

ROAD REPAIR AND ACCOUNTABILITY ACT OF 2017
PROJECT BASELINE AGREEMENT

RIV 10 CAPM, DRAINAGE & ADA

Resolution **SHOPP-P-2627-01B**

(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 20, 2026** (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 **3/20/2026** meeting the Commission approved the **State Highway Operation and Protection Program** and included in this program of projects the **RIV 10 CAPM, DRAINAGE & ADA**, 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 **[REDACTED]**, "Adoption of Program of Projects for the Active Transportation Program", dated **[REDACTED]**
- ☐ Resolution **[REDACTED]**, "Adoption of Program of Projects for the Local Partnership Program", dated **[REDACTED]**
- ☐ Resolution **[REDACTED]**, "Adoption of Program of Projects for the Solutions for Congested Corridors Program", dated **[REDACTED]**
- ☒ Resolution **G-26-33**, "Adoption of Program of Projects for the State Highway Operation and Protection Program", dated **3/20/2026**
- ☐ Resolution **[REDACTED]**, "Adoption of Program of Projects for the Trade Corridor Enhancement Program", dated **[REDACTED]**

- 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.)*

N/A

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 **RIV 10 CAPM, DRAINAGE & ADA**

Resolution **SHOPP-P-2627-01B**

(to be completed by CTC)

	Date
Caltrans	
Project Applicant	

	Date
Caltrans	
Implementing Agency	

Catalino Pining Iii	Digitally signed by Catalino Pining Iii Date: 2026.06.24 16:38:46 -07'00'	6/24/2026
Catalino A. Pining III		Date
District Director		
California Department of Transportation		

FOR		
	Dina El-Tawansy	Date
	Director	
	California Department of Transportation	

		08/24/2026
Tanisha Taylor		Date
Executive Director		
California Transportation Commission		

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: 06/30/26 10:53:50 AM

District	EA	Project ID		PPNO	Project Manager
08	1M360	0821000109		3018N	ALARKAN, DALIA
County	Route	Begin Postmile	End Postmile	Implementing Agency	
RIV	10	32.6	44.4	PA&ED	Caltrans
				PS&E	Caltrans
				Right of Way	Caltrans
				Construction	Caltrans

Project Nickname

RIV 10 CAPM, DRAINAGE & ADA

Location/Description

In and near Cathedral City, from 0.5 mile west of Indian Avenue to 0.1 mile west of Monterey Avenue. Rehabilitate pavement, upgrade lighting and Transportation Management Systems (TMS) elements. (G13 Contingency)

Legislative Districts

Assembly: 47 **Senate:** 19 **Congressional:** 25, 41

PERFORMANCE MEASURES

	Primary Asset	Good	Fair	Poor	New	Total	Units
Existing Condition	Pavement		93.7			93.7	Lane-miles
Programmed Condition	Pavement	93.7				93.7	Lane-miles

Project Milestone

	Actual	Planned
Project Approval and Environmental Document Milestone	05/18/26	
Right of Way Certification Milestone		10/01/27
Ready to List for Advertisement Milestone		12/02/27
Begin Construction Milestone (Approve Contract)		02/01/29

FUNDING (Allocated amounts are shaded)

Component	Fiscal Year	SHOPP					Total
PA&ED	24/25	1,757					1,757
PS&E	25/26	2,636					2,636
RW Support	25/26	353					353
Const Support	28/29	7,473					7,473
RW Capital	28/29	144					144
Const Capital	28/29	55,099					55,099
Total		67,462					67,462

Memorandum

To: Rich Stone
SHOPP
HQ Financial Programming

Date: June 18, 2026

File: 08-1M360
0821000109
08-Riv-10-32.6/44.4

From: Dalia Alarkan, PE
Project Manager
District 8

Dalia Alarkan
Subject: PROJECT STATUS UPDATE

This memorandum is written to accompany the Baseline Agreement for the referenced project.

The project was programmed into the 2024 State Highway Operation and Protection Program (SHOPP) for Fiscal Year (FY) 2026/2027 RTL delivery. Since the Project Report was prepared, the estimate has been revised by the District's Design Team. A Project Change Report (PCR) was submitted and approved at the June 2026 CTC, and PS&E allocation request has been submitted to August 2026 CTC meeting. The project was amended into the 2026 SHOPP at the March 2026 CTC meeting.

Currently Proposed Major Milestones:

Milestone	Current Schedule
R/W Cert M410	10/01/27
RTL M460	12/02/27
Approve Contract M500	02/01/29

Current and Proposed Funds (\$K):

Component	Programmed	Allocation	PR Estimate	PCR #1
PAED Support	\$1,757	\$1,757	\$1,757	
PS&E Support	\$2,288	\$2,636	\$2,636	
RW Support	\$303	\$353	\$353	
Const. Support	\$7,473		\$7,799	\$7,799
RW Capital	\$144		\$2,560	\$2,560
Const. Capital	\$55,099		\$57,057	\$57,057

Project Report For Project Approval

On Route RIV 010

Between IN AND NEAR CATHEDRAL CITY, FROM 0.5 MI W/O
INDIAN AVENUE TO 0.1 W/O MONTEREY AVENUE.

And

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:

gg

for

Christine Senteno

CHRISTINE L SENTENO, Deputy District Director, Right of Way

APPROVAL RECOMMENDED:

AS

Dalia Alarkan

DALIA ALARKAN, Project Manager

AC

Antonio Toledo

ANTONIA TOLEDO, Deputy District Director, Environmental

AB

for

Haissam Yahya

HAISSAM YAHYA, Deputy District Director, Traffic Operations

CQ

for

Jesus Galvan Jr

JESUS GALVAN, Deputy District Director, Design

PROJECT APPROVED:

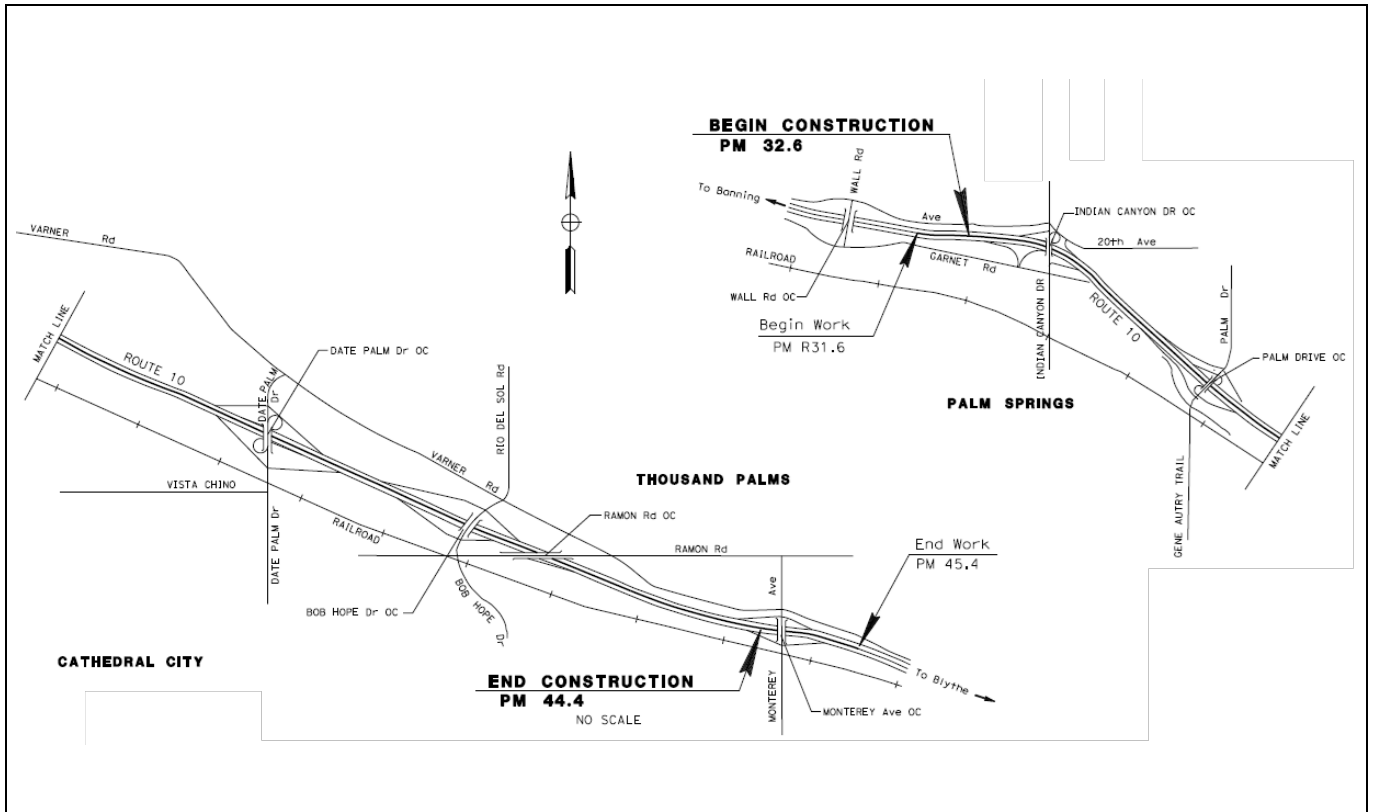
Catalino A Pinning III

CATALINO A PINING III, District Director

05/18/2026

Date

Vicinity Map



In Riverside County, in and near Cathedral City, from 0.5 mile west of Indian Avenue to 0.1 west of Monterey Avenue on Interstate 10 from Post Mile (PM) 32.6 to 44.4

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.

Perinpanathan Jude Ananthanathan

05/07/26

PERINPANATHAN JUDE ANANTHANATHAN
REGISTERED CIVIL ENGINEER

DATE



SHOPP August CTC Baseline Agreement

Final Audit Report

2026-07-21

Created:	2026-07-21
By:	Cecilia Gutierrez (s135761@dot.ca.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAAj-e1jNquul8l3RWFj7114_zpwWWrAd66

"SHOPP August CTC Baseline Agreement" History



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Agreement completed.

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Memorandum

To: Rich Stone
SHOPP
HQ Financial Programming

Date: June 18, 2026

File: 08-1M360
0821000109
08-Riv-10-32.6/44.4

From: Dalia Alarkan, PE
Project Manager
District 8

Dalia Alarkan
Subject: PROJECT STATUS UPDATE

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Project Report For Project Approval

On Route RIV 010
Between IN AND NEAR CATHEDRAL CITY, FROM 0.5 MI W/O
INDIAN AVENUE TO 0.1 W/O MONTEREY AVENUE.
And

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:

 for Christine Senteno
CHRISTINE L SENTENO, Deputy District Director, Right of Way

APPROVAL RECOMMENDED:

 Dalia Alarkan
DALIA ALARKAN, Project Manager

 
ANTONIA TOLEDO, Deputy District Director, Environmental

 for Haissam Yahya
HAISSAM YAHYA, Deputy District Director, Traffic Operations

 for Jesus Galvan Jr
JESUS GALVAN, Deputy District Director, Design

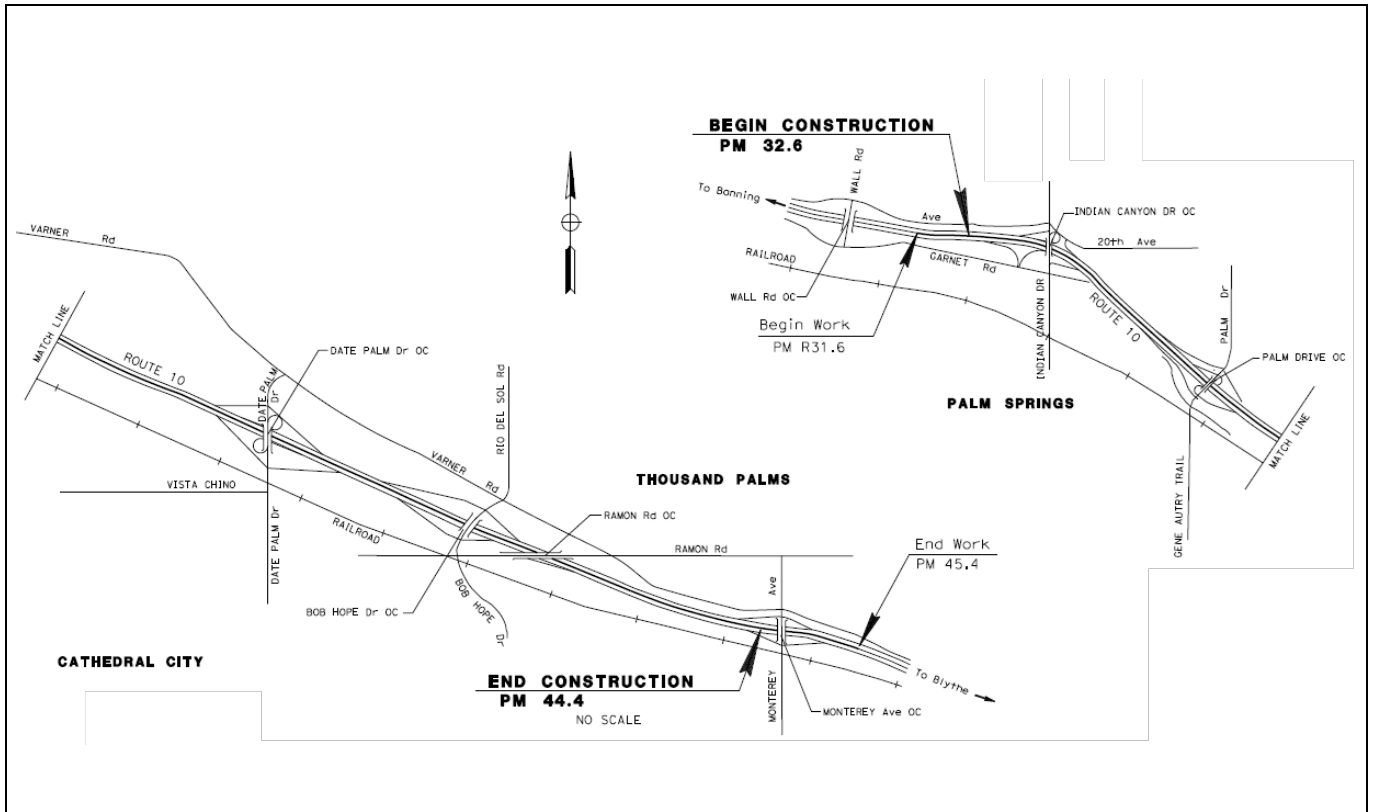
PROJECT APPROVED:


CATALINO A PINING III, District Director

05/18/2026

Date

Vicinity Map



In Riverside County, in and near Cathedral City, from 0.5 mile west of Indian Avenue to 0.1 west of Monterey Avenue on Interstate 10 from Post Mile (PM) 32.6 to 44.4

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.

Perinpanathan Jude Ananthanathan

05/07/26

PERINPANATHAN JUDE ANANTHANATHAN
REGISTERED CIVIL ENGINEER

DATE



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1. INTRODUCTION

Project Description:

The California Department of Transportation (Caltrans) proposes to extend pavement service life of the mainline, ramps and shoulders by cold planing existing pavement and overlaying with Rubberized Hot Mix Asphalt Gap graded (RHMA-G). The project also includes replacing shoulder rumble strips, upgrade culverts, upgrade existing guardrails to Midwest Guardrail System (MGS), upgrade ADA curb ramps, upgrade transportation management systems (TMS) and ramp metering systems (RMS), upgrade striping to enhanced wet night visibility at crosswalks, mark Class II bike lanes with green conflict paint, install a flashing beacon to improve pedestrian and bicycle facilities, and install rock blankets to improve roadside safety along Route 10 (I-10) between the project limits in and near cities of Palm Springs, Cathedral City and Thousand Palms in Riverside County (See Attachment A - Project Location Map, Attachment B - Typical Cross section and Layouts). Stormwater mitigation measures will be implemented by installing trash capture devices within Significant Trash Generating Areas (STGAs). Erosion control mitigation includes installing twelve check dams, regrading six sediment basins, installing Rock Slope Protection (RSP) at two locations and concrete apron at one location. Removal of dead trees and wells, replanting and installing irrigation system are also included with landscape work.

Project Limits	08-Riv-10 PM 32.6/44.4	
Number of Alternatives	2 (1 build and 1 no-build)	
	Current Cost Estimate: (\$1000)	Escalated Cost Estimate: (\$1000)
Capital Support	11,450	12,545
Capital Outlay Construction	49,112	57,057
Capital Outlay Right-of-Way	2,560	2,560
Funding Source	State Highway Operations and Protection Program (SHOPP); Pavement Preservation (201.121) Program	
Funding Year	2028	
Type of Facility	8-lane freeway	
SHOPP Project Output	93.7 lane-miles	
Environmental Determination or Document	Initial Study (IS) with Negative Declaration (ND) for California Environmental Quality Act (CEQA) and Categorical Exclusion (CE) for National Environmental Policy Act (NEPA)	
Legal Description	In and near Cathedral City, from 0.5 mile west of Indian Avenue to 0.1 west of Monterey Avenue	
Project Development Category	5	

2. RECOMMENDATION

It is recommended that this Project Report (PR) be approved, and authorization to be granted to proceed with Plans, Specifications and Estimate (PS&E) for the Build Alternative.

3. BACKGROUND

3A. Project History

The Office of Maintenance Engineering initiated this project under Project Initiation Proposal (PIP) No. 4804 that was approved on June 17, 2021 for project EA 1M360. A Project Initiation Report (PIR) was prepared and signed on May 09, 2022. The PIR included the following scope of work:

- Cold Plane 0.25' and overlay with 0.15' Rubberized Hot Mix Asphalt-Gap graded (RHMA-G) over 0.10' Hot Mix Asphalt – Type A (HMA-A) for Mainline
- Cold; Plane 0.20' and overlay with 0.20' RHMA-G for Ramps
- 10% Replace Asphalt Concrete Surfacing (Digouts)
- Replace AC dikes
- Replace one culvert in poor condition at PM 33.85 (D=24", L=98')
- 26 Signal and lighting systems for lighting rehabilitation
- One overhead sign structure rehabilitation (PM 41.415 EB)
- Upgrade the Americans with Disabilities Act (ADA) Curb Ramps
- Upgrade pedestrian and bicycle facilities including striping crosswalks to enhanced wet night visibility striping and green conflict painting
- Upgrade Transportation Management Systems (TMS)
 - Modify signal & lighting systems
 - Modify ramp metering systems
 - Modify traffic monitoring stations
- Install Erosion Control
 - Sediment basins
 - Check dams
 - Rock Slope Protection (RSP)
 - Concrete apron.
 - Slope Paving
- Landscape work
 - Removing irrigation facility
 - Irrigation System
 - Trees planting
 - Rock Blankets at the gore areas

However, following further field inspections, input from maintenance, construction personnel, and VA study, the following scope refinements were made:

- Deleted culvert replacement at PM 33.85

- Deleted 26 lighting systems
- Deleted overhead sign structure
- Included culvert upsizing at PM 39.87, Culvert upsizing at PM 43.27 and inlet repair at PM 44.31
- Included paved CHP turnaround at PM 34.38, 38.18, and 41.14
- Revised cold plane and overlay thickness and pavement material for the mainline and shoulder
- Finalize tree removal and replanting locations
- Finalize stormwater mitigation work including trash capture devices
- Upgrade existing guardrail to Midwest Guardrail System (MGS).

A Draft Environmental Document (DED) was circulated to the public as an Initial Study with Proposed Negative Declaration (IS-ND). Property Owners within 500 feet, local and regional agencies, and utility providers potentially affected by the project were provided with a public notice of the document on March 16, 2026. An Opportunity to review and comment was provided until April 15, 2026. The Final Environmental Document (FED) was finalized on May 01, 2026 after addressing comments received during the circulation of the environmental documents.

A detailed scope of work is included in the Alternatives section.

3B. Existing Facility

I-10 begins in the City of Santa Monica at its junction with State Route 1 (SR-1) and ends in Jacksonville, Florida. In the State of California, I-10 traverses District 7 in Los Angeles County and District 8 across both Riverside and San Bernardino Counties. In District 8, the route length is 196 miles. Within the project limits, the freeway is four lanes in each direction.

I-10, within the project limits, consist of four general purpose lanes in each direction of travel separated by unpaved median. Lanes and shoulders are paved with AC. Lanes are 12 feet in width, inside shoulders are generally 8 to 10 feet wide and outside shoulders are 10 feet wide. Much of the pavement within the project limits is in fair condition with longitudinal and transverse cracking.

Mainline Pavement Condition

A Pavement Condition Report from Pavement Management System (PaveM) was generated to evaluate the existing pavement condition. The table below is a summary of the actual and predicted flexible pavement distress within the project post mile.

Table: Summary of APCS Actual and Predicted

Type	Extent	
	Current APCS 2023 (Actual)	RTL FY 2027/2028 (Predicted)
Alligator B Cracking (%)	3.00	8.42
Rutting (inches)	0.13	0.15
International Roughness Index (IRI, inches/mile)	62	65

3C. Community Interaction

Caltrans makes it a priority to engage the public, stakeholders, the media, and others on any project that the Department is developing. This generally includes one or more of the following actions: holding and attending public meetings, meeting with partner agencies, sending out virtual notifications via social media and or emails, and sending out notification letters to partner agencies.

Local Agencies were notified by letters dated January 13, 2026, about the scope of the project as well as their input was requested. To date no public outreach events have been scheduled. However, more communications will be done in the subsequent phase.

During the construction phase of the project, Caltrans' Public Information Officers, in coordination with the Resident Engineer will arrange and facilitate outreach programs to inform and engage residents, businesses, and agencies about the construction process and mainline/ramp closure.

4. PURPOSE AND NEED

Purpose:

The purpose of this project is to maintain existing pavement in good condition before more expensive rehabilitation is required, extend the life of the facility, improve the ride quality, and upgrade other highway appurtenances and facilities that are worn out or functionally obsolete.

Need:

This project is needed to address deficiencies of the pavement. Due to the heavy and continuous traffic, the existing pavement is showing distress and deterioration. As indicated in the Department of Transportation's (Caltrans) Pavement Condition Survey (PCS), there are excessive areas of cracking and poor ride quality that are beyond routine maintenance.

4A. Problem, Deficiencies, Justification

The existing pavement is exhibiting signs of distress and deterioration at various locations along I-10 as indicated in the Pavement Management System (PaveM). There

are areas of alligator B cracking, rutting and roughness requiring pavement rehabilitation to extend pavement life and improve ride quality along Route 10. Existing curb ramps at several intersections do not meet the current ADA standards. Reconstruction of these curb ramps is necessary to comply with current standards. Drainage facilities at identified locations are of inadequate capacity and therefore need to be upsized. The culvert at PM 44.31 does not have an appropriate inlet. Guardrails within the project limits need to be upgraded to current standard.

4B. Regional and System Planning

This project would cause no changes to the current regional and system planning.

4C. Traffic

Current and Forecasted Traffic Data

No Traffic forecast analysis was performed as this project does not aim to increase capacity.

Collision Data Analysis

The TASAS Table B report identified below was generated on 04/229/2026 and it depicts crash rates per Million Vehicles (MV) for ramps, intersections, and segments less than 0.5 miles and per Million Vehicle Miles (MVM) for segments greater or equal to 0.5 miles. The crash rate history covers 36 months from the beginning date 01/01/2022 to the ending date 12/31/2024 from the Traffic Accident Surveillance and Analysis System (TASAS). In addition, detailed analysis per the TASAS Selective Accident Retrieval (TSAR) of types of collision and primary collision factors were tabulated for the locations as shown in the tables.

Table : TASAS Table B 36 months Crash Rates (01/01/2022 – 12/31/2024)

Item #	Route	Direction	Location	Start PM	Total No. of Collisions	Actual Rates			Average Rates		
						Fatal	Fatal + Injury	Total	Fatal	Fatal + Injury	Total
1	10	E/B	Mainline	32.6 - 44.400	239	0.004	0.110	0.340	0.005	0.280	0.880
2	10	W/B	Mainline	32.6 - 44.400	169	0.001	0.070	0.240	0.005	0.280	0.880
3	10	E/B	EB OFF TO GARNET AVE/INDIAN CY AVE	32.771	2	0.000	0.910	1.820	0.078	1.320	3.260
4	10	W/B	WB ON FR SB INDIAN	32.895	0	0.000	0.000	0.000	0.009	0.330	0.640

			CANYON AVE								
5	10	E/B	EB ON FR GARNET AVE/INDIAN CY AVE	32.977	0	0.000	0.000	0.000	0.007	0.470	0.000
6	10	W/B	WB ON FR NB INDIAN CY/20TH AVE	33.079	0	0.000	0.000	0.000	0.002	0.080	0.300
7	10	E/B	SEG ON FR NB INDIAN CY AVE	33.208	0	0.000	0.000	0.000	0.002	0.230	0.770
8	10	W/B	SEG WB ON FR 20TH AVE	33.209	2	0.000	<u>0.910</u>	<u>1.820</u>	0.002	0.230	0.630
9	10	E/B	WB OFF TO 20TH AVE/INDIAN CY AVE	33.322	2	0.000	<u>1.820</u>	<u>1.820</u>	0.003	0.380	1.040
10	10	W/B	EB ON FR NB INDIAN CANYON AVE	33.361	2	0.000	<u>0.910</u>	<u>1.820</u>	0.004	0.230	0.700
11	10	E/B	EB OFF TO GENE AUTRY TR	35.858	2	0.000	0.000	<u>1.820</u>	0.009	0.480	1.310
12	10	W/B	WB ON FR PALM DR	35.877	0	0.000	0.000	0.000	0.009	0.330	0.640
13	10	E/B	WB ON FR NB PALM DR	36.128	1	0.000	<u>0.910</u>	<u>0.910</u>	0.014	0.280	0.800
14	10	W/B	EB ON FR SB GENE AUTRY TR	36.151	7	0.000	<u>1.820</u>	<u>6.380</u>	0.014	0.280	0.800
15	10	E/B	EB ON FR GENE AUTRY TR	36.349	2	0.000	<u>0.910</u>	<u>1.820</u>	0.009	0.330	0.640
16	10	W/B	WB OFF TO PALM DR	36.389	4	0.000	<u>1.820</u>	<u>3.650</u>	0.009	0.480	1.310
17	10	E/B	WB ON FR DATE PALM DR	39.235	3	0.000	<u>3.690</u>	<u>11.070</u>	0.005	0.220	0.630
18	10	W/B	EB OFF TO DATE PALM DR	39.278	13	0.000	0.190	<u>2.480</u>	0.009	0.480	1.310
19	10	E/B	EB ON FR SB DATE PALM DR	39.468	3	0.000	0.000	<u>2.740</u>	0.014	0.280	0.800
20	10	W/B	WB ON FR NB DATE PALM DR	39.515	1	0.000	<u>0.910</u>	<u>0.910</u>	0.014	0.280	0.800

21	10	E/B	EB ON FRM DATE PALM DR	39.704	3	0.000	0.220	0.330	0.005	0.220	0.630
22	10	W/B	WB OFF TO DATE PALM DR	39.713	4	0.000	0.000	0.400	0.009	0.480	1.310
23	10	E/B	WB ON FROM BOB HOPE DR	42.870	7	0.000	<u>1.820</u>	<u>6.380</u>	0.002	0.230	0.630
24	10	W/B	EB OFF TO BOB HOPE DR	42.904	8	0.000	<u>1.820</u>	<u>7.290</u>	0.003	0.380	1.040
25	10	E/B	EB ON FROM BOB HOPE DR	43.320	0	0.000	0.000	0.000	0.002	0.230	0.630
26	10	W/B	WB OFF TO BOB HOPE DR	43.344	6	0.000	<u>1.820</u>	<u>5.470</u>	0.003	0.380	1.040
27	10	E/B	EB ON FRM RAMON RD	43.523	8	0.000	<u>0.490</u>	<u>0.790</u>	0.002	0.230	0.630
28	10	W/B	WB ON FR SB MONTEREY AVE	44.278	0	0.000	0.000	0.000	0.004	0.230	0.700
29	10	E/B	EB OFF TO MONTEREY AVE	44.345	38	0.000	<u>1.890</u>	<u>4.230</u>	0.003	0.380	1.040

Source: Caltrans, Traffic Accident Surveillance and Analysis System (TASAS). Data retrieved on 04/29/2026

Notes:

1. Abbreviations: EB-eastbound; WB-westbound; SB-southbound; NB-northbound; OFF-offramp; ON-onramp; CYN-canyon; TR-trail
2. Values underlined denotes crash rates are higher than the statewide average for similar facilities
3. All reported crashes (including Property Damage Only (PDO) crashes).

Table: TSAR

Item No.	Type of Collisions									Primary Collision Factors										
	Head-On	Side- swipe	Rear-End	Broad- side	Hit- Object	Over- turn	Auto-Ped	Other	Not Stated	Influence Alcohol	Follow too Close	Failure to Yield	Improper Turn	Speeding	Other Violations	Improper Driving	Other than Driver	Unknown	Fell Asleep	Not Stated
	No. of Collisions																			
1	1	91	71	2	61	12	0	1	0	22	0	0	99	59	36	0	22	1	0	0
2	1	61	34	2	53	13	0	5	0	13	0	0	59	29	40	0	25	3	0	0
3	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0

Item No.	Type of Collisions									Primary Collision Factors										
	Head-On	Side- swipe	Rear-End	Broad- side	Hit- Object	Over- turn	Auto-Ped	Other	Not Stated	Influence Alcohol	Follow too Close	Failure to Yield	Improper Turn	Speeding	Other Violations	Improper Driving	Other than Driver	Unknown	Fell Asleep	Not Stated
	No. of Collisions																			
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0
9	0	1	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
10	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0
11	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
14	0	1	1	0	3	2	0	0	0	0	0	0	2	5	0	0	0	0	0	0
15	0	0	2	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
16	0	0	4	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0
17	1	0	1	0	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0
18	1	0	6	1	5	0	0	0	0	1	0	0	5	6	1	0	0	0	0	0
19	0	0	2	0	1	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0
20	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
21	0	1	1	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0

Item No.	Type of Collisions									Primary Collision Factors										
	Head-On	Side-swipe	Rear-End	Broad-side	Hit-Object	Over-turn	Auto-Ped	Other	Not Stated	Influence Alcohol	Follow too Close	Failure to Yield	Improper Turn	Speeding	Other Violations	Improper Driving	Other than Driver	Unknown	Fell Asleep	Not Stated
	No. of Collisions																			
22	0	1	3	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0
23	0	3	2	1	1	0	0	0	0	0	0	1	5	1	0	0	0	0	0	0
24	0	2	5	0	1	0	0	0	0	3	0	0	1	4	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	1	1	2	2	0	0	0	0	0	0	1	2	1	2	0	0	0	0	0
27	0	1	5	1	1	0	0	0	0	2	0	2	1	3	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	3	26	7	1	0	0	1	0	2	0	7	4	17	7	0	1	0	0	0

The proposed work will include upgrading end treatments and metal beam guardrails (MBGR) to MGS, installing and enhancing crosswalks, implementing signage and pavement markings for pedestrian and bicycle facilities. These upgrades are expected to lower the crash rates and reduce the severity of collisions. The replacement/ upsizing of drainage culverts is expected to reduce the possibility of water crossing the roadbed, leading to safer road conditions and less erosion.

