ROAD REPAIR AND ACCOUNTABILITY ACT OF 2017
PROJECT BASELINE AGREEMENT

12-0S380, Rte 5, Rehab Pavement and Multi Assets

Resolution SHOPP-P-2425-01B
(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 August 15, 2024 (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 12-0S380, Rte 5, Rehab Pavement and Multi Assets, 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: 12-0S380, Rte 5, Rehab Pavement and Multi Assets

Resolution: SHOPP-P-2425-01B

(to be completed by CTC)

N/A

Date

N/A

Project Applicant

Date

N/A

N/A

Implementing Agency

Lan Zhou

07/17/2024

Lan Zhou

Date

District Director

California Department of Transportation

07/29/2024

Tony Tavares

Date

Director

California Department of Transportation

10/31/2025

Tanisha Taylor

Date

Executive Director

California Transportation Commission

DD Signature request + 12-0S380 - Baseline-agreement_for Lan's signature_for print

Final Audit Report 2024-07-17

Created:	2024-07-17
By:	Nana Wang (s161717@dot.ca.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAAv6immrFrcwLzcynVAODGXhXkd2oQApOF

"DD Signature request + 12-0S380 - Baseline-agreement_for Lan's signature_for print" History

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Document e-signed by Lan Zhou (lan.zhou@dot.ca.gov)
Signature Date: 2024-07-17 - 11:48:53 PM GMT - Time Source: server- IP address: 174.195.84.86

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2024-07-17 - 11:48:53 PM GMT

August CTC SB1 SHOPP Baseline Agreement

Final Audit Report 2024-07-29

Created:	2024-07-23
By:	Lauren Applegate (s147989@dot.ca.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAAI_0SYj_0LuOHY3egKDZ47BVNTT9bxs4c

"August CTC SB1 SHOPP Baseline Agreement" History

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Document e-signed by Tony Tavares (tony.tavares@dot.ca.gov)
Signature Date: 2024-07-29 - 9:29:09 PM GMT - Time Source: server- IP address: 149.136.17.253

Agreement completed.
2024-07-29 - 9:29:09 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:	05/22/24 07:19:35 AM

District	EA	Project ID	PPNO	Project Manager
12	0S380	1220000058	2676A	MCGAHEY, BARBARA A

County	Route	Begin Postmile	End Postmile	Implementing Agency	
ORA	5	10.0	21.3	PA&ED	Caltrans
				PS&E	Caltrans
				Right of Way	Caltrans
				Construction	Caltrans

Project Nickname

12-0S380, Rte 5, RT 74 to RT 405 Multi-Asset Project

Location/Description

In San Juan Capistrano, Mission Viejo, Laguna Niguel, and Irvine, from north of Route 74 to Route 405. Rehabilitate pavement and drainage systems, upgrade lighting, enhance highway worker safety, replace overhead sign panels, construct bicycle and pedestrian improvements, construct a park and ride facility, and construct stormwater treatment Best Management Practices (BMPs).

Legislative Districts

Assembly:	68, 73, 74	**Senate:**	36, 37	**Congressional:**	45, 49

PERFORMANCE MEASURES

	Primary Asset	Good	Fair	Poor	New	Total	Units
Existing Condition	Pavement	32.7	102.6	1.2		136.5	Lane-miles
Programmed Condition	Pavement	136.4	0.0	0.0	0.0	136.4	Lane-miles

Project Milestone	Actual	Planned
Project Approval and Environmental Document Milestone	04/25/24	
Right of Way Certification Milestone		02/11/25
Ready to List for Advertisement Milestone		03/31/25
Begin Construction Milestone (Approve Contract)		12/31/25

FUNDING (Allocated amounts are shaded)

Component	Fiscal Year	SHOPP					Total
PA&ED	22/23	4,550					4,550
PS&E	23/24	5,555					5,555
RW Support	23/24	195					195
Const Support	24/25	6,353					6,353
RW Capital	24/25	135					135
Const Capital	24/25	44,544					44,544
Total		61,332					61,332

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

Memorandum

To: LYLE STOCKTON
SHOPP Office Chief
Division of Financial Programming
DISTRICT DIRECTORS
DIVISION CHIEFS

Date: July 5, 2024

File: 12-0S380- 1220000058
Ora-5 – 10.0/21.3

From: BARBARA McGAHEY
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 Interstate 5 in Orange County. The purpose of this memorandum is to clarify the actual and target dates in the Project Report's PA&ED (M200), R/W Cert (M410), RTL (M460), Approve Contract (M500) and updates to the COS and Total Programmed amounts reflected in the approved Supplemental Project Report included with the BA submittal package.

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 includes 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)
4/25/2024	2/11/2025	3/31/2025	12/31/2025

If you have any further questions, please contact me at 949-226-6840.

12 - Ora – 5 – 10.0/21.3
EA 0S3800 – Project Number 1220000058 – 2676A(PPNO)
Program Code 20.10.201.121 –Pavement Class I
May 2024

SUPPLEMENTAL PROJECT REPORT

For Project Approval and Environmental Documentation

On Route 5

Between El Horno Street Undercrossing (PM10.0)

And Route 405 Connector (PM 21.3)

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 R/W ENGINEERING

APPROVAL RECOMMENDED:

David Lam
BRANCH CHIEF, DESIGN "C"

Barbara McGahey
PROJECT MANAGER

CONCURRED BY:

Adnan Maiah
DEPUTY DISTRICT DIRECTOR
SINGLE FOCAL POINT
STRATEGIC PORTFOLIO MANAGEMENT

APPROVED BY:

Matthew Cugini 5-7-2024
DEPUTY DISTRICT DIRECTOR
PROJECT DELIVERY
DATE

Lan Zhou
DISTRICT DIRECTOR
DISTRICT 12

Vicinity Map

This supplemental 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.

05/06/2024

Joseph Seo, P.E. *DATE*
Design – Branch C

Table of Contents

1. INTRODUCTION

Project Description:

This Supplemental Project Report adjusts the expected capital cost for this multi-asset project with a pavement anchor from $43,600,000, as shown in the approved project report, to $44,544,000. This project is located on Interstate 5 (I-5) between El Horno Street (St) and the Interstate 405 (I-405) connector (Postmile (PM) 10.0/21.3) in the cities of San Juan Capistrano, Mission Viejo, Laguna Hills, Lake Forest, Irvine, and Laguna Niguel. A project location map is included as Attachment A.

The project proposes to extend the pavement's life expectancy, restore drainage systems, upgrade lighting and sign panels, improve complete street elements, and install census stations along the I-5 corridor within the project limits.

Upon review of the risk register, the PDT has determined that the amount of contingency reserved for slab replacement is not sufficient. This project will be delivered in April of 2025 and we expect to start construction early in 2026. During this time there is continued heavy use of the roadway within the project limits.

The project risk register documents Risk 7, "Differing site condition risk which may lead to additional slab replacements and additional costs to the project," as a qualitative risk. It is more appropriate to include the risk in the cost estimate contingency as a known project risk. This risk will be updated now and included in included for RTL. District experience with other slab replacement projects demonstrates that Construction can expect to see slabs of varying depths and subgrade of inconsistent quality. The risk register will be revised to show the revised cost of this risk and this contingency has been included in the capital cost estimate.

The project is State and Federal funded through the 2022 State Highway Operation and Protection Program (SHOPP) and will be programmed in the 2025/2026 Fiscal Year (FY). The estimated escalated capital cost for construction and right-of-way (R/W) is $44,679,000. See project cost estimate, Attachment E. A summary of the project information is provided in Table 1.1. This adjustment ensures that the project budget adequately accounts for potential risks and provides a more accurate representation of the project's financial requirements.

Table 1.1: Project Summary

Project Limits	12-ORA-5 - PM 10.0/21.3	
Number of Alternatives	2 (1 Viable Alternative and 1 No-Build Alternative)	
	Current Cost Estimate:	**Escalated Cost Estimate:**
Capital Outlay Support	$16,439,000	$16,653,000
Capital Outlay Construction	$38,000,000	$44,544,000
Capital Outlay Right-of-Way	$125,000	$135,000
Funding Source	2022 SHOPP	
Funding Year	2025/2026 Fiscal Year	
Type of Facility	4 to 6 mix flow (MF) lanes freeway including 1 to 2 High-Occupancy Vehicle (HOV) lanes in each direction	
Number of Structures	None	
SHOPP Project Output	Refer to SHOPP Performance Measures Report (Attachment I) Pavement Class I: Pre-Condition: 102.591 in Fair condition, 1.169 in Poor condition Post Condition: 136.428 in Good condition	
Environmental Determination or Document	Categorical Exemption (CEQA) Categorical Exclusion (NEPA)	
Legal Description	In Orange County on Route 5 from El Horno Street Undercrossing to Route 405 Connector, in the Cities of San Juan Capistrano, Mission Viejo, Laguna Hills, Lake Forest, Irvine, and Laguna Niguel	
Project Development Category	Category 5, per PDPM Chapter 8, Section 5	

2. ATTACHMENTS (Number of Pages)

A. Location map (1)
B. Cost Estimate (14)

ATTACHMENT A
LOCATION MAP

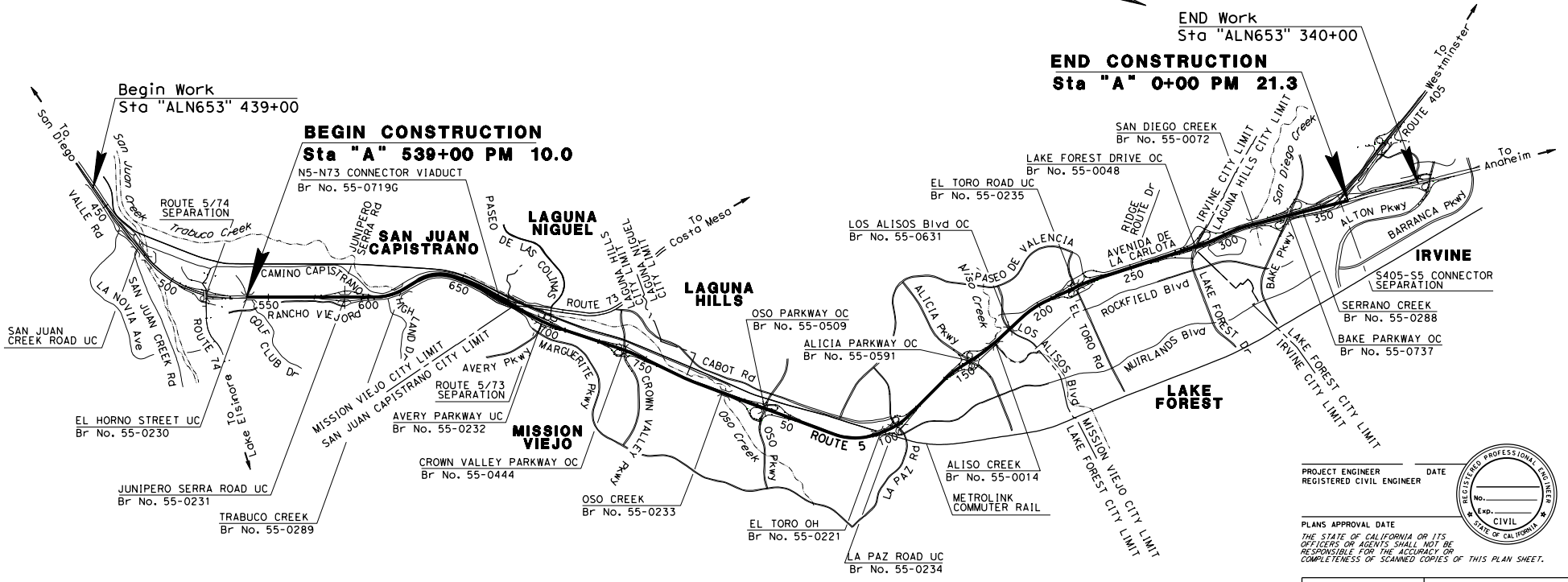
INDEX OF PLANS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN ORANGE COUNTY
IN SAN JUAN CAPISTRANO, MISSION VIEJO, LAGUNA HILLS, LAKE FOREST, IRVINE AND LAGUNA NIGUEL FROM EL HORNO STREET UNDERCROSSING TO ROUTE 405 CONNECTOR

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2023

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10/21.3	1	-



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

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

PLANS APPROVAL DATE

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

CONTRACT No.	12-0S3804
PROJECT ID	1220000058

PROJECT MANAGER: BARBARA McCAHEY
DESIGN MANAGER: DAVID LAM

LAST REVISION: DATE PLOTTED => 5/2/2024 TIME PLOTTED => 9:04:59 PM 03-21-24

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 => ...\Layout\1220000058ab001.dgn | UNIT 2994 | PROJECT NUMBER & PHASE 12200000581

ATTACHMENT B
COST ESTIMATE

PROJECT REPORT COST ESTIMATE

EA: 0S3800 PID: 1220000058

EA: 0S3800

PID: 1220000058

District-County-Route: 12-Ora-5

PM: 10.0-21.3

Type of Estimate : Project Report

Program Code : Various with SHOPP ID 22135

Project Limits : I-5 Between El Horno St and I-405 Connector

Project Description: The project proposes to extend the life expectancy of pavement, restore the drainage system, upgrade lighting, improve complete street elements and install monitoring stations along the I-5 corridor within the project limits.

Scope : Pavement rehabilitation, Drainage Improvement, lighting Imrpvement, Roadside Safety Improvement, Sign Panel Replacement, Complete Street Elements and Census Stations

Alternative : Alternative # 1

SUMMARY OF PROJECT COST ESTIMATE

	Current Year Cost	Escalated Cost
TOTAL ROADWAY COST	**$ 37,577,700**	**$ 44,544,396**
TOTAL STRUCTURES COST	**$ -**	**$ -**
SUBTOTAL CONSTRUCTION COST	**$ 37,577,700**	**$ 44,544,000**
TOTAL OF CONSTRUCTION CAPITAL	**$ 38,000,000**	**$ 44,544,000**
TOTAL RIGHT OF WAY COST	**$ 125,000**	**$ 135,000**
TOTAL CAPITAL OUTLAY COSTS	**$ 38,125,000**	**$ 44,679,000**
PA/ED SUPPORT	**$ 4,550,000**	**$ 4,550,000**
PS&E SUPPORT	**$ 5,555,000**	**$ 5,555,000**
RIGHT OF WAY SUPPORT	**$ 195,000**	**$ 195,000**
CONSTRUCTION SUPPORT	**$ 6,138,164**	**$ 6,353,000**
TOTAL SUPPORT COST	**$ 16,439,000**	**$ 16,653,000**
TOTAL PROJECT COST	**$ 54,600,000**	**$ 61,400,000** *

Programmed Amount

	Month	/	Year
Date of Estimate (Month/Year)	5	/	2023
Estimated Construction Start (Month/Year)	5	/	2026
Number of Working Days =	315		
Estimated Mid-Point of Construction (Month/Year)	1	/	2027
Estimated Construction End (Month/Year)	8	/	2027

Number of Plant Establishment Days

Estimated Project Schedule

PID Approval	6/30/2021
PA/ED Approval	1/30/2023
PS&E	1/1/2025
RTL	3/1/2025
Begin Construction	8/1/2027

Reviewed by	Joe Sawtelle	1/2/2024	714-708-6881
		Date	**Phone**
Approved by Project Manager	Ayman Salama	1/2/2024	714-708-6871
	Project Manager	**Date**	**Phone**

I. ROADWAY ITEMS SUMMARY

	Section		PR Cost
1	**Earthwork**	$	134,000
2	**Pavement Structural Section**	$	15,139,400
3	**Drainage**	$	2,231,200
4	**Specialty Items**	$	20,800
5	**Environmental**	$	751,200
6	**Traffic Items**	$	4,053,900
7	**Detours**	$	60,000
8	**Minor Items**	$	1,153,200
9	**Roadway Mobilization**	$	2,421,600
10	**Supplemental Work**	$	1,691,300
11	**State Furnished**	$	1,392,400
12	**Time-Related Overhead**	$	2,421,600
13	**Total Roadway Contingency**	$	6,107,100
	TOTAL ROADWAY ITEMS	**$**	**37,577,700**
14	**Structures**		$0
	Roadway + Structures	**$**	**37,577,700**

Estimate Prepared By : Sepideh Sarachi 9/26/2023

Name and Title Date

Estimate Reviewed By :

Name and Title Date

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.

EA: 0S3800 PID: 1220000058

SECTION 1: EARTHWORK

Item code		Unit	Quantity		Unit Price ($)			Cost
100100	Develop Water Supply	LS	1	x	10,000.00	=	$	10,000
152320	Lead Compliance Plan	LS	1	x	10,000.00	=	$	10,000
170103	Clearing & Grubbing	LS	1	x	25,000.00	=	$	25,000
190101	Roadway Excavation	LS	1	x	89,000.00	=	$	89,000
					TOTAL EARTHWORK SECTION ITEMS		**$**	**134,000**

SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code		Unit	Quantity		Unit Price ($)			Cost
250401	Class 4 Aggregate Subbase	CY	140	x	150.00	=	$	21,000
260203	Class 2 Aggregate Base	CY	2,230	x	100.00	=	$	223,000
280010	Rapid Strength Concrete Base	CY	1,640	x	500.00	=	$	820,000
290201	Asphalt Treated Permeable Base	CY	20	x	400.00	=	$	8,000
390132	Hot Mix Asphalt (Type A)	TON	350	x	380.00	=	$	133,000
390137	Rubberized Hot Mix Asphalt (Gap Graded)	TON	10,030	x	160.00	=	$	1,604,800
397005	Tack Coat	TON	25	x	1,500.00	=	$	37,500
398200	Cold Plane Asphalt Concrete Pavement	SQYD	102,390	x	6.00	=	$	614,340
401055	Jointed Plain Concrete Pavement (RSC)	CY	16,400	x	450.00	=	$	7,380,000
418006	Remove Concrete Pavement	CY	16,400	x	130.00	=	$	2,132,000
420102	Groove Existing Concrete Pavement	SQYD	50,000	x	5.00	=	$	250,000
420201	Grind Existing Concrete Pavement	SQYD	50,000	x	8.00	=	$	400,000
730020	Minor Concrete (Curb) (CY)	CY	140	x	1,300.00	=	$	182,000
731519	Minor Concrete (Stamped Concrete)	SF	2,140	x	25.00	=	$	53,500
731521	Minor Concrete (Sidewalk)	CY	85	x	1,000.00	=	$	85,000
731710	Remove Concrete Curb (LF)	LF	2,700	x	25.00	=	$	67,500
731780	Remove Concrete Sidewalk (SQYD)	SQYD	720	x	75.00	=	$	54,000
846012	Thermoplastic Crosswalk and Pavement Marking (Enhanced Wet Night Visibility)	SF	3,100	x	7.00	=	$	21,700
XXXXX	Junipero Serra Bike Path Project	EA	1	x	1,745,000.00	=	$	1,745,000
					TOTAL PAVEMENT STRUCTURAL SECTION ITEMS		**$**	**15,811,400**

Effective immediately, districts must input estimated item quantities in blue text above in the PRSM database for the pay items listed in the Design Memo, dated April 9, 2018, when Project Report is approved (Milestone 200). Link to Desgin Memo.

EA: 0S3800 PID: 1220000058

SECTION 3: DRAINAGE

Item code		Unit	Quantity		Unit Price ($)			Cost
710132	Remove Culvert	LF	815	x	120.00	=	$	97,800
710240	Modify Inlet	EA	5	x	7,500.00	=	$	37,500
641113	24" PLASTIC PIPE	LF	710	x	200.00	=	$	142,000
665023	24" CORRUGATED STEEL PIPE (.079" THICK)	LF	105	x	240.00	=	$	25,200
710384	24" Cured-In-Place Pipeliner	LF	2,340	x	280.00	=	$	655,200
710388	30" Cured-In-Place Pipeliner	LF	95	x	300.00	=	$	28,500
	Trash Capture Housing	EA	8	x	65,000.00	=	$	520,000
	Trash Net	EA	9	x	45,000.00	=	$	405,000
	Pipe Riser Trash Retrofit	EA	1	x	20,000.00	=	$	20,000
	Gross Solid Removal Devices	EA	2	x	150,000.00	=	$	300,000
						TOTAL DRAINAGE ITEMS	**$**	**2,231,200**

SECTION 4: SPECIALTY ITEMS

Item code		Unit	Quantity		Unit Price ($)			Cost
141120	Treated Wood Waste	LB	2,600	x	1.00	=	$	2,600
839752	Remove Guardrail	LF	130	x	22.00	=	$	2,860
832007	Midwest Guardrail System (Wood Post)	LF	100	x	75.00	=	$	7,500
839584	Alternative In-line Terminal System	EA	1	x	6,000.00	=	$	6,000
839581	End Anchor Assembly (Type SFT)	EA	1	x	1,800.00	=	$	1,800
						TOTAL SPECIALTY ITEMS	**$**	**20,800**

Effective immediately, districts must input estimated item quantities in blue text above in the PRSM database for the pay items listed in the Design Memo, dated April 9, 2018, when Project Report is approved (Milestone 200). Link to Desgin Memo.

EA: 0S3800 PID: 1220000058

SECTION 5: ENVIRONMENTAL

5A - ENVIRONMENTAL MITIGATION

Item code		Unit	Quantity		Unit Price ($)			Cost		
	Biological Mitigation (on-site)	LS	1	x	5,000.00	=	$	5,000		
80010X	Bird/Bat Protection	LS	1	x	5,000.00	=	$	5,000		
130670	Study Survey	LS	1	x	5,000.00	=	$	5,000		
								Subtotal Environmental Mitigation	*$*	*15,000*

5B - LANDSCAPE AND IRRIGATION

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

5D - NPDES

Item code		Unit	Quantity		Unit Price ($)			Cost		
130200	Prepare WPCP	LS	1	x	1,200.00	=	$	1,200		
130100	Job Site Management	LS	1	x	200,000.00	=	$	200,000		
130620	Temporary Drainage Inlet Protection	LS	1	x	10,000.00	=	$	10,000		
130730	Street Sweeping	LS	1	x	25,000.00	=	$	25,000		
XXXX	Temporary Construction Site BMP	LS	1	x	500,000.00	=	$	500,000		
								Subtotal NPDES	*$*	*736,200*

								TOTAL ENVIRONMENTAL	**$**	**751,200**

Supplemental Work for NPDES

066595	Water Pollution Control Maintenance Sharing*	LS	1	x	5,000.00	=	$	5,000		
066596	Additional Water Pollution Control**	LS	1	x	1,200.00	=	$	1,200		
								Subtotal Supplemental Work for NDPS	*$*	*6,200*

*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.

EA: 0S3800 PID: 1220000058

SECTION 6: TRAFFIC ITEMS

6A - Traffic Electrical

Item code		Unit	Quantity		Unit Price ($)			Cost
8609XX	Traffic Monitoring Station (Type X)	LS	1	x	105,000.00	=	$	105,000
872135A	Traffic Census Station Systems	LS	1	x	480,000.00	=	$	480,000
87213X	Modifying Lighting and Sign Illumination Systems	LS	1	x	475,000.00	=	$	475,000
872133	Modifying Traffic Signal and Lighting Systems	LS	1	x	250,000.00	=	$	250,000

Subtotal Traffic Electrical *$ 1,310,000*

6B - Traffic Signing and Striping

Item code		Unit	Quantity		Unit Price ($)			Cost
141101	Remove Yellow Painted Traffic Stripe (Hazardous Waste)	LF	4,000	x	1.00	=	$	4,000
56021X	Install and Furnish Versatile Sign Structure (Truss)	EA	1	x	200,000.00	=	$	200,000
568060	Modify Sign Structure	EA	6	x	15,000.00	=	$	90,000
810230	PAVEMENT MARKER (RETROREFLECTIVE)	EA	484	x	6.20	=	$	3,001
820350	Remove Sign From Sign Frame	EA	20	x	1,500.00	=	$	30,000
820700	Furnish Formed Panel Sign (Overhead)	SQFT	220	x	29.55	=	$	6,501
82071X	Furnish Laminated Panel Sign	SQFT	4,500	x	25.00	=	$	112,500
820890	Install Sign Panel on Existing Frame	SQFT	4,500	x	15.00	=	$	67,500
840516	Thermoplastic Pavement Marking (Enhanced Wet Night Visibility)	SQFT	10,100	x	4.50	=	$	45,450
840583	6" TWO-COMPONENT PAINT TRAFFIC STRIPE	LF	24,200	x	3.00	=	$	72,600
846007	6" Thermoplastic Traffic Stripe (Enhanced Wet Night Visibility)	LF	25,000	x	2.00	=	$	50,000
846020	Remove Painted Traffic Stripe	LF	21,000	x	1.00	=	$	21,000

Subtotal Traffic Signing and Striping *$ 702,552*

6C - Traffic Management Plan

Item code		Unit	Quantity		Unit Price ($)			Cost
120090	Construction Area Signs	LS	1	x	75,000.00	=	$	75,000
120204	Portable Radar Speed Feedback Sign System Day	LS	1	x	105,000.00	=	$	105,000
120100	Traffic Control System	LS	1	x	1,650,000.00	=	$	1,650,000
120320	TEMPORARY BARRIER SYSTEM	LF	2,250	x	45.00	=	$	101,250
128652	Portable Changeable Message Sign	LS	1	x	110,000.00	=	$	110,000

Subtotal Traffic Management Plan *$ 2,041,250*

6C - Stage Construction and Traffic Handling

Item code	Unit	Quantity	Unit Price ($)	Cost

Subtotal Stage Construction and Traffic Handling *$ -*

TOTAL TRAFFIC ITEMS **$ 4,053,900**

SECTION 7: DETOURS

Includes constructing, maintaining, and removal

Item code		Unit	Quantity		Unit Price ($)			Cost	
120149	Temporary Pavement Marking (Paint)	SQFT	20,000	x	3.00	=	$	60,000	

TOTAL DETOURS $ 60,000

SUBTOTAL SECTIONS 1 through 7 $ 23,062,500

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				5.0%		$ 1,153,125	
	Total of Section 1-7	$	23,062,500	x	5.0%	=	$ 1,153,125	

TOTAL MINOR ITEMS $ 1,153,200

SECTIONS 9: ROADWAY MOBILIZATION *

Item code								
999990	Total Section 1-8	$	24,215,700	x	10%	=	$	2,421,570

TOTAL ROADWAY MOBILIZATION $ 2,421,600

SECTION 10: SUPPLEMENTAL WORK

Item code		Unit	Quantity		Unit Price ($)			Cost	
066670	Payment Adjustments For Price Index Fluctuations	LS	1	x	92,000.00	=	$	92,000	
066070	Maintain Traffic	LS	1	x	500,000.00	=	$	500,000	from TMP Cost
066015	Federal Trainee Program	LS	1	x	14,400.00	=	$	14,400	
066610	Partnering	LS	1	x	50,000.00	=	$	50,000	
090205	Dispute Resolution Board On-Site Meeting	EA	8	x	6,000.00	=	$	48,000	calc
060210	Hourly Off-Site Dispute Resolution Board Related Tasks	HR	60	x	200.00	=	$	12,000	
	*Cost of **NPDES** Supplemental Work specified in Section 5D*					=	$	6,200	
	Total Section 1-8	$	24,215,700		4%	=	$	968,628	

TOTAL SUPPLEMENTAL WORK $ 1,691,300

*Note: For Project less than 50 Working Days Mobilization is not required as a separate contract item, however contract item prices should take into consideration mobilization as part of the price.
If the building portion of the project is greater than 50% of the total project cost, then mobilization is not included.

SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price ($)		Cost
066105	Resident Engineers Office	LS	1	x	333,000.00	=	$333,000
066063	Traffic Management Plan - Public Information	LS	1	x	150,000.00	=	$150,000
066062	COZEEP Contract	LS	1	x	425,000.00	=	$425,000

Total Section 1-8	$	24,215,700	2%	=	$	484,314

TOTAL STATE FURNISHED $1,392,400

SECTION 12: TIME-RELATED OVERHEAD

Total of Roadway and Structures Contract Items excluding Mobilization $24,215,700 (used to calculate total TRO)

Total Construction Cost (excluding TRO and Contingency) $29,721,000 (used to check if project capital cost is greater than $5 million including contingency)

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

Item code		Unit	Quantity		Unit Price ($)		Cost
090100	Time-Related Overhead	WD	315	X	$7,688	=	$2,421,600

TOTAL TIME-RELATED OVERHEAD $2,421,600

SECTION 13: ROADWAY CONTINGENCY*

Risk Amount from Risk Register	(for Known Risks)		3%			
Additional or Residual Contingency	(for Unknown/Undefined Risks)		16%		$5,271,386	
Total Section 1-12	$	32,142,600	x **19%**	=	$6,107,094	

TOTAL CONTINGENCY* $6,107,100

II. STRUCTURE ITEMS

	Bridge 1		Bridge 2		Bridge 3
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Bridge Name	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Bridge Number	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Structure Type	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Bridge Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Cost Per Square Foot	$0		$0		$0
COST OF EACH					

	Bridge 4		Bridge 5		Bridge 6
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Bridge Name	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Bridge Number	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Structure Type	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Bridge Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Cost Per Square Foot	$0		$0		$0
COST OF EACH					

SUBTOTAL COST OF BRIDGES		**$0**
SUBTOTAL COST OF BUILDINGS		**$0**
Time-Related Overhead	10%	**$0**
STRUCTURES MOBILIZATION	10%	**$0**
STRUCTURES CONTINGENCY*	25%	**$0**
SUBTOTAL COST OF STRUCTURES		**$0**

Estimate Prepared By: _____ _____

XXXXXXXXXXXXXXXX ------ Division of Structures Date

PROJECT COST ESTIMATE

II. STRUCTURE ITEMS

	Bridge 7		Building 1		Building 2
DATE OF ESTIMATE	03/23/21		03/23/21		03/23/21
Bridge Name	Paularino Off Ramp UC		RW 660		RW 90 (Alternative 1)
Bridge Number	55-0436G		55-RW660		55-RW90
Structure Type	CIP/PS Box Girders		RC Box Girders		Retaining Wall
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Bridge Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Cost Per Square Foot	$0		$0		$0
COST OF EACH					

	Building 3		Building 4		Building 5
DATE OF ESTIMATE	03/23/21		03/23/21		03/23/21
Building Name	RW 43		RW 266		RW 1
Bridge Number	55-RW43		55-RW266		55-RW1
Structure Type	Retaining Wall		Retaining Wall		Retaining Wall
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)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Cost Per Square Foot	$0		$0		$0
COST OF EACH					

SUBTOTAL COST OF BRIDGES		**$0**
SUBTOTAL COST OF BUILDINGS		**$0**
Time-Related Overhead	10%	**$0**
STRUCTURES MOBILIZATION	10%	**$0**
STRUCTURES CONTINGENCY*	25%	**$0**
SUBTOTAL COST OF STRUCTURES		**$0**

Estimate Prepared By: _____ _____

XXXXXXXXXXXXXXXX ------ Division of Structures — Date

II. STRUCTURE ITEMS

Building 6

DATE OF ESTIMATE	03/23/21		
Building Name	RW 2		
Bridge Number	55-RW2		
Structure Type	Retaining Wall		
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)	0 SQFT	0 SQFT	0 SQFT
Structure Depth (Feet)	0 LF	0 LF	0 LF
Footing Type (pile or spread)	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Cost Per Square Foot	$0	$0	$0
COST OF EACH			
	$0.00 $0.00	$0.00 $0.00	$0.00 $0.00
	0 6	0 6	0 6

DATE OF ESTIMATE			
Name			
Bridge Number			
Structure Type			
Width (Feet) [out to out]	0 LF	0 LF	0 LF
Total Length (Feet)	0 LF	0 LF	0 LF
Total Area (Square Feet)	0 SQFT	0 SQFT	0 SQFT
Structure Depth (Feet)	0 LF	0 LF	0 LF
Footing Type (pile or spread)	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxx
Cost Per Square Foot	$0	$0	$0
COST OF EACH			

SUBTOTAL COST OF BRIDGES		**$0**
SUBTOTAL COST OF BUILDINGS		**$0**
Time-Related Overhead	10%	**$0**
STRUCTURES MOBILIZATION	10%	**$0**
STRUCTURES CONTINGENCY*	25%	**$0**
SUBTOTAL COST OF STRUCTURES		**$0**

Estimate Prepared By: _____ _____

XXXXXXXXXXXXXXXX ------ Division of Structures — Date

EA: 0S3800 PID: 1220000058

III. RIGHT OF WAY

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

				Current Value Future Use		Escalated Value
A)	A1)	Acquisition, including Excess Land, Fees, Damages, Goodwill	$	0	$	0
	A2)	Acquisition of Offsite Mitigation	$	0	$	0
	A3)	Railroad Acquisition	$	0	$	0
		Project Permit Fees	$	0	$	0
B)	B1)	Utility Relocation (State Share)	$	125,000	$	135,000
	B2)	Potholing (Design Phase)	$	0	$	0
C)		Utility - Advance Engineering Estimate (Encumber with State Only Funds)	$	0	$	0
D)		RAP and/or Last Resort Housing	$	0	$	0
E)		Clearance & Demolition	$	0	$	0
F)		Relocation Assistance (RAP and/or Last Resort Housing Costs)	$	0	$	0
G)		Title and Escrow	$	0	$	0
H)		Environmental Review	$	0	$	0
I)		Condemnation Settlements 0%	$	0	$	0
J)		Design Appreciation Factor 0%	$	0	$	0
K)		Utility Relocation (Construction Cost)	$	0	$	0

L)	**TOTAL RIGHT OF WAY ESTIMATE**	**$125,000**
M)	**TOTAL R/W ESTIMATE: Escalated**	**$135,000**
N)	**RIGHT OF WAY SUPPORT**	**$195,000**

Support Cost Estimate Prepared By	Kelly Bernardino		
	Right of Way Estimator[1]		Phone
Utility Estimate Prepared By	Scott Hansen		
	Utility Coordinator[2]		Phone
R/W Acquisition Estimate Prepared By	Kelly Bernardino		
	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

DO NOT PRINT THIS SHEET AS PART OF COST ESTIMATE ATTACHMENT TO PROJECT INITIATION OR APPROVAL DOCUMENTS.

EA: 0S3800 PID: 1220000058

IV. SUPPORT COST ESTIMATE SUMMARY

Run a Support Cost Estimate Summary report (D11 Project Management Support onramp) for component data.

		Unescalated-Risk Loaded					Escalated (3.5% per year for ETC, effective FY22/23)				
Total by FY		**PA&ED**	**PS&E**	**RW**	**CON**	**Total $**	**PA&ED**	**PS&E**	**RW**	**CON**	**Total $**
<2015/16	Expended										
	ETC										
2016/17	Expended										
	ETC										
2017/18	Expended										
	ETC										
2018/19	Expended										
	ETC										
2019/20	Expended										
	ETC										
2020/21	Expended										
	ETC										
2021/22	Expended										
	ETC										
2022/23	Expended	$4,550,000				**$4,550,000**	$4,550,000				**$4,550,000**
	ETC										
2023/24	Expended		$5,555,000	$195,000		**$5,750,000**		$5,555,000	$195,000		**$5,750,000**
	ETC										
2024/25	Expended				$6,138,164	**$6,138,164**				$6,353,000	**$6,353,000**
	ETC										
2025/26	Expended										
	ETC										
2026/27	Expended										
	ETC										
2027/28	Expended										
	ETC										
2028/29	Expended										
	ETC										
>2029/30	Expended										
	ETC										
EAC (Expended + ETC)		**$4,550,000**	**$5,555,000**	**$195,000**	**$6,138,164**	**$16,438,164**	**$4,550,000**	**$5,555,000**	**$195,000**	**$6,353,000**	**$16,653,000**
Risk Amount from Risk Register						**Escalated Risk Amount**	**$0**	**$0**	**$0**	**$0**	**$0**
Support Escalation Rate											
Duration to mid-point component											
Total including Risk Amount		**$4,550,000**	**$5,555,000**	**$195,000**	**$6,138,164**	**Total Esc. Support Cost**	**$4,550,000**	**$5,555,000**	**$195,000**	**$6,353,000**	**$16,653,000**
Approved Budget (PRSM)											
Difference (Budget - EAC)		**-$4,550,000**	**-$5,555,000**	**-$195,000**	**-$6,138,164**	**-$16,438,164**	**$4,550,000**	**-$5,555,000**	**-$195,000**	**-$6,353,000**	**-$7,553,000**
Support Ratio (EAC / Cap Cost)		**10.2%**	**12.4%**	**0.4%**	**13.7%**	**36.8%**	**10.2%**	**12.4%**	**0.4%**	**14.2%**	**37.3%**

Total Capital Cost:	**44,679,000**
Total Capital Outlay Support Cost:	**16,653,000**
Overall Percent Support Cost:	**37.3%**

PRSM workplan hours/costs verified against approved MWA:

Office Chief - _____ Date _____

Approved by:

Project Control - _____ Date _____

12-ORA-5 – PM 10.0/21.3
EA# 0S3800 – Project Number 1220000058 – PPNO 2676A
Program Code: 201.121 Pavement Class I

February 2024

Project Report
For Project Approval and Environmental Document

On Route Route 5

Between El Horno Street Undercrossing (PM 10.0)

And Route 405 Connector (PM 21.3)

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 & Right of Way Engineering

APPROVAL RECOMMENDED:

KAMRAN MAZHAR
Chief, Design Branch "F"

BARBARA MCGAHEY
Project Manager

CONCURRED:

ADNAN MAIAH
Deputy District Director
Single Focal Point
Strategic Portfolio Management

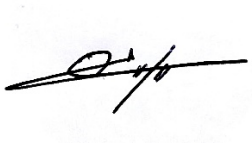
PROJECT APPROVED:

MATTHEW CUGINI 4-25-2024
MATTHEW CUGINI DATE
Deputy District Director
Project Delivery

LAN ZHOU
District Director
District 12

Vicinity Map

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.



02/01/2024

Sepideh Sarachi, REGISTERED CIVIL ENGINEER *DATE*

Table of Contents

List of Abbreviations and Acronyms

ADL	Aerially Deposited Lead	**PIR**	Project Initiation Report
ADT	Average Daily Traffic	**PM**	Post Mile
APCS	Automated Pavement Condition Survey	**PS&E**	Plans, Specifications, and Estimate
		RTE	Route
BMP	Best Management Practice	**RTL**	Ready To List
CAPM	Capital Preventive Maintenance	**RWQCB**	Regional Water Quality Control Board
CE/CE	Categorical Exemption/Categorical Exclusion	**SHOPP**	State Highway Operation Protection Program
CEQA	California Environmental Quality Act	**SPIR**	Supplemental Project Initiation Report
CFR	Code of Federal Regulations	**SR**	State Route
CIPP	Cured-In-Place-Pipe	**SWDR**	Storm Water Data Report
CMS	Changeable Message Sign	**SWMP**	Storm Water Management Plan
DD	District Directive	**SWRCB**	State Water Resources Control Board
DSDD	Design Standard Decision Document	**TASAS**	Traffic Accident Surveillance and Analysis System
DOE	District Office Engineer		
DSA	Disturbed Soil Area	**TMP**	Transportation Management Plan
EA	Expenditure Authorization	**WB**	Westbound
EB	Eastbound		
FHWA	Federal Highway Administration		
HOV	High-Occupancy Vehicle		
MASH	Manual for Assessing Safety Hardware		
MBGR	Metal Beam Guard Railing		
MCCE	Mitigation and Compliance Cost Estimate		
MGS	Midwest Guardrail System		
MOU	Memorandum of Understanding		
NEPA	National Environmental Policy Act		
NPDES	National Pollutant Discharge Elimination System		
OCTA	Orange County Transportation Authority		
PA&ED	Project Approval and Environmental Document		
PDPM	Project Development Procedures Manual		
PDT	Project Development Team		

1. INTRODUCTION

This project is located on Interstate 5 (I-5) between El Horno Street (St) and the Interstate 405 (I-405) connector (Postmile (PM) 10.0/21.3) in the cities of San Juan Capistrano, Mission Viejo, Laguna Hills, Lake Forest, Irvine, and Laguna Niguel. A project location map is included as Attachment A.

The project proposes to extend the pavement's life expectancy, restore drainage systems, upgrade lighting and sign panels, improve complete street elements, and install census stations along the I-5 corridor within the project limits.

The project is State and Federal funded through the 2022 State Highway Operation and Protection Program (SHOPP) and will be programmed in the 2025/2026 Fiscal Year (FY). The estimated escalated capital cost for construction and right-of-way (R/W) is $43,735,000. See project cost estimate, Attachment E. A summary of the project information is provided in Table 1.1.

This Project is categorized as Category 5, as described in the Project Development Procedures Manual (PDPM) Chapter 8, Section 5 under Project Development Categories. A Project Initiation Report (PIR) was completed in June 2021.

Table 1.1: Project Summary

Project Limits	12–ORA–5 – PM 10.0/21.3	
Number of Alternatives	2 (1 Viable Alternative and 1 No-Build Alternative)	
	Current Cost Estimate:	**Escalated Cost Estimate:**
Capital Outlay Support	$16,439,000	$16,653,000
Capital Outlay Construction	$37,000,000	$43,600,000
Capital Outlay Right-of-Way	$125,000	$135,000
Funding Source	2022 SHOPP	
Funding Year	2025/2026 Fiscal Year	
Type of Facility	4 to 6 mix flow (MF) lanes freeway including 1 to 2 High-Occupancy Vehicle (HOV) lanes in each direction	
Number of Structures	None	
SHOPP Project Output	Refer to SHOPP Performance Measures Report (Attachment I) Pavement Class I: Pre-Condition: 102.591 in Fair condition, 1.169 in Poor condition Post Condition: 136.428 in Good condition	
Environmental Determination or Document	Categorical Exemption (CEQA) Categorical Exclusion (NEPA)	

Legal Description	In Orange County on Route 5 from El Horno Street Undercrossing to Route 405 Connector, in the Cities of San Juan Capistrano, Mission Viejo, Laguna Hills, Lake Forest, Irvine, and Laguna Niguel
Project Development Category	Category 5, per PDPM Chapter 8, Section 5

2. RECOMMENDATION

Two alternatives were considered for this project. Alternative 1 is the build alternative, and Alternative 2 is the no-build alternative. Alternative 1 is the recommended alternative for this project.

3. BACKGROUND

Project History

This I-5 Asset Management project was initiated by the District 12 Maintenance Engineering Branch. The anchor asset of this project is pavement class 1, and satellite assets are drainage improvement, lighting rehabilitation, roadside safety improvements, replacement of overhead sign panels, complete street elements, and census stations within the project limits. The Project Initiation Report (PIR) was approved in 2021.

OCTA currently is implementing three concurrent projects within this project's limits, namely EA 0K021, EA 0K022, and EA 0K023. These projects will introduce a General Purpose (GP) lane from Avery Parkway to Alicia Parkway, reconstruct auxiliary lanes, and facilitate continuous ingress and egress to the HOV lane on both I-5 directions from Alicia Parkway to El Toro Road. Moreover, there are plans for constructing retaining and sound walls, as well as upgrading two existing interchanges, La Paz Road (Rd) and Avery Pkwy, to ensure the standard vertical clearance. These OCTA projects are projected for completion in 2024.

Community Interaction

There is no known opposition to the proposed project from local agencies or the public. All traffic handling and detours must be coordinated with the cities of San Juan Capistrano, Mission Viejo, Laguna Hills, Lake Forest, Irvine, and Laguna Niguel.

Existing Facility

I-5 is a controlled-access freeway and a major north-south interstate freeway. Within the project limits, there are (4) to (6) mixed flow (MF) lanes, (1) auxiliary (Aux) lane,(1 to 2) HOV lanes in each direction, (9) local interchanges, and (2) freeway-

to-freeway interchanges at SR-73 and I-405. I-5 consists of various segments as listed below:

The NB direction

- From El Horno St to Junipero Serra Rd: (5) MF lanes, (1) HOV lane.
- From Junipero Serra Rd to SR-73: (6) MF lanes, (1) HOV lane.
- From SR-73 to Avery Pkwy: (4) MF lanes, (1) HOV lane.
- From Avery Pkwy to Oso Pkwy:(4) MF lanes, (1) Aux Lane, (1) HOV lane.
- From Oso Pkwy to La Paz Rd: (4) MF lanes, (1) HOV lane.
- From La Paz Rd to Alicia Pkwy: (5) MF lanes, (1) HOV lane.
- From Alicia Pkwy to Los Alisos Boulevard (Blvd): (6) MF lanes, (1) HOV lane.
- From Los Alisos Blvd to El Toro Rd:(5) MF lanes, (1) Aux lane, (1) HOV lane.
- From El Toro Rd to Lake Forest Drive: (6) MF lanes, (2) HOV lanes.
- From Lake Forest Dr to Bake Pkwy: (5) MF lanes, (2) HOV lanes.

The SB direction

- From the I-405 connector to Bake Pkwy: (6) MF lanes, (1) HOV lane.
- From Bake Pkwy to Lake Forest Dr: (6) MF lanes, (2) HOV lanes.
- From Lake Forest Dr to El Toro Rd: (5) MF lanes, (1) Aux lane, (2) HOV lanes.
- From El Toro Rd to Los Alisos Blvd: (6) MF lanes, (1) HOV lane.
- From Los Alisos Blvd to Alicia Pkwy: (4) MF lanes, (1) HOV lane.
- From Alicia Pkwy to Oso Pkwy: (4) MF lanes, (1) Aux lane, (1) HOV lane.
- From Oso Pkwy to Crown Valley Pkwy: (5) MF lanes, (1) HOV lane
- From Crown Valley Pkwy to Avery Pkwy: (4) MF lanes, (1) Aux lane, (1) HOV lane.
- From Avery Pkwy to SR-73 connector: (4) MF lanes, (1) HOV lane.
- From SR-73 connector to Junipero Serra Rd: (5) MF lanes, (1) Aux lane, (1) HOV lane.
- From Junipero Serra Rd to El Horno St: (5) MF lanes, (1) HOV lane.

OCTA's ongoing projects (EA 0K021, EA 0K022, and EA 0K023) will affect the geometric features of I-5 that are mentioned above. The current pavement condition is included in Attachment M.

4. PURPOSE AND NEED

Purpose:

The purpose of this project is to do the following:

a) Extend the existing pavement's service life expectancy and improve the roadway's ride quality, pavement serviceability, safety characteristics, and structural integrity.

b) Improve the serviceability and flow capacity of the existing drainage systems.

c) Provide safe maintenance access roads during repetitive maintenance activities.

d) Minimize exposure of highway workers to traffic and reduce recurrent maintenance activities.

e) Improve the reflectivity of sign panels and refresh pavement delineation in each direction.

f) Improve accessibility, striping, and lighting to pedestrian/bicyclist facilities.

g) Provide the ability to collect traffic data.

Need:

The current state of this I-5 segment presents the following operational challenges:

a) The existing pavement necessitates rehabilitation.

b) Drainage systems have become non-operational due to wear and deterioration.

c) Existing covered soffit lighting fixtures require replacement with wall-mounted fixtures or light poles to ensure safe accessibility.

d) Maintenance personnel frequently encounter live traffic exposure during their operational tasks.

e) Sign panels exhibit reduced reflectivity, demanding enhanced visibility and readability for motorists.

f) Faded crosswalk markings and insufficient striping or lighting at critical pedestrian/bicyclist conflict zones.

g) Absence of census stations to capture crucial traffic data.

4A. Problem, Deficiencies, and Justification

Based on on-site assessments, the existing pavement condition along the I-5 corridor within the project boundaries is notably deteriorated, characterized by a significant prevalence of cracks and damages. The progressive deterioration threatens to degrade the road's ride quality, potentially hampering goods transportation and compromising driver safety. Noteworthy deficiencies encompass inadequate lighting systems, restricted maintenance worker access, and poorly visible overhead sign panels that fall short of contemporary standards. Additionally, there are discernible shortcomings in pavement delineation where it's essential.

Upon inspection, several culverts within the project limits have been flagged for cracks or breakages. Over extended periods, culverts are susceptible to deterioration from factors such as aging, corrosion, or general wear, culminating in structural impairments that compromise their hydraulic efficiency. Furthermore, stormwater-induced erosion or blockages can exacerbate these issues, potentially leading to inundations. The rehabilitation of culverts is imperative to ensure unimpeded stormwater conveyance, thereby averting flooding, minimizing erosion, and preserving the infrastructure's structural integrity. This restoration effort not only optimizes the drainage system's efficacy but also mitigates flood and erosion-related risks. Importantly, culvert restoration can bolster water quality by facilitating proper water infiltration and oxygenation.

The improvements for this project aim to bolster safety measures, elevate ride comfort, prolong pavement longevity, and reduce the occupational hazards faced by maintenance personnel .

4B. Regional and System Planning

Coordination with other ongoing projects on I-5 that overlap the project limits is critical to successfully deliver the project on schedule and within budget. To mitigate conflicts related to project scopes, construction sequencing, and Traffic Management Plans (TMPs), direct and regular communication among the project teams is essential. Table 4.1 contains concurrent projects on I-5 within the project limits.

Table 4.1: Adjacent Projects

EA	Begin PM	End PM	RTL	Description	Project Location
0K021	12.4	14.5	5/22/19	Add MF lane	SR-73 to Oso
0K022	14.5	17.1	6/13/18	Add MF lane	Oso to La Paz
0K023	17.1	18.9	4/02/20	Add MF / HOV lane	Alicia to El Toro
0K670	21.3	31.3	4/06/26	Add MF lane	I-405 to SR-55
0R970	0.5	10.0	7/15/25	Asset Management	ORA Co. Line to SR-74
0S050	21.3	31.3	7/08/24	Asset Management	I-405 to SR-55
0M980	17.8	19.7	4/01/29	Interchange Configuration	I-5/El Toro Interchange
0T931	0	12.5	9/30/24	Construct broadband middle-mile network elements including conduit, fiber optic cable, junction boxes, and supporting elements on Rte 5	In Orange County in and near San Clemente and San Juan Capistrano along I-5 btw PM 0.0 and 12.5
0T932	12.5	24.8R	9/30/24	Construct broadband middle-mile network elements including conduit, fiber optic cable, junction boxes, and supporting elements on Rte 5	In Orange County in and near Mission Viejo and Irvine along I-5 btw PM 12.5 to R24.2
0S280	9.6	10.4	2/15/24	Add a second auxiliary lane, Changeable Message Sign (CMS), and overhead sign structures	I-5 SB Ortega Hwy
0S850	15.4	15.6	6/12/24	Widen on-ramp	Oso Parkway

4C. Traffic

Current Traffic

The Annual Average Daily Traffic (AADT) and peak hour volume according to 2021 Traffic Volumes on the California State Highway System (CSHS) are shown in the table below:

Table 4.2: 2021 Traffic Volumes

PM	Location	Back			Ahead		
		Peak Hour Vol	Peak Month ADT	Veh AADT	Peak Hour Vol	Peak Month ADT	Veh AADT
10.91	Junipero Serra Rd	21,100	233,000	210,000	21,300	237,000	215,000
12.49	Junction Sr-73	21,300	237,000	215,000	17,000	190,000	173,000
12.94	Avery Pkwy	17,100	191,000	173,000	18,300	204,000	185,000
13.77	Crown Valley Pkwy	18,300	204,000	185,000	22,000	236,000	213,000
15.21	Oso Pkwy	22,000	236,000	213,000	22,000	240,000	217,000
16.52	La Paz Rd	22,000	240,000	217,000	22,000	240,000	218,000
17.47	Alicia Pkwy	22,000	240,000	218,000	22,900	306,000	285,000
18.68	Niguel Rd/El Toro Rd	22,000	301,000	285,000	30,500	371,000	339,000
19.89	Lake Forest Dr	30,500	371,000	339,000	27,500	337,000	317,000
21.30	Junction I-405	27,500	337,000	317,000	25,500	311,000	283,000

Collision Analysis

The TASAS Table B data, encompassing collisions from January 1, 2019, to December 31, 2021, along NB and SB I-5, is presented below. As delineated in Table 4.3, Caltrans's TASAS data reveals that the accident rates on this stretch were below the statewide average for similar facility types during the mentioned three-year timeframe.

The subsequent table provides a breakdown of collision data for each direction of I-5 spanning from PM 10.0 to PM 21.3.

Table 4.3: TASAS Table B Collision Rates

Direction	No. of Collisions			Actual Rates (Collisions/MVM)			Statewide Average Rates (Collisions/MVM)		
	Fat	F+I	Tot	Fat	F+I	Total	Fat	F+I	Total
NB	4	331	983	0.002	0.21	0.62	0.004	0.39	1.28
SB	2	445	1267	0.001	0.27	0.76	0.004	0.40	1.23

MVM = Million Vehicle Miles
F+I = Fatal + Injury Crashes
Fat = Fatal Crashes
Tot = All reported crashes (Includes Property Damage Only (PDO) Crashes)

For the project's analysis, 983 NB collisions and 1,267 SB collisions from TASAS were examined. The collision types and primary contributing factors for each direction are detailed below:

1. NB direction:

- Rear End: 49.7%
- Hit Object: 18.8%
- Sideswipe: 29.1%
- Broadside: 1.5%
- Head-On: 0.9%

Primary Causes:

- Speeding: 54.9%
- Improper Turn: 16.2%
- Other Violations: 23.2%
- Influence of Alcohol: 5.4%
- Failure to Yield: 0.3%

2. SB direction:

- Rear End: 65.0%
- Hit Object: 12.3%
- Sideswipe: 21.8%
- Broadside: 0.7%
- Head-On: 0.2%

Primary Causes:

- Speeding: 66.9%
- Improper Turn: 11.9%
- Other Violations: 15.4%
- Influence of Alcohol: 5.7%
- Failure to Yield: 0.1%

5. ALTERNATIVES

5A. Viable Alternative – Alternative 1

Alternative 1 will extend the pavement's life expectancy, restore the existing drainage system, enhance lighting, improve roadway safety access, replace overhead sign panels in-kind along the northbound direction, improve complete street elements, and construct census stations within the project limits as follows:

1) Pavement Class I

• Remove and replace approximately 8% of total concrete slabs at locations shown on the project layout sheets.

• Grind and groove new and existing concrete pavement.

• Remove and replace loop detectors in kind.

• Cold plane the existing asphalt pavement and replace with 0.15 feet of rubberized hot mix asphalt gap graded (RHMA-G) on the mainline and shoulders.

2) Drainage Improvement

Some of the culverts within the project limits have been identified as being damaged due to aging, corrosion, or wear and tear, leading to structural issues affecting their ability to carry water. Stormwater may also cause erosion around the culvert or blockages that can cause flooding.

To enhance the flow capacity of the culverts, the following measures are proposed:

1. Cure-In-Place-Pipe (CIPP) lining for the existing concrete and corrugated culverts is recommended at seven (7) specific locations.

2. Replacement of culverts is proposed at three (3) distinct locations.

Detailed locations and specifications can be found in Tables 5.1 and 5.2.

Table 5.1 : Drainage Improvements (CIPP)

Segment	Systems No.	Material	DIA (Inch)	Barrels	Length (ft)	Total Length (ft)	As-Built EA	Drainage Plan #
1	550050000988	HDPE	24	1	177.9	177.9	None Found	N/A
2	550050000988	HDPE	24	1	367.62	367.62	12-102544	DP1/11t
~~3~~	~~550050000988~~	~~HDPE~~	~~24~~	~~1~~	~~430.25~~	~~430.25~~	~~None Found~~	~~N/A~~
~~4~~	~~550050001084~~	~~HDPE~~	~~24~~	~~1~~	~~133.37~~	~~133.37~~	~~12-102544~~	~~DP5/23c~~
~~5~~	~~550054001003~~	~~RCP~~	~~30~~	~~2~~	~~98.8~~	~~197.60~~	~~12-102544~~	~~DP2/E~~
~~6~~	~~550050001142~~	~~HDPE~~	~~24~~	~~1~~	~~3.65~~	~~3.65~~	~~12-102544~~	~~DP7/34ad~~

Segment	Systems No.	Material	DIA (Inch)	Barrels	Length (ft)	Total Length (ft)	As-Built EA	Drainage Plan #
~~7~~	~~5500500 01142~~	~~CSP~~	~~24~~	~~1~~	~~276.6~~	~~276.6~~	~~12-102544~~	~~DP7/34d~~
~~8~~	~~5500500 01142~~	~~CSP~~	~~24~~	~~1~~	~~103.84~~	~~103.84~~	~~12-102544~~	~~DP7/34m~~
9	5500500 01142	HDPE	24	1	3.95	3.95	12-102544	DP7/34ad
10	5500500 01142	RCP	24	1	165.31	165.31	12-102544	DP7/E
~~11~~	~~5500500 012151~~	~~RCP~~	~~24~~	~~1~~	~~285.25~~	~~285.25~~	~~12-102544~~	~~DP10/E~~
~~12~~	~~5500500 01227~~	~~HDPE~~	~~24~~	~~1~~	~~141.70~~	~~141.70~~	~~12-102544~~	~~DP10/47p~~
13	5500512 01269	RCP	24	2	685.91	1371.82	12-102544	DP12/E
14	5500500 01445	RCP	24	1	119.28	119.28	None Found	N/A
1B	5500500 00988	HDPE	30	1	95	95	12-102544	DP1/11b

Crossed-out text: Removed at the PAED phase of the project based on Caltrans recommendations.
HDPE: High Density Polyethylene Pipe
RCP: Reinforced Concrete Pipe
CSP: Corrugated Steel Pipe

Table 5.2 : Drainage Improvements (Culvert Replacement)

Segment	Culvert #	System No.	Material	DIA (Inch)	Barrels	Length (ft)	Total Length (ft)	As-Built EA	Drainage Plan #
2B	12-11	550050000988	HDPE	24	1	431.12	431.12	12-102544	DP1/11r
2C	13-6	550050001142	CSP	24	1	103.84	103.84	12-102544	DP7/34m
2D	6-4	550050001142	HDPE	24	1	276.6	276.6	12-102544	DP7/34d

3) Lighting Improvement

Mainline Lighting: Cover the existing soffit lights with steel plates and install wall-mounted light fixtures or light poles, along with conduit, at the specified locations:

a. Oso Pkwy overcrossing at PM 15.2.

b. Alicia Pkwy overcrossing at PM 17.5.

c. Lake Forest Dr overcrossing at PM 19.9.

d. Bake Pkwy overcrossing at PM 20.8.

e. SB I-5 at NB I-5 to NB I-405 Truck Bypass at PM 21.3.

f. I-5 at SB I-405 Truck Bypass Connector at PM 21.3.

4) Roadside Safety Improvement

Relocate maintenance facilities to areas with reduced vehicular traffic to enhance worker safety and facilitate routine operations at the following locations:

a. Location 1: North of Junipero Serra Rd – Proposed Maintenance Vehicle Pullout (MVP) (PM 11.0).
b. Location 2: South of Avery Pkwy – Gore Area (PM 12.3).

In addition to the maintenance facility relocations, the following safety improvements will be completed:

- 2,136 sqft of gore area will be paved with stamped color concrete.
- 10,963 sqft of gravel will be used to cover existing maintenance access roads.
- The existing MVPs will be paved with HMA.

5) Replacement of Overhead Sign Panels along the northbound direction:

There are 20 overhead sign panels to be replaced due to retro reflectivity degradation on 13 existing sign structures. The replacement plan adheres to the Traffic Operations Policy Directive (TOPD) 14-2. Additionally:
1. Seven (7) Exit Number Plaques (E1-5P) and two (2) LEFT plaques (E1-5aP) will be incorporated into eight (8) existing overhead sign structures:

- Five (5) existing structures will be modified to accommodate five (5) Exit Number plaques (E1-5P).
- Two (2) structures will have two (2) Exit Number plaques (E1-5P) added by resizing the replacement panel while maintaining the original panel height.
- One (1) butterfly-type structure will be altered to integrate two (2) LEFT plaques (E1-5aP) oriented towards each traffic direction.

All six (6) proposed modifications were assessed by HQ Structures on September 27, 2023, confirming their suitability for the intended modifications.

6) Complete Streets Elements

a. Lighting:

Install LED light poles and conduits at the specified on/off-ramp locations:

- NB on-ramp from WB La Paz Rd
- SB on-ramp from EB La Paz Rd
- NB and SB on-ramps at Oso Pkwy
- NB on-ramp from WB El Toro Rd
- SB on-ramp from WB Lake Forest Dr
- NB and SB on-ramps from WB Bake Pkwy
- NB on-ramp from EB Bake Pkwy

b. Striping:

Refresh crosswalk striping with high-visibility markings at the following locations:

- SB on-ramp from WB Lake Forest Dr
- NB on-ramps from WB & EB Bake Pkwy

c. Class I Bikeway Implementation:

Location: Junipero Serra UC, within the Caltrans R/W:

1. Bike Path Construction:

    - Establish a Class I Bikeway (Bike Path) along the eastbound (EB) direction of Junipero Serra Rd, spanning both Caltrans and City R/W boundaries.
    - Design the lane to facilitate safe passage for cyclists under the I-5 bridge, particularly navigating through the conflict zones near freeway on/off-ramps.
    - Roadway modification involves:
        - Removal of existing sidewalk, curb, and gutter.
        - Construction of a new curb and gutter system.
        - Development of a 3-foot parkway planter behind the newly constructed curb.
        - Implementation of a tieback wall beneath the I-5 bridge to accommodate the proposed Class I bike path.

