT NO.: 12-0S080

USERNAME => s119326 DATE PLOTTED => 26-JUL-2023 TIME PLOTTED => 08:19

FILE => sheet_a1_2_floor_plan.dgn

ATTACHMENT C

Cost Estimate

PROJECT

PRELIMINARY COST ESTIMATE©

EA: 12-0S0800 PID: 1219000088

EA: 12-0S0800

PID: 1219000088

District-County-Route: 12-ORA-22

PM: R12.1/R13.2

Type of Estimate : Project Report (PR)

Program Code : 20.10.201.315

Project Limits : On SR-22 from 0.2 miles west of Cambridge Street Overcrossing (PM R12.1) to Route 22/55 separation (PM R13.2)

Project Description: Upgrade Facility

Scope : This project proposes to improve TMS elements, partially reconstruct the Orange Maintenance Facility, add complete street elements, and add treatment BMPs.

Alternative : Build Alternative

SUMMARY OF PROJECT COST ESTIMATE

	Current Year Cost	Escalated Cost (2.5 Yrs at 3.2%-4.9% per yr)
TOTAL ROADWAY COST	$ 6,376,100	$ 7,052,229
TOTAL STRUCTURES COST	$ 16,928,587	$ 18,723,714
SUBTOTAL CONSTRUCTION COST	$ 23,304,687	$ 25,775,943
TOTAL RIGHT OF WAY COST	$ -	$ -
TOTAL CAPITAL OUTLAY COSTS	$ 23,305,000	$ 25,776,000
PA/ED SUPPORT	$ 1,383,000	$ 1,383,000
PS&E SUPPORT	$ 2,958,934	$ 3,220,000
RIGHT OF WAY SUPPORT	$ -	$ -
CONSTRUCTION SUPPORT	$ 3,592,992	$ 3,910,000
TOTAL SUPPORT COST	$ 7,935,000	$ 8,513,000
TOTAL PROJECT COST	$ 31,250,000	$ 34,300,000 *

Programmed Amount

	Month	/	Year
Date of Estimate (Month/Year)	11	/	2023
Estimated Construction Start (Month/Year)	9	/	2026
Number of Working Days =			250
Estimated Mid-Point of Construction (Month/Year)	3	/	2027
Estimated Construction End (Month/Year)	9	/	2027

Number of Plant Establishment Days

Estimated Project Schedule

PID Approval	6/21/2021
PA/ED Approval	11/17/2023
PS&E	11/7/2025
RTL	2/5/2026
Begin Construction	9/3/2026

Reviewed by District O.E. or Cost Estimate Certifier

Office Engineer / Cost Estimate Certifier	Date	Phone
	xx/xx/xxxx	(xxx) xxx-xxxx

Approved by Project Manager

Project Manager	Date	Phone
	xx/xx/xxxx	(xxx) xxx-xxxx

I. ROADWAY ITEMS SUMMARY

	Section		Cost
1	**Earthwork**	$	265,500
2	**Pavement Structural Section**	$	1,346,600
3	**Drainage**	$	1,475,000
4	**Specialty Items**	$	68,500
5	**Environmental**	$	349,900
6	**Traffic Items**	$	717,000
7	**Detours**	$	-
8	**Minor Items**	$	-
9	**Roadway Mobilization**	$	422,300
10	**Supplemental Work**	$	192,600
11	**State Furnished**	$	540,000
12	**Time-Related Overhead**	$	423,100
13	**Total Roadway Contingency**	$	575,600
	TOTAL ROADWAY ITEMS	**$**	**6,376,100**

Estimate Prepared By : Sara Dabzadeh | 11/15/2023 | 657-328-6616

Name and Title | Date | Phone

Estimate Reviewed By :

Name and Title | Date | Phone

By signing this estimate you are attesting that you have discussed your project with all functional units and have incorporated all their comments or have discussed with them why they will not be incorporated.

SECTION 1: EARTHWORK

Item code		Unit	Quantity		Unit Price ($)			Cost
190101	Roadway Excavation	CY	630	x	350.00	=	$	220,500
190105	Roadway Excavation (Type Z-2)	CY	50	x	600.00	=	$	30,000
170103	Clearing & Grubbing	LS	1	x	10,000.00	=	$	10,000
170101	Develop Water Supply	LS	1	x	5,000.00	=	$	5,000
					TOTAL EARTHWORK SECTION ITEMS		**$**	**265,500**

SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code		Unit	Quantity		Unit Price ($)			Cost
401050	Jointed Plain Concrete Pavement	CY	26	x	1,900.00	=	$	49,400
390132	Hot Mix Asphalt (Type A)	TON	3,313	x	150.00	=	$	496,950
397005	Tack Coat	TON	10	x	1,100.00	=	$	11,000
398200	Cold Plane	SQYD	28,958	x	5.00	=	$	144,790
393004	Geosynthetic Pavement Interlayer (Type X)	SQYD	23,120	x	3.00	=	$	69,360
260203	Class 2 Aggregate Base	CY	1,432	x	200.00	=	$	286,400
731627	Minor Concrete (Curb, Sidewalk, and Curb Ramp)	CY	86	x	1,500.00	=	$	129,000
510050	Structural Concrete	CY	77	x	1,500.00	=	$	115,500
520101	Bar Reinforcing Steel	LB	5,031	x	6.00	=	$	30,186
698601	Geomembrane (Water Barrier)	SQYD	280	x	50.00	=	$	14,000
					TOTAL PAVEMENT STRUCTURAL SECTION ITEMS		**$**	**1,346,600**

SECTION 3: DRAINAGE

Item code		Unit	Quantity		Unit Price ($)			Cost
XXXXXX	Additional Drainage	LS	1	x	30,000.00	=	$	30,000
0142XX	Trash Capture Housing	EA	17	x	85,000.00	=	$	1,445,000
						TOTAL DRAINAGE ITEMS	**$**	**1,475,000**

SECTION 4: SPECIALTY ITEMS

Item code		Unit	Quantity		Unit Price ($)			Cost
080050	Progress Schedule (Critical Path Method)	LS	1	x	10,000.00	=	$	10,000
070030	Lead Compliance Plan	LS	1	x	5,000.00	=	$	5,000
140003	Asbestos Compliance Plan	LS	1	x	5,000.00	=	$	5,000
8003XX	Chain Link Fence (Type XX)	LF	1,000	x	40.00	=	$	40,000
735000	Parking Bumper (Precast Concrete)	EA	150	x	50.00	=	$	7,500
XXXXXX	Bike Rack	EA	2	x	500.00	=	$	1,000
						TOTAL SPECIALTY ITEMS	**$**	**68,500**

SECTION 5: ENVIRONMENTAL

5A - ENVIRONMENTAL MITIGATION

Item code		Unit	Quantity		Unit Price ($)			Cost		
									Subtotal Environmental Mitigation	$ -

5B - LANDSCAPE AND IRRIGATION

Item code		Unit	Quantity		Unit Price ($)			Cost		
20XXXX	Highway Planting	LS	1	x	18,000.00	=	$	18,000		
20XXXX	Irrigation System	LS	1	x	18,500.00	=	$	18,500		
204099	Plant Establishment Work	LS	1	x	3,000.00	=	$	3,000		
150685	Remove Irrigation Facility	LS	1	x	2,000.00	=	$	2,000		
									Subtotal Landscape and Irrigation	$ 41,500

5C - EROSION CONTROL

Item code		Unit	Quantity		Unit Price ($)			Cost		
									Subtotal Erosion Control	$ -

5D - NPDES

Item code		Unit	Quantity		Unit Price ($)			Cost		
130300	Prepare SWPPP	LS	1	x	30,500.00	=	$	30,500		
130100	Job Site Management	LS	1	x	250,000.00	=	$	250,000		
130330	Storm Water Annual Report	EA	3	x	2,000.00	=	$	6,000		
130310	Rain Event Action Plan	EA	15	x	500.00	=	$	7,500		
130320	Storm Water Sampling and Analysis Day	EA	4	x	3,600.00	=	$	14,400		
									Subtotal NPDES	$ 308,400
									TOTAL ENVIRONMENTAL	**$ 349,900**

Supplemental Work for NPDES

066595	Water Pollution Control Maintenance Sharing*	LS	1	x	30,500.00	=	$	30,500		
066596	Additional Water Pollution Control**	LS	1	x	6,000.00	=	$	6,000		
066597	Storm Water Sampling and Analysis***	LS	1	x	6,000.00	=	$	6,000		
066916	Annual General Construction Permit Fees	LS	1	x	2,000.00	=	$	2,000		
									Subtotal Supplemental Work for NDPS	$ 44,500

*Applies to all SWPPPs and those WPCPs with sediment control or soil stabilization BMPs.

**Applies to both SWPPPs and WPCP projects.

*** Applies only to project with SWPPPs.

SECTION 6: TRAFFIC ITEMS

6A - Traffic Electrical

Item code		Unit	Quantity		Unit Price ($)			Cost
871399	Camera Systems	LS	1	x	30,000.00	=	$	30,000
872131	Modifying Lighting Systems	LS	1	x	110,000.00	=	$	110,000
872133	Modifying Signal And Lighting Systems	LS	1	x	300,000.00	=	$	300,000

Subtotal Traffic Electrical *$* *440,000*

6B - Traffic Signing and Striping

Item code		Unit	Quantity		Unit Price ($)			Cost
820840	Roadside Sign - One Post	EA	4	x	1,000.00	=	$	4,000
820850	Roadside Sign - Two Post	EA	4	x	1,000.00	=	$	4,000
840556	Paint Traffic Stripe (2-Coat)	LF	3,000	x	4.50	=	$	13,500
846012	Thermoplastic Crosswalk and Pavement Marking (Enhanced Wet Night Visibility)	SQFT	490	x	12.00	=	$	5,880

Subtotal Traffic Signing and Striping *$* *27,380*

6C - Traffic Management Plan

Item code		Unit	Quantity		Unit Price ($)			Cost
128652	Portable Changeable Message Signs	LS	1	x	$ 25,000	=	$	25,000
120090	Construction Area Signs	LS	1	x	$ 10,000	=	$	10,000

Subtotal Traffic Management Plan *$* *35,000*

6C - Stage Construction and Traffic Handling

Item code		Unit	Quantity		Unit Price ($)			Cost
120165	Channelizer (Surface Mounted)	EA	60	x	100.00	=	$	6,000
120116	Type II Barricade	EA	12	x	50.00	=	$	600
120120	Type III Barricade	EA	6	x	200.00	=	$	1,200
120100	Traffic Control System	LS	1	x	150,000.00	=	$	150,000
120204	Portable Radar Speed Feedback Sign System Day	EA	24	x	130.00	=	$	3,120
120320	Temporary Barrier System	LF	2,000	x	30.00	=	$	60,000
129110	Temporary Crash Cushion	EA	6	x	250.00	=	$	1,500

Subtotal Stage Construction and Traffic Handling *$* *214,620*

TOTAL TRAFFIC ITEMS **$** **717,000**

SECTION 7: DETOURS

Includes constructing, maintaining, and removal

Item code		Unit	Quantity	Unit Price ($)	Cost

* Includes constructing, maintaining, and removal

TOTAL DETOURS $ -

SUBTOTAL SECTIONS 1 through 7 $ 4,222,500

SECTION 8: MINOR ITEMS

8A - Americans with Disabilities Act Items

ADA Items 0.0% $ -

8B - Bike Path Items

Bike Path Items 0.0% $ -

8C - Other Minor Items

Other Minor Items 0.0% $ -

Total of Section 1-7 $ 4,222,500 x 0.0% = $ -

TOTAL MINOR ITEMS $ -

SECTIONS 9: ROADWAY MOBILIZATION

Item code							
999990	Total Section 1-8	$	4,222,500	x 10%	= $	422,250	

TOTAL ROADWAY MOBILIZATION $ **422,300**

SECTION 10: SUPPLEMENTAL WORK

Item code		Unit	Quantity		Unit Price ($)		Cost
066670	Payment Adjustments For Price Index Fluctuations	LS	1	x	21,000.00	= $	21,000
066094	Value Analysis	LS	1	x	10,000.00	= $	10,000
066070	Maintain Traffic	LS	1	x	30,000.00	= $	30,000
066921	Dispute Resolution Advisor	LS	1	x	5,000.00	= $	5,000
066015	Federal Trainee Program	LS	1	x	2,000.00	= $	17,600
066610	Partnering	LS	1	x	20,000.00	= $	20,000