“Performance Based Decision-Making using Highway Safety Manual,” dated April 4, 2022, provides guidance for performance-based safety analysis for highway design using the AASHTO Highway Safety Manual (HSM). The HSM was considered and determined not be applicable for this project because of the following reasons: There are no nonstandard design features proposed, there are no geometric or operational features that varies from the existing condition or from other project alternatives, there are no new or modification interchanges. Project design decisions were made using engineering judgement and experience based on specific project conditions and requirements.

5. ALTERNATIVES

5A. Viable Alternatives

Proposed Engineering Features

This alternative consists of the following improvements within the project limits:

- Cold plane 0.20' ft and overlay 0.20' RHMA-G on the mainlines, shoulders, and ramps
- 0.40' Replace Asphalt Concrete Surfacing (Digouts)
- Replace AC Dikes
- Replace shoulder rumble strips
- Add an additional culvert to existing at PM 39.87, replace a culvert at PM 43.27, and repair and modify one culvert at PM 44.31. Headwalls will be constructed and replaced at these locations.
- Upgrade 30 ADA curb ramps located at the on and off ramps from and to Indian Canyon Drive, on and off ramp from and to Gene Autry Trail/Palm Drive, on and off ramp from and to Date Palm Drive, and on and off ramp from and to Bob Hope Drive, and on ramp from Ramond Road and relocate existing pedestrian push buttons.
- Upgrade crash cushions, existing connection and guardrails to MGS.
- Upgrade traffic signals and ramp meters
- Upgrade traffic striping to thermoplastic enhanced wet night visibility striping, green conflict painting at crosswalks and bicycle facilities and install one activated flashing beacon.
- Install paved CHP turnarounds at PM 34.38, 38.18, and 41.14
- Erosion control mitigations include twelve check dams, six sediment basins, RSP at two locations, concrete apron at one location and slope paving at one location.
- Implement stormwater mitigation measures by installing trash capture devices within STGAs.
- Landscape work includes rock blankets at gore areas to improve worker safety, removing dead trees within project limits, planting native trees with temporary irrigation, and destroying two existing wells and associated enclosures.

Nonstandard Design Features

This minor pavement rehabilitation project will not degrade existing roadway geometric features or create deviations from current design standards. Based on Design Information Bulletin (DIB) 81, Minor Pavement Rehabilitation Guidelines, design standard decision documentation for existing nonstandard geometry features is not required. Existing nonstandard features within project limits, if any, will remain unchanged.

Cost Estimates

The current roadway cost estimate is \$49,112,000. The Support cost for this work is estimated at \$2,502,000 for PS&E and \$6,880,000 for Construction. Refer to attachment C for detail cost estimate.

Right of Way Data

All work is expected to be within Caltrans' Right of Way except portions that are within Bureau of Land Management's (BLM) land and Bureau of Indian Affairs' (BIA) land. No acquisitions are needed. Caltrans has right as specified in application map A67008-01, A67009-01, A66315-01, A67005-01, and A67005-01. Right of Way Data Sheet (Attachment E) dated March 26, 2026, estimates \$2,000 for permits to enter, \$475,000 for offsite mitigation, \$1,991,390 for CVAG fee, \$60,000 for potholing, and \$31,080 for permit fees.

Railroad Facilities

Some drainage inlet work will be performed adjacent to railroad facilities. The work will be done under temporary occupancy permit.

Highway Planting

Trees that were planted but destroyed during a fire event will be removed and replaced with new native trees. The replaced trees will be irrigated using a temporary irrigation system during the establishment period only, once established, the native trees will be self-sustaining and adapt to the surrounding environment. All removal and replanting activities will occur within Caltrans' right of way.

Utility and Other Owner Involvement

Based on the scope of work, Utility Engineering Workgroup (UEW) does not anticipate any utility relocation on this project. There are unidentified utilities that will need to be evaluated. Further utility investigation will be carried out and identify the conflict in PS&E phase. The following Utilities are within the project limit. See attachment E for further details.

1. ATT- Transmission
2. Coachella Valley Water district
3. Imperial Irrigation, Kinder Morgan Energy Partners
4. MCI (Verizon Business)
5. Mission Springs Water District
6. City of Palm Springs
7. SoCal Gas Distribution Palm Desert
8. SoCal Gas Distribution Beaumont
9. Spectrum – Charter
10. SCE Distribution – Desert Region
11. SCE Trans Telecom
12. Frontier

High-Occupancy Vehicle Lanes

The project does not propose new High Occupancy Vehicle lanes.

Ramp Metering

The project does not propose new interchange or modification to existing ramps. This project will update the existing electrical components of the existing ramp metering system that is outdated.

Non-Motorized and Pedestrian features

The existing non-motorized and pedestrian features include sidewalks and bike lanes on the over crossing. There are no existing pedestrian facilities on the main line. This project does not propose any widening to accommodate new features. The upgrades will enhance existing facility, refer to Complete Street Decision Document (CSDD) section for additional details.

5B. Rejected Alternatives

The No-Build alternative would not improve the facility from its current condition. This alternative would not satisfy the purpose and need.

6. CONSIDERATIONS REQUIRING DISCUSSION

6A. Hazardous Waste

An Initial Site Assessment (ISA) checklist was completed on January 15, 2026, and the risk for potentially hazardous waste involvement is determined to be low, see (Attachment F)

6B. Value Analysis

A value analysis (VA) was performed for this project since the estimated total cost for this project exceeds the \$25 million department threshold required for a VA study. A total of 6 alternatives were proposed.

1. Alternative 1.0: Apply fog seal to shoulders in lieu of RHMA or HMA.
2. Alternative 2.0: Reduce shoulder depth in both directions to 0.10' cold plane and 0.10' HMA-A overlay for inside and outside shoulder.
3. Alternative 3.0: Use recycled materials for base via CCPR method material using recycle train. Reduce mainline RHMA-G depth from 0.20' to 0.15'
4. Alternative 4.0: Reduce mainline RHMA depth from 0.20' to 0.15'.
5. Alternative 5.0: Recycle asphalt concrete from base material using recycle train.

6. Alternative 6.0: On EB side, pave only lanes 2 and 3 and slurry seal on lanes 1 and 4.

The VA study team recommended alternatives 1, 2, 4, and 6. The PDT team elected not to implement any of the recommendations. The PDT was able to reduce costs through other design adjustments, making most of the alternatives unnecessary. Overall, the VA study validated the baseline design confirming it meets project needs and can move forward.

6C. Resource Conservation

Opportunities to salvage and recycle items, such as metal beam guardrail and utilizing asphalt grindings in HMA-A (Reclaimed Asphalt pavement up to 25%) will be considered in the design phase. This project does not have features that affect energy requirements and energy use efficiencies for the various stages of construction, operation, and maintenance.

6D. Right-of-Way Issues

All work will be performed within the State's Right of Way, and Permanent Easement will not be required. However, one culvert repair work will be performed adjacent to railroad's right of way under temporary occupancy permit that the contractor will need to obtain during construction. For the portions that are within BLM land and BIA land, courtesy letters will be delivered. A right of way (R/W) Data Sheet (Attachment E) was prepared and signed on March 26, 2026. It estimates the R/W capital costs for the viable project alternative. Potholing will be completed in Phase 1.

6E. Environmental Compliance

An Initial Study (IS) was prepared in accordance with Caltrans's environmental procedures and California Environmental Quality Act (CEQA) guidelines. An IS was deemed to be appropriate document for the project and the IS with Negative Declaration (ND) was signature approved on May 01, 2026 (Attachment D).

Under Caltrans' assumption of responsibility pursuant to 23 U.S.C. 326, this project has been determined eligible for a Categorical Exclusion (CE) in compliance with the National Environmental Policy Act (NEPA). The NEPA CE was completed and signed on May 01, 2026 (Attachment D)

6F. Air Quality Conformity

This project is exempt from air quality conformity analysis per 40 CFR 93.126 (Table 2) as pavement resurfacing and/or rehabilitation is listed under Safety. Hence, no Air Quality Study is needed for the project and further transportation air conformity requirements do not apply to the project.

6G. Title VI Considerations

Caltrans and FHWA policies demonstrate a commitment to Title VI of the Civil Rights Act, which provides that no person in the United State shall on the ground of race, color, or national origin be excluded from participation in, be denied the benefits of or be subjected to, discrimination under any program or activity receiving federal financial assistance.

6H. Noise Abatement Decision Report

Per Caltrans Traffic Noise Analysis Protocol (Apr 2020), this project falls under the Type III Project Category of 23 CFR 772.7. Type III projects do not require noise analysis.

6I. Life-Cycle Cost Analysis

Per Life Cycle Cost Analysis (LCCA) Procedure Manual, Section 1.4 and Highway Design Manual (HDM) Topic 619.1, pavement work on the State Highway System for Capital Preventative Maintenance (CAPM) projects are exempted from LCCA.

6J. Reversible Lanes

This project does not qualify as capacity increasing or a major street/highway realignment project, and reversible lanes are not considered.

7. OTHER CONSIDERATIONS AS APPROPRIATE

7A. Public Hearing Process

A draft IS-ND was distributed for public review and comments between 03/16/2006 and 04/15/2026. Minor comments were received and addressed.

7B. Permits

The following National Pollutant Discharge Elimination System (NPDES) permits are applicable to this project:

NPDES Statewide Stormwater Permit and Waste Discharge Requirements for the State of California Department of Transportation (Order 2022-0033-DWQ, NPDES No. CAS000003), which regulates stormwater discharges from Caltrans facilities.

NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order WQ 2022-0057-DWQ, NPDES No. CAS000002), which applies to all stormwater discharges from activities that result in a disturbed soil area of one acre or more.

The following environmental permits will be required:

1. Lake and Streambed Alteration 1602 Permit, California Department of Fish and Wildlife (CDFW)
2. Waste Discharge Report. Regional Water Quality Control Board (RWQCB)

7C. Transportation Management Plan

A preliminary Transportation Management Plan (TMP) data sheet (Attachment H) was prepared to identify traffic mitigation measures to be implemented during the construction. This includes public outreach, Information/Public Awareness Campaign, portable changeable message signs, Incident Management, Construction Zone Enhanced Enforcement Program (COZEED), and off-peak closures. It is anticipated that bicycle and pedestrian traffic will be impacted at the bridge during construction operation of curb ramps and restriping. Vehicular traffic will also be impacted on the mainline and ramps during pavement operation. A conceptual TMP will be developed in the Plans, Specifications and Estimates (PS&E) phase, in coordination with local communities and cities, to outline measures to minimize traffic impacts during construction. The measures anticipated to be implemented include implementing detours with posted signage.

7D. Constructability Issues

Culvert construction will implement Jack and Bore method to keep traffic open during construction. The alternative will require trenches and may impact on traffic and cost. The culvert upgrade at PM 44.31 is adjacent to the railroad's right of way. This may require railroad flaggers. During paving operation of the middle lanes (e.g. lane 2 or 3), shoulder strengthening may be needed to keep 2 lanes open. Unidentified utilities at the curb ramps may impact on the design. It may also impact on pedestrian traffic and require detours. Special local events may impact the period of construction and require adjusting construction staging. MGS replacement at bridge bent location might not provide sufficient deflection and a concrete barrier might be needed.

7E. Stage Construction

To minimize impacts on traveling public, traffic handling plans will be developed in the PS&E phase. Partial lane and shoulder closures are expected. Prior to shifting traffic onto the shoulder, the shoulder will be strengthened. The rumble strip will not be put back until shoulders are no longer in use. Upgrading the existing culverts could potentially require stage construction. This could consist of shifting traffic and implementing lane closures as needed. If stage construction is needed, plans will be prepared during the design phase. Coordination with the local communities will be required to minimize impacts to traffic movement during the construction phase. The Project Development Team (PDT) will implement Positive Work Zone Protection in accordance with DIB 91 during the PS&E phase to ensure safety of workers and the traveling public during construction.

7F. Asset Management

SHOPP tool performance output form is given in Attachment I.

7G. Route Matters

No freeway agreements, adoptions, or relinquishments are required for this project.

7H. Complete Streets

Deputy Directive 64-R2 calls for the inclusion of Complete Streets elements into all Caltrans projects. Complete Streets elements were evaluated, and this project is consistent with the Complete Streets policy (DD 64-R2). This project falls within Segment 10 (Riv-10-PM 29.69 to Riv-10-PM 46.92) of Route 10, where there are no pedestrians or bicyclists allowed. A CSDD is provided as Attachment I.

Pedestrian Facilities

The curb ramps listed at the table below will be corrected as part of this project. In addition, pedestrian crosswalks at the interchanges at Indian Canyon Drive Over Cross, Gene Autry Trail/Palm Drive Over Cross, Date Palm Drive Over Cross, and Bob Hope Drive Over cross are also upgraded with enhanced wet night visibility markings.

Location	Quantity	Deficiency
Garnet Avenue on and off ramp	2	Does not meet ADA Standard Plan
Indian Canyon Drive on and off ramp	2	Does not meet ADA Standard Plan
Gene Autry Trail/Palm Drive on and off ramp	8	Does not meet ADA Standard Plan
Date Palm Dr on and off ramp	12	Does not meet ADA Standard Plan
Bob Hope Dr on and off ramp	4	Does not meet ADA Standard Plan
Ramon Road on ramp E/B	2	Does not meet ADA Standard Plan

Bicycle Facilities

Pedestrians and bicycle access is not permitted in this section of the I-10. However, bicycle facilities are permitted at overcrossing within the state ROW. Improvements are made to such facilities using green conflict paint and by installing an activated flashing beacon at Indian Canyon Drive Overcrossing.

Transit Facilities

Amtrak, Riverside Transit Agency and Sunline Transit Agency operate within the project locations. Due to the project location, public transportation improvements are not feasible as transit stops are off system. However, the proposed project will not hinder future improvements or prevent other agencies from pursuing complete street elements and transit stop improvements on nearby or bisecting roadways.

Park-and-Ride Facilities

There are no Park-and-Ride facilities within the project limits.

7I. Climate Change Consideration

The State Highway System (SHS) and other transportation infrastructure in the State are at increasing risk of damage and impacts from climate change and associated extreme weather events. Construction emissions are unavoidable but will be reduced to the extent possible through planning and implantation of best practices throughout the project delivery process.

Greenhouse Gas Reduction Measures

The scope and nature of the project are relatively minor. Project improvements would not result in any increase in operational greenhouse gases (GHG); however, GHG emissions would occur during the short-term construction process.

The following GHG reduction measures may be incorporated as part of the construction process, as a means of contributing to Caltrans' goal and mandates to reduce GHG and consider climate change:

- Reduction of demolition waste
- Energy efficient construction methodologies
- Water efficient construction methodologies
- Fuel efficient measures both for construction equipment and traffic management during delays or detours
- Materials use/choice, including source distance from site and
- Construction methods and materials with lower GHG than standard specifications.

Adaptation Measures

The proposed project site is not located within the coastal zone and is not sited within an area prone to sea level rise, fires, or flooding. The risk due to these factors has been determined to be low, and adaptation measures in this regard are not anticipated to be required.

7J. Broadband and Advance Technologies

The proposed improvements will not impact on the accommodation for wired broadband facilities, fueling opportunities for zero-emission vehicles, and provisions of infrastructure-to-vehicle communications for transitional or fully autonomous vehicles. Based on Operations (Traffic Management Support) recommendations, there will be no broadband in this project.

7K. Drainage

Hydraulics Design Unit has evaluated existing drainage systems and has recommended upgrades including upsizing two culverts and repairs to another. These recommendations have been incorporated.

7L. Stormwater

The PA/ED Stormwater Data Report (SWDR) for this project was approved on May 11, 2026 (Attachment K). The following Best Management Practices (BMPs) will be Implemented: construction site BMPs, maintenance BMPs, design pollution prevention BMPs, and treatment BMPs.

8. FUNDING, PROGRAMMING AND ESTIMATE

Funding

This project is currently programmed in the 2024 State Highway Operation and Protection Program (SHOPP) under the Pavement Preservation 201.121 Program for Delivery in the 2027/28 Fiscal Year. It has been determined that this project is eligible for Federal-aid funding.

Programming

Fund Source	Fiscal Year Estimate						Program Amount	Escalated Estimate Difference From Programmed
20.XX.201.121	Current Estimate	24/25	25/26	26/27	27/28	Escalated Estimate		
Component	In thousands of dollars (\$1,000)							
PA&ED Support	\$1,757	\$1,757				\$1,757	\$1,757	
PS&E Support	\$2,502		\$2,636			\$2,636	\$2,288	\$348
Right-of-Way Support	\$311		\$353			\$353	\$303	\$50
Construction Support	\$6,880				\$7,799	\$7,799	\$7,473	\$326
Total Support	\$11,450	\$1,757	\$2,989		\$7,799	\$12,545	\$11,821	\$724
Right-of-Way	\$2,560				\$2,560	\$2,560	\$144	\$2,416
Construction	\$49,112				\$57,057	\$57,057	\$55,099	\$1,958
Total Capital	\$51,672				\$59,617	\$59,617	\$55,243	\$4,374
Total	\$63,122	\$1,757	\$2,989		\$67,416	\$72,162	\$67,064	\$5,098

The support cost ratio is 21% for this project. The average ratio for this type of project under program 20.xx.201.121 is 27.1% statewide. The support to capital amount is

below the average. PA&ED and PS&E programmed and estimated amount will be addressed at the time of allocations. A PCR is being processed to address the increase in construction support, construction capital, and R/W capital.

Estimate

The current estimated construction cost is \$49,112,000 and the estimated Right of Way cost is \$2,559,470. For a detailed breakdown of Construction and Right of Way capital cost items, see Attachment C – Preliminary Cost Estimate; and for the right of way capital costs, see Attachment E – Right of Way Data Sheet.

9. DELIVERY SCHEDULE

Project Milestones		Milestone Date	Milestone Designation (Target/ Actual)
PROGRAM PROJECT	M015	05/09/2022	Actual
BEGIN ENVIRONMENTAL	M020	10/09/2024	Actual
CIRCULATE DPR & DED EXTERNALLY	M120	03/16/2026	Actual
PA & ED	M200	05/14/2026	Target
R/W REQ	M224	05/14/2026	Target
REG R/W	M225	05/14/2026	Target
PS&E TO DOE	M377	05/03/2027	Target
RIGHT OF WAY CERTIFICATION	M410	10/01/2027	Target
READY TO LIST	M460	12/02/2027	Target
CCP DES	M475	09/11/2028	Target
HEADQUARTERS ADVERTISE	M480	10/09/2028	Target
AWARD	M495	01/02/2029	Target
APPROVE CONTRACT	M500	02/01/2029	Target
CONTRACT ACCEPTANCE	M600	08/01/2030	Target
END PROJECT EXPENDITURES	M800	02/02/2032	Target
FINAL PROJECT CLOSEOUT	M900	01/03/2033	Target

10. RISKS

The following has been identified as risks for this project. The risks range from low to moderate.

Moderate Risk:

1. Oil price index from uncertainty in oil price
2. Severe weather conditions from wind and temperature
3. Digout quantities from worsening road conditions
4. Local agencies coordination due to multiple simultaneous local project

5. Material cost due to political instability
6. Culvert design change due to trenchless construction method
7. PAED schedule due to the circulation of the draft environmental documents

Low Risk:

1. Obtaining permits if there are scope changes
2. Nesting birds or roosting bats that could restrict period of construction
3. Weather events due to overlapping local events
4. Potential asbestos containing materials from culverts

See current risk register in Attachment L for further details.

11. EXTERNAL AGENCY COORDINATION

The project requires the following coordination:

Federal Highway Administration (FHWA)

This PR has been reviewed by Caltrans's FHWA Liaison, Sergio Avila on 04/27/2026 and this project is eligible for federal aid funding per the current Joint Stewardship and Oversight Agreement between the California Department of Transportation (Caltrans) and Federal Highway Administration (FHWA), dated August 26, 2024, this project is considered a Delegated Project. However, should any future circumstances that will potentially classify the project for Risk-based Project Involvement (RBPI), Caltrans shall notify FHWA. FHWA will reassess this project to determine if it is selected for RBPI and identify the specific FHWA involvement activities.

Railroads

Some drainage work near railroad will be performed under temporary occupancy permit. A temporary occupancy permit may be required for culvert work.

Bureau of Indian Affairs

Works within the right of way of Bureau of Indian Affairs will be coordinated via courtesy letter.

Bureau of Land Management

Works within the right of way of the Bureau of Land Management will be coordinated via courtesy letter.

12. PROJECT REVIEWS

Landscape Architect	<i>Angjie Jun</i>	Date <i>04-21-26</i>
Traffic Operation COS	<i>Jorge Ochoa Jr</i>	Date <i>04-22-26</i>
Traffic Operation Mobility Sys	<i>Jay Carillo</i>	Date <i>04-24-26</i>
Traffic Operation DTM/TMP	<i>Cuong Trinh</i>	Date <i>04-24-26</i>
Maintenance Engineer	<i>Arshad Shaon</i>	Date <i>04-21-26</i>
Maintenance Asset Management	<i>Raymond Yip</i>	Date <i>04-23-26</i>
Environmental	<i>Cesar Garcia</i>	Date <i>04-20-26</i>
Environmental	<i>Andrew Kuria</i>	Date <i>04-23-26</i>
Materials Engineering	<i>Sittampalam Sathiskumar</i>	Date <i>04-21-26</i>
Materials Engineering	<i>Karl Kunak</i>	Date <i>04-23-26</i>
Materials Engineering	<i>Erika Pantoja</i>	Date <i>04-21-26</i>
Stormwater Quality	<i>Tri Tran</i>	Date <i>04-22-26</i>
Utility Engineering	<i>Max Auyeung</i>	Date <i>04-23-26</i>
Utility Engineering	<i>Anna Nguyen</i>	Date <i>04-20-26</i>
Constructability Review	<i>Hector Guerrero</i>	Date <i>04-23-26</i>
District Design Liaison/FHWA/ADA	<i>Sergio Avila</i>	Date <i>04-27-26</i>
HQ Project Delivery Coordinator	<i>Jeffrey Rud II</i>	Date <i>04-20-26</i>
District Project Manager	<i>Dalia Alarkan</i>	Date <i>04-27-26</i>
District Design Manager	<i>Cat Quach</i>	Date <i>04-20-26</i>
District QC/QA	<i>Jason Collado</i>	Date <i>04-23-26</i>
Right of Way	<i>Gustavo Gutierrez</i>	Date <i>04-23-26</i>
Hydraulic	<i>Gabriel Quintero</i>	Date <i>04-20-26</i>
Maintenance Engineering	<i>Harmeek Sangha</i>	Date <i>04-21-26</i>
Safety Device	<i>Danny Pheng</i>	Date <i>04-22-26</i>
Traffic Ops TMS	<i>Dirk Spaulding</i>	Date <i>04-24-26</i>
Traffic Ops Ramp Metering	<i>Jay Carillo</i>	Date <i>04-24-26</i>
Traffic Ops Mobility	<i>Martin Morris</i>	Date <i>04-23-26</i>

13. PROJECT PERSONNEL

Name	Title	Division/Office	Phone Number
Mustapha Raouf	Office Chief	Design	(909) 501-9318
Peripanathan “Jude” Ananthanathan	Project Engineer	Design	(213) 598-6329
Sathiskumar Sittampalam	Office Chief	Material Engineering	(213) 605-5538
Gabriel Quintero	Hydraulic Engineer	Hydraulics	(840) 587-2282
Dalia Alarkan	Project Manager	Project Management	(909) 746-3554
Gustavo Gutierrez	Right of Way Coordinator	Right of Way	(213) 310-2504
Cesar Garcia	Environmental Senior	Environmental	(909) 472-1699

Andrew Kuria	Environmental Scientist	Environmental	(909) 261-4005
Aung Naing	Office Chief	Traffic Design	(909) 518-8559
Siva Sivakulam	Office Chief	Traffic Operation	(909) 255-2368
Kimberly Portillo	Risk Manager	Risk Coordinator	(916) 879-7946
Max Auyeung	Office Chief	Utility Engineering Workgroup	(909) 518-7084
Sadique Hossain	Construction Senior	Construction	(951) 830-6828
Jorge Arellanes	Right of Way Transportation Surveyor	Right of Way	(951) 906-9921
Haider Alkhafaji	Acting Office Chief	Stormwater Design	(909) 453-5134
Angie Jun	Landscape Associate	Landscape Architecture	(909) 453-9594
Almabeth Anderson	Landscape Chief	Landscape Architecture	(909) 501-9012
Tri Tran	Stormwater Quality	Storm Water Quality	(840) 587-2262
Greg Clark	Office Chief	Storm Water Quality	(213) 317-0017
Alan Bisi	Office Chief	Hydraulics	(909) 665-3677
Adan Acevedo	Right of Way Utility Coordinator	Right of Way	(909)518-5548
Lindsay Campanella	Right of Way Rail Road Coordinator	Right of Way	(909)518-4753

14. ATTACHMENTS (NUMBER OF PAGES)

- A. Project Location Map (1)
- B. Typical Cross Section and Layout (32)
- C. Preliminary Cost Estimate (10)
- D. CEQA – Initial Study Cover Page, Title Sheet, and Negative Declaration, NEPA – Categorical Exclusion (13)
- E. Right of Way Data Sheet (13)
- F. Initial Site Assessment (ISA) Checklist (4)
- G. Value Analysis Study Report (100)
- H. Transportation Management Data Sheet (5)
- I. SHOPP Tool Performance Output (2)
- J. Complete Streets Decision Document (5)
- K. Stormwater Data Report Signed Cover Page (1)
- L. Risk Register (4)
- M. Joint Field Visit Sign-in Sheet (1)
- N. PRSM Quantity (1)

Attachment A

Project Location Map

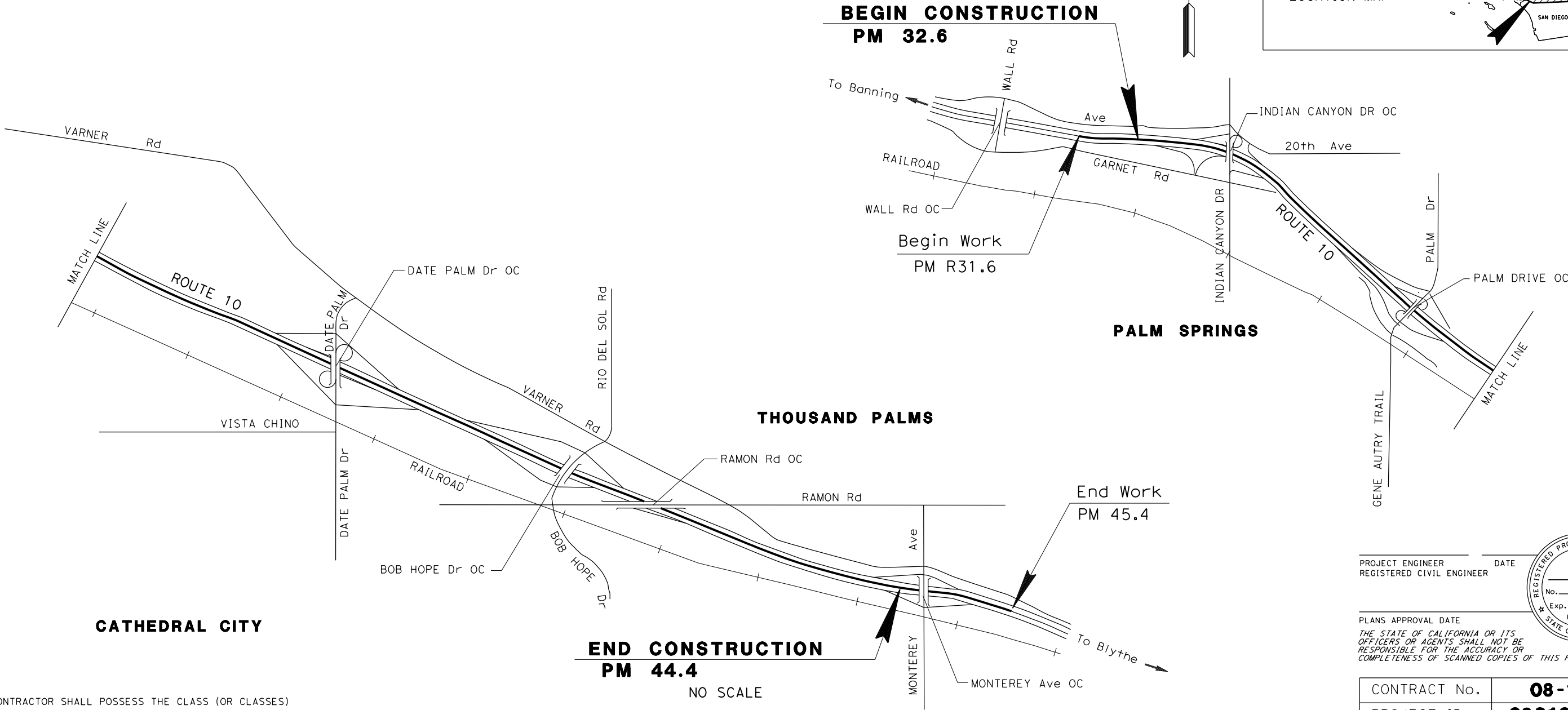
INDEX OF PLANS

Sheet No.	Description
1	TITLE SHEET AND LOCATION MAP

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN RIVERSIDE COUNTY
IN AND NEAR PALM SPRINGS,
CATHEDRAL CITY AND THOUSAND PALMS
FROM 0.53 MILE WEST OF INDIAN AVENUE OVERCROSSING
TO 0.1 MILE WEST OF MONTEREY AVENUE OVERCROSSING

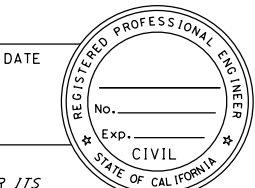
TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2025



PROJECT MANAGER	DALIA ALARKAN
DESIGN MANAGER	MUSTAPHA RAOUF

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

PROJECT ENGINEER
REGISTERED CIVIL ENGINEER



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.	08-1M3604
PROJECT ID	0821000109

Attachment B

Typical Cross Section and Layout

NOTES:

1. NO WORK SHALL BE ALLOWED ON BRIDGES. DO NOT COLD PLANE AND OVERLAY ON EXISTING CONCRETE PAVEMENT AND DRAINAGE INLET.
2. ENGINEER TO DETERMINE FINAL LOCATIONS OF REPLACING ASPHALT CONCRETE SURFACING.