2. Infrastructure Upgrades:

- Integrate new signage and lighting systems as deemed necessary, ensuring enhanced visibility and safety for cyclists using the designated bike path.

d. Class II Bikeway Implementation:

Location: Oso Parkway, within the Caltrans R/W:

1. Bike Lane Striping:

- Designate a Class II Bikeway (Bike Lane) along both eastbound (EB) and westbound (WB) directions of Oso Parkway.
- Apply green paint to the bike lane to visually differentiate it from the regular roadway. This green marking serves to:
  - Provide a safe connection between the proposed bike lane and the existing bike lane that is within the local jurisdiction's R/W.
  - Safely guide bicyclists through conflict zones near freeway on/off-ramps.
  - Enhance cyclist visibility, especially for drivers navigating the area.

2. Signage Installation:

- Integrate appropriate signs to inform and guide road users, ensuring clarity and safety for both cyclists and motorists.

Location: Junipero Serra UC, within Caltrans R/W:

1. Bike Lane Striping:

- Establish a Class II Bikeway (bike lane) on the westbound (WB) stretch of Junipero Serra Rd.
- Apply green paint to the bike lane for the following purposes:
  - Provide a safe connection between the proposed bike lane and the existing bike lane that is within the local jurisdiction's R/W.
  - Guide cyclists safely through the conflict zones near freeway on/off-ramps.
  - Improve cyclist visibility amidst traffic movements.

2. Signage Installation:

- Implement necessary signs to enhance road safety and provide clear guidance for both cyclists and motorists in the vicinity.

7) Census Stations

Construct four (4) census stations at the following locations as shown below.

Table 5.2 : Census Stations

Station #	Direction	PM	Location
1	NB	12.90	At CMS #11 Between SR-73 & Avery Pkwy
2	NB	18.60	At CMS #95 Between El Toro Rd UC & the off-ramp.
3	SB	18.90	At MVP, Between El Toro Rd on/off-ramps.
4	SB	14.55	At CMS #12 Between Oso Pkwy & Crown Valley Pkwy

The proposed census cabinets will be installed behind the existing MBGR/MGS or beyond the clear recovery zone. All underground utilities, conduits, fiber optics, and power lines will be protected in place.

Nonstandard Design Features

This Multi-Asset Management project proposes to reduce the width of some of the existing 12-foot wide lanes of the eastbound and westbound directions of Oso Pkwy to 11 feet to accommodate the proposed Class II Bike Lane. A nonstandard bike lane width is proposed on Oso Parkway with a 4-foot proposed width. Nonstandard shoulder widths and nonstandard distances between the ramp intersection and the local street intersection are also proposed at the Oso Parkway ramp locations, which are documented on the DSDD. This DSDD document is approved on 04/24/2024.

Cost Estimate

A detailed cost estimate for Alternative 1 is included as Attachment E.

5B. No Build Alternative – Alternative 2

The No Build Alternative would have this section of I-5 between SR-74 and I-405 remain in its present condition. This alternative would not address the identified deficiencies; therefore, this alternative is not recommended.

6. CONSIDERATIONS REQUIRING DISCUSSION

6A. Hazardous Waste

It is expected that soil underneath pavement slab replacement locations, existing MVP locations, and maintenance access roads will be disturbed and may contain aerially deposited lead (ADL). The potential of soil containing ADL is low or unknown, and an ADL investigation is necessary. Soil sampling will be conducted in the design phase for ADL. The analytical results of the soil sampling will determine the appropriate handling of the soil and disposal of surplus materials. During the early stage of the design phase, the project engineer will send a formal request to the Environmental Engineering Branch for ADL investigation.

6B. Value Analysis

In March 2023, a Value Analysis (VA) study was executed. The VA team comprised representatives from multiple Caltrans units, encompassing design, structure, maintenance, construction, landscape, and traffic. The Value Metrics framework was adopted to assess the build alternative delineated in this report. The following VA alternatives were formulated:

1.0 Incorporate Recycled Asphalt Pavement (RAP) using HMA and Aggregate materials where feasible.

2.1 Substitute Rapid Strength Concrete for precast concrete in all panel replacements.

2.2 Integrate Rapid Strength Concrete in lieu of precast concrete for half of the panel replacements.

Upon evaluation, the VA team endorsed a specific VA strategy (a blend of VA alternatives) for review by the PDT and District 12 management. The proposed VA strategy amalgamates alternatives 1.0 and 2.2. This approach advocates for the reutilization of asphalt waste derived from cold planing pavement activities within the project, and the adoption of rapid strength concrete in conjunction with the precast panel tactic (VA alternative 2.2) to achieve the project's 8% panel replacement target. Utilizing rapid strength concrete for panel replacements is projected to reduce project costs. Furthermore, this method aligns with the panel replacement methodology proposed for the recently updated EA 0R970 sister project, which focuses on rehabilitating deteriorated mainline panels.

6C. Resource Conservation

No resource conservation was identified on this project.

6D. Right-of-Way Issues

Right-of-Way Acquisitions

All proposed work is within the state's R/W 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 R/W cost obligations associated with this project. See Attachment D – Right of Way Data Sheet.

Railroad Involvement

There is a railroad crossing within the project limits: Southern California Regional Rail Authority (SCRRA)/METROLINK – El Toro OH, Bridge #55-221 L/R, PM 16.36/16.40, City of Laguna Hills. No railroad involvement is necessary as there is no proposed work within 25 feet of any railroad track. However, an Office of Engineer Railroad Clearance Memo is required, which contains railroad short clauses that must be inserted into the Specifications.

Utility and Other Owner Involvement

Utility verification research and mapping have been completed. One utility conflict is identified at Junipero Serra Rd. due to the roadway widening. One Air Vac/ Pressure relief valve owned by Santa Margarita Water District needs to be relocated to accommodate the proposed improvements. No test holes are needed to meet Caltrans' policy regarding high-priority utilities or to determine utility conflicts. The current utility plan, comprising the Layout Plans, is detailed in Attachment B, while the Utility Management Matrix is presented in Attachment C. The project encompasses facilities from various utility providers, both overhead and underground, including:

- American Telephone and Telegraph
- Cox Communications
- Crown Castle
- El Toro Water District
- Irvine Ranch Water District
- The Irvine Company Irrigation Facility
- Kinder Morgan Energy Partners
- Level 3/ Lumen Communications
- Microwave Communications, Inc. (Verizon)
- Moulton Niguel Water District
- Santa Margarita Water District
- Southern California Edison

- Southern California Gas Company
- San Diego Gas & Electric Company

Per Caltrans' guidelines, no test holes are mandated for high-priority utilities or to ascertain utility conflicts.

Airspace Lease Areas

There is no potential for future airspace development with high land values within the project limits.

Adjacent to the project vicinity at PM 21.4/21.6, a Freeway Lease Area, FLA 12-ORA-005-87 exists. This area will remain unaffected by the proposed enhancements and will not be accessible for utilization by the State contractor.

Relocation Impact Studies

It has been determined that 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.

6E. Environmental Compliance

The environmental document for the proposed project is a CE/CE, see attachment F. This document level has been selected based on the evaluation of the project impacts. Caltrans has acted as the lead agency in the preparation of a joint CEQA/NEPA environmental document. Caltrans will and has served as the NEPA lead agency under its assumption of responsibility pursuant to 23 U.S. Code 326.

On April 18, 2022, the FHWA renewed the 23 USC 326 CE Assignment MOU, Effective April 18, 2022. The new MOU is renewable every five years, effective April 18, 2022. In addition, with this renewal, the Programmatic Agreement for Non-Highway Projects, approved on May 24, 2021, has been superseded as the language in the new 326 MOU has been modified to cover these types of projects. Caltrans continues to assume FHWA responsibilities under NEPA and other federal environmental laws in the same manner as was assigned under the Pilot Program, with minor changes. The environmental review, consultation, and any other action required in conformance with applicable federal laws for this project is carried out by Caltrans under its assumption of responsibility pursuant to 23 USC 326.

6F. Air Quality Conformity

According to the CFR Title 40 Section 93.126, safety projects such as traffic control devices and pavement resurfacing/rehabilitation are exempt projects. This exempt project does not require project submittal to the Transportation Conformity Working Group for interagency consultation nor an operational quantitative air quality analysis.

6G. Climate Change/Greenhouse Gas Emissions Analysis

The construction contractor must comply with the Caltrans' Standard Specifications in Section 14-9 (2018) for reducing impacts from construction activities. Section 14-9.02 specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances.

6H. Title VI Considerations

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the United States 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

According to FHWA 23 CFR772, this project does not qualify as a Type I project, and a traffic noise study is not needed. However, the project must comply with Caltrans' Standard Specification 14-8.02 to control noise during construction.

7. OTHER CONSIDERATIONS AS APPROPRIATE

7A. Public Hearing Process

A public hearing is not proposed since the project is determined to be a CE/CE.

7B. Stormwater Compliance

This project must conform to all applicable water quality regulations and/or permit requirements of the State Water Resources Control Board (SWRCB), and the Santa Ana and San Diego Regional Water Quality Control Boards (RWQCB), including but not limited to the National Pollutant Discharge Elimination System (NPDES) Statewide Stormwater Permit and Waste Discharge Requirements for the State of California Department of

Transportation (Order No. 2022-0033-DWQ, NPDES No. CAS000003), the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order No. 2022-0057-DWQ, NPDES No. CAS000002), the Caltrans Storm Water Management Plan (SWMP) and any subsequent revisions and/or additional requirements at the time of construction.

The limits of the proposed project are within the jurisdiction of the Santa Ana and San Diego RWQCBs, and the receiving bodies on the 2020/2022 California Integrated Report (Clean Water Act Section 303(d) List Report) are San Diego Creek Reach 1, San Diego Creek Reach, Serrano Creek, Aliso Creek, Aliso Creek (mouth), Oso Creek (lower), Lower Arroyo Trabuco Creek, San Juan Creek, San Juan Creek (mouth), Pacific Ocean Shoreline, Lower San Juan HSA, at surfzone outfall at Doheny State Beach.

The project limits are within a Significant Trash Generating Area (STGA) as identified in 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). Therefore, this project needs to implement full trash capture devices within the project limits. A combination of different types of trash capture devices, including Trash Capture Housings, Trash Nets, and Gross Solids Removal Devices (GSRDs) are proposed for the sections of the project limits that fall within the STGAs.

The 2022 Caltrans Permit requires post-construction treatment for all highway projects creating 10,000 sq. ft. or more of new impervious surface. Projects that will have an approved Project Initiation Report (PIR), also known as Project Initiation Document (PID), prior to January 1, 2023, will be 'grandfathered' and can continue to apply the one-acre minimum threshold of the 2012 Caltrans Permit, provided they have commenced construction within five years of the effective date of the 2022 Caltrans Permit (by January 1, 2028), or up to seven years of approval of the PIR, whichever is sooner. Post-construction treatment BMPs will not be required since the project has a NIS of 0.07 acres.

The Disturbed Soil Area (DSA) for the proposed project is anticipated to be less than 1.0 acre; therefore, a Water Pollution Control Program (WPCP) will be prepared and implemented to address temporary impacts on 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 WPCP.

A Storm Water Data Report (SWDR) was prepared and approved for this project and can be found in Attachment G.

7C. Transportation Management Plan

Before granting final approval for the project design, a comprehensive TMP (Traffic Management Plan) report will be formulated. This report aims to mitigate potential construction-induced traffic conflicts, detours, and delays. Given the scope and impact of the proposed project, a Major TMP classification is anticipated.

The TMP will delineate the specifics of planned construction activities that will influence traffic patterns. This encompasses considerations like lane closures, temporary traffic control measures, and specific operational windows for tasks such as nighttime operations and extended weekend closures lasting up to 55 hours.

Key objectives of the TMP are to minimize traffic disruptions, ensure continuous traffic movement within the project boundaries, and guarantee a secure environment for both the work crew and motorists. The elements integrated into the project's TMP encompass:

- Public Information
- Motorist Information
- Incident Management
- Construction Strategies
- Demand Management

To provide a detailed financial overview of these strategies, a TMP Data Sheet has been created for the project. This document, estimating the associated costs, is appended as Attachment H.

7D. Stage Construction

Stage construction and traffic handling plans will be prepared during the PS&E phase to show the sequence of work activities and maintain vehicular traffic through the work zone. Nighttime lane closures will be required to allow for the replacement of concrete slabs. Additionally, to address tasks like cold planing and overlaying of asphalt pavement, temporary measures such as adjusted striping, narrowed lane widths, and shoulder closures will be implemented. Furthermore, specific night work strategies involving the closure of outer lanes and shoulders are anticipated. For accurate planning and implementation, lane requirement charts will be created during the PS&E phase. These charts will delineate the requisite number of lanes to remain open for traffic during each hour of the day throughout the construction phase.

7E. Asset Management

This project achieves the following performance objectives.

Performance Objectives	Quantity	Unit of Measure
Pavement Class 1	136.4	Lane Miles
Drainage System Restoration	723.7	Linear Feet
Lighting Rehabilitation	34	Locations
Worker Safety	15	Locations
Overhead Sign Panels Upgrade	38	Panels
Bikeway Class I	650	Linear Feet
Bikeway Class II	4250	Linear Feet
Crosswalk	144	Linear Feet
Bike and Pedestrian Lighting	8	Each
Enhanced Crosswalk Visibility	7	Each
Green Paint	4	Each
Traffic Census Stations	4	Stations

7F. Advanced Technologies & Communication System

1. Wired Broadband

Based on Caltrans policy, external stakeholders can use information from the list of proposed transportation projects on the State Highway System as listed *https://dot.ca.gov/programs/design/wired-broadband* to determine if there are opportunities to partner with Caltrans on projects.

2. Fueling

Incorporating fueling infrastructure for zero-emission vehicles is unnecessary for this project. Establishing charging stations would entail significant R/W acquisition since they must be positioned outside the State R/W. Additionally, there are two charging stations in close proximity to the project and several others near interchange locations such as I-5 & Crown Valley Pkwy, SR-74, Auto Center Drive, Alton, and Bake Pkwy, which adequately cater to motorists' needs.

3. Vehicle-to-Infrastructure (V2I) Technologies

Integration of V2I (Vehicle-to-Infrastructure) technologies is not required for this project. Establishing the back-office system development center and the requisite communications backhaul infrastructure for V2I deployment would necessitate substantial R/W acquisition, as they must be situated outside the State R/W.

8. FUNDING, PROGRAMMING AND ESTIMATE

8A. Funding

This project is eligible for Federal-aid funding. This project will be funded through the 2022 SHOPP. This project will be scheduled for construction in the 2025/2026 fiscal year.

8B. Programming

The following table shows the project funding consisting of 2022 SHOPP funds.

Fund Source	Fiscal Year Estimate				
2022 SHOPP	22/23	23/24	24/25	25/26	Total
Component	In thousands of dollars ($1,000)				
PA&ED Support	4,550				4,550
PS&E Support		5,555			5,555
Right-of-Way Support		195			195
Construction Support			6,353		6,353
Subtotal Support	4,550	5,750	6,353		16,653
Right-of-Way Capital			135		135
Construction Capital			43,600		43,600
Subtotal Capital			43,600		43,735
Total	4,550	5,750	50,080		60,388

**Annual Escalation rate is 4.89% for the 2024/2025 fiscal year. For every other year, the rate is 3.8% and the annual support cost escalation is 3.5% for FY 24/25.*

Total Escalated Support Cost:	$16,653,000
Total Escalated Construction and Right of Way Cost:	$43,735,000
Support/Construction Cost Ratio:	**38.1%**

8C. Estimate

The cost estimate is included as Attachment E.

9. DELIVERY SCHEDULE

Table 9-1 lists the major project milestones for this project.

Table 9-1: Project Milestones

Project Milestones		Milestone Date (Month/Year)	Milestone Designation (Actual/Target)
PROGRAM PROJECT	M015	May 2022	Actual
PA & ED	M200	April 2024	Target
BEGIN DESIGN	M210	May 2024	Target
PS&E TO DOE	M377	January 2025	Target
RIGHT OF WAY CERTIFICATION	M410	February 2025	Target
READY TO LIST	M460	March 2025	Target
FUND ALLOCATION	M470	May 2025	Target
HEADQUARTERS ADVERTISE	M480	July 2025	Target
AWARD	M495	November 2025	Target
APPROVE CONTRACT	M500	December 2025	Target
CONTRACT ACCEPTANCE	M600	August 2027	Target
END PROJECT	M800	May 2029	Target

10. RISKS

The project risk register includes the identified risks, qualitative risk analysis, and response strategy prepared using the ranking method. The project risk register is based on a qualitative risk analysis approach to rank the risks into high, medium, and low-risk categories based on their probability of occurrence and their impact on the project objectives, such as schedule, cost, R/W impact, and quality. While probability and impact vary with each one, these risks require close attention throughout the project. These risks should be monitored and updated during the entire project development phase. The risk register is included as Attachment J.

11. FHWA COORDINATION

This project is eligible for Federal-aid funding. The project is considered an Assigned Project per the current FHWA and Caltrans Joint Stewardship and Oversight Agreement.

12. REVIEWS

District Program Advisor Ben Nanjappa Date 9/22/2023

District Maintenance Hazel Lam Date 9/22/2023

Project Manager Barbara Mcgahey Date 1/5/2024

District Safety Review Thuan Nguyen Date 11/22/2023

Constructability Review Dat Pham Date 6/21/2023

District Traffic Safety Engineer Bryan Sorensen Date 6/20/2023

District TMP Engineer Ibtisam Abouiadah Date 9/26/2023

District Materials Engineer Mehrdad Mahdavian Date 7/11/2023

13. PROJECT KEY PERSONNEL

Name, Title	Phone
Barbara Mcgahey *Project Manager, Project Management*	(949) 226-6840
Kamran Mazhar *Branch Chief, Design "F"*	(949) 279-7743
Robin Ridley Johnston *Branch Chief, Environmental Analysis*	(657) 328-6324
Evangelina Washington *Branch Chief, Right of Way Project Coordination*	(949) 275-7468
Barjesh Sharma *Electrical Design*	(657) 328-6129
Phi Dinh *Branch Chief, Hydraulics*	(657) 328-6172
Hamideh Riazi *NPDES/Storm Water*	(657) 328-6154
Juan Cerros *Corridor Manager*	(657) 546-3289

14. ATTACHMENTS (NUMBER OF PAGES)

Attachment A **Project Location Map (1)**
Attachment B **Project Layout (57)**
Attachment C **Utility Management Matrix (5)**
Attachment D **Right-of-Way Data Sheet (3)**
Attachment E **Project Cost Estimate (10)**
Attachment F **Environmental Document (3)**
Attachment G **Storm Water Data Report Cover Page (1)**
Attachment H **Transportation Management Plan Data Sheet (3)**
Attachment I **SHOPP Performance Measures Report (1)**
Attachment J **Risk Register (3)**
Attachment K **TASAS Table B (6)**
Attachment L **OH Sign Inventory (7)**
Attachment M **Pavement Condition Report (7)**

ATTACHMENT A

Project Location Map


Los Angeles County
San Bernardino County
Riverside County
San Diego County
Orange County
Pacific Ocean
N
W
E
S
La Habra
Brea
Yorba Linda
Fullerton
Placentia
Buena Park
Anaheim
Cypress
Stanton
Villa Park
Orange
Los Alamitos
Garden Grove
Seal Beach
Westminster
Huntington Beach
Fountain Valley
Santa Ana
Tustin
Irvine
Costa Mesa
Lake Forest
Rancho Santa Margarita
Mission Viejo
Laguna Woods
Newport Beach
Laguna Hills
Aliso Viejo
Laguna Beach
Laguna Niguel
San Juan Capistrano
Dana Point
San Clemente
90
142
57
91
605
39
5
241
22
261
55
405
1
73
133
74
Project Location
PM 10.0/21.3
Caltrans

ATTACHMENT B

Project Layout

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

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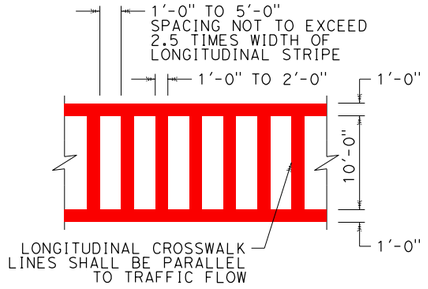
NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. UTILITY OWNERSHIP:

ELECTRIC - SOUTHERN CALIFORNIA EDISON (SCE)
ELECTRIC - SAN DIEGO GAS & ELECTRIC COMPANY (SDG&E)
FIBER OPTIC - COX COMMUNICATIONS (COX)
FIBER OPTIC - CROWN CASTLE (CC)
FIBER OPTIC - LEVEL 3 / LUMEN (LV3/LUM)
FIBER OPTIC - MICROWAVE COMMUNICATIONS, INC (MCI-VERIZON)
GAS - SOUTHERN CALIFORNIA GAS COMPANY (SCG)
OIL - KINDER MORGAN ENERGY PARTNERS (KMEP)
TELEPHONE - AMERICAN TELEPHONE AND TELEGRAPH (ATT)
WATER & SEWER - MOULTON NIGUEL WATER DISTRICT (MNWD)
WATER & SEWER - SANTA MARGARITA WATER DISTRICT (SMWD)
WATER & SEWER - EL TORO WATER DISTRICT (ETWD)
WATER & SEWER - IRVINE RANCH WATER DISTRICT (IRWD)

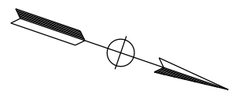


LADDER CROSSWALK DETAIL
NTS

LEGEND:

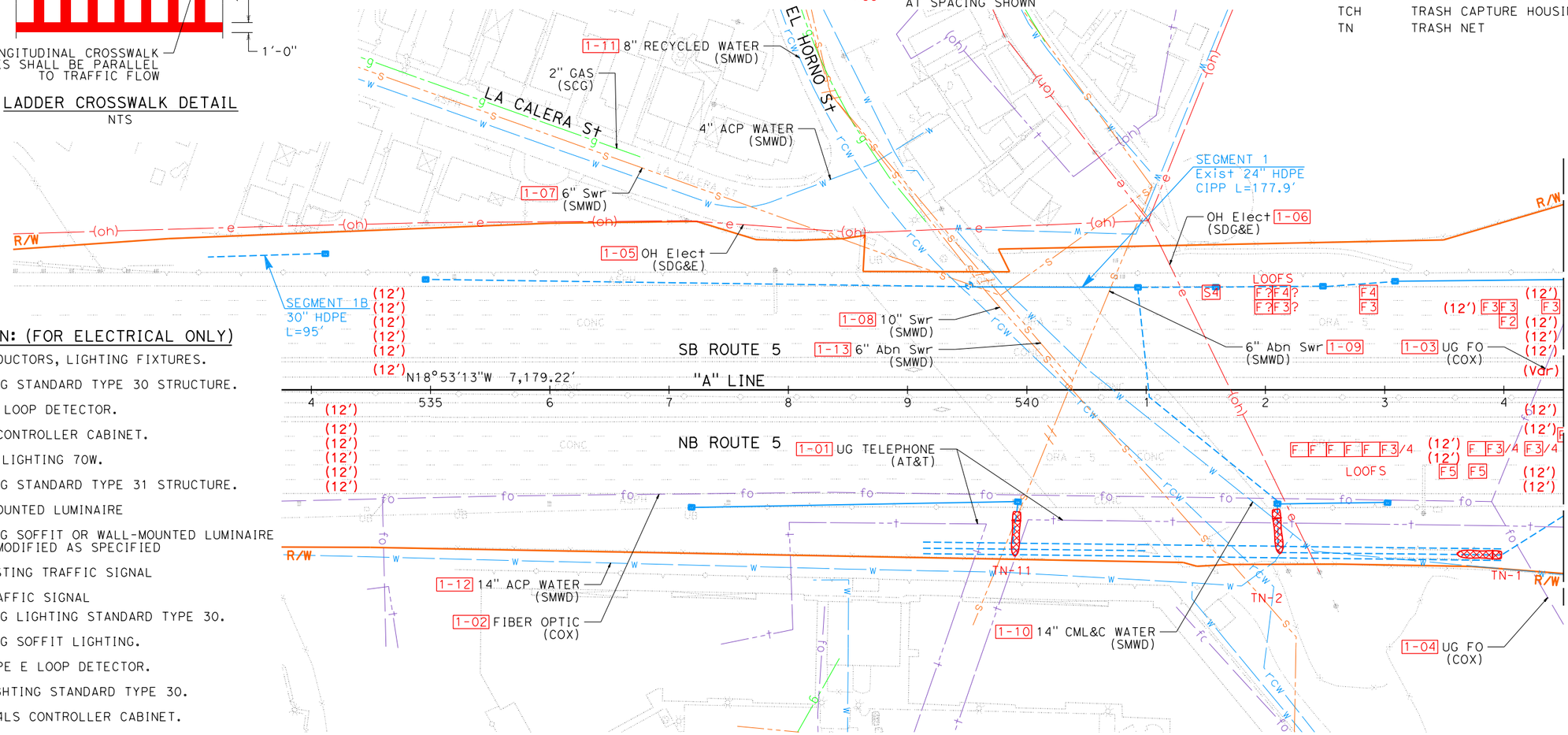
- GRIND CONCRETE PAVEMENT
- COLD PLANE Exist ASPHALT PAVEMENT AND REPLACE WITH 0.15' OF RHMA-G
- ACCESS ROAD (8" CLASS 2 AGGREGATE BASE)
- GORE TREATMENT (COLORED STAMPED CONCRETE)
- MAINTENANCE VEHICLE PULLOUT
- A# APPROACH SLAB REPLACEMENT AND LANE No. Loc
- D# DEPARTURE SLAB REPLACEMENT AND LANE No. Loc
- F# FULL SLAB REPLACEMENT AND LANE No. Loc
- S# SPALLING REPAIR NEEDED AND LANE No. Loc
- BICYCLE LOCKERS
- EXISTING DRAINAGE WORK
- PROPOSED DRAINAGE WORK
- INLET TRASH CAPTURE HOUSING
- TRASH NET
- GSRD
- X-XX UTILITY CONFLICT IDENTIFICATION

- No. PAVEMENT DELINEATION DETAIL No.
- LCW WHITE LADDER CROSSWALK
- LL 12" WHITE LIMIT LINE AT EXIT RAMP
- No. ROADSIDE SIGN No.
- TYPE I ARROW
- TYPE II(L) ARROW
- TYPE II(R) ARROW
- TYPE III(L) ARROW
- TYPE III(R) ARROW
- TYPE III(B) ARROW
- TYPE V ARROW
- S "SIGNAL" PAVEMENT MARKING
- A "AHEAD" PAVEMENT MARKING
- F TYPE F DELINEATOR (CLASS 1) AT SPACING SHOWN
- G TYPE G DELINEATOR (CLASS 1) AT SPACING SHOWN
- FG TYPE F GUARD RAILING DELINEATOR AT SPACING SHOWN
- GG TYPE G GUARD RAILING DELINEATOR AT SPACING SHOWN



ABBREVIATIONS:

CIPP	CURE-IN-PLACE-PIPE LINING
CS	CONTRAST STRIPE
GSRD	GROSS SOLIDS REMOVAL DEVICE
IS	ROADSIDE SIGN-SINGLE POST
RHMA-G	RUBBERIZED HOT MIX ASPHALT TYPE G
RS	REMOVE ROADSIDE SIGN
TCH	TRASH CAPTURE HOUSING
TN	TRASH NET



ANNOTATION: (FOR ELECTRICAL ONLY)

1. [RC] CONDUCTORS, LIGHTING FIXTURES.
2. LIGHTING STANDARD TYPE 30 STRUCTURE.
3. TYPE E LOOP DETECTOR.
5. 334LS CONTROLLER CABINET.
6. SOFFIT LIGHTING 70W.
7. LIGHTING STANDARD TYPE 31 STRUCTURE.
8. WALL MOUNTED LUMINAIRE
9. EXISTING SOFFIT OR WALL-MOUNTED LUMINAIRE TO BE MODIFIED AS SPECIFIED
10. [RC] EXISTING TRAFFIC SIGNAL
11. NEW TRAFFIC SIGNAL

- EXISTING LIGHTING STANDARD TYPE 30.
- EXISTING SOFFIT LIGHTING.
- NEW TYPE E LOOP DETECTOR.
- NEW LIGHTING STANDARD TYPE 30.
- NEW 334LS CONTROLLER CABINET.
- NEW LIGHTING STANDARD TYPE 31.
- NEW WALL-MOUNTED LUMINAIRE
- EXISTING SOFFIT OR WALL-MOUNTED LUMINAIRE TO BE MODIFIED AS SPECIFIED

LAYOUT
SCALE: 1" = 50'

L-1

REVISED BY	DATE REVISED
MICHAEL HULTGREN	SEPIDEH SARACHI
CALCULATED-DESIGNED BY	CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR	AYMAN SALAMA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	Caltrans

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

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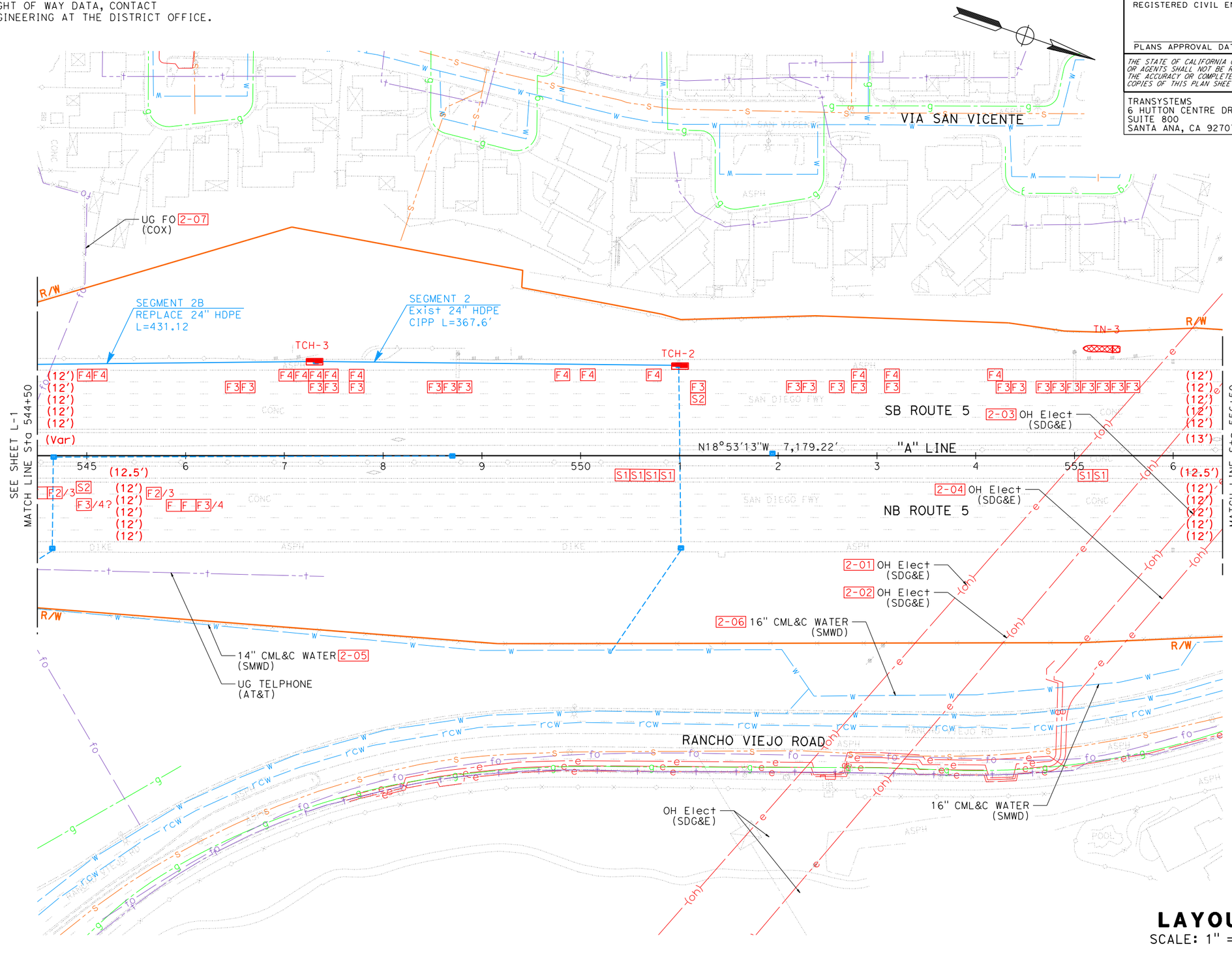

LAYOUT

SCALE: 1" = 50'

L-2

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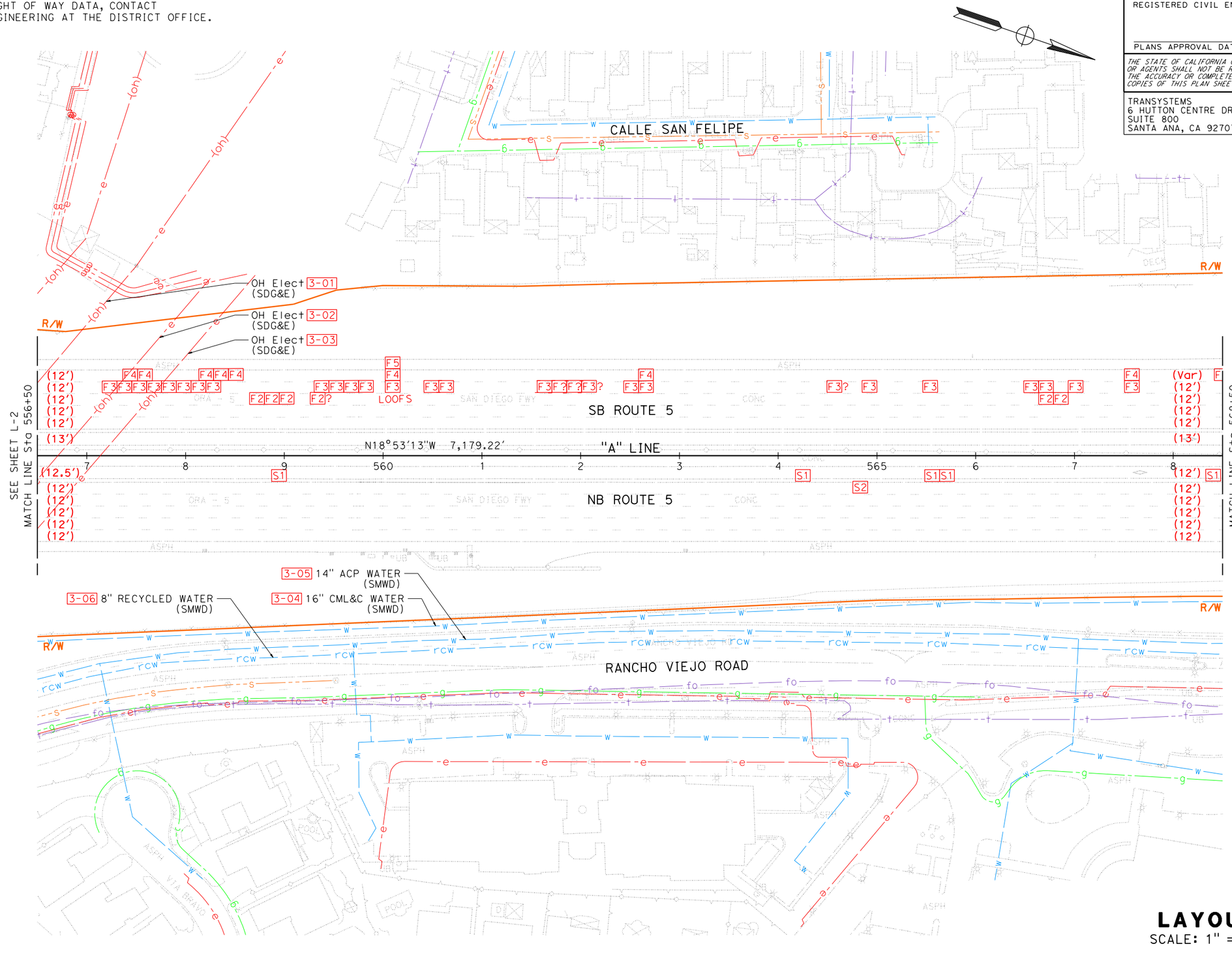

LAYOUT

SCALE: 1" = 50'

L-3

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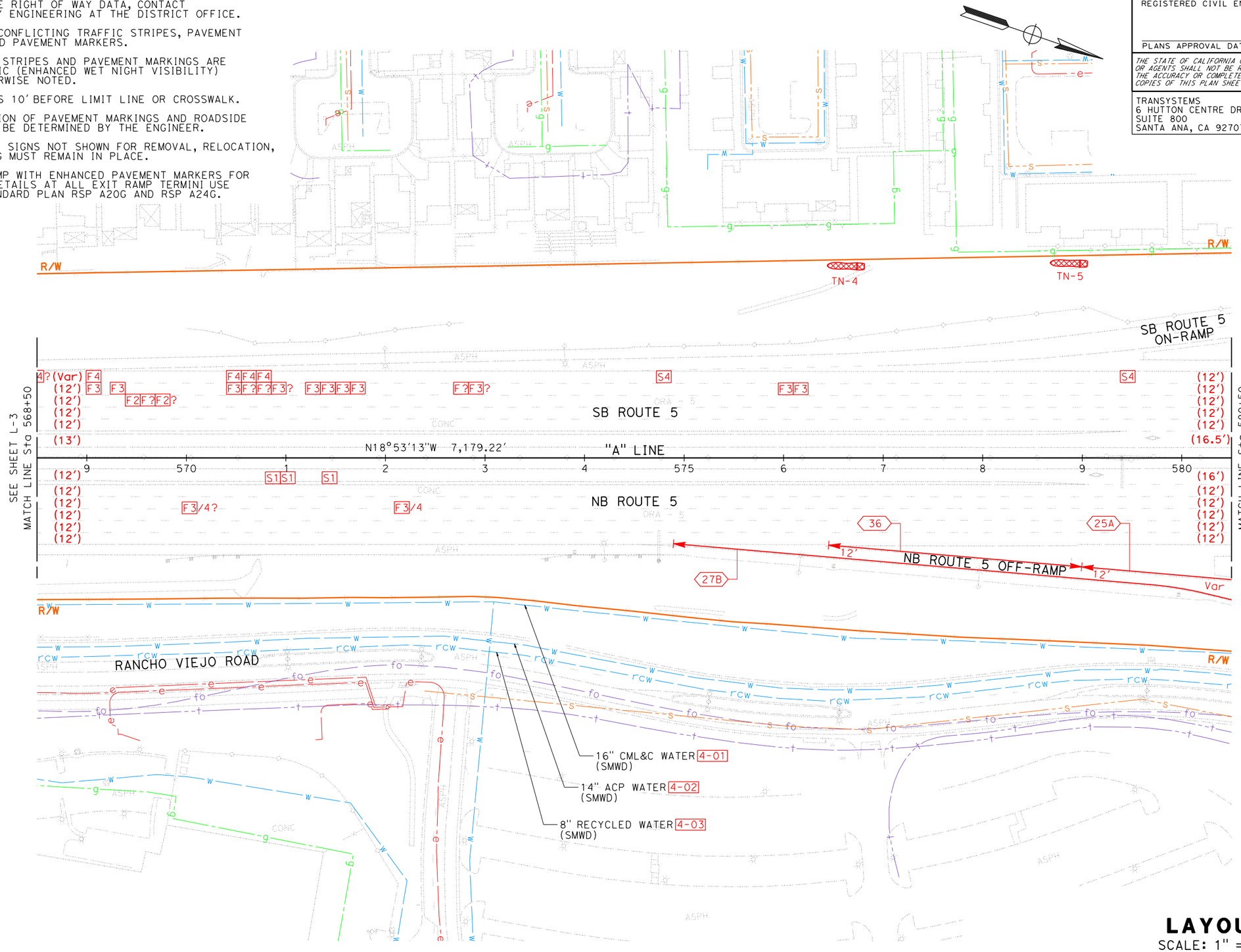
4. PLACE ARROWS 10' BEFORE LIMIT LINE OR CROSSWALK.
5. EXACT LOCATION OF PAVEMENT MARKINGS AND ROADSIDE SIGNS SHALL BE DETERMINED BY THE ENGINEER.
6. ALL EXISTING SIGNS NOT SHOWN FOR REMOVAL, RELOCATION, OR RESETTING MUST REMAIN IN PLACE.
7. FOR EXIT RAMP WITH ENHANCED PAVEMENT MARKERS FOR WRONG WAY DETAILS AT ALL EXIT RAMP TERMINI USE REVISED STANDARD PLAN RSP A20G AND RSP A24G.



LAYOUT

SCALE: 1" = 50'

L-4

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12	Ora	5	10.0/21.3		

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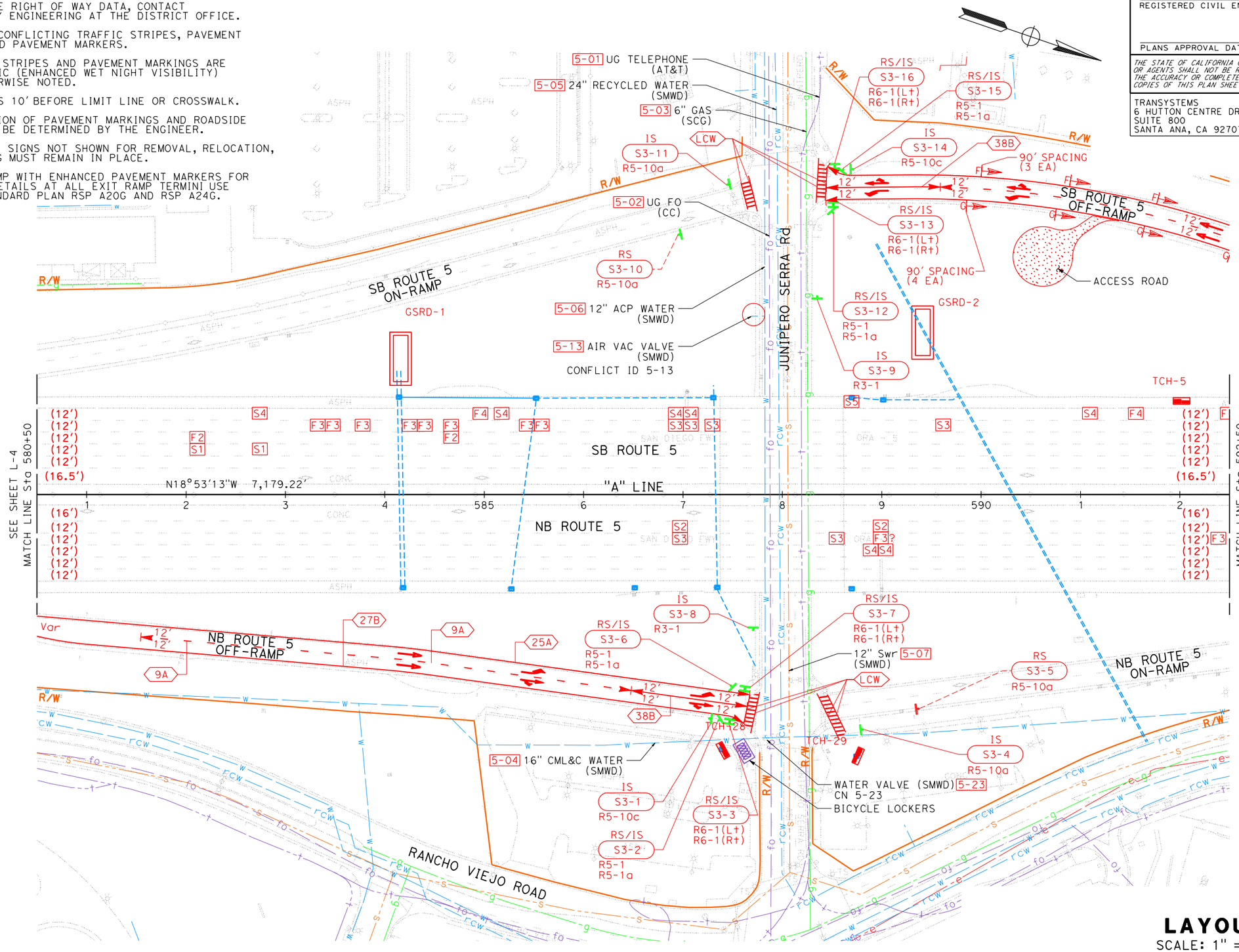

LAYOUT

SCALE: 1" = 50′

L-5

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12	Ora	5	10.0/21.3		

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CURVE DATA

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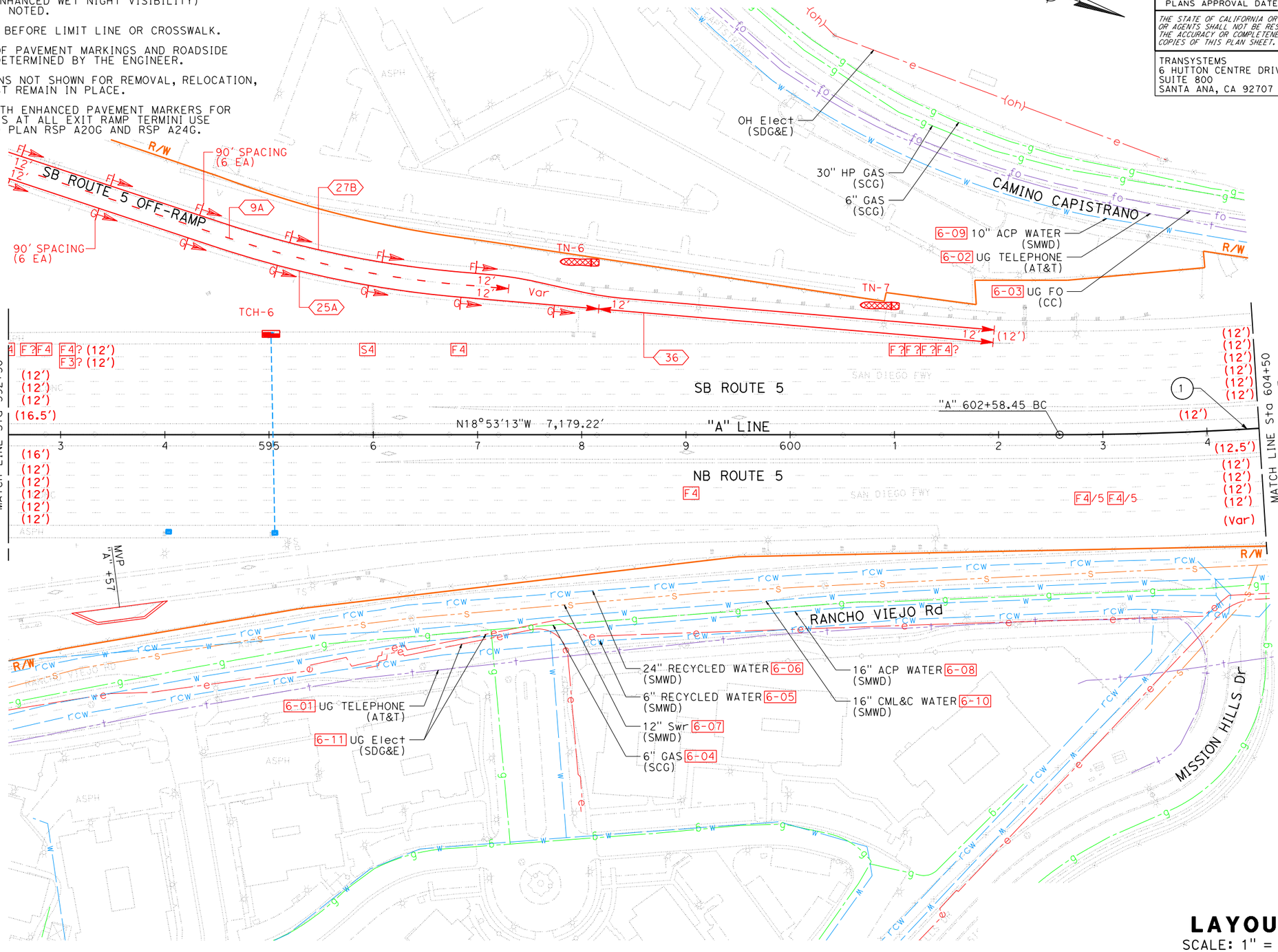

LAYOUT

SCALE: 1" = 50′ **L-6**

REVISED BY | DATE REVISED
MICHAEL HULTGREN | SEPIDEH SARACHI
CALCULATED-DESIGNED BY | CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR
AYMAN SALAMA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:03

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea006.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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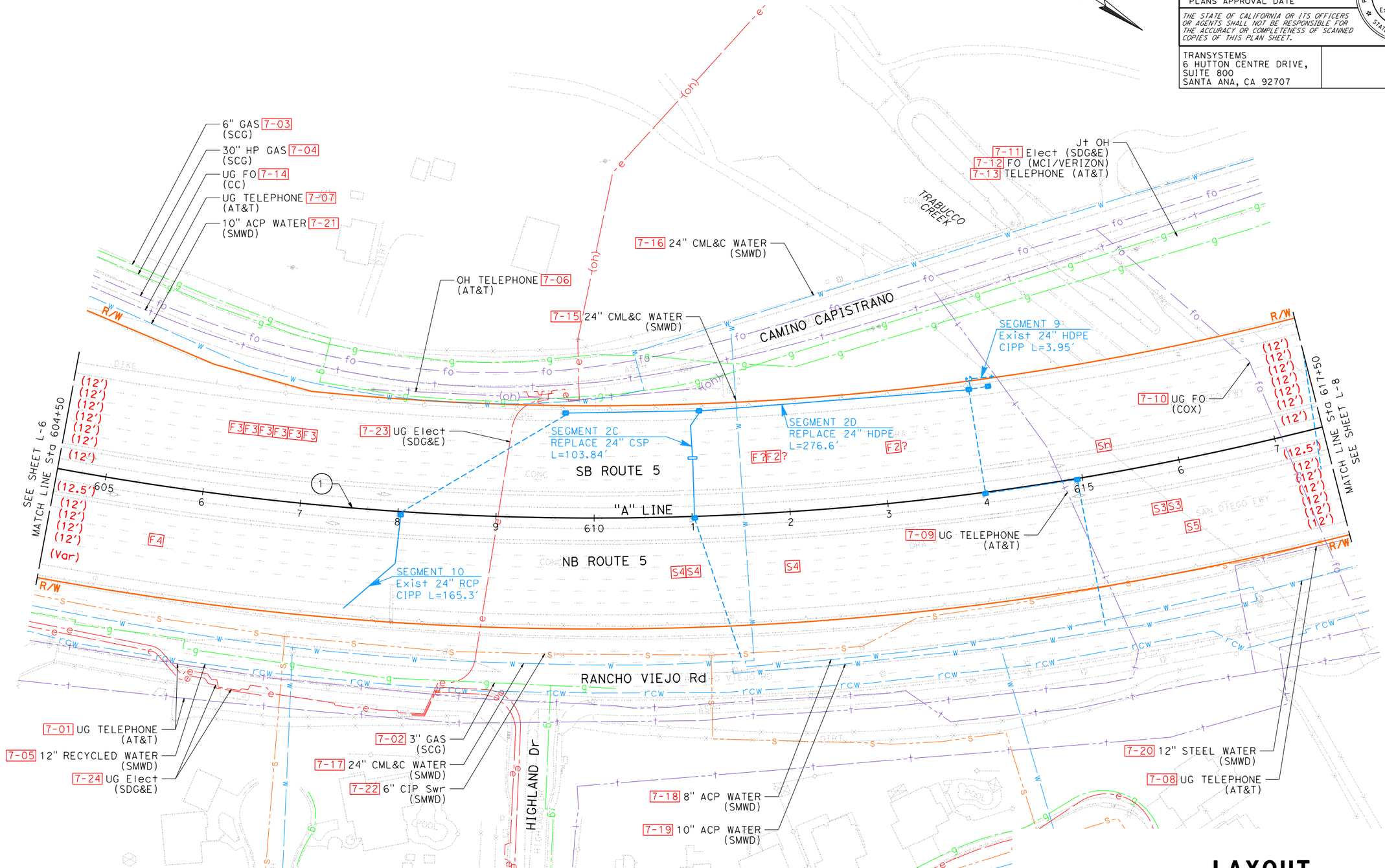
TRANSYSTEMS
6 HUTTON CENTRE DRIVE,
SUITE 800
SANTA ANA, CA 92707

NOTE:

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

CURVE DATA

No. ⓐ	R	Δ	T	L
1	3,000.00′	30°54′40"	829.57′	1,618.50′



LAYOUT

SCALE: 1" = 50′ **L-7**

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: MICHAEL HULTGREN
CHECKED BY: SEPIDEH SARACHI
CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION 00-00-00
DATE PLOTTED => 15-JAN-2024
TIME PLOTTED => 10:03

BORDER LAST REVISED 7/2/2010
USERNAME => mahultgren
DGN FILE => 1220000058ea007.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT xxxx
PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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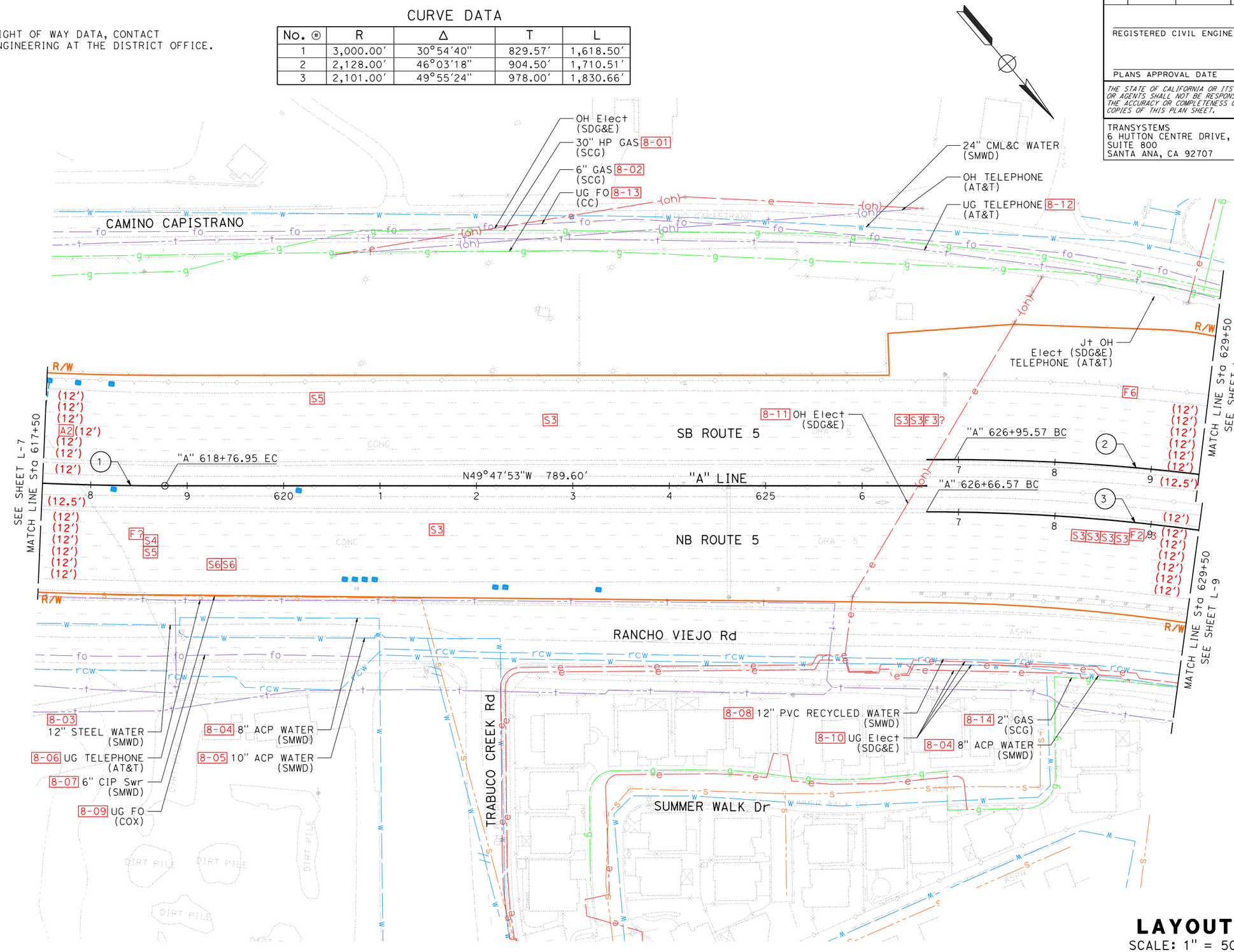
TRANSYSTEMS
6 HUTTON CENTRE DRIVE,
SUITE 800
SANTA ANA, CA 92707

NOTE:

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

CURVE DATA

No.	R	Δ	T	L
1	3,000.00′	30°54′40"	829.57′	1,618.50′
2	2,128.00′	46°03′18"	904.50′	1,710.51′
3	2,101.00′	49°55′24"	978.00′	1,830.66′



LAYOUT

SCALE: 1" = 50′

L-8

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: MICHAEL HULTGREN
CHECKED BY: SEPIDEH SARACHI
CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION: 00-00-00
DATE PLOTTED => 15-JAN-2024
TIME PLOTTED => 10:04

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea008.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

NOTE:

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

CURVE DATA

No. Ⓟ	R	Δ	T	L
2	2,128.00′	46°03′18"	904.50′	1,710.51′
3	2,101.00′	49°55′24"	978.00′	1,830.66′

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

PLANS APPROVAL DATE

TRANSYSTEMS
6 HUTTON CENTRE DRIVE,
SUITE 800
SANTA ANA, CA 92707

SCRRA/METROLINK

CAMINO CAPISTRANO

J† OH Elect (SDG&E) 9-08
TELEPHONE (AT&T) 9-09
6" GAS 9-07 (SCG)
30" HP GAS 9-06 (SCG)
UG FO 9-05 (MCI/VERIZON)
OH Elect† 9-10 (SDG&E)
24" CML&C WATER 9-11 (SMWD)
UG TELEPHONE 9-03 (AT&T)
UG FO 9-04 (CC)

SB ROUTE 5
NB ROUTE 5

MATCH LINE Sta 629+50 SEE SHEET L-8
MATCH LINE Sta 642+50 SEE SHEET L-10

UG Elect 9-15 (SDG&E)
8" ACP WATER 9-13 (SMWD)
2" GAS 9-16 (SCG)

RANCHO VIEJO ROAD
VILLAGE ROAD
LAKEVIEW ROAD

9-01 UG FO (COX)
9-02 4" GAS (SCG)
9-12 12" DIP WATER (SMWD)
9-18 12" RECLAIMED WATER (SMWD)
9-17 UG TELEPHONE (AT&T)
9-14 16" PVC WATER (SMWD)

LAYOUT
SCALE: 1" = 50′ **L-9**

REVISED BY	DATE REVISED
MICHAEL HULTGREN	SEPIDEH SARACHI
CALCULATED-DESIGNED BY	CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR	AYMAN SALAMA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00
DATE PLOTTED => 15-JAN-2024
TIME PLOTTED => 10:05

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea009.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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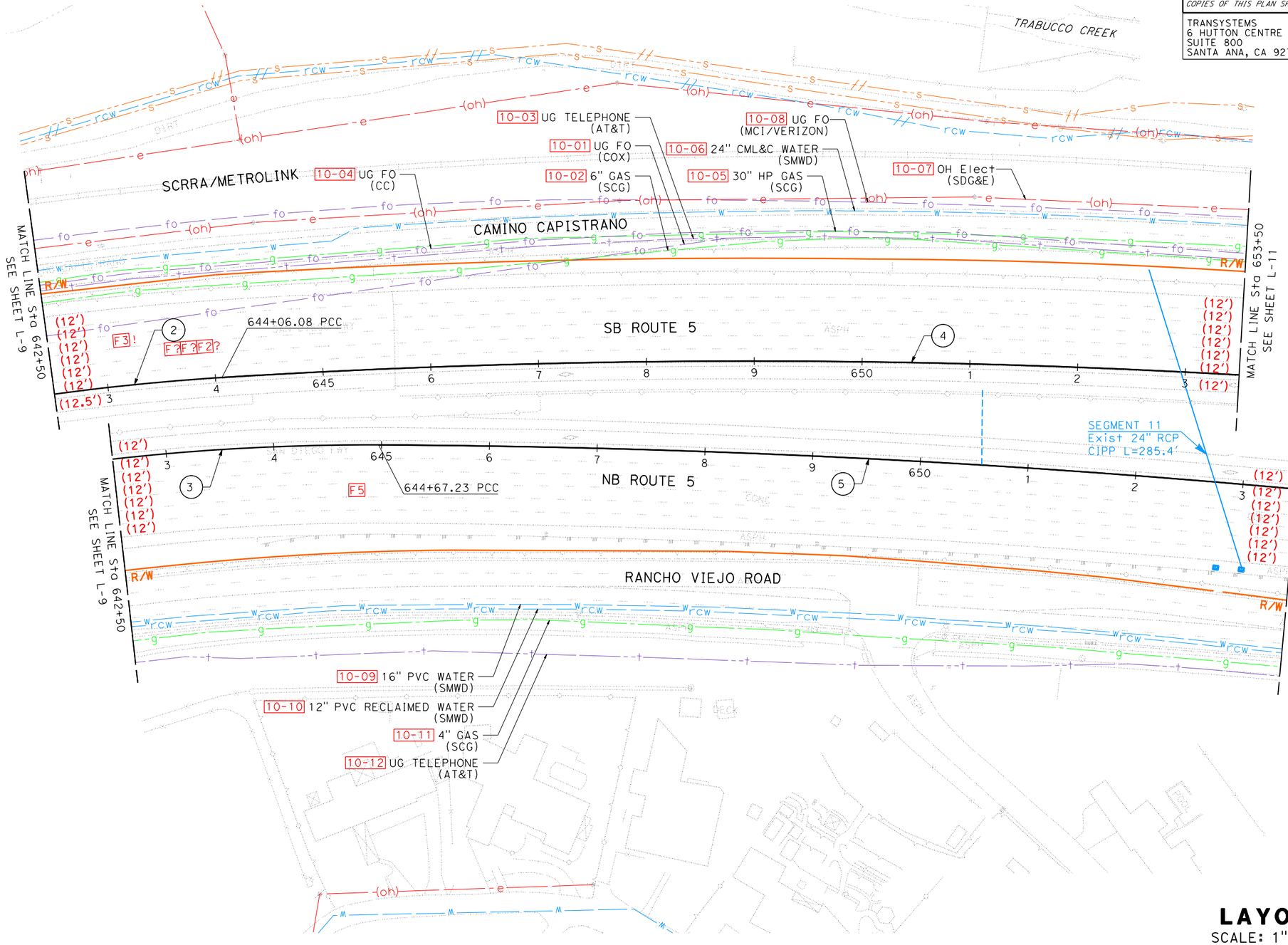
TRANSYSTEMS
6 HUTTON CENTRE DRIVE,
SUITE 800
SANTA ANA, CA 92707