*Cost of **NPDES** Supplemental Work specified in Section 5D* = $ 44,500

Total Section 1-8 $ 4,222,500 0% = $ -

TOTAL SUPPLEMENTAL WORK $ **148,100**

SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price ($)		Cost
066105	Resident Engineers Office	LS	1	x	225,000.00	=	$225,000
066063	Traffic Management Plan - Public Information	LS	1	x	10,000.00	=	$10,000
066062	COZEEP Contract	LS	1	x	30,000.00	=	$30,000
066911	Utility Connection Fee (Elect)	LS	1	x	75,000.00	=	$75,000
066912	Utility Connection Fee (Telephone)	LS	1	x	10,000.00	=	$10,000
XXXXXX	EV Fast Charger	EA	2	x	80,000.00	=	$160,000
XXXXXX	EV Level 2 Charger	EA	10	x	3,000.00	=	$30,000

Total Section 1-8 $ 4,222,500 0% = $ -

TOTAL STATE FURNISHED $540,000

SECTION 12: TIME-RELATED OVERHEAD

Total of Roadway and Structures Contract Items excluding Mobilization $21,151,087 (used to calculate TRO)

Total Construction Cost (excluding TRO and Contingency) $22,261,487 (used to check if project is greater than $5 million excluding contingency)

Estimated Time-Related Overhead (TRO) Percentage (0% to 10%) = **2%**

Item code		Unit	Quantity		Unit Price ($)		Cost
090100	Time-Related Overhead	WD	250	X	$1,692	=	$423,100

TOTAL TIME-RELATED OVERHEAD $423,100

SECTION 13: ROADWAY CONTINGENCY

Risk Amount from Risk Register		(for Known Risks)			0%		
Additional or Residual Contingency		(for Unknown/Undefined Risks)			10%		$575,600
Total Section 1-12	$	5,756,000	x	**10%**		=	$575,600

TOTAL CONTINGENCY* $575,600

II. STRUCTURE ITEMS

	Building 1	Building 2	Building 3
DATE OF ESTIMATE	08/04/20	08/04/20	08/04/20
Building Name	Building Demo	Regional Office Building	Crew Office Building
Bridge Number			
Structure Type	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Width (Feet) [out to out]	0 LF	0 LF	0 LF
Total Building Length (Feet)	0 LF	0 LF	0 LF
Total Area (Square Feet)	15,740 SQFT	4,980 SQFT	10,350 SQFT
Structure Depth (Feet)	0 LF	0 LF	0 LF
Footing Type (pile or spread)	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Cost Per Square Foot	$14	$434	$335
COST OF EACH	**$217,767**	**$2,161,320**	**$3,462,696**

	Others	Others	Others
DATE OF ESTIMATE	08/04/20	08/04/20	08/04/20
Building Name	Wash Rack with Canopy	EVCs	Site Work
Bridge Number			
Structure Type	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Width (Feet) [out to out]	0 LF	0 LF	0 LF
Total Building Length (Feet)	0 LF	0 LF	0 LF
Total Area (Square Feet)	1,700 SQFT	1 LS	1 LS
Structure Depth (Feet)	0 LF	0 LF	0 LF
Footing Type (pile or spread)	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Cost Per Square Foot	$716	$413,786	$2,610,708
COST OF EACH	**$1,217,710**	**$413,786**	**$2,610,708**

TOTAL COST OF BRIDGES		**$0**
TOTAL COST OF BUILDINGS		**$13,542,869**
STRUCTURES MOBILIZATION	0%	**$0**
STRUCTURES CONTINGENCY*	25%	**$3,385,717**
TOTAL COST OF STRUCTURES		**$16,928,587**

Estimate Prepared By: _____ _____

XXXXXXXXXXXXXXXX ------ Division of Structures Date

EA: 12-0S0800 PID: 1219000088

III. RIGHT OF WAY

Fill in all of the available information from the Right of Way Data Sheet.

A)	A1)	Acquisition, including Excess Land Purchases, Damages & Goodwill, Fees	$	
	A2)	SB-1210	$	0
B)		Acquisition of Offsite Mitigation	$	0
C)	C1)	Utility Relocation (State Share)	$	
	C2)	Potholing (Design Phase)	$	0
D)		Railroad Acquisition	$	0
E)		Clearance / Demolition	$	0
F)		Relocation Assistance (RAP and/or Last Resort Housing Costs)	$	0
G)		Title and Escrow	$	0
H)		Environmental Review	$	0
I)		Condemnation Settlements 0%	$	0
J)		Design Appreciation Factor 0%	$	0
K)		Utility Relocation (Construction Cost)	$	0

L)	**TOTAL RIGHT OF WAY ESTIMATE**	**$0**
M)	**TOTAL R/W ESTIMATE: Escalated**	**$0**
N)	**RIGHT OF WAY SUPPORT**	**$0**

Support Cost Estimate Prepared By	Project Coordinator[1]	Phone
Utility Estimate Prepared By	Utility Coordinator[2]	Phone
R/W Acquisition Estimate Prepared By	Right of Way Estimator[3]	Phone

Note: Items G & H applied to items A + B

[1] When estimate has Support Costs only [2] When estimate has Utility Relocation [3] When R/W Acquisition is required

ATTACHMENT D

Environmental Documentation

CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION
DETERMINATION FORM (rev. 06/2022)

Project Information

Project: MULTI ASSET PROJECT

DIST-CO-RTE: 12-ORA-22 **PM/PM:** R12.1/13.2

EA: 0S0800 (1219000088)

This multi-asset project is located on SR-22 from 0.2 miles west of Cambridge Street Overcrossing (PM R12.1) to Route 22/55 separation (PM R13.2), in the cities of Orange and Santa Ana, in Orange County. Scope of work includes installing yellow reflective back plates at traffic signal heads, repaving/resurfacing maintenance parking lot, increasing parking and adding EV charging stations and bike racks, constructing a decanting station including decanting pad and settling basin, with access road off the maintenance parking lot, adding ladder crosswalks, PED signage, touch-free pushbuttons, PED countdown and wall mounted LED lights at Tustin Avenue Undercrossing (BR No. 550385R), installing trash capture housing devices at existing drainage inlets between Cambridge St. Overcrossing (BR No. 0383 to the SR-22/SR-55 Interchange, xeriscaping and irrigation, plant establishment, upgrades of CCTV cameras, addition of CCTV cameras to exiting pole, video detection installation systems at on-ramp locations, installing PTZ surveillance cameras reconstructing/expanding maintenance office, reconstructing equipment storage building, reconstructing and expanding wash rack to meet Stormwater and Regional Water Quality Control Board standards, repaving lot, modifying sub-surface infrastructure, relocating the generator, reconfiguring parking, adding covered parking with solar panels, PED access route from Tustin Street to the offices, building demolition, vegetation removal, ADA curb ramp upgrades, additional drainage, and installing chain link fence. A potential exists for potholing and utility relocations at Design. The purpose of the project is to modernize the Orange Maintenance Station to a high-performance facility that meets current occupancy needs and TMS solutions, enhance complete street elements and improve all modes of transit, and improve storm water pollution mitigation. The disturbed soil area (DSA) is more than 1 acre. The project is state and federally funded. All work will occur in Caltrans Right of way. No new right of way is required.

Caltrans CEQA Determination (Check one)

☐ **Not Applicable** – Caltrans is not the CEQA Lead Agency
☐ **Not Applicable** – Caltrans has prepared an IS or EIR under CEQA

Based on an examination of this proposal and supporting information, the project is:
☐ **Exempt by Statute.** (PRC 21080[b]; 14 CCR 15260 et seq.)
☒ **Categorically Exempt. Class 1d** (PRC 21084; 14 CCR 15300 et seq.)
  ☐ No exceptions apply that would bar the use of a categorical exemption (PRC 21084 and 14 CCR 15300.2). See the SER Chapter 34 for exceptions.
☐ **Covered by the Common Sense Exemption**. This project does not fall within an exempt class, but it can be seen with certainty that there is no possibility that the activity may have a significant effect on the environment (14 CCR 15061[b][3].)

Senior Environmental Planner or Environmental Branch Chief

SMITA DESHPANDE	Smita Deshpande	September 29, 2023
Print Name	Signature	Date

Project Manager

JARED LINDO		9/29/2023
Print Name	Signature	Date

Caltrans NEPA Determination (Check one)

☐ **Not Applicable**

Caltrans has determined that this project has no significant impacts on the environment as defined by NEPA, and that there are no unusual circumstances as described in 23 CFR 771.117(b). See SER Chapter 30 for unusual circumstances. As such, the project is categorically excluded from the requirements to prepare an EA or EIS under NEPA and is included under the following:

☒ **23 USC 326:** Caltrans has been assigned, and hereby certifies that it has carried out the responsibility to make this determination pursuant to 23 USC 326 and the Memorandum of Understanding dated April 18, 2022, executed between FHWA and Caltrans. Caltrans has determined that the project is a Categorical Exclusion under:

- ☒ **23 CFR 771.117(c): activity (c)(26)**
- ☐ **23 CFR 771.117(d): activity (d)**
- ☐ **Activity 1 listed in Appendix A of the MOU between FHWA and Caltrans**

☐ **23 USC 327:** Based on an examination of this proposal and supporting information, Caltrans has determined that the project is a Categorical Exclusion under 23 USC 327. The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 USC 327 and the Memorandum of Understanding dated May 27, 2022, and executed by FHWA and Caltrans.

Senior Environmental Planner or Environmental Branch Chief

SMITA DESHPANDE	Smita Deshpande	September 29, 2023
Print Name	Signature	Date

Project Manager/ DLA Engineer

JARED LINDO		9/29/2023
Print Name	Signature	Date

Briefly list environmental commitments on continuation sheet if needed (i.e., not necessary if included on an attached ECR). Reference additional information, as appropriate (e.g., additional studies and design conditions).

Continuation sheet:

1) The limits of the proposed project are within the jurisdiction of the Santa Ana Regional Water Quality Control Board (RWQCB) and the receiving body is Santiago Creek. The receiving water body at the project location is not on the 2020/2022 California Integrated Report (Clean Water Act Section 303(d) List/ 305(b) /Report). The project limits are within a Significant Trash Generating Area (STGA) as identified in Attachment E of the Caltrans NPDES Permit and the Caltrans Trash Implementation Plan submitted to the State Water Resources Control Board (SWRCB) to comply with the Statewide Trash Provisions (SWRCB Resolution No. 2015-0019). Caltrans has committed to the SWRCB that roadways identified as STGA's will implement "Full Trash Capture" devices by the year 2030. To meet the Caltrans Statewide Trash Implementation Plan, the project will evaluate and implement Full Trash Capture devices within the STGA in the project limits consistent with guidance provided in the Caltrans Implementation Plan to comply with the SWRCB Trash Provisions
2) The Disturbed Soil Area (DSA) for the proposed project is anticipated to be greater than 1.0 acre therefore a Storm Water Pollution Prevention Plan (SWPPP) will be prepared and implemented to address temporary impacts to water quality. Potential temporary impacts to water quality will be addressed during construction with the application of specific temporary Best Management Practices (BMPs) as outlined in the contractor's SWPPP. If the project disturbs less than 1.0 acre, a Water Pollution Control Program (WPCP) will be prepared and implemented in place of a SWPPP.
3) This project must conform to all applicable water quality regulations and/or permit requirements of the State Water Resources Control Board (SWRCB) and any applicable local Regional Water Quality Control Board(s), including, but not limited to, the Caltrans Statewide NPDES Permit (Order No. 2022-0033-DWQ, NPDES No. CAS000003), the Statewide NPDES General Permit for Storm Water Discharges Associated With Construction and Land Disturbance Activities (Order No. 2022-0057-DWQ, NPDES No. CAS000002), and the Caltrans Storm Water Management Plan (SWMP), and any subsequent revisions and/or additional requirements at the time of construction.
4) The upgrades to the Orange Maintenance Station including elements used for maintenance and operation such as the Wash Racks and the new decanting basin are subject to the requirements of the Santa Ana RWQCB as well as the Caltrans NPDES Permit (Order No. 2022-0033-DWQ, NPDES No. CAS000003). A Facility Pollution Prevention Plan (FPPP) will be prepared and approved by the Maintenance Storm Water Coordinator for the facility. The FPPP is a plan that identifies the functional activities specific to a maintenance facility, applicable BMPs, and other procedures utilized by facility personnel to control the discharge of pollutants.
5) A Storm Water Data Report (SWDR) will be approved by the NPDES Unit to determine that this project conforms to Federal and State Clean Water Acts, and any other water quality
6) If vegetation removal occurs within the general avian and raptor breeding season (occurs from February 15th to August 31st), a pre-construction survey for avian nesting shall be conducted by a qualified biologist within the vegetation within 3 calendar days prior to work. If nests are found, a qualified biologist shall mark the buffer (500-feet for raptor nests; 300 feet from listed bird species' nests; and 100-feet from non-listed bird species' nests) so that work does not encroach into the buffer until the nest is no longer active, as determined by a qualified biologist.