STRUCTURAL SECTION:

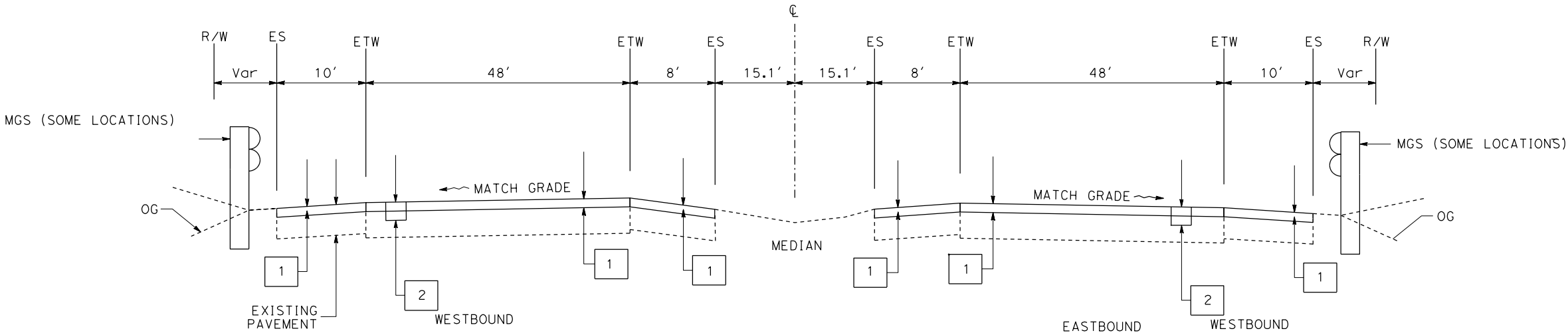
- 1 COLD PLANE 0.20' AND OVERLAY WITH 0.20' RHMA-G
- 2 0.40' REPLACE ASPHALT CONCRETE SURFACING

ABBREVIATION:

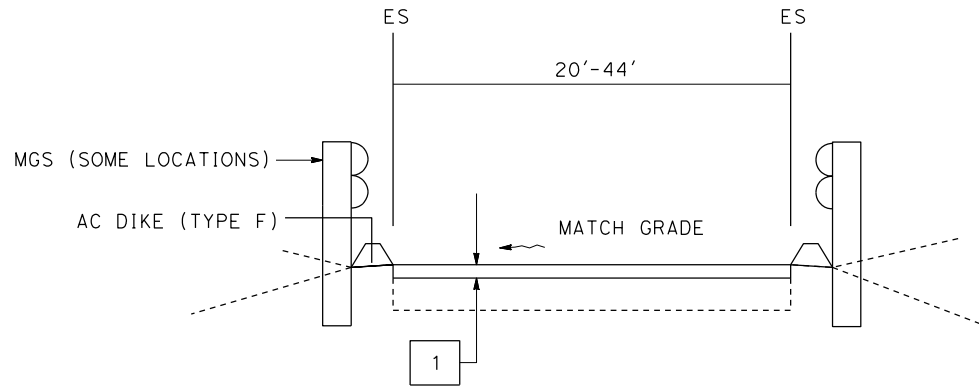
RHMA-G RUBBERIZED HOT MIX ASPHALT-GAP GRADED

DESIGN DESIGNATION:

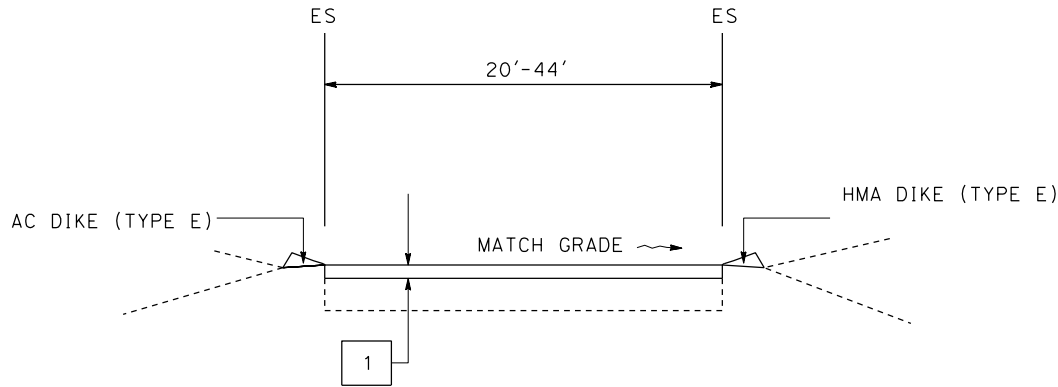
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REGISTERED CIVIL ENGINEER					DATE
PLANS APPROVAL DATE					
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ROUTE 10
PM 32.6 TO PM 44.4



ROUTE 10
PM 32.6 TO PM 44.4
TYPICAL RAMPS



ROUTE 10
PM 32.6 TO PM 44.4
TYPICAL RAMPS

TYPICAL CROSS SECTION
NO SCALE X-1

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. ALL ROADWAY WORK SHALL CONFORM TO EXISTING.
3. PROTECT IN PLACE ALL EXISTING DRAINAGE INLET AND OVERSIDE DRAIN.
4. CURB RAMP NOT CONSTRUCTED IN THE SAME DAY AS REMOVAL SHALL PROVIDE SUFFICIENT ROOM FOR TRUCK TURNING.

LEGEND:



DRAINAGE SYSTEM



MGS SYSTEM



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	32.6/44.4	X	X

REGISTERED CIVIL ENGINEER

DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER

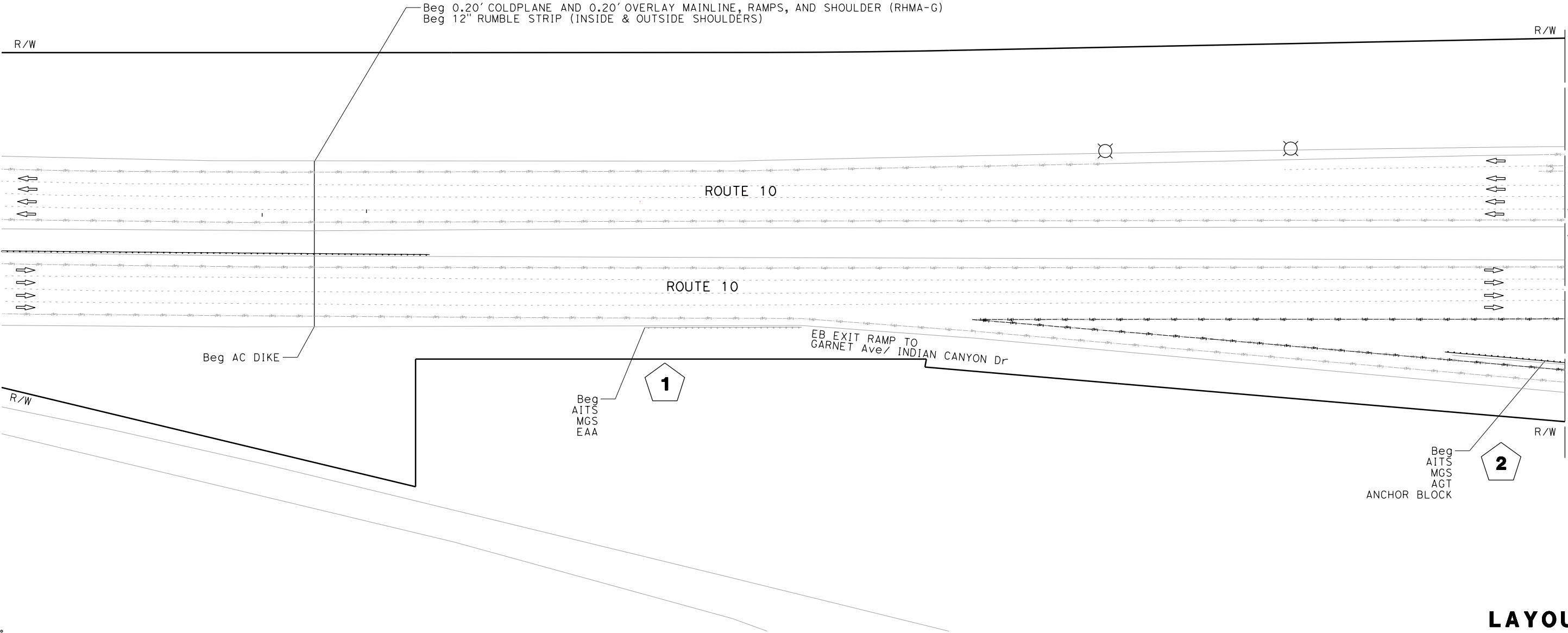
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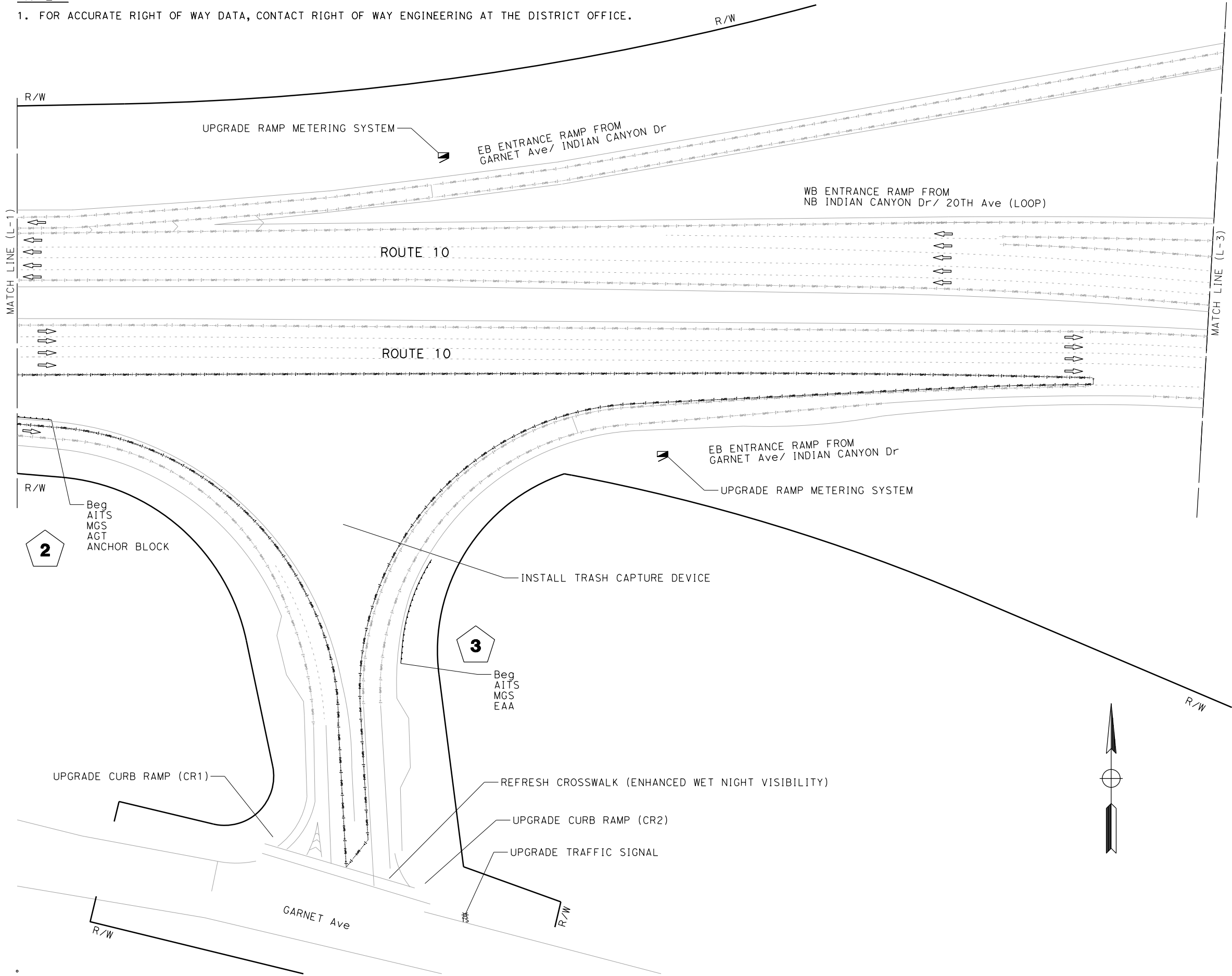


LAYOUT
L-1

SCALE: 1" = 50'

NOTE:

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



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	32.6/44.4	X	X

REGISTERED CIVIL ENGINEER

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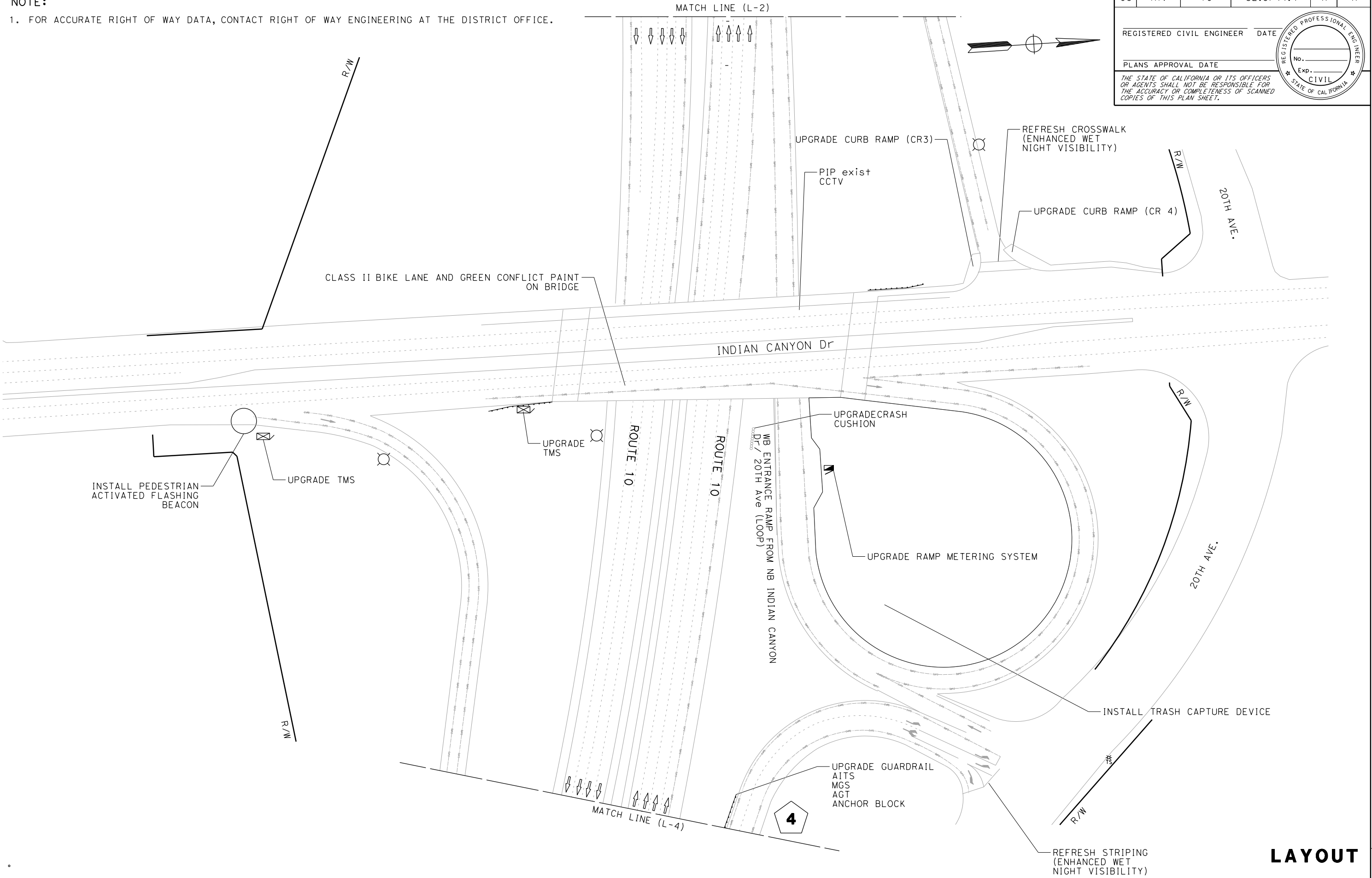
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	32.6/44.4	X	X

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REGISTERED PROFESSIONAL ENGINEER

No.

Exp.

CIVIL

STATE OF CALIFORNIA

BORDER LAST REVISED 7/2/2010

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DGN FILE => ...\\0820000061eq003.dgn

RELATIVE BORDER SCALE
IS IN INCHES

0 1 2 3

UNIT 2229

PROJECT NUMBER & PHASE

LAYOUT
L-3

SCALE: 1" = 50'

08210001090

LAST REVISION | DATE PLOTTED => 4/29/2026
00-00-00 | TIME PLOTTED => 1:47:04 PM

NOTE:

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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REGISTERED CIVIL ENGINEER

DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER

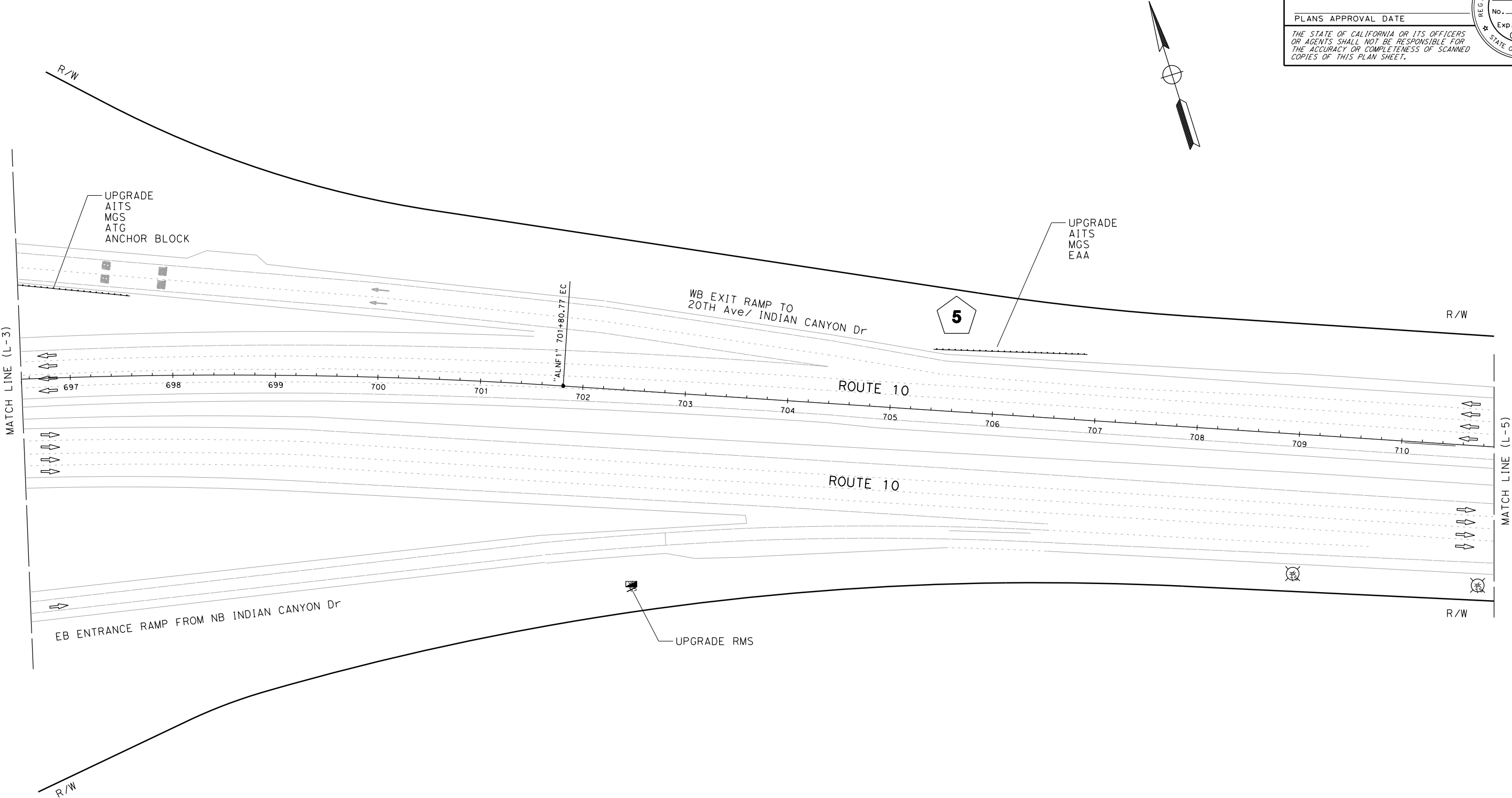
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Exp.

CIVIL

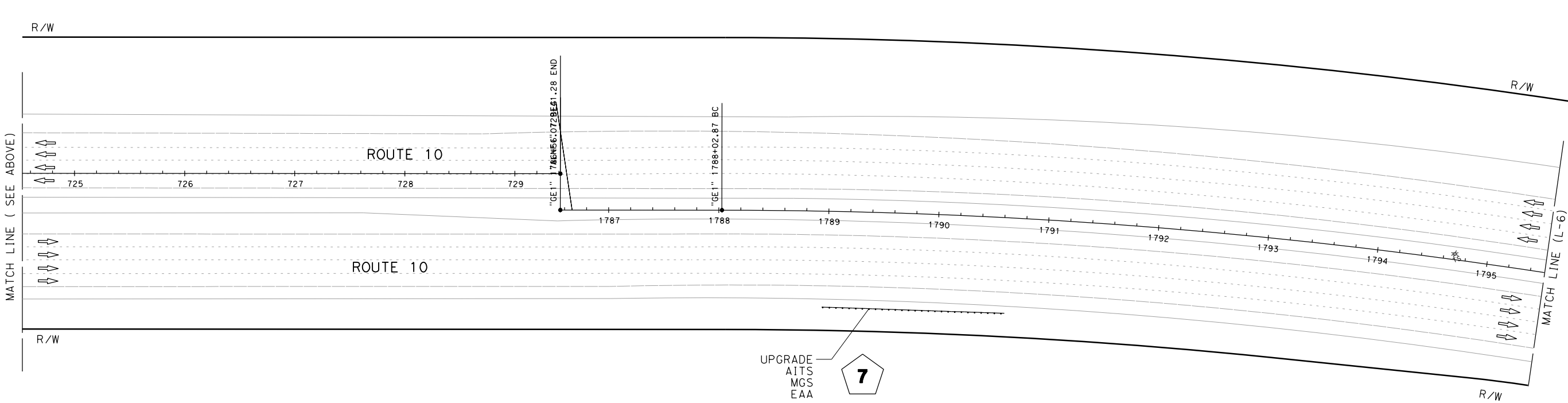
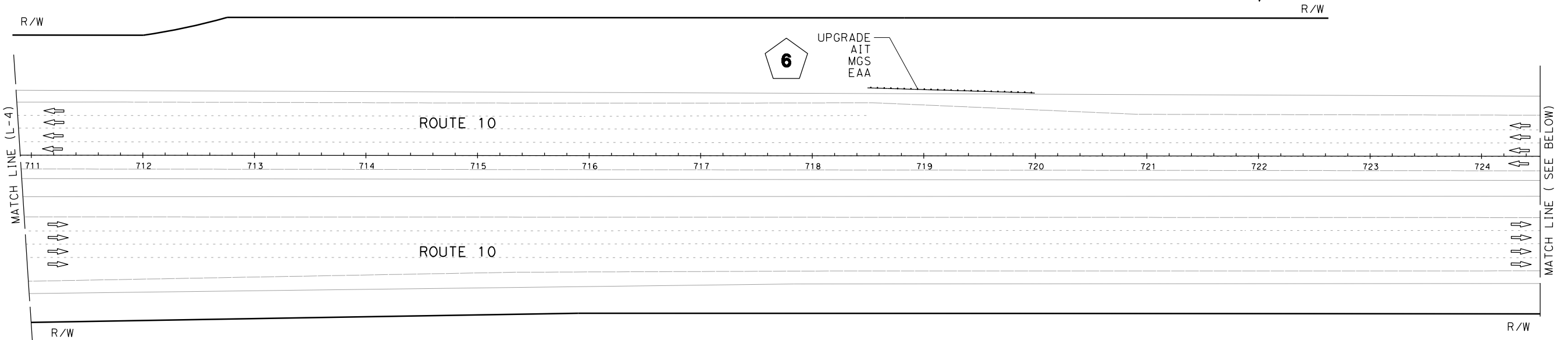
STATE OF CALIFORNIA

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NOTE:

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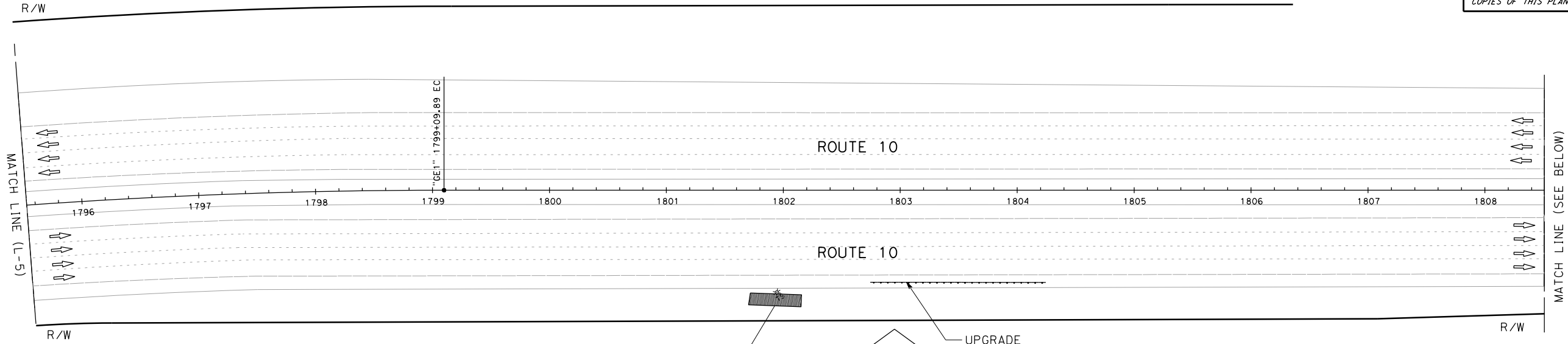
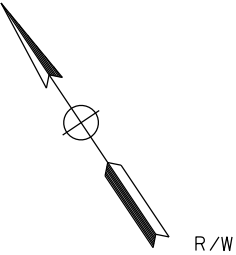


SCALE: 1" = 50'

LAYOUT
L-5

NOTE:

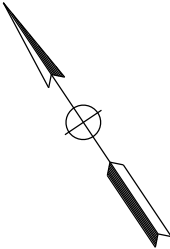
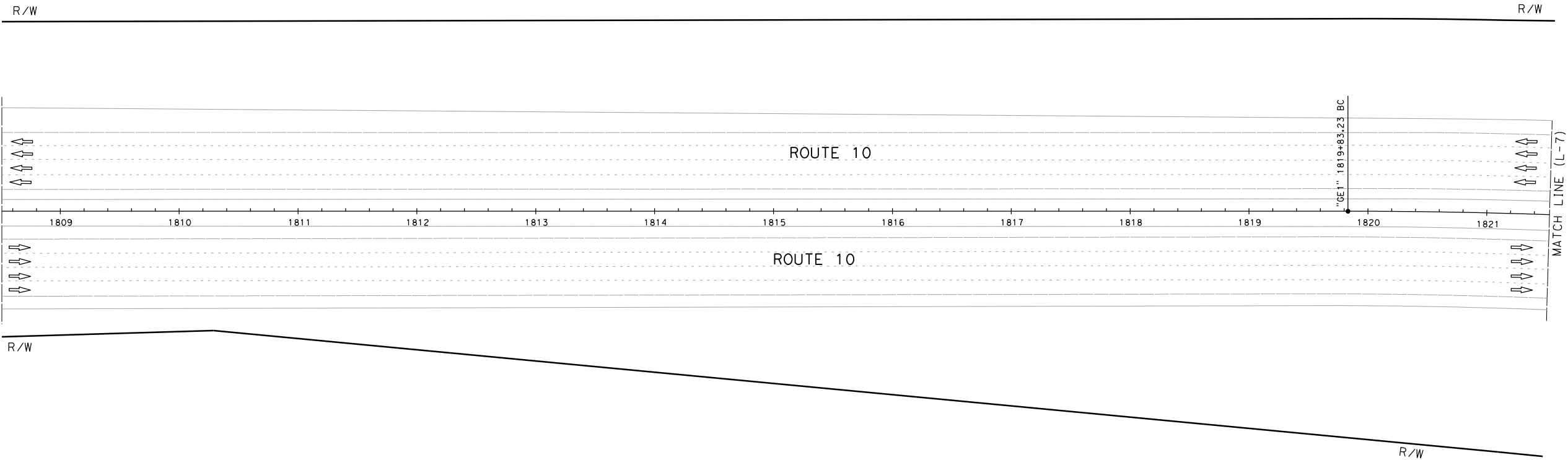
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



INSTALL SLOPE PAVING

8

UPGRADE
AITS
MGS
AGT
ANCHOR BLOCK



SCALE: 1" = 50'

LAYOUT
L - 6

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN

FUNCTIONAL SUPERVISOR

MUSTAPHA RAOUF

CALCULATED-DESIGNED BY

CHECKED BY

DANIEL CROSS

PERINPANTHAN ANANTHANATHAN

REVISED BY

DATE REVISED

NOTE:

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	32.6/44.4	X	X

REGISTERED CIVIL ENGINEER

DATE

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The plan view shows Route 10 with stationing from 1822 to 1849. The right-of-way (R/W) is indicated by solid lines. Match lines are shown at stations 1822 (L-6), 1849 (L-8), and 1830 (L-9). A north arrow is located in the upper right corner. A scale bar is provided at the bottom right. The plan view also shows the location of the 'GE 1" 1830+18.02 EC' and 'UPGRADE AITS MGS AGT ANCHOR BLOCK'.