NOTE:

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

CURVE DATA

No. ⓟ	R	Δ	T	L
2	2,128.00′	46°03′18"	904.50′	1,710.51′
3	2,101.00′	49°55′24"	978.00′	1,830.66′
4	7,915.00′	15°01′59"	1,044.35′	2,076.71′
5	10,000.00′	10°31′24"	920.92′	1,836.67



LAYOUT

SCALE: 1" = 50′

L-10

REVISED BY	DATE REVISED
MICHAEL HULTGREN	SEPIDEH SARACHI
CALCULATED-DESIGNED BY	CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR	AYMAN SALAMA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:06

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea010.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

NOTE:

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

CURVE DATA

No. ⑭	R	Δ	T	L
4	7,915.00′	15°01′59"	1,044.35′	2,076.71′
5	10,000.00′	10°31′24"	920.92′	1,836.67

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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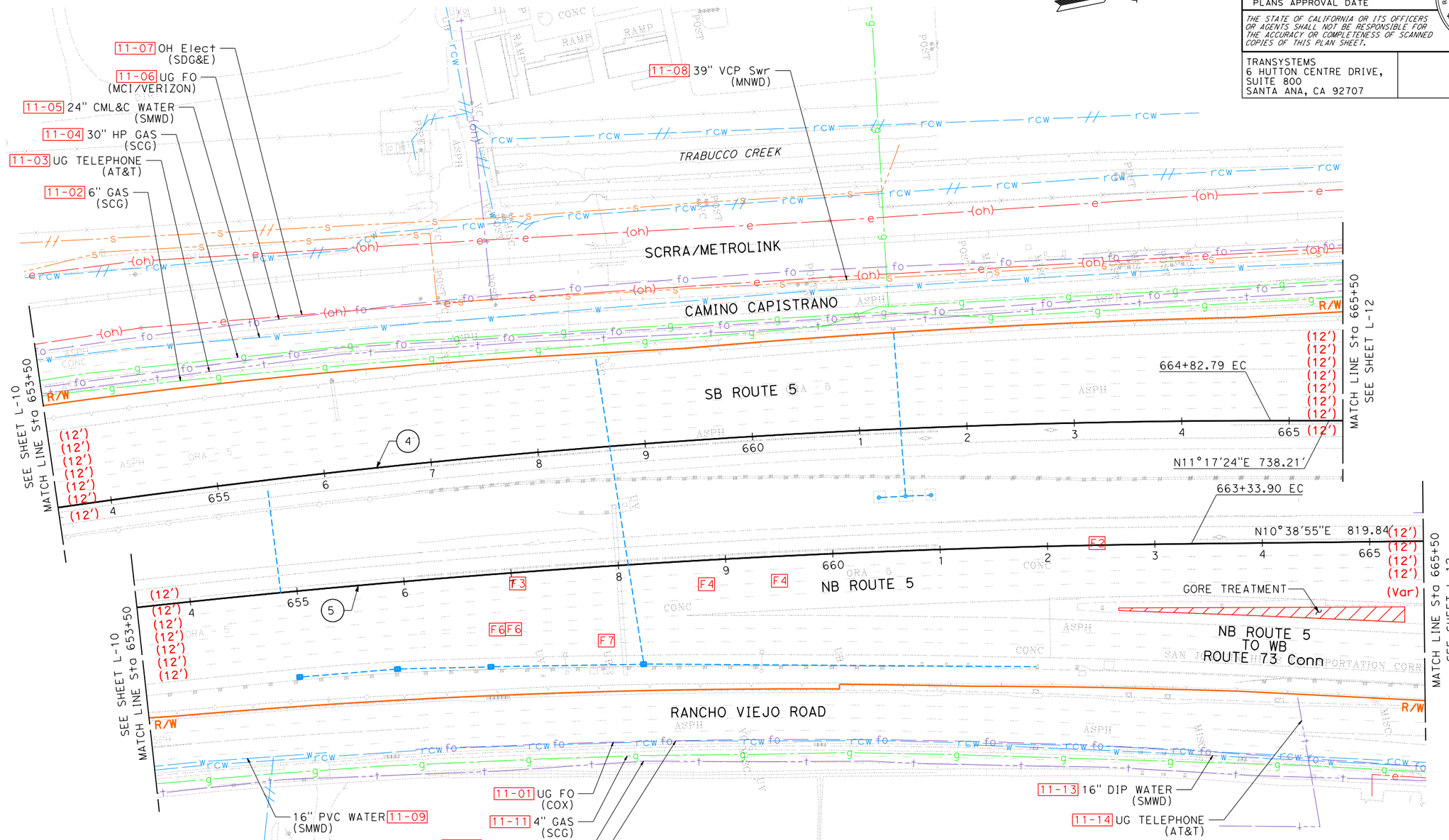
SUITE 800
SANTA ANA, CA 92707



LAYOUT

SCALE: 1" = 50′

L - 11

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | MICHAEL HULTGREN | SEPIDEH SARACHI

CHECKED BY | CONSULTANT FUNCTIONAL SUPERVISOR | AYMAN SALAMA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:06

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea011.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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TRANSYSTEMS
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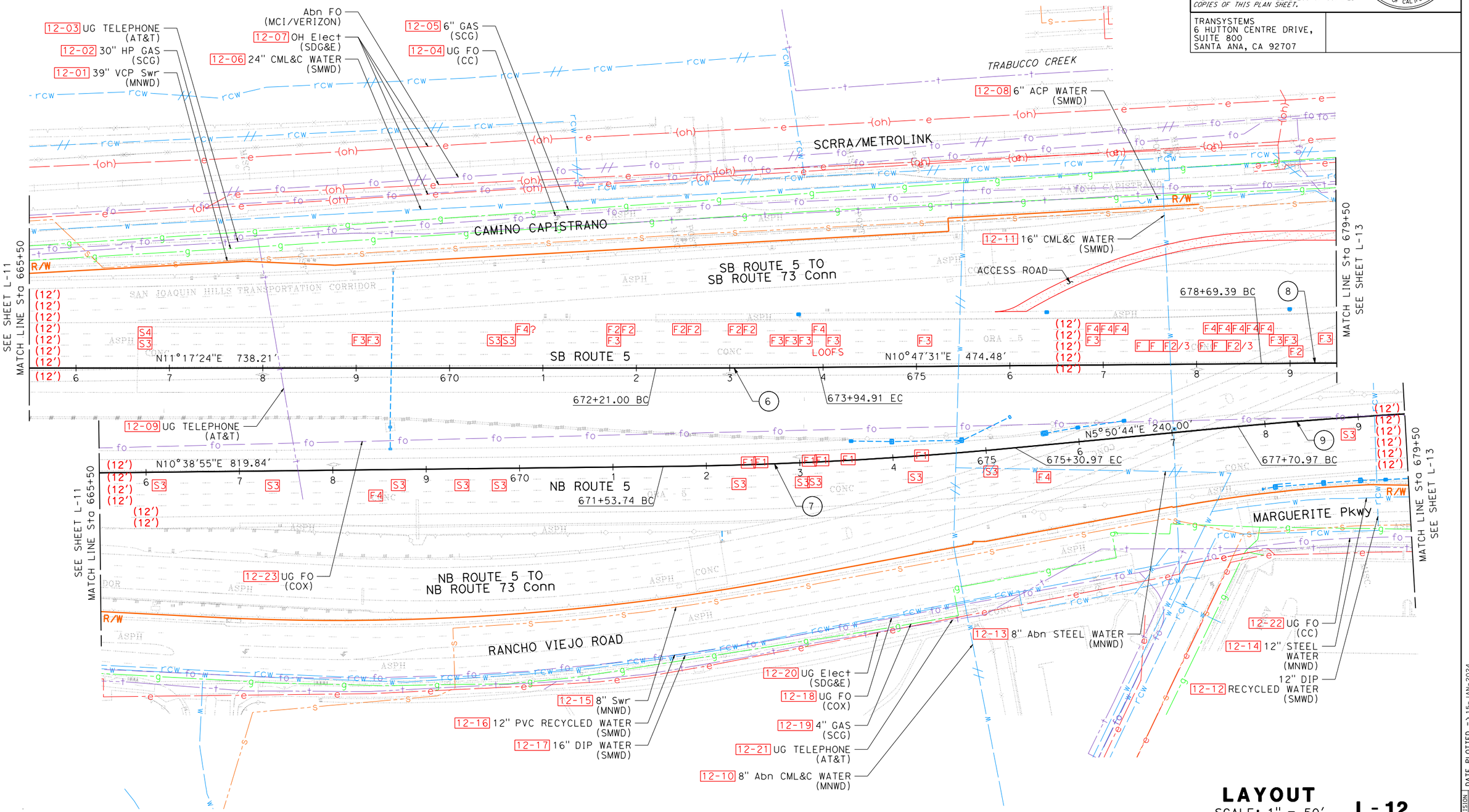
SUITE 800
SANTA ANA, CA 92707

NOTE:

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

CURVE DATA

No. ⑥	R	Δ	T	L
6	20,000.00′	0°29′54"	86.95′	173.91′
7	4,500.00′	4°48′11"	188.73′	377.23′
8	20,000.00′	1°21′49"	238.02′	476.02′
9	4,550.00′	6°18′36"	250.80′	501.10′



LAYOUT

SCALE: 1" = 50′

L-12

REVISED BY | DATE REVISED
MICHAEL HULTGREN | SEPIDEH SARACHI
CALCULATED-DESIGNED BY | CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR
AYMAN SALAMA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION DATE PLOTTED => 15-JAN-2024
00-00-00 TIME PLOTTED => 10:07

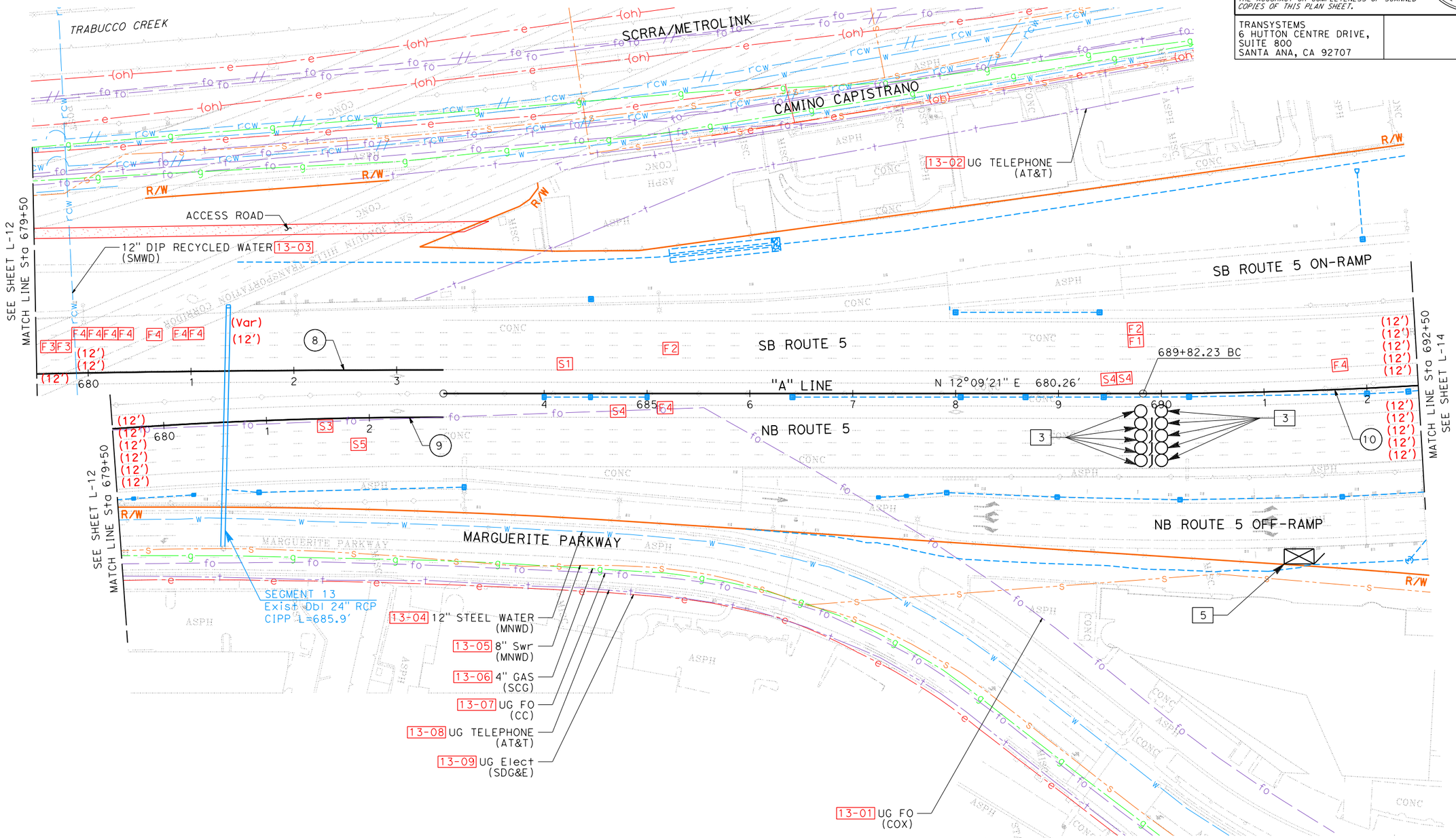
BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea012.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

NOTE:

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

CURVE DATA

No. Ⓐ	R	Δ	T	L
8	20,000.00′	1°21′49"	238.02′	476.02′
9	4,550.00′	6°18′36"	250.80′	501.10′
10	4,600.00′	13°01′14"	524.94′	1,045.36′



LAYOUT

SCALE: 1" = 50′

L-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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TRANSYSTEMS
6 HUTTON CENTRE DRIVE,
SUITE 800
SANTA ANA, CA 92707

REVISED BY | DATE REVISED

MICHAEL HULTGREN | SEPIDEH SARACHI

CALCULATED-DESIGNED BY | CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:08

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea013.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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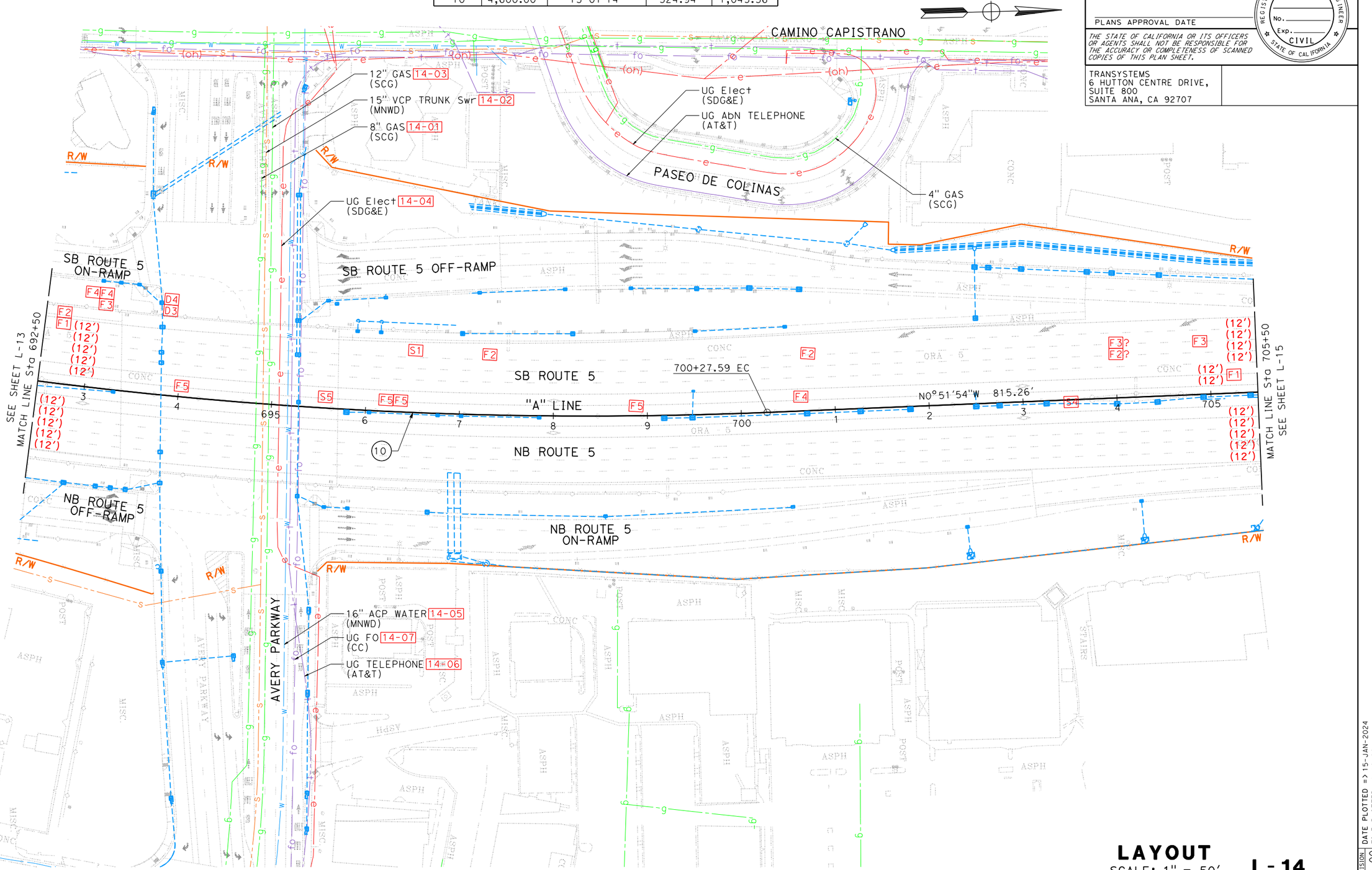
TRANSYSTEMS
6 HUTTON CENTRE DRIVE,
SUITE 800
SANTA ANA, CA 92707

NOTE:

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

CURVE DATA

No. ⑩	R	Δ	T	L
10	4,600.00′	13°01′14"	524.94′	1,045.36′



LAYOUT

SCALE: 1" = 50′

L - 14

REVISED BY | DATE REVISED
MICHAEL HULTGREN | SEPIDEH SARACHI
CALCULATED-DESIGNED BY | CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR
AYMAN SALAMA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:09

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea014.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

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.

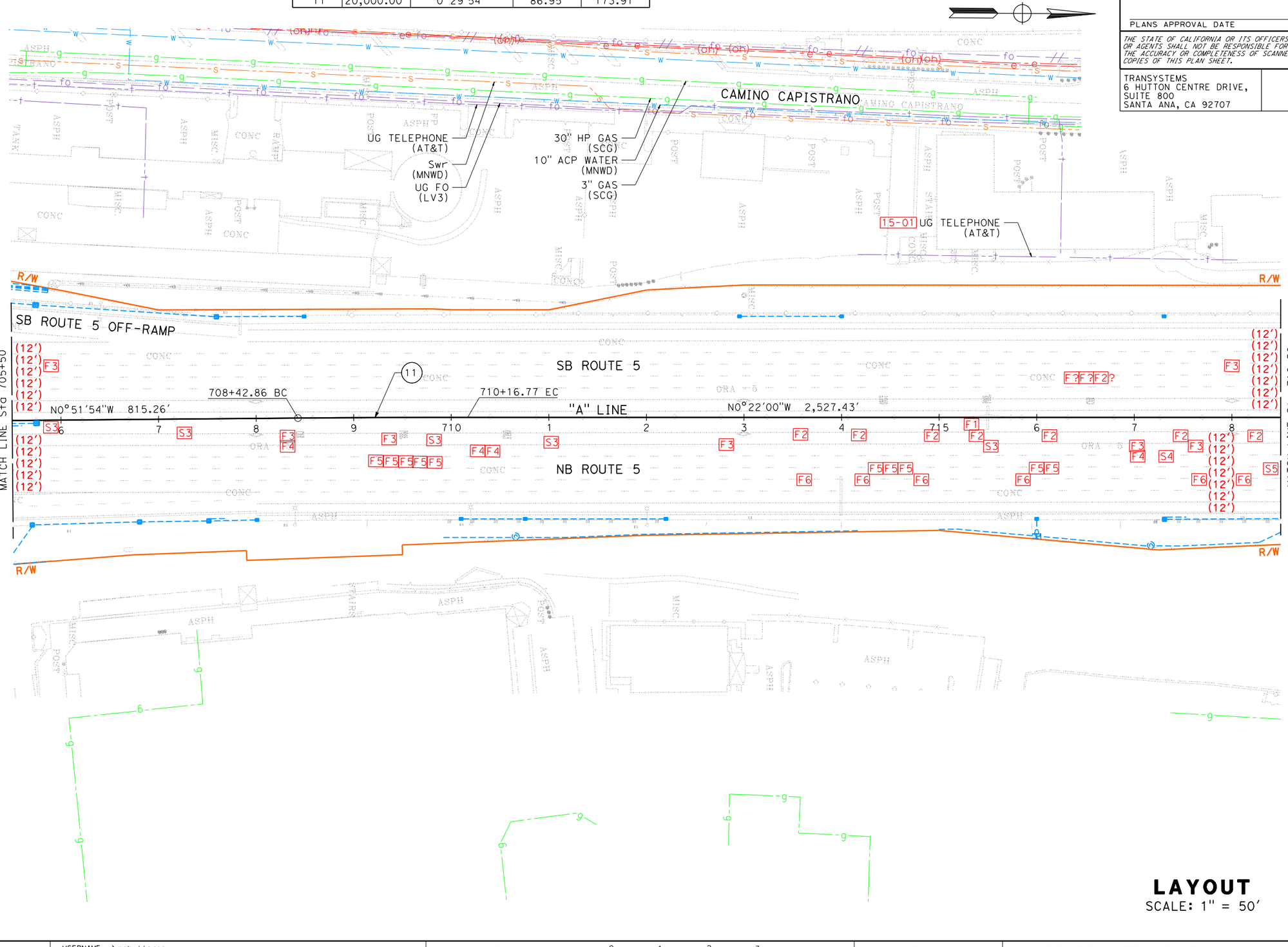
TRANSYSTEMS
6 HUTTON CENTRE DRIVE,
SUITE 800
SANTA ANA, CA 92707

NOTE:

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

CURVE DATA

No. ⑪	R	Δ	T	L
11	20,000.00′	0°29′54"	86.95′	173.91′



LAYOUT

SCALE: 1" = 50′

L - 15

CALCULATED-DESIGNED BY

CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA

REVISED BY: MICHAEL HULTGREN

DATE REVISED: SEPIDEH SARACHI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:09

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea015.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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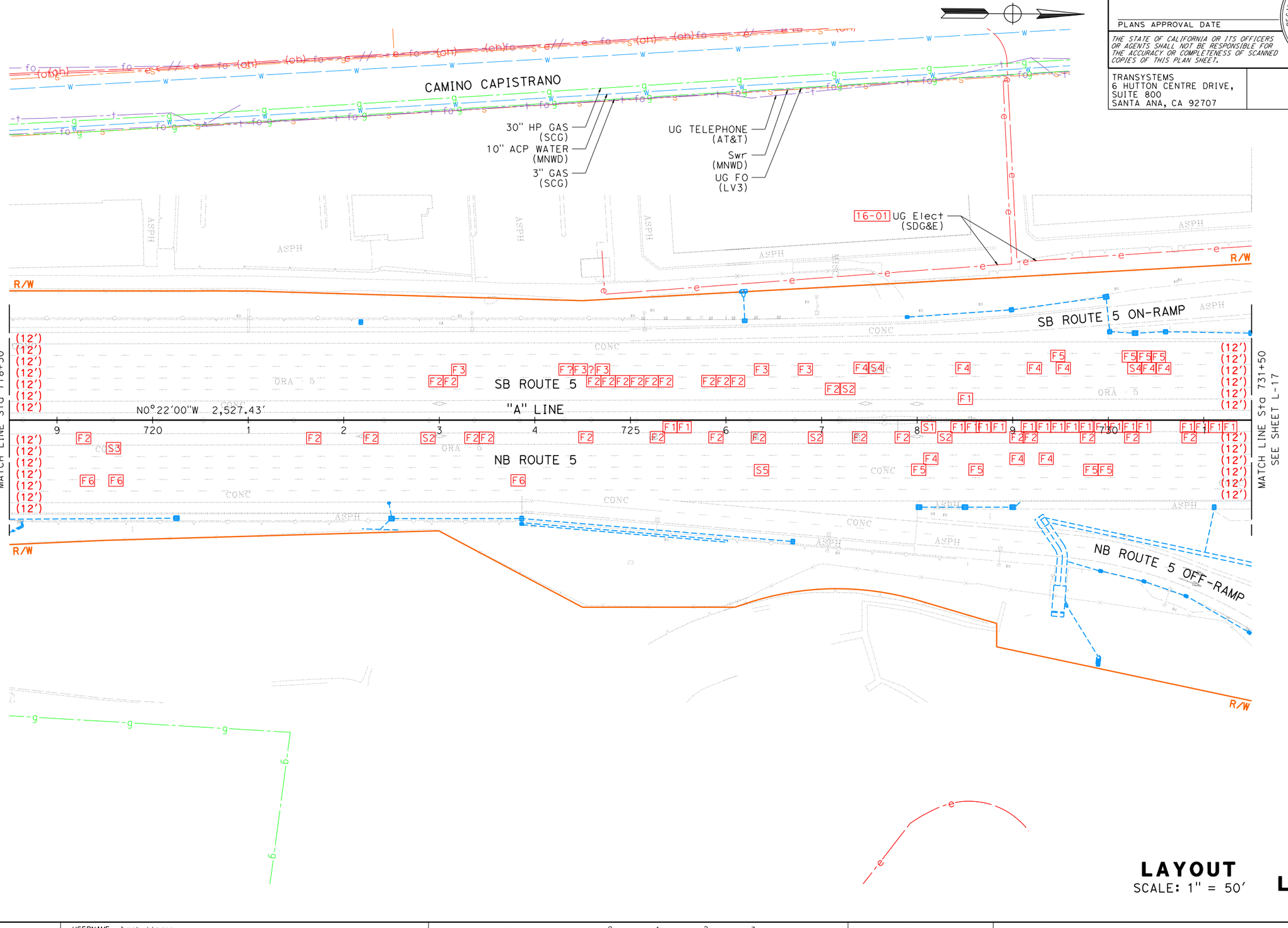
SUITE 800
SANTA ANA, CA 92707

NOTE:

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



LAYOUT
SCALE: 1" = 50'

L - 16

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA
CALCULATED-DESIGNED BY: SEPIDEH SARACHI
CHECKED BY: MICHAEL HULTGREN
REVISED BY / DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:10

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea016.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

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.

TRANSYSTEMS
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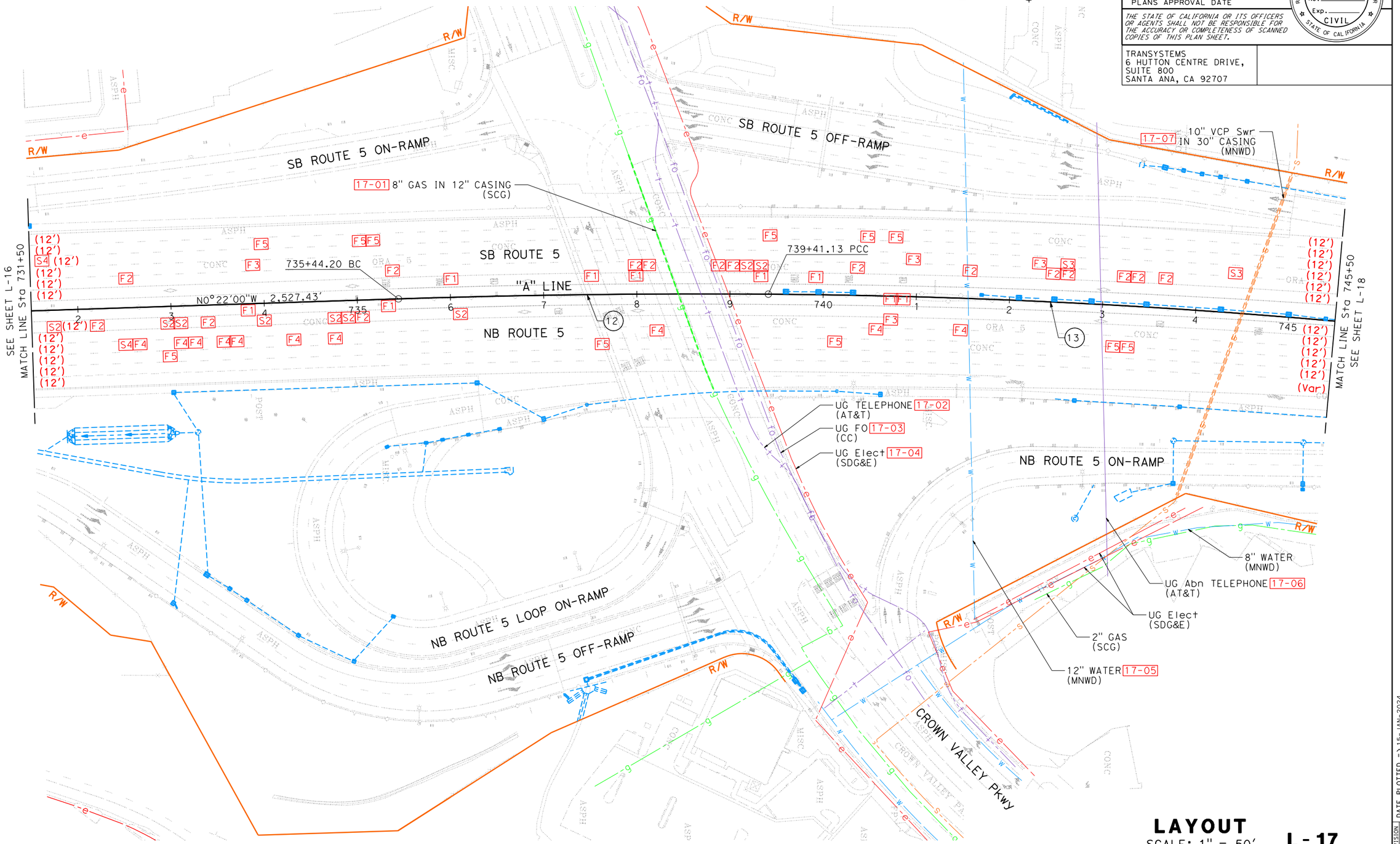
SUITE 800
SANTA ANA, CA 92707

NOTE:

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

CURVE DATA

No. ⑫	R	Δ	T	L
12	10,000.00′	2°16′27"	198.49′	396.93′
13	7,500.00′	4°58′53"	326.25′	652.08′



LAYOUT

SCALE: 1" = 50′

L - 17

REVISED BY | DATE REVISED
MICHAEL HULTGREN | SEPIDEH SARACHI
CALCULATED-DESIGNED BY | CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR
AYMAN SALAMA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:11

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea017.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

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.

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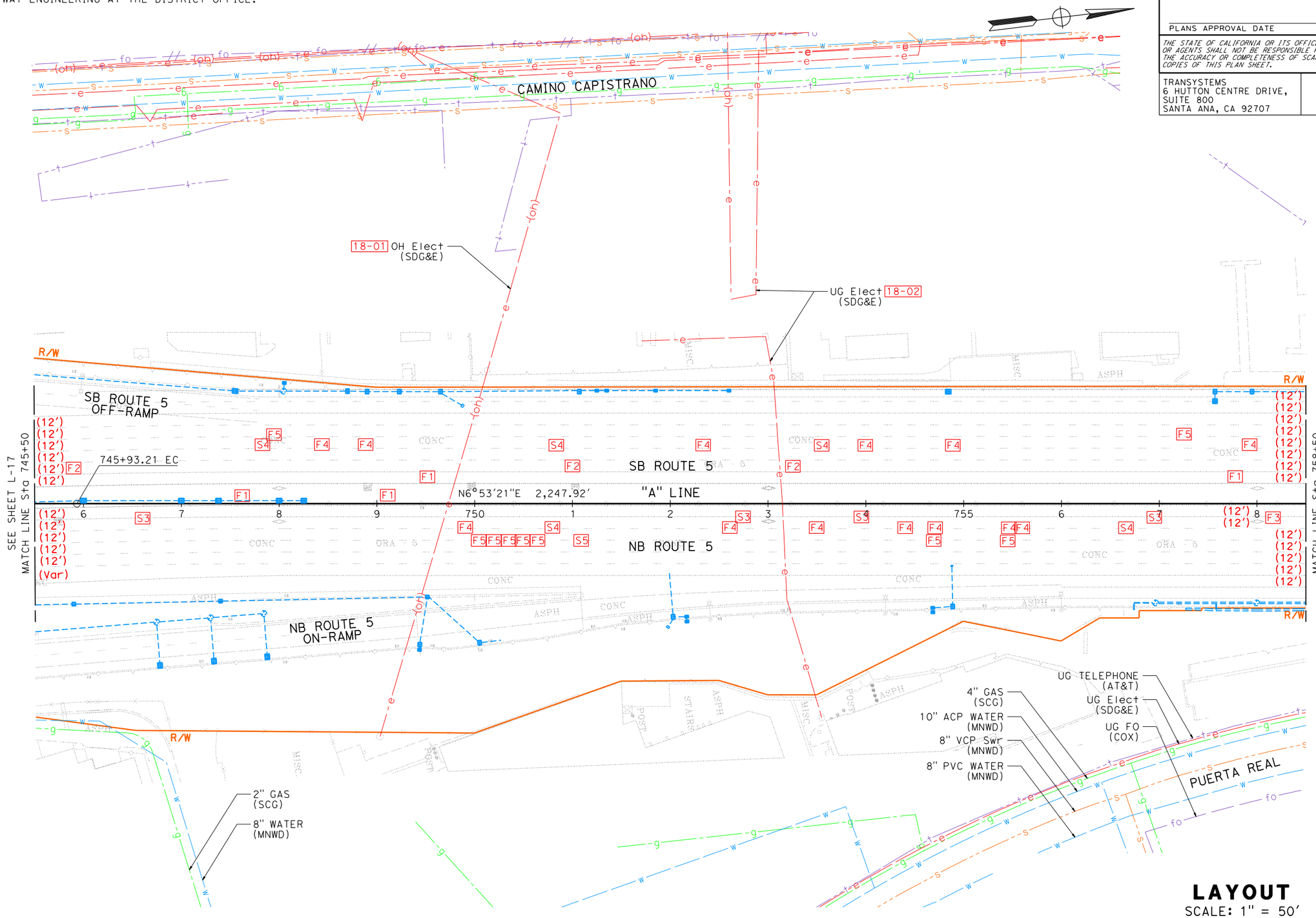
6 HUTTON CENTRE DRIVE,
SUITE 800
SANTA ANA, CA 92707

NOTE:

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



LAYOUT
SCALE: 1" = 50'

L-18

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: MICHAEL HULTGREN
CHECKED BY: SEPIDEH SARACHI
CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION 00-00-00
DATE PLOTTED => 15-JAN-2024
TIME PLOTTED => 10:12

BORDER LAST REVISED 7/2/2010
USERNAME => mahultgren
DGN FILE => 1220000058ea018.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT xxxx
PROJECT NUMBER & PHASE 12200000580

NOTE:

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

CURVE DATA

No. ⊛	R	Δ	T	L
14	10,000.00′	5°23′01"	470.15′	939.60′

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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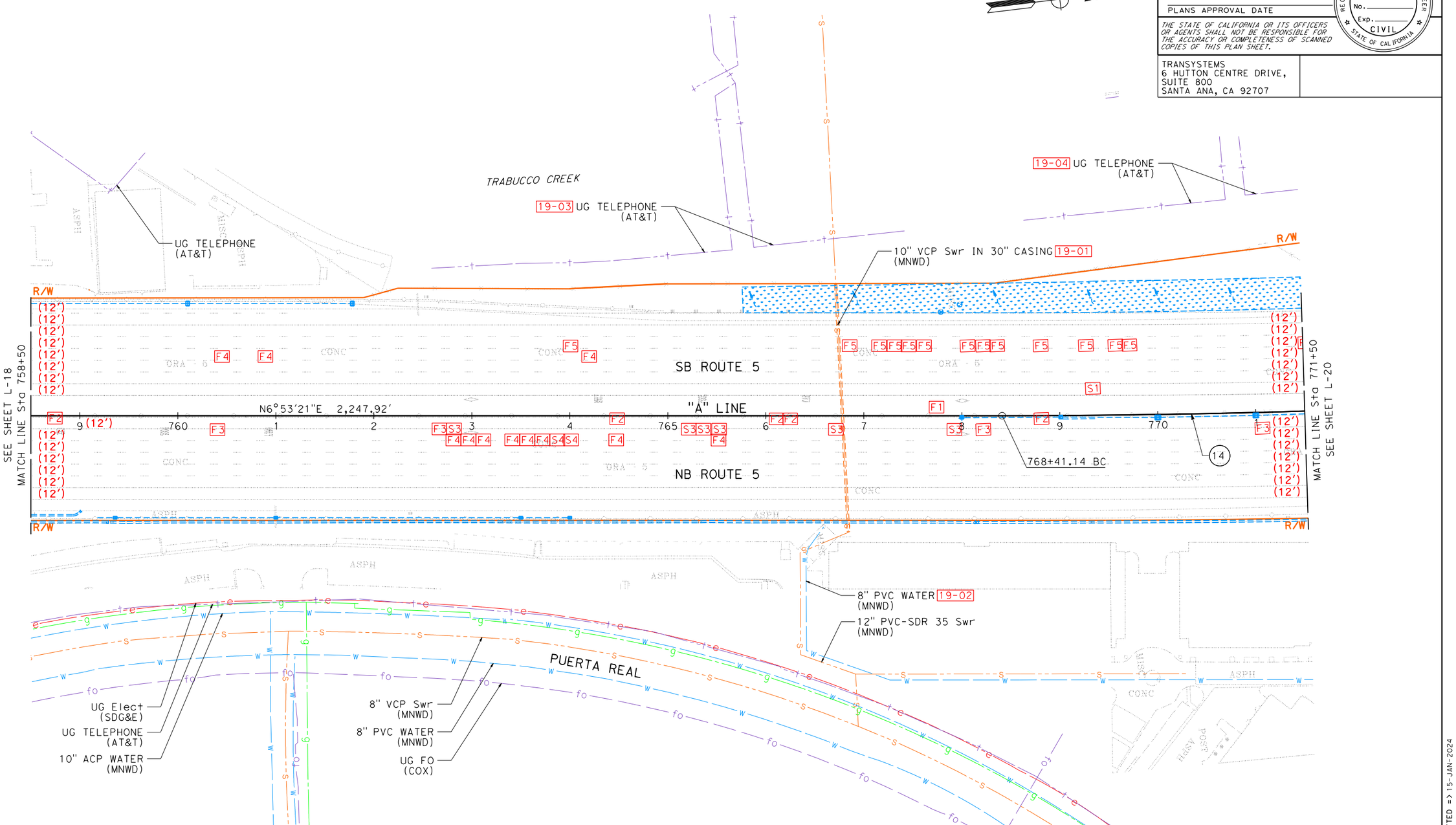
TRANSYSTEMS
6 HUTTON CENTRE DRIVE,
SUITE 800
SANTA ANA, CA 92707



LAYOUT

SCALE: 1" = 50′

L - 19

REVISED BY | DATE REVISED
MICHAEL HULTGREN | SEPIDEH SARACHI
CALCULATED-DESIGNED BY | CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR
AYMAN SALAMA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:12

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea019.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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SUITE 800
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NOTE:

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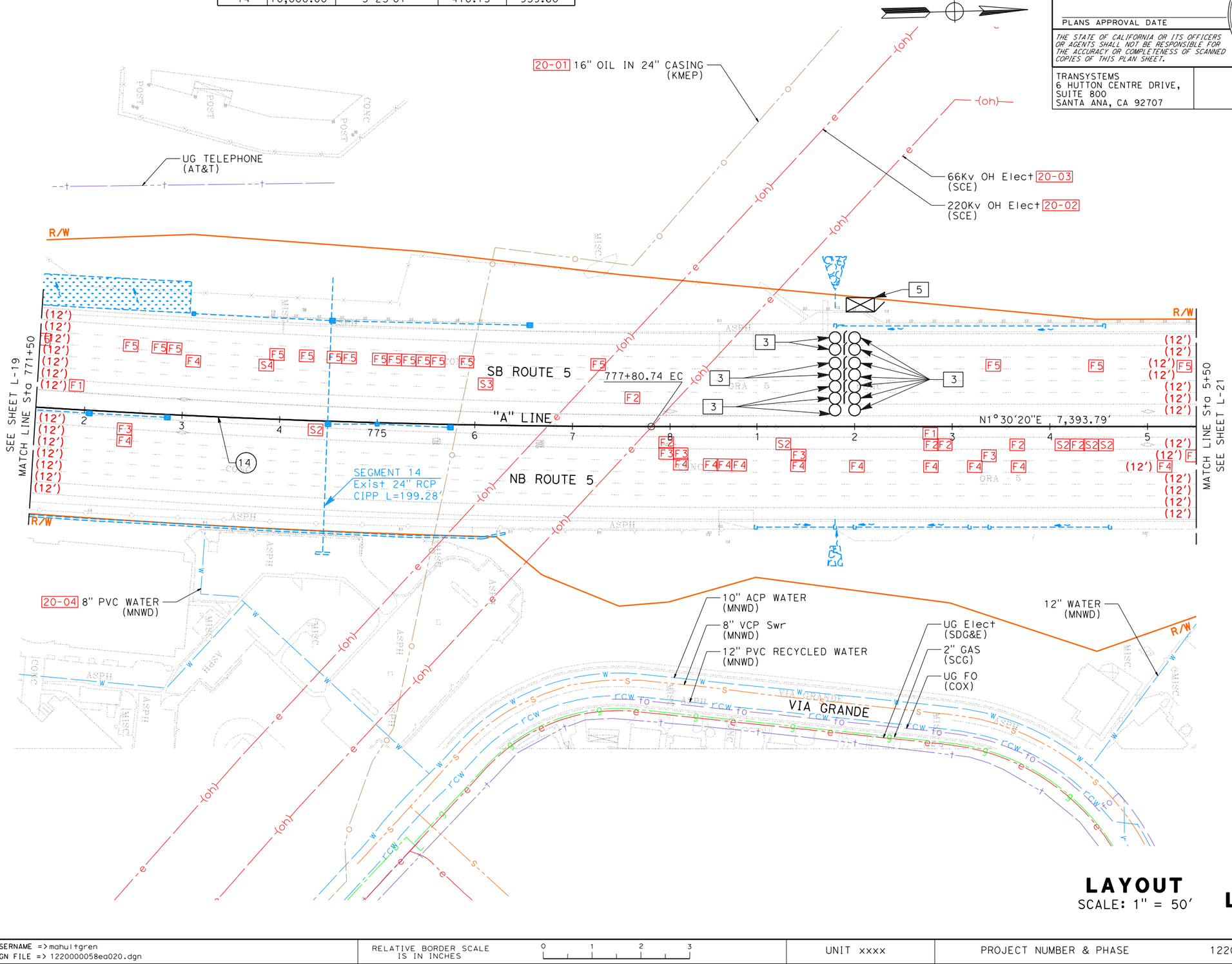
CURVE DATA

No. ⑭	R	Δ	T	L
14	10,000.00′	5°23′01"	470.15′	939.60′



LAYOUT

SCALE: 1" = 50′

L-20

REVISED BY	DATE REVISED
MICHAEL HULTGREN	SEPIDEH SARACHI
CALCULATED-DESIGNED BY	CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR	AYMAN SALAMA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:13

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea020.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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NOTE:

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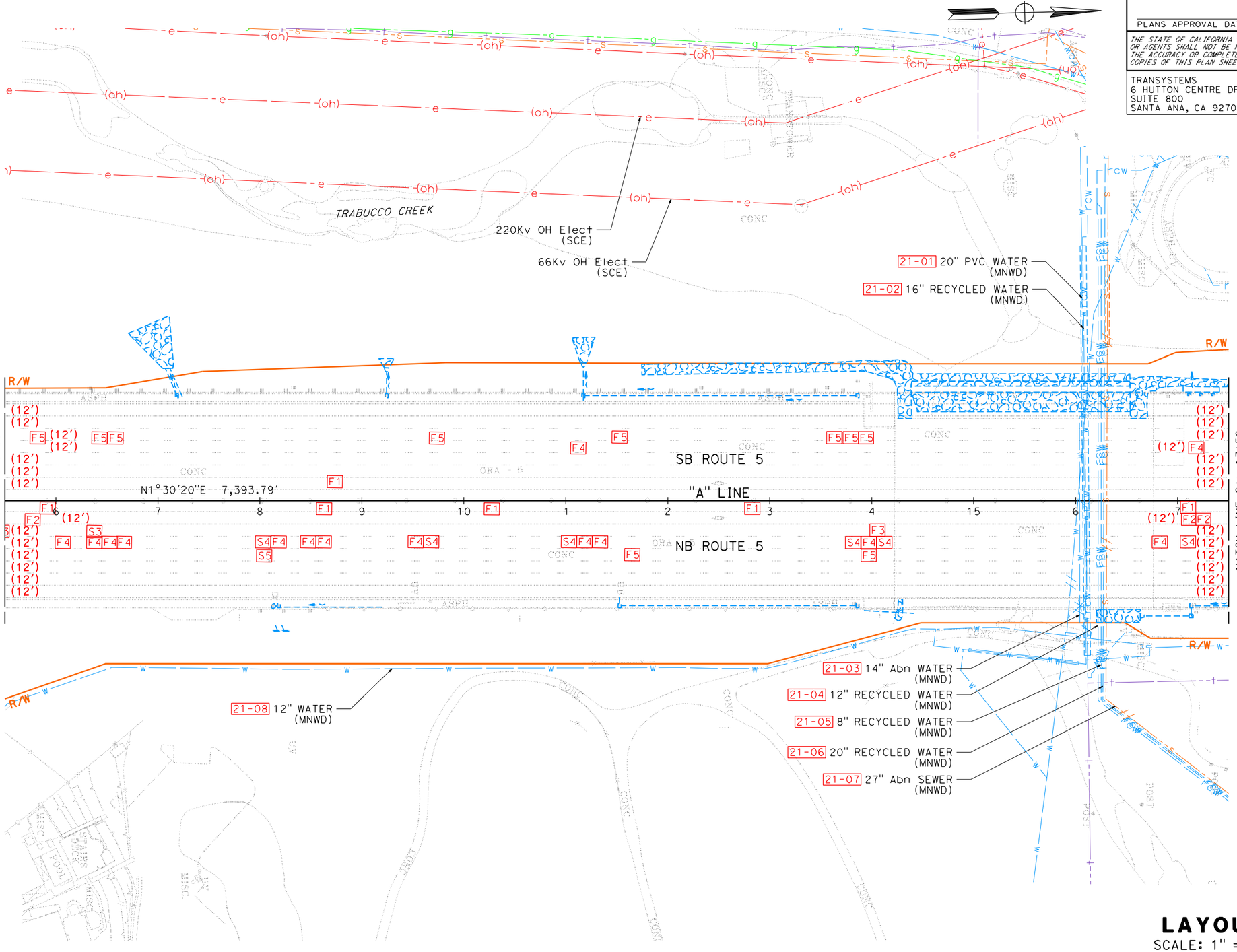

LAYOUT

SCALE: 1" = 50'

L-21

REVISED BY	DATE REVISED
MICHAEL HULTGREN	SEPIDEH SARACHI
CALCULATED-DESIGNED BY	CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:14

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea021.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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SUITE 800
SANTA ANA, CA 92707

NOTE:

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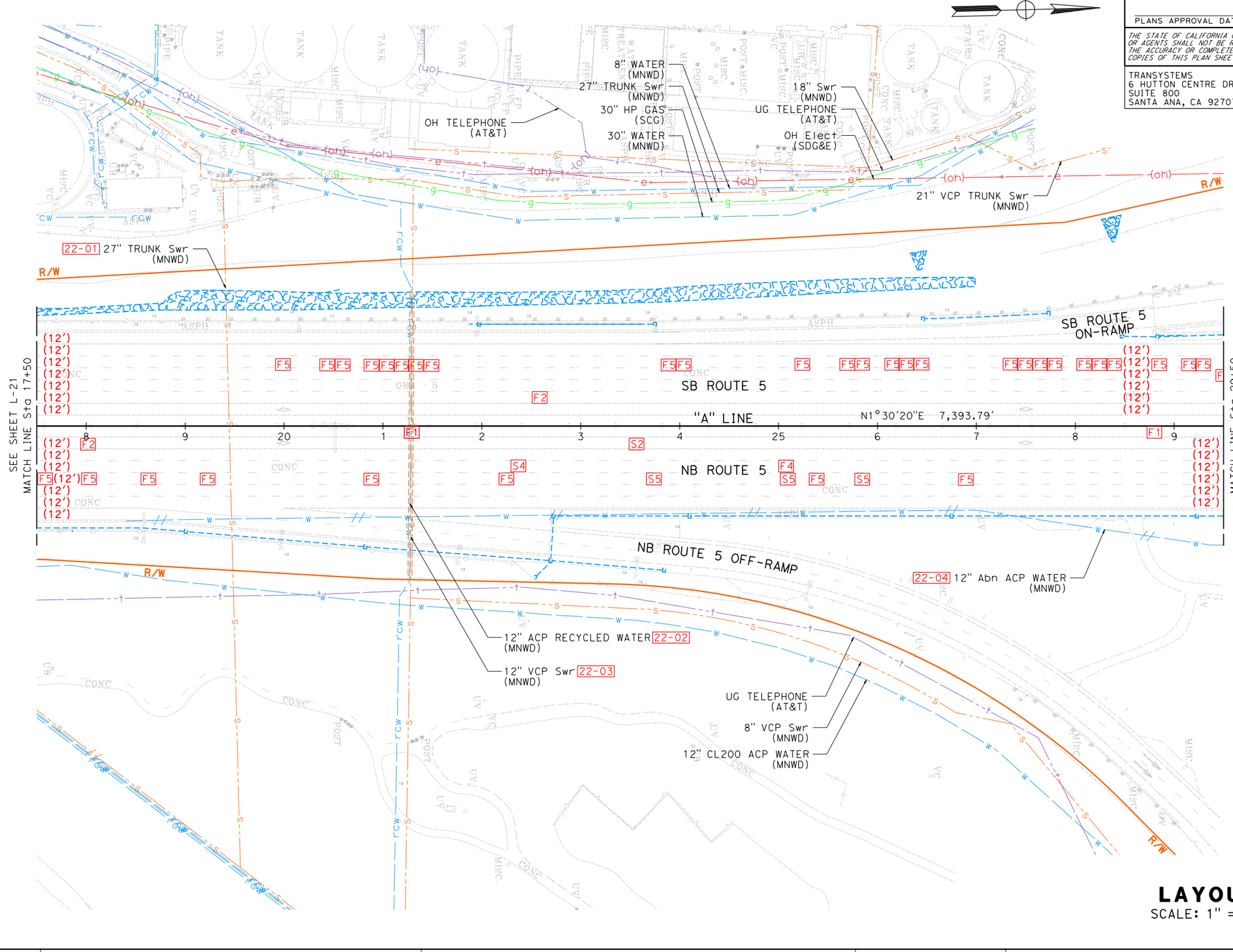
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



LAYOUT

SCALE: 1" = 50'

L-22

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: MICHAEL HULTGREN
CHECKED BY: SEPIDEH SARACHI
CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:15

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea022.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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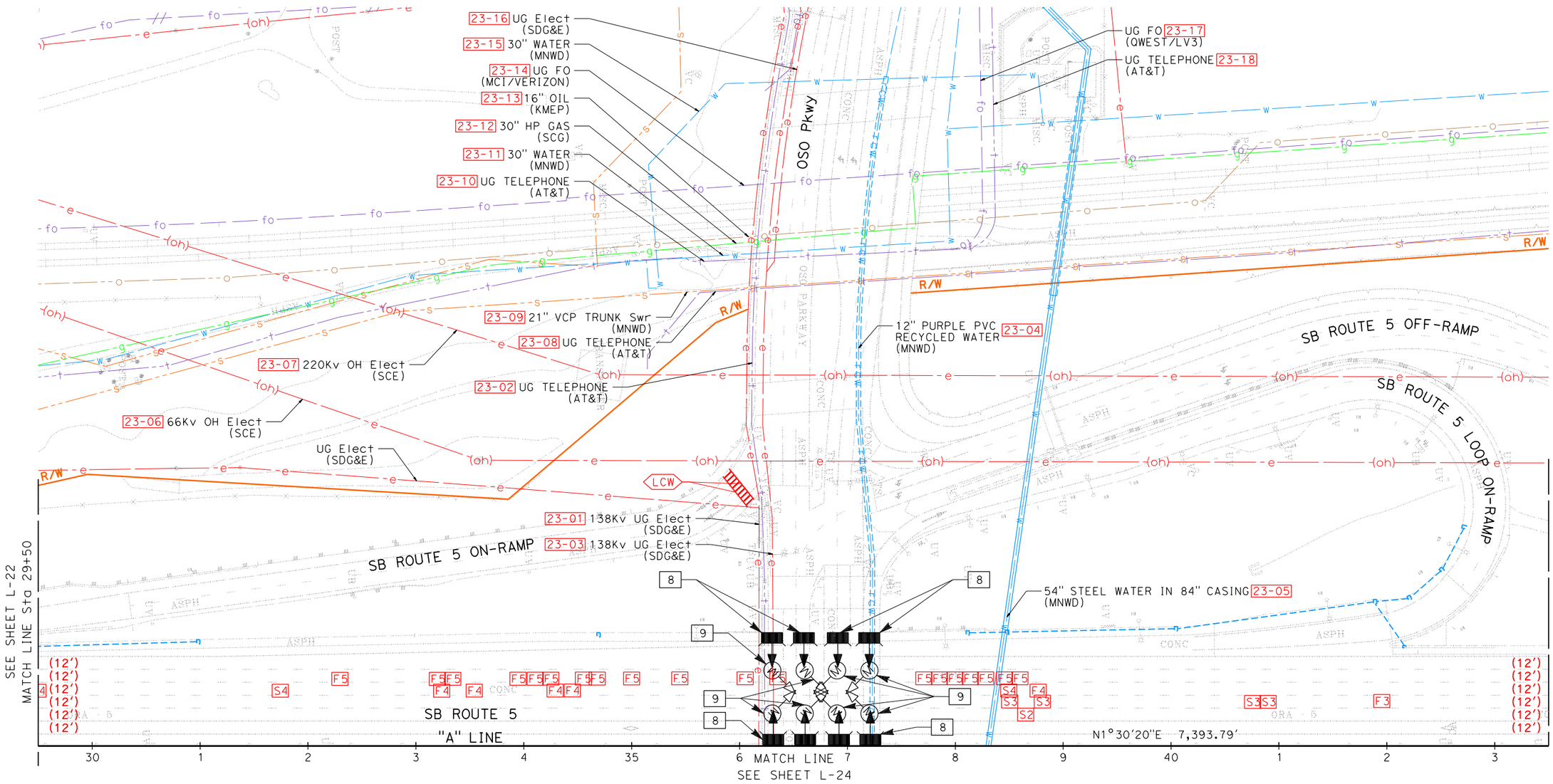
SANTA ANA, CA 92707

NOTE:

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



LAYOUT

SCALE: 1" = 50'

L-23

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
Caltrans	AYMAN SALAMA	SEPIDEH SARACHI	MICHAEL HULTGREN		

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:15

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea023.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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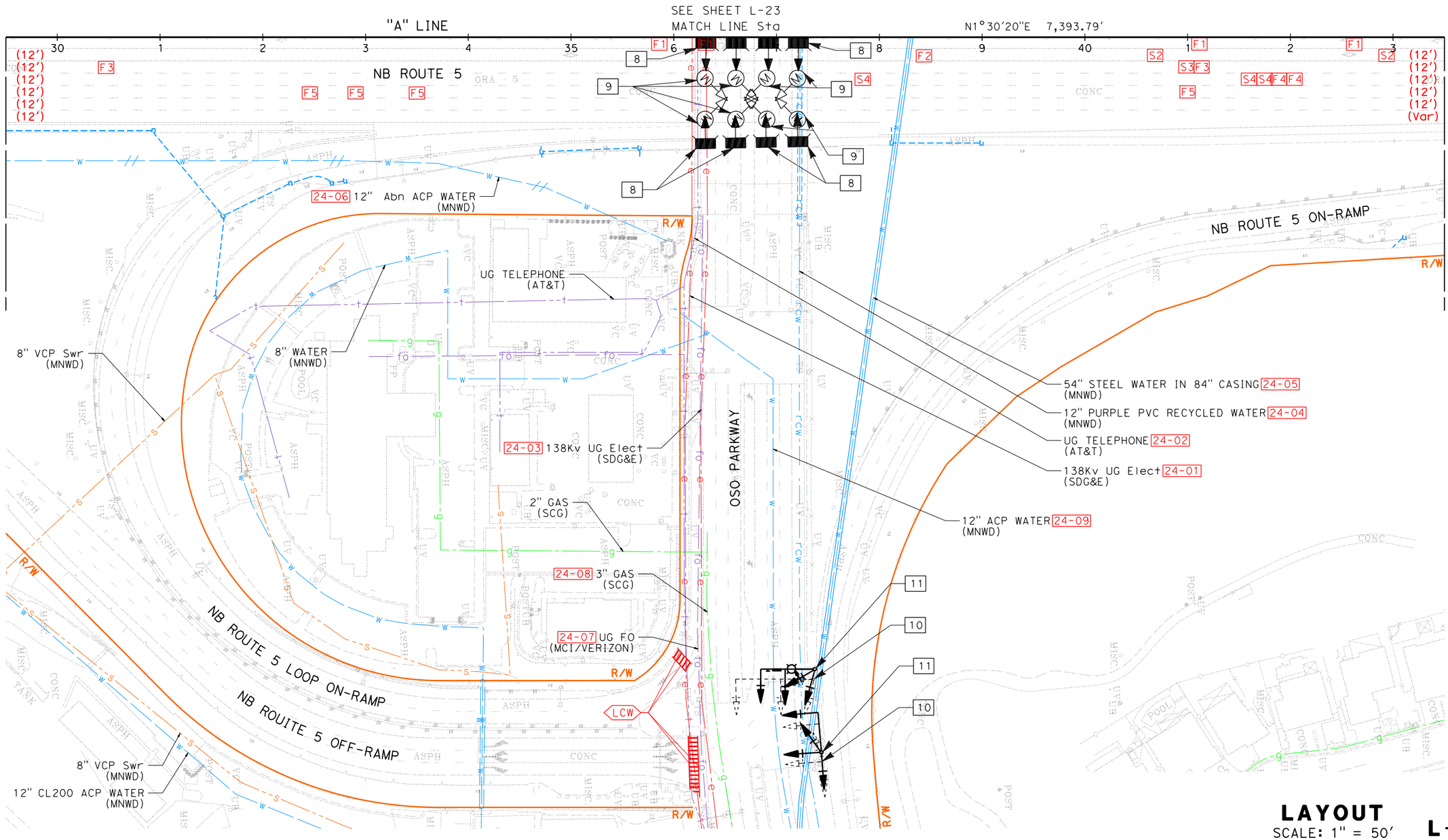
SANTA ANA, CA 92707

NOTE:

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



LAYOUT
SCALE: 1" = 50'

L-24

REVISED BY	DATE REVISED
MICHAEL HULTGREN	SEPIDEH SARACHI
CALCULATED-DESIGNED BY	CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR	AYMAN SALAMA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:16

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea024.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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NOTE:

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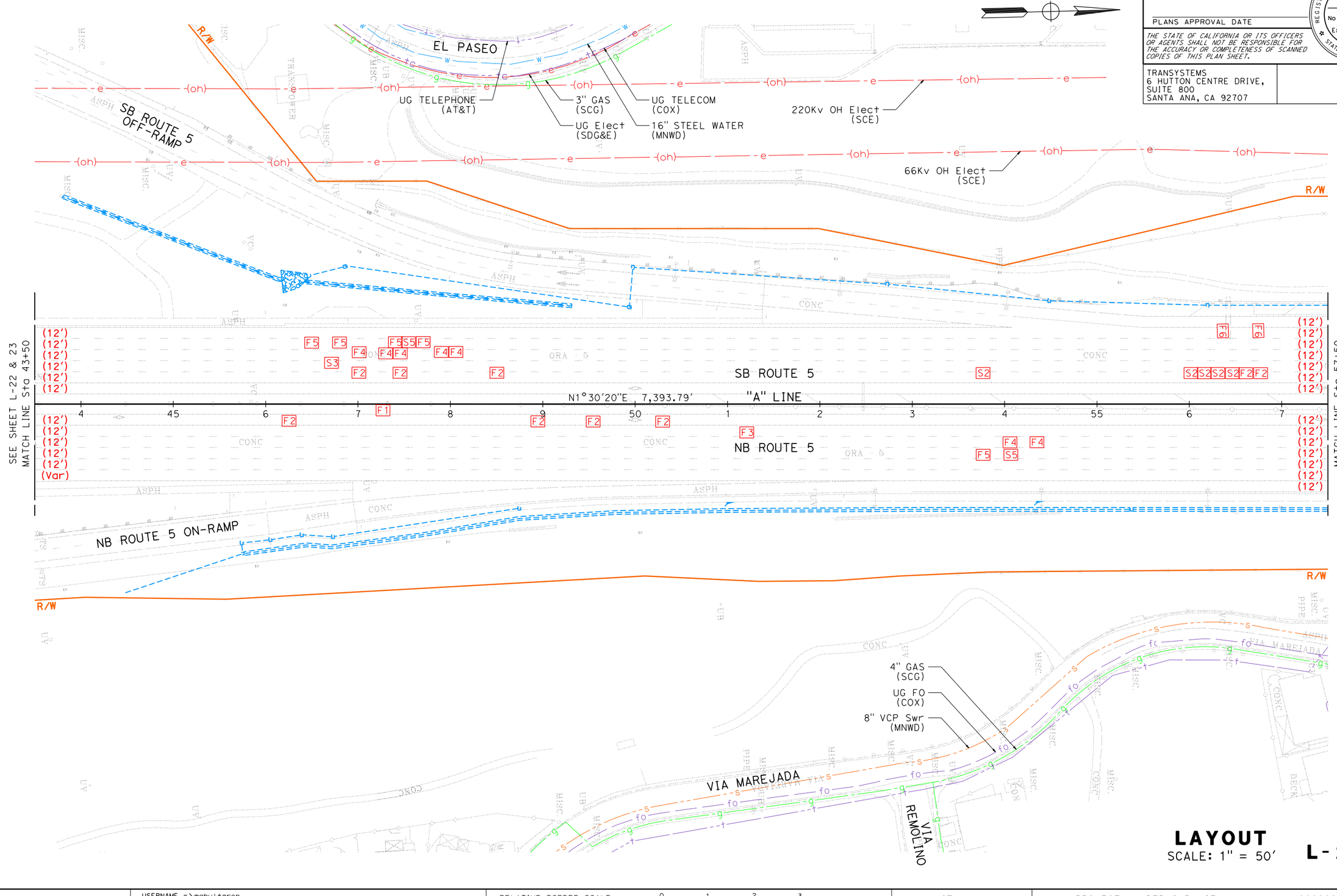

LAYOUT

SCALE: 1" = 50'

L - 25

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CALCULATED-DESIGNED BY: MICHAEL HULTGREN
CHECKED BY: SEPIDEH SARACHI
CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA

REVISED BY	DATE REVISED

LAST REVISION: 00-00-00
DATE PLOTTED => 15-JAN-2024
TIME PLOTTED => 10:17

BORDER LAST REVISED 7/2/2010

USERNAME => mahultgren
DGN FILE => 1220000058ea025.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT xxxx

PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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NOTE:

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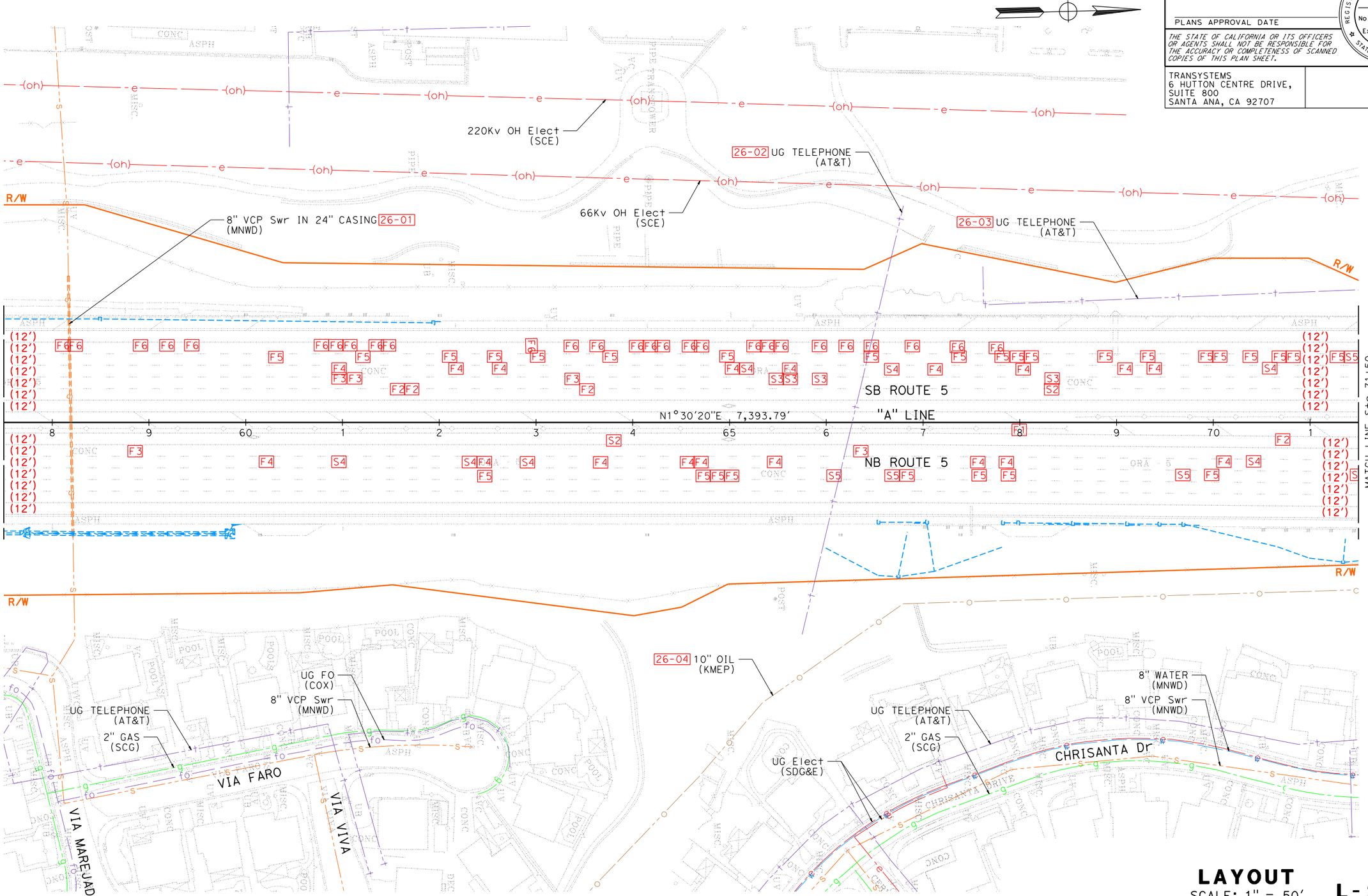
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



LAYOUT
SCALE: 1" = 50'

L-26

REVISED BY	DATE REVISED
MICHAEL HULTGREN	SEPIDEH SARACHI
CALCULATED-DESIGNED BY	CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR	AYMAN SALAMA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:18

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea026.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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NOTE:

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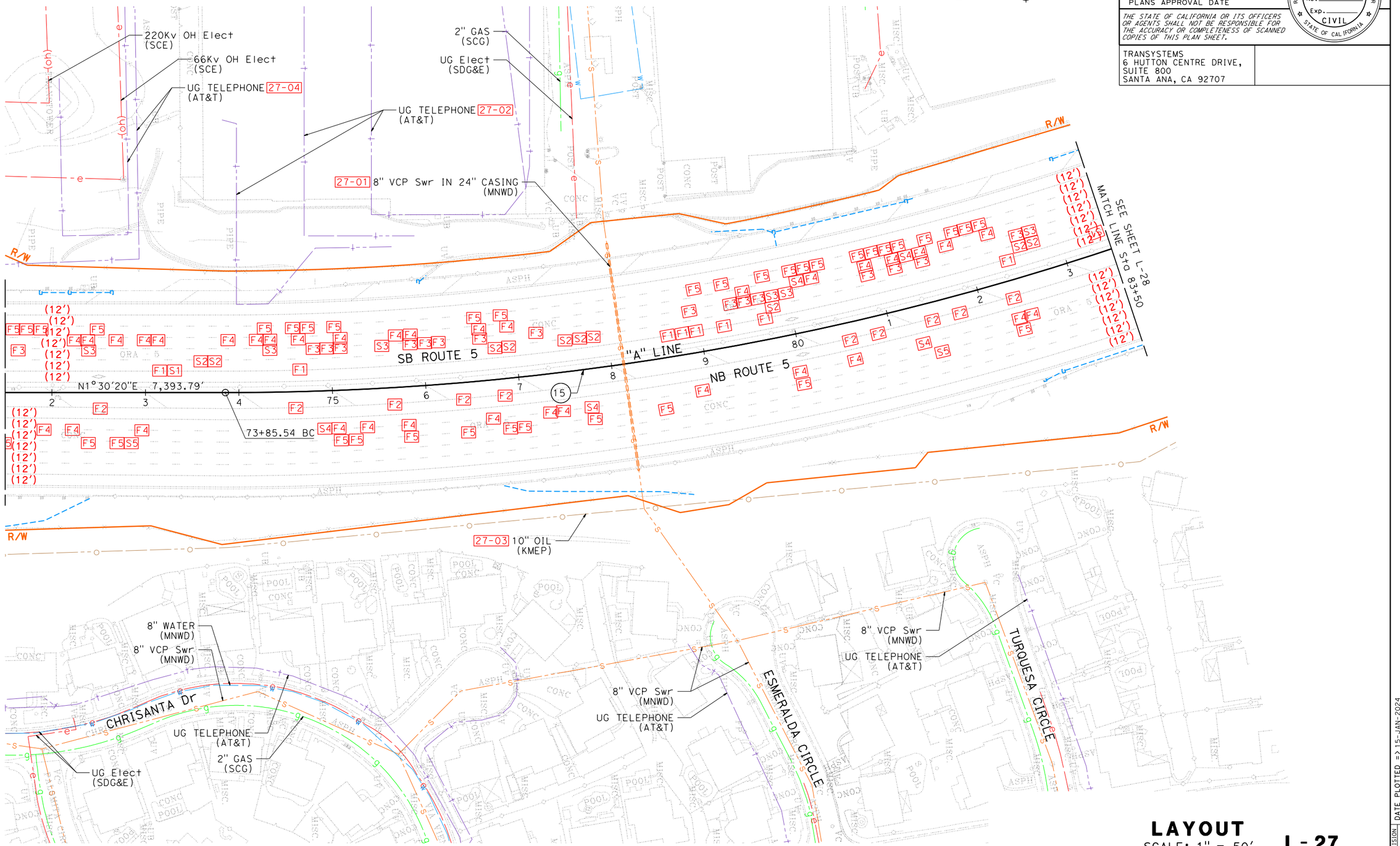
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

CURVE DATA

No. ⊕	R	Δ	T	L
15	3,000.00′	27°53′35"	745.01′	1,460.47′



LAYOUT
SCALE: 1" = 50′

L-27

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA
CALCULATED-DESIGNED BY: MICHAEL HULTGREN
CHECKED BY: SEPIDEH SARACHI
REVISED BY / DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 15-JAN-2024
TIME PLOTTED => 10:19

BORDER LAST REVISED 7/2/2010
USERNAME => mahultgren
DGN FILE => 1220000058ea027.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT xxxx
PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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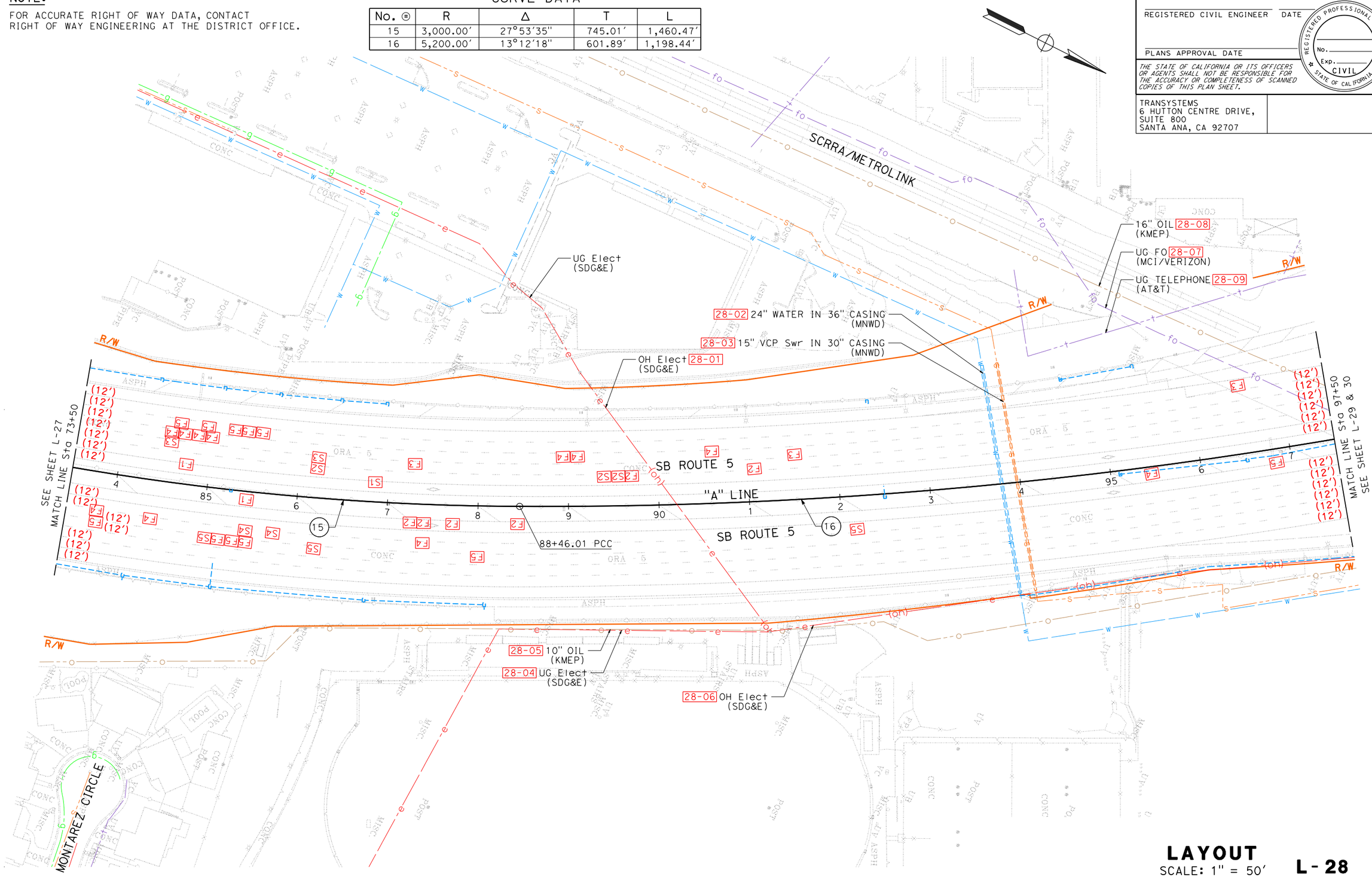
NOTE:

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

CURVE DATA

No. ⑮	R	Δ	T	L
15	3,000.00′	27°53′35"	745.01′	1,460.47′
16	5,200.00′	13°12′18"	601.89′	1,198.44′



LAYOUT

SCALE: 1" = 50′

L - 28

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA

CALCULATED-DESIGNED BY: MICHAEL HULTGREN

CHECKED BY: SEPIDEH SARACHI

REVISED BY | DATE REVISED

LAST REVISION 00-00-00

DATE PLOTTED => 15-JAN-2024
TIME PLOTTED => 10:19

BORDER LAST REVISED 7/2/2010

USERNAME => mahultgren
DGN FILE => 1220000058ea028.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT xxxx

PROJECT NUMBER & PHASE 12200000580

NOTE:

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

CURVE DATA

No. Ⓟ	R	Δ	T	L
16	5,200.00′	13°12′18"	601.89′	1,198.44′
17	3,000.00′	25°12′17"	670.71′	1,319.72′

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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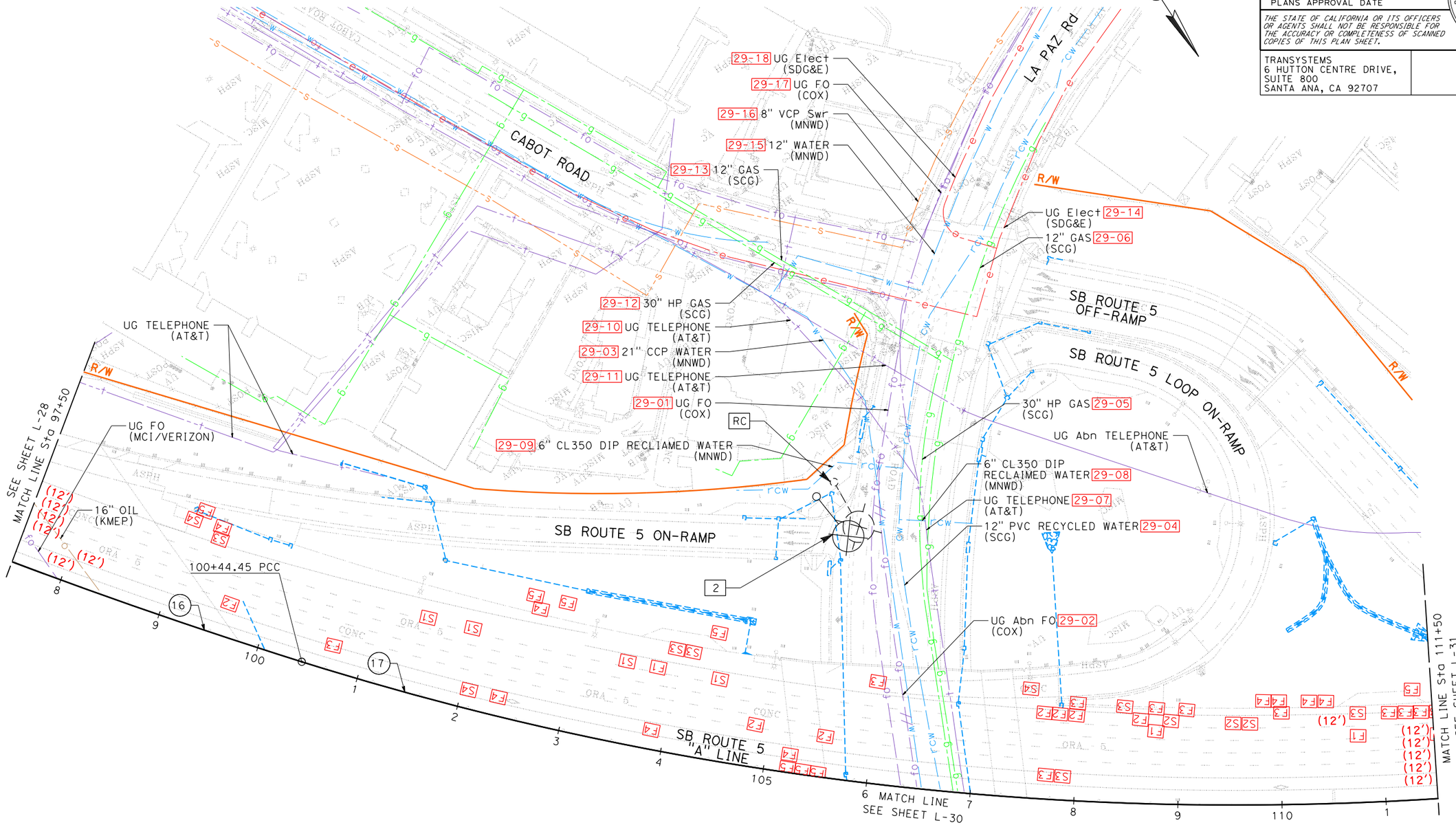

LAYOUT

SCALE: 1" = 50′ **L - 29**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans®

CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA

CALCULATED-DESIGNED BY: MICHAEL HULTGREN

CHECKED BY: SEPIDEH SARACHI

REVISED BY	DATE REVISED

LAST REVISION 00-00-00

DATE PLOTTED => 15-JAN-2024
TIME PLOTTED => 10:20

BORDER LAST REVISED 7/2/2010

USERNAME => mahultgren
DGN FILE => 1220000058ea029.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT xxxx

PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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NOTE:

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

CURVE DATA

No. Ⓗ	R	Δ	T	L
16	5,200.00′	13°12′18"	601.89′	1,198.44′
17	3,000.00′	25°12′17"	670.71′	1,319.72′

SEE SHEET L-28
MATCH LINE Sta 97+50

16

100+44.45 PCC

17

"A" LINE

SEE SHEET L-29
MATCH LINE

NB ROUTE 5

NB ROUTE 5 ON-RAMP

MATCH LINE Sta 111+50
SEE SHEET L-31

NB ROUTE 5 OFF-RAMP

NB ROUTE 5 LOOP ON-RAMP

SCRRA/METROLINK

R/W

30-16 10" OIL (KMEP)

UG Elect (SDG&E)

30-14 UG FO (MCI/VERIZON)

30-15 16" OIL (KMEP)

24" WATER (MNWD)

15" VCP Swr (MNWD)

30-11 8" PVC SDR-35 Swr (MNWD)

30-10 Abn Swr (MNWD)

30-02 Abn FO (COX)

30-01 UG FO (COX)

12" GAS 30-06 (SCG)

30" HP GAS 30-05 (SCG)

UG TELEPHONE 30-07 (AT&T)

12" PVC RECYCLED WATER 30-04 (MNWD)

21" CCP WATER 30-03 (MNWD)

10" ACP WATER 30-08 (ETWD)

UG TELEPHONE 30-13 (AT&T)

4" GAS 30-12 (SCG)

UG FO 30-09 (COX)

2

(12′) (12′) (12′) (12′) (12′) (12′)

LAYOUT

SCALE: 1" = 50′

L-30

REVISED BY	DATE REVISED
MICHAEL HULTGREN	SEPIDEH SARACHI
CALCULATED-DESIGNED BY	CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR	AYMAN SALAMA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:21

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea030.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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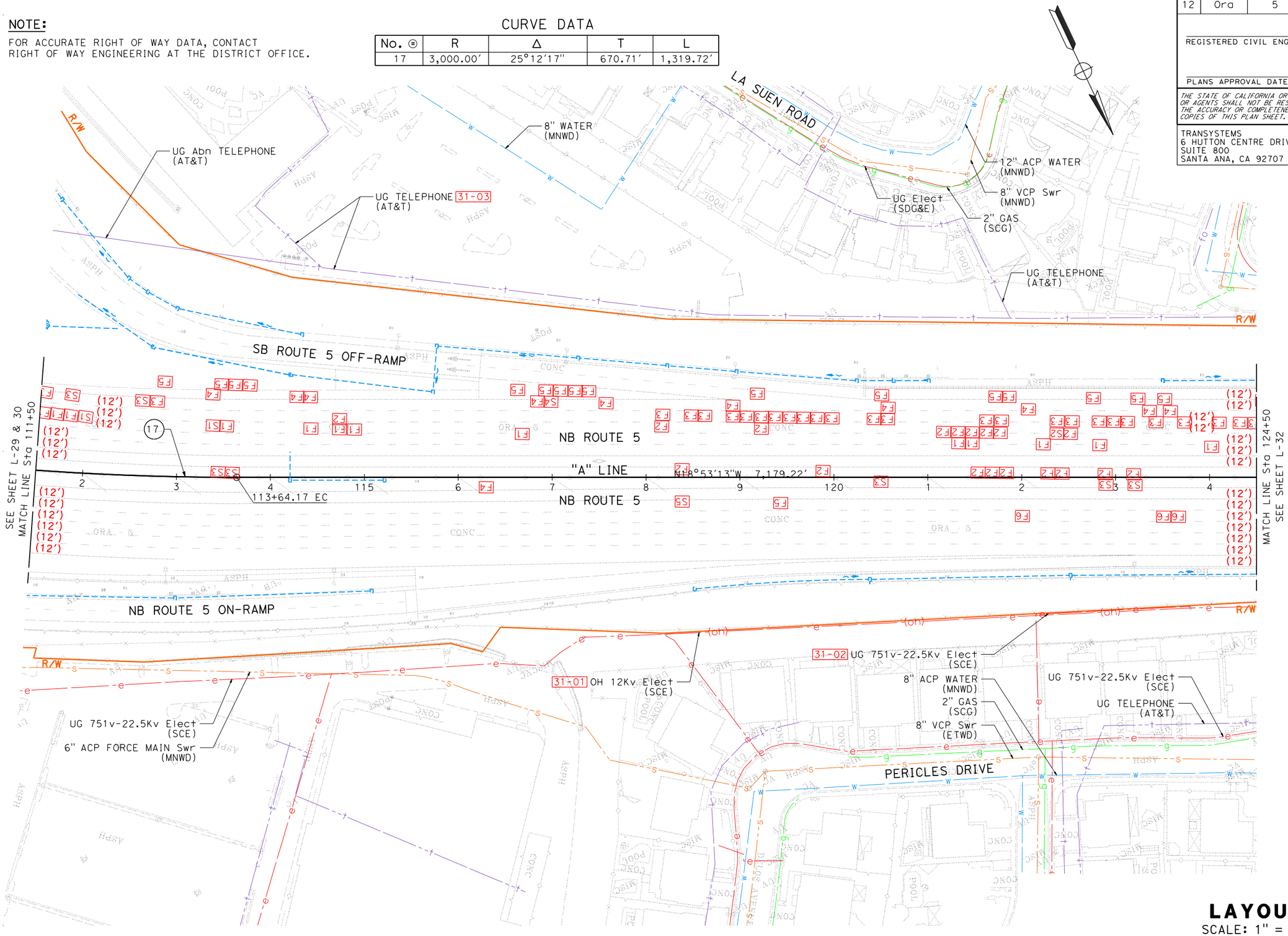
SUITE 800
SANTA ANA, CA 92707

NOTE:

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

CURVE DATA

No. Ⓗ	R	Δ	T	L
17	3,000.00′	25°12′17"	670.71′	1,319.72′



LAYOUT
SCALE: 1" = 50′

L-31

REVISED BY | DATE REVISED
MICHAEL HULTGREN | SEPIDEH SARACHI
CALCULATED-DESIGNED BY | CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR
AYMAN SALAMA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION | DATE PLOTTED => 15-JAN-2024
00-00-00 | TIME PLOTTED => 10:22

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea031.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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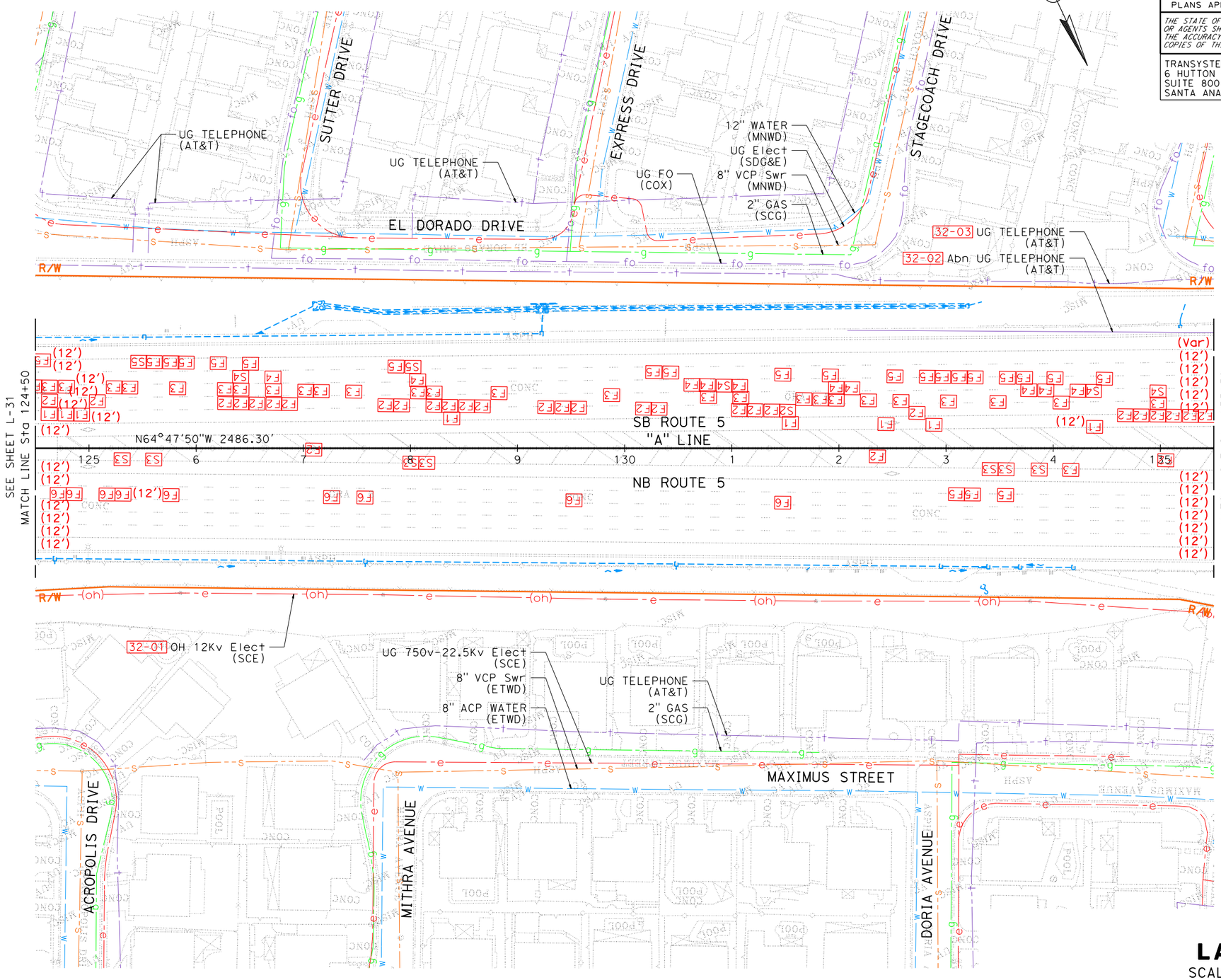
SUITE 800
SANTA ANA, CA 92707

NOTE:

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



LAYOUT

SCALE: 1" = 50'

L-32

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA

CALCULATED-DESIGNED BY: MICHAEL HULTGREN

CHECKED BY: SEPIDEH SARACHI

REVISED BY | DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:22

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea032.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

NOTE:

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

CURVE DATA

No. ⑱	R	Δ	T	L
18	5,000.00′	10°33′13"	461.79′	920.98′

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

PLANS APPROVAL DATE

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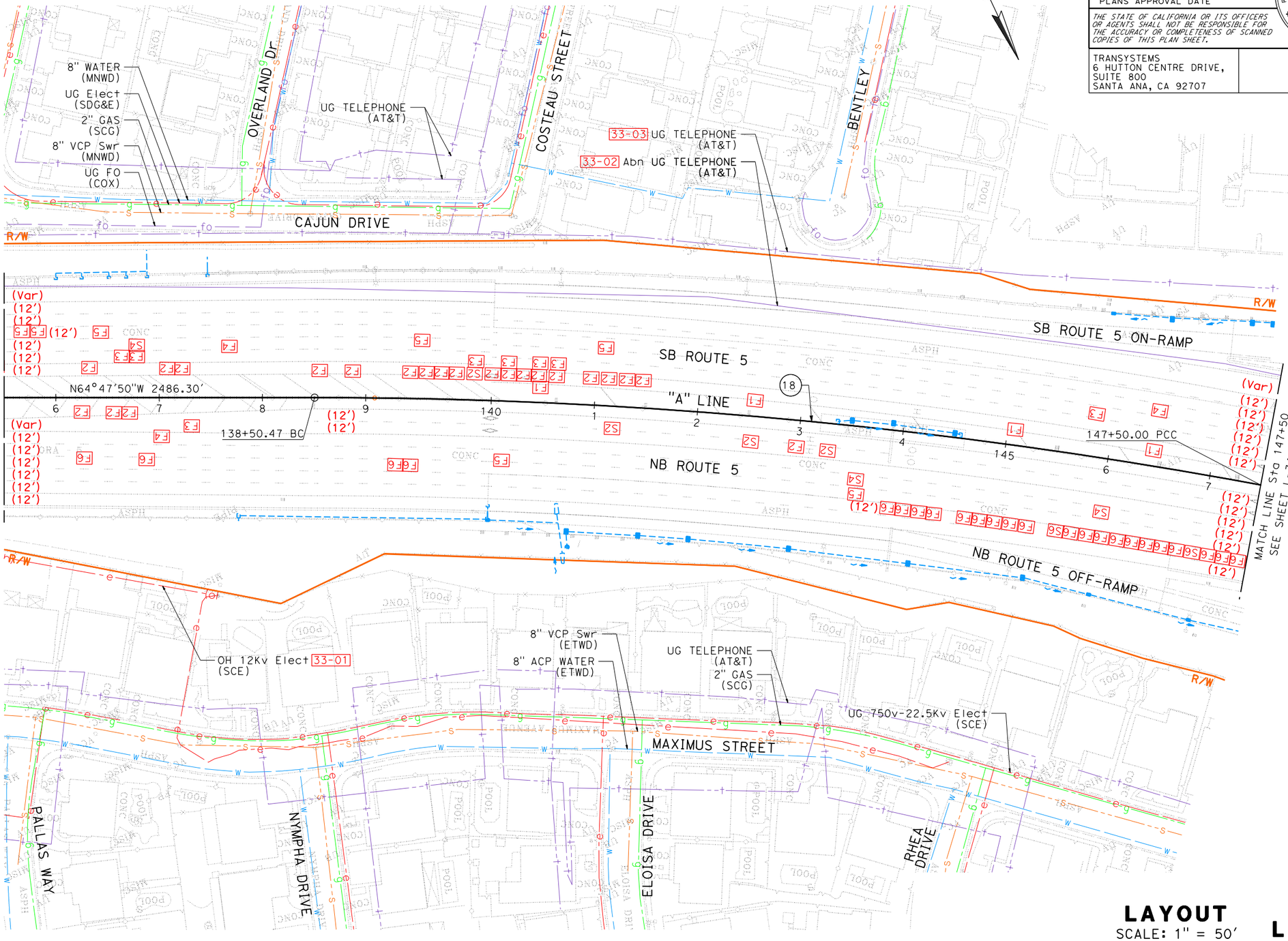
SUITE 800
SANTA ANA, CA 92707



LAYOUT

SCALE: 1" = 50′ **L-33**

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: MICHAEL HULTGREN
CHECKED BY: SEPIDEH SARACHI
CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION | DATE PLOTTED => 15-JAN-2024
00-00-00 | TIME PLOTTED => 10:23

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea033.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

NOTE:

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

CURVE DATA

No. ⑱	R	Δ	T	L
19	5,000.00′	4°06′35"	179.39′	358.63′
20	8,000.00′	3°49′13"	266.81′	533.42′

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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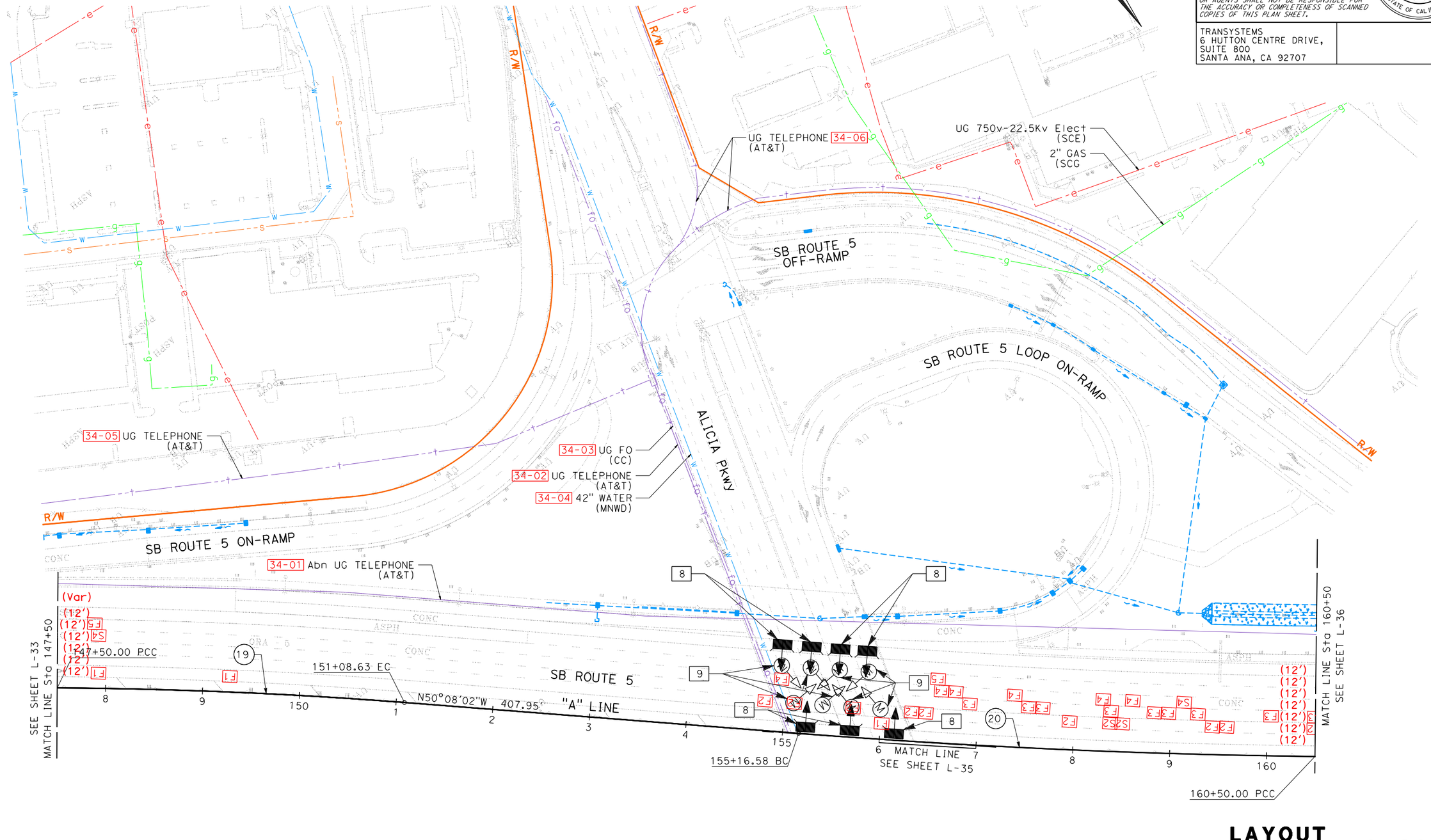
6 HUTTON CENTRE DRIVE,
SUITE 800
SANTA ANA, CA 92707



LAYOUT

SCALE: 1" = 50′

L-34

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans®

CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA

CALCULATED-DESIGNED BY: MICHAEL HULTGREN
CHECKED BY: SEPIDEH SARACHI

REVISED BY | DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:24

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea034.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

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.

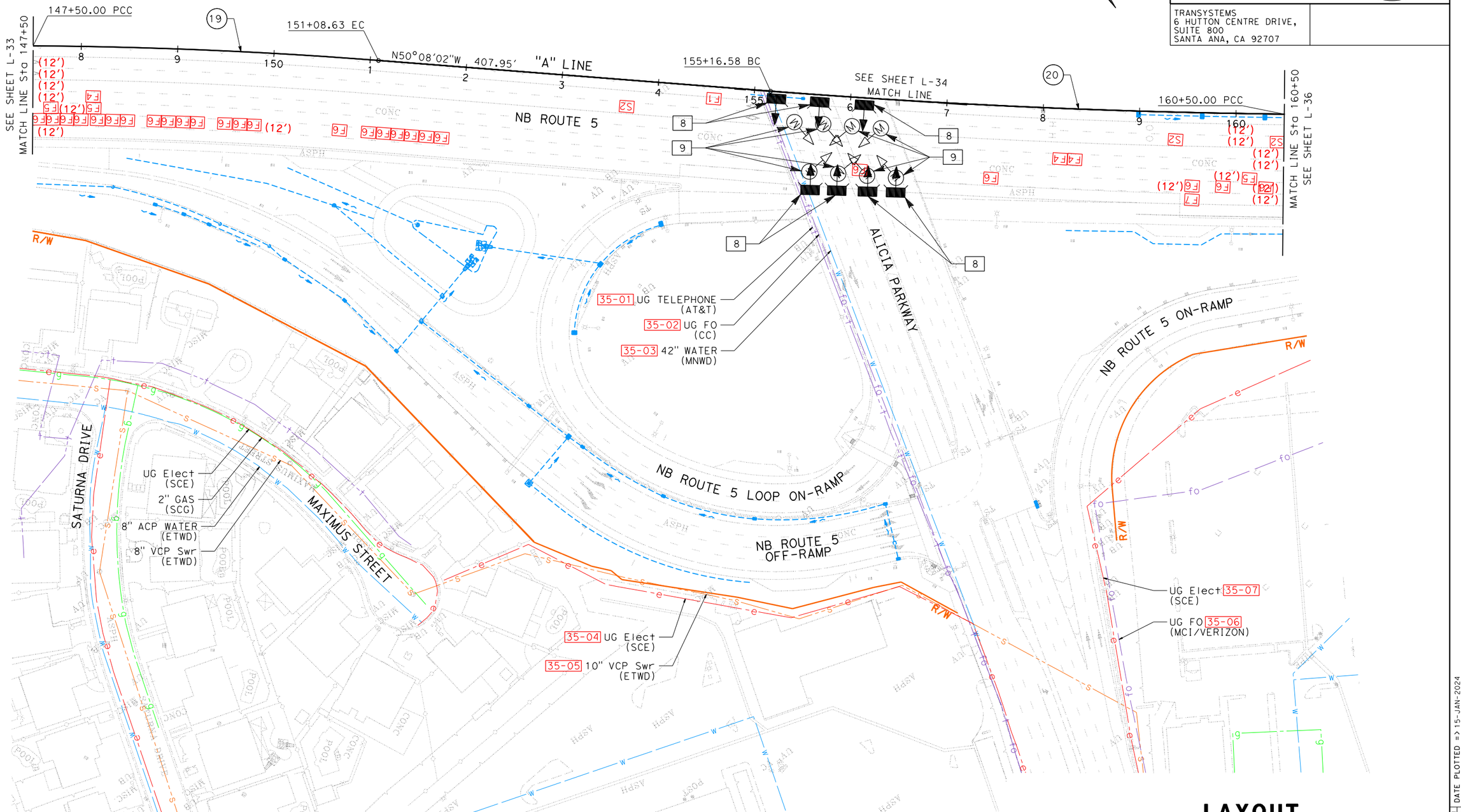
TRANSYSTEMS
6 HUTTON CENTRE DRIVE,
SUITE 800
SANTA ANA, CA 92707

NOTE:

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

CURVE DATA

No. ⊕	R	Δ	T	L
19	5,000.00′	4°06′35"	179.39′	358.63′
20	8,000.00′	3°49′13"	266.81′	533.42′



LAYOUT
SCALE: 1" = 50′

L - 35

REVISED BY	DATE REVISED
MICHAEL HULTGREN	SEPIDEH SARACHI
CALCULATED-DESIGNED BY	CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR	AYMAN SALAMA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:25

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea035.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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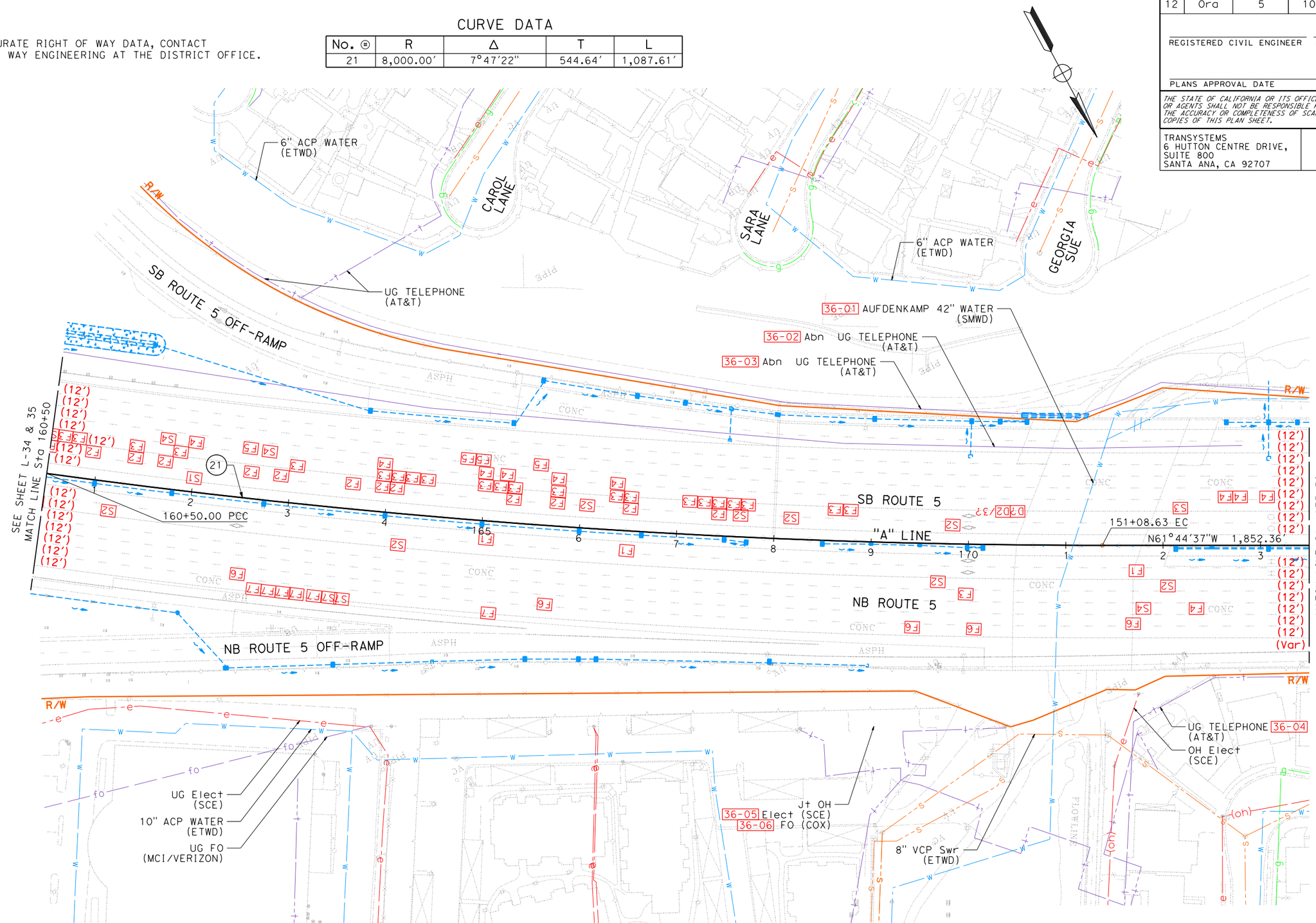
SUITE 800
SANTA ANA, CA 92707

NOTE:

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

CURVE DATA

No. ⊕	R	Δ	T	L
21	8,000.00′	7°47′22"	544.64′	1,087.61′



LAYOUT

SCALE: 1" = 50′

L - 36

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: MICHAEL HULTGREN
CHECKED BY: SEPIDEH SARACHI
CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION 00-00-00
DATE PLOTTED => 15-JAN-2024
TIME PLOTTED => 10:25

BORDER LAST REVISED 7/2/2010
USERNAME => mahultgren
DGN FILE => 1220000058ea036.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT xxxx
PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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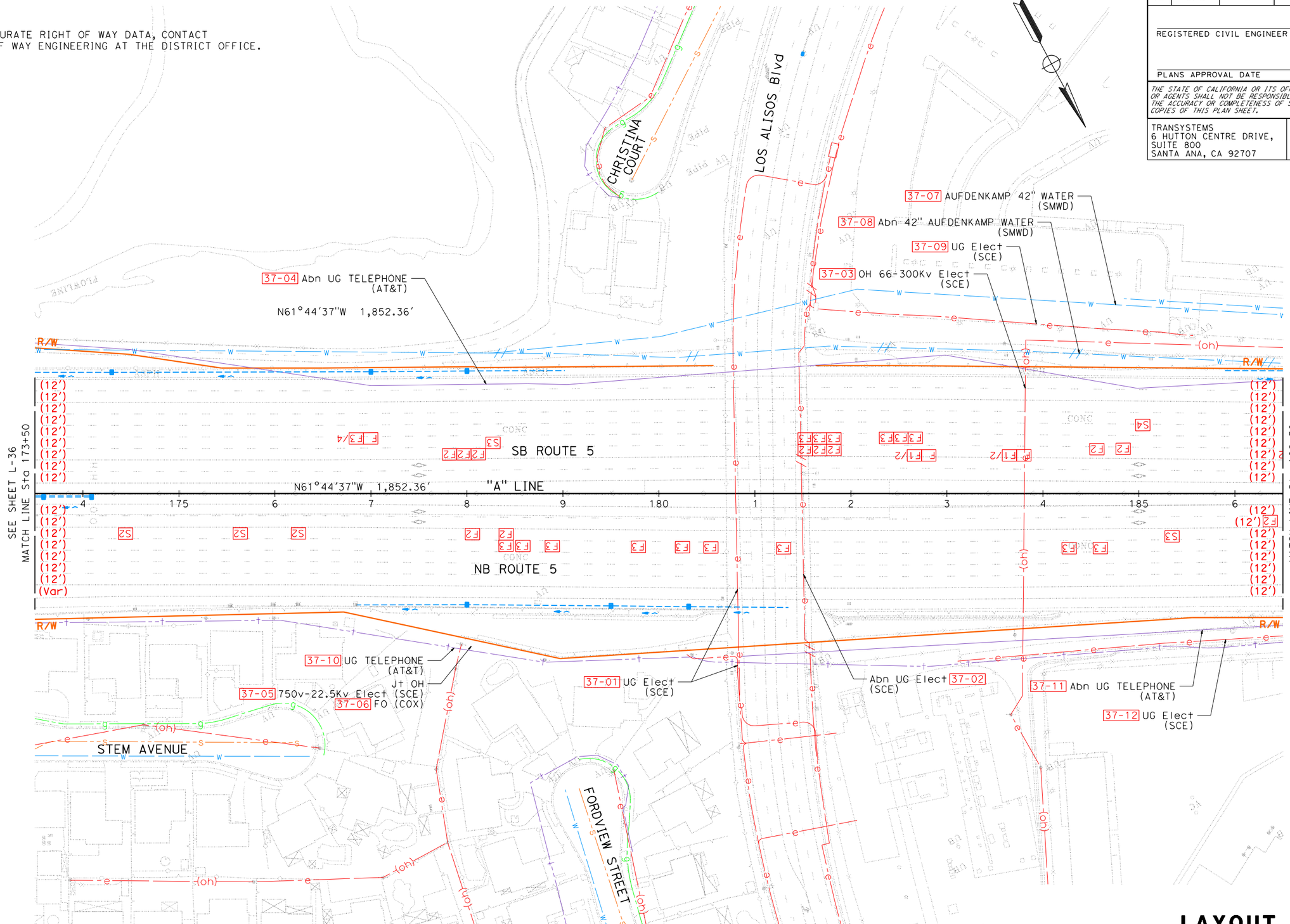
SUITE 800
SANTA ANA, CA 92707

NOTE:

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



LAYOUT
SCALE: 1" = 50'

L-37

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA
CALCULATED-DESIGNED BY: MICHAEL HULTGREN
CHECKED BY: SEPIDEH SARACHI
REVISED BY / DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 15-JAN-2024
TIME PLOTTED => 10:26

BORDER LAST REVISED 7/2/2010
USERNAME => mahultgren
DGN FILE => 1220000058ea037.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT xxxx
PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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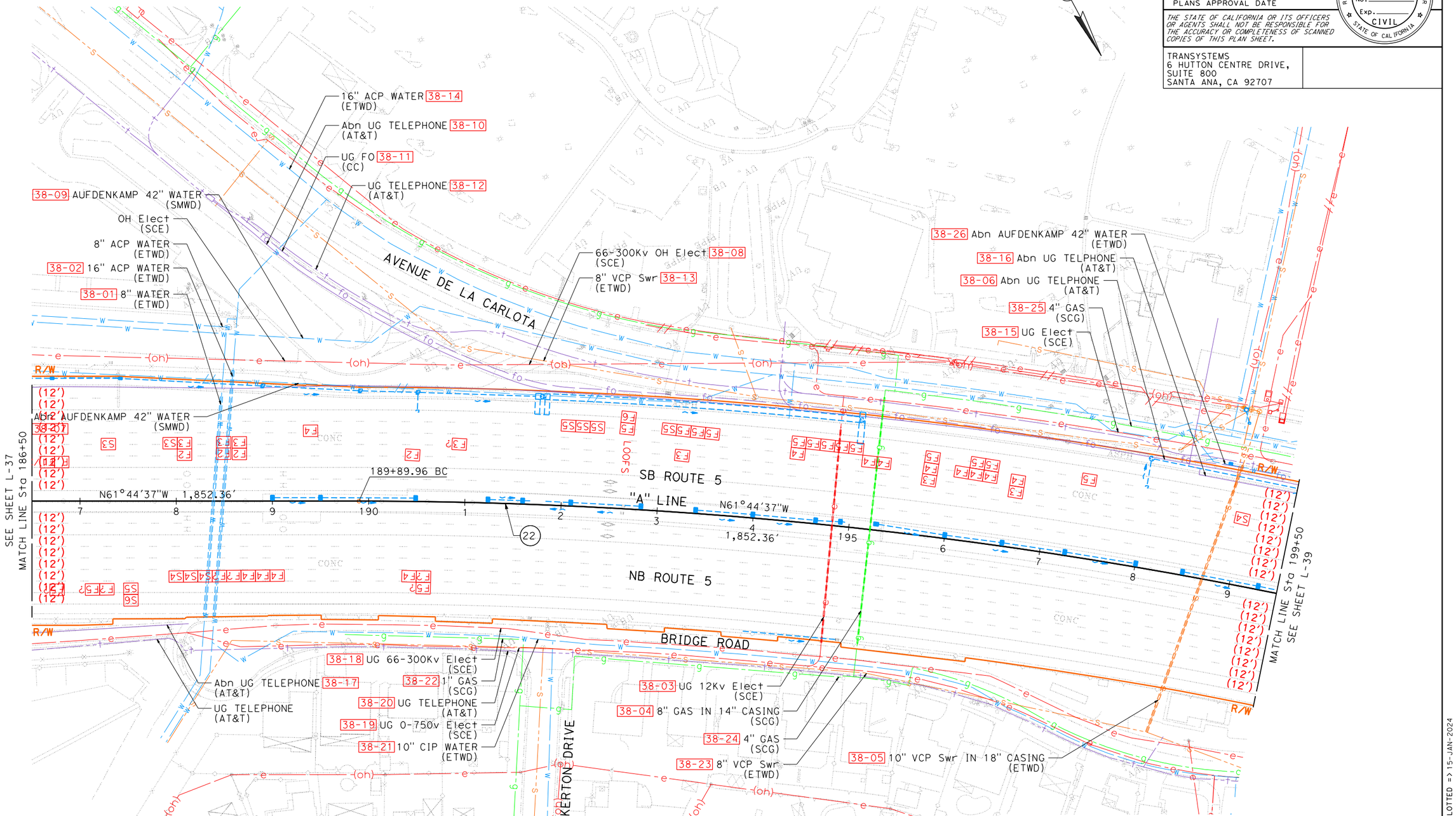
SUITE 800
SANTA ANA, CA 92707

NOTE:

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

CURVE DATA

No. ⑭	R	Δ	T	L
22	4,790.00′	18°14′29"	769.01′	1,525.00′



LAYOUT

SCALE: 1" = 50′

L-38

REVISED BY	DATE REVISED
MICHAEL HULTGREN	SEPIDEH SARACHI
CALCULATED-DESIGNED BY	CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR	AYMAN SALAMA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:27

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea038.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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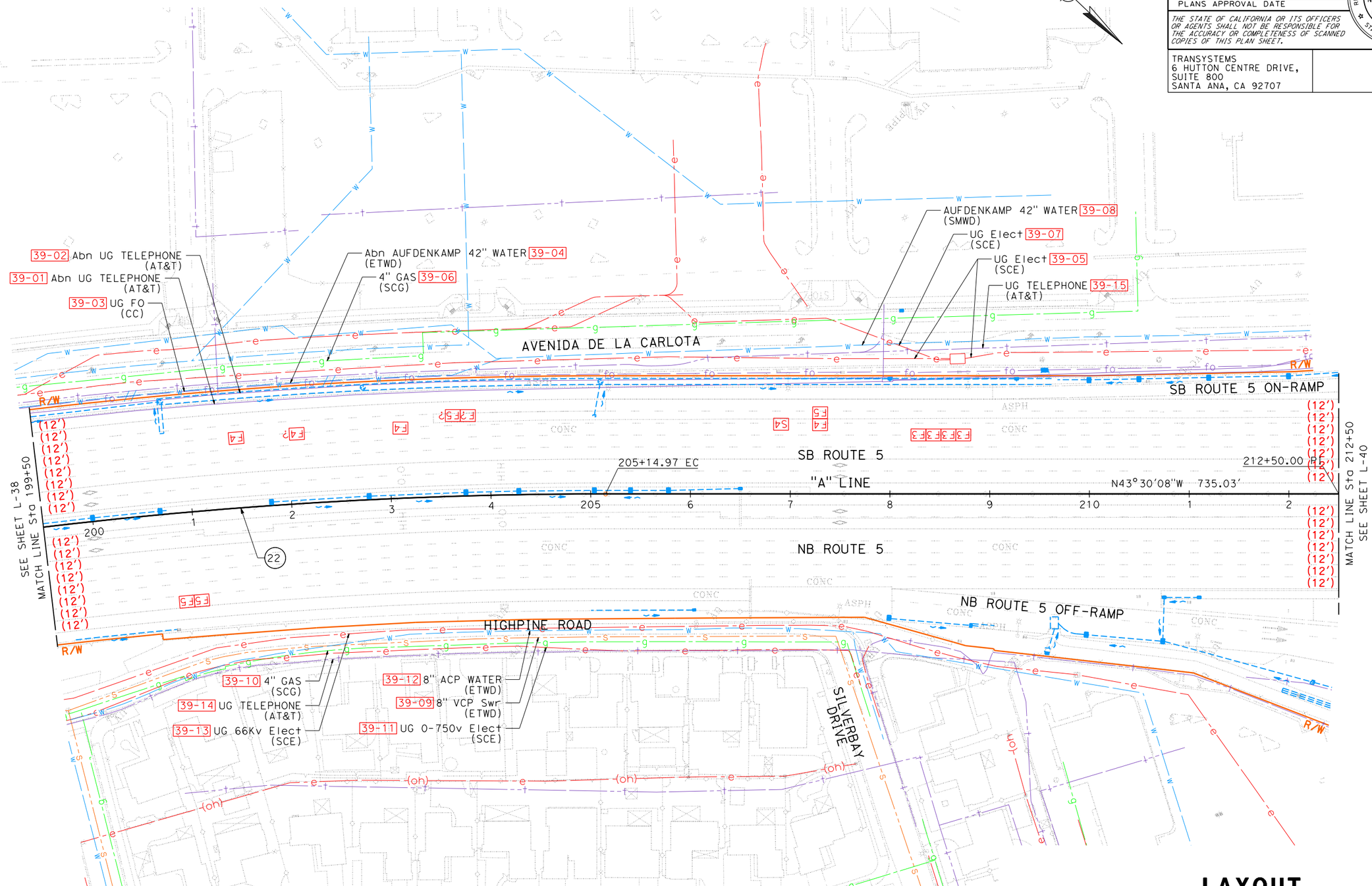
SUITE 800
SANTA ANA, CA 92707

NOTE:

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

CURVE DATA

No. ⊕	R	Δ	T	L
22	4,790.00′	18°14′29"	769.01′	1,525.00′



LAYOUT
SCALE: 1" = 50′ **L-39**

REVISED BY | DATE REVISED
MICHAEL HULTGREN | SEPIDEH SARACHI
CALCULATED-DESIGNED BY | CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:28

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea039.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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SANTA ANA, CA 92707

NOTE:

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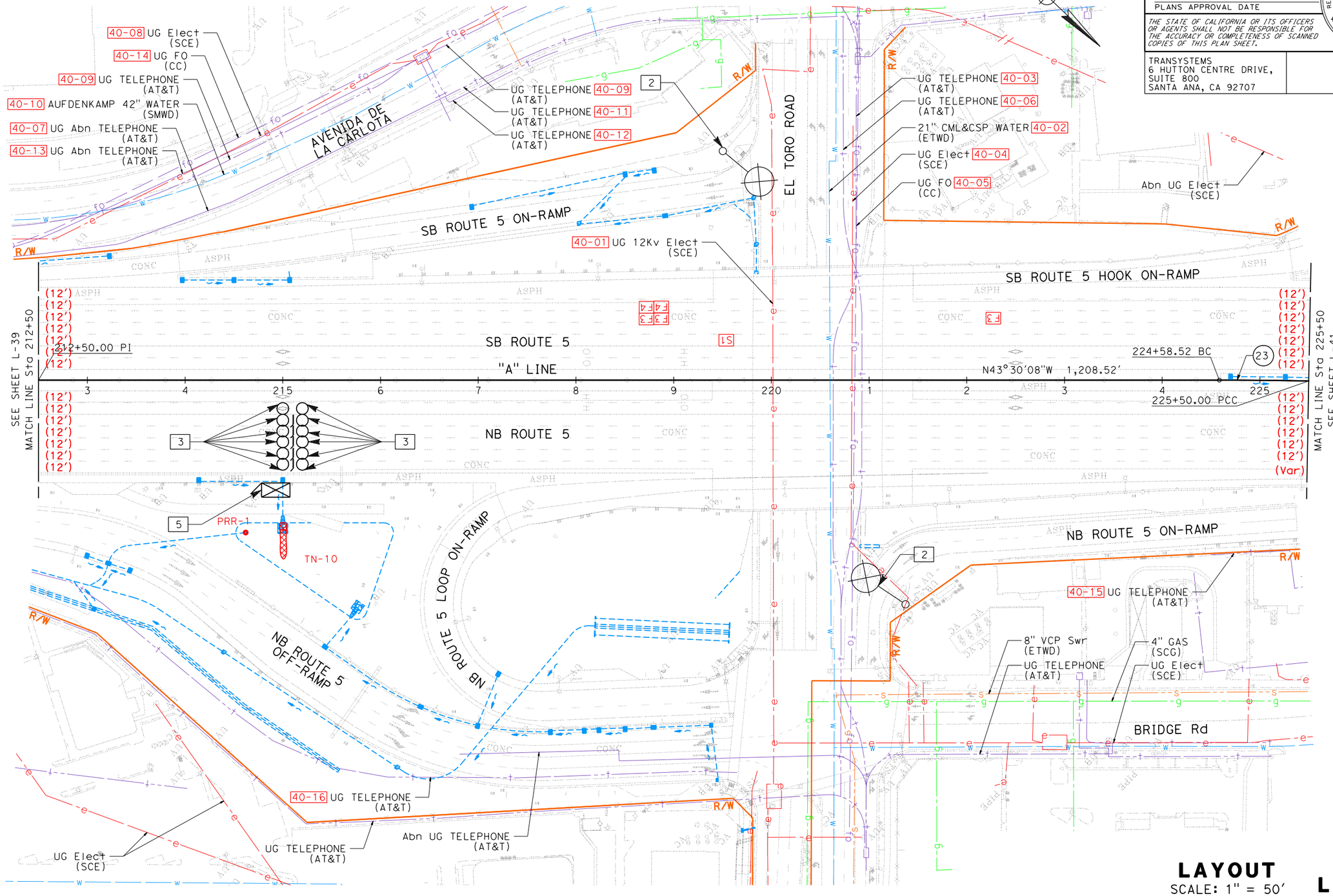
CURVE DATA

No.	R	Δ	T	L
23	5,000.00′	1°02′54"	45.74′	91.48′



LAYOUT
SCALE: 1" = 50′

L-40

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY
MICHAEL HULTGREN

CHECKED BY
SEPIDEH SARACHI

CONSULTANT FUNCTIONAL SUPERVISOR
AYMAN SALAMA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00
DATE PLOTTED => 15-JAN-2024
TIME PLOTTED => 10:29

BORDER LAST REVISED 7/2/2010
USERNAME => mahultgren
DGN FILE => 1220000058ea040.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT xxxx
PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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SUITE 800
SANTA ANA, CA 92707

NOTE:

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

CURVE DATA

No. ⊕	R	Δ	T	L
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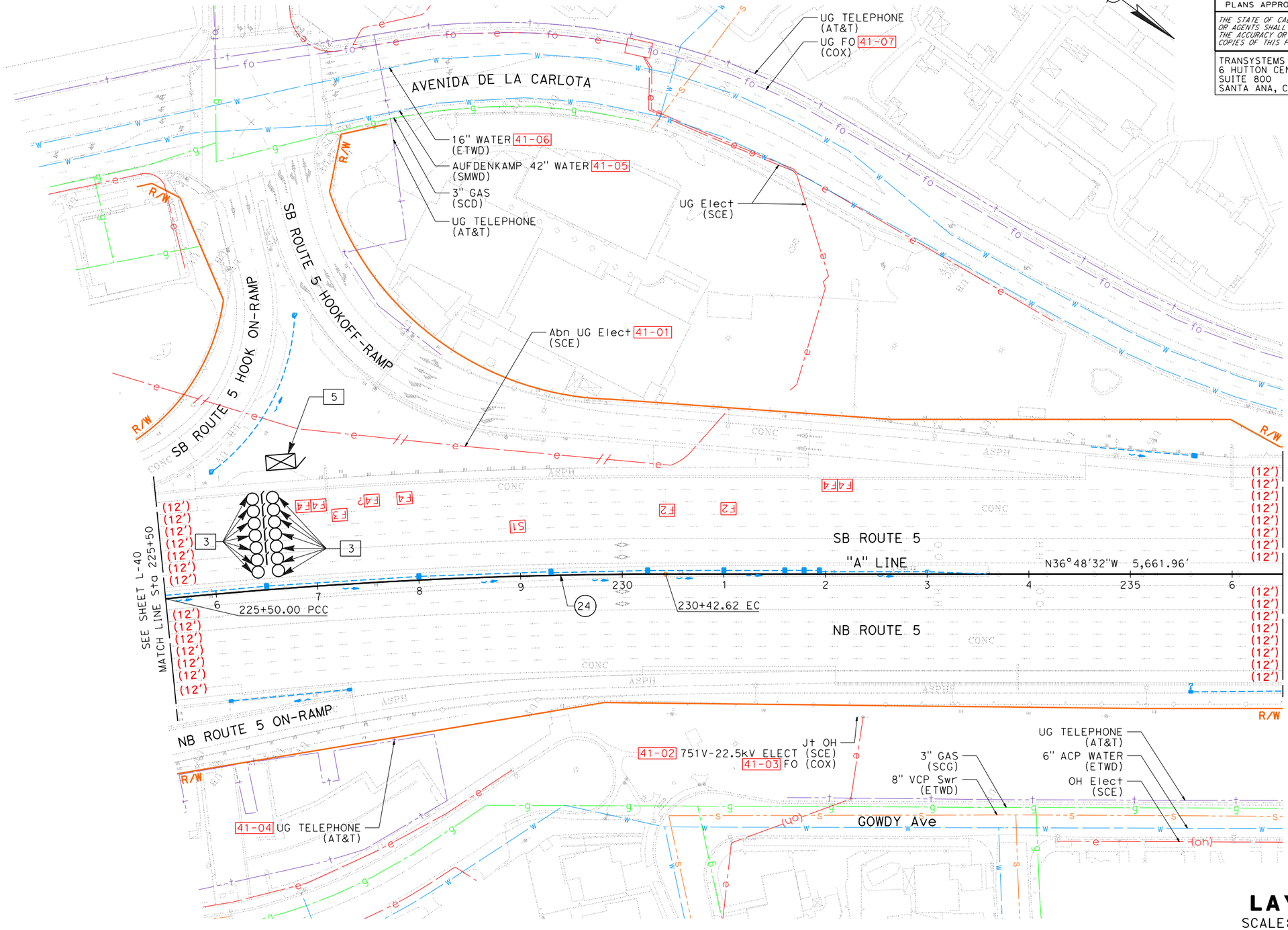

LAYOUT
SCALE: 1" = 50′

L-41

REVISED BY | DATE REVISED
MICHAEL HULTGREN | SEPIDEH SARACHI
CALCULATED-DESIGNED BY | CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR
AYMAN SALAMA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:30

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea041.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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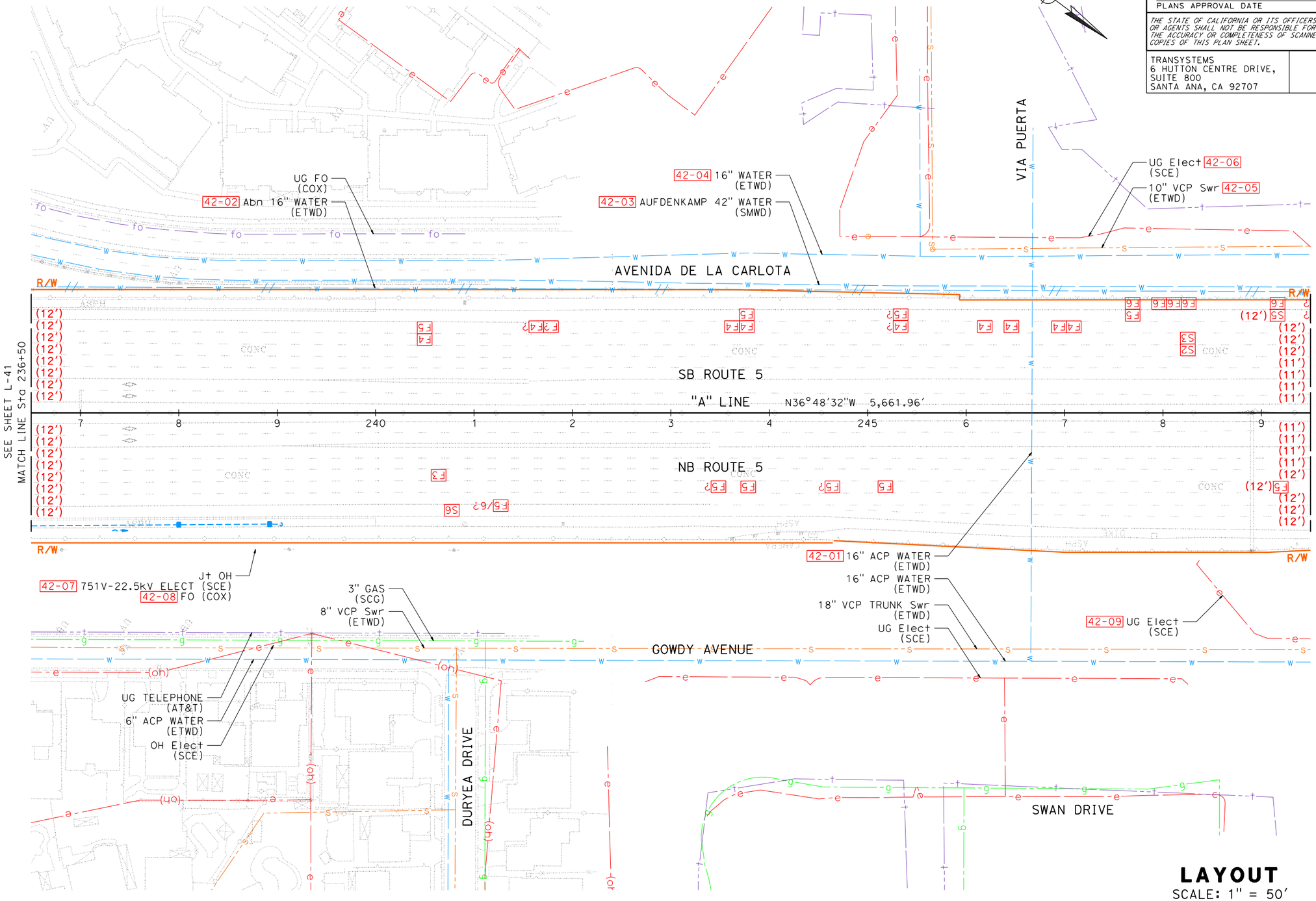
SUITE 800
SANTA ANA, CA 92707

NOTE:

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



LAYOUT

SCALE: 1" = 50'

L-42

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: MICHAEL HULTGREN
CHECKED BY: SEPIDEH SARACHI

CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00
DATE PLOTTED => 15-JAN-2024
TIME PLOTTED => 10:31

BORDER LAST REVISED 7/2/2010

USERNAME => mahultgren
DGN FILE => 1220000058ea042.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT xxxx

PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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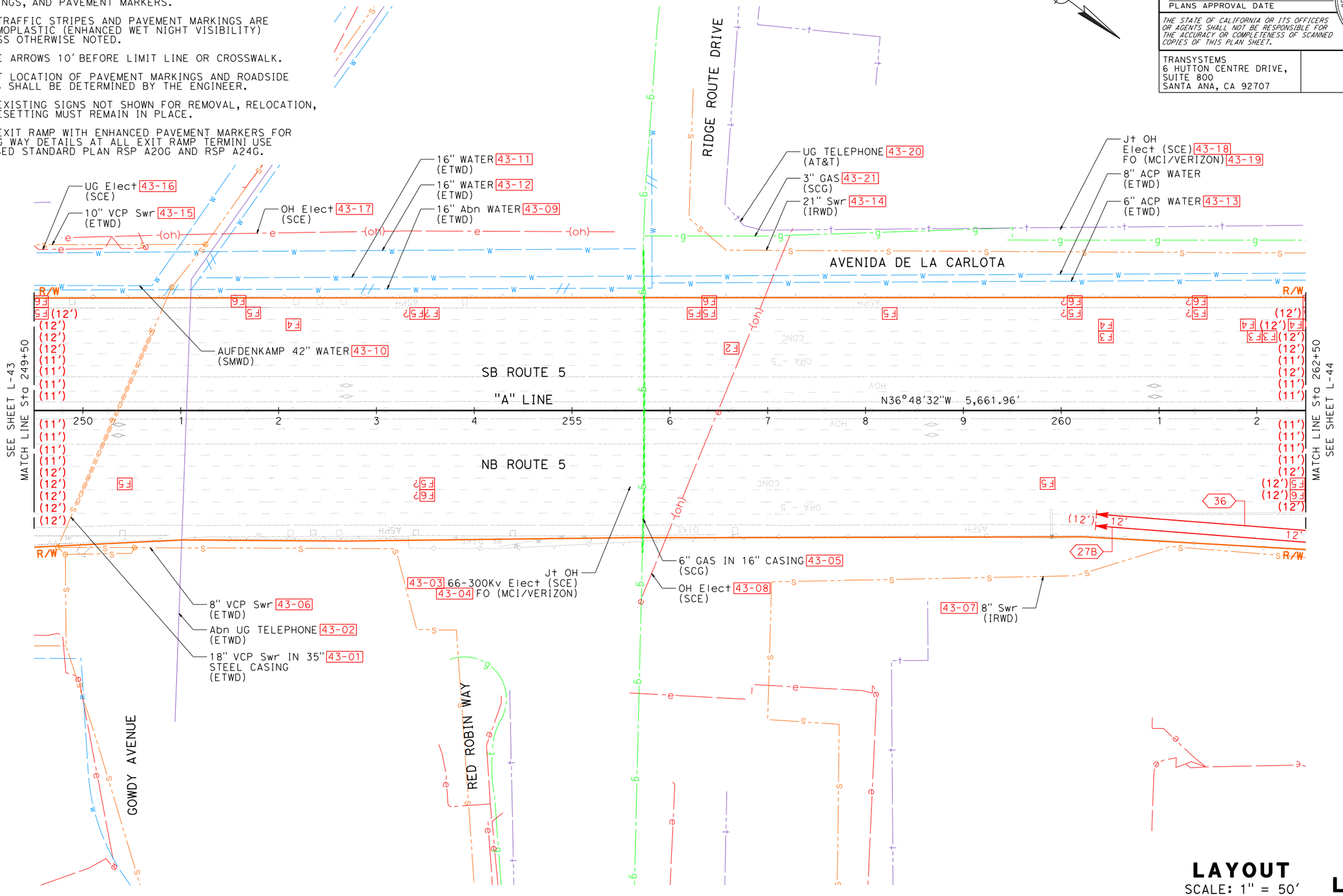
TRANSYSTEMS
6 HUTTON CENTRE DRIVE,
SUITE 800
SANTA ANA, CA 92707

NOTES:

FOR ACCURACY IN RIGHTWAY DATA CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

2. REMOVE ALL CONFLICTING TRAFFIC STRIPES, PAVEMENT MARKINGS, AND PAVEMENT MARKERS.
3. ALL TRAFFIC STRIPES AND PAVEMENT MARKINGS ARE THERMOPLASTIC (ENHANCED WET NIGHT VISIBILITY) UNLESS OTHERWISE NOTED.
4. PLACE ARROWS 10' BEFORE LIMIT LINE OR CROSSWALK.
5. EXACT LOCATION OF PAVEMENT MARKINGS AND ROADSIDE SIGNS SHALL BE DETERMINED BY THE ENGINEER.
6. ALL EXISTING SIGNS NOT SHOWN FOR REMOVAL, RELOCATION, OR RESETTING MUST REMAIN IN PLACE.
7. FOR EXIT RAMP WITH ENHANCED PAVEMENT MARKERS FOR WRONG WAY DETAILS AT ALL EXIT RAMP TERMINI USE REVISED STANDARD PLAN RSP A20G AND RSP A24G.



LAYOUT

SCALE: 1" = 50'

L-43

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA

CALCULATED-DESIGNED BY: MICHAEL HULTGREN

CHECKED BY: SEPIDEH SARACHI

REVISED BY | DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:32

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea043.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

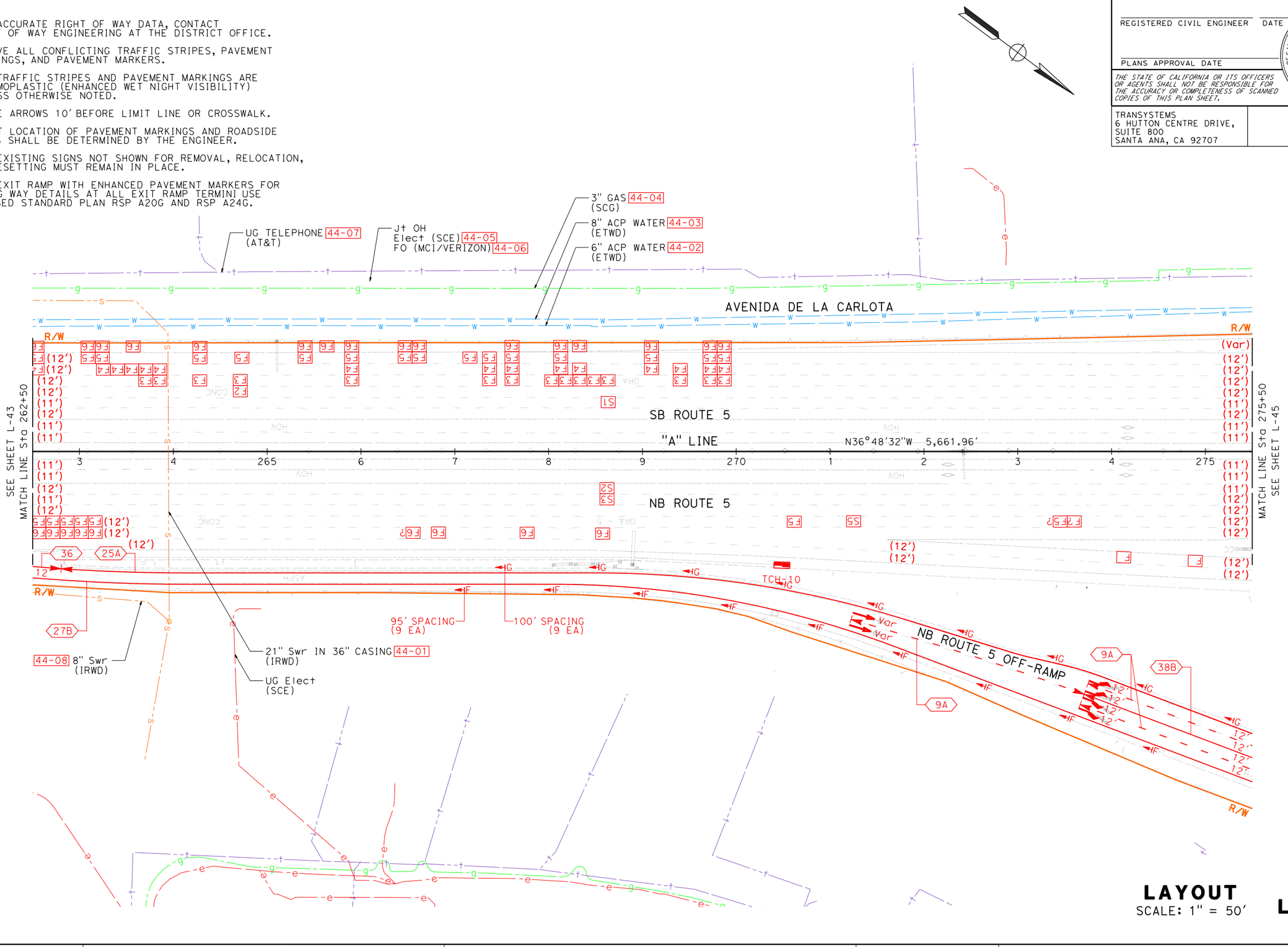
REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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.

TRANSYSTEMS
6 HUTTON CENTRE DRIVE,
SUITE 800
SANTA ANA, CA 92707

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. REMOVE ALL CONFLICTING TRAFFIC STRIPES, PAVEMENT MARKINGS, AND PAVEMENT MARKERS.
3. ALL TRAFFIC STRIPES AND PAVEMENT MARKINGS ARE THERMOPLASTIC (ENHANCED WET NIGHT VISIBILITY) UNLESS OTHERWISE NOTED.
4. PLACE ARROWS 10′ BEFORE LIMIT LINE OR CROSSWALK.
5. EXACT LOCATION OF PAVEMENT MARKINGS AND ROADSIDE SIGNS SHALL BE DETERMINED BY THE ENGINEER.
6. ALL EXISTING SIGNS NOT SHOWN FOR REMOVAL, RELOCATION, OR RESETTING MUST REMAIN IN PLACE.
7. FOR EXIT RAMP WITH ENHANCED PAVEMENT MARKERS FOR WRONG WAY DETAILS AT ALL EXIT RAMP TERMINI USE REVISED STANDARD PLAN RSP A20G AND RSP A24G.



LAYOUT

SCALE: 1" = 50′

L-44

LAST REVISION: DATE PLOTTED => 15-JAN-2024
00-00-00 TIME PLOTTED => 10:33

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA
CALCULATED-DESIGNED BY: SEPIDEH SARACHI
CHECKED BY: MICHAEL HULTGREN
REVISED BY / DATE REVISED

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea044.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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TRANSYSTEMS
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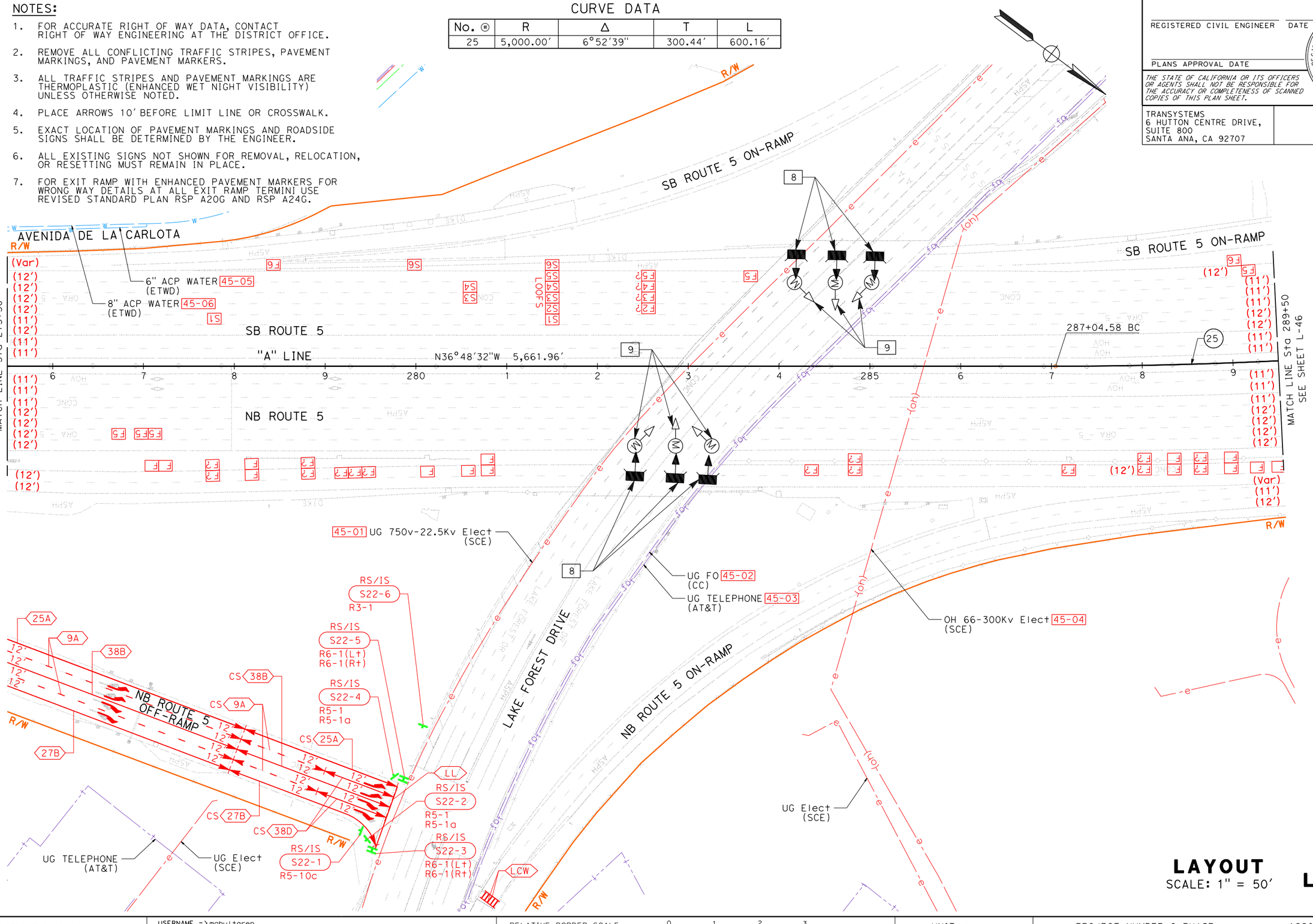
SUITE 800
SANTA ANA, CA 92707

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. REMOVE ALL CONFLICTING TRAFFIC STRIPES, PAVEMENT MARKINGS, AND PAVEMENT MARKERS.
3. ALL TRAFFIC STRIPES AND PAVEMENT MARKINGS ARE THERMOPLASTIC (ENHANCED WET NIGHT VISIBILITY) UNLESS OTHERWISE NOTED.
4. PLACE ARROWS 10′ BEFORE LIMIT LINE OR CROSSWALK.
5. EXACT LOCATION OF PAVEMENT MARKINGS AND ROADSIDE SIGNS SHALL BE DETERMINED BY THE ENGINEER.
6. ALL EXISTING SIGNS NOT SHOWN FOR REMOVAL, RELOCATION, OR RESETTING MUST REMAIN IN PLACE.
7. FOR EXIT RAMP WITH ENHANCED PAVEMENT MARKERS FOR WRONG WAY DETAILS AT ALL EXIT RAMP TERMINI USE REVISED STANDARD PLAN RSP A20G AND RSP A24G.

CURVE DATA

No. ⊕	R	Δ	T	L
25	5,000.00′	6°52′39"	300.44′	600.16′



LAYOUT

SCALE: 1" = 50′

L-45

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: MICHAEL HULTGREN
CHECKED BY: SEPIDEH SARACHI
CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00
DATE PLOTTED => 15-JAN-2024
TIME PLOTTED => 10:34

BORDER LAST REVISED 7/2/2010
USERNAME => mahultgren
DGN FILE => 1220000058ea045.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT xxxx
PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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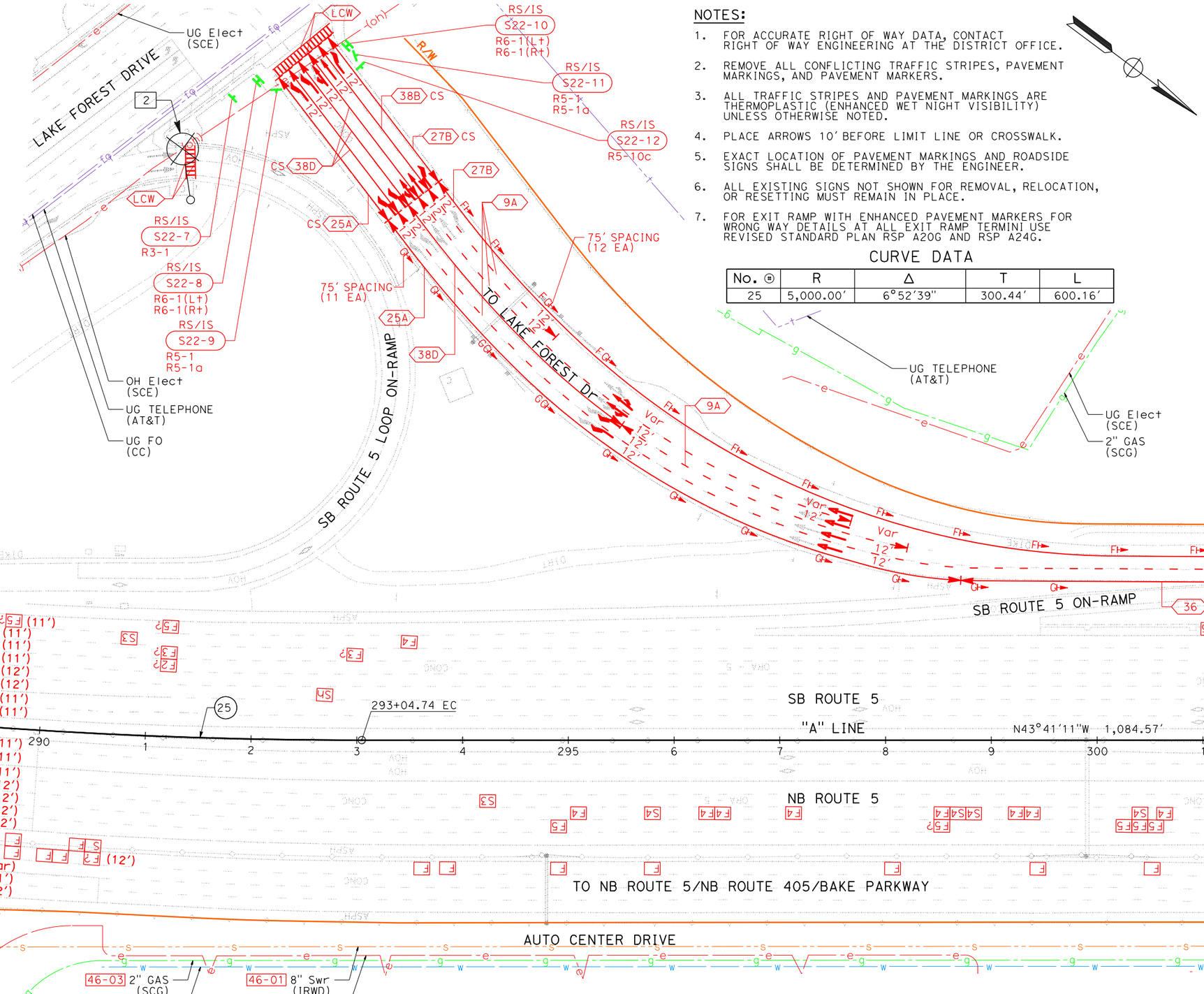
SUITE 800
SANTA ANA, CA 92707

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. REMOVE ALL CONFLICTING TRAFFIC STRIPES, PAVEMENT MARKINGS, AND PAVEMENT MARKERS.
3. ALL TRAFFIC STRIPES AND PAVEMENT MARKINGS ARE THERMOPLASTIC (ENHANCED WET NIGHT VISIBILITY) UNLESS OTHERWISE NOTED.
4. PLACE ARROWS 10' BEFORE LIMIT LINE OR CROSSWALK.
5. EXACT LOCATION OF PAVEMENT MARKINGS AND ROADSIDE SIGNS SHALL BE DETERMINED BY THE ENGINEER.
6. ALL EXISTING SIGNS NOT SHOWN FOR REMOVAL, RELOCATION, OR RESETTING MUST REMAIN IN PLACE.
7. FOR EXIT RAMP WITH ENHANCED PAVEMENT MARKERS FOR WRONG WAY DETAILS AT ALL EXIT RAMP TERMINI USE REVISED STANDARD PLAN RSP A20G AND RSP A24G.

CURVE DATA

No. ⓔ	R	Δ	T	L
25	5,000.00'	6°52'39"	300.44'	600.16'



LAYOUT

SCALE: 1" = 50'

L - 46

REVISED BY | DATE REVISED

MICHAEL HULTGREN | SEPIDEH SARACHI

CALCULATED-DESIGNED BY | CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:35

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea046.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

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.

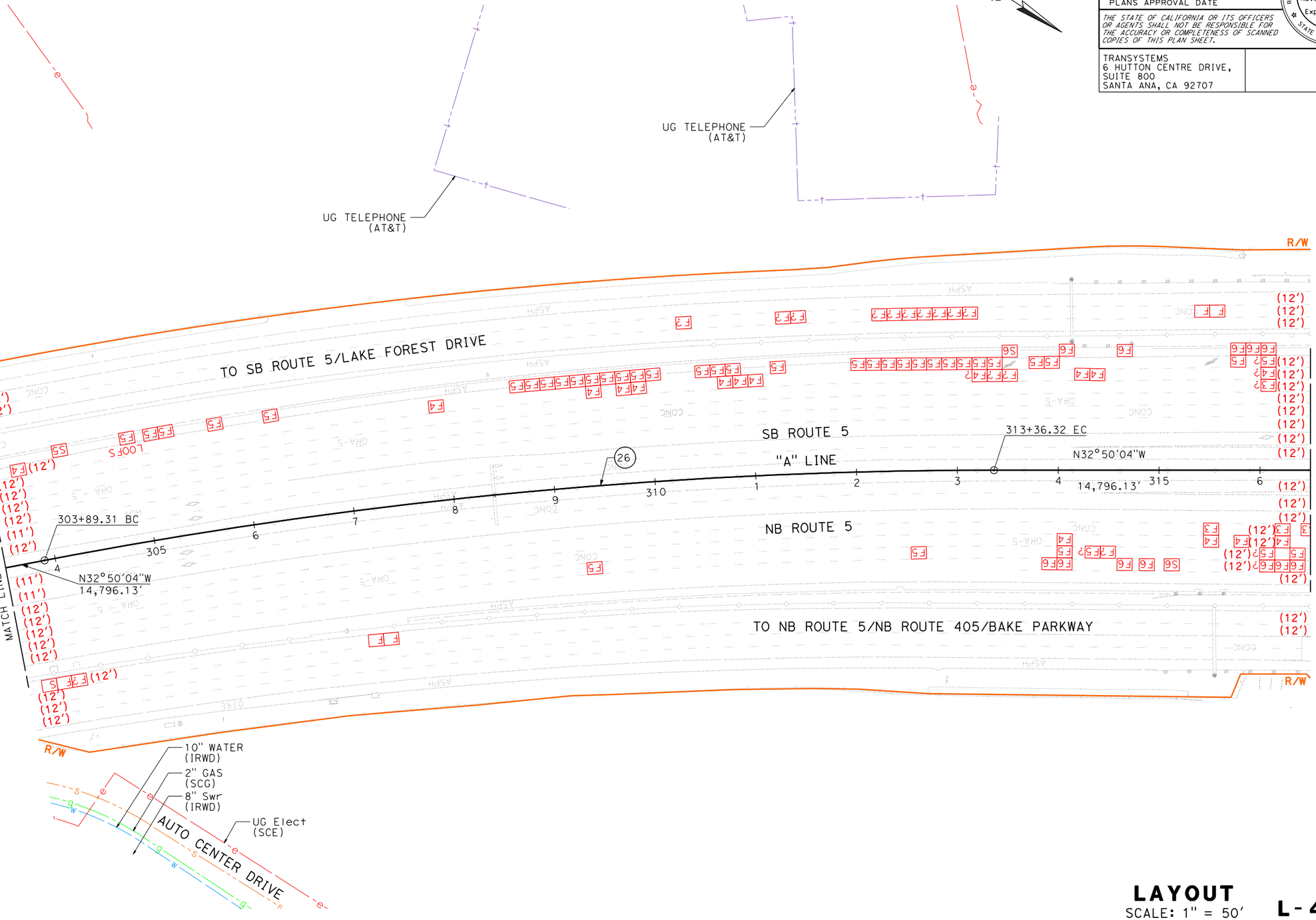
TRANSYSTEMS
6 HUTTON CENTRE DRIVE,
SUITE 800
SANTA ANA, CA 92707

NOTE:

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

CURVE DATA

No. ⊕	R	Δ	T	L
26	5,000.00′	10°51′07"	474.93′	947.01′



LAYOUT

SCALE: 1" = 50′ **L-47**

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: MICHAEL HULTGREN
CHECKED BY: SEPIDEH SARACHI
CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION 00-00-00
DATE PLOTTED => 15-JAN-2024
TIME PLOTTED => 10:36

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea047.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

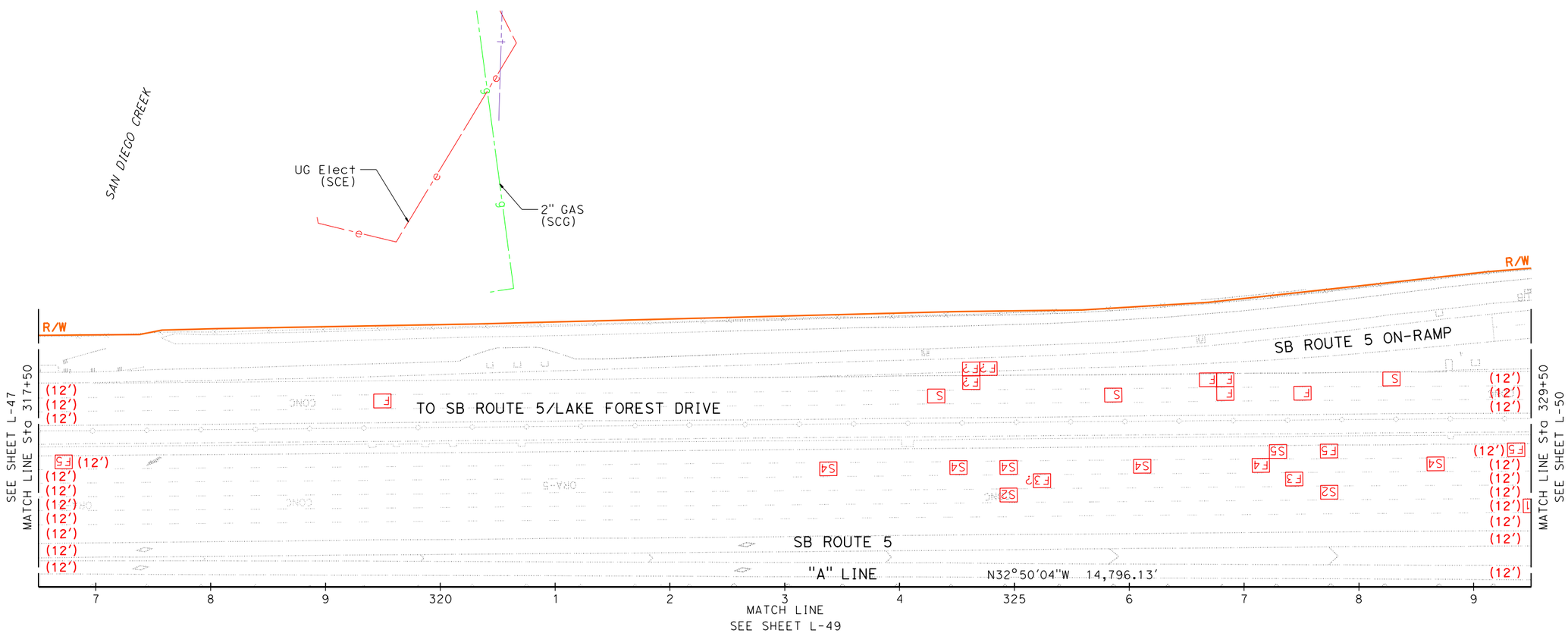
REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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.

TRANSYSTEMS
6 HUTTON CENTRE DRIVE,
SUITE 800
SANTA ANA, CA 92707

NOTE:

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



LAYOUT
SCALE: 1" = 50'

L-48

CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
MICHAEL HULTGREN	SEPIDEH SARACHI		

CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:37

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea048.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

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.

TRANSYSTEMS
6 HUTTON CENTRE DRIVE,
SUITE 800
SANTA ANA, CA 92707

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. REMOVE ALL CONFLICTING TRAFFIC STRIPES, PAVEMENT MARKINGS, AND PAVEMENT MARKERS.
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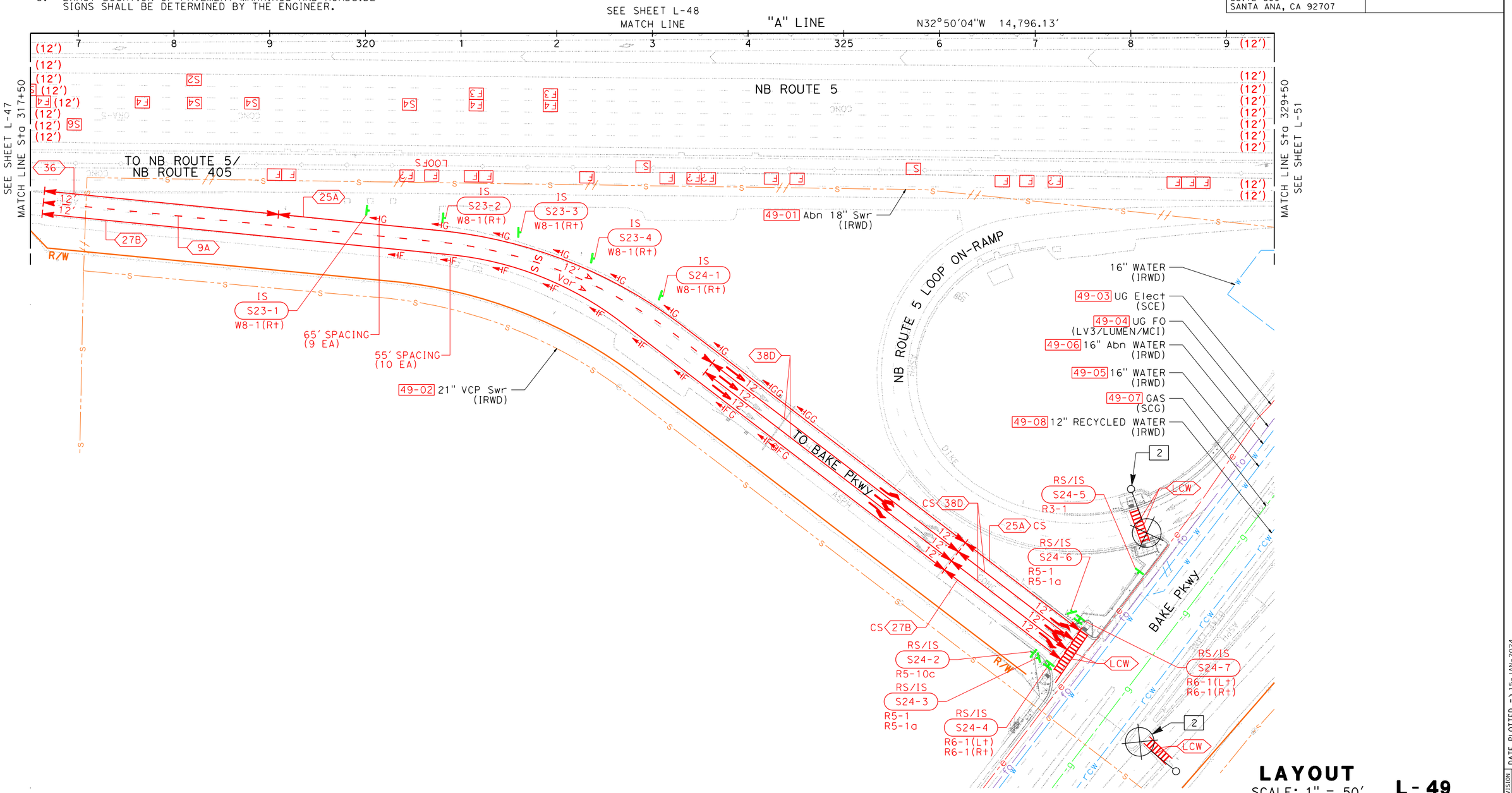

LAYOUT

SCALE: 1" = 50'

L-49

REVISED BY	DATE REVISED
MICHAEL HULTGREN	SEPIDEH SARACHI
CALCULATED-DESIGNED BY	CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR	AYMAN SALAMA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:38

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea049.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. REMOVE ALL CONFLICTING TRAFFIC STRIPES, PAVEMENT MARKINGS, AND PAVEMENT MARKERS.
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

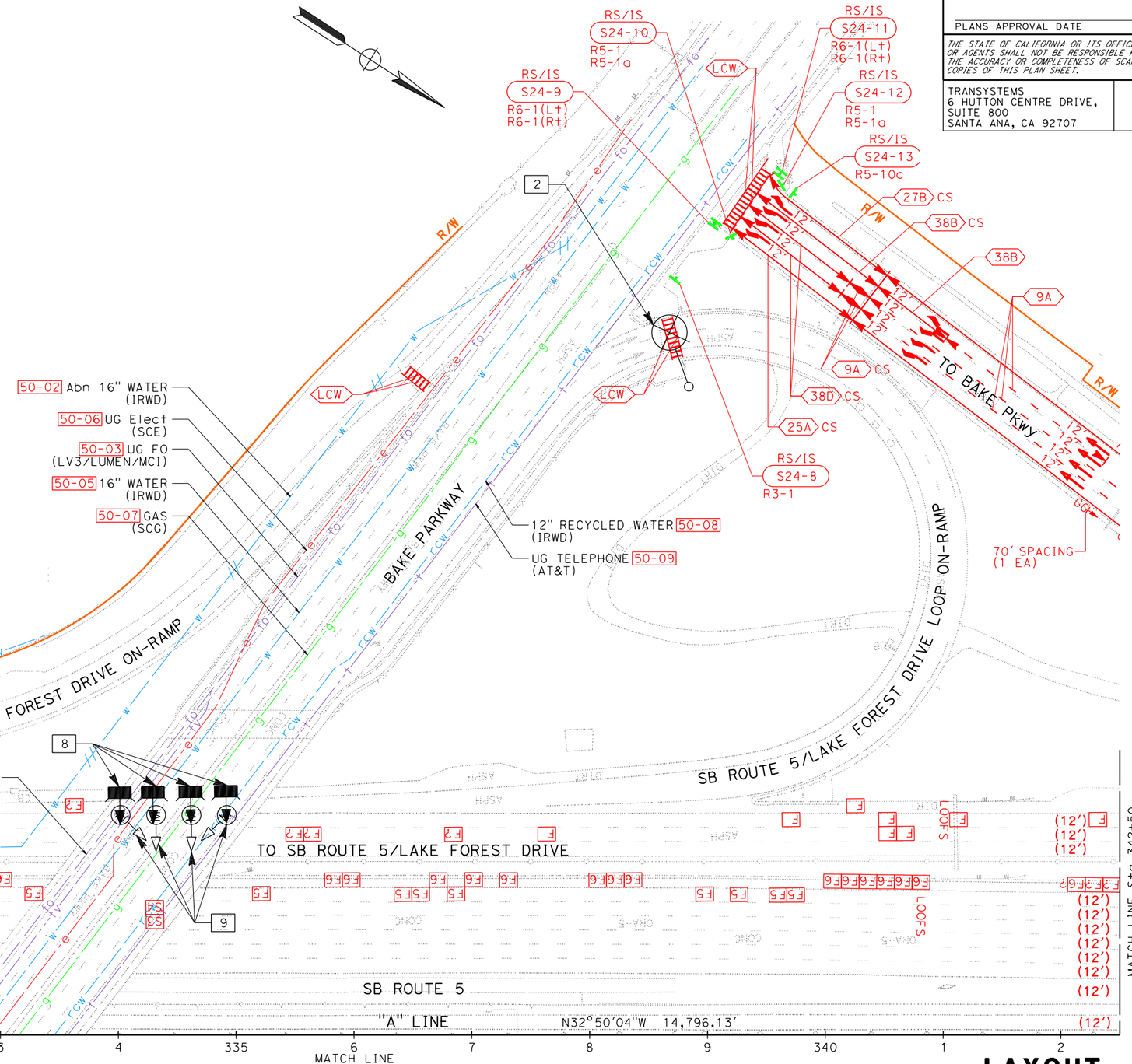
REGISTERED CIVIL ENGINEER DATE

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.

TRANSYSTEMS
6 HUTTON CENTRE DRIVE,
SUITE 800
SANTA ANA, CA 92707



LAYOUT

SCALE: 1" = 50'

L-50

REVISED BY | DATE REVISED
MICHAEL HULTGREN | SEPIDEH SARACHI
CALCULATED-DESIGNED BY | CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:39

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea050.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

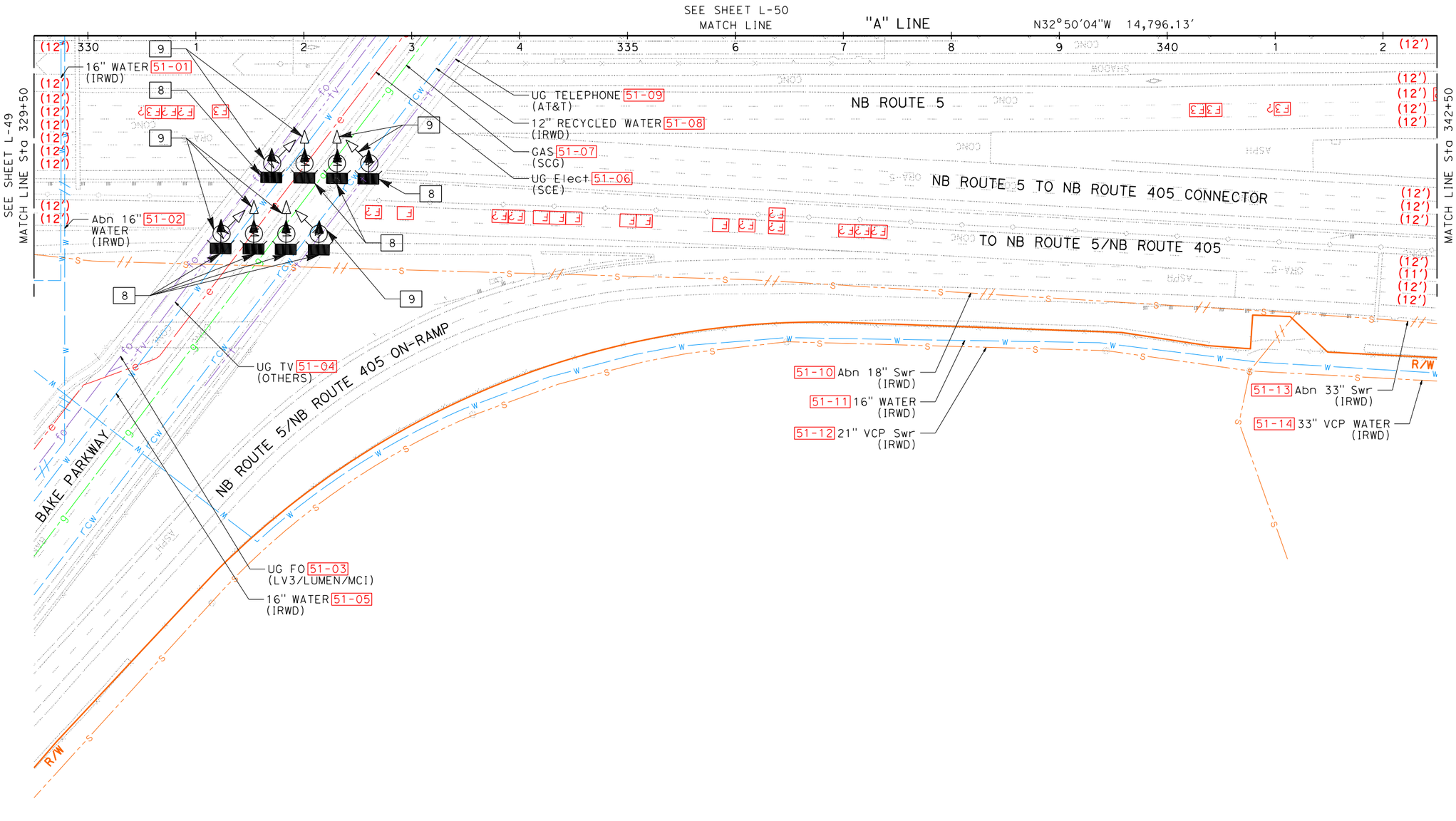
REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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.

TRANSYSTEMS
6 HUTTON CENTRE DRIVE,
SUITE 800
SANTA ANA, CA 92707

NOTE:

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



LAYOUT
SCALE: 1" = 50'

L-51

REVISED BY | DATE REVISED
MICHAEL HULTGREN | SEPIDEH SARACHI
CALCULATED-DESIGNED BY | CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:39

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea051.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

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.

TRANSYSTEMS
6 HUTTON CENTRE DRIVE,
SUITE 800
SANTA ANA, CA 92707

NOTES:

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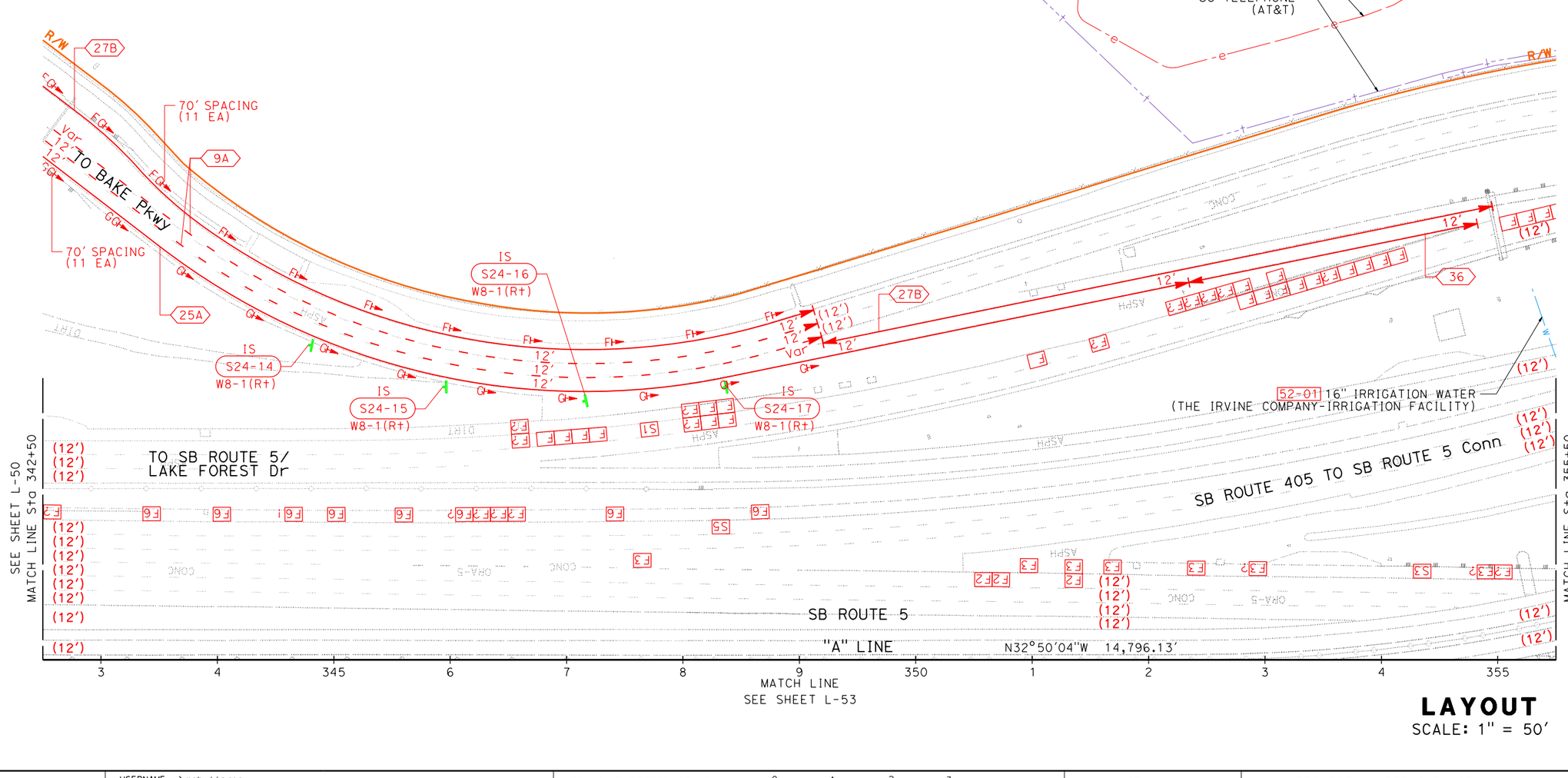


LAYOUT

SCALE: 1" = 50'

L-52

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA

CALCULATED-DESIGNED BY: MICHAEL HULTGREN

CHECKED BY: SEPIDEH SARACHI

DATE REVISED	REVISED BY

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:40

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea052.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

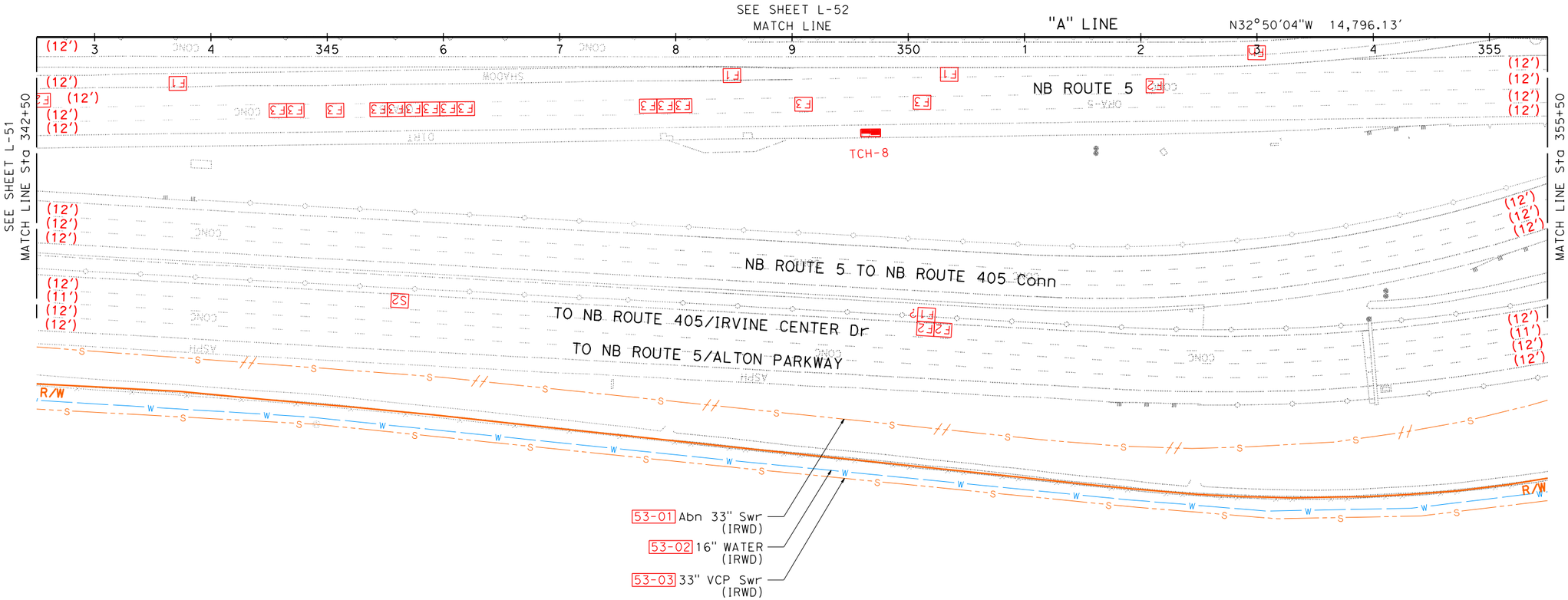
REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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.