7) If buried cultural resources are encountered during Project Activities, it is Caltrans policy that work stop within 60 feet of the area until a qualified archaeologist can evaluate the nature and significance of the find.
8) In the event that human remains are found, the county coroner shall be notified and ALL construction activities within 60 feet of the discovery shall stop. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC) who will then notify the Most Likely Descendent (MLD). The person who discovered the remains will contact the District 12 Division of Environmental Planning; Alben Phung, Senior Environmental Scientist: (657) 328-6054 and Cheryl Sinopoli, DNAC: (657) 328-6165. Further provisions of PRC 5097.98 are to be followed as applicable.
9) Construction greenhouse gas emission for the TMS improvement work was calculated using CAL-CET2021 and for reconstruction of maintenance facility was calculated using CalEEMod. The total estimated CO_2e emission from the construction of this project would be 452 MT during the estimated construction period. The result is obtained by applying mitigation factors.
10) Construction work will generate fugitive dust emissions and construction equipment emissions, which can be controlled by compliance with Caltrans Standard Specification in Section 14-9 (2022) and South Coast Air Quality Management District (SCAQMD) Rules and regulation during construction.
11) There will be soil disturbance to reconstruct the Orange Maintenance Station. Also, the Equipment storage building has underdone Asbestos Abatement in 1995. Therefore, the design branch will request Aerially Deposited Lead (ADL) and Asbestos Containing Material (ACM) investigations from Environmental Engineering early in the design phase. Details TBD by Environmental Team.

PROJECT MAXIMUM AVERAGE DAILY CONSTRUCTION EMISSIONS TABLE

	TOG	ROG	CO	NOx	PM10	PM2.5	CO2	CH4	N2O	BC	HFC
Daily Max Construction Total Emissions	0.846	0.789	4.445	5.647	6.652	0.915	2317	0.035	0.144	0.083	0.221

CONSTRUCTION EMISSIONS REDUCTION MEASURES

1) Maintain equipment in proper tune and working condition.
2) Limit idling to 5 minutes for delivery and dump trucks and other diesel-powered equipment.
3) Reduce construction waste and maximize the use of recycled materials (reduces consumption of raw materials, reduces landfill waste, and encourages cost savings)

ATTACHMENT E

Right-of-Way Data Sheet

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY DATA SHEET TRANSMITTAL MEMORANDUM

(Form #)

EXHIBIT
4-EX-4 (REV 7/2016)

To: MONTASHEEMA AFROZE, Branch Chief
Design "D"

Date: October 26, 2023
Dist.: 12 Co. ORA Rte. 22 P/M: R12.1/R13.2
EA: 0S080 EFIS: 1219000088

Attn: SARA DABZADEH
Project Engineer

Project Description: This project proposes to improve TMS elements, partially reconstruct the Orange Maintenance Station, add complete street elements, and add treatment BMPs for Multi-Asset Project on SR-22.

From: EVANGELINA WASHINGTON, Branch Chief
R/W Project Coordination

Subject: Current Estimated Right of Way Costs

We have completed an estimate of the right of way costs for the above referenced project base on maps we received from you on 09/01/2023, and the following assumptions and limiting conditions.

[ ] 1. The mapping did not provide sufficient detail to determine the limits of the right of way required.

[ ] 2. The transportation facilities have not been sufficiently designed so our estimator could determine the damages to any of the remainder parcels affected by the project.

[ ] 3. Additional right of way requirements are anticipated, but are not defined due to the preliminary nature of the early design requirements.

[ ] 4. _____

[X] 5. We have determined there are no right of way functional involvements in the proposed project at this time as designed.

Right of Way Lead Time will require a minimum of 2 months after we begin receiving final right of way requirements (PYPSCAN node No. 224), necessary environmental clearance has been obtained, and freeway agreements have been approved. From the date of receipt of final right of way requirements (PYPSCAN node no. 225), we will require a minimum of 2 months prior to the date of certification of the projects. Shorter lead times will require either more right of way resources or an increased number of condemnation suits to be filed, either of which may reflect adversely on the district's other programs.

_____
EVANGELINA WASHINGTON, Branch Chief
Project Coordination/Planning and Management/
& Acquisition

Attachments:

[X] Right of Way Data Sheet – Page One (always required)
[X] Right of Way Data Sheet – All Pages (required when interest in real property is being acquired)
[ ] Utility Information Sheet
[ ] Railroad Information Sheet

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY DATA SHEET

(Form #)

4-EX-1 (REV 7/2016)
EA 0S080 (1219000088)

To: MONTASHEEMA AFROZE, Branch Chief
Design "D"

Date: 10/26/2023

Dist: 12 Co ORA Rte. 22 PM R12.1/R13.2

EA: 0S080 E-FIS Project #: 1219000088

Attention: SARA DABZADEH
Project Engineer

Project Description: This project proposes to improve TMS elements, partially reconstruct the Orange Maintenance Station, add complete street elements, and add treatment BMPs for Multi-Asset Project on SR-22.

Subject: Right of Way Data Sheet

Alternate No.: Preferred

This Alternate meets the criteria for a Design/Build project: Yes ☐ No ☒

1. Right of Way Cost Estimate: To be entered into PMCS COST RW1-5 Screens.

		Current Value Future Use	Escalation Rate	Escalated Value
A.	**Total Acquisition Cost:**			
	Acquisition, including Excess Lands, Damages, and Goodwill.	$ 0	%	$ 0
	Project Permit Fees.	$ 0	%	$ 0
B.	**Utility Relocation** (State Share)	$ 0	%	$ 0
C.	**Relocation Assistance**	$ 0	%	$ 0
D.	**Clearance/Demolition**	$ 0	%	$ 0
E.	**Title and Escrow**	$ 0	%	$ 0
F.	**Total Estimated Cost**	$ 0		$ 0
G.	**Construction Contract Work**	$	%	$

2. Current Date of Right of Way Certification 01/06/2026T

3. Parcel Data: To be entered into PRSM RCFP Screen.

Type		Dual/Appr	Utilities		RR Involvements	
X			U4-1		None	X
A			-2		C&M Agrmt	
B			-3		Svc Contract	
C			-4		Design	
D			U5-7		Const.	
E	XXXX		-8		Lic/RE/Clauses/	
F	XXXX		-9		OE Clearance	
					Misc. R/W Work	
Total	0				RAP Displ	N/A
					Clear/Demo	N/A
					Const Permits	N/A
					Condemnation	N/A

Areas: R/W 0 No. Excess Parcels 0 Excess 0

Entered RCFP Screens _____ by T. Dinh

Entered AGRE Screen (Railroad data only) ___ / ___ / ___ / By _____

4. Are there any major items of construction contract work? Yes ☐ No ☒ (If "Yes," explain.)

5. Provide a general description of the right of way and excess lands required (zoning, use, major improvements, critical or sensitive parcels, etc…)
No right of way required. ☒

*There are no acquisitions or additional cost obligations by R/W. Due to project schedule and cost limitations, Project Manager & Design team decided to move forward with the State's Contractor to obtain an Encroachment Permit with the City of Orange and any other local agencies for portions of proposed work located within the city's R/W.

6. Any assumptions and/or limiting conditions used? Yes ☐ Not Significant ☐ No ☒ (If "Yes," explain.)

7. Are utility facilities or rights of way affected?
Yes ☐ No ☒ (If "Yes," attach Utility Information Sheet, Exhibit 4-EX-5.)

The following checked items may seriously impact lead time for utility relocation:

☐ Longitudinal policy conflict(s)

☐ Environmental concerns impacting acquisition of potential easements

☐ Power lines operating in excess of 50 KV and substations

(See attached Exhibit 4-EX-5 for explanation.)

8. Are Railroad facilities or rights of way affected?
Yes ☐ No ☒ (If "Yes," attach Railroad Information Sheet, Exhibit 4-EX-6.)

9. Were any previously unidentified sites with hazardous waste and/or material found?
Yes ☐ None Evident ☒ (If "Yes," attach memorandum per R/W Manual, Chapter 4, Section 4.01.10.00.)

10. Are State or Federal rights of way affected?
Yes ☐ No ☒ (If "Yes," provide the following information)

Agencies Involved:

_____ Army Corps of Engineers	_____ GSA	_____ US Postal Service
_____ BIA	_____ National Parks	_____ Veterans Administration
_____ BLM	_____ US Fish & Wildlife	_____ Other _____
_____ Dept. of Parks & Recreation	_____ US Forest Service	_____ Other _____

Rights/Permissions Required:

_____ Cooperative Work Agreement	_____ Letter of Concurrence	_____ Special Use Permit
_____ Cost Recovery	_____ Letter of Consent	_____ Timber Sale
_____ Courtesy Letter	_____ Mineral Agreement	_____ Transfer of Jurisdiction
_____ Easement	_____ Right of Entry	_____ Other _____
_____ Highway Easement	_____ Right of Way Grant	_____ Other _____

11. Are RAP displacements required? Yes ☐ No ☒ (If "Yes," provide the following information.)

    No. of single family _____ No. of business/nonprofit _____

    No. of multi-family _____ No. of farms _____

    Based on Draft/Final Relocation Impact Statement/Study dated _____, it is anticipated that sufficient replacement housing (will/will not) be available without Last Resort Housing.

12. Are there any outdoor advertising signs impacted? Yes ☐ No ☒ (If "Yes," explain.)

13. Are Material Borrow and/or Disposal Sites required? Yes ☐ No ☒ (If "Yes," explain.)

14. Are there potential relinquishments and/or abandonments? Yes ☐ No ☒ (If "Yes," explain.)

15. Are there any existing and/or potential airspace sites? Yes ☐ No ☒ (If "Yes," explain.)

16. Indicate the anticipated Right of Way schedule and lead time requirements. (Discuss if district proposes less than PMCS lead-time and/or if significant pressures for project advancement are anticipated.)

    Based on the R/W requirements on Page 1 of this Data Sheet, R/W will require a lead-time of 2 months from the date regular appraisals can begin to project certification.

    In any event, RW Maps will require 2 months from Final Maps to project certification.

17. Is it anticipated that Caltrans staff will perform all Right of Way work? Yes ☒ No ☐ (If "No," discuss.)

Evaluation Prepared By:

Right of Way:	Name	Kelly Bernardino KELLY BERNARDINO Right of Way Estimator	Date	10/26/2023
Railroad:	Name	Antonio Avila ANTONIO AVILA Right of Way Railroad Coordinator	Date	10/26/2023
Utilities:	Name	 TIM CHEUNG Right of Way Utility Estimator	Date	10/26/2023
Airspace:	Name	Yolanda Mendoza YOLANDA MENDOZA Right of Way Airspace Coordinator	Date	10/26/2023
State/Federal Lands:	Name	Kelly Bernardino KELLY BERNARDINO Right of Way Estimator	Date	10/26/2023

I have personally reviewed this Right of Way Data Sheet and all supporting information. I certify that the probable Highest and Best Use, estimated values, escalation rates, and assumptions are reasonable and proper, subject to the limiting conditions set forth; and I find this Data Sheet complete and current.