BORDER LAST REVISED 7/2/2010

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RELATIVE BORDER SCALE
IS IN INCHES

UNIT 2229

PROJECT NUMBER & PHASE

08210001090

LAYOUT
L-7

SCALE: 1" = 50'

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00-00-00 | TIME PLOTTED => 2:23:13 PM

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REGISTERED CIVIL ENGINEER

DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER

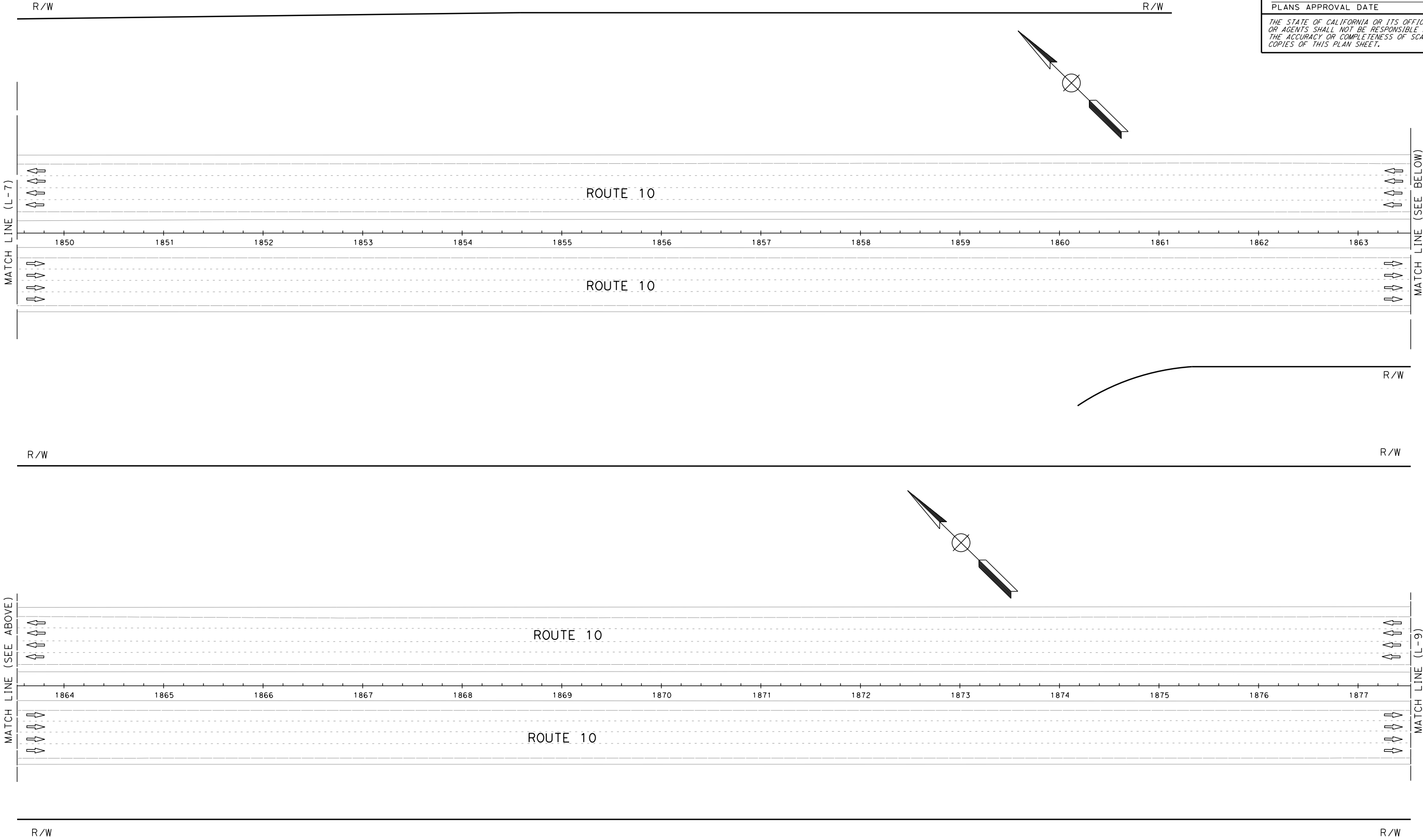
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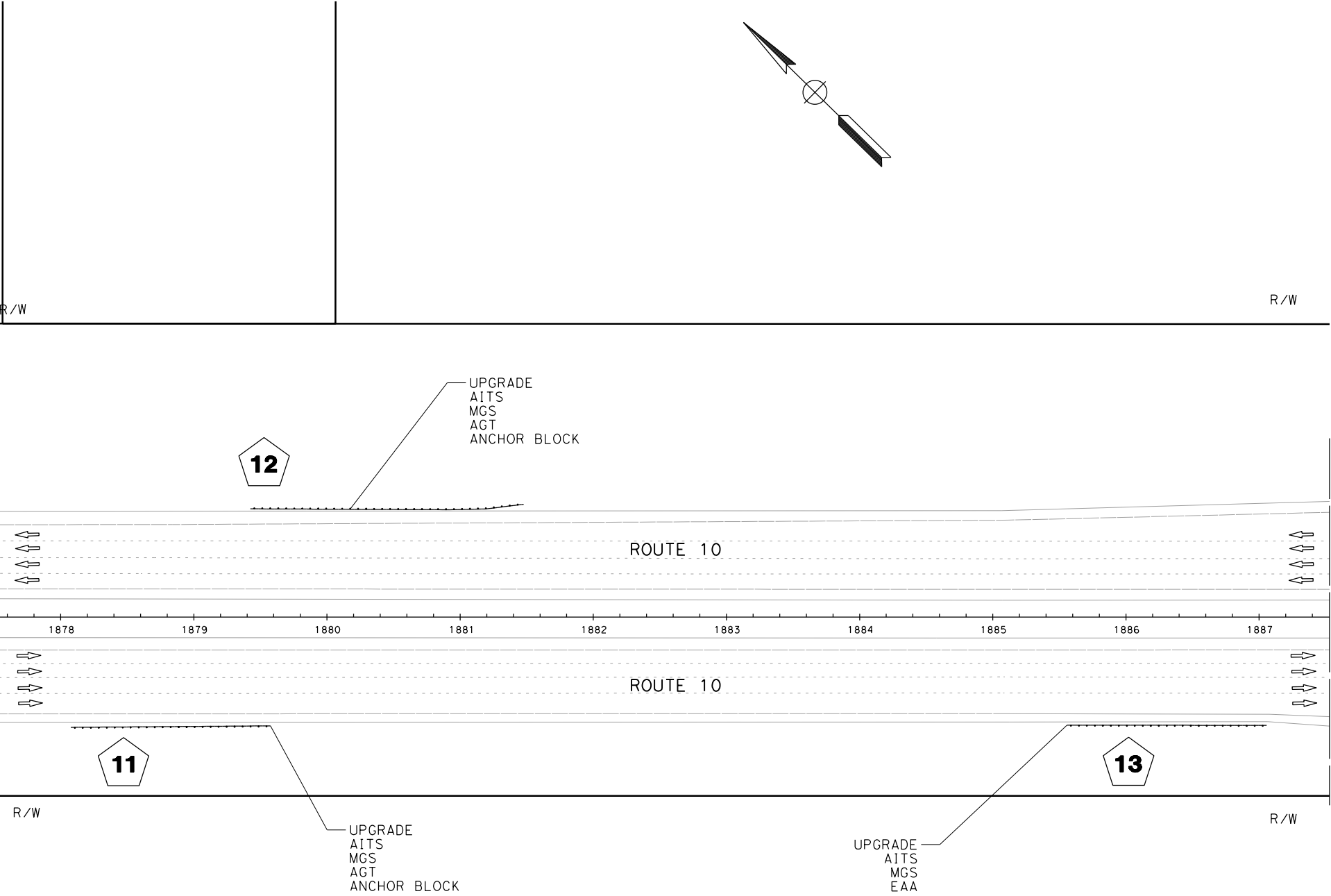


SCALE: 1" = 50'

LAYOUT
L - 8

NOTE:

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



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08	Riv	10	32.6/44.4	X	X

REGISTERED CIVIL ENGINEER

DATE

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REGISTERED CIVIL ENGINEER

DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER

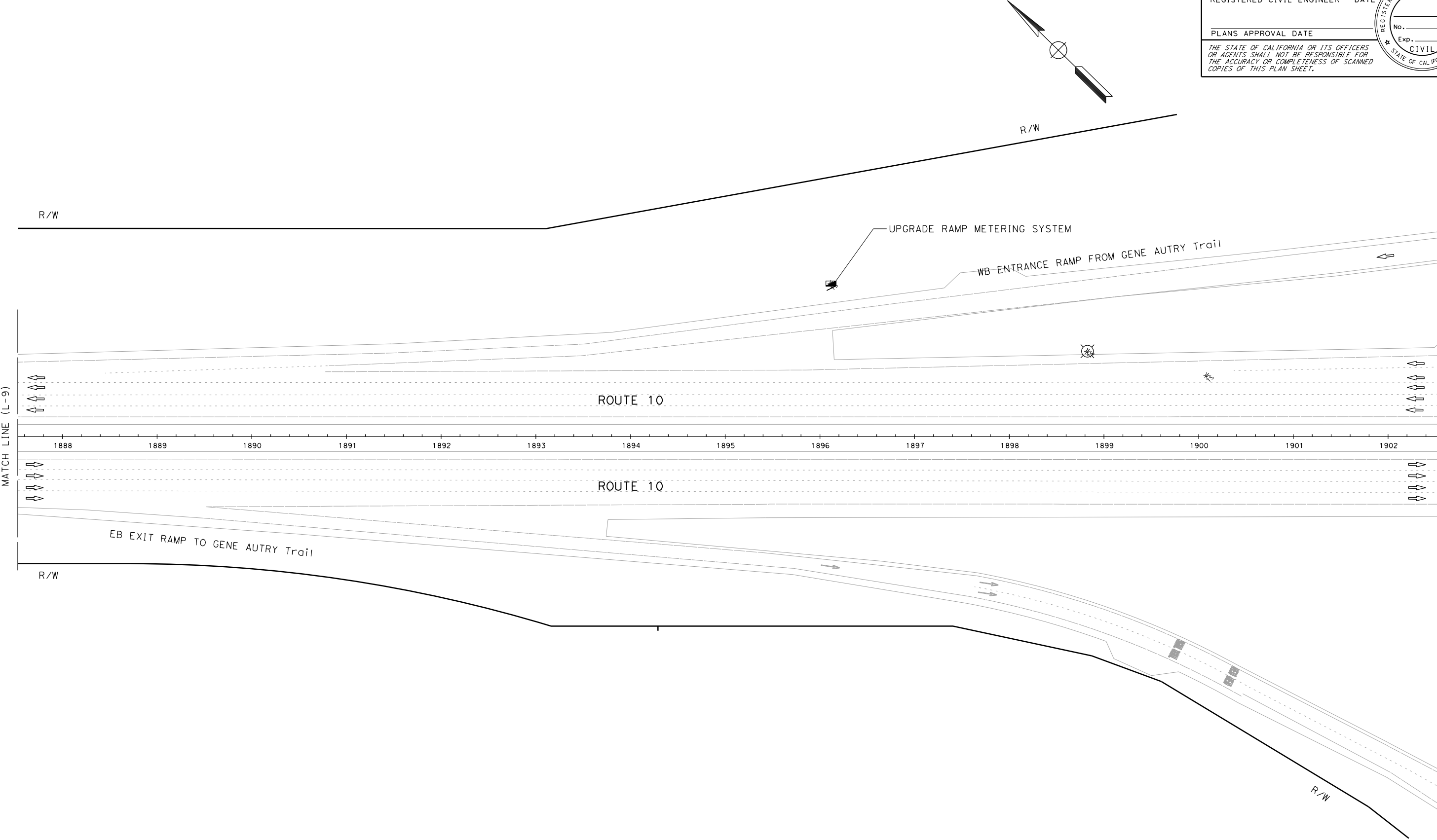
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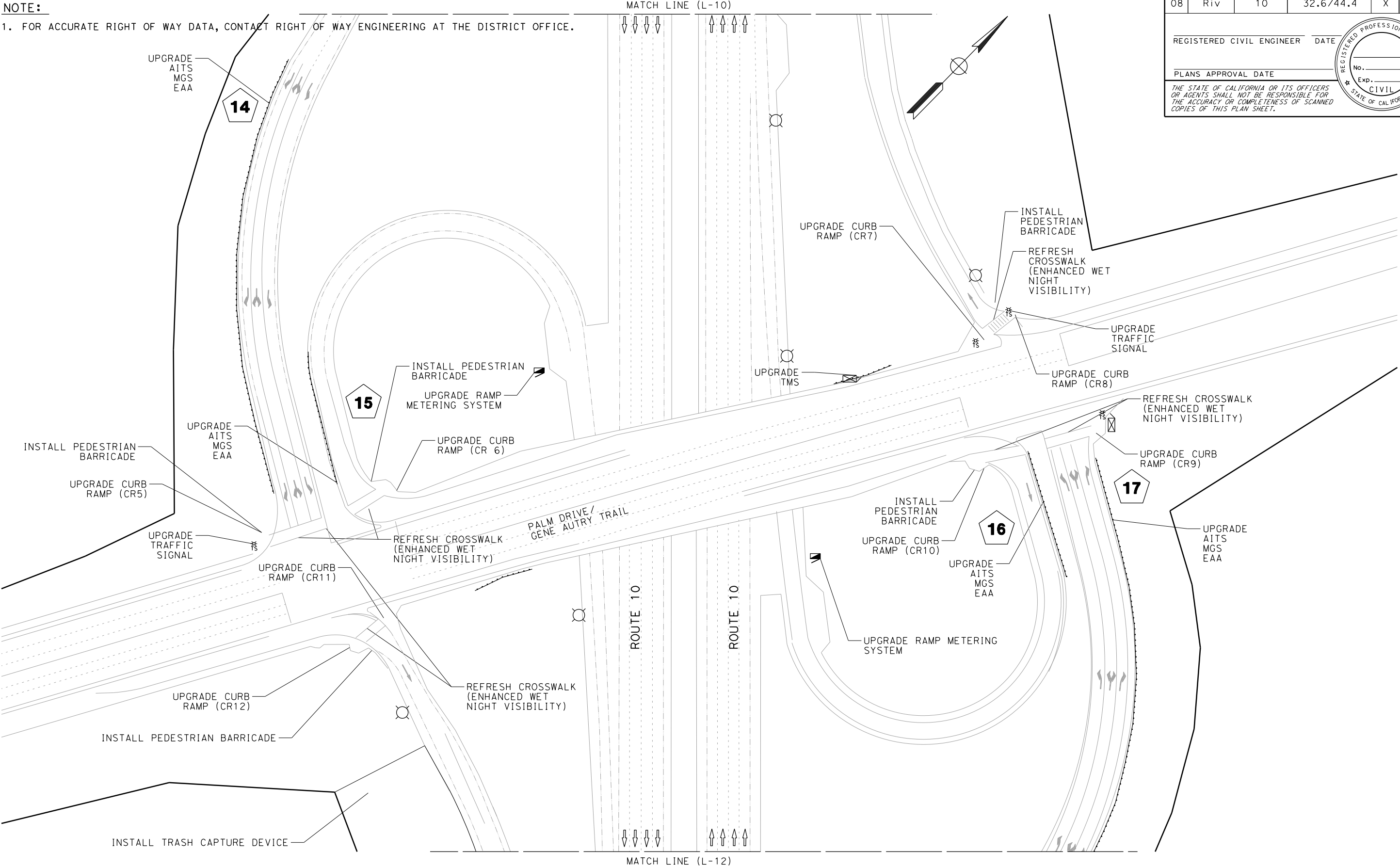


LAYOUT
L-10

SCALE: 1" = 50'

NOTE:

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08	Riv	10	32.6/44.4	X	X

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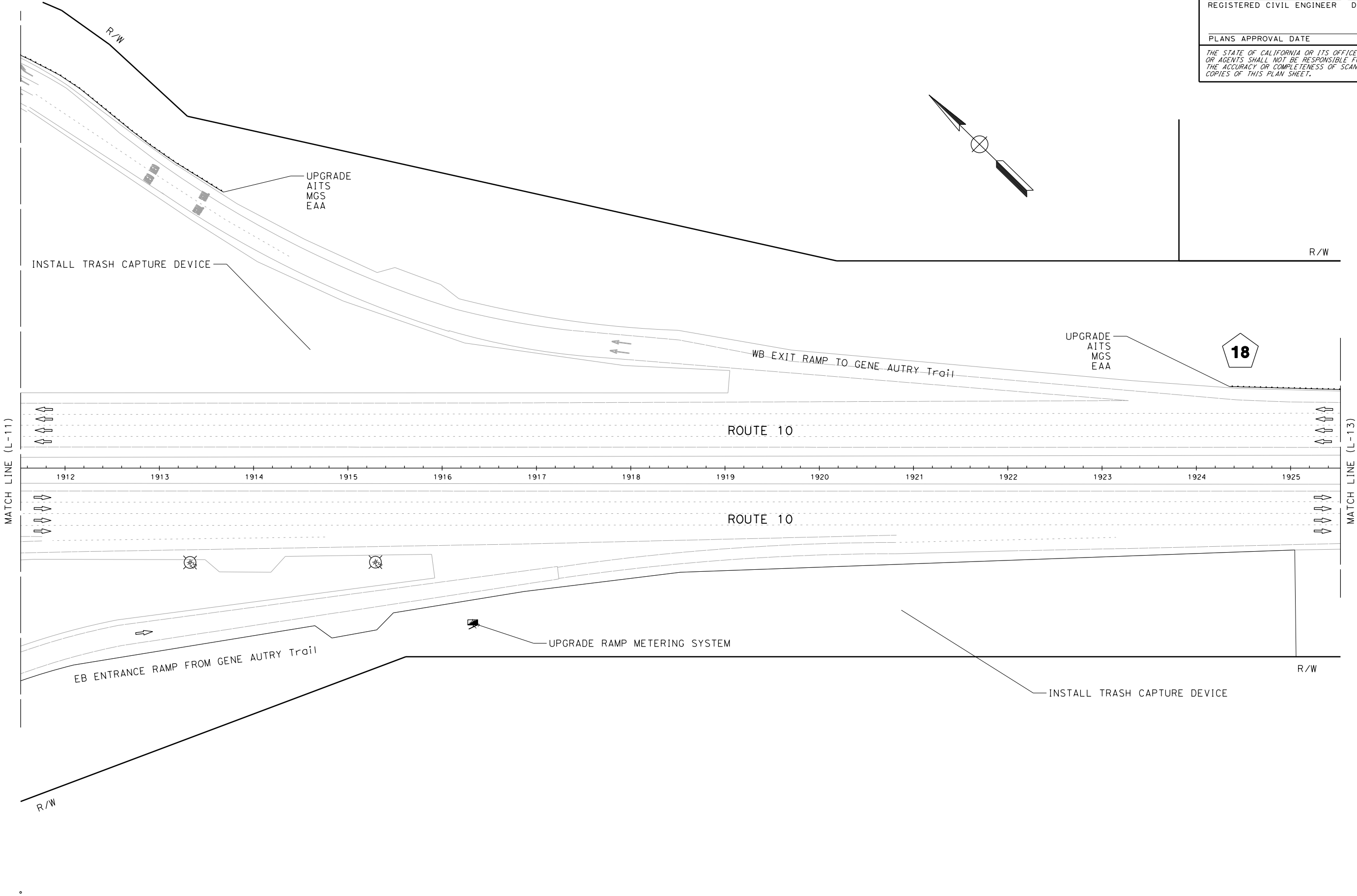
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STATE OF CALIFORNIA

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



LAYOUT
L-12

SCALE: 1" = 50'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION



DESIGN

FUNCTIONAL SUPERVISOR

MUSTAPHA RAOUF

CALCULATED-DESIGNED BY

CHECKED BY

DANIEL CROSS

PERINPANTHAN ANANTHANATHAN

REVISED BY

DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	32.6/44.4	X	X

REGISTERED CIVIL ENGINEER

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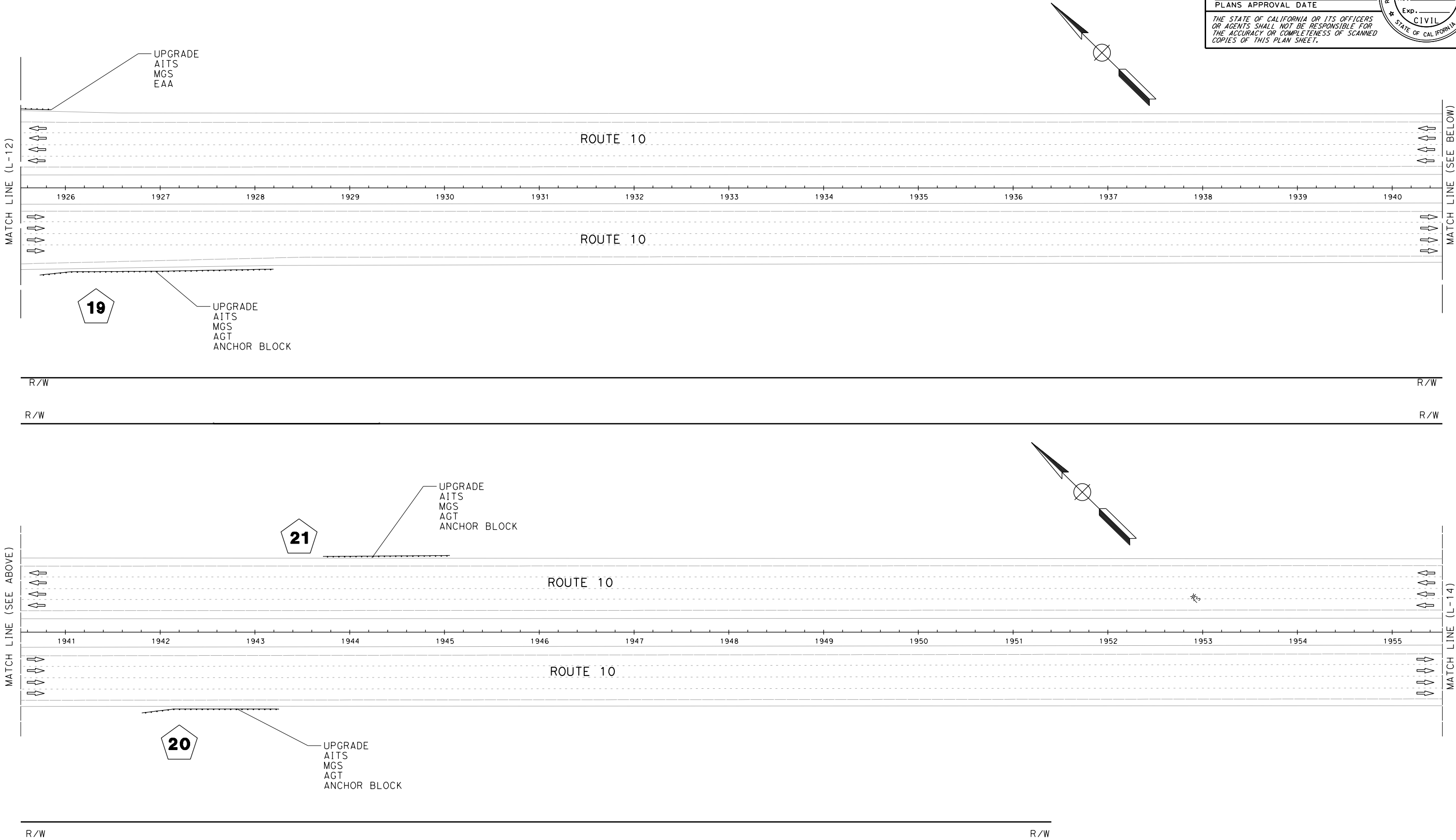
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CIVIL

STATE OF CALIFORNIA

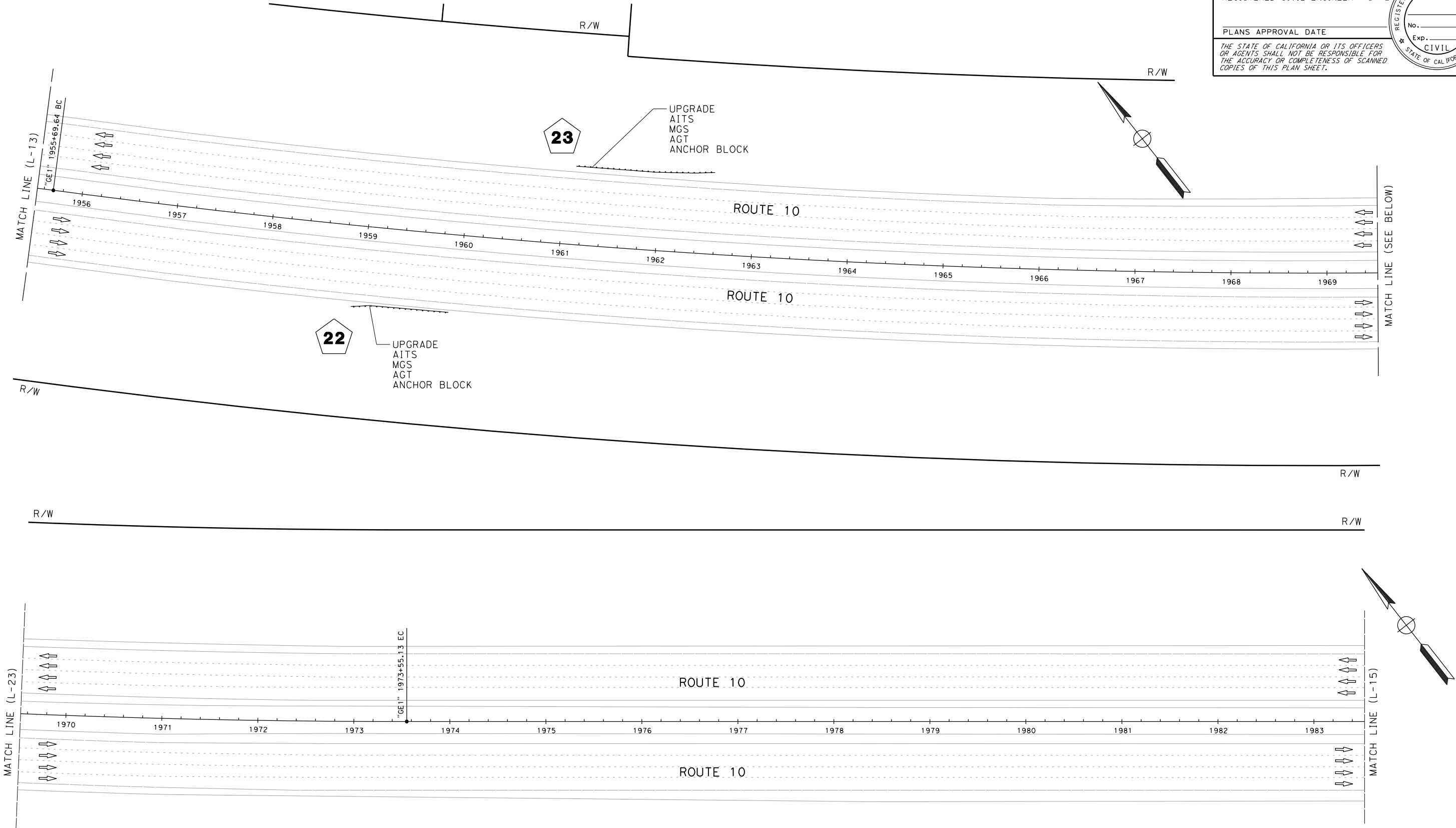
NOTE:

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION



DESIGN

FUNCTIONAL SUPERVISOR

MUSTAPHA RAOUF

CALCULATED-DESIGNED BY

CHECKED BY

DANIEL CROSS

PERINPANTHAN ANANTHANATHAN

REVISED BY

DATE REVISED

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08	Riv	10	32.6/44.4	X	X

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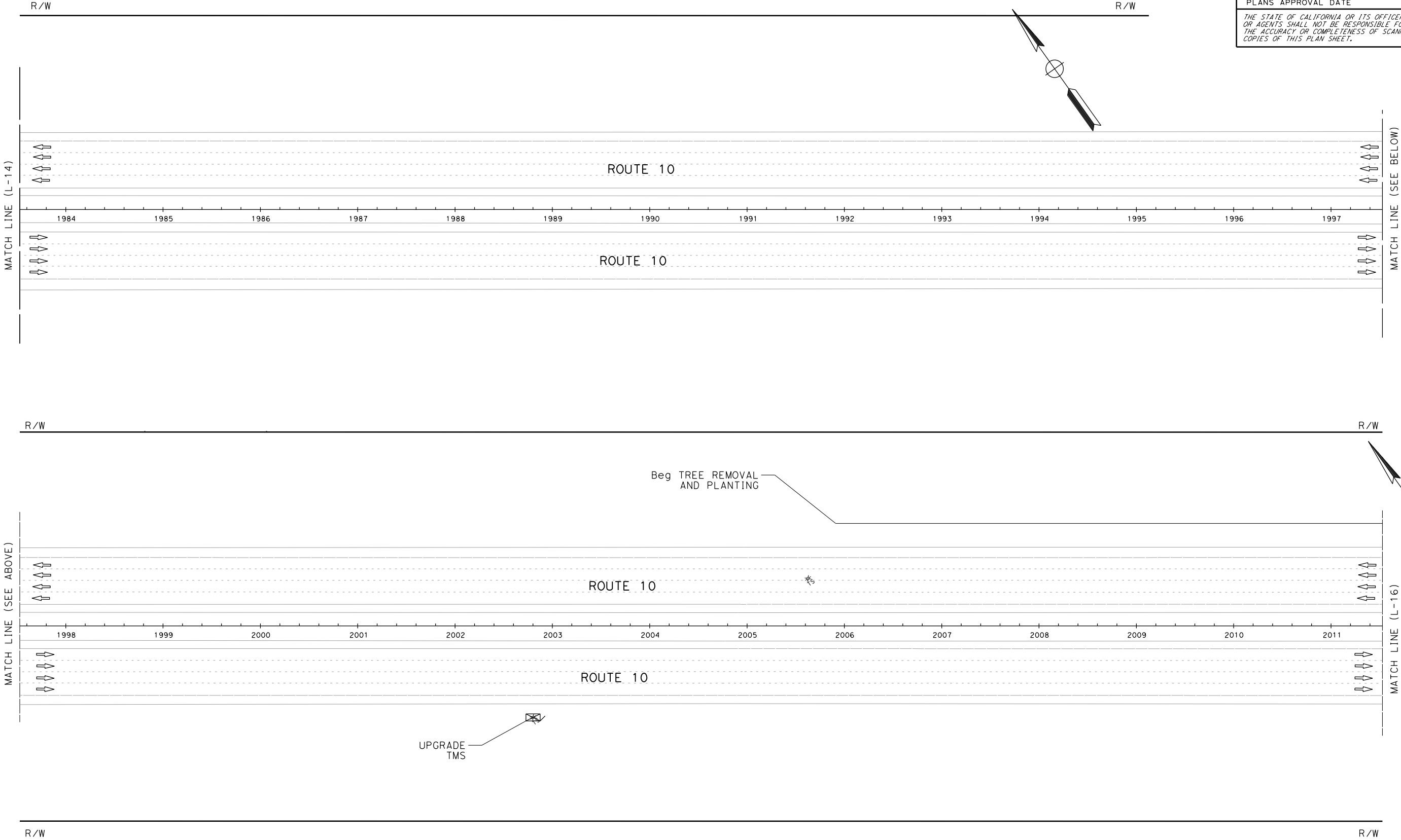
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No.