TRANSYSTEMS
6 HUTTON CENTRE DRIVE,
SUITE 800
SANTA ANA, CA 92707

NOTE:

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



LAYOUT
SCALE: 1" = 50'

L-53

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA	MICHAEL HULTGREN	SEPIDEH SARACHI	REVISED BY	DATE REVISED
				CALCULATED-DESIGNED BY	CHECKED BY

LAST REVISION 00-00-00 | DATE PLOTTED => 15-JAN-2024 | TIME PLOTTED => 10:41

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea053.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

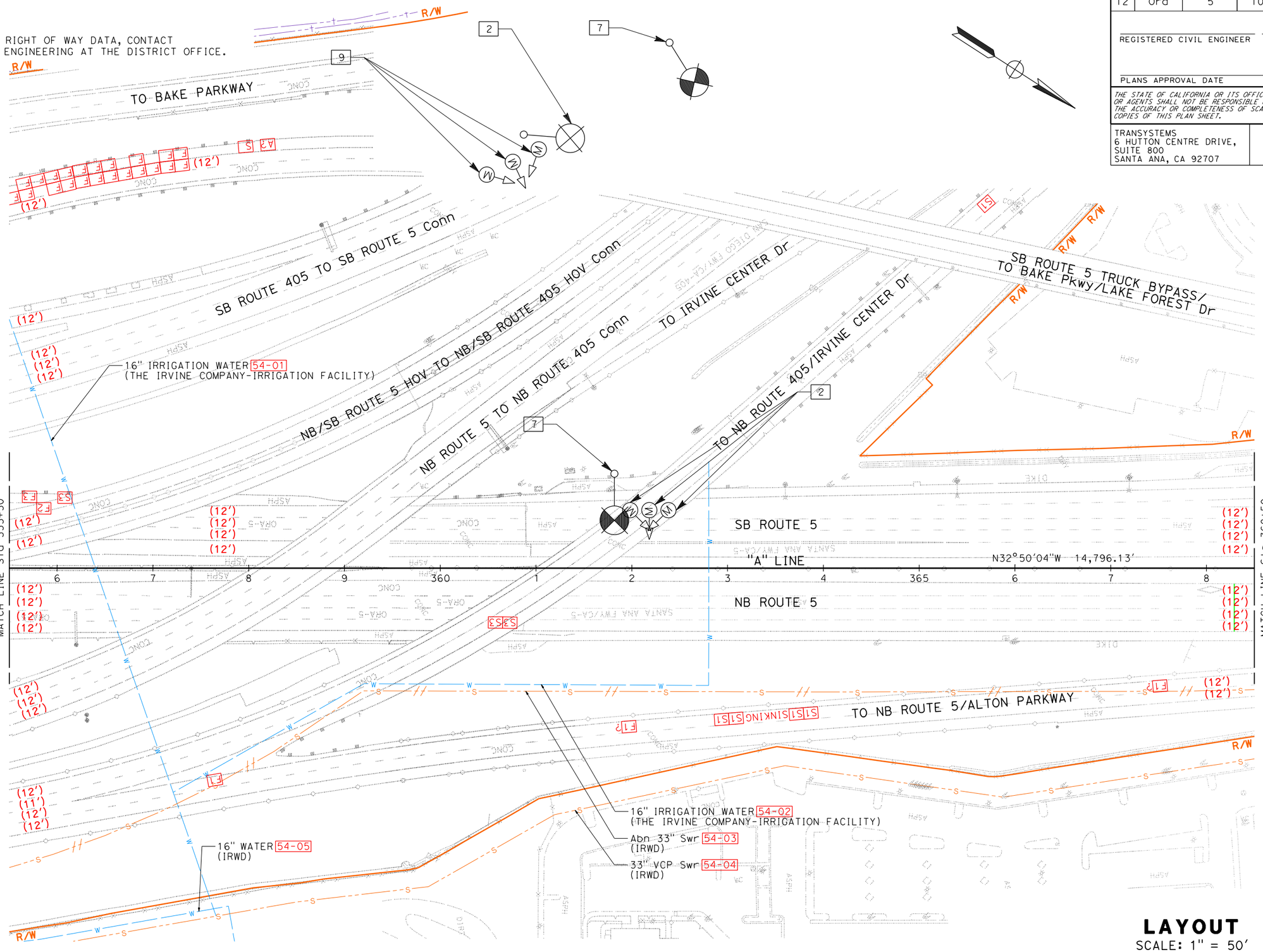
REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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.

TRANSYSTEMS
6 HUTTON CENTRE DRIVE,
SUITE 800
SANTA ANA, CA 92707

NOTE:

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



LAYOUT
SCALE: 1" = 50'

L-54

REVISED BY | DATE REVISED
MICHAEL HULTGREN | SEPIDEH SARACHI
CALCULATED-DESIGNED BY | CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR
AYMAN SALAMA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION DATE PLOTTED => 15-JAN-2024
00-00-00 TIME PLOTTED => 10:42

BORDER LAST REVISED 7/2/2010 | USERNAME => mahultgren | DGN FILE => 1220000058ea054.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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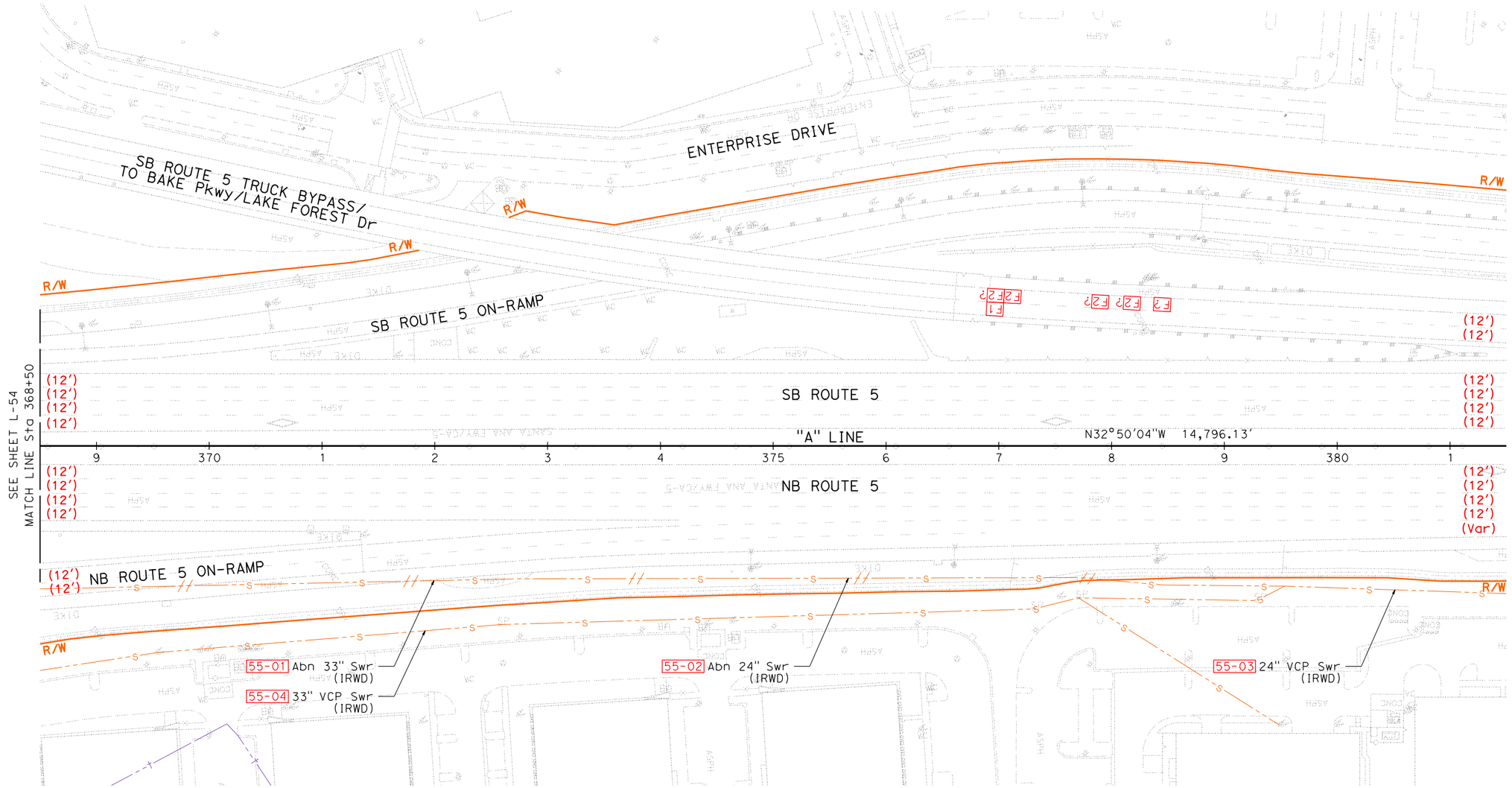
TRANSYSTEMS
6 HUTTON CENTRE DRIVE,
SUITE 800
SANTA ANA, CA 92707

NOTE:

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



LAYOUT

SCALE: 1" = 50'

L-55

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: MICHAEL HULTGREN
CHECKED BY: SEPIDEH SARACHI

CONSULTANT FUNCTIONAL SUPERVISOR: AYMAN SALAMA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 00-00-00
DATE PLOTTED => 15-JAN-2024
TIME PLOTTED => 10:43

BORDER LAST REVISED 7/2/2010

USERNAME => mahultgren
DGN FILE => 1220000058ea055.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT xxxx

PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

ADVANCED CIVIL TECHNOLOGIES
6 HUTTON CENTRE DRIVE,
SUITE 450
SANTA ANA, CA 92707

LANE WIDTH TRANSITION TABLE

POINT #	DIRECTION	LANE #	Beg Sta	Beg LANE WIDTH	END Sta	END LANE WIDTH
1	WB	1	14+86.31	11′		
2	WB	1			16+36.64	12′
7	WB	3	21+45.82	12′		
8	WB	3			22+60.39	11′

CURVE DATA

No.	R	Δ	T	L
1	1600.00′	15°57′21"	224.24′	445.57′

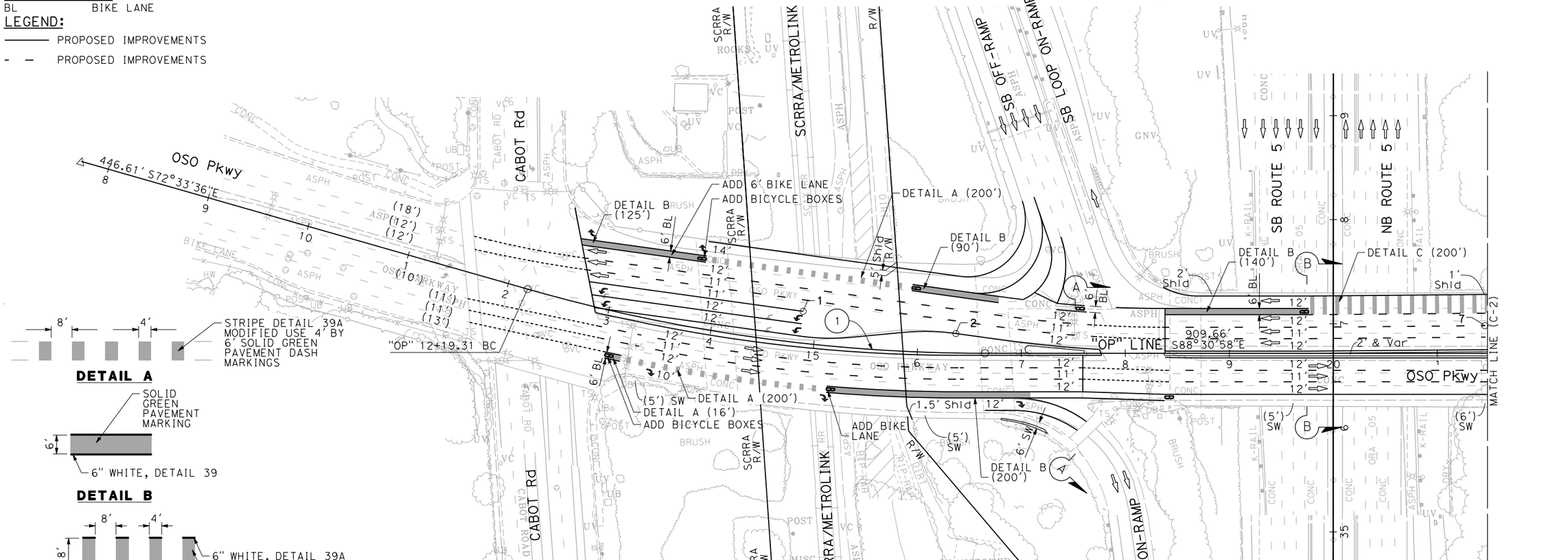
ABBREVIATION:

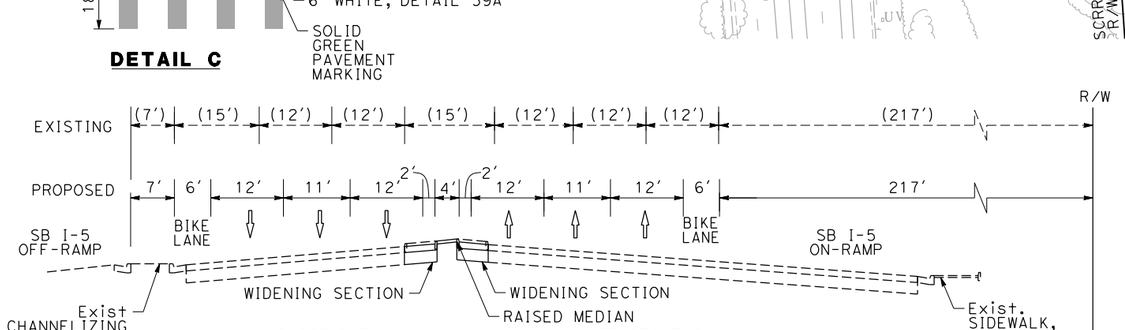
BL BIKE LANE

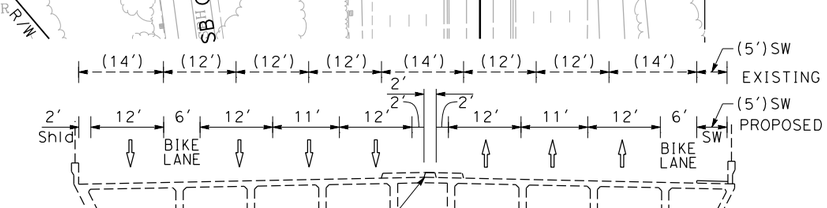
LEGEND:

——— PROPOSED IMPROVEMENTS

- — PROPOSED IMPROVEMENTS







CONSTRUCTION DETAILS

(OSO PARKWAY BIKE LANE)

SCALE: 1" = 50′

C-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
CONSULTANT FUNCTIONAL SUPERVISOR
CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED

LAST REVISION 00-00-00 DATE PLOTTED => 25-MAR-2024 TIME PLOTTED => 12:08

BORDER LAST REVISED 7/2/2010 | USERNAME => TLiu | DGN FILE => 1220000058ga01.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	10.0/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

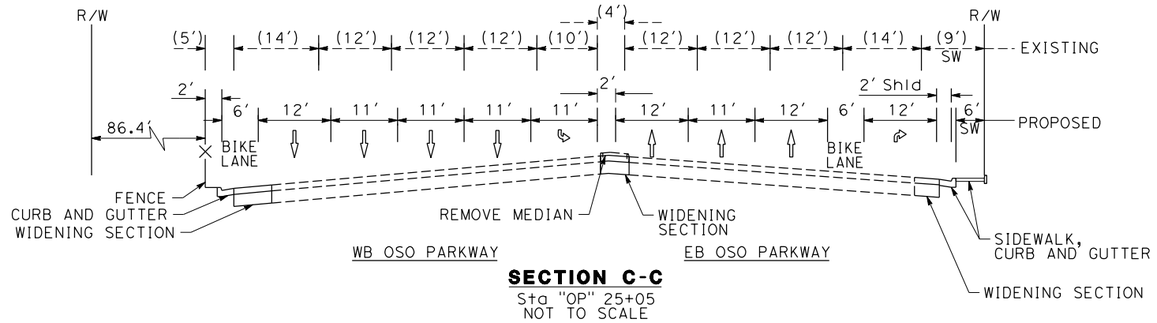
REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

ADVANCED CIVIL TECHNOLOGIES
6 HUTTON CENTRE DRIVE,
SUITE 450
SANTA ANA, CA 92707

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | CONSULTANT FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

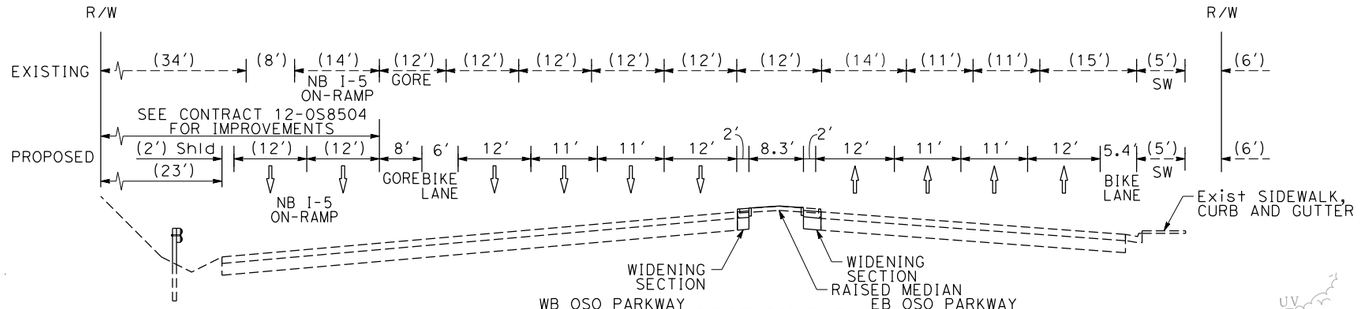
Caltrans



SECTION C-C
Sta "OP" 25+05
NOT TO SCALE

LANE WIDTH TRANSITION TABLE

POINT #	DIRECTION	LANE #	Beg Sta	Beg LANE WIDTH	END Sta	END LANE WIDTH
3	WB	1	22+20.95	12′		
4	WB	1			23+37.18	11′
5	WB	1	26+02.75	11′		
6	WB	1			27+15.10	12′
7	WB	3	21+45.82	12′		
8	WB	3			22+60.39	11′
9	EB	3	25+58.46	12′		
10	EB	3			27+31.87	11′



SECTION D-D
Sta "OP" 28+32
NOT TO SCALE

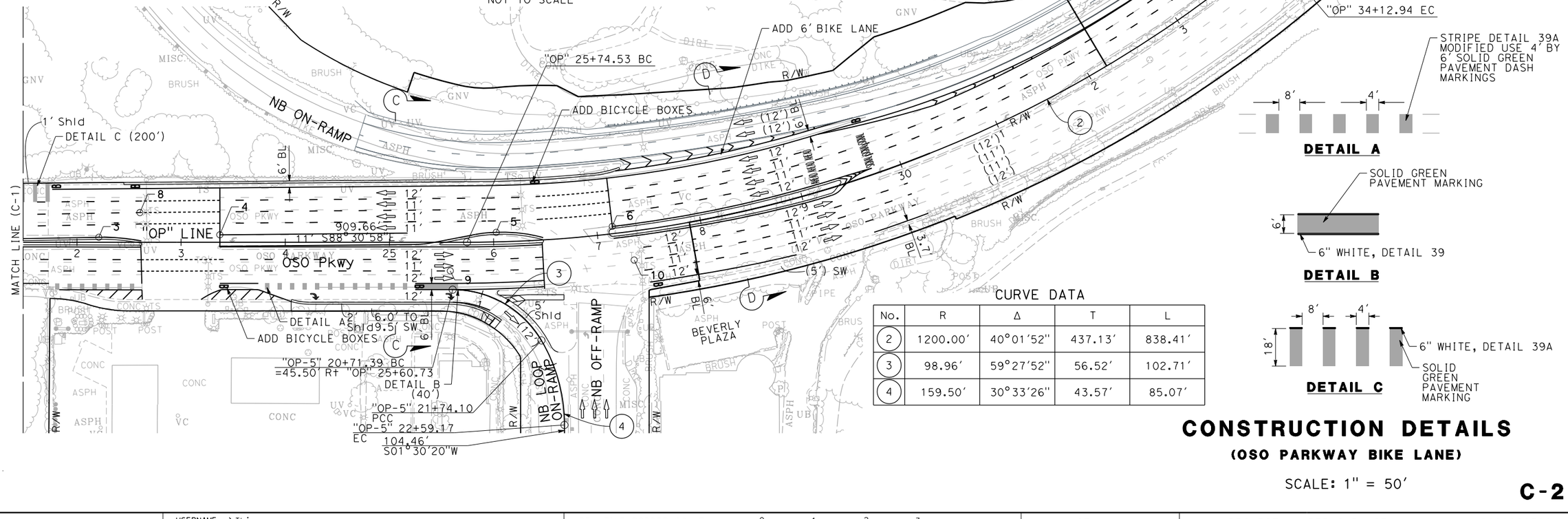
LEGEND:

——— PROPOSED IMPROVEMENTS

- — PROPOSED IMPROVEMENTS

——— IMPROVEMENTS FROM CONTRACT 12-0S8504

- —



CURVE DATA

No.	R	Δ	T	L
2	1200.00′	40°01′52″	437.13′	838.41′
3	98.96′	59°27′52″	56.52′	102.71′
4	159.50′	30°33′26″	43.57′	85.07′

STRIPE DETAIL 39A MODIFIED USE 4′ BY 6′ SOLID GREEN PAVEMENT DASH MARKINGS

DETAIL A

DETAIL B

DETAIL C

CONSTRUCTION DETAILS

(OSO PARKWAY BIKE LANE)

SCALE: 1" = 50′

C-2

LAST REVISION 00-00-00 | DATE PLOTTED => 25-MAR-2024 | TIME PLOTTED => 12:10

BORDER LAST REVISED 7/2/2010 | USERNAME => TLiu | DGN FILE => 1220000058ga02.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT xxxx | PROJECT NUMBER & PHASE 12200000580

ATTACHMENT C

Utility Management Matrix

Utility Management Matrix

Project Owner: Caltrans
Project No. : 1220000058 EA 12-05380
Project Description: Pavement, Lighting, OH Sign, Monitoring Stations Improvements - Location: 12-ORA-005, PM 10.0/21.3
Highway or Route: Interstate 5

Utility Conflict Matrix Developed/Revised By: Aaron Angel
Date: 10/23/2023
Reviewed By: Sepideh Sarachi
Date: 12/11/2023

Utility Owner and/or Contact Name	Conflict ID	Drawing or Sheet No.	Utility Type	Size and/or Material	Start Station	Start Offset		End Station	End Offset		Utility Investigation Level Needed	Recommended Action or Resolution	Estimated Resolution Date	Resolution Status
ATT	1-01	L-1	Telephone	UG Telephone Conduit	538+00	111'	RT	544+50	115'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
COX	1-02	L-1	Fiber Optic	UG Fiber Optic	531+50	99'	RT	544+00	94'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
COX	1-03	L-1	Fiber Optic	UG Fiber Optic	544+28	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
COX	1-04	L-1	Fiber Optic	UG Fiber Optic	544+00	94'	RT	544+50	197'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	1-05	L-1	Electric	OH Electric	531+50	129'	LT	541+00	129'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	1-06	L-1	Electric	OH Electric	541+70	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	1-07	L-1	Sewer	6" Sewer	534+40	270'	LT	541+00	173'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	1-08	L-1	Sewer	10" Sewer	540+38	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	1-09	L-1	Sewer	6" Abandoned Sewer	540+35	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	1-10	L-1	Water	14" CML&C Water	540+72	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	1-11	L-1	Water	8" Recycled Water	540+35	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	1-12	L-1	Water	14" ACP Water	531+50	135'	RT	542+23	120'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	1-13	L-1	Sewer	6" Abandoned Sewer	538+50	248'	LT	540+50	8'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	2-01	L-2	Electric	OH Electric	555+06	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	2-02	L-2	Electric	OH Electric	555+88	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	2-03	L-2	Electric	OH Electric	556+71	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	2-04	L-2	Electric	OH Electric	557+14	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	2-05	L-2	Water	14" CML&C Water	544+50	155'	RT	552+236	243'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	2-06	L-2	Water	16" CML&C Water	552+236	243'	RT	556+50	188'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
COX	2-07	L-2	Fiber Optic	UG Fiber Optic	544+50	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	3-01	L-3	Electric	OH Electric	555+88	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	3-02	L-3	Electric	OH Electric	556+71	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	3-03	L-3	Electric	OH Electric	557+14	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	3-04	L-3	Water	16" CML&C Water	556+50	188'	RT	568+50	148'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	3-05	L-3	Water	14" ACP Water	556+50	226'	RT	568+50	190'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	3-06	L-3	Water	8" Recycled Water	556+50	237'	RT	568+50	200'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	4-01	L-4	Water	16" CML&C Water	568+50	148'	RT	580+50	196'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	4-02	L-4	Water	14" ACP Water	568+50	190'	RT	580+50	218'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	4-03	L-4	Water	8" Recycled Water	568+50	200'	RT	580+50	228'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	5-01	L-5	Telephone	UG Telephone Conduit	588+19	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
CC	5-02	L-5	Fiber Optic	UG Fiber Optic	587+88	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	5-03	L-5	Gas	6" Gas	588+26	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	5-04	L-5	Water	16" CML&C Water	580+50	196'	RT	592+50	217'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	5-05	L-5	Water	24" Recycled Water	587+97	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	5-06	L-5	Water	12" ACP Water	587+84	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	5-07	L-5	Sewer	12" Sewer	588+06	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	5-13	L-5	Water	Air Vac Valve	587+71	182'	LT	-	-	-	QLC	Relocate	Prior to Construction	Utility Conflict Created
SMWD	5-23	L-5	Water	Water Valve	587+86	252'	RT	-	-	-	QLC	Remain in Place	N/A	Utility Conflict Resolved
ATT	6-01	L-6	Telephone	UG Telephone Conduit	599+00	200'	RT	603+50	179'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	6-02	L-6	Telephone	UG Telephone Conduit	604+00	200'	LT	604+50	191'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
CC	6-03	L-6	Fiber Optic	UG Fiber Optic	604+50	200'	LT	604+50	200'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	6-04	L-6	Gas	6" Gas	595+50	200'	RT	604+50	149'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	6-05	L-6	Water	6" Recycled Water	598+00	200'	RT	604+00	175'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	6-06	L-6	Water	24" Recycled Water	594+00	200'	RT	604+00	175'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	6-07	L-6	Sewer	12" Sewer	594+50	200'	RT	604+50	131'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	6-08	L-6	Water	16" ACP Water	592+50	269'	RT	604+00	158'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	6-09	L-6	Water	10" ACP Water	603+50	200'	LT	604+50	179'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	6-10	L-6	Water	16" CML&C Water	592+50	217'	RT	604+07	143'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	6-11	L-6	Electric	UG Electric	592+50	264'	RT	604+50	159'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	7-01	L-7	Telephone	UG Telephone Conduit	604+50	178'	RT	617+50	237'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	7-02	L-7	Gas	3" Gas	604+94	148'	RT	610+21	174'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	7-03	L-7	Gas	6" Gas	607+07	125'	LT	617+50	235'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	7-04	L-7	Gas	30" HP Gas	604+50	220'	LT	617+50	216'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	7-05	L-7	Water	12" Recycled Water	604+50	170'	RT	617+50	193'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	7-06	L-7	Telephone	OH Telephone	607+69	121'	LT	611+38	143'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	7-07	L-7	Telephone	UG Telephone Conduit	604+50	191'	LT	617+50	241'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	7-08	L-7	Telephone	UG Telephone Conduit	616+33	117'	RT	617+50	117'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved

Utility Management Matrix

Project Owner: Caltrans
Project No. : 1220000058 EA 12-05380
Project Description: Pavement, Lighting, OH Sign, Monitoring Stations Improvements - Location: 12-ORA-005, PM 10.0/21.3
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Date: 10/23/2023
Reviewed By: Sepideh Sarachi
Date: 12/11/2023

Utility Owner and/or Contact Name	Conflict ID	Drawing or Sheet No.	Utility Type	Size and/or Material	Start Station	Start Offset		End Station	End Offset		Utility Investigation Level Needed	Recommended Action or Resolution	Estimated Resolution Date	Resolution Status
ATT	7-09	L-7	Telephone	UG Telephone Conduit	614+79	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
COX	7-10	L-7	Fiber Optic	UG Fiber Optic	617+07	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	8-01	L-8	Gas	30" HP Gas	617+50	216'	LT	629+50	193'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	8-02	L-8	Gas	6" Gas	617+50	235'	LT	629+50	185'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	7-11	L-7	Electric	OH Electric	611+38	143'	LT	617+50	233'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
MCI	7-12	L-7	Fiber Optic	OH Fiber Optic	611+38	143'	LT	617+50	233'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	7-13	L-7	Telephone	OH Telephone	611+38	143'	LT	617+50	233'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
CC	7-14	L-7	Fiber Optic	UG Fiber Optic	604+50	200'	LT	617+50	261'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	7-15	L-7	Water	24" CML&C Water	611+53	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	7-16	L-7	Water	24" CML&C Water	610+50	171'	LT	617+50	282'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	7-17	L-7	Water	24" CML&C Water	604+07	143'	RT	611+55	149'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	7-18	L-7	Water	8" ACP Water	611+47	149'	RT	616+47	150'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	7-19	L-7	Water	10" ACP Water	611+34	149'	RT	616+47	150'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	7-20	L-7	Water	12" Steel Water	616+47	150'	RT	617+50	145'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	7-21	L-7	Water	10" ACP Water	604+50	178'	LT	611+50	197'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	7-22	L-7	Sewer	6" CIP Sewer	604+50	131'	RT	617+50	113'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	7-23	L-7	Electric	UG Electric	609+02	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	7-24	L-7	Electric	UG Electric	604+50	158'	RT	609+20	188'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	8-03	L-8	Water	12" Steel Water	617+50	145'	RT	618+92	145'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	8-04	L-8	Water	8" ACP Water	618+92	144'	RT	629+50	164'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	8-05	L-8	Water	10" ACP Water	618+92	144'	RT	622+25	158'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	8-06	L-8	Telephone	UG Telephone Conduit	617+50	117'	RT	625+72	122'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	8-07	L-8	Sewer	6" CIP Sewer	617+50	113'	RT	621+43	117'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	8-08	L-8	Water	12" PVC Recycled Water	617+50	193'	RT	629+50	152'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
COX	8-09	L-8	Fiber Optic	UG Fiber Optic	617+50	178'	RT	620+80	177'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	8-10	L-8	Electric	UG Electric	622+45	188'	RT	629+50	160'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	8-11	L-8	Electric	OH Electric	626+64	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	8-12	L-8	Telephone	UG Telephone Conduit	617+50	241'	LT	629+50	183'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
CC	8-13	L-8	Fiber Optic	UG Fiber Optic	617+50	260'	LT	629+50	197'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	8-14	L-8	Gas	2" Gas	628+11	166'	RT	629+50	164'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
COX	9-01	L-9	Fiber Optic	UG Fiber Optic	639+00	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	9-02	L-9	Gas	4" Gas	630+47	148'	RT	642+50	170'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	9-03	L-9	Telephone	UG Telephone Conduit	629+50	183'	LT	642+50	96'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
CC	9-04	L-9	Fiber Optic	UG Fiber Optic	629+50	197'	LT	642+50	102'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
MCI	9-05	L-9	Fiber Optic	UG Fiber Optic	635+00	250'	LT	642+50	144'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	9-06	L-9	Gas	30" HP Gas	629+50	192'	LT	642+50	105'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	9-07	L-9	Gas	6" Gas	635+50	112'	LT	660+50	98'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	9-08	L-9	Electric	OH Electric	629+50	174'	LT	634+90	200'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	9-09	L-9	Telephone	OH Telephone	629+50	174'	LT	634+90	200'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	9-10	L-9	Electric	OH Electric	634+90	200'	LT	642+50	137'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	9-11	L-9	Water	24" CML&C Water	629+50	221'	LT	642+50	116'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	9-12	L-9	Water	12" DIP Water	630+45	163'	RT	637+93	145'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	9-13	L-9	Water	8" ACP Water	629+50	164'	RT	630+45	163'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	9-14	L-9	Water	16" PVC Water	637+93	145'	RT	642+50	152'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	9-15	L-9	Electric	UG Electric	629+50	160'	RT	630+35	171'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	9-16	L-9	Gas	2" Gas	629+50	164'	RT	630+58	212'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	9-17	L-9	Telephone	UG Telephone Conduit	629+50	200'	RT	642+50	190'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	9-18	L-9	Water	12" PVC Recycled Water	629+50	152'	RT	642+50	156'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
COX	10-01	L-10	Fiber Optic	UG Fiber Optic	642+50	Transverse	-	648+75	114'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	10-02	L-10	Gas	6" Gas	642+50	85'	LT	653+50	105'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	10-03	L-10	Telephone	UG Telephone Conduit	642+50	96'	LT	653+50	107'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
CC	10-04	L-10	Fiber Optic	UG Fiber Optic	642+50	102'	LT	653+50	113'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	10-05	L-10	Gas	30" HP Gas	642+50	104'	LT	653+50	119'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	10-06	L-10	Water	24" CML&C Water	642+50	116'	LT	653+50	139'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	10-07	L-10	Electric	OH Electric	642+50	137'	LT	653+50	152'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
MCI	10-08	L-10	Electric	UG Fiber Optic	642+50	144'	LT	653+50	147'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	10-09	L-10	Water	16" PVC Water	642+50	152'	RT	653+50	149'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	10-10	L-10	Water	12" PVC Recycled Water	642+50	156'	RT	653+50	152'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved

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SCG	10-11	L-10	Gas	4" Gas	642+50	170'	RT	653+50	165'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	10-12	L-10	Telephone	UG Telephone Conduit	642+50	190'	RT	653+50	174'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
COX	11-01	L-11	Fiber Optic	UG Fiber Optic	656+00	157'	RT	665+50	210'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	11-02	L-11	Gas	6" Gas	653+50	105'	LT	665+50	131'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	11-03	L-11	Telephone	UG Telephone Conduit	653+50	107'	LT	665+50	121'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	11-04	L-11	Gas	30" HP Gas	653+50	119'	LT	665+50	115'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	11-05	L-11	Water	24" CML&C Water	653+50	139'	LT	665+50	147'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
MCI	11-06	L-11	Fiber Optic	UG Fiber Optic	653+50	147'	LT	665+50	164'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	11-07	L-11	Electric	OH Electric	653+50	152'	LT	665+50	161'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	11-08	L-11	Sewer	39" VCP Sewer	657+20	147'	LT	665+50	158'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	11-09	L-11	Water	16" PVC Water	653+50	149'	RT	655+13	153'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	11-10	L-11	Water	12" PVC Recycled Water	653+50	152'	RT	665+50	206'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	11-11	L-11	Gas	4" Gas	653+50	165'	RT	665+50	215'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	11-12	L-11	Telephone	UG Telephone Conduit	653+50	174'	RT	665+50	223'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	11-13	L-11	Water	16" DIP Water	661+19	182'	RT	665+50	210'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	11-14	L-11	Telephone	UG Telephone Conduit	664+31	144'	RT	664+50	265'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	12-01	L-12	Sewer	39" VCP Sewer	666+29	107'	LT	679+50	173'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	12-02	L-12	Gas	30" HP Gas	665+50	115'	LT	679+50	220'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	12-03	L-12	Telephone	UG Telephone Conduit	665+50	121'	LT	679+50	192'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
CC	12-04	L-12	Fiber Optic	UG Fiber Optic	665+50	127'	LT	679+50	195'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	12-05	L-12	Gas	6" Gas	665+50	131'	LT	679+50	221'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	12-06	L-12	Water	24" CML&C Water	665+50	147'	LT	679+50	218'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	12-07	L-12	Electric	OH Electric	665+50	161'	LT	679+50	241'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	12-08	L-12	Water	6" ACP Water	677+20	169'	LT	679+50	176'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	12-09	L-12	Telephone	UG Telephone Conduit	668+19	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	12-10	L-12	Water	8" Abandoned CML&C Water	675+45	Transverse	-	674+68	Transverse	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	12-11	L-12	Water	16" CML&C Water	677+72	Transverse	-	677+00	Transverse	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	12-12	L-12	Water	12" DIP Recycled Water	679+18	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	12-13	L-12	Water	8" Abandoned Steel Water	674+66	15'	RT	667+59	49'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	12-14	L-12	Water	12" Steel Water	667+34	88'	RT	679+50	88'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	12-15	L-12	Sewer	8" Sewer	669+27	170'	RT	679+50	118'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	12-16	L-12	Water	12" PVC Recycled Water	665+50	206'	RT	677+17	159'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	12-17	L-12	Water	16" DIP Water	665+50	210'	RT	676+94	138'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
COX	12-18	L-12	Fiber Optic	UG Fiber Optic	665+50	210'	RT	676+51	145'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	12-19	L-12	Gas	4" Gas	676+50	215'	RT	679+50	122'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	12-20	L-12	Electric	UG Electric	665+50	220'	RT	679+50	148'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	12-21	L-12	Telephone	UG Telephone Conduit	676+00	116'	RT	686+50	225'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
CC	12-22	L-12	Fiber Optic	UG Fiber Optic	676+51	145'	RT	679+50	132'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
COX	12-23	L-12	Fiber Optic	UG Fiber Optic	665+50	Median	-	679+50	Median	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
COX	13-01	L-13	Fiber Optic	UG Fiber Optic	679+50	Median	-	691+52	430'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	13-02	L-13	Telephone	UG Telephone Conduit	683+17	69'	LT	685+82	214'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	13-03	L-13	Water	12" DIP Recycled Water	679+88	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	13-04	L-13	Water	12" Steel Water	679+50	89'	RT	690+59	430'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	13-05	L-13	Sewer	8" Sewer	679+50	118'	RT	690+09	430'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	13-06	L-13	Gas	4" Gas	679+50	123'	RT	689+97	430'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
CC	13-07	L-13	Fiber Optic	UG Fiber Optic	679+50	132'	RT	689+91	430'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	13-08	L-13	Telephone	UG Telephone Conduit	679+50	143'	RT	689+65	430'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	13-09	L-13	Electric	UG Electric	679+50	148'	RT	689+57	430'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	14-01	L-14	Gas	8" Gas	694+75	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	14-02	L-14	Sewer	15" VCP Trunk Sewer	694+85	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	14-03	L-14	Gas	12" Gas	695+00	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	14-04	L-14	Electric	UG Electric	695+00	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	14-05	L-14	Water	16" ACP Water	695+25	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	14-06	L-14	Telephone	UG Telephone Conduit	695+25	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
CC	14-07	L-14	Fiber Optic	UG Fiber Optic	695+30	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	15-01	L-15	Telephone	UG Telephone Conduit	714+17	167'	LT	718+06	161'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	16-01	L-16	Electric	UG Electric	724+73	132'	LT	731+50	182'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	17-01	L-17	Gas	8" Gas in 12" Casing	738+45	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved

Utility Management Matrix

Project Owner: Caltrans
Project No. : 1220000058 EA 12-05380
Project Description: Pavement, Lighting, OH Sign, Monitoring Stations Improvements - Location: 12-ORA-005, PM 10.0/21.3
Highway or Route: Interstate 5

Utility Conflict Matrix Developed/Revised By: Aaron Angel
Date: 10/23/2023
Reviewed By: Sepideh Sarachi
Date: 12/11/2023

Utility Owner and/or Contact Name	Conflict ID	Drawing or Sheet No.	Utility Type	Size and/or Material	Start Station	Start Offset		End Station	End Offset		Utility Investigation Level Needed	Recommended Action or Resolution	Estimated Resolution Date	Resolution Status
ATT	17-02	L-17	Telephone	UG Telephone Conduit	738+69	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
CC	17-03	L-17	Fiber Optic	UG Fiber Optic	738+90	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	17-04	L-17	Electric	UG Electric	738+98	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	17-05	L-17	Water	12" Water	741+56	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	17-06	L-17	Telephone	Abn Telephone Conduit	742+98	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	17-07	L-17	Sewer	10" VCP Sewer in 30" Casing	744+50	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	18-01	L-18	Electric	OH Electric	749+73	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	18-02	L-18	Electric	UG Electric	753+15	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	19-01	L-19	Sewer	10" VCP Sewer in 30" Casing	766+78	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	19-02	L-19	Water	8" PVC Water	766+59	113'	RT	766+42	240'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	19-03	L-19	Telephone	UG Telephone Conduit	762+59	151'	LT	767+42	189'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	19-04	L-19	Telephone	UG Telephone Conduit	768+63	200'	LT	771+50	226'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
KMEP	20-01	L-20	Oil	16" Oil in 24" Casing	775+82	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	20-02	L-20	Electric	220 Kv OH Electric	776+75	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	20-03	L-20	Electric	66 Kv OH Electric	777+81	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	20-04	L-20	Water	8" PVC Water	773+19	119'	RT	773+72	189'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	21-01	L-21	Water	20" PVC Water	16+09	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	21-02	L-21	Water	16" Recycled Water	16+10	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	21-03	L-21	Water	14" Abn Water	16+04	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	21-04	L-21	Water	12" Recycled Water	16+22	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	21-05	L-21	Water	8" Recycled Water	16+25	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	21-06	L-21	Water	20" Recycled Water	16+27	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	21-07	L-21	Sewer	27" Abn Sewer	16+25	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	21-08	L-21	Water	12" Water	6+55	163'	RT	6+74	142'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	22-01	L-22	Sewer	27" Trunk Sewer	19+44	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	22-02	L-22	Water	12" ACP Recycled Water	21+28	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	22-03	L-22	Sewer	12" VCP Sewer	21+29	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	22-04	L-22	Water	12" ACP Abn Water	18+40	96'	RT	29+50	120'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	23-01	L-23	Electric	138 Kv UG Electric	36+18	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	23-02	L-23	Telephone	UG Telephone Conduit	36+23	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	23-03	L-23	Electric	138 Kv UG Electric	36+33	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	23-04	L-23	Water	12" Purple PVC Recycled Water	37+23	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	23-05	L-23	Water	54" Steel Water in 84" Casing	38+31	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	23-06	L-23	Electric	66 kV OH Electric	17+36 (Oso Pkwy)	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	23-07	L-23	Electric	220 kV OH Electric	16+56 (Oso Pkwy)	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	23-08	L-23	Telephone	UG Telephone Conduit	15+72 (Oso Pkwy)	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	23-09	L-23	Sewer	21" VCP Trunk Sewer	15+71 (Oso Pkwy)	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	23-10	L-23	Telephone	UG Telephone Conduit	15+45 (Oso Pkwy)	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	23-11	L-23	Water	30" Water	15+39 (Oso Pkwy)	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	23-12	L-23	Gas	30" HP Gas	15+27 (Oso Pkwy)	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
KMEP	23-13	L-23	Oil	16" Oil	15+22 (Oso Pkwy)	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MCI	23-14	L-23	Fiber Optic	UG Fiber Optic	14+74 (Oso Pkwy)	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	23-15	L-23	Water	30" Water	13+81 (Oso Pkwy)	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	23-16	L-23	Electric	UG Electric	15+63 (Oso Pkwy)	50'	LT	13+22 (Oso Pkwy)	46'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
QWEST/LV3	23-17	L-23	Fiber Optic	UG Fiber Optic	15+30 (Oso Pkwy)	119'	RT	13+12 (Oso Pkwy)	112'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	23-18	L-23	Telephone	UG Telephone Conduit	14+90 (Oso Pkwy)	157'	RT	13+12 (Oso Pkwy)	124'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	24-01	L-24	Electric	138 Kv UG Electric	36+18	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	24-02	L-24	Telephone	UG Telephone Conduit	36+23	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	24-03	L-24	Electric	138 Kv UG Electric	36+33	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	24-04	L-24	Water	12" Purple PVC Recycled Water	37+23	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	24-05	L-24	Water	54" Steel Water in 84" Casing	38+31	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	24-06	L-24	Water	12" ACP Abn Water	29+50	120'	RT	35+93	198'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
MCI	24-07	L-24	Fiber Optic	UG Fiber Optic	21+73 (Oso Pkwy)	44'	LT	27+62 (Oso Pkwy)	54'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	24-08	L-24	Gas	3" Gas	24+82 (Oso Pkwy)	39'	LT	27+66 (Oso Pkwy)	31'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	24-09	L-24	Water	12" ACP Water	22+64 (Oso Pkwy)	72'	LT	27+75 (Oso Pkwy)	25'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	26-01	L-26	Sewer	8" VCP Sewer in 24" Casing	58+19	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	26-02	L-26	Telephone	UG Telephone Conduit	66+27	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	26-03	L-26	Telephone	UG Telephone Conduit	67+63	122'	LT	71+50	137'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved

Utility Management Matrix

Project Owner: Caltrans
Project No. : 1220000058 EA 12-05380
Project Description: Pavement, Lighting, OH Sign, Monitoring Stations Improvements - Location: 12-ORA-005, PM 10.0/21.3
Highway or Route: Interstate 5

Utility Conflict Matrix Developed/Revised By: Aaron Angel
Date: 10/23/2023
Reviewed By: Sepideh Sarachi
Date: 12/11/2023

Utility Owner and/or Contact Name	Conflict ID	Drawing or Sheet No.	Utility Type	Size and/or Material	Start Station	Start Offset		End Station	End Offset		Utility Investigation Level Needed	Recommended Action or Resolution	Estimated Resolution Date	Resolution Status
KMEP	26-04	L-26	Oil	10" Oil	66+80	187'	RT	71+50	173'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	27-01	L-27	Sewer	8" VCP Sewer in 24" Casing	78+13	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	27-02	L-27	Telephone	UG Telephone Conduit	74+00	94'	LT	75+73	150'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
KMEP	27-03	L-27	Oil	10" Oil	71+50	173'	RT	83+50	218'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	27-04	L-27	Telephone	UG Telephone Conduit	71+50	137'	LT	72+93	143'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	28-01	L-28	Electric	OH Electric	90+20	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	28-02	L-28	Water	24" Water in 36" Casing	93+79	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	28-03	L-28	Sewer	15" VCP Sewer in 30" Casing	93+95	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	28-04	L-28	Electric	UG Electric	88+25	135'	RT	91+16	144'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
KMEP	28-05	L-28	Oil	10" Oil	86+14	144'	RT	97+50	144'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	28-06	L-28	Electric	OH Electric	91+16	144'	RT	97+50	132'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
MCI	28-07	L-28	Fiber Optic	UG Fiber Optic	97+50	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
KMEP	28-08	L-28	Oil	16" Oil	97+50	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	28-09	L-28	Telephone	UG Telephone Conduit	94+23	137'	LT	97+50	184'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
COX	29-01	L-29	Fiber Optic	UG Fiber Optic	106+33	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
COX	29-02	L-29	Fiber Optic	UG Abn Fiber Optic	106+49	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	29-03	L-29	Water	21" CCP Water	106+53	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	29-04	L-29	Water	12" PVC Recycled Water	106+72	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	29-05	L-29	Gas	30" HP Gas	106+84	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	29-06	L-29	Gas	12" Gas	106+50	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	29-07	L-29	Telephone	UG Telephone Conduit	106+95	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	29-08	L-29	Water	6" CL 350 DIP Recycled Water	17+80 (La Paz)	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	29-09	L-29	Water	6" CL 350 DIP Recycled Water	17+32 (La Paz)	13'	LT	17+70 (La Paz)	169'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	29-10	L-29	Telephone	UG Telephone Conduit	17+38 (La Paz)	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	29-11	L-29	Telephone	UG Telephone Conduit	16+55 (La Paz)	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	29-12	L-29	Gas	30" HP Gas	16+23 (La Paz)	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	29-13	L-29	Gas	12" Gas	16+17 (La Paz)	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	29-14	L-29	Electric	UG Electric	15+75 (La Paz)	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	29-15	L-29	Water	12" Water	15+65 (La Paz)	35'	LT	12+72 (La Paz)	35'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	29-16	L-29	Sewer	8" VCP Sewer	15+33 (La Paz)	64'	LT	12+87 (La Paz)	60'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
COX	29-17	L-29	Fiber Optic	UG Fiber Optic	15+24 (La Paz)	50'	LT	12+81 (La Paz)	51'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SDG&E	29-18	L-29	Electric	UG Electric	15+05 (La Paz)	Transverse	-	12+77 (La Paz)	42'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
COX	30-01	L-30	Fiber Optic	UG Fiber Optic	106+33	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
COX	30-02	L-30	Fiber Optic	UG Abn Fiber Optic	106+49	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	30-03	L-30	Water	21" CCP Water	106+53	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	30-04	L-30	Water	12" PVC Recycled Water	106+72	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	30-05	L-30	Gas	30" HP Gas	106+84	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	30-06	L-30	Gas	12" Gas	106+50	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	30-07	L-30	Telephone	UG Telephone Conduit	106+95	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ETWD	30-08	L-30	Water	10" ACP Water	25+16 (La Paz)	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
COX	30-09	L-30	Fiber Optic	UG Fiber Optic	25+69 (La Paz)	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	30-10	L-30	Sewer	Abn Sewer	25+41 (La Paz)	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	30-11	L-30	Sewer	8" PVC SDR-35 Sewer	25+66 (La Paz)	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	30-12	L-30	Gas	4" Gas	25+83 (La Paz)	4'	RT	25+74 (La Paz)	500'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	30-13	L-30	Telephone	UG Telephone Conduit	22+85 (La Paz)	40'	RT	25+51 (La Paz)	23'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
MCI / VERIZON	30-14	L-30	Fiber Optic	UG Fiber Optic	98+00	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
KMEP	30-15	L-30	Oil	16" Oil	98+43	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
KMEP	30-16	L-30	Oil	10" Oil	97+50	145'	RT	100+35	153'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	31-01	L-31	Electric	OH 12 Kv Electric	117+34	170'	RT	124+50	138'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	31-02	L-31	Electric	UG 751 v-22.5 Kv Electric	121+15	144'	RT	123+80	137'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	31-03	L-31	Telephone	UG Telephone Conduit	114+11	229'	LT	124+50	170'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	32-01	L-32	Electric	OH 12 Kv Electric	124+50	138'	RT	135+50	155'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	32-02	L-32	Telephone	Abn Telepone Conduit	132+08	110'	LT	135+50	108'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	32-03	L-32	Telephone	UG Telephone Conduit	124+50	171'	LT	135+50	158'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	33-01	L-33	Electric	OH 12 Kv Electric	135+50	155'	RT	137+57	192'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	33-02	L-33	Telephone	Abn Telephone Conduit	135+50	108'	LT	147+50	108'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	33-03	L-33	Telephone	UG Telephone Conduit	135+50	158'	LT	147+50	190'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	34-01	L-34	Telephone	Abn Telephone Conduit	147+50	108'	LT	160+50	126'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved

Utility Management Matrix

Project Owner: Caltrans
Project No. : 1220000058 EA 12-05380
Project Description: Pavement, Lighting, OH Sign, Monitoring Stations Improvements - Location: 12-ORA-005, PM 10.0/21.3
Highway or Route: Interstate 5

Utility Conflict Matrix Developed/Revised By: Aaron Angel
Date: 10/23/2023
Reviewed By: Sepideh Sarachi
Date: 12/11/2023

Utility Owner and/or Contact Name	Conflict ID	Drawing or Sheet No.	Utility Type	Size and/or Material	Start Station	Start Offset		End Station	End Offset		Utility Investigation Level Needed	Recommended Action or Resolution	Estimated Resolution Date	Resolution Status
ATT	34-02	L-34	Telephone	UG Telephone Conduit	155+06	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
CC	34-03	L-34	Fiber Optic	UG Fiber Optic	155+09	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	34-04	L-34	Water	42" Water	155+16	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	34-05	L-34	Telephone	UG Telephone Conduit	147+50	190'	LT	15+81 (Alicia Pkwy)	65'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	34-06	L-34	Telephone	UG Telephone Conduit	14+67 (Alicia Pkwy)	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	35-01	L-35	Telephone	UG Telephone Conduit	155+06	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
CC	35-02	L-35	Fiber Optic	UG Fiber Optic	155+09	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MNWD	35-03	L-35	Water	42" Water	155+16	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	35-04	L-35	Electric	UG Electric	152+18	532'	RT	25+68 (Alicia Pkwy)	49'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ETWD	35-05	L-35	Sewer	10" VCP Sewer	151+88	549'	RT	26+25 (Alicia Pkwy)	Transverse	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MCI	35-06	L-35	Fiber Optic	UG Fiber Optic	24+95 (Alicia Pkwy)	112'	RT	27+71 (Alicia Pkwy)	67'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	35-07	L-35	Electric	UG Electric	24+95 (Alicia Pkwy)	60'	RT	27+71 (Alicia Pkwy)	104'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	36-01	L-36	Water	AUFDENKAMP 42" Water	171+08	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	36-02	L-36	Telephone	Abn Telephone Conduit	160+50	126'	LT	172+81	103'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	36-03	L-36	Telephone	Abn Telephone Conduit	162+91	211'	LT	173+50	157'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	36-04	L-36	Telephone	UG Telephone Conduit	170+52	136'	RT	173+50	135'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	36-05	L-36	Telephone	OH Electric	164+06	220'	RT	173+50	132'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
COX	36-06	L-36	Fiber Optic	OH Fiber Optic	164+06	220'	RT	173+50	132'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	37-01	L-37	Electric	UG Electric	180+80	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	37-02	L-37	Electric	Abn UG Electric	181+50	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	37-03	L-37	Electric	OH 66-300 Kv Electric	183+80	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	37-04	L-37	Telephone	Abn Telephone Conduit	173+50	157'	LT	186+50	118'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	37-05	L-37	Electric	OH 751 v-22.5 Kv Electric	173+50	132'	RT	180+75	166'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
COX	37-06	L-37	Fiber Optic	OH Fiber Optic	173+50	132'	RT	180+75	166'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	37-07	L-37	Water	AUFDENKAMP 42" Water	173+50	150'	LT	186+50	186'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	37-08	L-37	Water	Abn AUFDENKAMP 42" Water	178+00	147'	LT	186+50	136'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	37-09	L-37	Electric	UG Electric	181+65	192'	LT	185+56	165'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	37-10	L-37	Telephone	UG Telephone Conduit	173+50	135'	RT	186+50	155'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	37-11	L-37	Telephone	Abn Telephone Conduit	180+86	170'	RT	186+50	137'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	37-12	L-37	Electric	UG Electric	183+11	175'	RT	186+50	148'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ETWD	38-01	L-38	Water	8" Water in 16" Casing	188+39	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ETWD	38-02	L-38	Water	16" ACP Water in 30" Casing	188+50	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	38-03	L-38	Electric	UG 12 Kv Electric	194+82	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	38-04	L-38	Gas	8" Gas in 14" Casing	195+22	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ETWD	38-05	L-38	Sewer	10" VCP Sewer in 18" Casing	198+71	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	38-06	L-38	Telephone	Abn Telephone Conduit	186+50	118'	LT	199+50	115'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	38-07	L-38	Water	Abn AUFDENKAMP 42" Water	185+50	136'	LT	194+08	150'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	38-08	L-38	Electric	66-300Kv OH Electric	186+50	152'	LT	198+81	183'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	38-09	L-38	Water	AUFDENKAMP 42" Water	186+50	186'	LT	199+50	160'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	38-10	L-38	Telephone	Abn Telephone Conduit	188+38	312'	LT	192+10	118'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
CC	38-11	L-38	Fiber Optic	UG Fiber Optic	188+67	295'	LT	199+50	121'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	38-12	L-38	Telephone	UG Telephone Conduit	188+30	313'	LT	199+50	126'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ETWD	38-13	L-38	Sewer	8" VCP Sewer	190+84	162'	LT	198+26	128'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ETWD	38-14	L-38	Water	16" ACP Water	189+85	293'	LT	199+50	151'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	38-15	L-38	Electric	UG Electric	194+82	135'	LT	199+50	134'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	38-16	L-38	Telephone	Abn Telephone Conduit	198+37	113'	LT	199+50	106'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	38-17	L-38	Telephone	Abn Telephone Conduit	186+50	137'	RT	188+13	127'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	38-18	L-38	Electric	UG 66-300 Kv Electric	186+50	148'	RT	198+95	174'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	38-19	L-38	Electric	UG 0-750 v Electric	188+11	137'	RT	199+50	195'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	38-20	L-38	Telephone	UG Telephone Conduit	186+50	155'	RT	199+50	199'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ETWD	38-21	L-38	Water	10" CIP Water	188+37	147'	RT	199+50	195'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	38-22	L-38	Gas	1" GAS	189+75	139'	RT	191+66	141'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ETWD	38-23	L-38	Sewer	8" VCP Sewer	188+58	145'	RT	199+50	185'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	38-24	L-38	Gas	4" Gas	195+22	157'	RT	199+50	190'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	38-25	L-38	Gas	4" Gas	195+22	146'	LT	199+50	142'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	38-26	L-38	Water	Abn AUFDENKAMP 42" Water	198+30	150'	LT	199+50	122'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	39-01	L-39	Telephone	Abn Telephone Conduit	199+50	106'	LT	212+50	126'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	39-02	L-39	Telephone	Abn Telephone Conduit	199+50	115'	LT	212+50	136'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved

Utility Management Matrix

Project Owner: Caltrans
Project No. : 1220000058 EA 12-05380
Project Description: Pavement, Lighting, OH Sign, Monitoring Stations Improvements - Location: 12-ORA-005, PM 10.0/21.3
Highway or Route: Interstate 5

Utility Conflict Matrix Developed/Revised By: Aaron Angel
Date: 10/23/2023
Reviewed By: Sepideh Sarachi
Date: 12/11/2023

Utility Owner and/or Contact Name	Conflict ID	Drawing or Sheet No.	Utility Type	Size and/or Material	Start Station	Start Offset		End Station	End Offset		Utility Investigation Level Needed	Recommended Action or Resolution	Estimated Resolution Date	Resolution Status
CC	39-03	L-39	Fiber Optic	UG Fiber Optic	199+50	121'	LT	212+50	139'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	39-04	L-39	Water	Abn AUFDENKAMP 42" Water	199+50	122'	LT	204+13	137'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	39-05	L-39	Electric	UG Electric	199+50	134'	LT	212+50	144'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	39-06	L-39	Gas	4" Gas	199+50	142'	LT	210+49	183'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	39-07	L-39	Electric	UG Electric	199+50	134'	LT	208+60	135'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	39-08	L-39	Water	AUFDENKAMP 42" Water	199+50	160'	LT	212+50	164'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ETWD	39-09	L-39	Sewer	8" VCP Sewer	199+50	185'	RT	207+46	143'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	39-10	L-39	Gas	4" Gas	199+50	190'	RT	207+57	148'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	39-11	L-39	Electric	UG 0-750v Electric	199+50	195'	RT	207+58	157'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ETWD	39-12	L-39	Water	8" ACP Water	199+50	196'	RT	210+54	200'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	39-13	L-39	Electric	UG 66kV Electric	205+85	133'	RT	211+00	201'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	39-14	L-39	Telephone	UG Telephone Conduit	199+50	199'	RT	212+50	234'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	39-15	L-39	Telephone	UG Telephone Conduit	199+50	126'	LT	212+50	158'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	40-01	L-40	Electric	UG 12 Kv Electric	220+02	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ETWD	40-02	L-40	Water	21" CML&CSP Water	220+60	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	40-03	L-40	Telephone	UG Telephone Conduit	220+63	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	40-04	L-40	Electric	UG Electric	220+82	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
CC	40-05	L-40	Fiber Optic	UG Fiber Optic	220+85	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	40-06	L-40	Telephone	UG Telephone Conduit	220+93	Transverse					QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	40-07	L-40	Telephone	Abn Telephone Conduit	212+50	126'	LT	216+60	288'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	40-08	L-40	Electric	UG Electric	212+50	144'	LT	216+36	327'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	40-09	L-40	Telephone	UG Telephone Conduit	212+50	158'	LT	217+49	383'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	40-10	L-40	Water	AUFDENKAMP 42" Water	212+50	164'	LT	217+88	383'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	40-11	L-40	Telephone	UG Telephone Conduit	216+60	288'	LT	16+17 (El Toro)	Transverse	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	40-12	L-40	Telephone	UG Telephone Conduit	216+71	285'	LT	217+81	337'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	40-13	L-40	Telephone	Abn Telephone Conduit	212+50	136'	LT	216+37	328'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
CC	40-14	L-40	Fiber Optic	UG Fiber Optic	212+50	139'	LT	217+27	383'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	40-15	L-40	Telephone	UG Telephone Conduit	224+49	178'	RT	225+29	175'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	40-16	L-40	Telephone	UG Telephone Conduit	212+50	196'	RT	219+65	402'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	41-01	L-41	Electric	Abn UG Electric	225+50	226'	LT	231+05	163'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	41-02	L-41	Electric	OH 751 volts-22.5 Kv Electric	230+50	138'	RT	240+50	140'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
COX	41-03	L-41	Fiber Optic	OH Fiber Optic	230+50	138'	RT	240+50	140'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	41-04	L-41	Telephone	UG Telephone Conduit	225+50	173'	RT	228+08	152'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	41-05	L-41	Water	AUFDENKAMP 42" Water	225+50	435'	LT	236+50	160'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ETWD	41-06	L-41	Water	16" Water	225+50	457'	LT	236+50	181'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
COX	41-07	L-41	Fiber Optic	UG Fiber Optic	226+40	514'	LT	236+50	212'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ETWD	42-01	L-42	Water	16" ACP Water	246+67	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ETWD	42-02	L-42	Water	16" Abn Water	236+55	128'	LT	249+50	123'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	42-03	L-42	Water	AUFDENKAMP 42" Water	236+50	161'	LT	249+50	128'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ETWD	42-04	L-42	Water	16" Water	236+50	181'	LT	249+50	161'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ETWD	42-05	L-42	Sewer	10" VCP Sewer	245+75	166'	LT	249+50	169'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	42-06	L-42	Electric	UG Electric	244+72	179'	LT	249+50	169'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	42-07	L-42	Electric	OH 751v-22.5Kv Electric	236+50	139'	RT	241+09	138'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
COX	42-08	L-42	Fiber Optic	OH Fiber Optic	236+50	139'	RT	241+09	138'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	42-09	L-42	Electric	UG Electric	248+37	150'	RT	249+50	230'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ETWD	43-01	L-43	Sewer	18" VCP Sewer	250+35	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	43-02	L-43	Telephone	Abn Telephone Conduit	251+06	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	43-03	L-43	Electric	OH-66-300kV Electric	255+55	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
MCI	43-04	L-43	Fiber Optic	OH Fiber Optic	255+55	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	43-05	L-43	Gas	6" Gas in 16" Casing	255+74	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ETWD	43-06	L-43	Sewer	8" VCP Sewer	249+75	140'	RT	253+20	141'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	43-07	L-43	Sewer	8" Sewer	257+04	175'	RT	262+50	150'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	43-08	L-43	Electric	OH Electric	256+50	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ETWD	43-09	L-43	Water	16" Abn Water	249+50	123'	LT	255+82	125'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SMWD	43-10	L-43	Water	AUFDENKAMP 42" Water	249+50	128'	LT	250+70	128'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ETWD	43-11	L-43	Water	16" Water	251+19	136'	LT	262+50	140'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ETWD	43-12	L-43	Water	16" Water	249+50	161'	LT	255+65	165'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ETWD	43-13	L-43	Water	6" ACP Water	255+82	130'	LT	249+50	133'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved

Utility Management Matrix

Project Owner: Caltrans
Project No. : 1220000058 EA 12-05380
Project Description: Pavement, Lighting, OH Sign, Monitoring Stations Improvements - Location: 12-ORA-005, PM 10.0/21.3
Highway or Route: Interstate 5

Utility Conflict Matrix Developed/Revised By: Aaron Angel
Date: 10/23/2023
Reviewed By: Sepideh Sarachi
Date: 12/11/2023

Utility Owner and/or Contact Name	Conflict ID	Drawing or Sheet No.	Utility Type	Size and/or Material	Start Station	Start Offset		End Station	End Offset		Utility Investigation Level Needed	Recommended Action or Resolution	Estimated Resolution Date	Resolution Status
IRWD	43-14	L-43	Sewer	21" Sewer	256+18	164'	LT	262+50	161'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ETWD	43-15	L-43	Sewer	10" VCP Sewer	249+50	169'	LT	251+25	170'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	43-16	L-43	Electric	UG Electric	249+50	169'	LT	250+64	166'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	43-17	L-43	Electric	OH Electric	249+78	176'	LT	255+44	183'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	43-18	L-43	Electric	OH Electric	255+44	183'	LT	262+50	187'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
MCI	43-19	L-43	Fiber Optic	OH Fiber Optic	255+44	183'	LT	262+50	187'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	43-20	L-43	Telephone	UG Telephone Conduit	256+95	184'	LT	262+50	189'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	43-21	L-43	Gas	3" Gas	255+73	179'	LT	262+50	174'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	44-01	L-44	Sewer	21" Sewer in 36" Casing	263+95	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ETWD	44-02	L-44	Water	6" ACP Water	262+50	133'	LT	275+50	149'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ETWD	44-03	L-44	Water	8" ACP Water	262+50	140'	LT	275+50	153'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	44-04	L-44	Gas	3" Gas	262+50	174'	LT	275+50	195'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	44-05	L-44	Electric	OH Electric	262+50	187'	LT	275+50	200'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
MCI	44-06	L-44	Fiber Optic	OH Fiber Optic	262+50	187'	LT	275+50	200'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	44-07	L-44	Telephone	UG Telephone Conduit	262+50	189'	LT	275+50	188'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	44-08	L-44	Sewer	8" Sewer	262+50	150'	RT	263+95	181'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	45-01	L-45	Electric	UG 750v-22.5Kv Electric	283+00	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
CC	45-02	L-45	Fiber Optic	UG Fiber Optic	284+35	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	45-03	L-45	Telephone	UG Telephone Conduit	284+39	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	45-04	L-45	Electric	OH 66-300 Kv Electric	285+60	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ETWD	45-05	L-45	Water	6" ACP Water	275+50	149'	LT	277+04	157'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
ETWD	45-06	L-45	Water	8" ACP Water	275+50	153'	LT	277+04	157'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	46-01	L-46	Sewer	8" Sewer	289+50	209'	RT	303+50	217'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	46-02	L-46	Electric	UG Electric	290+00	194'	RT	298+75	203'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	46-03	L-46	Gas	2" Gas	290+63	215'	RT	303+16	219'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	46-04	L-46	Water	10" Water	290+69	220'	RT	302+92	219'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	49-01	L-49	Sewer	Abn 18" Sewer	317+06	248'	RT	329+50	203'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	49-02	L-49	Sewer	21" VCP Sewer	317+06	248'	RT	328+15	789'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	49-03	L-49	Electric	UG Electric	326+46	790'	RT	329+50	383'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
LV3/LUMEN/MCI	49-04	L-49	Fiber Optic	UG Fiber Optic	326+56	790'	RT	329+50	402'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	49-05	L-49	Water	16" Water	326+62	790'	RT	329+50	431'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	49-06	L-49	Water	16" Abn Water	328+17	588'	RT	329+50	414'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	49-07	L-49	Gas	UG Gas	327+18	790'	RT	329+50	484'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	49-08	L-49	Water	12" Recycled Water	327+44	790'	RT	329+50	518'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	50-01	L-50	Water	16" Water	329+75	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	50-02	L-50	Water	16" Abn Water	329+79	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
LV3/LUM/MCI	50-03	L-50	Fiber Optic	UG Fiber Optic	332+56	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
OTHER	50-04	L-50	Cable TV	UG Cable TV	332+67	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	50-05	L-50	Water	16" Water	332+80	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	50-06	L-50	Electric	UG Electric	332+93	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	50-07	L-50	Gas	Gas	333+16	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	50-08	L-50	Water	12" Recycled Water	333+46	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	50-09	L-50	Telephone	UG Telephone Conduit	333+57	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	51-01	L-51	Water	16" Water	329+75	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	51-02	L-51	Water	16" Abn Water	329+79	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
LV3/LUM/MCI	51-03	L-51	Fiber Optic	UG Fiber Optic	332+56	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
OTHER	51-04	L-51	Cable TV	UG Cable TV	332+67	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	51-05	L-51	Water	16" Water	332+80	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCE	51-06	L-51	Electric	UG Electric	332+93	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
SCG	51-07	L-51	Gas	Gas	333+16	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	51-08	L-51	Water	12" Recycled Water	333+46	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
ATT	51-09	L-51	Telephone	UG Telephone Conduit	333+57	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	51-10	L-51	Sewer	Abn 18" Sewer	329+50	203'	RT	341+20	257'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	51-11	L-51	Water	16" Water	331+57	469'	RT	342+50	313'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	51-12	L-51	Sewer	21" VCP Sewer	331+63	478'	RT	340+93	309'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	51-13	L-51	Sewer	Abn 33" Sewer	341+20	257'	RT	342+50	267'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	51-14	L-51	Sewer	33" VCP Sewer	340+93	309'	RT	342+50	267'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved

Utility Management Matrix

Project Owner: Caltrans
Project No. : 1220000058 EA 12-05380
Project Description: Pavement, Lighting, OH Sign, Monitoring Stations Improvements - Location: 12-ORA-005, PM 10.0/21.3
Highway or Route: Interstate 5

Utility Conflict Matrix Developed/Revised By: Aaron Angel
Date: 10/23/2023
Reviewed By: Sepideh Sarachi
Date: 12/11/2023

Utility Owner and/or Contact Name	Conflict ID	Drawing or Sheet No.	Utility Type	Size and/or Material	Start Station	Start Offset		End Station	End Offset		Utility Investigation Level Needed	Recommended Action or Resolution	Estimated Resolution Date	Resolution Status
The Irvine Company Irrigation Facility	52-01	L-52	Water	16" Irrigation Water	355+30	319'	LT	355+50	260'	LT	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	53-01	L-53	Sewer	Abn 33" Sewer	342+50	267'	RT	355+50	312'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	53-02	L-53	Water	16" Water	342+50	313'	RT	355+50	391'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	53-03	L-53	Sewer	33" VCP Sewer	342+50	267'	RT	355+50	399'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
The Irvine Company Irrigation Facility	54-01	L-54	Water	16" Irrigation Water	356+40	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
The Irvine Company Irrigation Facility	54-02	L-54	Water	16" Irrigation Water	362+80	Transverse	-	-	-	-	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	54-03	L-54	Sewer	Abn 33" Sewer	355+50	312'	RT	368+50	127'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	54-04	L-54	Sewer	33" VCP Sewer	356+17	389'	RT	368+50	197'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	54-05	L-54	Water	16" Water	355+50	391'	RT	357+79	353'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	55-01	L-55	Sewer	Abn 33" Sewer	368+50	127'	RT	372+74	118'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	55-02	L-55	Sewer	Abn 24" Sewer	372+74	118'	RT	379+53	124'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	55-03	L-55	Sewer	24" VCP Sewer	379+53	124'	RT	381+50	131'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved
IRWD	55-04	L-55	Sewer	33" VCP Sewer	368+50	197'	RT	379+53	124'	RT	QLD	Remain in Place	N/A	Utility Conflict Resolved

ATTACHMENT D

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: KAMRAN MAZHAR, Branch Chief
Design "F"

Attn: ALMA OLGUIN
Project Engineer

Date: December 26, 2023
Dist.: 12 Co. ORA Rte. 5 P/M: 10.0/21.3
EA: 0S3801 EFIS: 1220000058
Project Description: The project proposes to extend the life expectancy of pavement, restore the drainage system, upgrade lighting and sign panels, improve complete street elements and install monitoring stations along the I-5 corridor within the project limits.

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

Subject: Current Estimated Right of Way Costs

We have completed an updated estimate of the right of way costs for the above referenced project based on maps we received from you on 06/07/2023, 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.

[X] 4. Right of Way to complete Lic/RE/Clauses and OE Clearances prior to or at time of Certification

[ ] 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 8 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 12 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)
- [X] Utility Information Sheet
- [X] Railroad Information Sheet

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY DATA SHEET

(Form #)

4-EX-1 (REV 7/2016)
EA 0S380 (1220000058)

To: KAMRAN MAZHAR, Branch Chief
Design "F"

Date: 12/26/2023
Dist: 12 Co ORA Rte. 5 PM 10.0/21.3
EA: 0S380 E-FIS Project #: 1220000058

Attention: ALMA OLGUIN
Project Engineer

Project Description: The project proposes to extend the life expectancy of pavement, restore the drainage system, upgrade lighting and sign panels, improve complete street elements and install monitoring stations along the I-5 corridor within the project limits.

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. Railroad	$ 0	%	$ 0
B.	**Utility Relocation** (State Share)	$ 125,000	5 %	$ 135,000
C.	**Relocation Assistance**	$ 0	%	$ 0
D.	**Clearance/Demolition**	$ 0	%	$ 0
E.	**Title and Escrow**	$ 0	%	$ 0
F.	**Total Estimated Cost**	$ 125,000		$ 135,000
G.	**Construction Contract Work**	$	%	$

2. Current Date of Right of Way Certification 04/15/2025T

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

Type		Dual/Appr	Utilities		RR Involvements	
X			U4-1		None	
A			-2		C&M Agrmt	
B			-3		Svc Contract	
C			-4	1	Design	
D			U5-7	1	Const.	
E	XXXX		-8	2	Lic/RE/Clauses/	X
F	XXXX		-9	1	OE Clearance	X
					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 N/A

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. ☒

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.)

There is a Freeway Lease Area, FLA 12-ORA-005-87 near the project vicinity (PM 21.4/21.6). However, it will not be impacted by the proposed improvements.

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 12 months from the date regular appraisals can begin to project certification.

In any event, RW Maps will require 8 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 Right of Way Estimator	Date	12/26/2023
Railroad:	Name	ANTONIO AVILA Right of Way Railroad Coordinator	Date	12/26/2023
Utilities:	Name	SCOTT HANSEN Right of Way Utility Estimator	Date	12/26/2023
Airspace:	Name	JAMES THORNBURG Right of Way Airspace Coordinator	Date	12/26/2023
State/Federal Lands:	Name	KELLY BERNARDINO Right of Way Estimator	Date	12/26/2023

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

12/26/2023
Date

RAILROAD INFORMATION SHEET

1. Describe railroad facilities or right of way affected.

   SR-005: SCRRA/Metrolink – El Toro OH – Bridge #55-221 L/R – PM 16.36/16.40 – City of Laguna Hills

2. When branch lines or spurs are affected, would acquisition and/or payment of damages to business and/or industries served by the railroad facility be more cost effective than construction of a facility to perpetuate the rail service? Yes _____ No __X__ (If yes, explain)

3. Discuss types of agreements and right required from the railroads. Are grade crossings requiring service Contracts or grade separations requiring construct and maintenance agreements involved?

   Office of Engineer Railroad Clearance Memo is required which contains railroad short clauses that must be inserted into the Specifications.

4. Remarks (non-operating railroad right of way involved?):

   None

5. PMCS Input Information

RR Involvements	
None	
C&M Agreement	
Service Contract	
Design	
Const.	
Lic/RE/Clauses	X
OE Clearance	X

Prepared By:

Antonio Avila
ANTONIO AVILA
Right of Way Railroad Coordinator

12/26/2023
Date

UTILITY INFORMATION SHEET

1. Name of utility companies involved in project:

   Santa Margarita Water District - Water

2. Types of facilities and agreements required:

   Types of Facilities:
   SMWD-W: Water Valve

   Types of Agreements:
   A Notice to Owner and possible Utility Agreement are required to perform utility relocation work for one Air Vac Water Valve.

3. Is any facility a longitudinal encroachment in existing or proposed access controlled right of way? Explain.

   No

   Disposition of longitudinal encroachment(s):
   ☐ Relocation required.
   ☐ Exception to policy needed.
   ☐ Other. Explain.

4. Additional information concerning utility involvements on this project, i.e., long lead-time materials, growing or species seasons, customer service seasons (no transmission tower relocations in summer).

   None

5. PMCS Input Information
   Total estimated cost of State's obligation for utility relocation on this project:
   $ 135,000.00

   Utility Involvements:

U4-1	_____	(Total number of expected owner expense involvements)
-2	_____	(Total number of expected State expense involvements – conventional highway, no Federal aid)
-3	_____	(Total number of expected State expense involvements – freeway, no Federal aid)
-4	1	(Total number of expected State expense involvements – conventional or freeway, with Federal aid)
U5-7	1	(Total number of expected utility verifications, which will not result in involvements)
-8	2	(Total number of expected utility verifications – 50% will result in involvement and 50% will not)
-9	1	(Total number of expected utility verifications, which will result in involvements)

Prepared By:

SCOTT HANSEN
Right of Way Utility Estimator

12/26/2023
Date

ATTACHMENT E

Project Cost Estimate

PROJECT REPORT COST ESTIMATE

EA: 0S3800 PID: 1220000058

EA: 0S3800

PID: 1220000058

District-County-Route: 12-Ora-5

PM: 10.0-21.3

Type of Estimate : Project Report

Program Code : Various with SHOPP ID 22135

Project Limits : I-5 Between El Horno St and I-405 Connector

Project Description: The project proposes to extend the life expectancy of pavement, restore the drainage system, upgrade lighting, improve complete street elements and install monitoring stations along the I-5 corridor within the project limits.

Scope : Pavement rehabilitation, Drainage Improvement, lighting Imrpvement, Roadside Safety Improvement, Sign Panel Replacement, Complete Street Elements and Census Stations

Alternative : Alternative # 1

SUMMARY OF PROJECT COST ESTIMATE

	Current Year Cost	Escalated Cost
TOTAL ROADWAY COST	$ 36,855,600	$ 43,688,423
TOTAL STRUCTURES COST	$ -	$ -
SUBTOTAL CONSTRUCTION COST	$ 36,855,600	$ 43,600,000
TOTAL OF CONSTRUCTION CAPITAL	$ 37,000,000	$ 43,600,000
TOTAL RIGHT OF WAY COST	$ 125,000	$ 135,000
TOTAL CAPITAL OUTLAY COSTS	$ 37,125,000	$ 43,735,000
PA/ED SUPPORT	$ 4,550,000	$ 4,550,000
PS&E SUPPORT	$ 5,555,000	$ 5,555,000
RIGHT OF WAY SUPPORT	$ 195,000	$ 195,000
CONSTRUCTION SUPPORT	$ 6,138,164	$ 6,353,000
TOTAL SUPPORT COST	$ 16,439,000	$ 16,653,000
TOTAL PROJECT COST	$ 53,600,000	$ 60,400,000 *

Programmed Amount

	Month	Year
Date of Estimate (Month/Year)	5	2023
Estimated Construction Start (Month/Year)	5	2026
Number of Working Days =	315	
Estimated Mid-Point of Construction (Month/Year)	1	2027
Estimated Construction End (Month/Year)	8	2027

Number of Plant Establishment Days

Estimated Project Schedule

PID Approval	6/30/2021
PA/ED Approval	1/30/2023
PS&E	1/1/2025
RTL	3/1/2025
Begin Construction	8/1/2027

Reviewed by	Joe Sawtelle	1/2/2024	714-708-6881
		Date	**Phone**
Approved by Project Manager	Ayman Salama	1/2/2024	714-708-6871
	Project Manager	**Date**	**Phone**

I. ROADWAY ITEMS SUMMARY

	Section		PR Cost
1	**Earthwork**	$	134,000
2	**Pavement Structural Section**	$	15,139,400
3	**Drainage**	$	2,231,200
4	**Specialty Items**	$	20,800
5	**Environmental**	$	751,200
6	**Traffic Items**	$	4,053,900
7	**Detours**	$	60,000
8	**Minor Items**	$	1,159,900
9	**Roadway Mobilization**	$	2,435,800
10	**Supplemental Work**	$	1,696,900
11	**State Furnished**	$	1,430,200
12	**Time-Related Overhead**	$	2,435,800
13	**Total Roadway Contingency**	$	5,306,500
	TOTAL ROADWAY ITEMS	**$**	**36,855,600**
14	**Structures**		$0
	Roadway + Structures	**$**	**36,855,600**

Estimate Prepared By : Sepideh Sarachi 9/26/2023

Name and Title Date

Estimate Reviewed By :

Name and Title Date

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.

EA: 0S3800 PID: 1220000058

SECTION 1: EARTHWORK

Item code		Unit	Quantity		Unit Price ($)			Cost
100100	Develop Water Supply	LS	1	x	10,000.00	=	$	10,000
152320	Lead Compliance Plan	LS	1	x	10,000.00	=	$	10,000
170103	Clearing & Grubbing	LS	1	x	25,000.00	=	$	25,000
190101	Roadway Excavation	LS	1	x	89,000.00	=	$	89,000
					TOTAL EARTHWORK SECTION ITEMS			**$ 134,000**

SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code		Unit	Quantity		Unit Price ($)			Cost
250401	Class 4 Aggregate Subbase	CY	140	x	150.00	=	$	21,000
260203	Class 2 Aggregate Base	CY	2,230	x	100.00	=	$	223,000
280010	Rapid Strength Concrete Base	CY	1,640	x	500.00	=	$	820,000
290201	Asphalt Treated Permeable Base	CY	20	x	400.00	=	$	8,000
390132	Hot Mix Asphalt (Type A)	TON	350	x	380.00	=	$	133,000
390137	Rubberized Hot Mix Asphalt (Gap Graded)	TON	10,030	x	160.00	=	$	1,604,800
397005	Tack Coat	TON	25	x	1,500.00	=	$	37,500
398200	Cold Plane Asphalt Concrete Pavement	SQYD	102,390	x	6.00	=	$	614,340
401055	Jointed Plain Concrete Pavement (RSC)	CY	16,400	x	450.00	=	$	7,380,000
418006	Remove Concrete Pavement	CY	16,400	x	130.00	=	$	2,132,000
420102	Groove Existing Concrete Pavement	SQYD	50,000	x	5.00	=	$	250,000
420201	Grind Existing Concrete Pavement	SQYD	50,000	x	8.00	=	$	400,000
730020	Minor Concrete (Curb) (CY)	CY	140	x	1,300.00	=	$	182,000
731519	Minor Concrete (Stamped Concrete)	SF	2,140	x	25.00	=	$	53,500
731521	Minor Concrete (Sidewalk)	CY	85	x	1,000.00	=	$	85,000
731710	Remove Concrete Curb (LF)	LF	2,700	x	25.00	=	$	67,500
731780	Remove Concrete Sidewalk (SQYD)	SQYD	720	x	75.00	=	$	54,000
846012	Thermoplastic Crosswalk and Pavement Marking (Enhanced Wet Night Visibility)	SF	3,100	x	7.00	=	$	21,700
XXXXX	Junipero Serra Bike Path Project	EA	1	x	1,880,000.00	=	$	1,880,000
					TOTAL PAVEMENT STRUCTURAL SECTION ITEMS			**$ 15,946,400**

Effective immediately, districts must input estimated item quantities in blue text above in the PRSM database for the pay items listed in the Design Memo, dated April 9, 2018, when Project Report is approved (Milestone 200). Link to Desgin Memo.

SECTION 3: DRAINAGE

Item code		Unit	Quantity		Unit Price ($)			Cost
710132	Remove Culvert	LF	815	x	120.00	=	$	97,800
710240	Modify Inlet	EA	5	x	7,500.00	=	$	37,500
641113	24" PLASTIC PIPE	LF	710	x	200.00	=	$	142,000
665023	24" CORRUGATED STEEL PIPE (.079" THICK)	LF	105	x	240.00	=	$	25,200
710384	24" Cured-In-Place Pipeliner	LF	2,340	x	280.00	=	$	655,200
710388	30" Cured-In-Place Pipeliner	LF	95	x	300.00	=	$	28,500
	Trash Capture Housing	EA	8	x	65,000.00	=	$	520,000
	Trash Net	EA	9	x	45,000.00	=	$	405,000
	Pipe Riser Trash Retrofit	EA	1	x	20,000.00	=	$	20,000
	Gross Solid Removal Devices	EA	2	x	150,000.00	=	$	300,000
						TOTAL DRAINAGE ITEMS	**$**	**2,231,200**

SECTION 4: SPECIALTY ITEMS

Item code		Unit	Quantity		Unit Price ($)			Cost
141120	Treated Wood Waste	LB	2,600	x	1.00	=	$	2,600
839752	Remove Guardrail	LF	130	x	22.00	=	$	2,860
832007	Midwest Guardrail System (Wood Post)	LF	100	x	75.00	=	$	7,500
839584	Alternative In-line Terminal System	EA	1	x	6,000.00	=	$	6,000
839581	End Anchor Assembly (Type SFT)	EA	1	x	1,800.00	=	$	1,800
						TOTAL SPECIALTY ITEMS	**$**	**20,800**

Effective immediately, districts must input estimated item quantities in blue text above in the PRSM database for the pay items listed in the Design Memo, dated April 9, 2018, when Project Report is approved (Milestone 200). Link to Desgin Memo.

SECTION 5: ENVIRONMENTAL

5A - ENVIRONMENTAL MITIGATION

Item code		Unit	Quantity		Unit Price ($)			Cost		
	Biological Mitigation (on-site)	LS	1	x	5,000.00	=	$	5,000		
80010X	Bird/Bat Protection	LS	1	x	5,000.00	=	$	5,000		
130670	Study Survey	LS	1	x	5,000.00	=	$	5,000		
								Subtotal Environmental Mitigation	*$*	*15,000*

5B - LANDSCAPE AND IRRIGATION

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

5D - NPDES

Item code		Unit	Quantity		Unit Price ($)			Cost		
130200	Prepare WPCP	LS	1	x	1,200.00	=	$	1,200		
130100	Job Site Management	LS	1	x	200,000.00	=	$	200,000		
130620	Temporary Drainage Inlet Protection	LS	1	x	10,000.00	=	$	10,000		
130730	Street Sweeping	LS	1	x	25,000.00	=	$	25,000		
XXXX	Temporary Construction Site BMP	LS	1	x	500,000.00	=	$	500,000		
								Subtotal NPDES	*$*	*736,200*

								TOTAL ENVIRONMENTAL	**$**	**751,200**

Supplemental Work for NPDES

066595	Water Pollution Control Maintenance Sharing*	LS	1	x	5,000.00	=	$	5,000		
066596	Additional Water Pollution Control**	LS	1	x	1,200.00	=	$	1,200		
								Subtotal Supplemental Work for NDPS	*$*	*6,200*

*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
8609XX	Traffic Monitoring Station (Type X)	LS	1	x	105,000.00	=	$	105,000
872135A	Traffic Census Station Systems	LS	1	x	480,000.00	=	$	480,000
87213X	Modifying Lighting and Sign Illumination Systems	LS	1	x	475,000.00	=	$	475,000
872133	Modifying Traffic Signal and Lighting Systems	LS	1	x	250,000.00	=	$	250,000

Subtotal Traffic Electrical $ *1,310,000*

6B - Traffic Signing and Striping

Item code		Unit	Quantity		Unit Price ($)			Cost
141101	Remove Yellow Painted Traffic Stripe (Hazardous Waste)	LF	4,000	x	1.00	=	$	4,000
56021X	Install and Furnish Versatile Sign Structure (Truss)	EA	1	x	200,000.00	=	$	200,000
568060	Modify Sign Structure	EA	6	x	15,000.00	=	$	90,000
810230	PAVEMENT MARKER (RETROREFLECTIVE)	EA	484	x	6.20	=	$	3,001
820350	Remove Sign From Sign Frame	EA	20	x	1,500.00	=	$	30,000
820700	Furnish Formed Panel Sign (Overhead)	SQFT	220	x	29.55	=	$	6,501
82071X	Furnish Laminated Panel Sign	SQFT	4,500	x	25.00	=	$	112,500
820890	Install Sign Panel on Existing Frame	SQFT	4,500	x	15.00	=	$	67,500
840516	Thermoplastic Pavement Marking (Enhanced Wet Night Visibility)	SQFT	10,100	x	4.50	=	$	45,450
840583	6" TWO-COMPONENT PAINT TRAFFIC STRIPE	LF	24,200	x	3.00	=	$	72,600
846007	6" Thermoplastic Traffic Stripe (Enhanced Wet Night Visibility)	LF	25,000	x	2.00	=	$	50,000
846020	Remove Painted Traffic Stripe	LF	21,000	x	1.00	=	$	21,000

Subtotal Traffic Signing and Striping $ *702,552*

6C - Traffic Management Plan

Item code		Unit	Quantity		Unit Price ($)			Cost
120090	Construction Area Signs	LS	1	x	75,000.00	=	$	75,000
120204	Portable Radar Speed Feedback Sign System Day	LS	1	x	105,000.00	=	$	105,000
120100	Traffic Control System	LS	1	x	1,650,000.00	=	$	1,650,000
120320	TEMPORARY BARRIER SYSTEM	LF	2,250	x	45.00	=	$	101,250
128652	Portable Changeable Message Sign	LS	1	x	110,000.00	=	$	110,000

Subtotal Traffic Management Plan $ *2,041,250*

6C - Stage Construction and Traffic Handling

Item code		Unit	Quantity	Unit Price ($)	Cost

Subtotal Stage Construction and Traffic Handling $ -

TOTAL TRAFFIC ITEMS **$ 4,053,900**

SECTION 7: DETOURS

Includes constructing, maintaining, and removal

Item code		Unit	Quantity		Unit Price ($)		Cost	
120149	Temporary Pavement Marking (Paint)	SQFT	20,000	x	3.00	= $	60,000	

TOTAL DETOURS **$ 60,000**

SUBTOTAL SECTIONS 1 through 7 $ 23,197,500

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				5.0%	$	1,159,875	
	Total of Section 1-7	$	23,197,500	x	5.0%	= $	1,159,875	

TOTAL MINOR ITEMS **$ 1,159,900**

SECTIONS 9: ROADWAY MOBILIZATION *

Item code								
999990	Total Section 1-8	$	24,357,400	x	10%	= $	2,435,740	

TOTAL ROADWAY MOBILIZATION **$ 2,435,800**

SECTION 10: SUPPLEMENTAL WORK

Item code		Unit	Quantity		Unit Price ($)		Cost	
066670	Payment Adjustments For Price Index Fluctuations	LS	1	x	92,000.00	= $	92,000	
066070	Maintain Traffic	LS	1	x	500,000.00	= $	500,000	from TMP Cost
066015	Federal Trainee Program	LS	1	x	14,400.00	= $	14,400	
066610	Partnering	LS	1	x	50,000.00	= $	50,000	
090205	Dispute Resolution Board On-Site Meeting	EA	8	x	6,000.00	= $	48,000	calc
060210	Hourly Off-Site Dispute Resolution Board Related Tasks	HR	60	x	200.00	= $	12,000	
	*Cost of **NPDES** Supplemental Work specified in Section 5D*					= $	6,200	
	Total Section 1-8	$	24,357,400		4%	= $	974,296	

TOTAL SUPPLEMENTAL WORK **$ 1,696,900**

*Note: For Project less than 50 Working Days Mobilization is not required as a separate contract item, however contract item prices should take into consideration mobilization as part of the price.
If the building portion of the project is greater than 50% of the total project cost, then mobilization is not included.

SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price ($)		Cost
066105	Resident Engineers Office	LS	1	x	333,000.00	=	$333,000
066063	Traffic Management Plan - Public Information	LS	1	x	160,000.00	=	$160,000
066062	COZEEP Contract	LS	1	x	450,000.00	=	$450,000

Total Section 1-8	$	24,357,400	2%	= $	487,148

TOTAL STATE FURNISHED	**$1,430,200**

SECTION 12: TIME-RELATED OVERHEAD

Total of Roadway and Structures Contract Items excluding Mobilization	$24,357,400	(used to calculate total TRO)
Total Construction Cost (excluding TRO and Contingency)	$29,920,300	(used to check if project capital cost is greater than $5 million including contingency)

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

Item code		Unit	Quantity		Unit Price ($)		Cost
090100	Time-Related Overhead	WD	315	X	$7,733	=	$2,435,800

TOTAL TIME-RELATED OVERHEAD	**$2,435,800**

SECTION 13: ROADWAY CONTINGENCY*

Risk Amount from Risk Register	(for Known Risks)			0%		
Additional or Residual Contingency	(for Unknown/Undefined Risks)			16%		$5,306,400
Total Section 1-12	$	32,356,100	x	**16%**	=	$5,306,401

TOTAL CONTINGENCY*	**$5,306,500**

II. STRUCTURE ITEMS

	Bridge 1		Bridge 2		Bridge 3
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Bridge Name	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Bridge Number	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Structure Type	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Bridge Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Cost Per Square Foot	$0		$0		$0
COST OF EACH					

	Bridge 4		Bridge 5		Bridge 6
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Bridge Name	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Bridge Number	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Structure Type	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Bridge Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Cost Per Square Foot	$0		$0		$0
COST OF EACH					

SUBTOTAL COST OF BRIDGES		**$0**
SUBTOTAL COST OF BUILDINGS		**$0**
Time-Related Overhead	10%	**$0**
STRUCTURES MOBILIZATION	10%	**$0**
STRUCTURES CONTINGENCY*	25%	**$0**
SUBTOTAL COST OF STRUCTURES		**$0**

Estimate Prepared By: _____ _____

XXXXXXXXXXXXXXXX ------ Division of Structures Date

EA: 0S3800 PID: 1220000058

III. RIGHT OF WAY

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

				Current Value Future Use		*Escalated Value*
A)	A1)	Acquisition, including Excess Land, Fees, Damages, Goodwill	$	0	$	0
	A2)	Acquisition of Offsite Mitigation	$	0	$	0
	A3)	Railroad Acquisition	$	0	$	0
		Project Permit Fees	$	0	$	0
B)	B1)	Utility Relocation (State Share)	$	125,000	$	135,000
	B2)	Potholing (Design Phase)	$	0	$	0
C)		Utility - Advance Engineering Estimate (Encumber with State Only Funds)	$	0	$	0
D)		RAP and/or Last Resort Housing	$	0	$	0
E)		Clearance & Demolition	$	0	$	0
F)		Relocation Assistance (RAP and/or Last Resort Housing Costs)	$	0	$	0
G)		Title and Escrow	$	0	$	0
H)		Environmental Review	$	0	$	0
I)		Condemnation Settlements 0%	$	0	$	0
J)		Design Appreciation Factor 0%	$	0	$	0
K)		Utility Relocation (Construction Cost)	$	0	$	0

L)	**TOTAL RIGHT OF WAY ESTIMATE**	**$125,000**
M)	**TOTAL R/W ESTIMATE: Escalated**	**$135,000**
N)	**RIGHT OF WAY SUPPORT**	**$195,000**

Support Cost Estimate Prepared By	Kelly Bernardino	Right of Way Estimator[1]	Phone
Utility Estimate Prepared By	Scott Hansen	Utility Coordinator[2]	Phone
R/W Acquisition Estimate Prepared By	Kelly Bernardino	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 F

Environmental Document

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

Project Information

Project Name (if applicable): 12-0S380, RTE 5m RT 74 to RT 405 MULTI-ASSET PROJECT

DIST-CO-RTE: 12-ORA-5 **PM/PM:** 10.0/21.3

EA: 0S380/1222000058 **Federal-Aid Project Number:** NA

Project Description

The proposed undertaking includes work at various locations within the Project Post Mile Limits: Replacement of Concrete Slabs, Grind and Groove, and Cold Plane Existing Pavement; Service and Restore Drainage Systems to Improve Flow Capacity; Service and Replace Existing Light Fixtures and Poles; Relocate Selected Turn-Outs and Service Access Roads for Maintenance Vehicles; Replace Existing Overhead Signs and Remove Two Existing Sign Poles; Install Lighting and Striping at Crosswalks On Ramps; and Install Traffic Data Collection Stations along Interstate 5 between Post Miles 10.0 and 21.4 in Orange County. Continue page 3:

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** 1 (c). (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

Alben Phung		9/21/23
Print Name	Signature	Date

Project Manager

BARBARA MCGAHEY		9/22/23
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) (9A)**
- ☐ **23 CFR 771.117(d): activity (d)(Enter activity number)**
- ☐ **Activity Enter activity number 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

Alben Phung		9/21/23
Print Name	Signature	Date

Project Manager/ DLA Engineer

BARBARA MCGAHEY		9/22/23
Print Name	Signature	Date

Date of Categorical Exclusion Checklist completion (if applicable): NA
Date of Environmental Commitment Record or equivalent: 8/31/2023

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:

The work will be done in the cities of Irvine, San Juan Capistrano, Mission Viejo, Laguna Hills, Lake Forest, and unincorporated areas in Orange County. All work will be performed on existing pavement, bridges, and previously landscaped ground. All work will take place in the Caltrans Right-of-Way. The project is state and federally funded.

Purpose: This project propose is to extend life expectancy of pavement, restore drainage system, upgrade lighting and conduits, improve accessibility and lighting to pedestrian/bicyclists' facilities, and install traffic census stations along the I-5 corridor within the project limits.

Need: The need is to improve mobility.

There are no significant environmental consequences anticipated with the proposed project. In addition to the measures given in the Caltrans Standard Specifications, measures related to construction noise, air pollution control, water pollution control, erosion, cultural resources, biological resources, and any subsequent requirements will be implemented as project features to the proposed project.

The Environmental Division has evaluated this non-capacity increasing project for greenhouse gas emissions and other climate change impacts. It has determined that the project would not cause a significant impact on GHG emissions because it is a BMMN non transportation project that has the following reduction strategies considered: Reduction of construction waste, energy efficient construction methodologies, fuel efficient measures for equipment and traffic management, local materials be used (where feasible/available) to reduce GHG emissions, reduce frequency of vehicle idle times.

GHG	TOG	ROG	COG	NOx	PM10	PM2.5	CO2	CH4	N20	BC	HFC
Daily Avg.	7.111	6.395	39.949	43.752	11.624	3.839	10293	0.265	0.627	0.843	0.707

These are the daily averages; there is no significance for Green House Gases.

NONE

No significant environmental consequences are anticipated with the proposed project. However, please find the attached Environmental Commitment Record (ECR) with lists all the special measures that must be met and documented throughout the project.

Technical studies completed.
Air Quality Study memo (CT, DEA, Caraig, 4/17/2023)
Biological resources memo (CT, DEA, Sato, 5/3/2023)
Cultural resources memo (CT, DEA, Everson, 6/1/2023)
Hazardous Waste email (CT, DEA, Caraig, 4/17/2023)
Noise Study email (CT, DEA, Caraig, 4/17/2023)
Water Quality memo (CT, DEA, Salas, 7/11/2023)

ATTACHMENT G

Storm Water Data Report Cover Sheet

Long Form – Stormwater Data Report

Dist-County-Route: 12-ORA-5
Post Mile Limits: 10.000/21.304
Type of Work: Pavement Rehabilitation
Project ID (EA): 1220000058-EA 12-0S3800

Phase: ☐ PID ☒ PA/ED ☐ PS&E

Applicable Caltrans Post Construction Treatment Requirement: 2012 ☒ 2022 ☐
Regional Water Quality Control Board(s): Santa Ana (Region 8) and San Diego (Region 9)
Total Disturbed Soil Area: 0.73 acres PCTA: 0.00 acres
Alternative Compliance (acres): 0 acres ATA 2 (50% Rule)? Yes ☐ No ☒
Estimated Const. Start Date: 5/1/26 Estimated Const. Completion Date: 8/10/27
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: TBD 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.

Sepideh Sarachi, Registered Project Engineer — 11/15/2023 Date

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

Barbara McGahey, Project Manager — 11/15/2023 *Date*

Hilton Briggs, Designated Maintenance Representative — 11/16/2023 *Date*

Eric Dickson, Designated Landscape Architect Representative — 11/16/23 *Date*

Arvin Cuevas, Branch Chief of the NPDES Branch — 11/16/2023 *Date*

[Stamp Required at PS&E only]

ATTACHMENT H

Transportation Management Plan Data Sheet

TMP ESTIMATE

TRANSPORTATION MANAGEMENT PLAN DATA SHEET

(Preliminary TMP Elements and Costs)

CO/RTE/PM: ORA / 5 / PM 10/21.304 EA#12- 0S380 ID#1220000058

Project Limit: In Orange County in San Juan Capistrano, Mission Viejo, Laguna Hills, Lake Forest, Irvine and unincorporated areas between El Horno Street and Interstate 405 (I-405) connector.

Project Description: Extend the life expectancy of pavement, restore drainage system, upgrade lighting, improve roadside access roads, replace overhead (OH) signs panels, improve complete street elements and install monitoring stations along the I-5 corridor.

1 PUBLIC INFORMATION

066063	☑	a.	Brochures and Mailers		80,000
	☐	b.	Press Release		
	☐	c.	Paid Advertising		
	☐	d.	Public Information Center/Kiosk		
	☐	e.	Public Meeting/Speakers Bureau		
	☐	f.	Telephone Hotline		
	☐	g.	Internet		
	☑	h.	Traffic Management Plan-Public Information		80,000
Subtotal			160,000		

2 MOTORISTS INFROMATION STRATEGIES

	☑	a.	Portable Changeable Message Signs (EA)	(PCMS)	
128652	☑	b.	Portable Changeable Message Signs (LS)	(PCMS)	110,000
120090	☑	d.	Ground Mounted Signs		75,000
120204	☑	d.	Portable Radar Speed Feedback Sign System Day		105,000
	☐	e.	Highway Advisory Radio		
	☐	f.	Caltrans Highway Information Network	(CHIN)	
	☐	g.	Others	TBD	
Subtotal			290,000		

3 INCIDENT MANAGEMENT

	066062	☑	a.	Construction Zone Enhanced Enforcement Program (COZEEP)	450,000
		☐	b.	Freeway Service Patrol	
		☐	c.	Helicopter Surveillance	
		☐	d.	Traffic Surveillance Stations (Portable CCTV and traffic monitoring stations)	
		☐	e.	Others	
		☐	f.	Others	
		☐	g.	Others	
	Subtotal			450,000	

4 CONSTRUCTION STRATEGIES

	120100	■	a.	Traffic Control System		1,650,000
		□	b.	Reversible Lanes		
		□	c.	Total Facility Closure		
		□	d.	Contra Flow		
		□	e.	Truck Traffic Restrictions		
		□	f.	Connector and Ramp Closures		
		□	g.	Incentive and Disincentive		
		□	h.	Moveable Barrier		
		□	i.	Temporary Radar Speed Feedback Sign System		
	066070	■	j.	Others/ Maintain Traffic		500,000
	Subtotal			2,150,000		

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	
	Subtotal			0	

6 ALTERNATIVE ROUTE STRATEGIES

		□	a.	Add Capacity to Freeway Connector	
		□	b.	Street Improvement (traffic signal timing modification and striping modification)	
		□	c.	Traffic Control Officers	
		■	d.	Parking Restrictions	
		■	e.	Others	
	Subtotal			0	

7 OTHER STRATEGIES

		□	a.	Application of New Technology	
		□	b.	Others TBD	
	Subtotal			0	

TOTAL ESTIMATED COST OF TMP ELEMENTS **$3,050,000**

Project Notes:

Assumptions/Comments:

1 Entire Project will take approximately **300** working days to construct at an approximate cost of **$44,500,000**

2 Current dollar values used. Inflation was not factored into the estimate.

3 The estimate for Traffic Control System which includes cost of traffic handling for all mainline lane closures, ramp lane closures and shoulder closures is: **$1,650,000**

4 Portable CMS specified for this project by this estimate are designated for congestion relief as outlined by Deputy Directive, DD-60-R-2. Portable CMS required for other purposes should be included under other specifications.

5 The COZEEP specified for this project by this estimate is designated for congestion relief as outlined by Deputy Directive,DD-60-R-2. The COZEEP required for other purposes should be included under other specifications.

Note1:
As outlined in Deputy Directive 60-R-2, this TMP is a living document, subject to change as required by changing circumstances. If there is material change to the project scope which will affect the function or adequacy of the TMP, then changes to the TMP must be addressed. If traffic conditions at the project site demonstrate that TMP elements need to b adjusted to adequately address congestion, then the TMP shall be altered accordingly.

Note2:
Hospitals with emergency services and fire stations that may require access through work zones at all hours should be accommodated. Schools, major venues, shopping malls, and other heavily utilized areas should also be notified of construction activities that may impact their services. These services and businesses should be notified and coordinated with the use of the Public Information strategies.

ATTACHMENT I

SHOPP Performance Measures Report

SHOPP Project - Accomplishment - Performance Measures - Benefits

District: 12 **Tool ID:** 22135 **Project ID:** 1220000058 **EA:** 0S380 **Co-Rte-PM:** ORA-005-10/21.3 (Primary Location)

Res In PID WP: 04/17/20 **Project Manager:** Barbara McGahey

Save to Excel

☐ Bridge ☑ Pavement ☑ Drainage ☐ Facilities ☑ Signs and Lighting ☑ Mobility ☑ Roadside ☑ Bicycle and Pedestrian Infrastructure ☐ 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	B26	Concrete Pavement Minor Rehab (CAPM)	Pavement Class I	Lane Miles	136.428	32.668	102.591	1.169		136.428							
2	C01	Replace/Install Culverts (201.151)	No Performance Objective in the SHSMP	Each	3.0		1.000	2.000		3.000							
3	C02	Replace/Install Culverts (201.151)	Drainage Restoration	Linear Feet	292.6		95.000	197.600		292.600							
4	C05	Cure in Place Line Culvert (201.151)	No Performance Objective in the SHSMP	Each	1.0			1.000		1.000							
5	C06	Cure in Place Line Culvert (201.151)	Drainage Restoration	Linear Feet	431.12			431.120		431.120							
6	C11	Energy Dissipation & Other Element {RSP,DI, FES etc.} (201.151)	No Performance Objective in the SHSMP	Each	1.0			1.000		1.000							RSP
7	E24	Lighting - Rehabilitation (201.170)	Lighting Rehabilitation	Each	34.0			34.000		34.000							
8	E26	Sign Panel Replacement	Sign Panel Replacement	Each	38.0			38.000		38.000							
9	E55	Proactive Safety Vehicles	Proactive Safety	Annual Fatal & Serious Injury Collisions	0.47			0.470		0.470							From SPW, Item E26 = 0.37 and Item G07 = 0.10 for a total of 0.47
10	F01	Census Station (201.315)	No Performance Objective in the SHSMP	Each	4.0				4.0								
11	F45	TMS Structure Component	Transportation Management System Structures	Each	4.0				4.0								
12	F46	TMS Technology Component	Transportation Management Systems	Each	4.0				4.0								
13	G07	Worker Safety - Safe Access	Roadside Safety Improvements	Locations	15.0			15.000		15.000							
14	H05	Bikeway Class I	No Performance Objective in the SHSMP	Linear Feet	650.0				650.0								IIJA Formula funding for Complete Streets - located on Junipero Serra
15	H06	Bikeway Class II	No Performance Objective in the SHSMP	Linear Feet	4250.0				4250.0								IIJA Formula funding for Complete Streets - 850 LF located on Junipero Serra and 3400 LF on Oso Pkwy
16	H10	Conflict Zone Green Paint	No Performance Objective in the SHSMP	Each	4.0			4.000		4.000							Proposed Complete Streets recommendation
17	H12	Enhanced Crosswalk Visibility	No Performance Objective in the SHSMP	Each	7.0			7.000		7.000							Proposed Complete Streets recommendation - continental striping
18	H13	Crosswalks	No Performance Objective in the SHSMP	Linear Feet	144.0				144.0								Proposed Complete Streets recommendation - crosswalk restriping
19	H17	Bike and Pedestrian Lighting	No Performance Objective in the SHSMP	Each	8.0			8.000		8.000							Proposed Complete Streets recommendation
20	H32	Is any Location Within the Project Limits Ped/Bike Accessible?	No Performance Objective in the SHSMP	Yes/No	No												on freeway mainline
21	H63	Bicycle and Pedestrian Infrastructure	Bicycle and Pedestrian Infrastructure	Linear Feet	5044.0				5044.0								

ATTACHMENT J

Risk Register

STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION

RISK REGISTER CERTIFICATION (ACCOUNTABILITY CHECKPOINTS)

Form PM-XX (Rev. 05/15/18)

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

Total Capital Cost: $46,000K

District 12 – EA/Project ID/Route/Post mile: 12-0S380 / 1220000058 / Rte 05 / PM 10.0 to 21.3
Project Nickname: Rte 5, Multi-Asset Project
Project Description: In Orange County at Interstate 5 (I-5) between El Horno Street and Interstate 405 (I-405) connector, to extend the life expectancy of pavement, restore drainage system, upgrade lighting, improve roadside access roads, replace overhead (OH) signs panels, improve complete street elements and install monitoring stations along the I-5 corridor within the project limits.
Manager (PM): Barbara Mcgahey

☐ 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:	Barbara Mcgahey	Barbara McGahey	12/31/20
Deputy District Director, Planning:	for Lan Zhou	Grace Tell	12/31/20
Office Chief, Design:	Matt Cugini	Matthew Cugini	1-4-2021
Office Chief, Project Management:	Monica Benavides	Monica Benavides	1-21-2020

PA&ED [M200]	Print	Signature	Date
Project Manager:	Barbara McGahey	Barbara McGahey (Nov 22, 2023 08:56 PST)	11/22/2023
Deputy District Director, Enviro:	Christopher Flynn	Chris Flynn	11/08/2023
Office Chief, R/W:	Jennifer Pham	J Pham	11/08/2023
Office Chief, Design:	Andrew Oshrin	Andrew Oshrin	11/01/2023
Office Chief, Project Management:	Barbara McGahey	Barbara McGahey (Nov 15, 2023 08:26 PST)	11/15/2023

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 12-0S380, SB-1 Asset Management

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

Risk Checkpoint:	PA&ED
Date:	5/22/2023
Project Nickname:	SB-1 Asset Management
EA:	12-0S380
Co-Rt, Post Miles:	ORA-5-10,000/21,304
Project Manager:	Barbara Mcgahey
FY & Program (SHOPP or STIP):	2022 SHOPP
Capital Costs:	$46,000k
Support Costs:	$12,201k
Total Costs:	$58,201k
RTL Target:	5/15/2025

Phase	Cost Contingency Range $k			Schedule Contingency Range (Wkg Days)		
	Optimistic	PERT	Pessimistic	Optimistic	PERT	Pessimistic
0-PA&ED	$3	$7	$12	18	36	54
1-PS&E	$3	$8	$12	18	45	108
2-RW Sup	$0	$0	$0	0	0	0
3-Con Sup	$0	$0	$0	0	0	0
Support Contingency	$6	$15	$24	36	81	162
9-RW Cap	$0	$0	$0	0	0	0
4-Con Cap	$70	$4,407	$10,138	42	92	141
Capital Contingency	$70	$4,407	$10,138	42	92	141
Total Contingency	$76	$4,422	$10,161	78	173	303

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	1	Threat	Environmental	Impacts to Biological Resources	If the project impacts sensitive biological resources (e.g. riparian site, wetlands, State or federally listed wildlife species), additional studies, surveys, resource agency permits, and compensatory mitigation will be required.	If work occurs within Oso Creek and/or Aliso Creek areas, a Caltrans Biologist must be contacted prior to the start of work. A biological monitor may be needed for any work occurring in or near Aliso and/or Oso Creak areas.	As a result of a change in scope or details uncovered by environmental studies, a requirement for mitigation measures may occur, which would lead to increased project costs, changed environment document level, or delayed project schedule	3-Moderate (31-50%)	8 - High ($5,451k - $10,900k)	24	Mitigate	Coordinate with the Project Engineer during PA/ED to determine the level of biological impacts.	Environmental Analysis	9/26/2023	1-PS&E Sup	O 40 hours ML 80 hours P 160 hours PERT 87 hours	O 30 ML 60 P 180 75 days	$5k
								40%	8 - High (3-6 months)	24					3-Con Sup	ML P	O ML P	30
Active	4	Threat	Construction	Materials Shortages	Material shortages may result in higher construction cost than projected.	There will be no material shortages.	A material shortage occurs during construction.	3-Moderate (31-50%)	4 - Moderate ($2,726k - $5,450k	12	Accept	Continue to update engineering estimate every year and monitor concrete and ash shortages.	Construction	9/26/2023	4-Con Cap	O $50k ML $100k P $250k PERT $117k	O 30 ML 60 P 90 60 days	$47k
								40%	4 - Moderate (1-3 months)	12								24
Active	6	Threat	Construction	Unforeseen Cost Escalation	Unforeseen material and/or labor cost escalation may result in increased cost to the project after bid.	Contractor may increase the bid price to account for the potential material price increase.	Material and/or labor increase after bid	3-Moderate (31-50%)	2 - Low (<$2,700k)	6	Accept	Adequate contingency in funding is needed.	Construction	9/26/2023	4-Con Cap	O $0k ML $7,830k P $19,575k PERT $8,483k	O 0 ML 15 P 30 15 days	$4,242k
								50%	1 - Very Low (Insignificant)	3								8
Active	7	Threat	Construction	Concrete Slab Replacement	Differing site condition risk which may lead to additional slab replacements and adding cost to the project.	There is no additional slab replacement required.	Additional slab deterioration over time	4-High (51-70%)	4 - Moderate ($3,802k - $7,603k	16	Accept	Continue to monitor site condition to identify the slabs that need replacement.	Construction	9/26/2023	4-Con Cap	O $50k ML $100k P $250k PERT $117k	O 30 ML 60 P 90 60 days	$71k
								60%	4 - Moderate (1-3 months)	16								36
Active	8	Threat	Utilities	Delay of Utility Owners	If the Utility Owners do not sumbit their liability claim, utility relocation plan, and signed Utility Agreement at least 3-4 months prior to R/W Cert, then R/W Certification and RTL will be at risk.	Utility Owners will submit their documents on time.	Utility Owners' late submittal of liability claim and utility relocation plan.	3-Moderate (31-50%)	2 - Low (<$2,910k)	6	Mitigate	Design, Utility Engineering, and R/W Utility Relocations will continue to coordinate with the Utility Owners on a regular basis and will assist the Utility Owner with its submittal	Utility Engineering/R/W Utility Relocations	10/31/2023		O 40 hours	O 30	
								31%	8 - High (3-6 months)	24								
Active	9	Threat	Utilities	Untimely submittal of Utility Management Matrix, Utility Conflict Maps, and R/W Utility Relocation Memo	If Design does not submit an 100% Utility Management Matrix, Utility Conflict Maps, and R/W Utility Relocation Memo at least 11-12 months prior to R/W Certification, then the R/W Certification Milestone will be at Risk. 11-12 months are needed from M224 to M410.	Design will submit a 100% Utility Management Matrix, Utility Conflict Maps, and Utility Relocation Memo on time.	Late submittal of Utility Management Matrix, Utility Conflict Maps, and R/W Utility Relocation Memo on time.	3-Moderate (31-50%)	1 - Very Low (Insignificant)	3	Mitigate	Design/UEW to provide Utility Management Matrix, Utility Conflict Maps, and Utility Relocation Memo as early as possible, but no later than 11-12 months prior to R/W Certification. 11-12 months are needed from M224 to M410	Design/UEW	10/31/2023		O 40 hours	O 30	
								30%	4 - Moderate (1-3 months)	12								
Retired	5	Threat	Environmental	STGA Trash	Resource agency may change boundaries for STGA to include PM 11.5 to 18.0. This would increase cost and impact schedule for delivery.	Boundaries will not change.	Resource change	4-High (51-70%)	2 - Low (<$2,725k)	8	Accept	Coordinate with resources agency.	NPDES Coordinator	5/31/2023				
								60%	1 - Very Low (Insignificant)	4								
Retired	2	Threat	Environmental	Impacts to Cultural/Paleo Resources	If the project impacts sensitive cultural or paleontological resources, additional studies and monitoring may be required.	No longer a concern at PA&ED	As a result of a change in scope or details uncovered by environmental studies, a requirement for mitigation measures may occur, which would lead to increased project costs, changed environment document level, or delayed project schedule	2-Low (11-30%)	4 - Moderate ($2,726k - $5,450k	8	Mitigate	Coordinate with the Project Engineer during PA/ED to determine the level of cultural/paleo impacts.	Environmental Analysis	9/26/2023	1-PS&E Sup	O 40 hours ML 80 hours P 160 hours PERT 87 hours	O 30 ML 60 P 180 75 days	$3k
								20%	8 - High (3-6 months)	16								15
Retired	3	Threat	Design	(28) OH Sign panels are attached to (10) OH sign Structures	As a result of the HQ new guideline design standard, these (10) OH sign structures may need to be reconstructed.	It is assumed that HQ will concur with the as built plans of the OH sign structures.	As built may not be found or HQ may not concur with the as built.	4-High (51-70%)	1 - Very Low (Insignificant)	4	Mitigate	Coordinate with HQ to accept the proposed work or eliminate the proposed work from the scope.	Construction	9/26/2023	0-PA&ED Sup	O 40 hours ML 80 hours P 160 hours PERT 87 hours	O 30 ML 60 P 90 60 days	$7k
								60%	8 - High (3-6 months)	32								36

12-0S380 Rte 005 Risk Register PA&ED

Final Audit Report 2023-11-22

Created:	2023-11-01
By:	Omar Moursi (s154093@dot.ca.gov)
Status:	Signed
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ATTACHMENT K

TASAS Table B

[redacted]

California Department of Transportation
Table B - Selective Accident Rate Calculation

[redacted]

Location Description	Rate Group (RUS)	No. of Accidents / Significance Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark	Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Actual Accident Rates Fat	F+I	Average Accident Rates Tot	Fat	F+I	Tot
12 ORA 005 010.000 - 12 ORA 005 010.499 0001-0001 2019-01-01 2021-12-31 *36 mo.*	**.500 MI** H 67 NORTH U	31	1	10	11	23	0	9	1 14	112.2	61.46	0.016	.18	.50	0.004	.40	1.29
12 ORA 005 010.500 - 12 ORA 005 010.999 0001-0002 2019-01-01 2021-12-31 *36 mo.*	**.500 MI** H 67 NORTH U	26	1	9	10	19	1	11	1 11	112.9	61.86	0.016	.16	.42	0.004	.40	1.30
12 ORA 005 011.000 - 12 ORA 005 011.499 0001-0003 2019-01-01 2021-12-31 *36 mo.*	**.500 MI** H 67 NORTH U	22	0	8	8	18	3	6	0 10	116.2	63.65	0.000	.13	.35	0.004	.40	1.30
12 ORA 005 011.500 - 12 ORA 005 011.999 0001-0004 2019-01-01 2021-12-31 *36 mo.*	**.500 MI** H 67 NORTH U	28	0	7	7	23	1	8	0 7	116.2	63.65	0.000	.11	.44	0.004	.40	1.30
12 ORA 005 012.000 - 12 ORA 005 012.499 0001-0005 2019-01-01 2021-12-31 *36 mo.*	**.500 MI** H NORTH U	31	0	11	11	26	2	6	0 17	115.8	63.44	0.000	.17	.49	0.004	.40	1.28
12 ORA 005 012.500 - 12 ORA 005 012.999 0001-0006 2019-01-01 2021-12-31 *36 mo.*	**.500 MI** H 66 NORTH U	47	0	22	22	36	5	12	0 34	97.5	53.44	0.000	.41	.88	0.003	.34	1.08
12 ORA 005 013.000 - 12 ORA 005 013.499 0001-0007 2019-01-01 2021-12-31 *36 mo.*	**.500 MI** H NORTH U	31	0	10	10	26	1	6	0 13	104.3	57.13	0.000	.18	.54	0.004	.38	1.22
12 ORA 005 013.500 - 12 ORA 005 013.999 0001-0008 2019-01-01 2021-12-31 *36 mo.*	**.500 MI** H NORTH U	55	0	23	23	53	2	5	0 39	111.8	61.24	0.000	.38	.90	0.003	.35	1.12
12 ORA 005 014.000 - 12 ORA 005 014.499 0001-0009 2019-01-01 2021-12-31 *36 mo.*	**.500 MI** H 66 NORTH U	48	0	15	15	41	1	14	0 21	121.0	66.30	0.000	.23	.72	0.003	.35	1.12
12 ORA 005 014.500 - 12 ORA 005 014.999 0001-0010 2019-01-01 2021-12-31 *36 mo.*	**.500 MI** H 66 NORTH U	45	1	14	15	42	2	9	1 19	121.0	66.30	0.015	.23	.68	0.003	.35	1.12
12 ORA 005 015.000 - 12 ORA 005 015.499 0001-0011 2019-01-01 2021-12-31 *36 mo.*	**.500 MI** H 66 NORTH U	61	0	24	24	56	4	19	0 34	123.3	67.55	0.000	.36	.90	0.003	.36	1.13
12 ORA 005 015.500 - 12 ORA 005 015.999 0001-0012 2019-01-01 2021-12-31 *36 mo.*	**.500 MI** H NORTH U	45	0	21	21	41	4	9	0 38	125.0	68.49	0.000	.31	.66	0.004	.38	1.21

Accident Rates expressed as: **# of accidents / Million vehicle miles**

+ denotes that **Million Vehicles** (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

Location Description	Rate Group (RUS)	No. of Accidents / Significance Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark	Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Actual Accident Rates Fat	F+I	Average Accident Rates Tot	Fat	F+I	Tot
12 ORA 005 016.000 - 12 ORA 005 016.499 0001-0013 2019-01-01 2021-12-31 *36 mo.*	**.500 MI** H 66 NORTH U	38	0	13	13	31	4	11	0 19	125.0	68.49	0.000	.19	.56	0.003	.36	1.13
12 ORA 005 016.500 - 12 ORA 005 016.999 0001-0014 2019-01-01 2021-12-31 *36 mo.*	**.500 MI** H NORTH U	39	1	7	8	27	3	13	1 9	128.0	70.12	0.014	.11	.56	0.004	.38	1.21
12 ORA 005 017.000 - 12 ORA 005 017.499 0001-0015 2019-01-01 2021-12-31 *36 mo.*	**.500 MI** H 67 NORTH U	94	0	28	28	86	3	18	0 44	129.5	70.97	0.000	.39	1.33	0.004	.41	1.33
12 ORA 005 017.500 - 12 ORA 005 017.999 0001-0016 2019-01-01 2021-12-31 *36 mo.*	**.500 MI** H 67 NORTH U	68	0	20	20	55	6	17	0 29	154.1	84.45	0.000	.24	.81	0.004	.43	1.38
12 ORA 005 018.000 - 12 ORA 005 018.499 0001-0017 2019-01-01 2021-12-31 *36 mo.*	**.500 MI** H 67 NORTH U	77	0	33	33	60	8	28	0 48	158.2	86.70	0.000	.38	.89	0.004	.43	1.39
12 ORA 005 018.500 - 12 ORA 005 018.999 0001-0018 2019-01-01 2021-12-31 *36 mo.*	**.500 MI** H 67 NORTH U	49	0	14	14	40	3	8	0 18	174.4	95.55	0.000	.15	.51	0.004	.44	1.42
12 ORA 005 019.000 - 12 ORA 005 019.499 0001-0019 2019-01-01 2021-12-31 *36 mo.*	**.500 MI** H 67 NORTH U	45	0	17	17	39	10	22	0 23	182.2	99.82	0.000	.17	.45	0.004	.44	1.43
12 ORA 005 019.500 - 12 ORA 005 019.999 0001-0020 2019-01-01 2021-12-31 *36 mo.*	**.500 MI** H 67 NORTH U	59	0	18	18	46	16 **H97**	26	0 28	178.9	98.06	0.000	.18	.60	0.004	.44	1.43
12 ORA 005 020.000 - 12 ORA 005 020.499 0001-0021 2019-01-01 2021-12-31 *36 mo.*	**.500 MI** H 67 NORTH U	42	0	10	10	34	6	13	0 19	167.5	91.79	0.000	.11	.46	0.004	.43	1.40
12 ORA 005 020.500 - 12 ORA 005 020.999 0001-0022 2019-01-01 2021-12-31 *36 mo.*	**.500 MI** H 67 NORTH U	38	0	14	14	26	5	15	0 22	167.5	91.79	0.000	.15	.41	0.004	.43	1.40
12 ORA 005 021.000 - 12 ORA 005 021.299 0001-0023 2019-01-01 2021-12-31 *36 mo.*	**.300 MI** H NORTH U	9	0	0	0	5	0	5	0 0	167.5	55.07	0.000	.00	.16	0.004	.42	1.33