EVANGELINA WASHINGTON, Branch Chief
R/W Project Coordination, Planning & Management,
& Acquisition

10/26/2023
Date

ATTACHMENT F

Utility Plan Sheets

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	ORA	22	R12.1/R13.2		

REGISTERED CIVIL ENGINEER DATE

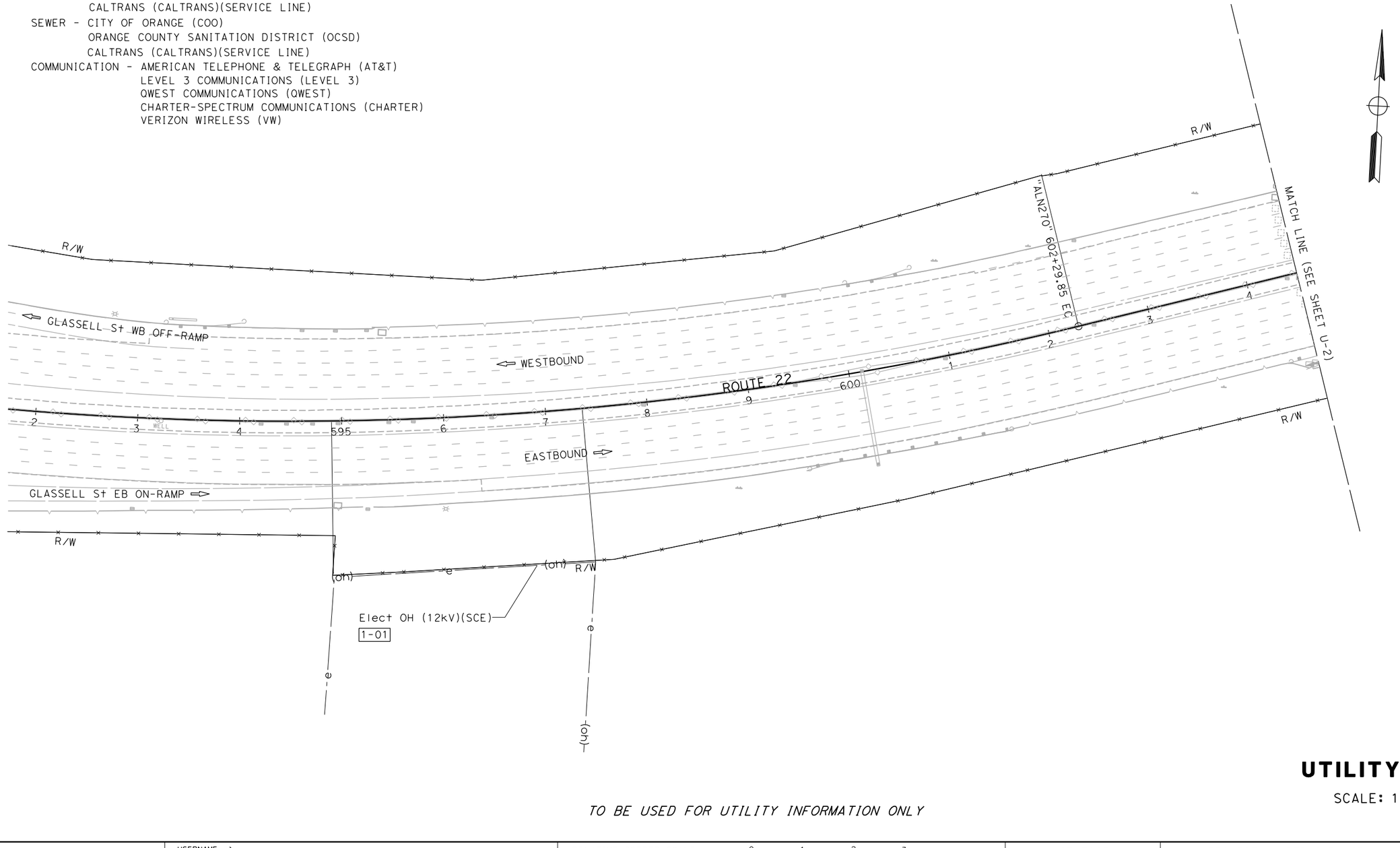
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
KEVIN D PHAM
No. C61965
Exp. 9-30-25
CIVIL
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.

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. LOCATIONS OF UTILITY FACILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND SHALL BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION.
3. UTILITY OWNERSHIP:
   NATURE GAS - SOUTHERN CALIFORNIA GAS (SCG)
   CALTRANS (CALTRANS)(SERVICE LINE)
   ELECTRIC - SOUTHERN CALIFORNIA EDISON (SCE)
   CALTRANS (CALTRANS)(SERVICE LINE)
   WATER - CITY OF ORANGE (COO)
   CITY OF SANTA ANA (COSA)
   METROPOLITAN WATER DISTRICT (MWD)
   CALTRANS (CALTRANS)(SERVICE LINE)
   SEWER - CITY OF ORANGE (COO)
   ORANGE COUNTY SANITATION DISTRICT (OCSD)
   CALTRANS (CALTRANS)(SERVICE LINE)
   COMMUNICATION - AMERICAN TELEPHONE & TELEGRAPH (AT&T)
   LEVEL 3 COMMUNICATIONS (LEVEL 3)
   QWEST COMMUNICATIONS (QWEST)
   CHARTER-SPECTRUM COMMUNICATIONS (CHARTER)
   VERIZON WIRELESS (VW)



TO BE USED FOR UTILITY INFORMATION ONLY

UTILITY PLAN

SCALE: 1" = 50'

U-1

REVISED BY | DATE REVISED
MINH PHAM | KEVIN PHAM
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: CHRISTOPHER LE
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® UTILITY ENGINEERING

LAST REVISION 10-18-23 | DATE PLOTTED => 10/18/2023 | TIME PLOTTED => 9:53:01 AM

BORDER LAST REVISED 8/5/2020 | USERNAME => | DGN FILE => ...\UtilityEng\1219000088ka001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 3003 | PROJECT NUMBER & PHASE 12190000880

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	ORA	22	R12.1/R13.2		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
KEVIN D PHAM
No. C61965
Exp. 9-30-25
CIVIL
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.

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

TO BE USED FOR UTILITY INFORMATION ONLY

UTILITY PLAN

SCALE: 1" = 50'

U-2

REVISED BY	DATE REVISED
MINH PHAM	KEVIN PHAM
CALCULATED-DESIGNED BY	CHECKED BY
FUNCTIONAL SUPERVISOR	CHRISTOPHER LE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® **UTILITY ENGINEERING**

LAST REVISION 10-18-23 | DATE PLOTTED => 10/18/2023 | TIME PLOTTED => 9:46:37 AM

BORDER LAST REVISED 8/5/2020 | USERNAME => | DGN FILE => ...\UtilityEng\1219000088ka002.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 3003 | PROJECT NUMBER & PHASE 12190000880

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

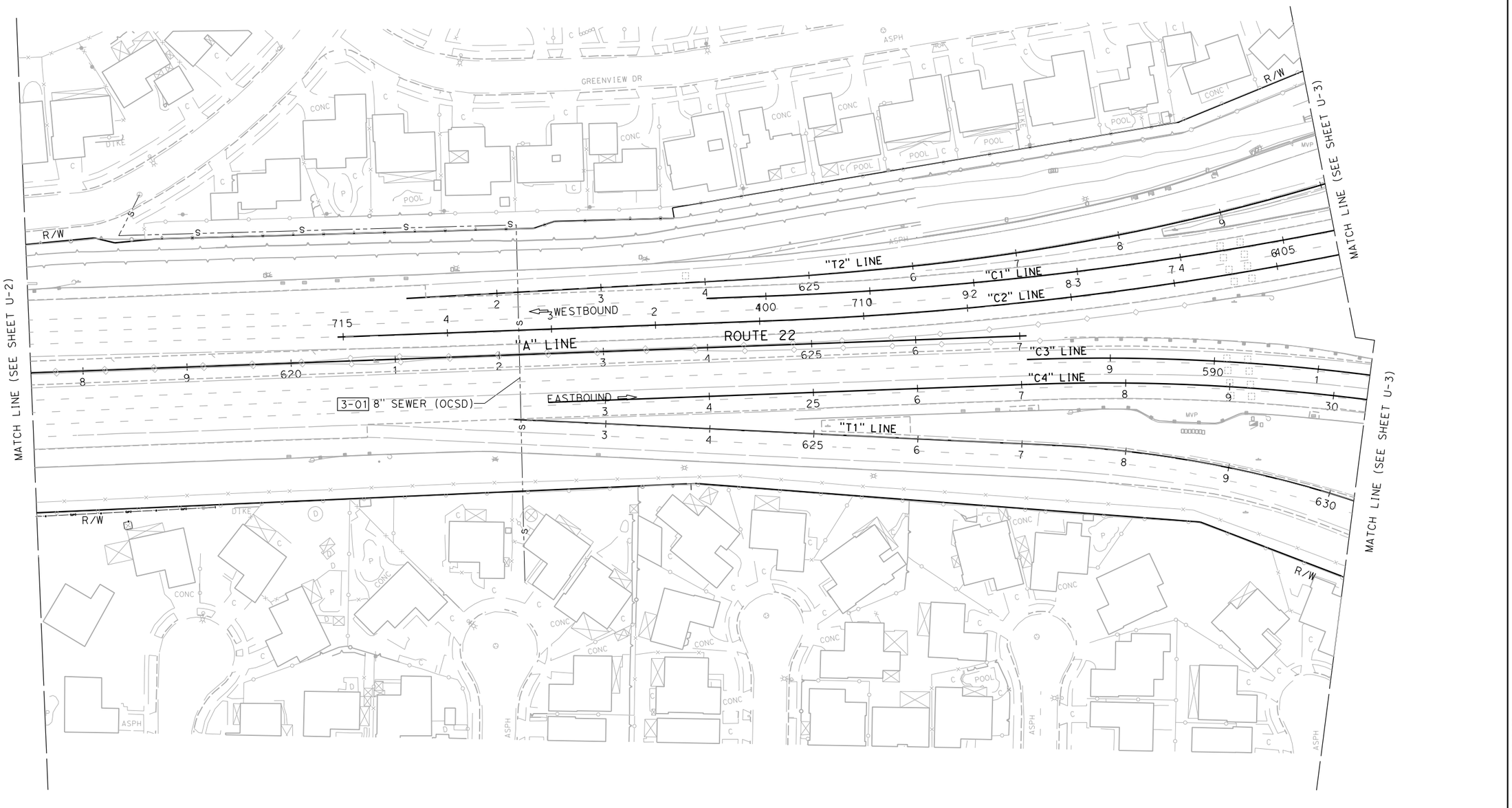
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	ORA	22	R12.1/R13.2		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
KEVIN D PHAM
No. C61965
Exp. 9-30-25
CIVIL
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.



TO BE USED FOR UTILITY INFORMATION ONLY

UTILITY PLAN

SCALE: 1" = 50' **U-3**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
UTILITY ENGINEERING

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: MINH PHAM
CHECKED BY: KEVIN PHAM
FUNCTIONAL SUPERVISOR: CHRISTOPHER LE

LAST REVISION 10-18-23
DATE PLOTTED => 10/18/2023
TIME PLOTTED => 10:08:47 AM

BORDER LAST REVISED 8/5/2020
USERNAME =>
DGN FILE => ...\UtilityEng\1219000088ka003.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 3003
PROJECT NUMBER & PHASE 12190000880

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

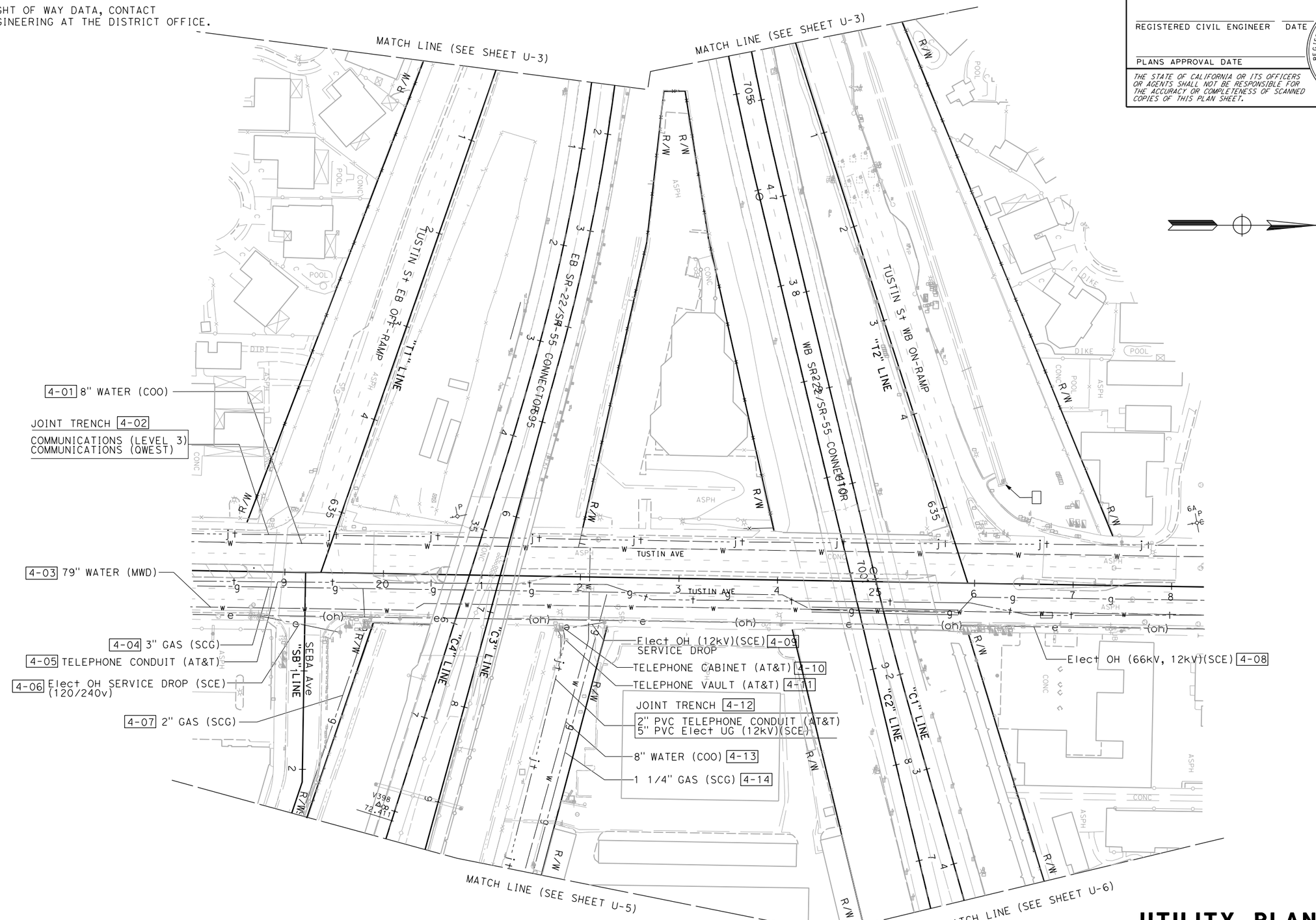
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	ORA	22	R12.1/R13.2		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
KEVIN D PHAM
No. C61965
Exp. 9-30-25
CIVIL
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.