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STATE OF CALIFORNIA



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

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08	Riv	10	32.6/44.4	X	X

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

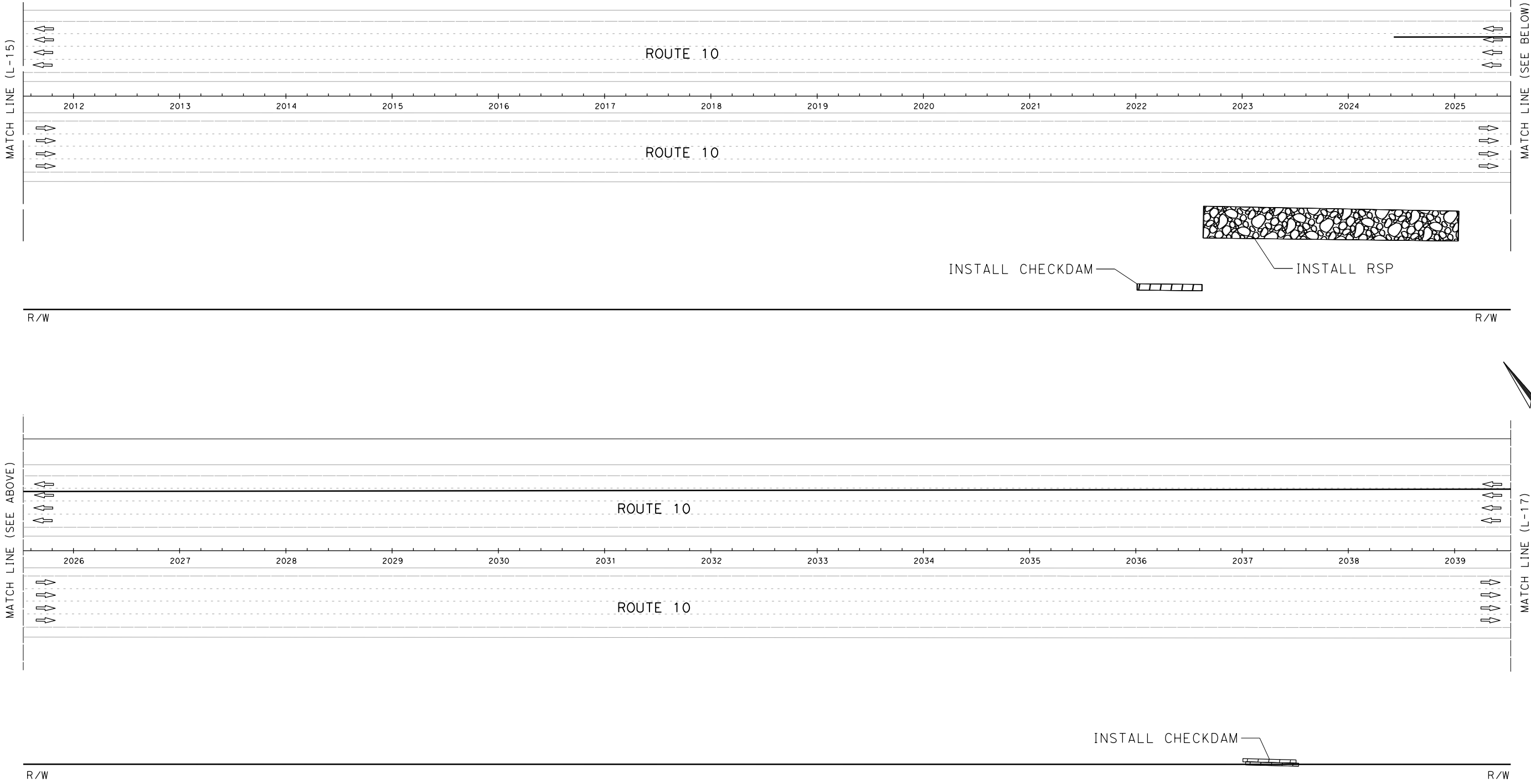
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REGISTERED PROFESSIONAL ENGINEER

No. Exp.

CIVIL

STATE OF CALIFORNIA



NOTE:

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R/W

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	10	32.6/44.4	X	X

REGISTERED CIVIL ENGINEER

DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER

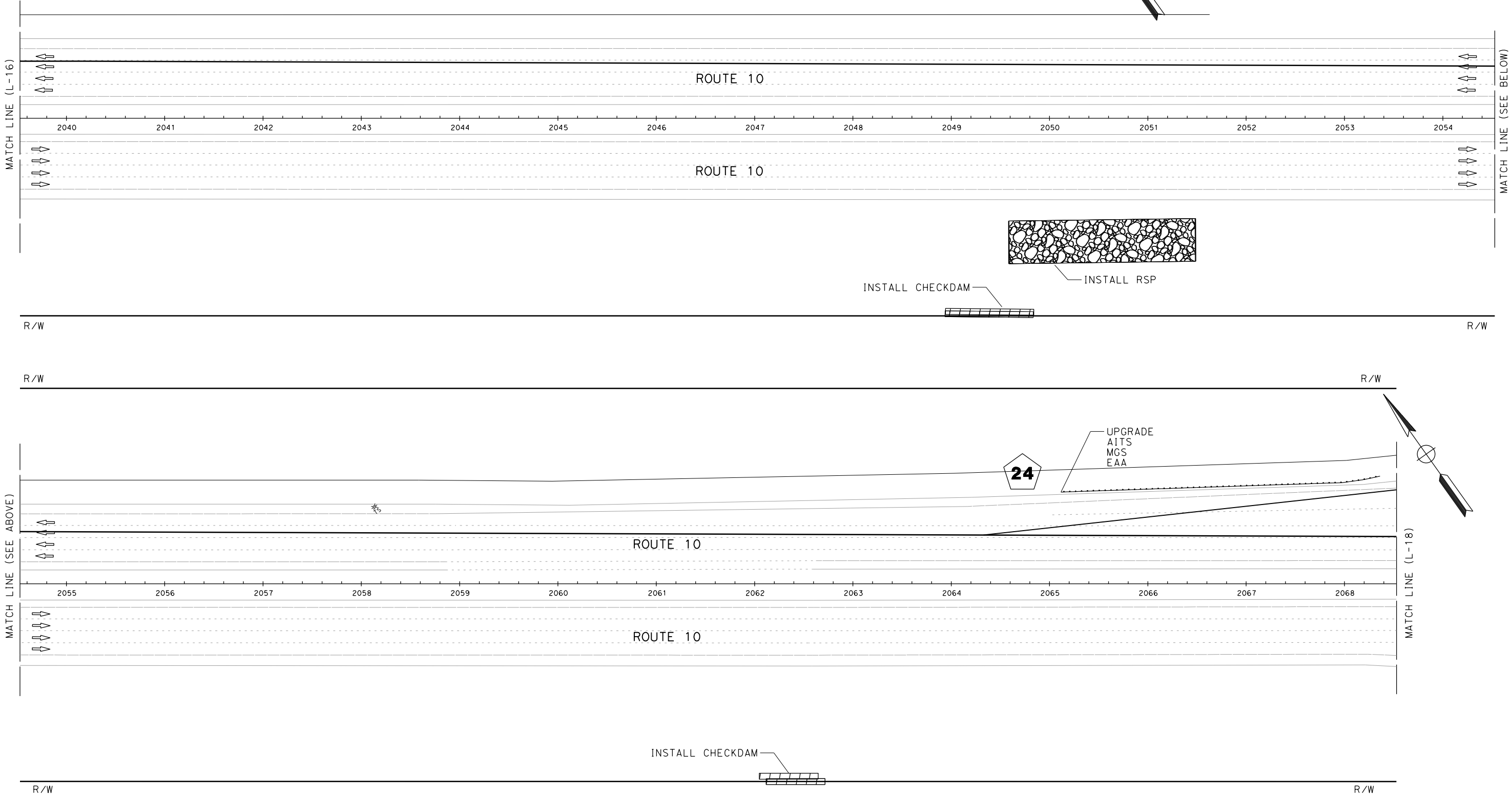
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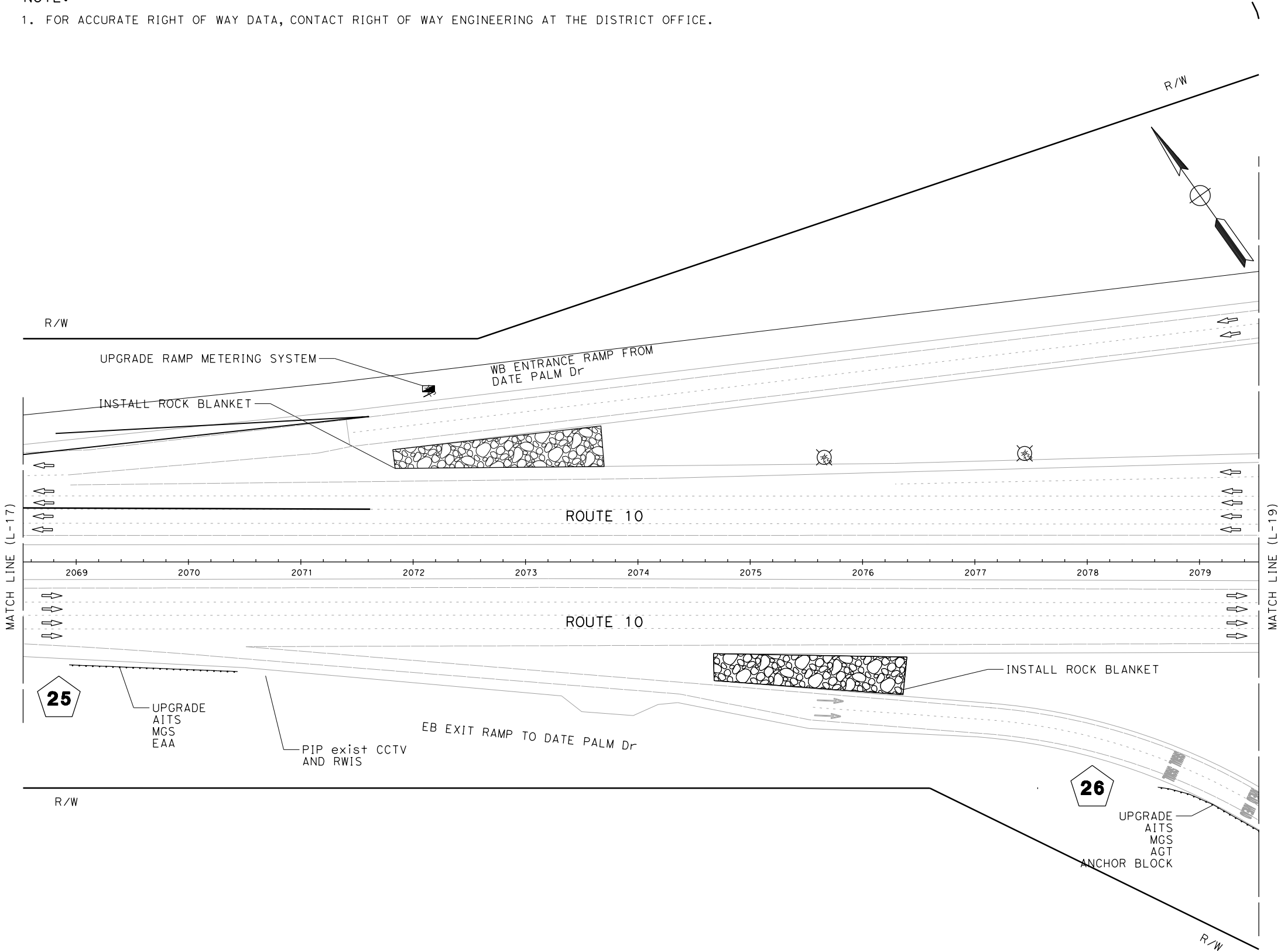
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NOTE:

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	32.6/44.4	X	X

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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LAYOUT
L-18

SCALE: 1" = 50'

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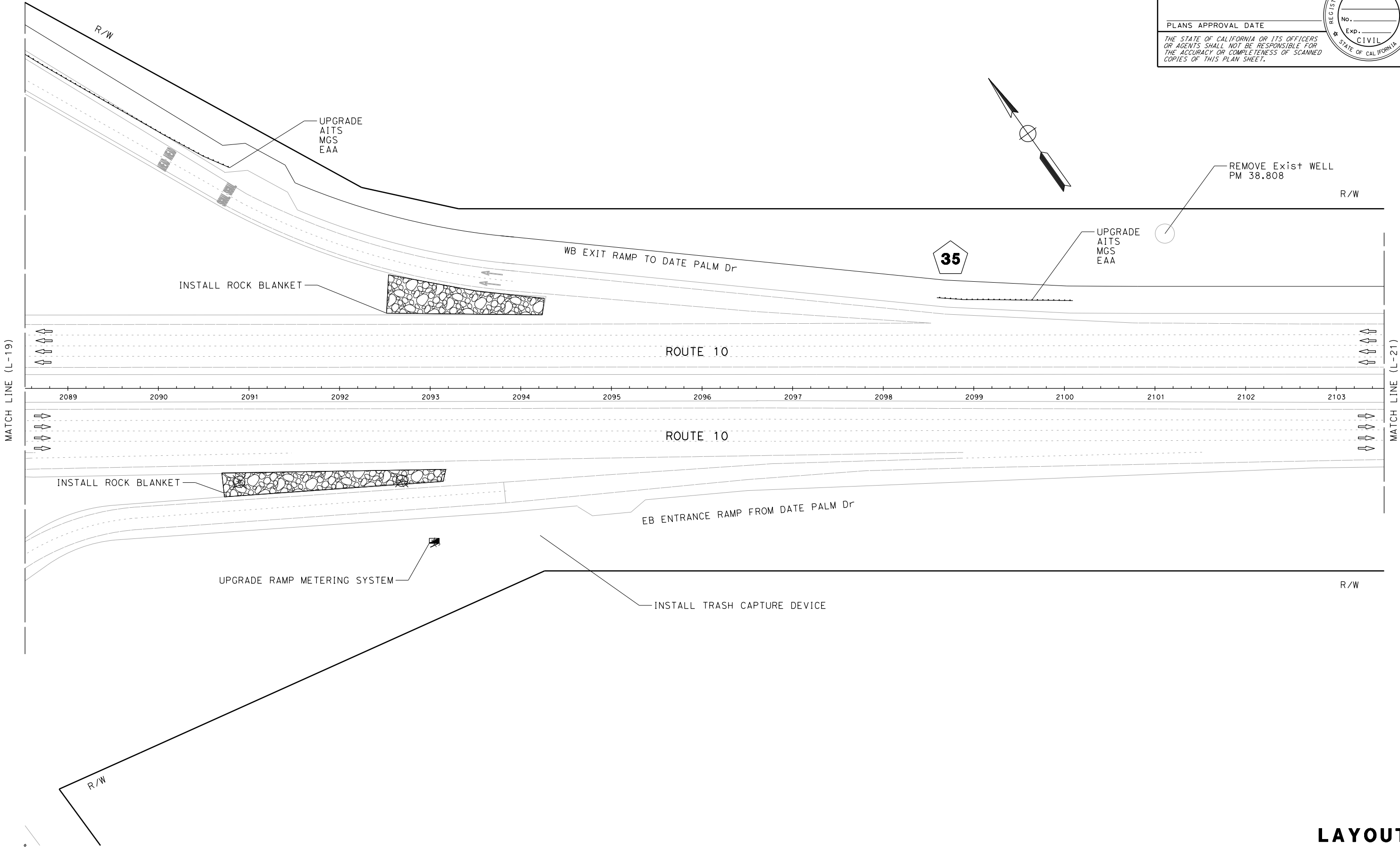
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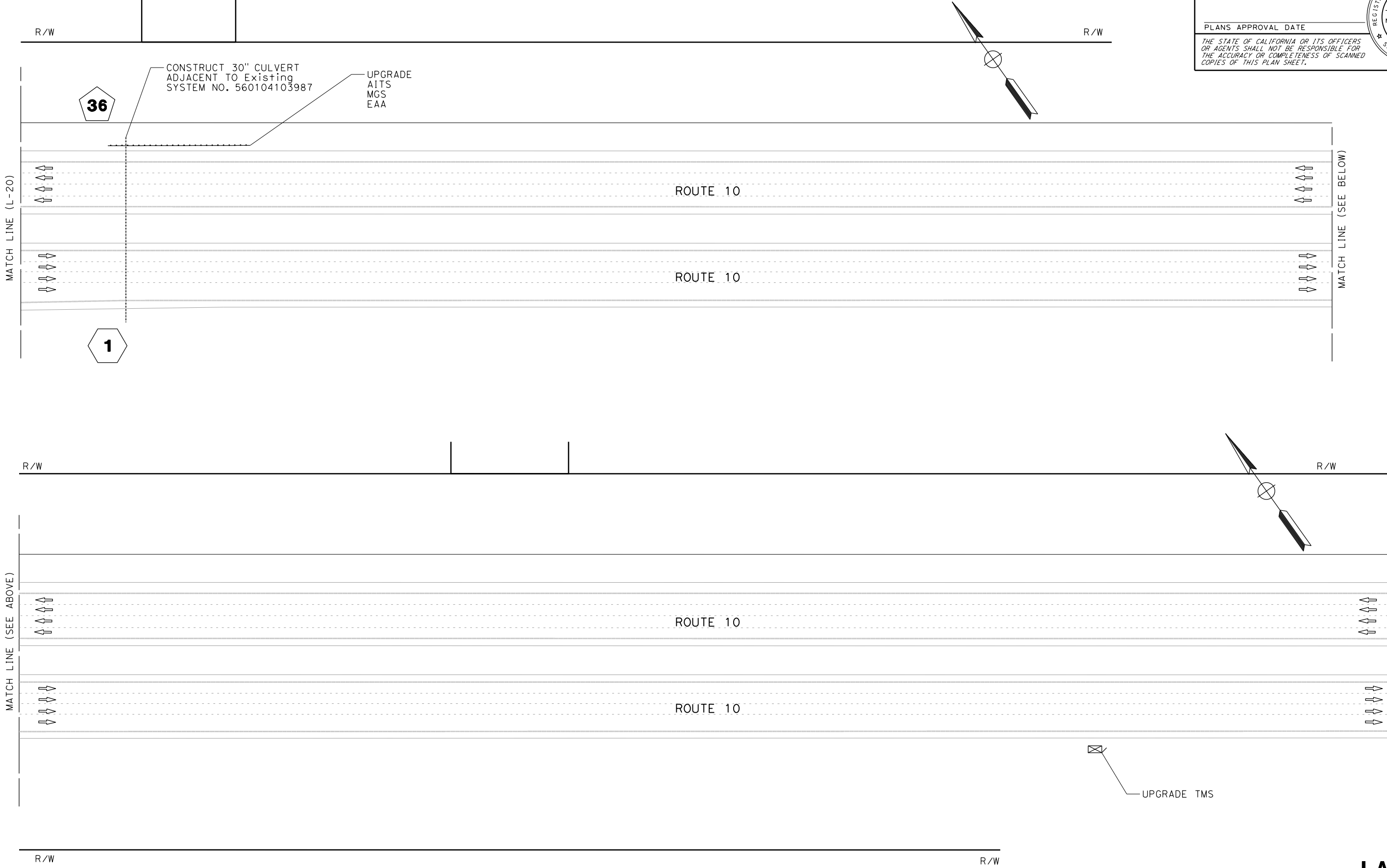
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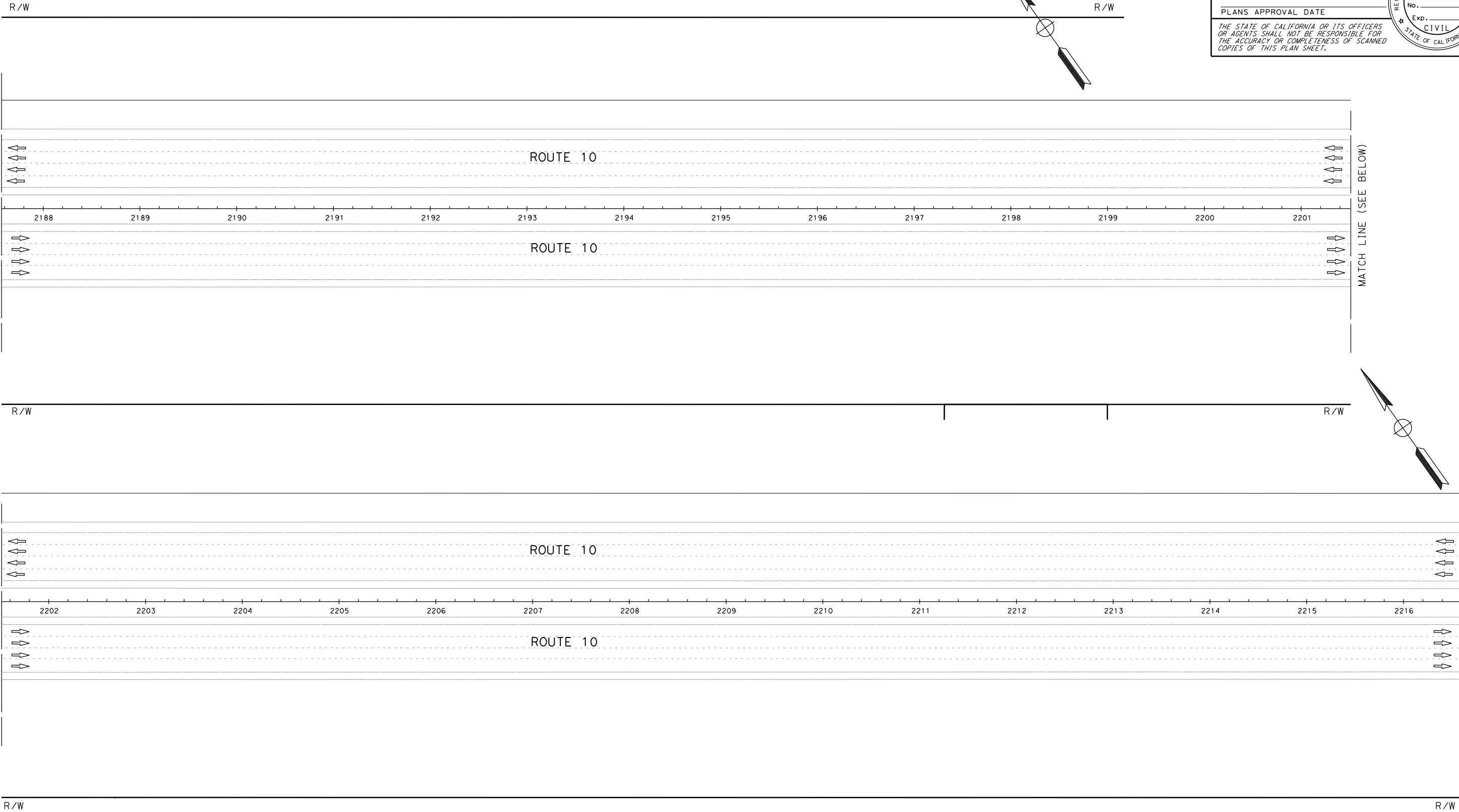
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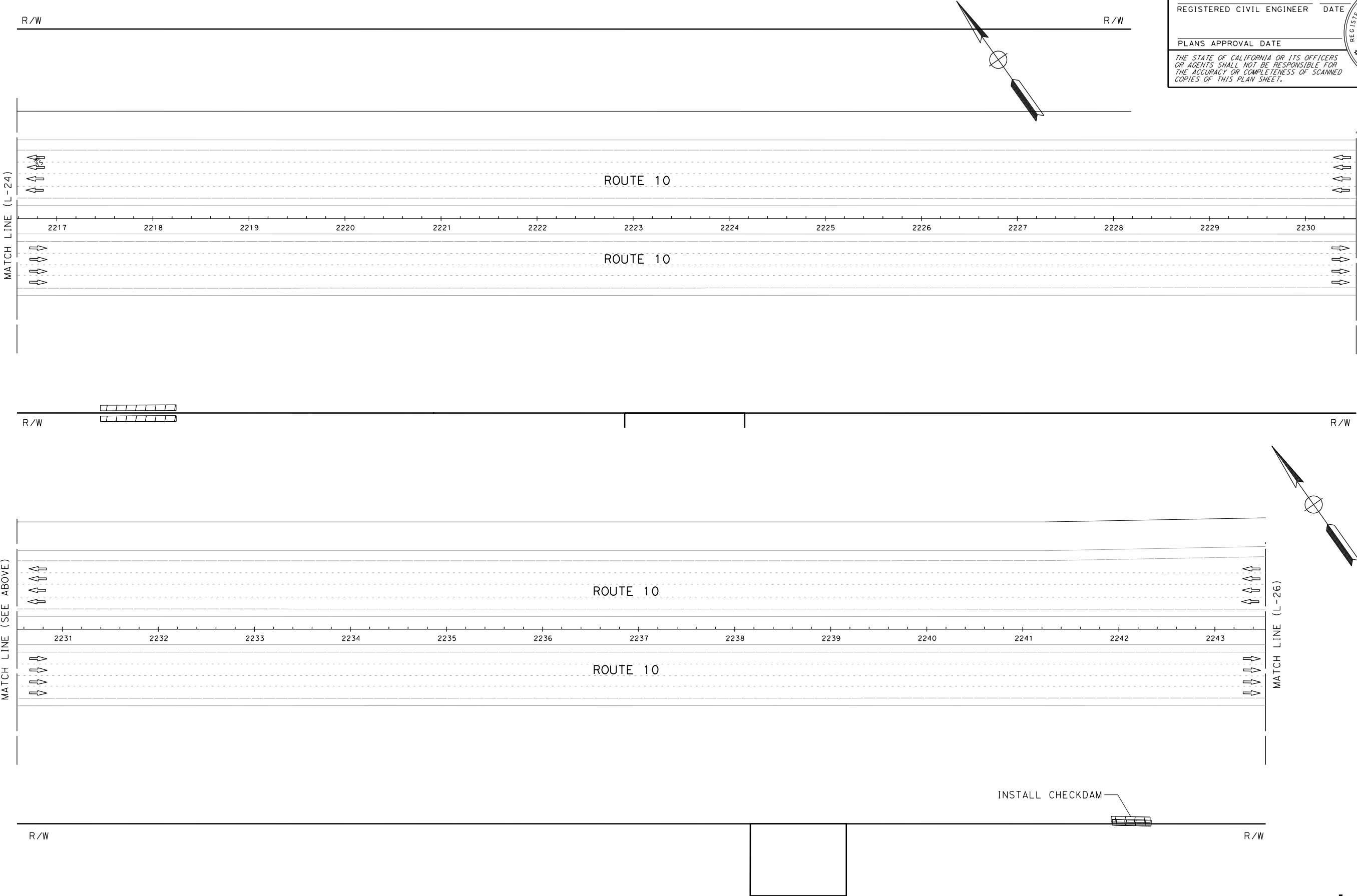
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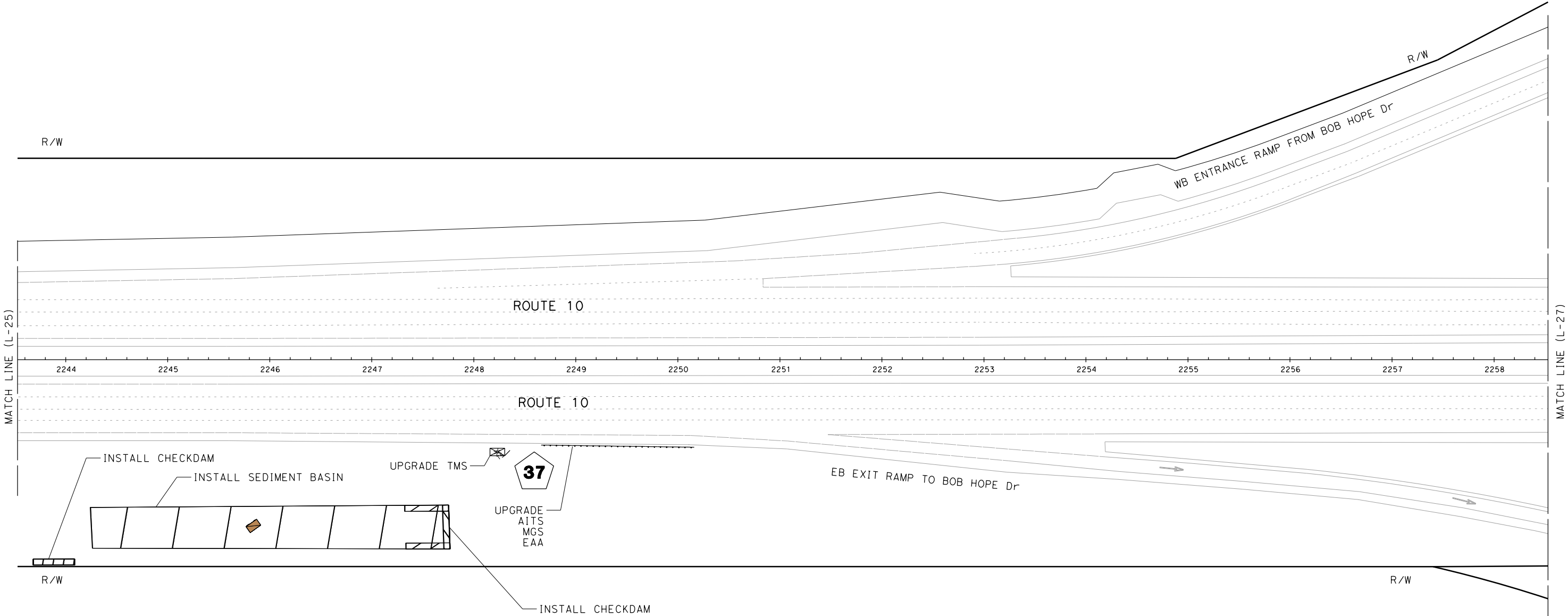
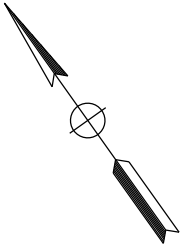
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No. Exp.