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For Ramps RUS only considers R(Rural) U(Urban)

[redacted]

California Department of Transportation
Table B - Selective Accident Rate Calculation

Location Description	Rate Group (RUS)	No. of Accidents / Significance Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark	Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Accident Rates Actual Fat	Actual F+I	Average Tot	Average Fat	Average F+I	Average Tot
12 ORA 005 009.428 005/SB ON FROM ORTEGA HWY	R 12	1	0	0	0	1	0	0	0	7.7	8.49 +	0.000	.00	.12	0.002	.23	.63
0001-0001 2019-01-01 2021-12-31 *36 mo.*	U								0	.0							
12 ORA 005 009.449 005/NB OFF TO ORTEGA/RTE 74	R 54	5	0	1	1	4	0	2	0	7.9	8.67 +	0.000	.12	.58	0.006	.28	.82
0001-0002 2019-01-01 2021-12-31 *36 mo.*	U								1	.0							
12 ORA 005 009.575 005/NB ON FR EB ORTEGA/RTE 74	R 72	2	0	0	0	1	1	1	0	6.0	6.55 +	0.000	.00	.31	0.001	.19	.65
0001-0003 2019-01-01 2021-12-31 *36 mo.*	U								0	.0							
12 ORA 005 009.722 005/SBOFF TO ORTEGA(RTE 74)	R 54	15	0	5	5	13	0	5	0	26.6	29.19 +	0.000	.17	.51	0.006	.28	.82
0001-0004 2019-01-01 2021-12-31 *36 mo.*	U								6	.0							
12 ORA 005 009.760 005/NB ON FR WB ORTEGA/RTE 74	R 64	9	0	3	3	4	2	3	0	5.4	5.88 +	0.000	.51	1.53	0.005	.15	.46
0001-0005 2019-01-01 2021-12-31 *36 mo.*	U	**H99**		**H92**	**H92**		**H95**		3	.0							
12 ORA 005 010.749 005/NBOFF TO JUNIPERO SERRA	R 10	1	0	0	0	1	0	1	0	3.0	3.33 +	0.000	.00	.30	0.003	.38	1.04
0001-0006 2019-01-01 2021-12-31 *36 mo.*	U								0	.0							
12 ORA 005 010.762 005/SB ON FR JUNIPERO SERRA	R 12	3	0	2	2	3	0	0	0	4.4	4.88 +	0.000	.41	.62	0.002	.23	.63
0001-0007 2019-01-01 2021-12-31 *36 mo.*	U								2	.0							
12 ORA 005 011.069 005/NB ON FR JUNIPERO SERRA	R 12	4	0	3	3	4	0	1	0	7.4	8.09 +	0.000	.37	.49	0.002	.23	.63
0001-0008 2019-01-01 2021-12-31 *36 mo.*	U								4	.0							
12 ORA 005 011.138 005/SBOFF TO JUNIPERO SERRA	R 10	3	0	0	0	3	0	1	0	8.8	9.64 +	0.000	.00	.31	0.003	.38	1.04
0001-0009 2019-01-01 2021-12-31 *36 mo.*	U								0	.0							
12 ORA 005 012.820 005/NB OFF AVERY PKWY	R 10	6	0	4	4	6	0	2	0	3.3	3.62 +	0.000	1.10	1.66	0.003	.38	1.04
0001-0010 2019-01-01 2021-12-31 *36 mo.*	U			**H92**	**H92**				4	.0							
12 ORA 005 012.831 005/SB ON AVERY PKWY	R 12	5	0	2	2	5	0	3	0	6.4	7.01 +	0.000	.29	.71	0.002	.23	.63
0001-0011 2019-01-01 2021-12-31 *36 mo.*	U								2	.0							
12 ORA 005 013.104 005/SB OFF AVERY PKWY	R 10	9	0	3	3	8	0	2	0	14.5	15.94 +	0.000	.19	.57	0.003	.38	1.04
0001-0012 2019-01-01 2021-12-31 *36 mo.*	U								5	.0							

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For Ramps RUS only considers R(Rural) U(Urban)

[redacted]

California Department of Transportation
Table B - Selective Accident Rate Calculation

[redacted]

Location Description	Rate Group (RUS)	No. of Accidents / Significance Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark	Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Accident Rates Actual Fat	Actual F+I	Average Tot	Average Fat	Average F+I	Average Tot
12 ORA 005 013.109 005/NB ON AVERY PKWY	R 12	1	0	1	1	1	0	0	0	10.4	11.39 +	0.000	.09	.09	0.002	.23	.63
0001-0013 2019-01-01 2021-12-31 *36 mo.*	U								1	.0							
12 ORA 005 013.572 005/NB OFF CROWN VALLEY PKW	R 10	13	0	6	6	9	2	5	0	10.3	11.28 +	0.000	.53	1.15	0.003	.38	1.04
0001-0014 2019-01-01 2021-12-31 *36 mo.*	U								6	.0							
12 ORA 005 013.609 005/SB ON CROWN VALLEY	R 12	8	0	2	2	7	0	4	0	9.4	10.36 +	0.000	.19	.77	0.002	.23	.63
0001-0015 2019-01-01 2021-12-31 *36 mo.*	U								4	.0							
12 ORA 005 013.718 005/NBON FR EB CROWN VAL PK	R 24	4	0	0	0	4	0	0	0	14.9	16.31 +	0.000	.00	.25	0.002	.26	.76
0001-0016 2019-01-01 2021-12-31 *36 mo.*	U								0	.0							
12 ORA 005 013.900 005/SB OFF CROWN VALLEY	R 10	35	0	15	15	33	1	6	0	17.5	19.14 +	0.000	.78	1.83	0.003	.38	1.04
0001-0017 2019-01-01 2021-12-31 *36 mo.*	U	**H99**		**H97**	**H97**				26	.0							
12 ORA 005 013.934 005/NBON FR WB CROWN VAL PK	R 12	9	0	1	1	6	2	3	0	20.7	22.70 +	0.000	.04	.40	0.002	.23	.63
0001-0018 2019-01-01 2021-12-31 *36 mo.*	U								1	.0							
12 ORA 005 014.945 005/NB OFF TO OSO PKWAY	R 10	9	0	3	3	6	1	3	0	13.5	14.80 +	0.000	.20	.61	0.003	.38	1.04
0001-0019 2019-01-01 2021-12-31 *36 mo.*	U								4	.0							
12 ORA 005 015.028 005/SB ON FROM EB OSO PKWY	R 20	4	0	4	4	3	2	2	0	5.9	6.49 +	0.000	.62	.62	0.004	.23	.70
0001-0020 2019-01-01 2021-12-31 *36 mo.*	U			**H92**	**H90**		**H92**		7	.0							
12 ORA 005 015.156 005/NB ON FROM EB OSO PKWY	R 40	3	0	0	0	2	1	1	0	4.5	4.93 +	0.000	.00	.61	0.002	.23	.77
0001-0021 2019-01-01 2021-12-31 *36 mo.*	U								0	.0							
12 ORA 005 015.315 005/SB ON FROM WB OSO PKWY	R 40	3	0	0	0	1	0	2	0	6.6	7.24 +	0.000	.00	.41	0.002	.23	.77
0001-0022 2019-01-01 2021-12-31 *36 mo.*	U								0	.0							
12 ORA 005 015.450 005/NB ON FROM WB OSO PKWY	R 20	6	0	2	2	3	1	1	0	12.7	13.95 +	0.000	.14	.43	0.004	.23	.70
0001-0023 2019-01-01 2021-12-31 *36 mo.*	U								2	.0							
12 ORA 005 015.474 005/SB OFF TO OSO PKWAY	R 10	8	0	3	3	5	1	2	0	17.1	18.70 +	0.000	.16	.43	0.003	.38	1.04
0001-0024 2019-01-01 2021-12-31 *36 mo.*	U								3	.0							

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Location Description	Rate Group (RUS)	No. of Accidents / Significance							Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Accident Rates Actual			Accident Rates Average		
		Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark				Fat	F+I	Tot	Fat	F+I	Tot
12 ORA 005 016.373 005/NB OFF LA PAZ RD 0001-0025 2019-01-01 2021-12-31 *36 mo.*	R 10 U	9	0	4	4	5	0	4	0 5	5.6 .0	6.10 +	0.000	.66	1.48	0.003	.38	1.04
12 ORA 005 016.386 005/SB ON EB LA PAZ RD 0001-0026 2019-01-01 2021-12-31 *36 mo.*	R 20 U	1	0	0	0	1	0	0	0 0	3.4 .0	3.69 +	0.000	.00	.27	0.004	.23	.70
12 ORA 005 016.555 005/NB ON FR EB LA PAZ RD 0001-0027 2019-01-01 2021-12-31 *36 mo.*	R 40 U	3	0	2	2	2	0	0	0 3	7.1 .0	7.81 +	0.000	.26	.38	0.002	.23	.77
12 ORA 005 016.571 005/SB ON WB LA PAZ RD 0001-0028 2019-01-01 2021-12-31 *36 mo.*	R 40 U	1	0	1	1	1	0	0	0 1	13.0 .0	14.28 +	0.000	.07	.07	0.002	.23	.77
12 ORA 005 016.717 005/SB OFF LA PAZ RD 0001-0029 2019-01-01 2021-12-31 *36 mo.*	R 10 U	11	0	6	6	9	1	1	0 11	13.4 .0	14.66 +	0.000	.41	.75	0.003	.38	1.04
12 ORA 005 016.738 005/NB ON WB LA PAZ RD 0001-0030 2019-01-01 2021-12-31 *36 mo.*	R 20 U	5	0	0	0	2	1	2	0 0	8.0 .0	8.80 +	0.000	.00	.57	0.004	.23	.70
12 ORA 005 017.255 005/SB ON EB ALICIA PKWAY 0001-0031 2019-01-01 2021-12-31 *36 mo.*	R 20 U	4	0	2	2	4	0	2	0 2	3.3 .0	3.67 +	0.000	.55	1.09	0.004	.23	.70
12 ORA 005 017.297 005/NB OFF TO ALICIA PKWAY 0001-0032 2019-01-01 2021-12-31 *36 mo.*	R 10 U	5	0	3	3	5	0	3	0 4	8.1 .0	8.88 +	0.000	.34	.56	0.003	.38	1.04
12 ORA 005 017.464 005/NB ON EB ALICIA PKWAY 0001-0033 2019-01-01 2021-12-31 *36 mo.*	R 40 U	4	0	0	0	2	2	1	0 0	13.4 .0	14.72 +	0.000	.00	.27	0.002	.23	.77
12 ORA 005 017.487 005/SB ON WB ALICIA PKWAY 0001-0034 2019-01-01 2021-12-31 *36 mo.*	R 40 U	6	0	4 **H95**	4 **H95**	5	2 **H95**	0	0 6	4.8 .0	5.22 +	0.000	.77	1.15	0.002	.23	.77
12 ORA 005 017.634 005/SB OFF TO ALICIA PKWY 0001-0035 2019-01-01 2021-12-31 *36 mo.*	R 10 U	19	0	3	3	16	1	7	0 3	40.7 .0	44.60 +	0.000	.07	.43	0.003	.38	1.04
12 ORA 005 017.650 005/NB ON WB ALICIA PKWAY 0001-0036 2019-01-01 2021-12-31 *36 mo.*	R 20 U	7	0	2	2	2	1	4	0 2	25.5 .0	27.95 +	0.000	.07	.25	0.004	.23	.70

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Location Description	Rate Group (RUS)	No. of Accidents / Significance							Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Accident Rates Actual			Accident Rates Average		
		Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark				Fat	F+I	Tot	Fat	F+I	Tot
12 ORA 005 018.490 005/NBOFF EL TORO/BRIDGER	R 10	18	0	8	8	15	0	3	0	6.8	7.50 +	0.000	1.07	2.40	0.003	.38	1.04
0001-0037 2019-01-01 2021-12-31 *36 mo.*	U	**H99**		**H97**	**H97**				9	.0							
12 ORA 005 018.537 005/SB ON FR EB EL TORO RD	R 20	6	0	4	4	5	0	4	0	2.9	3.13 +	0.000	1.28	1.92	0.004	.23	.70
0001-0038 2019-01-01 2021-12-31 *36 mo.*	U	**H95**		**H97**	**H97**			**H97**	4	.0							
12 ORA 005 018.631 005/NB ON FR EB EL TORO RD	R 40	5	0	0	0	5	0	2	0	16.6	18.18 +	0.000	.00	.28	0.002	.23	.77
0001-0039 2019-01-01 2021-12-31 *36 mo.*	U								0	.0							
12 ORA 005 018.786 005/SBON FR CARLOTA/VALENCI	R 28	3	0	2	2	3	0	1	0	4.3	4.71 +	0.000	.43	.64	0.002	.18	.57
0001-0040 2019-01-01 2021-12-31 *36 mo.*	U								3	.0							
12 ORA 005 018.813 005/NB ON FR WB EL TORO RD	R 20	8	0	3	3	6	1	1	0	16.8	18.36 +	0.000	.16	.44	0.004	.23	.70
0001-0041 2019-01-01 2021-12-31 *36 mo.*	U								4	.0							
12 ORA 005 018.913 005/SB OFF CARLOTA/VALENCIA	R 26	18	0	7	7	14	0	6	0	25.6	28.09 +	0.000	.25	.64	0.007	.42	1.37
0001-0042 2019-01-01 2021-12-31 *36 mo.*	U								10	.0							
12 ORA 005 019.499 005/NBOFF TO LAKE FOREST DR	R 10	14	0	7	7	11	0	3	0	5.0	5.45 +	0.000	1.28	2.57	0.003	.38	1.04
0001-0043 2019-01-01 2021-12-31 *36 mo.*	U	**H99**		**H97**	**H97**				10	.0							
12 ORA 005 019.734 005/NB OFF TO BAKE PKWY/NB 405	R 06	0	0	0	0	0	0	0	0	4.1	4.46 +	0.000	.00	.00	0.005	.17	.51
0001-0044 2019-01-01 2021-12-31 *36 mo.*	U								0	.0							
12 ORA 005 019.798 005/SB ON FR EB LAKE FOREST	R 20	0	0	0	0	0	0	0	0	2.6	2.80 +	0.000	.00	.00	0.004	.23	.70
0001-0045 2019-01-01 2021-12-31 *36 mo.*	U								0	.0							
12 ORA 005 019.952 005/SEGNB ON5/405 WB LKFRST	R 20	4	0	2	2	4	0	2	0	14.0	15.34 +	0.000	.13	.26	0.004	.23	.70
0001-0046 2019-01-01 2021-12-31 *36 mo.*	U								5	.0							
12 ORA 005 020.009 005/SB ON WB L.FOREST/CARLO	R 40	5	0	1	1	4	0	1	0	2.8	3.06 +	0.000	.33	1.63	0.002	.23	.77
0001-0047 2019-01-01 2021-12-31 *36 mo.*	U								1	.0							
12 ORA 005 020.193 005/SB ON FROM BAKE PKWY	R 08	1	0	0	0	1	0	0	0	6.7	7.40 +	0.000	.00	.14	0.004	.17	.55
0001-0048 2019-01-01 2021-12-31 *36 mo.*	U								0	.0							

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For Ramps RUS only considers R(Rural) U(Urban)

Location Description	Rate Group (RUS)	No. of Accidents / Significance							Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Accident Rates Actual			Accident Rates Average		
		Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark				Fat	F+I	Tot	Fat	F+I	Tot
12 ORA 005 020.565 005/SEG NB OFF TO BAKE PKWY 0001-0049 2019-01-01 2021-12-31 *36 mo.*	R 10 U	7	0	2	2	4	1	2	0 2	32.0 .0	35.07 +	0.000	.06	.20	0.003	.38	1.04
12 ORA 005 020.706 005/SEG NB 5/405 ON FR EB BAKE I 0001-0050 2019-01-01 2021-12-31 *36 mo.*	R 40 U	0	0	0	0	0	0	0	0 0	5.8 .0	6.36 +	0.000	.00	.00	0.002	.23	.77
12 ORA 005 020.745 005/SEG SB ON FR EB BAKE PKWY 0001-0051 2019-01-01 2021-12-31 *36 mo.*	R 20 U	0	0	0	0	0	0	0	0 0	.9 .0	1.03 +	0.000	.00	.00	0.004	.23	.70
12 ORA 005 020.801 005/NB HOV CONN TO NB RTE 405 0001-0052 2019-01-01 2021-12-31 *36 mo.*	R 06 U	2	0	2	2	1	0	1	0 2	6.3 .0	6.93 +	0.000	.29	.29	0.005	.17	.51
12 ORA 005 020.867 005/SEG NB 5/405 ON FR WB BAKE 0001-0053 2019-01-01 2021-12-31 *36 mo.*	R 20 U	15	0	6	6	7	9 **H99**	4	0 9	24.0 .0	26.30 +	0.000	.23	.57	0.004	.23	.70
12 ORA 005 020.930 005/NB OFF TO NB RTE 405 0001-0054 2019-01-01 2021-12-31 *36 mo.*	R 06 U	14	1	6	7 **H90**	3	0	10 **H97**	2 6	19.3 .0	21.15 +	0.047	.33	.66	0.005	.17	.51
12 ORA 005 020.949 005/SEG SB ON FR WB BAKE PKWY 0001-0055 2019-01-01 2021-12-31 *36 mo.*	R 40 U	1	0	0	0	1	0	0	0 0	4.1 .0	4.49 +	0.000	.00	.22	0.002	.23	.77
12 ORA 005 021.166 005/SEG SB 5/405 OFF TO BAKE PK 0001-0056 2019-01-01 2021-12-31 *36 mo.*	R 10 U	6	0	2	2	3	0	2	0 2	21.9 .0	24.00 +	0.000	.08	.25	0.003	.38	1.04
12 ORA 005 021.182 005/SB ON FR SB RTE 405 0001-0057 2019-01-01 2021-12-31 *36 mo.*	R 64 U	1	0	1	1	0	0	1	0 4	21.6 .0	23.66 +	0.000	.04	.04	0.005	.15	.46
12 ORA 005 021.194 005/SEG SB OFF TO LAKE FOREST 0001-0058 2019-01-01 2021-12-31 *36 mo.*	R 06 U	0	0	0	0	0	0	0	0 0	18.0 .0	19.73 +	0.000	.00	.00	0.005	.17	.51
12 ORA 005 021.195 005/SEG SB OF TO BAKE PKWY 0001-0059 2019-01-01 2021-12-31 *36 mo.*	R 58 U	1	0	0	0	1	0	1	0 0	13.0 .0	14.25 +	0.000	.00	.07	0.000	.07	.23

Accident Rates expressed as: **# of accidents / Million vehicle miles**

+ denotes that **Million Vehicles** (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

ATTACHMENT L

OH Sign Inventory

12-0S3800
Overhead Sign Inventory

No.	PM	Dir	No. of Panels	Message Description	Notes
1	10.069	NB	1	Junipero Serra Route 73 NORTH Avery Pkwy	Replace panel in kind
2	10.662	NB	1	Junipero Serra Rd	Remain in place
3	11.287	NB	1	Route 73 NORTH 1 Mile	Replace and add exit plaque on top
4	11.616	NB	2	I-5 NORTH Route 73 NORTH	Replace by reducing panel size and add exit plaque on top without exceeding total H=120"
5	12.25	NB	2	I-5 NORTH Route 73 NORTH	Replace by reducing panel size and add exit plaque on top without exceeding total H=120"
6	18.94	NB	1	Lake Forest Dr (1/2) I-5 TRUCK BYPASS Bake Pkwy (3/4)	Replace panel in kind
7	19.235	NB	5	CARPOOLS ONLY {405/5} NORTH Route 133 NORTH Route 133 SOUTH I-5 TRUCK BYPASS Bake Pkwy Lake Forest Drive	Remain in place
8	19.442	NB	1	Lake Forest Dr	Replace and add exit plaque on top
9	19.61	NB	1	I-5 TRUCK BYPASS Bake Pkwy	Replace and add exit plaque on top
10	19.839	NB	3	CARPOOLS ONLY {405/5} NORTH I-5 NORTH I-405 NORTH	Remain in place
11	20.11	NB CD	2	N405 / N5 Bake Pkwy	Replace and add exit plaque on top

12-0S3800
Overhead Sign Inventory

No.	PM	Dir	No. of Panels	Message Description	Notes
12	20.206	NB	3	CARPOOLS ONLY {405/5} NORTH I-5 NORTH I-405 NORTH	Remain in place
13	20.376	NB	1	CARPOOLS ONLY {405/5} NORTH	Replace and add LEFT plaque on top
		SB	1	Carpool Ingress	Replace and add LEFT plaque on top
14	20.511	NB CD	2	N405 / N5 Bake Pkwy	Replace and add exit plaque on top
15	20.782	NB	4	Carpool I-405 NORTH Carpool I-5 NORTH I-5 NORTH I-405 NORTH	Remain in place
16	21.003	NB CD	2	I-405 NORTH Irvine Center Dr I-5 NORTH Alton Pkwy	Replace panel in kind
17	21.228	NB CD	2	I-405 NORTH Irvine Center Dr I-5 NORTH Alton Pkwy	Replace panel in kind
18	21.272	NB	1	Alton Pkwy Route 133 NORTH Sand Canyon Ave	Replace panel in kind

Replacement of 20 OH Sign Panels Along NB I-5

Notes: Replace 20 OH sing panels in-kind with type XI retroreflective sheeting

PM 10.069 Replace panel in kind

PM 11.287 Replace and add exit plaque on top

PM 18.94 Replace panel in kind

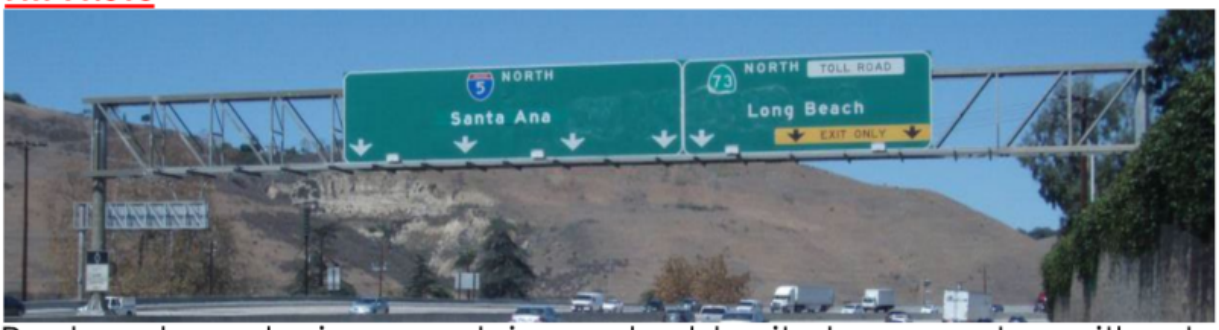
PM 19.442 Replace and add exit plaque on top

PM 19.61 Replace and add exit plaque on top

PM 20.376 Replace and add LEFT plaque on top, one each direction

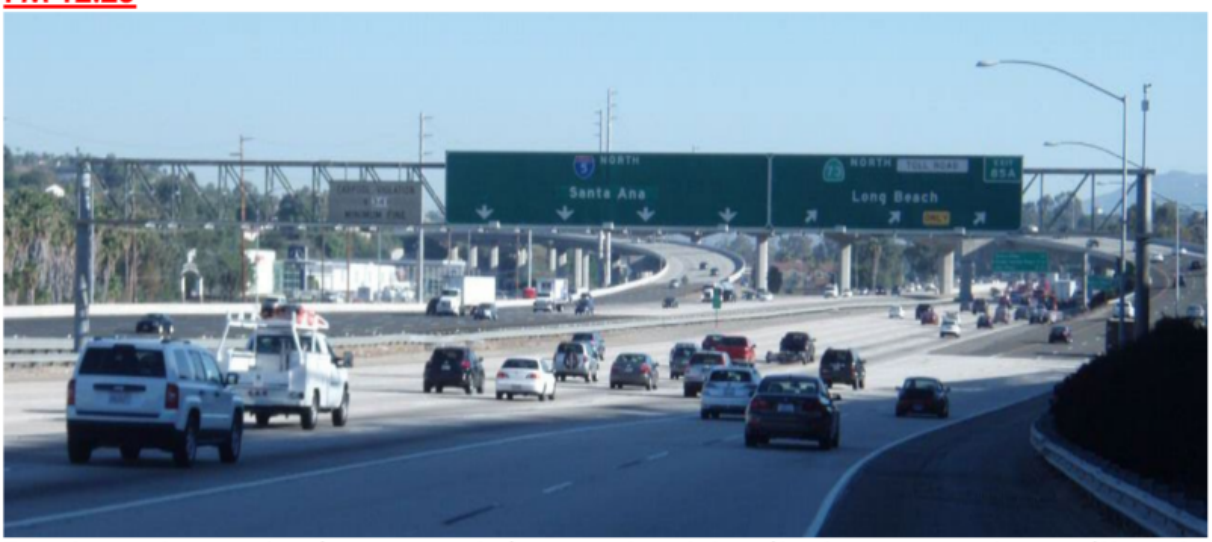
PM 21.272 Replace panel in kind

PM 11.616



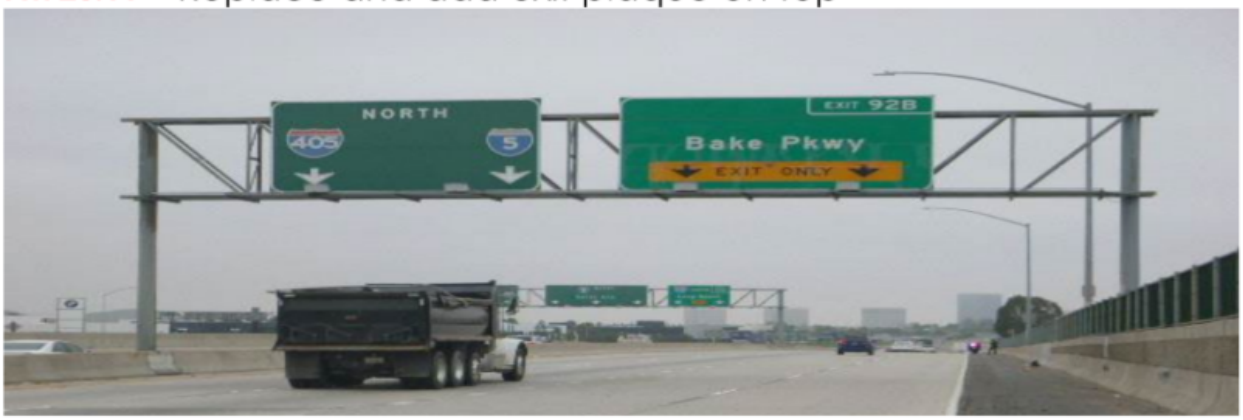
Replace by reducing panel size and add exit plaque on top without exceeding total H=120"

PM 12.25



Replace by reducing panel size and add exit plaque on top without exceeding total H=120"

PM 20.11 Replace and add exit plaque on top



PM 20.511 Replace and add exit plaque on top

PM 20.782 Remain in place

PM 21.003 Replace panel in kind

PM 21.228 Replace panel in kind

ATTACHMENT M

Pavement Condition Report

PaveM Scenario Used: #3096
APCS Data Year: 2018

Caltrans Pavement Program
Pavement Condition Summary Report (PaveM)
BOTH DIRECTIONS; ALL LANES

District: 12; County: Orange (ORA); Route: 5

From PM: 10.000 To PM: 21.300

L-Length: 11.300. R-Length: 11.300

L-Lane Miles: 68.890. R-Lane Miles: 67.538 (Unknown lane miles: 0.000)

	Traditional Condition (lane miles)					MAP-21 Condition (lane miles)				Effectiveness (%)	
Year/ Condition Lane Miles	Green	Yellow	Blue	Orange	Red	Good	Fair	Poor	Total Lane Miles	SHOPP Effectiveness ((Red + Orange) /Total Lane Miles) %	Rehab Effectiveness (Red/Total Lane Miles) %
2015	122.033	8.537	0.689	2.968	1.475	62.491	73.211	0.000	135.702	3.27	1.09
2016	115.844	16.212	1.326	1.724	1.322	59.776	76.652	0.000	136.428	2.23	0.97
2017	*No Data Available*										

End Previous Years Actuals - Begin APCS Data Collection Year and Predicted Years

2018	123.322	8.981	1.735	1.178	1.212	58.553	77.875	0.000	136.428	1.75	0.89
2019	120.869	9.751	2.808	1.788	1.212	54.776	81.261	0.391	136.428	2.20	0.89
2020	118.715	9.270	3.678	2.721	2.044	50.373	85.664	0.391	136.428	3.49	1.50
2021	113.634	10.130	6.789	3.713	2.162	45.702	90.149	0.577	136.428	4.31	1.58
2022	103.525	12.789	7.766	9.906	2.442	42.832	92.707	0.889	136.428	9.05	1.79
2023	89.901	13.805	9.891	20.389	2.442	39.892	95.367	1.169	136.428	16.73	1.79
2024	79.019	19.622	9.278	26.067	2.442	36.280	98.979	1.169	136.428	20.90	1.79
2025	64.158	32.580	8.168	28.259	3.263	32.668	102.591	1.169	136.428	23.11	2.39
2026	60.031	34.955	7.777	30.402	3.263	26.997	108.262	1.169	136.428	24.68	2.39
2027	53.309	36.246	6.422	37.188	3.263	22.629	112.630	1.169	136.428	29.65	2.39
2028	49.499	35.865	3.838	43.572	3.654	19.115	116.144	1.169	136.428	34.62	2.68
2029	47.441	36.303	3.333	45.385	3.966	16.603	117.835	1.990	136.428	36.17	2.91
2030	35.500	44.707	2.223	48.945	5.053	14.276	120.162	1.990	136.428	39.58	3.70
2031	12.401	66.317	2.223	50.038	5.449	12.383	120.435	3.610	136.428	40.67	3.99
2032	11.291	63.678	1.113	53.940	6.406	11.070	120.768	4.590	136.428	44.23	4.70

	Detailed Breakdown of MAP-21 Fair Condition (lane miles)										
Year/ Condition Lane Miles	Fair (Poor Crack) F1	Fair (Poor Ride) F2	Fair (Poor Rut/Fault) F3/F4	Fair (Fair Ride Only) F5	Fair (Rut/Fault Only) F6/F7	Fair (Cracking Only) F8	Fair (Cracking & IRI) F9	Fair (Cracking & Rutting/ Faulting Only) F10	Fair (IRI & Rut/Fault) F11	Fair (All Fair) F12	Fair Total Lane Miles
2015	1.383	1.071	0.000	45.070	0.000	11.777	13.910	0.000	0.000	0.000	73.211
2016	3.533	1.656	0.000	43.199	0.532	12.760	14.706	0.000	0.266	0.000	76.652
2017	*No Data Available*										

End Previous Years Actuals - Begin APCS Data Collection Year and Predicted Years

2018	9.924	1.926	0.000	46.646	0.000	8.753	10.626	0.000	0.000	0.000	77.875
2019	9.924	2.938	0.000	47.542	0.000	9.585	11.272	0.000	0.000	0.000	81.261
2020	11.654	3.994	0.000	50.068	0.000	8.101	11.847	0.000	0.000	0.000	85.664
2021	11.654	7.105	0.000	48.838	0.000	7.670	14.882	0.000	0.000	0.000	90.149
2022	12.378	8.161	0.000	47.433	0.000	7.466	17.269	0.000	0.000	0.000	92.707
2023	12.485	11.658	0.000	44.138	0.000	7.079	20.007	0.000	0.000	0.000	95.367
2024	12.964	14.229	0.000	43.650	0.000	7.769	20.367	0.000	0.000	0.000	98.979
2025	13.749	15.791	0.000	43.277	0.000	8.245	21.529	0.000	0.000	0.000	102.591
2026	13.984	16.395	0.000	42.414	0.000	12.298	23.171	0.000	0.000	0.000	108.262
2027	13.984	19.627	0.000	32.437	0.000	13.199	21.749	0.000	5.877	5.757	112.630
2028	14.679	24.361	0.000	27.240	0.000	12.759	28.792	0.000	5.050	3.263	116.144
2029	14.605	27.009	0.000	25.068	0.000	13.243	32.245	0.000	2.753	2.912	117.835
2030	15.824	29.091	0.000	26.126	0.000	10.621	34.917	0.000	0.813	2.770	120.162
2031	14.999	30.891	0.000	23.084	0.000	10.974	37.467	0.000	0.167	2.853	120.435
2032	14.285	33.711	0.000	19.756	0.000	9.437	41.038	0.000	0.167	2.374	120.768

ID	Pavement Condition Rating	Description		
		Crack	Ride	Rutting or Faulting
F1	Fair (Poor Crack)	Poor	Good or Fair	Good or Fair
F2	Fair (Poor Ride)	Good or Fair	Poor	Good or Fair
F3/F4	Fair (Poor Rut/Fault)	Good or Fair	Good or Fair	Poor
F5	Fair (Fair Ride Only)	Good or Fair	Fair	Good
F6/F7	Fair (Rut/Fault Only)	Good or Fair	Good	Fair
F8	Fair (Cracking Only)	Fair	Good	Good
F9	Fair (Cracking & IRI)	Fair	Fair	Good
F10	Fair (Cracking and Rutting/Faulting Only)	Fair	Good	Fair
F11	Fair (IRI & Rut/Fault)	Good	Fair	Fair
F12	Fair (All Fair)	Fair	Fair	Fair

PaveM Scenario Used: #3096
APCS Data Year: 2018
Using: Prior-Treatment Distresses

Caltrans Pavement Program
Pavement Condition Detailed Report (PaveM)

District: 12; County: Orange (ORA); Route: 5
From PM: 10.000 To PM: 21.300

Year: 2025 (Predicted)
R-Length: 11.300. L-Length: 11.300
R-Lane Miles: 67.538. L-Lane Miles: 68.890 (Unknown lane miles: 0.000)

Pavement Segment	Lane	Type	Concrete			Asphalt			IRI in/mi	MAP-21 Condition	Traditional Condition	Road Class	Estimated Lane Miles
			1st%	3rd%	Fault%	Alligator A%	Alligator B%	Rut (in)					
Post Mile: 10.000 to 11.103 Length: 1.103 Estimated Lane Mileage: 12.672	L1	JPC		3.30	2.88				91	Good	Yellow	1	1.056
	L2	JPC		0.40	11.93				79	Good	Green	1	1.056
	L3	JPC		1.00	15.14				125	Fair	Green	1	1.056
	L4	JPC		6.90	22.60				146	Fair	Yellow	1	1.056
	L5	JPC		1.30	19.90				185	Fair	Blue	1	1.056
	L6	JPC		0.90	17.26				129	Fair	Green	1	1.056
	R1	JPC		3.30	12.43				141	Fair	Yellow	1	1.056
	R2	JPC		0.40	14.68				125	Fair	Green	1	1.056
	R3	JPC		0.40	11.77				106	Fair	Green	1	1.056
	R4	JPC		1.60	18.74				126	Fair	Green	1	1.056
	R5	JPC		0.90	18.99				217	Fair	Blue	1	1.056
	R6	JPC		0.90	21.01				200	Fair	Blue	1	1.056
Post Mile: 11.103 to 12.258 Length: 1.155 Estimated Lane Mileage: 15.540	L1	JPC		3.80	6.68				121	Fair	Yellow	1	1.110
	L2	JPC		0.40	12.01				119	Fair	Green	1	1.110
	L3	JPC		0.40	23.19				161	Fair	Green	1	1.110
	L4	JPC		0.40	27.20				170	Fair	Orange	1	1.110
	L5	JPC		1.40	18.40				167	Fair	Green	1	1.110
	L6	JPC		0.90	28.15				184	Fair	Orange	1	1.110
	L7	JPC		1.70	20.50				189	Fair	Blue	1	1.110
	R1	JPC		3.30	8.63				140	Fair	Yellow	1	1.110
	R2	JPC		0.40	7.23				133	Fair	Green	1	1.110
	R3	JPC		0.40	13.41				141	Fair	Green	1	1.110
	R4	JPC		1.50	18.58				161	Fair	Green	1	1.110
	R5	JPC		0.70	20.22				179	Fair	Blue	1	1.110
	R6	JPC		0.90	26.51				224	Fair	Orange	1	1.110
	R7	JPC		0.90	17.86				205	Fair	Blue	1	1.110
Post Mile: 12.258 to 12.491 Length: 0.233 Estimated Lane Mileage: 1.631	L1	Flexible				0.80	0.50	0.09	101	Fair	Green	1	0.233
	L2	Flexible				9.00	6.90	0.08	105	Fair	Yellow	1	0.233
	L3	Flexible				9.00	6.90	0.10	105	Fair	Yellow	1	0.233
	L4	Flexible				30.20	6.90	0.14	106	Fair	Yellow	1	0.233
	L5	Flexible				33.40	7.70	0.09	131	Fair	Yellow	1	0.233
	L6	Flexible				15.70	8.70	0.06	116	Fair	Yellow	1	0.233
	L7	Flexible				20.50	8.70	0.06	123	Fair	Yellow	1	0.233
Post Mile: 12.258 to 12.896 Length: 0.638 Estimated Lane Mileage: 3.190	R1	JPC		3.30	8.58				145	Fair	Yellow	1	0.638
	R2	JPC		0.40	5.84				118	Fair	Green	1	0.638
	R3	JPC		0.70	11.32				128	Fair	Green	1	0.638
	R4	JPC		0.90	27.84				206	Fair	Orange	1	0.638
	R5	JPC		1.50	12.49				164	Fair	Green	1	0.638
Post Mile: 12.491 to 12.896 Length: 0.405 Estimated Lane Mileage: 2.025	L1	JPC		3.30	1.30				87	Good	Yellow	1	0.405
	L2	JPC		1.20	4.63				83	Good	Green	1	0.405
	L3	JPC		1.50	13.45				95	Good	Green	1	0.405
	L4	JPC		3.70	35.54				186	Fair	Orange	1	0.405
	L5	JPC		5.70	14.98				125	Fair	Yellow	1	0.405
Post Mile: 12.896 to 13.104 Length: 0.208 Estimated Lane Mileage: 0.930	L1	JPC		3.30	7.28				105	Fair	Yellow	1	0.186
	L2	JPC		1.20	7.45				112	Fair	Green	1	0.186
	L3	JPC		1.50	13.25				109	Fair	Green	1	0.186
	L4	JPC		1.70	42.33				229	Fair	Orange	1	0.186
	L5	JPC		5.40	29.62				190	Poor	Orange	1	0.186
Post Mile: 12.896 to 13.109 Length: 0.213 Estimated Lane Mileage: 0.955	R1	JPC		3.30	11.24				199	Fair	Blue	1	0.191
	R2	JPC		1.20	7.30				131	Fair	Green	1	0.191
	R3	JPC		1.50	15.32				123	Fair	Green	1	0.191
	R4	JPC		1.70	44.32				275	Fair	Orange	1	0.191
	R5	JPC		1.50	48.99				229	Fair	Orange	1	0.191

Post Mile: 13.104 to 13.609 Length: 0.505 Estimated Lane Mileage: 3.030	L1	JPC		3.30	5.14				87	Good	Yellow	1	0.505
	L2	JPC		1.20	6.69				73	Good	Green	1	0.505
	L3	JPC		1.20	7.43				73	Good	Green	1	0.505
	L4	JPC		7.10	18.66				124	Fair	Yellow	1	0.505
	L5	JPC		2.70	35.51				152	Fair	Orange	1	0.505
	L6	JPC		2.40	15.78				188	Fair	Blue	1	0.505
Post Mile: 13.109 to 13.572 Length: 0.463 Estimated Lane Mileage: 2.778	R1	JPC		4.10	5.38				102	Fair	Yellow	1	0.463
	R2	JPC		1.20	10.25				76	Fair	Green	1	0.463
	R3	JPC		1.20	12.57				75	Good	Green	1	0.463
	R4	JPC		1.50	19.91				111	Fair	Green	1	0.463
	R5	JPC		3.50	36.14				165	Fair	Orange	1	0.463
	R6	JPC		0.90	18.29				151	Fair	Green	1	0.463
Post Mile: 13.609 to 15.241 Length: 1.632 Estimated Lane Mileage: 7.920	L1	JPC		3.60	4.40				92	Fair	Yellow	1	1.584
	L2	JPC		1.20	7.05				80	Good	Green	1	1.584
	L3	JPC		1.50	10.10				87	Good	Green	1	1.584
	L4	JPC		3.20	34.11				156	Fair	Orange	1	1.584
	L5	JPC		2.50	16.48				120	Fair	Green	1	1.584
Post Mile: 13.572 to 13.776 Length: 0.204 Estimated Lane Mileage: 1.020	R1	JPC		3.30	8.50				122	Fair	Yellow	1	0.204
	R2	JPC		1.20	4.63				89	Fair	Green	1	0.204
	R3	JPC		1.50	13.82				81	Good	Green	1	0.204
	R4	JPC		1.70	40.72				154	Fair	Orange	1	0.204
	R5	JPC		1.50	20.12				126	Fair	Green	1	0.204
Post Mile: 13.776 to 14.110 Length: 0.334 Estimated Lane Mileage: 1.670	R1	JPC		3.30	5.07				108	Fair	Yellow	1	0.334
	R2	JPC		1.20	6.47				90	Fair	Green	1	0.334
	R3	JPC		1.50	16.03				80	Good	Green	1	0.334
	R4	JPC		1.70	35.49				155	Fair	Orange	1	0.334
	R5	JPC		1.50	18.24				136	Fair	Green	1	0.334
Post Mile: 14.110 to 14.860 Length: 0.750 Estimated Lane Mileage: 3.510	R1	JPC		3.30	6.88				98	Fair	Yellow	1	0.702
	R2	JPC		1.20	8.89				77	Good	Green	1	0.702
	R3	JPC		1.50	22.33				106	Fair	Green	1	0.702
	R4	JPC		2.50	33.58				141	Fair	Orange	1	0.702
	R5	JPC		1.50	14.17				135	Fair	Green	1	0.702
Post Mile: 14.860 to 15.847 Length: 0.987 Estimated Lane Mileage: 4.935	R1	JPC		3.70	4.70				88	Good	Yellow	1	0.987
	R2	JPC		1.20	9.51				89	Good	Green	1	0.987
	R3	JPC		1.50	10.52				91	Good	Green	1	0.987
	R4	JPC		1.70	46.99				195	Fair	Orange	1	0.987
	R5	JPC		2.10	28.73				140	Fair	Orange	1	0.987
Post Mile: 15.241 to 15.563 Length: 0.322 Estimated Lane Mileage: 1.610	L1	JPC		3.30	5.20				88	Good	Yellow	1	0.322
	L2	JPC		1.20	9.71				93	Good	Green	1	0.322
	L3	JPC		1.50	12.23				95	Fair	Green	1	0.322
	L4	JPC		6.20	33.60				141	Fair	Orange	1	0.322
	L5	JPC		1.50	10.80				130	Fair	Green	1	0.322
Post Mile: 15.563 to 15.847 Length: 0.284 Estimated Lane Mileage: 1.704	L1	JPC		3.30	3.96				71	Good	Yellow	1	0.284
	L2	JPC		1.20	16.62				84	Good	Green	1	0.284
	L3	JPC		1.20	15.05				99	Fair	Green	1	0.284
	L4	JPC		1.50	17.61				107	Fair	Green	1	0.284
	L5	JPC		2.80	30.66				193	Fair	Orange	1	0.284
	L6	JPC		0.20	5.55				206	Fair	Blue	1	0.284
Post Mile: 15.847 to 16.717 Length: 0.870 Estimated Lane Mileage: 4.030	L1	JPC		3.30	2.67				85	Good	Yellow	1	0.806
	L2	JPC		1.20	9.30				77	Good	Green	1	0.806
	L3	JPC		2.30	15.35				104	Fair	Green	1	0.806
	L4	JPC		3.90	39.38				150	Fair	Orange	1	0.806
	L5	JPC		2.80	13.28				134	Fair	Green	1	0.806
Post Mile: 15.847 to 16.738 Length: 0.891 Estimated Lane Mileage: 4.135	R1	JPC		3.30	4.10				83	Good	Yellow	1	0.827
	R2	JPC		2.50	8.42				71	Good	Green	1	0.827
	R3	JPC		1.50	10.25				83	Good	Green	1	0.827
	R4	JPC		1.70	35.08				150	Fair	Orange	1	0.827
	R5	JPC		1.50	29.28				135	Fair	Orange	1	0.827
Post Mile: 16.717 to 17.487 Length: 0.770 Estimated Lane Mileage: 4.620	L1	JPC		3.30	8.47				84	Good	Yellow	1	0.770
	L2	JPC		1.20	7.62				76	Good	Green	1	0.770
	L3	JPC		2.50	13.69				93	Fair	Green	1	0.770
	L4	JPC		1.50	19.29				111	Fair	Green	1	0.770
	L5	JPC		1.70	33.51				150	Fair	Orange	1	0.770
	L6	Flexible				19.80	10.50	0.07	139	Fair	Orange	1	0.770
Post Mile: 16.738 to 17.190 Length: 0.452 Estimated Lane Mileage: 2.712	R1	JPC		3.30	4.41				81	Good	Yellow	1	0.452
	R2	JPC		1.20	13.99				88	Good	Green	1	0.452
	R3	JPC		1.20	9.15				73	Good	Green	1	0.452
	R4	JPC		1.50	10.70				99	Fair	Green	1	0.452
	R5	JPC		1.70	37.17				141	Fair	Orange	1	0.452
	R6	Flexible				26.40	14.20	0.08	172	Fair	Orange	1	0.452

	R1	JPC		3.30	13.32				84	Good	Yellow	1	0.107
	R2	JPC		1.20	14.21				93	Good	Green	1	0.107
Post Mile: 17.190 to 17.297	R3	JPC		1.20	8.51				73	Good	Green	1	0.107
Length: 0.107	R4	JPC		1.20	4.63				98	Fair	Green	1	0.107
Estimated Lane Mileage: 0.749	R5	JPC		1.50	18.58				103	Fair	Green	1	0.107
	R6	JPC		1.70	31.70				234	Fair	Orange	1	0.107
	R7	JPC		1.70	33.66				253	Fair	Orange	1	0.107
	R1	JPC		3.30	7.72				96	Fair	Yellow	1	0.167
Post Mile: 17.297 to 17.464	R2	JPC		1.20	11.42				84	Good	Green	1	0.167
Length: 0.167	R3	JPC		1.20	7.30				74	Good	Green	1	0.167
Estimated Lane Mileage: 1.002	R4	JPC		1.50	11.97				104	Fair	Green	1	0.167
	R5	JPC		1.70	30.22				127	Fair	Orange	1	0.167
	R6	JPC		1.70	30.86				107	Fair	Orange	1	0.167
	L1	JPC		3.30	1.30				93	Fair	Yellow	1	0.147
Post Mile: 17.487 to 17.634	L2	JPC		4.20	10.22				68	Fair	Yellow	1	0.147
Length: 0.147	L3	JPC		1.50	14.26				75	Fair	Green	1	0.147
Estimated Lane Mileage: 0.735	L4	JPC		1.70	41.49				148	Fair	Orange	1	0.147
	L5	JPC		1.50	18.81				109	Fair	Green	1	0.147
	R1	JPC		3.70	5.18				83	Good	Yellow	1	1.002
	R2	JPC		1.90	11.26				79	Good	Green	1	1.002
Post Mile: 17.464 to 18.490	R3	JPC		1.20	10.17				83	Good	Green	1	1.002
Length: 1.026	R4	JPC		1.20	12.99				96	Fair	Green	1	1.002
Estimated Lane Mileage: 7.014	R5	JPC		2.10	11.40				103	Fair	Green	1	1.002
	R6	JPC		1.70	32.43				110	Fair	Orange	1	1.002
	R7	JPC		3.30	31.66				111	Fair	Orange	1	1.002
	L1	JPC		3.30	3.42				95	Fair	Yellow	1	0.832
	L2	JPC		1.20	9.87				79	Good	Green	1	0.832
Post Mile: 17.634 to 18.490	L3	JPC		3.90	18.26				93	Fair	Yellow	1	0.832
Length: 0.856	L4	JPC		12.70	16.29				113	Fair	Red	1	0.832
Estimated Lane Mileage: 5.824	L5	JPC		1.50	14.40				120	Fair	Green	1	0.832
	L6	JPC		1.70	31.57				133	Fair	Orange	1	0.832
	L7	JPC		2.60	32.86				144	Fair	Orange	1	0.832
	L1	JPC		3.30	4.73				95	Fair	Yellow	1	0.396
	L2	JPC		3.40	7.89				116	Fair	Yellow	1	0.396
Post Mile: 18.490 to 18.913	L3	JPC		7.40	7.06				76	Fair	Yellow	1	0.396
Length: 0.423	L4	JPC		3.40	22.94				110	Fair	Yellow	1	0.396
Estimated Lane Mileage: 2.772	L5	JPC		2.70	30.64				144	Fair	Orange	1	0.396
	L6	JPC		1.70	34.91				134	Fair	Orange	1	0.396
	L7	JPC		1.70	33.04				127	Fair	Orange	1	0.396
	R1	JPC		3.30	5.73				84	Good	Yellow	1	0.141
	R2	JPC		1.20	11.98				82	Good	Green	1	0.141
Post Mile: 18.490 to 18.631	R3	JPC		1.20	4.63				78	Good	Green	1	0.141
Length: 0.141	R4	JPC		1.50	10.80				124	Fair	Green	1	0.141
Estimated Lane Mileage: 0.846	R5	JPC		1.70	36.92				166	Fair	Orange	1	0.141
	R6	JPC		1.70	31.94				141	Fair	Orange	1	0.141
	R1	JPC		3.30	5.56				87	Fair	Yellow	1	0.155
	R2	JPC		1.20	7.45				81	Good	Green	1	0.155
Post Mile: 18.631 to 18.813	R3	JPC		1.20	14.09				84	Good	Green	1	0.155
Length: 0.182	R4	JPC		1.20	12.29				125	Fair	Green	1	0.155
Estimated Lane Mileage: 1.085	R5	JPC		1.50	17.64				127	Fair	Green	1	0.155
	R6	JPC		1.70	31.75				132	Fair	Orange	1	0.155
	R7	JPC		1.70	30.22				210	Fair	Orange	1	0.155
	R1	JPC		5.10	3.50				87	Fair	Yellow	1	0.387
	R2	JPC		1.20	7.93				98	Fair	Green	1	0.387
Post Mile: 18.813 to 19.200	R3	JPC		1.20	9.66				80	Good	Green	1	0.387
Length: 0.387	R4	JPC		1.20	7.31				92	Good	Green	1	0.387
Estimated Lane Mileage: 3.096	R5	JPC		2.50	12.13				87	Fair	Green	1	0.387
	R6	JPC		2.80	12.34				74	Fair	Green	1	0.387
	R7	JPC		1.70	34.47				136	Fair	Orange	1	0.387
	R8	JPC		1.40	22.09				119	Fair	Green	1	0.387
	L1	JPC		3.80	2.64				81	Fair	Yellow	1	0.821
	L2	JPC		2.90	13.33				104	Fair	Green	1	0.821
Post Mile: 18.913 to 19.734	L3	JPC		22.20	13.37				98	Fair	Red	1	0.821
Length: 0.821	L4	JPC		10.00	10.15				87	Fair	Red	1	0.821
Estimated Lane Mileage: 6.568	L5	JPC		6.20	21.98				116	Fair	Yellow	1	0.821
	L6	JPC		7.80	10.60				117	Fair	Yellow	1	0.821
	L7	JPC		2.40	31.75				140	Fair	Orange	1	0.821
	L8	JPC		4.30	23.69				127	Fair	Yellow	1	0.821
	R1	JPC		3.30	3.90				75	Good	Yellow	1	0.299
	R2	JPC		1.20	13.22				95	Fair	Green	1	0.299

	R3	JPC		1.20	9.92				84	Good	Green	1	0.299
Post Mile: 19.200 to 19.499	R4	JPC		1.20	4.63				68	Good	Green	1	0.299
Length: 0.299	R5	JPC		1.20	9.96				94	Good	Green	1	0.299
Estimated Lane Mileage: 2.691	R6	JPC		2.80	17.33				102	Fair	Green	1	0.299
	R7	JPC		1.50	8.81				97	Fair	Green	1	0.299
	R8	JPC		3.00	20.09				84	Fair	Yellow	1	0.299
	R9	JPC		1.40	20.23				194	Fair	Blue	1	0.299
	R1	JPC		3.30	7.83				74	Good	Yellow	1	0.235
	R2	JPC		1.20	11.08				92	Good	Green	1	0.235
	R3	JPC		1.20	9.82				76	Good	Green	1	0.235
Post Mile: 19.499 to 19.734	R4	JPC		1.20	4.63				68	Good	Green	1	0.235
Length: 0.235	R5	JPC		1.20	13.44				92	Good	Green	1	0.235
Estimated Lane Mileage: 1.880	R6	JPC		1.50	11.15				93	Good	Green	1	0.235
	R7	JPC		1.70	31.83				119	Fair	Orange	1	0.235
	R8	JPC		1.40	21.94				127	Fair	Green	1	0.235
	L1	JPC		3.30	7.28				86	Good	Yellow	1	0.266
	L2	JPC		3.00	10.37				94	Fair	Yellow	1	0.266
	L3	JPC		7.90	8.10				114	Fair	Yellow	1	0.266
	L4	JPC		1.20	10.22				95	Fair	Green	1	0.266
	L5	JPC		1.20	13.07				109	Fair	Green	1	0.266
	L6	JPC		4.50	9.95				113	Fair	Yellow	1	0.266
Post Mile: 19.734 to 20.000	L7	JPC		1.70	36.00				152	Fair	Orange	1	0.266
Length: 0.266	L8	JPC		1.40	24.47				129	Fair	Green	1	0.266
Estimated Lane Mileage: 3.990	R1	Flexible				0.80	0.50	0.09	118	Fair	Green	1	0.266
	R2	Flexible				0.80	0.50	0.07	99	Fair	Green	1	0.266
	R3	Flexible				0.80	0.50	0.10	85	Good	Green	1	0.266
	R4	Flexible				6.40	4.10	0.14	106	Fair	Yellow	1	0.266
	R5	Flexible				6.20	4.50	0.13	99	Fair	Yellow	1	0.266
	R6	Flexible				9.20	6.60	0.09	89	Good	Yellow	1	0.266
	R7	Flexible				9.20	6.60	0.06	95	Good	Yellow	1	0.266
	L1	JPC		3.30	4.84				84	Fair	Yellow	1	0.199
	L2	JPC		1.20	20.30				111	Fair	Green	1	0.199
Post Mile: 20.000 to 20.199	L3	JPC		1.20	16.23				121	Fair	Green	1	0.199
Length: 0.199	L4	JPC		1.20	13.30				107	Fair	Green	1	0.199
Estimated Lane Mileage: 1.592	L5	JPC		1.20	24.92				118	Fair	Green	1	0.199
	L6	JPC		1.50	8.81				147	Fair	Green	1	0.199
	L7	JPC		1.70	35.09				139	Fair	Orange	1	0.199
	L8	JPC		1.40	18.52				126	Fair	Green	1	0.199
	R1	JPC		3.30	3.34				91	Fair	Yellow	1	0.479
	R2	JPC		4.60	13.69				90	Fair	Yellow	1	0.479
Post Mile: 20.000 to 20.479	R3	JPC		1.20	13.37				107	Fair	Green	1	0.479
Length: 0.479	R4	JPC		2.70	8.56				88	Fair	Green	1	0.479
Estimated Lane Mileage: 3.353	R5	JPC		2.70	12.70				102	Fair	Green	1	0.479
	R6	JPC		1.70	33.37				116	Fair	Orange	1	0.479
	R7	JPC		4.30	31.22				122	Fair	Orange	1	0.479
	L1	JPC		3.30	4.03				102	Fair	Yellow	1	0.280
	L2	JPC		1.20	7.91				88	Good	Green	1	0.280
Post Mile: 20.199 to 20.479	L3	JPC		1.20	9.05				88	Good	Green	1	0.280
Length: 0.280	L4	JPC		1.20	16.44				100	Fair	Green	1	0.280
Estimated Lane Mileage: 1.960	L5	JPC		1.50	32.32				127	Fair	Orange	1	0.280
	L6	JPC		4.50	31.04				190	Poor	Orange	1	0.280
	L7	JPC		11.60	32.97				129	Fair	Red	1	0.280
	L1	JPC		3.30	7.90				133	Fair	Yellow	1	0.312
	L2	JPC		1.20	6.33				79	Good	Green	1	0.312
	L3	JPC		1.20	8.72				97	Fair	Green	1	0.312
	L4	JPC		1.20	22.88				105	Fair	Green	1	0.312
	L5	JPC		1.20	20.50				125	Fair	Green	1	0.312
	L6	JPC		1.50	17.14				140	Fair	Green	1	0.312
Post Mile: 20.479 to 20.791	L7	JPC		1.70	30.89				189	Fair	Orange	1	0.312
Length: 0.312	L8	JPC		1.40	25.56				153	Fair	Orange	1	0.312
Estimated Lane Mileage: 4.992	R1	JPC		7.60	10.64				139	Fair	Yellow	1	0.312
	R2	JPC		1.20	15.76				90	Fair	Green	1	0.312
	R3	JPC		1.20	10.71				73	Good	Green	1	0.312
	R4	JPC		1.20	4.63				81	Good	Green	1	0.312
	R5	JPC		1.20	11.81				99	Fair	Green	1	0.312
	R6	JPC		3.10	22.48				126	Fair	Yellow	1	0.312
	R7	JPC		1.70	31.80				137	Fair	Orange	1	0.312
	R8	JPC		5.60	32.63				200	Poor	Orange	1	0.312
	L1	JPC		4.30	3.47				81	Fair	Yellow	1	0.391
	L2	JPC		0.40	1.05				68	Good	Green	1	0.391

Post Mile: 20.791 to 21.182	L3	JPC		2.70	5.46				100	Fair	Green	1	0.391
Length: 0.391	L4	JPC		0.40	13.98				100	Fair	Green	1	0.391
Estimated Lane Mileage: 2.737	L5	JPC		0.70	7.26				118	Fair	Green	1	0.391
	L6	JPC		1.40	23.95				284	Fair	Blue	1	0.391
	L7	JPC		8.80	35.40				262	Poor	Orange	1	0.391
	R1	JPC		23.80	13.32				104	Fair	Red	1	0.139
	R2	JPC		3.70	11.34				80	Fair	Yellow	1	0.139
Post Mile: 20.791 to 20.930	R3	JPC		0.40	4.94				67	Fair	Green	1	0.139
Length: 0.139	R4	JPC		6.30	1.05				79	Fair	Yellow	1	0.139
Estimated Lane Mileage: 0.973	R5	JPC		6.70	3.30				83	Fair	Yellow	1	0.139
	R6	JPC		1.40	33.12				294	Fair	Orange	1	0.139
	R7	JPC		1.40	42.43				238	Fair	Orange	1	0.139
Post Mile: 20.930 to 21.182	R1	JPC		18.70	1.30				85	Fair	Red	1	0.252
Length: 0.252	R2	JPC		1.20	9.27				81	Fair	Green	1	0.252
Estimated Lane Mileage: 1.008	R3	JPC		1.70	31.04				103	Fair	Orange	1	0.252
	R4	JPC		7.20	17.43				105	Fair	Yellow	1	0.252
	L1	Flexible				1.40	1.40	0.08	88	Good	Green	1	0.118
	L2	Flexible				0.80	0.50	0.08	88	Good	Green	1	0.118
Post Mile: 21.182 to 21.300	L3	Flexible				6.20	4.50	0.10	112	Fair	Yellow	1	0.118
Length: 0.118	L4	Flexible				18.30	6.60	0.13	114	Fair	Yellow	1	0.118
Estimated Lane Mileage: 0.944	R1	JPC		12.50	6.00				92	Fair	Red	1	0.118
	R2	JPC		1.20	4.63				75	Fair	Green	1	0.118
	R3	JPC		1.70	32.21				107	Fair	Orange	1	0.118
	R4	JPC		0.90	14.15				98	Fair	Green	1	0.118
				2.50	**16.39**	**12.89**	**6.37**	**0.09**	**121**				**136.428**
				Lane Weighted Average									Total