UTILITY PLAN

SCALE: 1" = 50' **U-4**

TO BE USED FOR UTILITY INFORMATION ONLY

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: MINH PHAM
CHECKED BY: KEVIN PHAM
FUNCTIONAL SUPERVISOR: CHRISTOPHER LE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® UTILITY ENGINEERING

LAST REVISION 10-18-23
DATE PLOTTED => 10/18/2023
TIME PLOTTED => 11:10:40 AM

BORDER LAST REVISED 8/5/2020 | USERNAME => | DGN FILE => ...\UtilityEng\1219000088ka004.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 3003 | PROJECT NUMBER & PHASE 12190000880

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	ORA	22	R12.1/R13.2		

REGISTERED CIVIL ENGINEER DATE

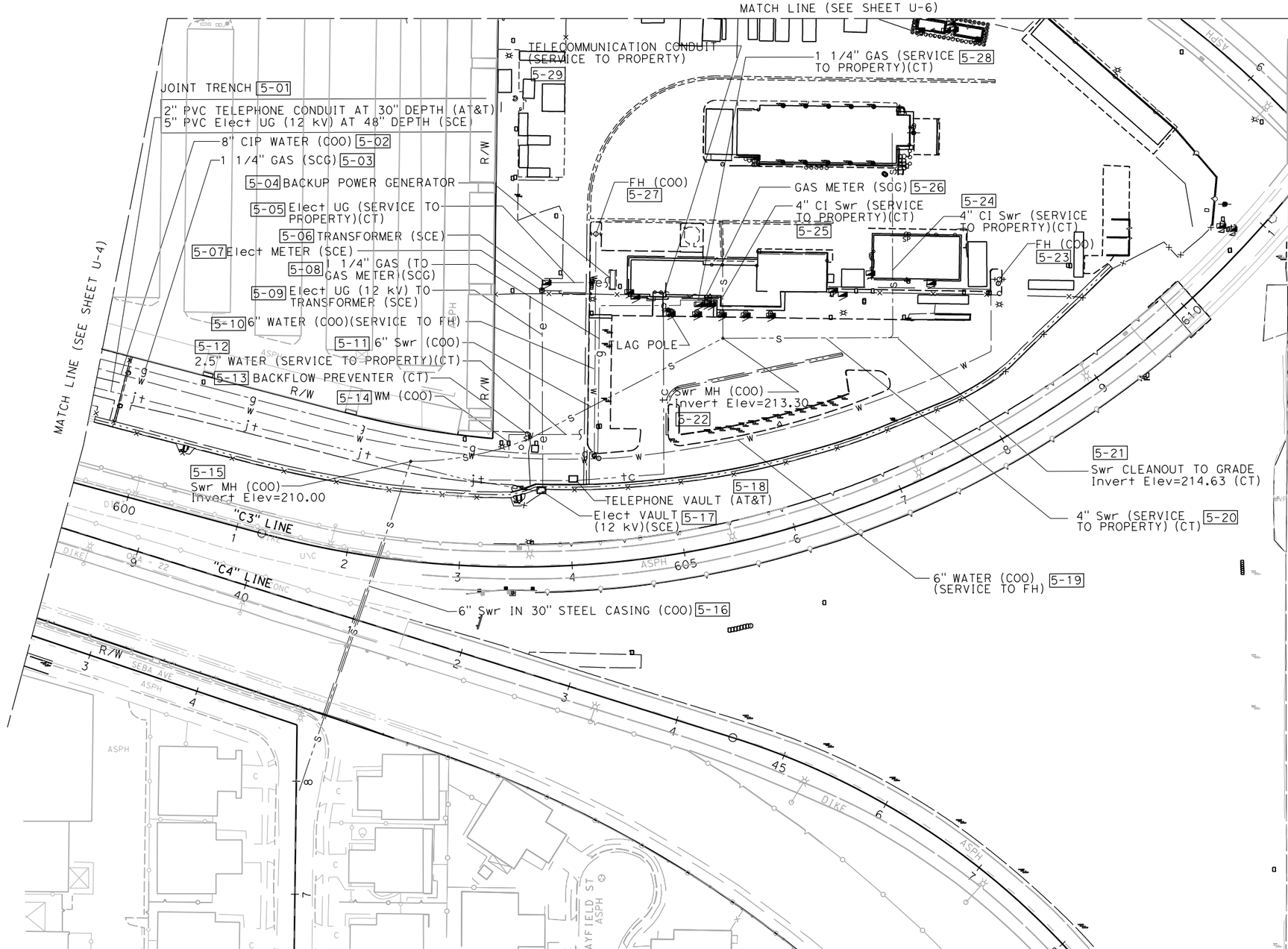
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
KEVIN D PHAM
No. C61965
Exp. 9-30-25
CIVIL
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.

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



TO BE USED FOR UTILITY INFORMATION ONLY

UTILITY PLAN

SCALE: 1" = 50' **U-5**

REVISED BY	DATE REVISED
MINH PHAM	KEVIN PHAM
CALCULATED-DESIGNED BY	CHECKED BY
FUNCTIONAL SUPERVISOR	CHRISTOPHER LE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® UTILITY ENGINEERING

LAST REVISION 10-18-23
DATE PLOTTED => 10/18/2023
TIME PLOTTED => 11:24:33 AM

BORDER LAST REVISED 8/5/2020 | USERNAME => | DGN FILE => ...\UtilityEng\1219000088ka005.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 3003 | PROJECT NUMBER & PHASE 12190000880

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

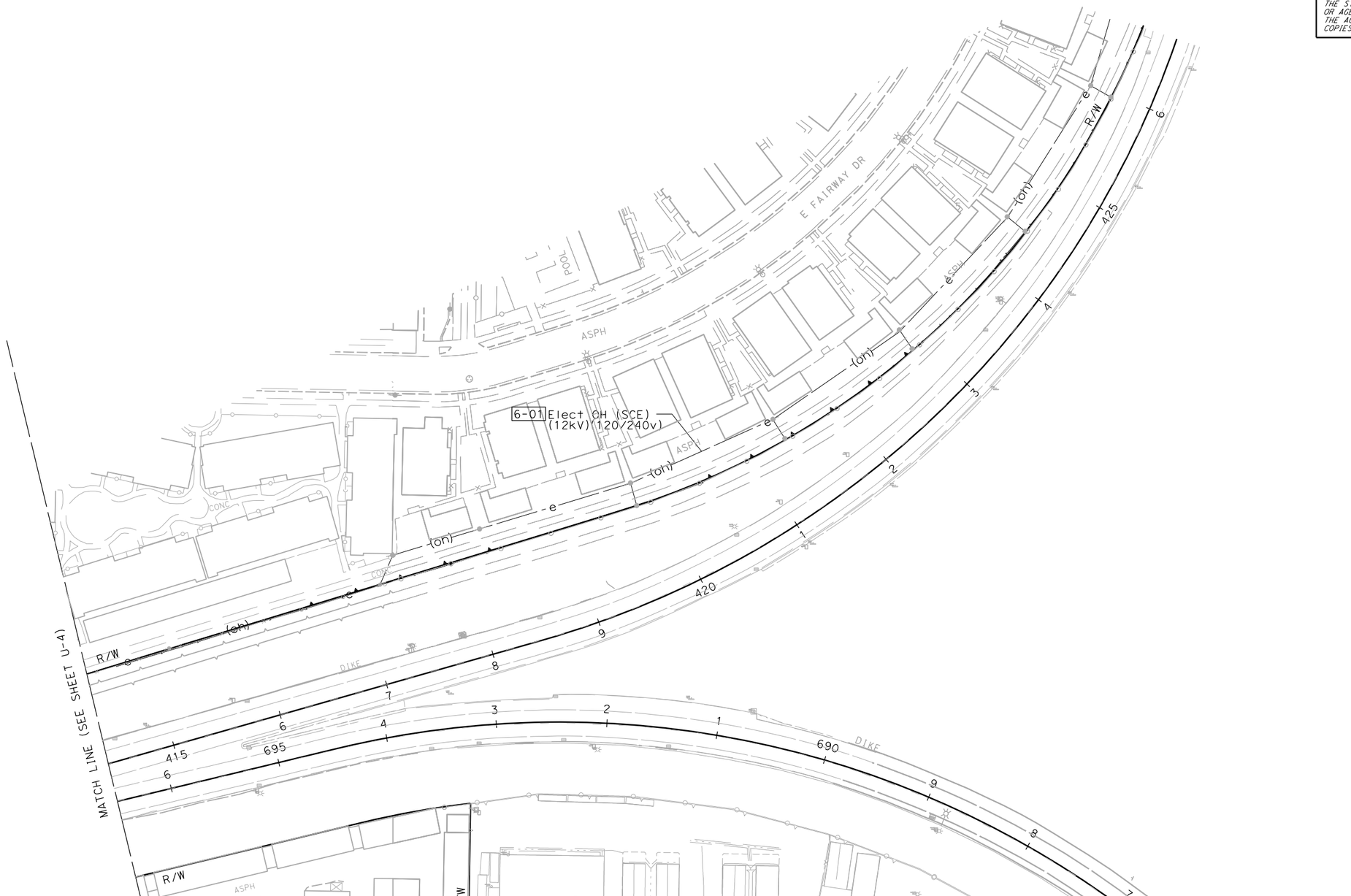
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	ORA	22	R12.1/R13.2		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
KEVIN D PHAM
No. C61965
Exp. 9-30-25
CIVIL
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.



UTILITY PLAN

SCALE: 1" = 50' **U-6**

TO BE USED FOR UTILITY INFORMATION ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® UTILITY ENGINEERING

CALCULATED-DESIGNED BY	MINH PHAM	REVISED BY	
CHECKED BY	KEVIN PHAM	DATE REVISED	
FUNCTIONAL SUPERVISOR	CHRISTOPHER LE		

LAST REVISION 10-18-23
DATE PLOTTED => 10/18/2023
TIME PLOTTED => 10:48:08 AM

BORDER LAST REVISED 8/5/2020 | USERNAME => | DGN FILE => ...\UtilityEng\1219000088ka006.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 3003 | PROJECT NUMBER & PHASE 12190000880

ATTACHMENT G

Utility Management Matrix

Utility Management Matrix

Project Owner: Caltrans
Project No. : EA 0S080_ID 1219000088
Project Description: Rebuild Maintenance Station
Highway or Route: Rte 22_PM R12.1/13.2

Note: refer to subsheet for utility conflict cost analysis.