CIVIL

STATE OF CALIFORNIA



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION



DESIGN

FUNCTIONAL SUPERVISOR

MUSTAPHA RAOUF

CALCULATED-DESIGNED BY

CHECKED BY

DANIEL CROSS

PERINPANTHAN ANANTHANATHAN

REVISED BY

DATE REVISED

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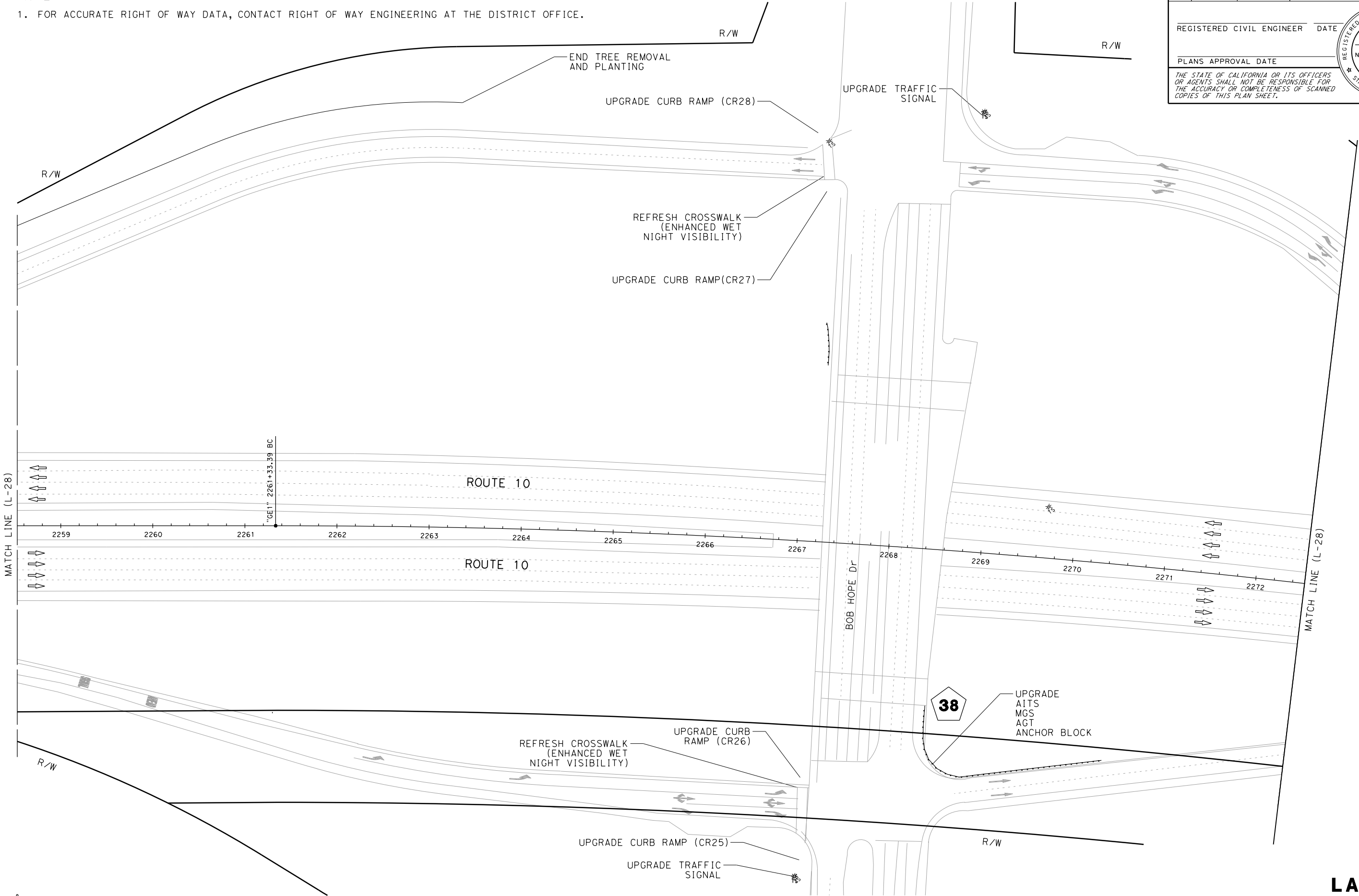
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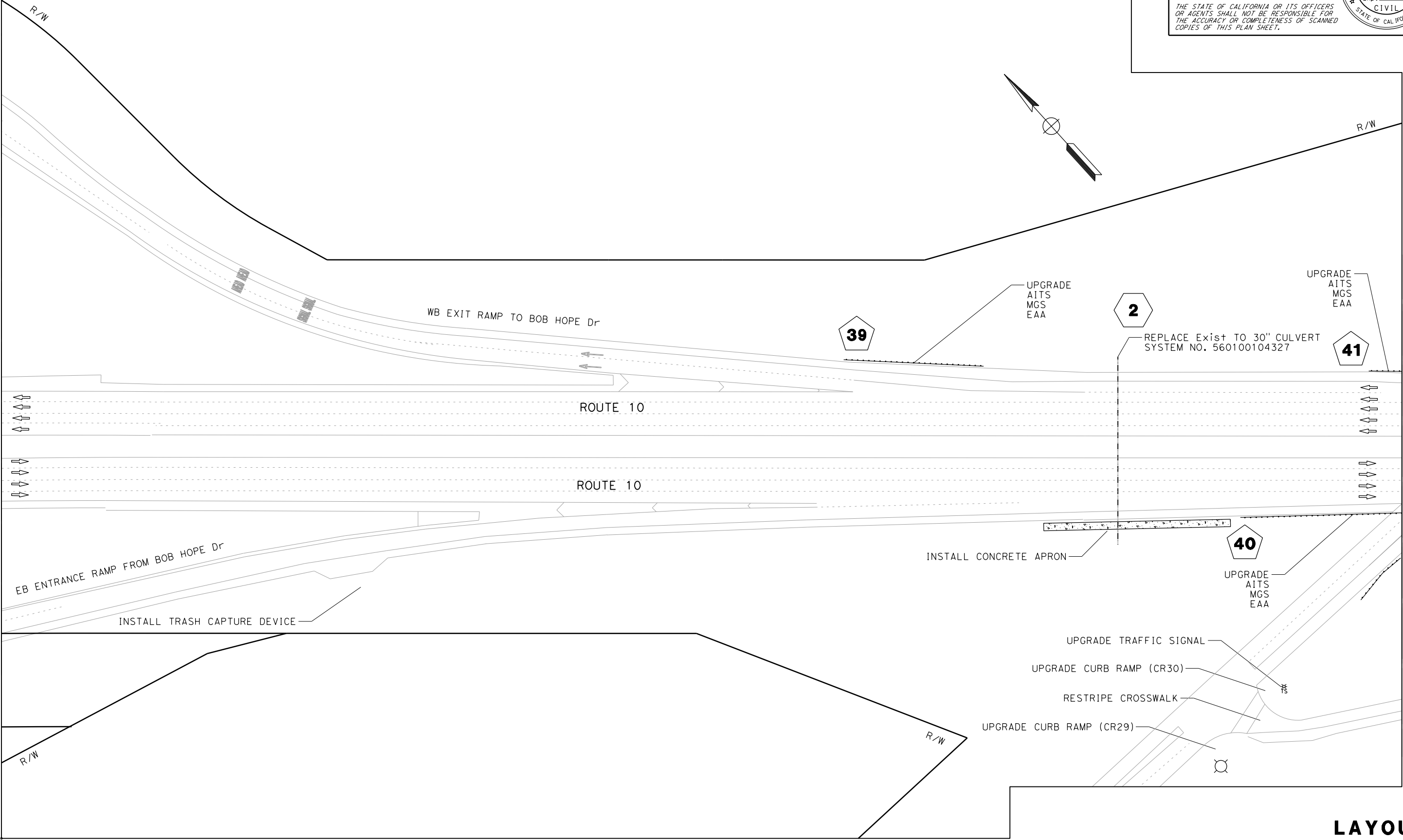
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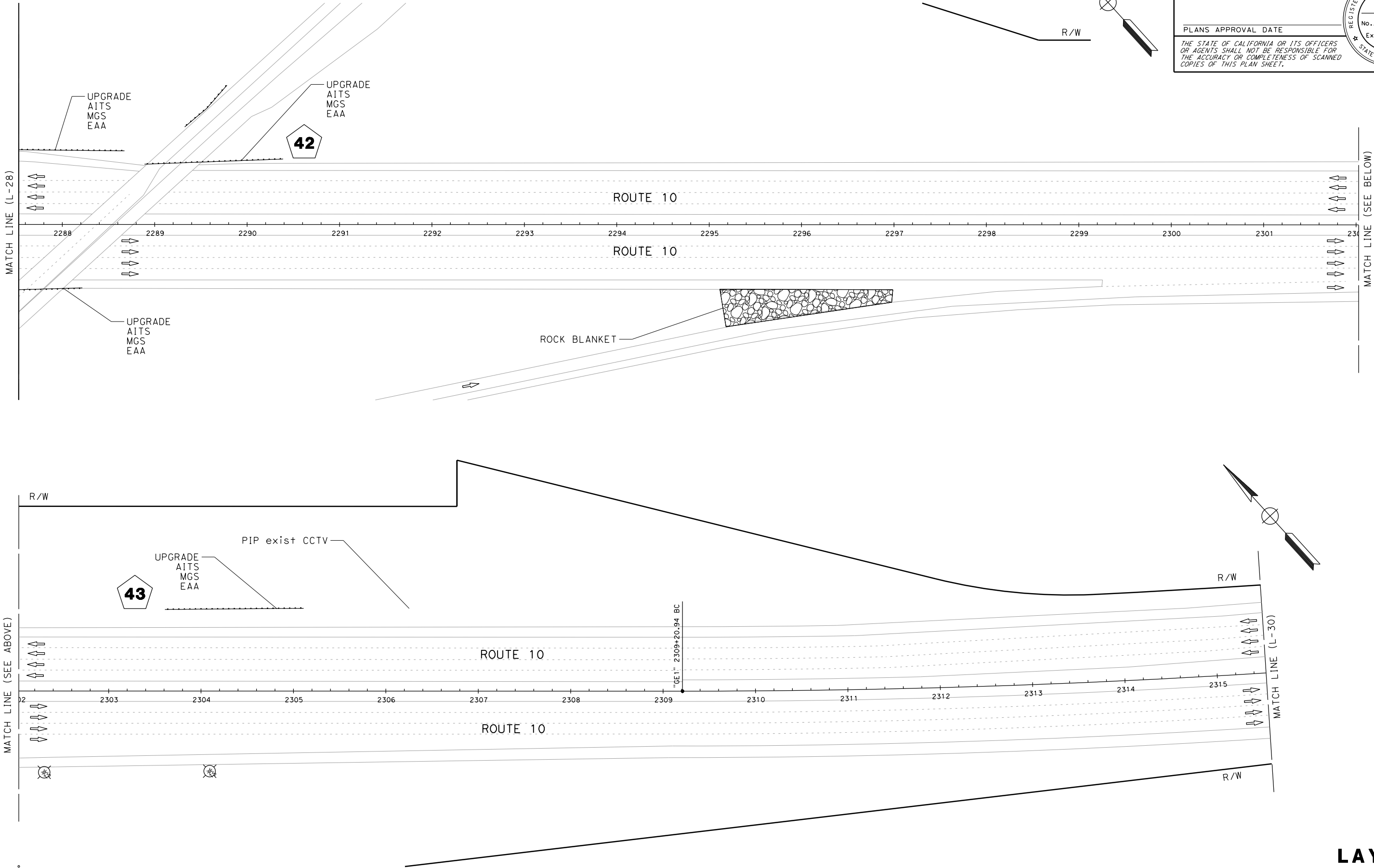


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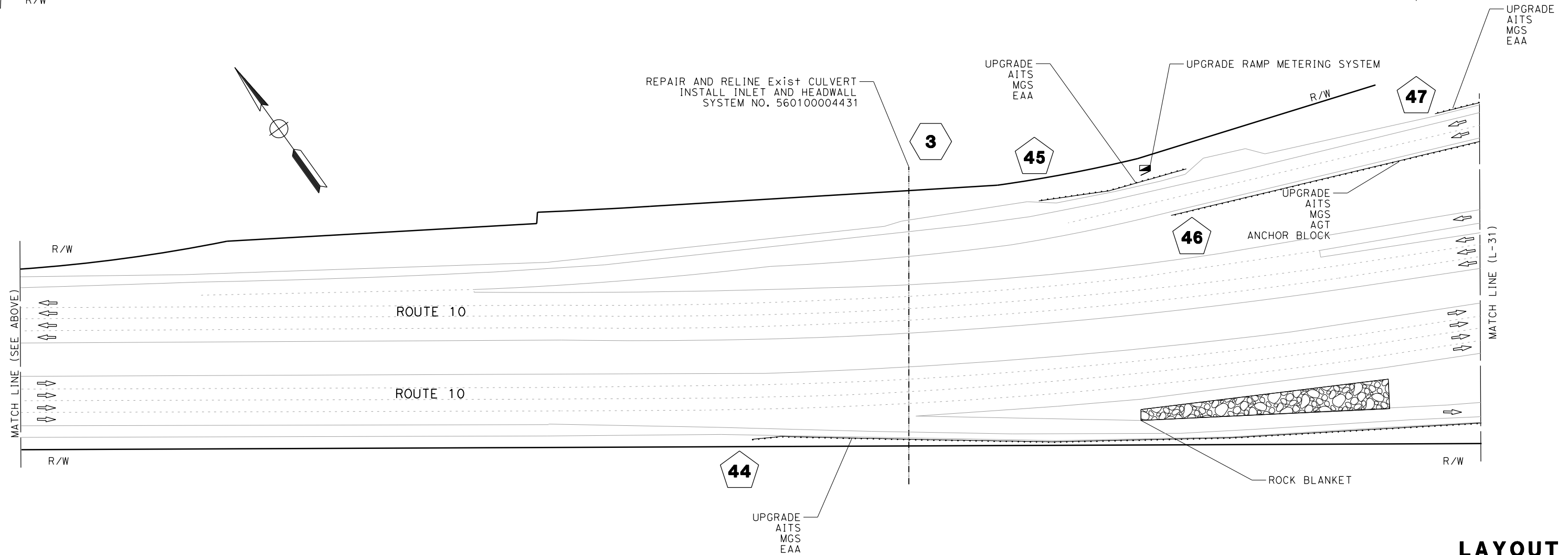
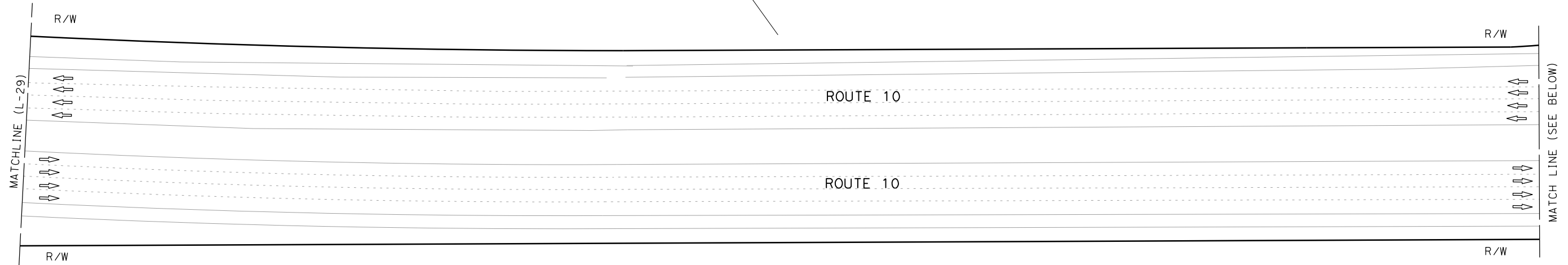
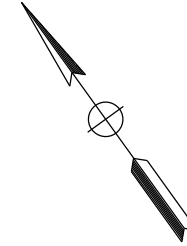
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Existing CENSUS STATION 109-D8TCS



LAYOUT

L-30

SCALE: 1" = 50'

BORDER LAST REVISED 7/2/2010

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USERNAME =>
DGN FILE => ... \0820000061ea030.dgn

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RELATIVE BORDER SCALE
IS IN INCHES

A horizontal number line with arrows at both ends. It has major tick marks labeled 0, 1, and 2. There are also minor tick marks between 0 and 1, and between 1 and 2, representing 0.5 and 1.5 respectively.

UNIT 2229

PROJECT NUMBER & PHASE

08210001090

DATE PLOTTED => 4/30/2026	LAST REVISION
TIME PLOTTED => 10:26:18 AM	00-00-00

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION



DESIGN

FUNCTIONAL SUPERVISOR

MUSTAPHA RAOUF

CALCULATED-DESIGNED BY

CHECKED BY

DANIEL CROSS

PERINPANTHAN ANANTHANATHAN

REVISED BY

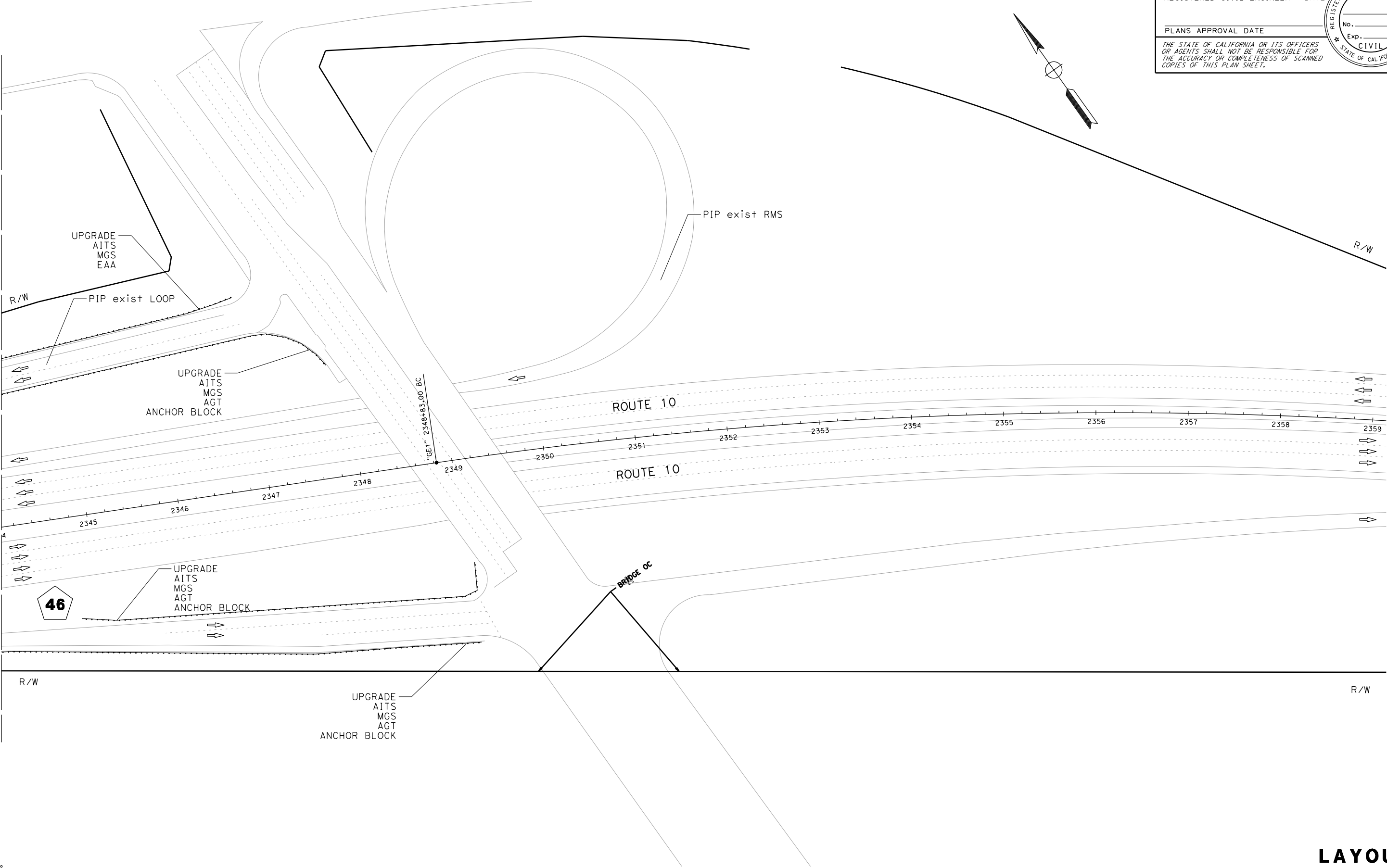
DATE

REVISED BY

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Attachment C Preliminary
Cost Estimate

PROJECT
PLANNING COST ESTIMATE©

EA: 08-1M360

EA: 08-1M360 PID: 0821000109

PID: 0821000109

District-County-Route: 08-Riv-10

PM: 32.6 - 44.4

Type of Estimate : PAED (unit price update + MGS)

Program Code : SHOPP

Project Limits : NEAR PALM SPRINGS FROM 0.53 MILES WEST OF INDIAN AVE OC TO 0.1 MILE WEST OF MONTEREY AVE OC

Project Description: RIV 10 CAPM, DRAINAGE & ADA

Scope : REHABILITATE PAVEMENT, UPGRADE LIGHTING AND TRANSPORTATION MANAGEMENT SYSTEMS (TMS) ELEMENTS.

Alternative : Build Alternative

SUMMARY OF PROJECT COST ESTIMATE

	Current Year Cost	Escalated Cost
TOTAL ROADWAY COST	\$ 49,112,000	\$ 57,057,000
TOTAL STRUCTURES COST	\$ -	\$ -
SUBTOTAL CONSTRUCTION COST	\$ 49,112,000	\$ 57,057,000
TOTAL RIGHT OF WAY COST	\$ 2,560,000	\$ 2,560,000
TOTAL CAPITAL OUTLAY COSTS	\$ 51,672,000	\$ 59,617,000
PA/ED SUPPORT	\$ 1,757,000	\$ 1,757,000
PS&E SUPPORT	\$ 2,502,000	\$ 2,636,000
RIGHT OF WAY SUPPORT	\$ 311,000	\$ 353,000
CONSTRUCTION SUPPORT	\$ 6,880,000	\$ 7,798,000
TOTAL SUPPORT COST	\$ 11,450,000	\$ 12,544,000

TOTAL PROJECT COST	\$ 63,122,000	\$ 72,161,000
---------------------------	----------------------	----------------------

Programmed Amount \$ 67,064,000

Date of Estimate (Month/Year) Month / Year
4 / 2026

Estimated Construction Start (Month/Year) 2 / 2029

Number of Working Days = 280

Estimated Mid-Point of Construction (Month/Year) 11 / 2029

Estimated Construction End (Month/Year) 8 / 2030

Number of Plant Establishment Days 750

Estimated Project Schedule

PID Approval	5/9/2022
PA/ED Approval	5/1/2026
PS&E	5/3/2027
RTL	12/2/2027
Begin Construction	2/1/2029

Approved by Program Advisor

(951) 313-1068

Mike Ristic

Date

Phone

Approved by Project Manager

(909) 746-3554

Dalia Alarkan

Date

Phone

I. ROADWAY ITEMS SUMMARY

	Section	Cost
1	Earthwork	\$ 15,000
2	Pavement Structural Section	\$ 22,771,100
3	Drainage	\$ 1,003,000
4	Specialty Items	\$ 1,257,600
5	Environmental	\$ 3,838,400
6	Traffic Items	\$ 3,599,900
7	Detours	\$ -
8	Minor Items	\$ 974,600
9	Roadway Mobilization	\$ 3,011,400
10	Supplemental Work	\$ 2,830,100
11	State Furnished	\$ 1,731,200
12	Time-Related Overhead	\$ 1,673,000
13	Total Roadway Contingency	\$ 6,405,800

TOTAL ROADWAY ITEMS	\$ 49,111,100
----------------------------	----------------------

Estimate Prepared By :



5/7/2026

(213) 598-6329

P.J. Ananthanathan, PE

Date

Phone

Estimate Reviewed By :

Mustapha Raouf, Office Chief

Date

Phone

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

SECTION 1: EARTHWORK

Item code	Unit	Quantity	Unit Price (\$)	Cost	
190101 Roadway Excavation	CY	x	= \$	-	
19010X Roadway Excavation (Insert Type) ADL	CY	x	= \$	-	
19801X Imported Borrow	CY/TON	x	= \$	-	
194001 Ditch Excavation	CY	x	= \$	-	
192037 Structure Excavation (Retaining Wall)	CY	x	= \$	-	
193013 Structure Backfill (Retaining Wall)	CY	x	= \$	-	
193031 Pervious Backfill Material (Retaining Wall)	CY	x	= \$	-	
17010X Clearing & Grubbing	LS/ACRE	1 x	15,000.00 = \$	15,000	Rdwy
100100 Develop Water Supply	LS	x	= \$	-	
19801X Imported Borrow	CY/TON	x	= \$	-	
21012X Duff	ACRE/SQFT	x	= \$	-	
XXXXXX Some Item	Unit	x	= \$	-	

TOTAL EARTHWORK SECTION ITEMS	\$ 15,000
--------------------------------------	------------------

SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code	Unit	Quantity	Unit Price (\$)	Cost	
401050 Jointed Plain Concrete Pavement	CY	x	= \$	-	
400050 Continuously Reinforced Concrete Pavement	CY	x	= \$	-	
390132 Hot Mix Asphalt (Type A)	TON	x	120.00 = \$	-	Rdwy
26020X Class 2 Aggregate Base	TON/CY	x	= \$	-	
250401 Class 4 Aggregate Subbase	CY	x	= \$	-	
414240 Isolation Joint Seal (Asphalt Rubber)	LF	x	= \$	-	
414241 Isolation Joint Seal (Silicone)	LF	x	= \$	-	
280010 Rapid Strength Concrete Base	CY	x	= \$	-	
410096 Drill and Bond (Dowel Bar)	EA	x	= \$	-	
390137 Rubberized Hot Mix Asphalt (Gap Graded)	TON	122,000 x	141.00 = \$	17,202,000	Rdwy
391006 Asphalt Binder (Geosynthetic Pavement Interlayer)	TON	x	= \$	-	
290201 Asphalt Treated Permeable Base	CY	x	= \$	-	
374002 Asphaltic Emulsion (Fog Seal Coat)	TON	10 x	1,120.00 = \$	11,200	Rdwy
397005 Tack Coat	TON	200 x	920.00 = \$	184,000	Rdwy
377501 Slurry Seal	TON	x	= \$	-	
374493 Polymer Asphaltic Emulsion (Seal Coat)	TON	x	= \$	-	
370001 Sand Cover (Seal)	TON	x	= \$	-	
731530 Minor Concrete (Textured Paving)	CY	x	= \$	-	
731502 Minor Concrete (Miscellaneous Construction)	CY	x	= \$	-	
731627 Minor Concrete (Curb, Sidewalk, and Curb Ramp)	CY	84 x	1,723.00 = \$	144,732	Rdwy
731850 Remove Concrete (Curb, Gutter, And Sidewalk) (C)	CY	84 x	454.00 = \$	38,136	Rdwy
394074 Place Hot Mix Asphalt Dike (Type C)	LF	26,000 x	2.00 = \$	52,000	Rdwy
398100 Remove Asphalt Concrete Dike	LF	26,000 x	2.10 = \$	54,600	Rdwy
420201 Grind Existing Concrete Pavement	SQYD	x	= \$	-	
398300 Remove Base and Surfacing	CY	x	= \$	-	
390095 Replace Asphalt Concrete Surfacing (10 %)	CY	7,230 x	300.00 = \$	2,169,000	Rdwy
41800X Remove Concrete Pavement	SQYD/CY	x	= \$	-	
394090 Place Hot Mix Asphalt (Miscellaneous Area)	SQYD	x	= \$	-	
398200 Cold Plane Asphalt Concrete Pavement	SQYD	944,200 x	2.80 = \$	2,643,760	Rdwy
846046 6" Rumble Strip (Asphalt Concrete Pavement)	STA	x	= \$	-	
846049 6" Rumble Strip (Concrete Pavement)	STA	x	= \$	-	
846051 12" Rumble Strip (Asphalt Concrete Pavement)	STA	3,000 x	54.50 = \$	163,500	Rdwy
846052 12" Rumble Strip (Concrete Pavement)	STA	x	= \$	-	
420102 Groove Existing Concrete Pavement	SQYD	x	= \$	-	
839745 Concrete Barrier Transition	LF	315 x	305.00 = \$	96,075	Rdwy
394095 Roadside Paving (Miscellaneous Areas)	SQYD	x	= \$	-	
390136 Minor Hot Mix Asphalt	TON	x	= \$	-	
568062 Pedestrian Barricade	EA	6 x	2,000.00 = \$	12,000	Rdwy
XXXXXX Some Item	Unit	x	= \$	-	

TOTAL PAVEMENT STRUCTURAL SECTION ITEMS	\$ 22,771,100
--	----------------------

SECTION 3: DRAINAGE

Item code	Unit	Quantity		Unit Price (\$)		Cost	
710132 Remove Culvert	LF	315	x	150.00	= \$	47,250	Hydraulics
710240 Modify Inlet	EA		x		= \$	-	
710370 Sand Backfill	CY		x		= \$	-	
71010X Abandon Culvert	EA/LF		x		= \$	-	
610117 30" Alternative Pipe Culvert	LF	506	x	350.00	= \$	177,100	Hydraulics
610112 24" Alternative Pipe Culvert	LF	10	x	300.00	= \$	3,000	Hydraulics
710384 24" Cured-In-Place Pipeliner	LF	200	x	300.00	= \$	60,000	Hydraulics
710196 Adjust Inlet	LF		x		= \$	-	
710262 Cap Inlet	EA		x		= \$	-	
510501 Minor Concrete	CY		x		= \$	-	
510502 Minor Concrete (Minor Structure)	CY	21	x	4,000.00	= \$	84,000	Hydraulics
731627 Minor Concrete (Curb, Sidewalk, and Curb Ramp)	CY		x		= \$	-	
6101XX XX" Alternative Pipe Culvert (Insert Type)	LF		x		= \$	-	
6411XX XX" Plastic Pipe	LF		x		= \$	-	
65XXXX XX" Reinforced Concrete Pipe (Insert Type)	LF		x		= \$	-	
6811XX XX" Plastic Pipe (Edge Drain)	LF		x		= \$	-	
665049 48" CORRUGATED STEEL PIPE (.064" THICK)	LF		x		= \$	-	
665030 36" CORRUGATED STEEL PIPE (.079" THICK)	LF	20	x	1,600.00	= \$	32,000	Hydraulics
7032XX XX" Corrugated Steel Pipe Riser (0.XXX" Thick)	LF		x		= \$	-	
7050XX XX" Steel Flared End Section	EA		x		= \$	-	
703233 Grated Line Drain	LF		x		= \$	-	
72XXXX Rock Slope Protection (Type and Method)	CY/TON		x		= \$	-	
390132 Hot Mix Asphalt (Type A)	TON	4	x	450.00	= \$	1,800	Hydraulics
750030 Inlet Frame And Grate	EA		x		= \$	-	
510092 Structural concrete, headwall	CY	5	x	4,000.00	= \$	20,000	Hydraulics
723085 Rock Slope Protection (60 LB, Class II, Method B)(to	CY	10	x	500.00	= \$	5,000	Hydraulics
394090 Place hot mix asphalt (Miscellaneous area)	SY	5	x	115.00	= \$	575	Hydraulics
750001 Miscellaneous Iron and Steel	LB	531	x	20.00	= \$	10,620	Hydraulics
27740 Jack and Bored	LF	351	x	1,600.00	= \$	561,600	Hydraulics

TOTAL DRAINAGE ITEMS	\$	1,003,000
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SECTION 4: SPECIALTY ITEMS

Item code	Unit	Quantity		Unit Price (\$)		Cost	
730070 Detectable Warning Surface	SQFT	105	x	51.00	= \$	5,355	Rdwy
520103 Bar Reinforced Steel (Retaining Wall)	LB		x		= \$	-	
5100XX Structural Concrete	CY		x		= \$	-	
510060 Structural Concrete, Retaining Wall	CY		x		= \$	-	
5201XX Bar Reinforcing Steel	LB		x		= \$	-	
080050 Progress Schedule (Critical Path Method)	LS	1	x	3,000.00	= \$	3,000	Rdwy
582001 Sound Wall (Masonry Block)	SQFT		x		= \$	-	
510530 Minor Concrete (Wall)	CY		x		= \$	-	
60005X Remove Sound Wall	LF/LS/SQFT		x		= \$	-	
070030 Lead Compliance Plan	LS	1	x	5,000.00	= \$	5,000	Traffic
141120 Treated Wood Waste	LB	170,000	x	1.20	= \$	204,000	Rdwy
839750 Remove Barrier	LF		x		= \$	-	
839752 Remove Guardrail	LF	11,500	x	12.00	= \$	138,000	Rdwy
710167 Remove Flared End Section	EA		x		= \$	-	
8000XX Chain Link Fence (Insert Type)	LF		x		= \$	-	
80XXXX XX" Chain Link Gate (Type CL-X)	EA		x		= \$	-	
832007 Midwest Guardrail System (Steel Post)	LF	11,500	x	40.00	= \$	460,000	Rdwy
839301 Single Thrie Beam Barrier	LF		x		= \$	-	
839310 Double Thrie Beam Barrier	LF		x		= \$	-	
839521 Cable Railing	LF		x		= \$	-	
832070 Vegetation Control (Minor Concrete)	SQYD		x		= \$	-	
839566 Terminal System (Type CAT)	EA		x		= \$	-	
839584 Alternative In-line Terminal System	EA	48	x	4,750.00	= \$	228,000	Rdwy
839585 Alternative Flared Terminal System	EA		x		= \$	-	
870700 Flashing Beacon System	LS	1	x	5,000.00	= \$	5,000	Rdwy
8396XX Crash Cushion (TL3)	EA	1	x	40,000.00	= \$	40,000	
8331XX Concrete Barrier (Insert Type)	LF		x		= \$	-	
475010 Retaining Wall (Masonry Wall)	SQFT		x		= \$	-	
511035 Architectural Treatment	SQFT		x		= \$	-	
780460 Anti-Graffiti Coating	SQFT		x		= \$	-	
780450 Rock Stain	SQFT		x		= \$	-	
4730XX Reinforced Concrete Crib Wall (Insert Type)	SQFT		x		= \$	-	
839544 Transition Railing (AGT)	EA	20	x	6,500.00	= \$	130,000	Rdwy
780440 Prepare and Stain Concrete	SQFT		x		= \$	-	
839561 Rail Tensioning Assembly	EA		x		= \$	-	
839580 End Anchor Assembly (Type Sft-M)	EA	29	x	1,350.00	= \$	39,150	Rdwy
83958X End Anchor Assembly (Insert Type)	EA						