Utility Management Matrix Developed/Revised By: Minh Pham/Minh Pham
Date: 10-18-23 (Rev01)
Reviewed By: Kevin Pham
Date: 10/18/2023

Utility Owner and/or Contact Name	Conflict ID	Drawing or Sheet No.	Utility Type	Size and/or Material	Utility Conflict Description	Start Station	Start Offset	End Station	End Offset	Utility Investigation Level Needed	Test Hole	Recommended Action or Resolution	Estimated Resolution Date	Resolution Status
SCE	1-01	U-1	Electric	Elect OH (12kv)	No conflict. Outside State R/W	594+90	153' Rt	597+36	150' Rt	QLB		Remain in Place	N/A	Utility conflict resolved
JOINT OVERHEAD (SCE, CHARTER, AT&T)	2-01	U-2	Electric	Elect OH (66kV,12kV). Tel & Comm Cables	No conflict.	607+94	134' Rt	608+85	150' Lt	QLB		Remain in Place	N/A	Utility conflict resolved
COO	2-02	U-2	Water	4"	No conflict. Outside State R/W	608+91	146' Lt	609+09	226' Lt	QLD		Remain in Place	N/A	Utility conflict resolved
COSA	2-03	U-2	Water	14"	No conflict. Outside State R/W	607+47	141' Rt	607+86	241' Rt	QLD		Remain in Place	N/A	Utility conflict resolved
SCE	2-04	U-2	Electric	Elect UG (12kv)	No conflict.	607+53	293' Rt	607+95	134' Rt	QLD		Remain in Place	N/A	Utility conflict resolved
VW	2-05	U-2	Communications	Fiber Optic	No conflict.	607+75	300' Rt	609+41	218' Lt	QLD		Remain in Place	N/A	Utility conflict resolved
SCG	2-06	U-2	Gas	4" Gas in 8" Casing	No conflict.	607+90	305' Rt	609+52	214' Lt	QLD		Remain in Place	N/A	Utility conflict resolved
AT&T	2-07	U-2	Communications	Telephone Duct	No conflict.	608+02	309' Rt	609+69	209' Lt	QLD		Remain in Place	N/A	Utility conflict resolved
SCE, AT&T	2-08	U-2	Electric	Elect OH (12kv)	No conflict.	608+12	305' Rt	608+65	138' Rt	QLD		Remain in Place	N/A	Utility conflict resolved
SCE, AT&T	2-09	U-2	Electric	Elect OH (12kv)	No conflict.	607+95	134' Rt	617+50	137' Rt	QLB		Remain in Place	N/A	Utility conflict resolved
COO	2-10	U-2	Sanitary Sewer	8"	No conflict.	607+97	307' Rt	609+63	211' Lt	QLD		Remain in Place	N/A	Utility conflict resolved
SCG	2-11	U-2	Gas	6" Abandoned	No conflict.	612+99	140' Rt	613+57	134' Lt	QLD		Remain in Place	N/A	Utility conflict resolved
OCSD	3-01	U-3	Sanitary Sewer	8"	No conflict.	622+19	130' Rt	622+19	120' Lt	QLD		Remain in Place	N/A	Utility conflict resolved
COO	4-01	U-4	Water	8"	No conflict.	18+06 "T" Line	29' Lt	28+32 "T" Line	30' Lt	QLD		Remain in Place	N/A	Utility conflict resolved
Level 3, QWEST	4-02	U-4	Communications	UG conduit	No conflict.	18+06 "T" Line	37' Lt	28+32 "T" Line	42' Lt	QLD		Remain in Place	N/A	Utility conflict resolved
MWD	4-03	U-4	Water	79"	No conflict.	18+06 "T" Line	37' Rt	28+32 "T" Line	28' Rt	QLD		Remain in Place	N/A	Utility conflict resolved
SCG	4-04	U-4	Gas	3"	No conflict.	18+06 "T" Line	16' Rt	28+32 "T" Line	14' Rt	QLD		Remain in Place	N/A	Utility conflict resolved
AT&T	4-05	U-4	Communications	UG conduit	No conflict.	18+06 "T" Line	10' Rt	28+32 "T" Line	29' Rt	QLD		Remain in Place	N/A	Utility conflict resolved
SCE	4-06	U-4	Electric	120/240 v (Service drop)	No conflict.	18+75 "T" Line	44' Rt	19+57 "T" Line	60' Rt	QLD		Remain in Place	N/A	Utility conflict resolved
SCG	4-07	U-4	Gas	2"	No conflict	19+79 "T" Line	15' Rt	12+45 "S" Line	10' Lt	QLD		Remain in Place	N/A	Utility conflict resolved

SCE	4-08	U-4	Electric	Elect OH (66kv, 12 kV)	No conflict	18+06 "T" Line	44' Rt	28+32 "T" Line	42' Rt	QLB		Remain in Place	N/A	Utility conflict resolved
SCE	4-09	U-4	Electric	Elect OH (12kv) Service Drop	No conflict	21+76 "T" Line	54' Rt	22+25 "T" Line	45' Rt	QLB		Remain in Place	N/A	Utility conflict resolved
AT&T	4-10	U-4	Communications	Telephone Cabinet	No conflict	21+82 "T" Line	50' Rt			QLB		Remain in Place	N/A	Utility conflict resolved
AT&T	4-11	U-4	Communications	Telephone Vault	No conflict	21+86 "T" Line	64' Rt			QLB		Remain in Place	N/A	Utility conflict resolved
SCE, AT&T	4-12	U-4	Electric	Joint Trench	No conflict	21+30 "T" Line	297' Rt	21+76 "T" Line	54' Rt	QLD		Remain in Place	N/A	Utility conflict resolved
COO	4-13	U-4	Water	8"	No conflict	21+48 "T" Line	300' Rt	22+10 "T" Line	29' Lt	QLD		Remain in Place	N/A	Utility conflict resolved
SCG	4-14	U-4	Gas	1 1/4"	No conflict	21+56 "T" Line	302' Rt	22+27 "T" Line	15' Rt	QLD		Remain in Place	N/A	Utility conflict resolved
SCE, AT&T	5-01	U-5	Electric	Joint Trench	No conflict	599+50	86' Lt	603+77	67' Lt	QLD		Remain in Place	N/A	Utility conflict resolved
COO	5-02	U-5	Water	8"	No conflict	599+50	144' Lt	604+27	91' Lt	QLD		Remain in Place	N/A	Utility conflict resolved
SCG	5-03	U-5	Gas	1 1/4"	No conflic	599+50	112' Lt	605+77	218' Lt	QLD		Remain in Place	N/A	Utility conflict resolved
Caltrans	5-04	U-5	Electric	Back Up Power Generator	State's facility	604+70	247' Lt			QLB		State's facility	N/A	Utility conflict resolved
Caltrans	5-05	U-5	Electric	UG conduit service to building	State's facility	603+93	250' Lt	604+70	247' Lt	QLD		State's facility	N/A	Utility conflict resolved
SCE	5-06	U-5	Electric	Transformer	No conflict	603+93	250' Lt			QLB		Remain in Place	N/A	Utility conflict resolved
SCE	5-07	U-5	Electric	Electric Meter	No conflict	603+83	245' Lt			QLB		Remain in Place	N/A	Utility conflict resolved
SCG	5-08	U-5	Gas	1 1/4"	Same as 5-03									
SCE	5-09	U-5	Electric	Elect UG (12kV)	No conflict	603+77	67' Lt	603+82	241' Lt	QLD		Remain in Place	N/A	Utility conflict resolved
COO	5-10	U-5	Water	6"	No conflict	604+19	93' Lt	604+19	199' Lt	QLD		Remain in Place	N/A	Utility conflict resolved
COO	5-11	U-5	Sanitary Sewer	6"	No conflict	602+46	87' Lt	605+83	177' Lt	QLB		Remain in Place	N/A	Utility conflict resolved
Caltrans	5-12	U-5	Water	2.5" Service to Buildings	State's facility	603+41	603+41	604+15	114' Lt	QLD		State's facility	N/A	Utility conflict resolved
Caltrans	5-13	U-5	Water	Backflow Preventer	State's facility	603+61	115' Lt			QLB		State's facility	N/A	Utility conflict resolved
COO	5-14	U-5	Water	Water Meter	No conflict	603+41	603+41			QLB		Remain in Place	N/A	Utility conflict resolved
COO	5-15	U-5	Sanitary Sewer	Sewer MH	No conflict	602+46	87' Lt			QLB		Remain in Place	N/A	Utility conflict resolved
COO	5-16	U-5	Sanitary Sewer	6" Swr in 30" Steel Casing	No conflict	602+00	217' Rt	602+46	87' Lt	QLB		Remain in Place	N/A	Utility conflict resolved
SCE	5-17	U-5	Electric	Elect Vault (12kV)	No conflict	603+77	67' Lt			QLB		Remain in Place	N/A	Utility conflict resolved
AT&T	5-18	U-5	Communications	Telephone Vault	No conflict	604+06	74' Lt			QLB		Remain in Place	N/A	Utility conflict resolved

COO	5-19	U-5	Water	6"	No conflict	604+27	91' Rt	608+78	120' Lt	QLD		Remain in Place	N/A	Utility conflict resolved
Caltrans	5-20	U-5	Sanitary Sewer	4"	State's facility	605+83	177' Lt	607+60	122' Lt	QLD		State's facility	N/A	Utility conflict resolved
Caltrans	5-21	U-5	Sanitary Sewer	Clean out	State's facility	607+60	122' Lt			QLB		State's facility	N/A	Utility conflict resolved
COO	5-22	U-5	Sanitary Sewer	Sewer MH	No conflict	605+83	177' Lt			QLB		Remain in Place	N/A	Utility conflict resolved
COO	5-23	U-5	Water	Fire Hydrant	No conflict	608+78	120' Lt			QLB		Remain in Place	N/A	Utility conflict resolved
Caltrans	5-24	U-5	Sanitary Sewer	4" Service to building	State's facility	607+60	122' Lt	608+78	284' Lt	QLD		State's facility	N/A	Utility conflict resolved
Caltrans	5-25	U-5	Sanitary Sewer	4" Service to building	State's facility	605+83	177' Lt	606+10	248' Lt	QLD		State's facility	N/A	Utility conflict resolved
SCG	5-26	U-5	Gas	Gas Meter	No conflict	605+77	218' Lt	605+63	221' Lt	QLB		Remain in Place	N/A	Utility conflict resolved
COO	5-27	U-5	Water	Fire Hydrant	No conflict	604+19	292' Lt			QLB		Remain in Place	N/A	Utility conflict resolved
Caltrans	5-28	U-5	Gas	1 1/4" Service to building	State's facility	605+77	218' Lt			QLB		State's facility	N/A	Utility conflict resolved
AT&T	5-29	U-5	Communications	UG conduit	No conflict.	604+06	74' Lt	605+31	227' Lt	QLD		Remain in Place	N/A	Utility conflict resolved
SCE	6-01	U-6	Electric	Elect OH (12kV, 120/240v)	No conflict. Outside State R/W	414+40	84' Lt	426+67	63' Lt	QLB		Remain in Place	N/A	Utility conflict resolved
Notes (Rev01): Add Caltrans to ownership of service line, updated UMM to match description of CN#: 2-01, 2-06, 4-07, 5-09, 5-16, 5-17														

Key:
[List of acronyms used in the utility conflict matrix]

ATTACHMENT H

Storm Water Data Report
Signed Cover Sheet

Long Form – Stormwater Data Report Template

Dist-County-Route: 12-ORA-22
Post Mile Limits: PM 12.1/13.2
Type of Work: Maintenance Facility (Multi-Asset)
Project ID (EA): 1219000088 (EA 12-0S0800)

Phase: ☐ PID ☒ PA/ED ☐ PS&E

Applicable Caltrans Post Construction Treatment Requirement: 2012 ☒ 2022 ☐
Regional Water Quality Control Board(s): SANTA ANA
Total Disturbed Soil Area: 1.72 acres PCTA: 1.72 acres
Alternative Compliance (acres): ATA 2 (50% Rule)? Yes ☐ No ☒
Estimated Const. Start Date: Sept. 2026 Estimated Const. Completion Date: Feb. 2029
Risk Level: RL 1 ☐ RL 2 ☒ RL 3 ☐ WPCP ☐ Other: _____
Is (M)WELO applicable? Yes ☐ No ☒
Is the Project within a TMDL watershed? Yes ☒ No ☐
Does the project require trash treatment? Yes ☒ No ☐
Notification of ADL reuse (if yes, provide date): Yes ☐ Date: _____ No ☒

This Report has been prepared under the direction of the following Licensed Person. The Licensed Person attests to the technical information contained herein and the date upon which recommendations, conclusions, and decisions are based. Professional Engineer or Landscape Architect stamp required at PS&E only.

Arvin Cuevas 10/23/2023

Arvin Cuevas, Registered Project Engineer/Landscape Architect — Date

I have reviewed the stormwater quality design issues and find this report to be complete, current and accurate:

Jared Lindo (Oct 24, 2023 14:04 PDT) 10/24/2023

Jared Lindo, Project Manager — *Date*

10/25/2023

Hilton Briggs, District Maintenance Stormwater Coordinator — *Date*

10/24/2023

Erik Dickson, Designated Landscape Architect Representative — *Date*

10/24/2023

[Stamp Required at PS&E only]

Trung C. Phan, Acting Districtl Design SW Coordinator — *Date*

ATTACHMENT I

Traffic Management Plan
Data Sheet

TRANSPORTATION MANAGEMENT PLAN DATA SHEET
(Preliminary TMP Elements and Costs)

Co/Rte/PM Ora/22/12.1 to 13.1 EA 0S080 Alternative No. _____

Project Limit Cambridge OC to Rte 55 separation

Project Description Upgrade TMS and Maintenance Station

1) Public Information

- ☐ a. Brochures and Mailers $ _____
- ☐ b. Press Release
- ☐ c. Paid Advertising $ _____
- ☐ d. Public Information Center/Kiosk $ _____
- ☐ e. Public Meeting/Speakers Bureau
- ☒ f. Telephone Hotline
- ☐ g. Internet
- ☐ h. Others TBD (To Be Determine when LRCs are final or later @ P S & E Review.) $10,000

2) Motorists Information Strategies

- ☐ a. Changeable Message Signs (Fixed) $ _____
- ☒ b. Changeable Message Signs (Portable) $ _____
- ☐ c. Ground Mounted Signs $ _____
- ☐ d. Highway Advisory Radio $ _____
- ☐ e. Caltrans Highway Information Network (CHIN)
- ☐ f. Others TBD $25,000

3) Incident Management

- ☒ a. Construction Zone Enhanced Enforcement Program (COZEEP) $ _____
- ☐ b. Freeway Service Patrol $ _____
- ☐ c. Traffic Management Team
- ☐ d. Helicopter Surveillance $ _____
- ☒ e. Traffic Surveillance Stations (Loop Detector and CCTV) $ _____
- ☐ f. Others TBD $30,000

4) Construction Strategies

☒	a. Lane Closure Chart	
☐	b. Reversible Lanes	
☐	c. Total Facility Closure	
☐	d. Contra Flow	
☐	e. Truck Traffic Restrictions	$
☒	f. Reduced Speed Zone	$
☒	g. Connector and Ramp Closures	
☐	h. Incentive and Disincentive	$
☐	i. Moveable Barrier	$
☐	j. Others _____	$120,000

5) Demand Management

☐	a. HOV Lanes/Ramps (New or Convert)	$
☐	b. Park and Ride Lots	$
☐	c. Rideshare Incentives	$
☐	d. Variable Work Hours	
☐	e. Telecommute	
☐	f. Ramp Metering (Temporary Installation)	$
☐	g. Ramp Metering (Modify Existing)	$
☐	h. Others TBD	$10,000

6) Alternative Route Strategies

☐	a. Add Capacity to Freeway Connector	$
☒	b. Street Improvement (widening, traffic signal... etc)	$
☒	c. Traffic Control Officers	$
☐	d. Parking Restrictions	
☐	e. Others TBD	$20,000

7) Other Strategies

☐	a. Application of New Technology	$
☐	e. Others Maintain Traffic	$30,000

TOTAL ESTIMATED COST OF TMP ELEMENTS = $245,000

Project Notes:

This TMP cost estimate is based on the approved PR. The estimate will be refined as the project plans are developed.

PREPARED BY Cuong Ly DATE 12/14/2022

APPROVAL RECOMMENDED BY Jose Hernandez DATE 10-26-2023

APPROVED BY _____ DATE _____

ATTACHMENT J

Risk Register

STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION

RISK REGISTER CERTIFICATION (ACCOUNTABILITY CHECKPOINTS)

The risk register is to be approved and signed-off by the District Deputies* listed below for all scalability levels. By signing this form, you are certifying that you have reviewed the risks documented in the register and agree that they have been managed to the extent possible by the PDT, or that PM has checked and signed below indicating "No Risk Register Certification Required".

Project Information PA&ED Risk Cert Total Capital Cost: $22,000,000.

District 12 – 0S080/1219000088/SR22/R12.1/R13.2

Project Nickname: Maintenance Facility and TMS

Project Description: In Orange County in Santa Ana and Orange from near Cambridge St OC to near 55/22

Project Manager (PM): Jared Lindo

☐ No Risk Register Certification Required -- Check Box if project is a Minor. Sign below and submit this form at required submittal intervals (as applicable).

Project Manager Signature: _____ Date: _____

PID [M010]	Print	Signature	Date
Project Manager:	for Constantino Stamation		6/7/21
Deputy District Director, Planning:	for Lan Zhou		06/07/2021
Office Chief, Design:	Lisa Ramsey	Lisa Ramsey	6/10/2021
Office Chief, Project Management:	Janilee Jablonski, Acting	Janilee Jablonski for Monica Benavides	6/15/2021

PA&ED [M200]	Print	Signature	Date
Project Manager:	Jared Lindo	Jared Lindo (Oct 24, 2023 10:41 PDT)	10/24/2023
Deputy District Director, Enviro:	Christopher Flynn	Chris Flynn	10/25/2023
Office Chief, R/W:	Jennifer Pham	JPham	10/24/2023
Office Chief, Design:	Lisa Ramsey	Lisa Ramsey	11/09/2023
Office Chief, Project Management:	Barbara McGahey	Barbara McGahey (Oct 31, 2023 13:08 PDT)	10/31/2023

Prior to RTL [M377]	Print	Signature	Date
Project Manager:			
Office Chief, Design:			
Office Chief, Construction:			
Office Chief, R/W:			
Deputy District Director, Enviro:			
Deputy District Director, Maint:			
Office Chief, Traffic Operations:			
Office Chief, Project Management:			

Risk Register for 12-0S080, Rte 22, Maintenance Facility & TMS

Form v3.4 last modified 1/31/2019 CB

Risk Checkpoint:	PA&ED
Date:	11/17/2023
Project Nickname:	Rte 22, Maintenance Facility & TMS
EA:	12-0S080
Co-Rt, Post Miles:	Ora - 022 - PM R12.1/R13.2
Project Manager:	Jared Lindo
FY & Program (SHOPP or STIP):	2022 (SHOPP)
Capital Costs:	$22,000k
Support Costs:	$8,413k
Total Costs:	$30,413k
RTL Target:	2/5/2026

Phase	Cost Contingency Range $k			Schedule Contingency Range (Wkg Days)		
	Optimistic	PERT	Pessimistic	Optimistic	PERT	Pessimistic
0-PA&ED	$0	$0	$0	0	0	0
1-PS&E	$0	$0	$0	0	0	0
2-RW Sup	$0	$0	$0	0	0	0
3-Con Sup	$0	$0	$0	0	0	0
Support Contingency	$0	$0	$0	0	0	0
9-RW Cap	$0	$0	$0	0	0	0
4-Con Cap	$0	$0	$0	0	0	0
Capital Contingency	$0	$0	$0	0	0	0
Total Contingency	$0	$0	$0	0	0	0

Risk Identification								Risk Assessment			Risk Response				Quantifying "Red" (High P & I) Level Risks			
Status	ID #	Type	Category	Title	Risk Statement	Current status / assumptions	Risk Trigger	Probability (P)	Cost Impact Schedule Impact (I)	Cost Score Schedule Score (PxI)	Strategy	Response Actions	Risk Contact	Updated	Impacted Phase	Support (Hrs) Capital Cost ($k)	Schedule (Days)	Calculated Contingency
Active	2	Threat	Structure Design	Staffing Issues	As a result of staff turnover in the office of transportation architecture, all building design work has been postponed to phase 1. Uncertainty in the environmental declaration and structures cost estimate may occur, which would lead to an increased capital cost.	Staff hiring to address the staff shortage is in progress.	Structures cost estimate is higher than anticipated.	2-Low (11-30%)	4 - Moderate ($1k - $k	8	Accept	Risk will be accepted due to staff shortages state wide and competitive market trends.	Frank Thomas	9/19/2023				
								20%	4 - Moderate (1-3 months)	8								
Active	3	Threat	Design	Water Board Regulations	As a result of water board regulations and oversight, decanting site design needing to be altered may occur, which would lead to added costs.	We are designing the decanting basins based on the current water board regulations.	Water board regulations require new design of decanting sites.	3-Moderate (31-50%)	4 - Moderate ($1k - $k	12	Accept	Modify design to accommodate for decanting basins based on the water board regulations.	Sara Dabzadeh	9/20/2023				
								40%	2 - Low (<1 month)	6								
Active	4	Threat	Design	Drainage Inlet Structures	As a result of designing drainage inlet structures in phase one, trash capture device design has not yet been determined. This may result in the possibility that trash capture devices do not fit within existing inlets, which can lead to the modification of existing inlets and nearby safety devices in those areas. As a consequence, this can result in increased cost.	We are using the preliminary design and will be updated in Phase one.	Trash capture device design not compatible with drainage inlet structures in Phase one.	2-Low (11-30%)	2 - Low (<$k)	4	Mitigate	Will design trash capture devices during PS&E Phase once all drainage inlet structures have been analyzed.	Sara Dabzadeh	9/20/2023				
								20%	2 - Low (<1 month)	4								
Active	5	Threat	Design	Increase Due to Inflation	As a result of current and recent market trends and bid environment, an increase in labor and material costs may occur, which would lead to an increased project costs.	The potential for an increase in inflation and material costs exists.	Recent bid results show higher trends in cost items than estimated.	3-Moderate (31-50%)	4 - Moderate ($1k - $k	12	Accept	Will review latest cost estimates to develop latest estimates.	Sara Dabzadeh	9/20/2023				
								40%	4 - Moderate (1-3 months)	12								
Active	6	Threat	Design	IIJA Scope Increase	As a result of recently included safety and stormwater scope improvement opportunities through IIJA funding, additional changes not yet identified may occur, which would lead to an increase in project costs.	IIJA funding has been added to the project and additional improvement opportunities are being identified.	Additional improvement opportunities exceed the additional funding and increase the project costs.	2-Low (11-30%)	2 - Low (<$k)	4	Mitigate	Will use change control to mitigate and funding shortfalls.	Sara Dabzadeh / Jared Lindo	9/20/2023				
								20%	2 - Low (<1 month)	4								
Active	7	Threat	Design	Site Preparation	As a result of preliminary architecture design, an uncertainty in site preparations may occur, which would lead to changes in the scope and cost of the project.	We are using preliminary design provided by the architect in consultation from maintenance field staff.	In PS&E, design modifications are needed.	2-Low (11-30%)	2 - Low (<$k)	4	Accept	We will evaluate the design in PS&E.	Sara Dabzadeh	9/20/2023				
								20%	2 - Low (<1 month)	4								
Active	8	Threat	Environmental	IIJA Funding	As a result of recently included IIJA scope of work changes, additional environmental technical studies may occur in PS&E, which would lead to additional time and cost.	PCRs have been processed and submitted for IIJA funding and scope. Awaiting approval at December CTC.	Additional scope not identified due to additional IIJA funding requires additional technical studies and permits.	2-Low (11-30%)	2 - Low (<$k)	4	Accept	Any additional environmental studies or permits will be evaluated for the approved scope in PS&E and resourced with project change management.	Bahar Heydari	9/20/2023				
								20%	2 - Low (<1 month)	4								
Active	9	Threat	Construction	Illegal Dumping	As a result of illegal dumping at the SR-22/SR-57 in-field area, existing site conditions may vary which will lead to additional costs during construction of the decanting station.	Illegal dumping will be cleared prior to construction.	Illegal dumping is done prior to construction.	3-Moderate (31-50%)	1 - Very Low (Insignificant)	3	Accept	CCO for illegal dumping clean up to be considered during construction.	Sara Dabzadeh	9/27/2023				
								40%	1 - Very Low (Insignificant)	3								
Active	10	Threat	Design	Governor's Zero Net Energy Mandate	As a result of the governor's zero net energy mandate being elevated to zero net carbon emissions, additional design requirements for the building design may occur, which would lead to the potential for increased costs for the project and/or reduced square footage to offset it.	We are designing the building based on the current governor's net zero energy mandate regulations.	The governor's zero net energy mandate is elevated to zero net carbon emissions.	3-Moderate (31-50%)	4 - Moderate ($1k - $k	12	Accept	Requirements for the governor's zero net energy mandate will be in compliance.	Sara Dabzadeh	9/27/2023				
								40%	4 - Moderate (1-3 months)	12								
Retired	1	Threat	Project Management	Facility Cost Estimates	As a result of project funding constraints, reduced unit costs have been applied towards facility estimates, which may lead to potential capital cost overrun.	Based on the recent project nearby, all the information obtained suggest that the contingency would be reduced to 15%. Lower unit and lump sum costs have also been refined to a reduced amount by using preliminary site plans.	Cost Estimate will be updated at appropriate milestone for phase 0 and 1.	3-Moderate (31-50%)	8 - High ($1k - $k)	24	Mitigate	Mitigation will be made through seeking additional funding. District Design to work closely with DES/Architecture for all phases of the project to refine the estimate.	PM/Design/DES	9/20/2023	4-Con Cap	O $100k ML $200k P $300k PERT $200k	O ML P	$80k
								40%	2 - Low (<1 month)	6					3-Con Sup	O 200 hours ML 300 hours P 400 hours PERT 300 hours	O ML P	$15k

ATTACHMENT K

Complete Streets Decision Document
Revalidation

Complete Streets Decision Document (CSDD)

1) Is the project located entirely on a facility where bicyclists and pedestrians are legally prohibited and the project does not involve a shared use path, pedestrian/bicycle structure or work impacting a local road crossing or interchange? (For example, a project including freeway mainline and ramp work where the project freeway segment legally prohibits bicyclists and pedestrians.)

   __X___ NO - Proceed to Question 2
   _____ YES - Stop here. The project is exempt from further complete streets evaluation. Sign document.