TOTAL SPECIALTY ITEMS	\$	1,257,600
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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 Design Memo.](#)

SECTION 5: ENVIRONMENTAL**5A - ENVIRONMENTAL MITIGATION**

Item code		Unit	Quantity	Unit Price (\$)		Cost	
146002	Contractor Supplied Biologist	LS	1	x	21,500.00	=	\$21,500
80010X	Temporary Fence (Insert Type)	LF		x		=	\$-
401	Permit	EA	1	x	10,500.00	=	\$10,500
	CVAG Fee	LS	1	x		=	\$-
	CVAG Contribution (5% of sections 1-8)	LS	1	x		=	\$-
130670	Temporary Reinforced Silt Fence	LF		x		=	\$
Subtotal Environmental Mitigation						\$	32,000

5B - LANDSCAPE AND IRRIGATION

Item code		Unit	Quantity	Unit Price (\$)		Cost	
200002	Roadside Clearing	LS	1	x	500,000.00	=	\$ 500,000
20xxxx	Highway Planting	LS	1	x	40,000.00	=	\$ 40,000
202039	Slow Release Fertilizer	LS	1	x	8,000.00	=	\$ 8,000
20XXXX	Temporary Irrigation System	LS	1	x	60,000.00	=	\$ 60,000
204099	Plant Establishment Work	LS	1	x	40,000.00	=	\$ 40,000
206405	Remove Irrigation Facility	LS	1	x	15,000.00	=	\$ 15,000
200114	Rock Blanket	SQFT	34,000	x	18.00	=	\$ 612,000
XXXXXX	Abandon Existing well and building demolition	EA	2	x	68,000.00	=	\$ 136,000
200114	Rock Blanket	SQFT	0	x	0.00	=	\$ -
200002	Roadside Clearing	LS	0	x	0.00	=	\$ -
202040	Mycorrhizae Inoculant	LB	0	x	0.00	=	\$ -
995100	Water Meter Charges	EA	0	x	0.00	=	\$ -
2087XX	XX" Conduit (Use for Irrigation x-overs)	LF		x		=	\$ -
	Drip System (Use for Irrigation Line)	SQFT		x		=	\$ -
	Drip Irrigation (Use for Extension of Irrigation)	SQFT		x		=	\$ -
20890X	Extend X" Conduit (Use for Extension of Irrigation)	LF		x		=	\$ -
Subtotal Landscape and Irrigation						\$	1,411,000

5C - EROSION CONTROL

Item code		Unit	Quantity	Unit Price (\$)		Cost	
211111	Permanent Erosion Control Establishment Work	LS		x		=	\$ -
210010	Move-In/Move-Out (Erosion Control)	EA	0	x	0.00	=	\$ -
210350	Fiber Rolls	LF		x		=	\$ -
210360	Compost Sock	LF		x		=	\$ -
2102XX	Rolled Erosion Control Product (Insert Type)	SQFT		x		=	\$ -
21025X	Bonded Fiber Matrix	SQFT	0	x	0.00	=	\$ -
210300	Hydromulch	SQFT		x		=	\$ -
210420	Straw	SQFT		x		=	\$ -
210430	Hydroseed	SQFT		x		=	\$ -
210610	Compost	CY		x		=	\$ -
XXXXXX	Check Dam & Sediment Basin	LS	1	x	1,655,352.00	=	\$ 1,655,352
210630	Incorporate Materials	SQFT					
Subtotal Erosion Control						\$	1,655,352

5D - NPDES

Item code		Unit	Quantity	Unit Price (\$)		Cost	
130300	Prepare SWPPP	LS	1	x	8,000.00	=	\$ 8,000
130200	Prepare WPCP	LS		x		=	\$ -
130100	Job Site Management	LS	1	x	80,000.00	=	\$ 80,000
130331	Storm Water Annual Report	EA		x		=	\$ -
130310	Rain Event Action Plan	EA		x		=	\$ -
130320	Storm Water Sampling and Analysis Day	EA		x		=	\$ -
130520	Temporary Hydraulic Mulch	SQYD		x		=	\$ -
130550	Temporary Hydroseed	SQYD		x		=	\$ -
130505	Move-In/Move-Out (Temporary Erosion Control)	EA		x		=	\$ -
130640	Temporary Fiber Roll	LF	2,000	x	8.00	=	\$ 16,000
130900	Temporary Concrete Washout	LS	1	x	5,000.00	=	\$ 5,000
130710	Temporary Construction Entrance	EA	3	x	7,000.00	=	\$ 21,000
130610	Temporary Check Dam	LF		x		=	\$ -
130620	Temporary Drainage Inlet Protection	EA		x		=	\$ -
130730	Street Sweeping	LS		x		=	\$ -
XXXXXX	Trash Capture Device	LS	1	x	600,000.00	=	\$ 600,000
130560	Temporary Soil Binder	SQYD	10,000	x	1.00	=	\$ 10,000
130312	Pre-Storm Event Inspection Report	EA	6	x	800.00	=	\$ 4,800
130322	During and Post Storm Event Inspection	EA	6	x	1,600.00	=	\$ 9,600
Subtotal NPDES						\$	740,000

TOTAL ENVIRONMENTAL	\$	3,838,400
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Supplemental Work for NPDES

066595	Water Pollution Control Maintenance Sharing*	LS	1	x	8,000.00	=	\$ 8,000	SWDR
066596	Additional Water Pollution Control**	LS	1	x	8,000.00	=	\$ 8,000	SWDR
066597	Storm Water Sampling and Analysis***	LS		x		=	\$ -	
XXXXXX	Some Item	LS		x		=	\$ -	
Subtotal Supplemental Work for NPDES						\$	16,000	

*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	
870200	Lighting System	LS	x	= \$	-	
870300	Sign Illumination System	LS	x	= \$	-	
870510	Ramp Metering System	LS	x	= \$	-	
87181X	Interconnection Conduit and Cable	LF/LS	x	= \$	-	
5602XX	Furnish Sign Structure (Type X)	LB	0	x 0.00	= \$	-
5602XX	Install Sign Structure (Type X)	LB	0	x 0.00	= \$	-
4980XX	XX" CIDHC Pile (Sign Foundation)	LF	x	= \$	-	
87011X	Inductive Loop Detector	EA/LS	x	= \$	-	
872133	Modifying Signal And Lighting Systems	LS	1	x 100,000.00	= \$	100,000 Electrical
872134	Modifying Ramp Metering Systems	LS	1	x 500,000.00	= \$	500,000 Electrical
872135	Modifying Traffic Monitoring Stations	LS	1	x 15,000.00	= \$	15,000 Electrical
870600	Traffic Monitoring Station System	LS	x	= \$	-	
56804X	Remove Sign Structure	EA/LS	x	= \$	-	
568054	Reconstruct Sign Structure	EA	x	= \$	-	
568060	Modify Sign Structure	EA	x	= \$	-	
870009	Maintaining Existing Traffic Management System Elements During Construction	LS	1	x 5,000.00	= \$	5,000 Electrical
820710	Furnish Laminated Panel Sign (1"-Type A)	SQFT	0	x 0.00	= \$	-
870400	Signal And Lighting System	EA	0	x 0.00	= \$	-
86XXXX	Fiber Optic Conduit System	LS	x	= \$	-	
XXXXX	Some Item	Unit	x	= \$	-	
Subtotal Traffic Electrical					\$	620,000

6B - Traffic Signing and Striping

Item code		Unit	Quantity	Unit Price (\$)	Cost	
820840	Roadside Sign - One Post	EA	x	= \$	-	
820850	Roadside Sign - Two Post	EA	x	= \$	-	
5602XX	Furnish Sign Structure (Insert Type)	SQFT	x	= \$	-	
820890	Install Sign Panel on Existing Frame	SQFT	x	= \$	-	
846020	Remove Painted Traffic Stripe	LF	x	= \$	-	
141102	Remove Yellow Painted Traffic Stripe (Hazardous Waste)	LF	x	= \$	-	
846025	Remove Painted Pavement Marking	SQFT	x	= \$	-	
820250	Remove Roadside Sign	EA	x	= \$	-	
820530	Reset Roadside Sign	EA	x	= \$	-	
840516	Thermoplastic Pavement Marking (Enhanced Wet Night Visibility)	SQFT	13,400	x 5.30	= \$	71,020 Traffic
846007	6" Thermoplastic Traffic Stripe (Enhanced Wet Night Visibility)	LF	249,216	x 1.00	= \$	249,216 Traffic
847222	6" Traffic Stripe Tape With Contrast (Warranty) (Broken 36-12) (Broken 36-12)	LF	373,824	x 3.25	= \$	1,214,928 Traffic
810230	Pavement Marker (Retroreflective)	EA	10,700	x 4.60	= \$	49,220 Traffic
820610	Relocate Roadside Sign	EA	x	= \$	-	
8101XX	Delineator (Insert Class)	EA	x	= \$	-	
840502	Thermoplastic Traffic Stripe (Enhanced Wet Night V	LF	x	= \$	-	
846012	Thermoplastic Crosswalk and Pavement Marking (Enhanced Wet Night Visibility)	SQFT	x	= \$	-	
120090	Construction Area Signs	LS	1	x 30,000.00	= \$	30,000 Traffic
847224	8" Traffic Stripe Tape with contract (Warranty)	LF	4,800	x 12.00	= \$	57,600 Traffic
Subtotal Traffic Signing and Striping					\$	1,671,984

6C - Traffic Management Plan

Item code		Unit	Quantity	Unit Price (\$)	Cost	
128651	Portable Changeable Message Sign (Ea)	EA	9	x \$ 5,000	= \$	45,000 Traffic
Subtotal Traffic Management Plan					\$	45,000

6C - Stage Construction and Traffic Handling

Item code		Unit	Quantity	Unit Price (\$)	Cost	
120198	Plastic Traffic Drums	EA	x	= \$	-	
128655	Temporary Automated End Of Queue Warning Syst	DAY	x	=	-	
128658	End Of Queue Monitoring And Warning With Truck	EA				
120207	Portable Radar Speed Feedback Sign System	DAY	250	x 390.00	= \$	97,500 Traffic
12016X	Channelizer (Insert Type)	EA	x	= \$	-	
120116	Type II Barricade	EA	x	= \$	-	
120120	Type III Barricade	EA	x	= \$	-	
129100	Temporary Crash Cushion Module	EA	x	= \$	-	
120100	Traffic Control System	LS	1	x 925,000.00	= \$	925,000 Traffic
129110	Temporary Crash Cushion	EA	x	= \$	-	
129000	Temporary Railing (Type K)	LF	1,500	x 27.00	= \$	40,500 RDWY
120149	Temporary Pavement Marking (Paint)	SQFT	x	= \$	-	
120152	Temporary Pavement Marking (Tape)	SQFT	x	= \$	-	
810190	Guard Railing Delineator	EA	354	x 35.00	= \$	12,390 Traffic
120103	Stationary Impact Attenuator Vehicle	DAY	250	x 750.00	= \$	187,500 Traffic
Subtotal Stage Construction and Traffic Handling					\$	1,262,890

TOTAL TRAFFIC ITEMS	\$	3,599,900
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SECTION 7: DETOURS

Includes constructing, maintaining, and removal

Item code	Unit	Quantity	Unit Price (\$)	Cost
190101 Roadway Excavation	CY	x	= \$	-
19801X Imported Borrow	CY/TON	x	= \$	-
390132 Hot Mix Asphalt (Type A)	TON	x	= \$	-
26020X Class 2 Aggregate Base	CY/TON	x	= \$	-
250401 Class 4 Aggregate Subbase	CY	x	= \$	-
130620 Temporary Drainage Inlet Protection	EA	x	= \$	-
129000 Temporary Railing (Type K)	LF	x	= \$	-
128601 Temporary Signal System	LS	x	= \$	-
120149 Temporary Pavement Marking (Paint)	SQFT	x	= \$	-
80010X Temporary Fence (Insert Type)	LF	x	= \$	-
XXXXXX Some Item	LS	x	= \$	-
TOTAL DETOURS				\$ -

SUBTOTAL SECTIONS 1 through 7 \$ 32,485,000

SECTION 8: MINOR ITEMS**8A - Americans with Disabilities Act Items**

ADA Items 1.0% \$ 324,850

8B - Bike Path Items

Bike Path Items 1.0% \$ 324,850

8C - Other Minor Items

Other Minor Items 1.0% \$ 324,850

8D - Temporary BMPs

Temporary BMPs 0.0% \$ -

8E - Permanent BMPs

Permanent BMPs 0.0% \$ -

Total of Section 1-7 \$ 32,485,000 x 3.0% = \$ 974,550

TOTAL MINOR ITEMS \$ 974,600**SECTIONS 9: ROADWAY MOBILIZATION ***

Item code						
999990	Total Section 1-8	\$ 33,459,600	x	9%	= \$	3,011,364

TOTAL ROADWAY MOBILIZATION \$ 3,011,400**SECTION 10: SUPPLEMENTAL WORK**

Item code	Unit	Quantity	Unit Price (\$)	Cost
066670 Payment Adjustments For Price Index Fluctuations	LS	1	x 537,230.00 = \$	537,230 Rdwy
066094 Value Analysis	LS	1	x 10,000.00 = \$	10,000 Rdwy
066070 Maintain Traffic	LS	1	x 50,000.00 = \$	50,000 Traffic
066919 Dispute Resolution Board	LS	1	x 56,000.00 = \$	56,000 Rdwy
066921 Dispute Resolution Advisor	LS		x = \$	-
066015 Federal Trainee Program	LS	1	x 1,000.00 = \$	1,000 Rdwy
066610 Partnering	LS	1	x 50,000.00 = \$	50,000 Rdwy
066204 Remove Rock and Debris	LS		x = \$	-
066393 Hot Mix Asphalt Smoothness Incentive	LS	1	x 421,830.00 = \$	421,830 Rdwy
066222 Locate Existing Crossover	LS		x = \$	-
066861 Maintain Existing Electrical System	LS	1	x 15,000.00 = \$	15,000 Electrical
066596 Additional Water Pollution Control	LS		x = \$	-
XXXXXX Some Item	Unit		x = \$	-

Cost of NPDES Supplemental Work specified in Section 5D = \$ 16,000

Total Section 1-8 \$ 33,459,600 5% = \$ 1,672,980

TOTAL SUPPLEMENTAL WORK \$ 2,830,100

SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price (\$)	=	Cost	
066105	Resident Engineers Office	LS	1	x	490,000.00	=	\$490,000	Rdwy
066063	Traffic Management Plan - Public Information	LS	1	x	10,000.00	=	\$10,000	TMP
066901	Water Expenses	LS		x		=	\$0	
8609XX	Traffic Monitoring Station (X)	LS		x		=	\$0	
066841	Traffic Controller Assembly	LS		x		=	\$0	
066840	Traffic Signal Controller Assembly	LS		x		=	\$0	
066062	COZEEP Contract/TMP Incident Management	LS	1	x	560,000.00	=	\$560,000	TMP
066838	Reflective Numbers and Edge Sealer	LS		x		=	\$0	
066065	Tow Truck Service Patrol	LS		x		=	\$0	
066916	Annual Construction General Permit Fee	LS	1	x	2,000.00	=	\$2,000	SWDR
066916	Spector Radar Unit	LS		x		=		
XXXXXX	Some Item	Unit		x		=	\$0	
Total Section 1-8		\$	33,459,600	2%	=	\$	669,192	

TOTAL STATE FURNISHED	\$1,731,200
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SECTION 12: TIME-RELATED OVERHEAD

Total of Roadway and Structures Contract Items excluding Mobilization \$33,459,600 (used to calculate total TRO)

Estimated Time-Related Overhead (TRO) Percentage (0% to 10%) = 5%

Item code		Unit	Quantity		Unit Price (\$)	=	Cost	
090100	Time-Related Overhead	WD	280	X	\$5,975	=	\$1,673,000	Rdwy

TOTAL TIME-RELATED OVERHEAD	\$1,673,000
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SECTION 13: ROADWAY CONTINGENCY*

Risk Amount from Risk Register	(for Known Risks)	0%	\$0
Additional or Residual Contingency	(for Unknown/Undefined Risks)	15%	\$6,405,795
Total Section 1-12	\$	42,705,300	x 15% = \$6,405,795

TOTAL CONTINGENCY*	\$6,405,800
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II. STRUCTURE ITEMS

	<u>Bridge 1</u>		<u>Bridge 2</u>		
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Bridge Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	200 LF		200 LF		0 LF
Total Bridge Length (Feet)	200 LF		350 LF		0 LF
Total Area (Square Feet)	40000 SQFT		70000 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot					\$0
COST OF EACH	\$0		\$0		\$0

	<u>Building 1</u>				
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Building Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	100 LF		0 LF		0 LF
Total Building Length (Feet)	150 LF		0 LF		0 LF
Total Area (Square Feet)	15000 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot			\$0		\$0
COST OF EACH	\$0		\$0		\$0

TOTAL COST OF BRIDGES	\$0
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TOTAL COST OF BUILDINGS	\$0
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Time-Related Overhead	10%	\$0
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STRUCTURES MOBILIZATION	10%	\$0
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STRUCTURES CONTINGENCY*	25%	\$0
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TOTAL COST OF STRUCTURES	\$0
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Estimate Prepared By:

XXXXXXXXXXXXXXXXXXXX ----- Division of Structures

Date

EA: 08-1M360 PID: 0821000109

III. RIGHT OF WAY

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

			<i>Current Value Future Use</i>		<i>Escalated Value</i>
A)	A1)	Acquisition, including Excess Land, Fees, Damages, Goodwill	\$	2,000	\$ 2,000
	A2)	Acquisition of Offsite Mitigation	\$		\$
	A3)	Railroad Acquisition	\$		\$
B)	B1)	Acquisition of Offsite Mitigation	\$	475,000	\$ 475,000
	B2)	CVAG 5%	\$	\$ 1,991,390.00	\$ 1,991,390
C)	Utility - Relocation (State Share)		\$	0	\$ 0
	Potholing (80 potholes at \$750.00 each)		\$	60,000	\$ 60,000
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)	Project Permit Fees		\$	31,080	\$ 31,080
H)	Environmental Review		\$	0	\$ 0
I)	Condemnation Settlements	<u>0%</u>	\$	0	\$ 0
J)	Design Appreciation Factor	<u>0%</u>	\$	0	\$ 0
K)	Utility Relocation (Construction Cost)		\$	0	\$ 0

L)	TOTAL RIGHT OF WAY ESTIMATE	\$2,559,470
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M)	TOTAL R/W ESTIMATE: Escalated	\$2,559,470
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N)	RIGHT OF WAY SUPPORT	\$0
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Support Cost Estimate
Prepared By _____ Project Coordinator¹ _____ Phone _____

Utility Estimate Prepared By _____ Utility Coordinator² _____ Phone _____

R/W Acquisition Estimate
Prepared By _____ Right of Way Estimator³ _____ Phone _____

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

¹ When estimate has Support Costs only² When estimate has Utility Relocation³ When R/W Acquisition is required

Attachment D

CEQA - Initial Study Cover Page

Title Sheet

Negative Declaration

NEPA - Categorical Exclusion

Interstate 10 Minor Pavement Rehabilitation Project

Riverside County, California
District 08-RIV-10 (PM 32.6/44.4)
EA 08-1M360/PN 0821000109

Initial Study with Negative Declaration



Prepared by the
State of California Department of Transportation



April 2026

1.1 General Information About This Document

1.1.1 What's in this document:

The California Department of Transportation (Caltrans) has prepared this Initial Study (IS) with Negative Declaration, for the proposed Project in Riverside County, California. Caltrans is the lead agency under the California Environmental Quality Act (CEQA). The document tells you why the project is being proposed, what alternatives have been considered for the project, how the existing environment could be affected by the project the , the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures. The Initial Study circulated to the public for 30 days between March 16, 2026, and April 15, 2026. Comments received during this period are included in Chapter 3. Changes made to the document since the draft document circulation are shown as vertical bars in the margin. Minor editorial changes and clarifications are not shown. Additional copies of this document and the related technical studies are available for review at Caltrans District 8, 464 W.4th Street, San Bernardino, CA 92401.

1.1.2 Alternative formats:

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Robert Tsai, 464 West Fourth Street, San Bernardino, 92401, robert.tsai@dot.ca.gov, (909) 925-7517 (Voice), or use the California Relay Service 1(800) 735-2929 (TTY to Voice), 1(800) 735-2922 (Voice to TTY), 1(800) 855-3000 (Spanish TTY to Voice and Voice to TTY), 1(800) 854-7784 (Spanish and English Speech-to-Speech) or 711.

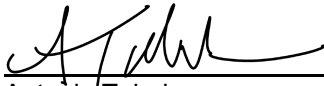
SCH#2026030572
08-RIV-10 PM 32.6/44.4
EA 08-1M360/08211000109

Conduct roadway improvements and upgrades along Interstate 10 in Riverside County, California.

**INITIAL STUDY
with Negative Declaration**

Submitted Pursuant to: (State) Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation



Antonia Toledo
Deputy District Director
Division of Environmental Planning
California Department of Transportation, District 8
CEQA Lead Agency

05/01/2026

Date

The following persons may be contacted for more information about this document:
Cesar Garcia, Senior Environmental Scientist Supervisor, Caltrans District 8, 464 West 4th Street, MS-829
San Bernardino, CA 92401-1400, (909) 472-1699, Cesar.Garcia@dot.ca.gov

State Clearinghouse # 2026030572
Negative Declaration
Pursuant to Division 13, Public Resources Code

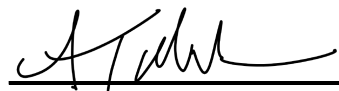
1.1 Project Description

The California Department of Transportation (Caltrans) proposes to extend pavement service life of the mainline, ramps and shoulders by cold planing existing pavement and overlaying with Rubberized Asphalt Concrete-[Gap graded (RHMA-G)]. The Project also includes replacing shoulder rumble strips, upgrade culverts, upgrade existing guardrail to Midwest Guardrail System (MGS), upgrade ADA curb ramps, upgrade transportation management systems (TMS) and ramp metering systems (RMS), upgrade striping to enhanced wet night visibility at crosswalks, mark Class II bike lanes with green conflict paint, install a flashing beacon to improve pedestrian and bicycle facilities, and install rock blankets to improve roadside safety along Interstate 10 (I-10) between the Project limits in and near cities of Palm Springs, Cathedral City and Thousand Palms in Riverside County. Stormwater work includes installing trash capture devices. Erosion control mitigation includes installing twelve check dams, six sediment basins, installing Rock Slope Protection (RSP) at two locations and concrete apron at one location. Removal of dead trees, replanting and installing irrigation system are also included with landscape work.

1.2 Determination

Caltrans has prepared an Initial Study for this Project, and following public review, has determined from this study that the Project would not have a significant effect on the environment for the following reasons:

- The Project would have no effect on aesthetics, agriculture and forest resources, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, utility and service systems, and wildfires.
- The Project would have less than significant effects to air quality, biological resources, cultural resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, noise, transportation, and tribal cultural resources.



Antonia Toledo
Deputy District Director
Division of Environmental Planning
California Department of Transportation, District 8

05/01/2026

Date



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

Project Information

Project Name (if applicable): Interstate 10 Minor Pavement Rehabilitation Project

DIST-CO-RTE:08-RIV-10

PM/PM: 32.6/44.4

EA:1M360 **PN:** 0821000109

Federal-Aid Project Number: N/A

Project Description

See continuation sheet for detailed project description:

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** Enter class. (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

N/A

Print Name

Signature

Date

Project Manager

N/A

Print Name

Signature

Date



CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION DETERMINATION FORM

Caltrans NEPA Determination (Check one)

☐ **Not Applicable**

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

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

☒ **23 CFR 771.117(c): activity (c)(26)**

☐ **23 CFR 771.117(d): activity (d)(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

Cesar Garcia

Print Name

Cesar Garcia

Signature

5/1/2026

Date

Project Manager/ DLA Engineer

Dalia Alarkan

Print Name

Dalia Alarkan

Signature

05/1/2026

Date

Date of Categorical Exclusion Checklist completion (if applicable): N/A

Date of Environmental Commitment Record or equivalent: April 27, 2026

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).



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Continuation sheet:

Caltrans proposes to extend pavement service life of the mainline, ramps and shoulders by cold planing existing pavement and overlaying with Rubberized Asphalt Concrete- [Gap graded (RHMA-G)]. The Project also includes replacing shoulder rumble strips, upgrade culverts, upgrade existing guardrails to Midwest Guardrail System (MGS), upgrade ADA curb ramps, upgrade transportation management systems (TMS) and ramp metering systems (RMS), upgrade striping to enhanced wet night visibility at crosswalks, mark Class II bike lanes with green conflict paint, install a flashing beacon to improve pedestrian and bicycle facilities, and install rock blankets to improve roadside safety along Interstate 10 (I-10) between the project limits in and near cities of Palm Springs, Cathedral City and Thousand Palms in Riverside County. Stormwater work includes installing trash capture devices. Erosion control mitigation includes installing twelve check dams, six sediment basins, installing Rock Slope Protection (RSP) at two locations and concrete apron at one location. Removal of dead trees, replanting and installing irrigation system are also included with landscape work.

The following studies, questionnaires, and memos informed the determination that with respect to addressing applicable National Environmental Policy Act (NEPA) requirements, this Project was eligible to receive the Categorical Exclusion identified on this Determination Form. For each resource, as applicable and based on the results of the respective study, questionnaire, or memo completed, a summary of the avoidance and/or minimization measures included in the attached Environmental Commitments Record (ECR) for that resource, will be provided. The referenced ECR was prepared specifically in support of the NEPA Categorical Exclusion determination made for this Project.

Natural Environment Study (Minimal Impacts)- November 19, 2025.

Historic Property Survey Report- December 2025

Noise Exemption Memorandum- November 10, 2025

Air Quality Exemption Memorandum- October 29, 2025

Air Quality Conformity Checklist- October 29, 2025

GHG Analysis Memorandum- December 2, 2025

Visual Impact Assessment Questionnaire- October 2025

Initial Site Assessment Checklist- April 8, 2026

BIOLOGICAL RESOURCES

In coordination with District Biological Studies, a Natural Environment Study- Minimal Impacts was prepared and approved on **November 19, 2025**. The NESMI determined that the proposed project will result in a determination of *No Effect* for Coachella Valley fringe-toed Lizard (*Uma inornate*), Coachella Valley Milk-vetch (*Astragalus lentiginosus* var. *Coachellae*), and Coachella Valley Milk-vetch Final Critical Habitat and for all other



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federally listed species with implementation of the BIO measures in this document. Caltrans will not pursue a streamlined Programmatic Biological Opinion (PBO) for Coachella Valley milk vetch and for Coachella Valley fringe toad lizard. USFWS). For work within the proposed project area, the following permits are required. Section 1602 Lake and Streambed Alteration Agreement, Section 401 of the Clean Water Act permit. Proposed project impacts to jurisdictional areas will be mitigated and coordinated with CDFW and RWQCB, and during the permitting process. These results are subject to modification following agency.

The following measures are included in the ECR.

BIO-General-1: Staging /Disturbance Limits. All laydown areas, haul routes, and maintenance pads will use existing paved or previously disturbed shoulders. No new access roads will be created.

Bio-General-1: Equipment Staging, Storing & Borrow Sites

All staging, storing, and borrow sites require the approval of the Caltrans biologist.

Bio-Plant-1: Rare Plant Surveys, Flagging and Fencing

Within 14 days prior to construction, a preconstruction survey must be conducted by a qualified Caltrans biologist for special-status plants if the project construction timing falls within the typical blooming period and if the consultant is not assigned. Special-status plants must be flagged for visual identification to construction personnel for work avoidance. Special-status plants detected that feature multiple plants in a single location must be fenced with Environmentally Sensitive Area (ESA) temporary fencing.

BIO-General-2: Temporary Artificial Lighting Restrictions. Artificial lighting must be directed at the work site to minimize light spillover outside of the construction footprint if project activities occur at night.

Bio-General-9—11—ESA Fencing & Limits of Disturbance: ESA fencing will be installed along the outer edge of the disturbed shoulder prior to earthwork. The Resident Engineer and biologist will verify fencing daily during grading and remove it only after final inspection.

Bio-General-14 – Biological Monitor Presence: A qualified biological monitor will be present during all grading or sediment-basin excavation to ensure equipment remains inside the ESA boundary and that no wildlife enters active work zones.

Bio-General-16 – Invasive-Species Control: Equipment entering from off-site will be cleaned of soil and vegetation before arrival. Any disturbed soils will be stabilized with native or sterile cover species only; no hydroseed with non-native grasses.

Bio-General-17 – Dust Control / Sand-Corridor Protection: Dust suppression will be accomplished with water trucks using non-chlorinated water at a rate sufficient to prevent loss of surface sand to wind but not to the point of runoff. Check-dam and rock-



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blanket placement will be designed to allow wind flow continuity along mapped sand-transport corridors.

Bio-Reptile-3-6: Pre-Con Surveys, Monitoring, Trash/Predation Control. Pre-activity surveys for burrowing species will be completed within 48 hours of ground disturbance. Trash will be collected daily; no standing water containers will remain overnight.

Bio-Plant-2: Monitoring of Special-Status Plants. If any CVMSHCP-covered plant species are observed in shoulder margins (e.g., sand-dependent annuals), the monitor will flag and record their locations; avoidance buffers of ≥ 15 ft will be maintained.

CVMSHCP 10.2.6, 4.3, 4.4, 7.2.2, 7.3.1.1 Avoid disturbance to stabilized dune surfaces and maintain ecological functions. Project features will not cause impediment to sand transport.

Bio-Avian-1 – Nesting-Bird Avoidance and Monitoring: If work occurs February 1–August 31, pre-construction nesting-bird surveys will be conducted within 300 ft of all activity areas. Active nests will receive no-work buffers (typically 300 ft; adjusted per species and biologist approval).

Bio-Reptile-1–3 – Wildlife Protection and Relocation: Workers will check beneath vehicles and equipment prior to startup. Any snakes or lizards encountered will be allowed to disperse naturally; if needed, the biologist will relocate individuals outside the ROW to similar habitat.

Bio-General-2–3 – Lighting and Noise Controls: Temporary lighting for night work will be shielded and directed downward toward the road surface; generator mufflers will be maintained to limit ambient noise increases > 3 dBA at habitat edges.

Bio-Avian-1 – Nesting-Bird Avoidance: Active nesting surveys will precede vegetation trimming. If nests are found, exclusion zones will be implemented until fledging is confirmed.

Bio-Reptile-3–6 – Wildlife and Trash/Predator Management: Prior to grading, the biologist will perform clearance sweeps. All trenches or pits left overnight will include escape ramps $\leq 2:1$ slope. Trash will be contained in closed bins and removed daily to prevent attracting predators.

Bio-General-2–3 – Lighting Control and Spill Shielding: All new lighting associated with TMS, or roadway safety improvements will include cut-off shields to prevent light spill into adjacent scrub; light color temperature will not exceed 3000 K to minimize nocturnal attraction.