2) Is the primary project purpose to address assets that are outside of the roadbed where pedestrian and bicycle travel is not affected, and proposed project will not affect future pedestrian and bicycle facilities? Examples may include culvert outfalls, storm water treatment facilities, bridge substructure or scour mitigation, planting or vegetation removal, retaining walls, etc.

   __X___ NO - Continue to Question 3
   _____ YES - Stop here. The project is exempt from further complete streets evaluation. Sign document.

3) Has a Transportation Planning Scoping Information Sheet (TPSIS) been completed for this project?

   _____ NO – Proceed to Question 4
   __X___ YES – Skip to Question 5 (Note: TPSIS is attached to the PID)

4) Which of the following sources were consulted to determine bicycle, pedestrian or transit needs?
   - _____a. District Active Transportation Plan
   - _____b. Other Caltrans or local/regional agency bike/ped/transit/safe routes to school plans
   - _____c. ADA Transition Plan/Grievances (consult with the District ADA Coordinator)
   - _____d. Corridor planning documents
   - _____e. Other (list here) _____

5) Based on the reviews completed in Question 4 or identified in the TPSIS Section 2, after a review of the roadway geometrics, or identified by the PDT, are there any bicycle, pedestrian, or transit needs, deficiencies or opportunities for improvement identified for the project location?

   _____ NO – Provide brief description of findings: _____
   Stop . The project meets the requirements for consideration of Complete Streets elements. Sign document.
   __X___ YES – Describe them here: (*Refresh crosswalk striping, install wall-mounted LED lighting at Tustin UC, and upgrade push button at Tustin St on/off-ramps)*

6) Based on the needs identified in Question 5, what would be the preferred complete streets elements to address those needs? (i.e. road diet, separated bikeway, reconstructed sidewalk, etc.) Resources include the Complete Streets Toolbox, the Contextual Guidance for Bikeway Facility Selection, the Bikeway Facility Selection Guidance Memorandum, etc. Provide a rough estimated cost to construct preferred project complete streets elements (including right-of-way and support costs).

FACILITY TYPE	UNIT	QUANTITY	ESTIMATED TOTAL COST
Refresh crosswalk striping	*SQFT*	*490*	*$2,450*
Install wall- mounted LED lighting at Tustin UC	*EA*	*6*	*$60,000*
Upgrade push buttons at Tustin St on/off-ramps	*EA*	*8*	*$4,000*

7) Was there any known public and stakeholder opposition to any proposed complete streets elements identified for the project?

_X____ NO
_____ YES – Describe the opposition position here: _____

8) Does the programmable project alternative/project scope include all the complete streets elements identified in Question 6?

_____ NO - Proceed to Question 9
__X___ YES - Stop here. The project has met the requirements for consideration of complete streets elements. Sign document.

9) Does the project include any of the complete streets items that are identified in Question 6? Or are there any proposed incremental improvements related to the complete streets elements in Question 6?

_____ NO – The programmable project alternative does not include any complete streets elements, and therefore does not address identified needs for complete streets elements.
_____ YES – List them here:

FACILITY TYPE	UNIT	QUANTITY	ESTIMATED TOTAL COST

10) Does the project funding have constraints that would preclude the ability to incorporate additional complete streets elements into the project? (For example, cannot combine funding with other sources.)

_____ NO
_____ YES – Describe the constraints here: _____

11) Provide a rationale and justification for not including all the recommended complete streets elements into the project: (Consider the engineering justification, right-of-way constraints, environmental impacts, etc.) _____

Prepared by:

Minh Tran

Minh Van Tran, Project Engineer
Advance Planning/Project Studies Branch B

Concurred by:

Alyssa Murakami

5/17/2021

Alyssa Murakami
District Complete Streets Coordinator

Date

Lan Zhou

5/18/2021

Lan Zhou
Deputy District Director, Planning & Local Assistance

Date

Matthew Cugini

5-19-2019

Matthew Cugini
Deputy District Director, Project Delivery

Date

Revalidation of CSDD at PA&ED

Does the project scope defined in the project approval document include the complete streets elements identified in Question 6 or 9 of this CSDD and the PID?

_____ NO – Prepare a Superseding CSDD (answer Questions 1 through 11) replacing the original CSDD, obtain all certified and concurrence signatures, and attach the superseding CSDD to the project approval document.
__X__ YES – Certify there are no changes to the scope of complete streets elements with only the project engineer certification signature below on the original approved CSDD and attach the CSDD to the project approval document.

Certified by:

Sara Dabzadeh

Sara Dabzadeh, Project Engineer
Design Branch D/Design 2

10/06/2023
Date

ATTACHMENT L

Value Analysis Study
Summary Sheet

VA STUDY SUMMARY SHEET

DISTRICT 12

Caltrans

D-12 SR-22 Maintenance Facility & TMS Project

This project is located on SR-22 from 0.2 mile west of Cambridge Street Overcrossing to the SR-22/SR-55 separation, in the cities of Orange and Santa Ana in Orange County. It proposes to improve TMS elements, partially reconstruct the Orange Maintenance Station, add complete street elements, and add treatment best management practices (BMPs).

The scope of work includes reconstructing the Maintenance Office building, equipment storage, and wash racks; repaving/resurfacing the maintenance parking lot, increasing parking, and adding bike racks; constructing a decanting station with access roads off the maintenance lot and surrounding freeways; installing video detection systems and surveillance cameras on existing traffic poles; upgrading CCTV cameras to HD CCTV cameras; adding ladder crosswalks, pedestrian crossing signage, touch-free accessible pedestrian signals pushbuttons, pedestrian countdowns, and wall-mounted LED lights under the bridge; installing trash nets, gross solid removal devices and trash capture housing devices; and installing yellow reflective back plates at traffic signal heads.

PERFORMANCE ATTRIBUTE IMPACTS

Multi-Modal Connectivity

The accepted alternatives are not anticipated to significantly affect multi-modal connectivity.

Temporary Impacts

The accepted alternatives are not anticipated to significantly affect temporary impacts.

Permanent Impacts

The accepted alternatives will slightly degrade permanent impacts via the removal of vegetation and trees.

Maintainability

The accepted alternatives will improve maintainability by reducing ongoing maintenance for additional landscaping that is being removed.

VALUE SUMMARY

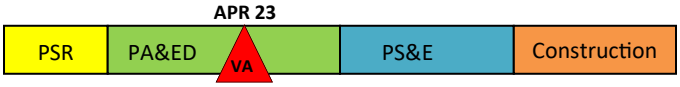
Construction Cost **$31,800,000**

VA Savings **$1,520,000,**

Performance Improved .....**+2.6%**

Value Improved .....**+5.6%**

Alternatives Accepted ..... **2 of2 (100%)**



VA STUDY RESULTS

Decision makers elected to accept both of the two proposed VA alternatives for improvement of the project. The accepted alternatives have the net effect of improving upon the baseline design performance by 2.6% and the anticipated cost impact is roughly $1,520,000 in initial savings. When these value elements are combined, they represent an overall value improvement over the baseline design of 5.6%.

IMPLEMENTED VA ALTERNATIVES

1.0 Construct Equipment Storage building with pre-engineered rigid frame building

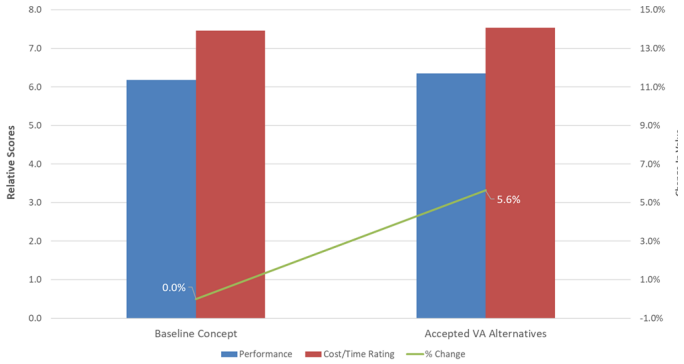
Initial Cost Savings to the Project: **$1,500,000**
Schedule Savings to the Project: **No change**
Performance Improvement: **-0.2%**
Value Improvement: **+2.7%**

2.0 Provide parking along the access road behind the gate

Initial Cost Savings to the Project: **$20,000**
Schedule Savings to the Project: **No change**
Performance Improvement: **+2.7%**
Value Improvement: **+2.7%**

Comparison of Value

Accepted VA Alternatives vs. Baseline Concept



ATTACHMENT M

SHOPP Performance Outputs

SHOPP Project - Accomplishment - Performance Measures - Benefits

District: 12 **Tool ID:** 21637 **Project ID:** 1219000088 **EA:** 0S080 **Co-Rte-PM:** ORA-022-R12.1/R13.164 (Primary Location) View/Print PIR (Performance) Report

☐ Bridge ☐ Pavement ☐ Drainage ☑ Facilities ☑ Signs and Lighting ☑ Mobility TMS ☑ Roadside ☑ Complete Streets ☐ Sustainability /Climate Change ☐ Advance Mitigation /Mitigation ☐ Major Damage & Betterments ☐ Green-house Gases ☐ Relinquishment

Performance & Accomplishments (PPC)

	ActID	Activity Detail	Performance Objective	Unit of Measurement	Quantity	Pre-Good	Pre-Fair	Pre-Poor	New	Post-Good	Post-Fair	Post-Poor	HQ Program Review - Agree with District?	HQ Comment	Review Date	Performance Change Date After Review	Comment
1	D01	Maintenance Facility (201.352)	Transportation Related Facilities	Square Feet	16280.000			11966.000	4314.000	11966.000							Maintenance Yard Upgrade/Decanting Site
2	D33	Number of Maintenance Facilities Locations	No Performance Objective in the SHSMP	Locations	1.000												
3	E55	Proactive Safety Vehicles	Proactive Safety	Annual Fatal & Serious Injury Collisions	0.020			0.020		0.020							
4	F03	CCTV (201.315)	No Performance Objective in the SHSMP	Each	13.000	1.000			12.000	1.000							
5	F45	TMS Structure Component	Transportation Management System Structures	Each	12.000				12.000								
6	F46	TMS Technology Component	Transportation Management Systems	Each	13.000	1.000			12.000	1.000							
7	G07	Worker Safety - Safe Access	Roadside Safety Improvements	Locations	1.000			1.000		1.000							
8	H12	Enhanced Crosswalk Visibility	No Performance Objective in the SHSMP	Each	3.000			3.000		3.000							Existing crosswalk striping will be replaced with continental crosswalk
9	H17	Bike and Pedestrian Lighting	No Performance Objective in the SHSMP	Each	26.000				26.000								20 smart lighting network + 6 wall mounted lightings @ SR 22 Tustin UC
10	H32	Is any Location Within the Project Limits Ped/Bike Accessible?	No Performance Objective in the SHSMP	Yes/No	Yes												Yes
11	H99	Other Complete Streets Activity	No Performance Objective in the SHSMP	-	8.000			8.000		8.000							upgrade ped push buttons

(Last Saved - 12/01/22 @ 10:10 AM by Arvin Wu)

Programming Performance Summary (All Locations)

Program Code	Activity Category	Asset Class	Asset	Performance Value	Performance Measure	Unit	Pre-Good	Pre-Fair	Pre-Poor	Pre-Total	Post Good	New	Post Good+New	Post-Fair	Post-Poor	Post-Total
201.315	Mobility - TMS	Primary	TMS	13.0	Field element(s)	Field element(s)	100.0%	0.0%	0.0%	1.0	7.7%	92.3%	100.0%	0.0%	0.0%	13.0

Notes:

1. The crosswalk for reporting performance in the "Programming Performance Summary" was developed to assist the districts on performance reporting requirements for CTC and PCRs. For discrepancies or errors, please notify AM Tool admins via e-mail at CT-TAM@dot.ca.gov.
2. The data summarized in the table represents the performance reported or to be reported in CTIPS.
3. Programming only requires the breakdown of Good, Fair and Poor for Primary and Supplementary Asset Classes.
4. Reporting of bridge pre and post conditions may contain errors if the project RTL is before 2024/25.
5. Reporting drainage pre-total and post good may differ whenever projects contain abandoned/removed culverts as the culvert no longer exists at post construction, is deleted from the pre-total value for posting of the post good value, and gets deleted from the statewide CIP inventory database.
6. Reactive Safety projects will temporally use the same performance outputs of Safety Improvement projects. When the reporting requirements for CTC changes, the logic in the AM Tool will change.
7. During the transition to the new Proactive Safety objective, the performance output for projects with a primary activity category of Proactive Safety (under program codes 015, 112, or 235) will continue to be presented here in the units of measure corresponding to the activities historically reported to date. A change in units to "Annual Fatal and Serious Injury Collisions" for future programming requests is being planned.