CVMSHCP 10.3.1, 4.3.8, 4.4, 7.2.2, 7.3.1.1 Invasive species will be removed as needed. Trash will be removed from site.



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Bio-General-7: Worker Environmental Awareness Program (WEAP)

A qualified biologist must present biological resource information program/WEAP for natural communities and special-status species/habitat prior to project activities to all personnel that will be present within the project limits for longer than 30 minutes at any given time.

BIO-5: Preconstruction Invertebrate Species Survey:

Prior to any ground disturbance, a qualified biologist shall survey for potential habitat suitability and presence of Crotch's bumble bee (*Bombus crotchii*) and San Emigdio blue butterfly (*Plebulina emigdionis*). The habitat assessment for Crotch's bumble bee shall be performed according to the 2023 CDFW Survey Considerations for Candidate Bumble Bee (available at

<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=213150>). A The preconstruction Crotch's bumblebee and San Emigdio Blue Butterfly survey must be conducted by a contractor-supplied biologist no more than 1 week prior to project activities within the Biological Study Area. The surveys shall include 100 percent visual coverage and include a minimum 500-meter buffer in adjacent habitat. If a Crotch's bumble bee or bumble bee nest, or San Emigdio Blue Butterfly, butterfly larva, or chrysalis is located, the Resident Engineer and Caltrans biologist must be contacted, and additional measures and/or agency coordination may will be required.

Bio-Anthropod-1: Rare Insect Host Plant Preconstruction Clearance Survey, Flagging, and Fencing: No more than 14 days prior to project activities, a qualified biologist must perform a preconstruction survey for rare insect host plants. Should any rare insect host plants be found, the Resident Engineer and Caltrans biologist must be contacted, and host plants must be flagged by the qualified biologist for visual identification to construction personnel for work avoidance. Should multiple plants in a single location be found, the groupings must be fenced with Environmentally Sensitive Area (ESA) temporary fencing.

Bio-Reptile-3 - PSM-5 – Special Status Reptile Survey:

Prior to any construction activities, known reptile habitat, such as Desert tortoise and Coachella Valley fringe-toed lizard, in the Biological Study Area will be surveyed. Any special status reptile habitat area determined to be active and within 500 feet from the PIA shall be evaluated for breeding status using established CDFW Survey Protocols. If special status reptile individuals are detected during the preconstruction surveys within 500 feet of the PIA, construction activities shall be avoided in this area during the optimal survey period (April 15 to July 15). To avoid excessive delays to the project when special status reptiles are active near a project location, work at other project locations should be done first; any site near an active special status reptile area should be done last. The special status reptile presence/ absence survey should be conducted when air temperature is between 77 F and 95 F. (Tollestrup 1976; USFWS 1985, 1998). Surveys must be conducted when the air temperature falls within the optimal range (CDFW 2019).



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BIO-General 4 - Pre-construction Surveys:

Pre-construction surveys for desert tortoise must be conducted by a qualified contractor-supplied biologist within the Project Impact Area and any staging areas within 7 days prior to project activities and following a habitat suitability assessment. If one of the species listed above or other special status species is located, the Resident Engineer and Caltrans biologist must be contacted and additional measures and/or agency coordination may be required.

Bio-General-6: Species Avoidance

If during project activities a desert tortoise is discovered within the project site, all construction activities must stop within 100 feet and the Caltrans biologist and Resident Engineer must be notified. Coordination with USFWS and CDFW may be required prior to restarting activities.

Bio-Avian-PSM-1: Presence/Absence Surveys: Presence/Absence burrowing owl surveys must be conducted by a qualified biologist during the PA&ED phase of the project to determine if burrowing owl is present in the BSA. If the species is located, protocol surveys must be conducted in the PS&E Phase and additional measures and/or agency coordination may be required.

Bio-Avian-PSM-2: Western burrowing owl Surveys and Avoidance: One pre-construction western burrowing owl survey shall be completed by a CDFW approved qualified biologist no more than 14 days before initiation of site preparation or grading activities, and a second survey shall be completed within 24 hours of the start of site preparation or grading activities. If ground-disturbing activities are delayed or suspended for more than 30 days after the pre-construction surveys, the Project site shall be resurveyed. Surveys for western burrowing owl shall be conducted in accordance with protocols established in the California Department of Fish and Wildlife 2012 Staff Report on Western burrowing owl Mitigation or current version. The surveys shall include 100 percent coverage of the Project site and 500-foot buffer in adjacent habitat. If western burrowing owls, active western burrowing owl burrows, or sign thereof are detected, the Project Proponent shall prepare and submit to CDFW for review and approval of a Burrowing Owl Plan. The Burrowing Owl Plan shall describe proposed full avoidance, minimization, and monitoring actions. The plan shall also include the number and location of occupied burrow sites, acres of western burrowing owl habitat that will be impacted, details of site monitoring, and details on proposed buffers and other avoidance measures. Project activities shall not occur within 1000 feet of an active burrow until CDFW approves the Plan.

CULTURAL STUDIES

In coordination with District Cultural Studies, a Historic Property Survey Report (HPSR) was prepared and approved **December, 2025**. The APE was established as the project footprint to include both direct impacts and potential indirect effects that may develop as



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a result of this undertaking, totaling approximately 1,242.62 acres. The APE is continuous and exists mostly within State Right of Way (ROW), except at PM 44.31 where temporary access for construction equipment is needed for the culvert work, which includes all of the work proposed for this project. Since the project will occur in an existing transportation corridor and involves repairing and maintaining existing infrastructure, there is minimal potential to affect adjacent built environment properties. Caltrans, pursuant to Section 106 PA Stipulation IX.A and as applicable PRC 5024 MOU Stipulation IX.A.2, has determined a Finding of No Historic Properties Affected is appropriate for this undertaking.

CR-1: If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

CR-2: In the event that human remains are found, the county coroner shall be notified and ALL construction activities within 60 feet of the discovery shall stop. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC) who will then notify the Most Likely Descendent (MLD). The person who discovered the remains will contact the District 8 Division of Environmental Planning; Gabrielle Duff, Environmental Branch Chief: (909) 501- 5142, and Julie Scrivner, DNAC: (909)-260-8265. Further provisions of PRC 5097.98 are to be followed as applicable.

CR-3: A Tribal monitor approved by the Agua Caliente Band of Cahuilla Indians shall be present intermittently during any ground disturbing preconstruction or construction related activities in all areas within the external boundaries of the reservation.

HAZARDOUS WASTE

In coordination with District Environmental Engineering, an Initial Site Assessment (ISA) Checklist was prepared and approved by District Environmental Engineering on April 8, 2026. According to the ISA Checklist, the project's potential for hazardous waste involvement as "Low Risk".

HAZ-1: Prior to and during construction, in order to avoid potential impacts from hazardous materials, the following will be performed in accordance with Caltrans Standard Specifications Section 36-4 for residue containing lead from paint and thermoplastic. This SSP also requires a lead compliance plan.

HAZ-2: Project will be performed in accordance with Caltrans Standard Specification 14-9.02 for Air Pollution Control [National Emission Standards for Hazardous Air Pollutants (NESHAP) notification for air pollution control.



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NOISE

Per memo from Caltrans Environmental Engineering dated November 10, 2025, this Project falls under the Type III project categories defined in 23 CFR 772.7, as referenced in the Traffic Noise Analysis Protocol dated April 2020. Per the Traffic Noise Analysis Protocol, "Type III projects do not require a noise analysis." Therefore, the Project was considered exempt. No noise study was required, and no noise study was prepared.

AIR QUALITY

Per memo from Caltrans Environmental Engineering dated October 29, 2025, the scope of the Project was evaluated and determined to be an exempt project. The project that falls under the broad category of exempt project type "*pavement resurfacing and/or rehabilitation*" listed under Table 1 of Caltrans Carbon Monoxide Protocol and Table 2 of 40 CFR 93.126. All projects listed under these tables are exempt from conformity analysis. An air quality report is not needed.

Transportation Air Quality Conformity Findings Checklist on October 29, 2025, stipulating that the proposed project is exempt from conformity requirements because it falls under one of the exempt projects (Pavement resurfacing and/or rehabilitation) listed in 40 CFR 93.126. An Air Quality Report is not required.

In conjunction with the results of the above technical documentation, the Avoidance, Minimization, and/or Mitigation Measure(s) included in the Environmental Commitments Record (ECR), which is attached separately, are expected to be implemented as applicable. Changes to the Project's scope of work, and/or project limits, will require that the District's Division of Environmental Planning be notified in a timely manner, to determine if an Environmental Re-Evaluation will be necessary with respect to confirming if the environmental documentation prepared to address NEPA (and CEQA) compliance, remains valid.

Attachment E

Right of Way Data Sheet

M E M O R A N D U M

To: JUDE ANANTHANATHAN
Design A

Date: March 26, 2026- Revision
File: 08-RIV 10 PM – 32.6/44.4
Project: Rehabilitate Pavement,
Upgrade Lighting and
Transportation
Management Systems
Elements

From: GUSTAVO GUTIERREZ
RW Project Coordination

E.A./P.N.: 1M3600 / 0821000109

We have completed an estimate of the right of way costs for the above-referenced project based on the request received on **December 18, 2025**, and the following assumptions and limiting conditions:

☐ Mapping received did not provide sufficient detail to determine the limits of the right of way requirements and/or to determine damages to the remainder parcels impacted by the project.

☐ Additional right of way requirements may be anticipated but are not defined due to the preliminary nature of the early design requirements.

☐ We have determined that there are no right of way functional involvements in the proposed project at this time as currently designed.

☒ Due to the preliminary nature of the project scope/mapping, utility estimate was provided without the benefit of As-Built maps or potholing.

☒ Other: **---There are utility conflicts, currently unidentified therefore UEW will need to evaluate utilities where ADA curb ramps upgrades are located**
---Right of Entry will need to be obtained through Union Pacific Railroad
---PCR needed for R/W Capital increase

Right of Way Engineering will require a minimum of 0 months after receiving final Right of Way Requirements to deliver Right of Way Appraisal mapping (M224).

Right of Way will require a minimum of 15 months prior to certification of the subject project after receiving final Right of Way Appraisal maps, necessary environmental clearances, and approved freeway agreements (M225).

Shorter lead times may lead to additional Right of Way resources, an increased number of eminent domain actions and possibly result in missing the certification date. Any of these actions may reflect adversely on the District's other programs or the Department's and/or District's public image.

*NOTE: THE WORKPLAN WILL BE SENT SEPARATELY AND ARE BASED ON THE INFORMATION PROVIDED WITH THE DATA SHEET REQUEST. IF THERE IS A CHANGE IN SCOPE, A REVISED DATA SHEET AND WORKPLAN WILL BE PROVIDED.

Attachments:

[XX] Right of Way Data Sheet
[XX] Utility Information Sheet
[XX] Railroad Information Sheet
[XX] Government Lands Information Sheet
[XX] M.C.C.E.

EVNT RW	_____
COST RW1-6	_____
TEXT TI	_____
SCAN	03/26/2026
CLASS	_____
AGRE	_____
TPRC	_____

RIGHT OF WAY DATA SHEET

08-RIV 10 PM – 32.6/44.4
 Rehabilitate Pavement,
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 Transportation Management
 Systems Elements
 1M3600 / 0821000109

(Form #)

Current 9-Phase Programming: \$ 137,000.00

1. Right of Way Cost Estimate:

	Value
A. Acquisition, including Excess Lands, Damages, Goodwill, Major Rehabilitation, and Permits to Enter Railroad	\$ 0.00
Federal Lands – Special Use	\$ 2,000.00
	\$ 0.00
B. Acquisition of Offsite Mitigation.	\$ 2,466,390.00
C. Utility - Relocation (State share)	\$ 0.00
- Potholing (80 Potholes at \$750.00 each)	\$ 60,000.00
D. RAP	\$ 0.00
E. Clearance/Demolition	\$ 0.00
F. Title and Escrow Fees	\$ 0.00
G. Project Permit Fees	\$ 31,080.00
H. Condemnation Costs	\$ 0.00
Total R/W Estimate:	\$ 2,559,470.00

2. Anticipated Date of Right of Way Certification October 01, 2027 ---PCR needed for R/W Capital increase

3. Parcel Data:

Type	Dual/Appr	Utility Involvement	RR Involvement	Yes
X _____	_____	U4-1 _____	C&M Agreement	<u>No</u>
A _____	_____	-2 _____	Svc Contract	_____
B _____	_____	-3 _____	OE Clearances/ Clauses	_____
C _____	_____	-4 _____	LIC/ROE	<u>1</u>
D _____	_____	U5-7 <u>6</u>		
		-8 _____		
Total Parcels <u>0</u>		-9 _____	Federal Lands	Yes
			Number of Parcels	_____

Areas: Right of Way: S.F. _____
 Excess: S.F. _____
 No. Excess Land Parcels: _____

Misc. R/W Work
 RAP Displacement _____
 Clear/Demo _____
 Const Permits _____
 Condemnation _____
 Permits to Enter-ENV _____

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4. Are there major items of Construction Contract Work?

Yes ____ No X (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.).

Type and Number of Parcels: Total Number of Larger Parcels 0

Fee ____
Easements ____

6. Is there an effect on assessed valuation?

Yes ____ Not Significant ____ No X (If yes, explain.)

7. Are utility facilities or rights of way affected?

Yes ____ No X (See attached Utility Information Sheet)

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.

8. Are railroad facilities or rights of way affected? Yes X No ____

(See attached Railroad Information Sheet)

9. Were any previously unidentified sites with hazardous waste and/or material found?

Yes ____ Non-Evident X

(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 X No ____ (See attached Government Lands Information Sheet)

Agencies Involved: Bureau of Indian Affairs; Bureau of Land Management

Rights/Permissions Required: Courtesy Letter

11. Are RAP displacements required? Yes ____ No X

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 material borrow and/or disposal sites required?

Yes ____ No X (If yes, explain.)

13. Are there potential relinquishments and/or abandonments?

Yes ____ No X (If yes, explain.)

14. Are there existing and/or potential Airspace sites?

Yes ____ No X (If yes, explain.)

RIGHT OF WAY DATA SHEET

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(Form #)

15. Is it anticipated that all Right of Way work will be performed by CALTRANS staff?

Yes X No (If no, discuss.)

Evaluations prepared by:

Right of Way Estimator: STEPHEN HENSLEY, Associate Right of Way Agent
 Railroad Coordinator: LYNDSEY CAMPANELLA, Associate Right of Way Agent
 Utility Coordinator: ADAN ACEVEDO, Right of Way Agent
 Federal Lands: ANDREW FILAMOR, Associate Right of Way Agent
 Right of Way Engineering: CARLOS URIBE, Senior Transportation Surveyor

Reviewed By:

Gustavo Gutierrez
 GUSTAVO GUTIERREZ
 Project Coordinator
 District 8, Right of Way

Reviewed By:

Gustavo Gutierrez
 GUSTAVO GUTIERREZ
 Senior RW Agent, Project Coordination
 District 8, Right of Way

Date: 02/04/2026

Date: 02/04/2026

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.

Shannon Smith
 SHANNON SMITH
 Project Delivery Manager – Acting
 District 8, Right of Way

Date: 02/05/2026

Christine Senteno
 CHRISTINE SENTENO
 Deputy District Director – Acting
 District 8, Right of Way and Land Surveys

Date: 02/12/2026

REVISIONS			APPROVAL	
No.	Date	Reason for Revision	Project Coordinator	Sr. RW Agent
1	03/26/2026	New MCCE provided. 9-Phase capital revised. PCR needed.	<u>gg</u>	<u>gg</u>

RIGHT OF WAY DATA SHEET

08-RIV 10 PM – 32.6/44.4
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(Form #)

This utility estimate was prepared using “project specific” data and unit values. This information is not to be utilized for the updating or preparation of this, or any other Right of Way Cost Report or Utility Information Sheet.

UTILITY INFORMATION SHEET

1. List of utility companies in the project area:

ATT – Transmission; C/Cathedral; C/Palm Springs; Coachella Valley Water District; Imperial Irrigation; Kinder Morgan Energy Partners; MCI (Verizon Business); Mission Springs Water District; City of Palm Springs; SoCal Gas Distribution Palm Desert; SoCal Gas Distribution Beaumont; Spectrum – Charter; SCE Distribution – Desert Region; SCE Trans Telecom; Frontier

2. Type and name of utilities in conflict and agreements required:

None

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

Disposition of longitudinal encroachment(s):

- ☒ None
☐ Relocation required.
☐ Exception to policy needed.
☐ Other. Explain

4. Additional information concerning utility involvement on this project. Is there any special circumstances/facilities requiring additional lead time?

There are utility conflicts, currently unidentified therefore UEW will need to evaluate utilities where ADA curb ramps upgrades are located and requests 80 potholes for further investigation.

5. Potholing costs: \$ 60,000.00

80 Phs x \$750.00

Total estimated cost of State's obligation for utility relocation on this project:
 (Phase 9 funding) \$ TBD

Facility Owner	Type of Relocation (facility)	Quantity (i.e., LF of waterline, # of manholes, # poles, etc.)	Cost of Each relocation	Total Cost of relocations	Estimated Grand Total including contingency
TBD					

RIGHT OF WAY DATA SHEET

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(Form #)

Utility Involvement

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 _____ total number of expected State expense involvements-conventional or freeway, with Federal aid

U5-7 6 _____ total number of expected utility verifications, which will not result in involvements

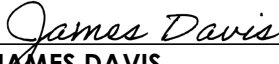
-8 _____ total number of expected utility verifications, 50% which will result in involvements, and 50% will not

-9 _____ total number of expected utility verifications, which will result in involvements

Prepared By: 

ADAN ACEVEDO
Right of Way Utility Estimator

Date: 1/08/2026

Reviewed By: 

JAMES DAVIS
Senior Right of Way Agent, Utilities

Date: 1/12/2026

RIGHT OF WAY DATA SHEET

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 Rehabilitate Pavement,
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 1M3600 / 0821000109

(Form #)

RAILROAD INFORMATION SHEET

1. Describe railroad facilities or rights of way affected.
Per the scope of work, there is a drainage outlet that Caltrans will be rehabilitating. This will cause workers to be within UPRR right of way during construction. We will not come within 25 feet of the railroad, but will be walking on railroad owned property.
2. When branch lines or spurs are affected, would acquisition and/or payment of damages to businesses 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 rights required from the railroads. Are grade crossings requiring service contracts, or grade separations requiring construction and maintenance agreements involved?
Right of Entry will need to be obtained through Union Pacific Railroad.
4. Remarks (non-operating railroad right of way involved?):
None
5. 4-Phase Cost: \$ **0**
 Explanation: (Flagging)

 9-Phase Cost: \$ **2,000**
 Explanation: (ROE, Svc Contract)
6. PMCS Input Information

RR Involvement	<u>YES</u>
C&M Agreement	<u>NO</u>
SVC Contract	_____
OE Clearances/ Clauses	_____
LIC/ROE	<u>1</u>

Anticipated Lead time: **2-3 months anticipated lead time.**

Prepared By: Lyndsay Campanella
 LYNDsay CAMPANELLA
 Right of Way Railroad Coordinator

Date: 01/14/2026

Reviewed By: Aidee Arpon
 AIDEE ARPON
 Senior Right of Way Agent, Acquisitions

Date: 1/14/2026

RIGHT OF WAY DATA SHEET

08-RIV 10 PM – 32.6/44.4
 Rehabilitate Pavement,
 Upgrade Lighting and
 Transportation Management
 Systems Elements
 1M3600 / 0821000109

(Form #)

FEDERAL LANDS INFORMATION SHEET

Are Federal Lands involved?

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	☐ Right of Way Grant
☐ Cost Recovery	☐ Letter of Consent	☐ Special Use Permit
☒ Courtesy Letter	☐ Mineral Agreement	☐ Timber Sale
☐ Easement	☐ Perfection of Title	☐ Transfer of Jurisdiction
☐ Highway Easement	☐ Right of Entry	☐ Other _____

9-Phase Cost Anticipated (if any) _____

Explanation:

There is BLM involvement at PM 37.02-37.28 and PM 37.36-37.44. State has rights as specified in application map A67005-01.

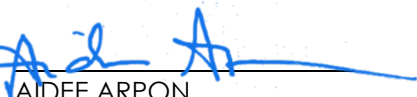
There is BIA (Agua Caliente Reservation) involvement at PM 38.3-39.5 and at PM 40.01-40.72 and at PM 41.72-41.95. State has rights as specified in application maps A67009-01, A66315-01, A67005-01,-02. A courtesy letter will be sent to BLM and BIA at PA&ED around 5/1/2026.

Remarks: (if multiple agencies, please comment on what rights are needed from each)

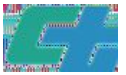
Anticipated Lead time: _____

Prepared By: 
 ANDREW FILAMOR
 Right of Way Federal Lands Coordinator

Date: 1/9/2026

Reviewed By: 
 AIDEE ARPON
 Senior Right of Way Agent, Acquisitions

Date: 1/9/2026



Mitigation and Compliance Cost Estimate (MCCE)

PART 1 - PROJECT INFORMATION

DIST-CO-RTE: 08 - RIV - 010 **PM/PM:** 32.600/44.400

EA/Project Number: 08-1M360_ / 0821000109

Project Name: RIV 10 CAPM, DRAINAGE & ADA

Form Completed by: Maggi Elgeziry

Project Manager: ALARKAN, DALIA **Phone:** 909-746-3554

Date: 3/23/2026

MCCE Phase prepared for: DED

PART 2 - ENVIRONMENTAL COMMITMENTS FOR PERMANENT IMPACTS

Environmental Commitments for Alternative:

Commitment	Design \$	FY	Ac/Crd	ROW \$ Planned	FY	ROW \$ Actual	Pd	Construction \$	FY
Biological									
Mitigation Parcel			5	\$475,000	27/28		☐		
Annual 401 Fee							☐	\$10,500	
Task Order Bio Surveys	\$27,200	25/26					☐		
Contractor supplied biologist							☐	\$21,500	27/28
CVAG fee				\$1,991,390	26/27		☐		
			5				☐		

PART 3 - PERMITS AND AGREEMENTS

Permit/Agreement	ROW \$ Planned	FY	ROW \$ Actual	Pd	Construction \$	FY
1600	\$6,867.25			☐		
Waste Discharge Requirement (WDR)	\$4,212			☐		
TOTAL	\$27,200		\$2,477,469.25		\$32,000	

Approved by:

Hannah Duarte

Environmental Branch Chief (Print Name)


Signature

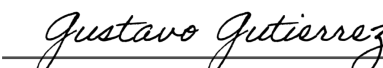
3/26/26

Date

If Right of Way Capital is needed:

Gustavo Gutierrez

Right-of-Way Office Chief (Print Name)


Signature

03/26/2026

Date

If cultural and biology mitigation totals more than \$500,000:

Environmental Office Chief (Print Name)

Signature

Date

Submitted to PM on: _____ Initial ____

Comments (explanation and risk management plan attached)

Task order for habitat suitability assessment and Jurisdictional Delineation = \$27,200.00.

401/WDR annual Fee = \$3,500/year. 3 years x \$3,500/year = \$10,500.

Caltrans is also required to contribute five percent (5%) of the project cost to the Coachella Valley Association of Governments (CVAG) for projects occurring within the CVMSHCP.

CVAG fee is:

5% X Total Construction items (\$39,827,800)=\$1,991,390.0

Assume 1.66 acres of permanent impacts to jurisdictional waters; 3:1 mitigation ratio for a total of 5 acres of mitigation required. Current mitigation parcels for waters go for \$95,000/acre. \$475,000 for waters mitigations.

Contractor supplied biologist needed for pre-construction surveys. Cost is \$2,150/day for 10 days

Memorandum

*Making Conservation
a California Way of Life.*

To: GUSTAVO GUTIERREZ
OFFICE CHIEF
PROJECT COORDINATION, RIGHT OF WAY

Date: December 18, 2025

File: 08-RIV-10-32.6/44.4
In and near Cathedral City, from
0.5 mi w/o Indian avenue to 0.1
w/o Monterey avenue.
082229/EA 1M360
PN.0821000109

From: MUSTAPHA RAOUF *MR*
Office Chief
Design A, MS 1164

Subject: REQUEST FOR UPDATE RIGHT OF WAY DATA SHEET

Design A is preparing a Project Report (PR) for the above-referenced project. The scope of work is to cold plane and overlay 0.20' with 0.20' RHMA-G for mainline and ramps, 0.10' with 0.10' HMA-A for the shoulders, and 0.40' Replace Asphalt Concrete Surfacing (Digouts). Replace shoulder rumble strips, AC dikes, 2 culverts at PM 39.87 and PM 43.27, install inlet and repair culvert at PM 44.31. Headwall will be constructed and replace at these locations. Upgrade 28 ADA curb ramps located at the on and off ramps from and to Indian Canyon Drive, on and off ramp from and to Gene Autry Trail/Palm Drive, on and off ramp from and to Date Palm Drive, and on and off ramp from and to Bob Hope Drive. Upgrade the existing connection and existing guardrails to Midwest Guardrail System (MGS). Upgrade traffic signals and ramp meters. Upgrade traffic striping to thermoplastic enhanced wet night visibility striping, green conflict painting and install one activated flashing beacon at crosswalks and bicycle facilities. Install paved CHP turn around at PM 34.38, 38.18, 41.14. Erosion control mitigations including twelve check dams, six sediment basins, RSP at two locations, concrete apron at one location and slope paving at one location. Stormwater mitigation includes trash capture devices. Landscape works including, rock blankets at gore areas to improve worker safety, removing dead trees, planting new trees, and removing existing wells and housing facility. All work is done within state Right of Way.

Please provide us with the Update Right of Way Data Sheet by 2/15/2025.

The attachments listed below can be found at the following location:

J:\1M360\DES\phf\490 Memos To File (Intra-District)\Attachments

J:\1M360\DES\plans\rdwy\PH0\Updated Plan 9.30.25

If you have any questions or need additional information, please contact Jude Ananthanathan at (213) 598-6329 or myself at (909) 383-6909.

Attachment(s)

- (1) Preliminary Layout
- (2) Right of Way Request Form
- (3) Utility Data Assessment for Right of Way Data Sheet

*“Provide a safe, sustainable, integrated and efficient transportation system
to enhance California’s economy and livability”*

Attachment F

Initial Site Assessment (ISA) Checklist

INITIAL SITE ASSESSMENT (ISA) CHECKLIST

DATE: 5/6/2025

Description of Work:Original

This project proposes to Cold plane and overlay 0.20' with 0.20' RHMA-G for mainline, shoulder and ramps including 10% digouts, replace AC dikes, replace one culvert at PM 33.85, rehabilitate signal and lighting systems, upgrade transportation management systems (TMS), upgrade ramp metering systems (RMS). add one overhead sign, upgrade curb ramps, thermoplastic striping with enhanced wet night visibility at crosswalks, Class II bike lanes with green conflict paints on bridges and one flashing beacon to improve pedestrian and bicycle facilities, and rock blankets at gore areas to improve roadside safety. Other hydraulics work includes installing twelve check dams and six sediment basins, repairing two sections of embankment with rock slope protection (RSP), adding one concrete apron and slope paving. All work is done within state Right of Way.

Revision 1: Remove the original culvert at PM 33.8 with three new culverts at PM 39.87, 43.29 and 44.3. The ADA curb ramp increases from 7 to 28 locations. The 26 lighting systems are remove and the shoulder pavement thickness change from 0.20' coldplane and overlay to 0.15'. One overhead sign is remove.

Rev 2.

This revision is to document the following changes:

1. Cold plane thickness reduced to 0.1 ft for the shoulders in both directions and digouts reduced to 2%. See Revised Preliminary Plan Sheets.
2. Include tree removal and replanting in the west bound direction between PM38.8 and PM43.0. See exhibit 1.
3. Include seven trash capture devices at PM 32.9, 33.2, 36.2, 36.3, 36.4, 39.7 and 43.1. Trash capture device types are modified outlet, GSRD, and rock dam. See Exhibit 2 and Exhibit 2A.
4. Upgrade existing MBGR to MGS. See Preliminary Plans.
5. Temporary access for construction equipment to Railroad's right of way at PM 44.3 to construct culvert upgrade.

Project Engineer

Jude Ananthanathan

Environmental

Andrew Kuria (909) 261-4005

Attach the project location map and an aerial photo to this checklist to show the location of proposed R/W and all known and/or potential hazardous waste sites.

New R/W, TCE, FEE,
partial take?☐Excavation within 15 ft. of
highway shoulder?☒Bridge
Demolition/Modification?☐

Railroad Involvement?

☐Subsurface Utility
Relocation?☐

Cold Planing?

☒

PROJECT INFORMATION:

District 8 County RIV Route 10 Postmile 32.6-44.4 EA 1M360

Treated Wood Waste?	☐	Non Hazardous Striping/Marker?	☐	Soil Stockpiling?	☐
Hazardous Yellow Striping/Marker?	☐	Concrete Box Bridge Culverts?	☐	Vehicle Sensor Nodes?	☐
Maintenance Vehicle Pullouts?	☐	Signpost removal ?	☐	Guardrail MGS/MBGR?	☒
		Leach Fields?	☐	Bridge Rails?	☐

AFFECTING SITES LISTED ON CORTESE LIST? ☐

Other comments and/or observations:

ACM on headwalls tested negative

Conduct Field Inspection GeoTracker Date 5/6/2025

Include the following Standard Special Provisions in the PS&E Package if checked (note SSP's may become NSSP's when modified):

- ☐ **SSP 7-1.02K(6)(j)(iii)** Earth material containing lead, requires a lead compliance plan (LCP) and bid item 070030 for LCP
- ☐ **SSP 7-1.02K(6)(j)(ii)** Lead Compliance Plan for Informational Submittal
- ☐ **SSP 14-11.14** Management of Treated Wood Waste.
- ☐ **SSP 14-11.12** Separate removal of yellow traffic stripe and pavement marking with hazardous residue.
- ☐ **SSP 84-9.03B** Nonhazardous Striping or Pavement Marker
- ☒ **SSP 36-4** Residue Containing Lead from Paint and Thermoplastic.

PROJECT INFORMATION:

District 8 County RIV Route 10 Postmile 32.6-44.4 EA 1M360

- ☐ **SSP 14-11.08** Regulated ADL
- ☐ **SSP 14-11.09** Minimal Disturbance of Regulated ADL
- ☐ **SSP 14-11.10** Naturally Occurring Asbestos
- ☐ **SSP 14-11.13** Lead Paint on Bridges
- ☒ **SSP 14-9.02** NESHAP Notification
- ☐ **SSP 14-11.16** Test/Manage Asbestos
- ☐ **NSSP 14-11.18** Lead Paint in Unoccupied Buildings
- ☐ **SSP 14-11.11** Department Generated Contaminated Waste
- ☐ **SSP 6-1.03B** Conditions for use of local material from non-commercial source.
- ☐ **SSP 87-21.03D** Vehicle Sensor Nodes
- ☐ **SSP 14-11.17** Asbestos in Unoccupied Buildings
- ☐ **SSP 46-3.03A** Difficult Soil Nails Installation
- ☐ **SSP 49-1.03** Difficult Pile Installation
- ☐ **SSP 71-6.03** Abandon Pipeline and Culverts

Broadband Middle Mile

- ☐ **NSSP 14-11.08** Regulated ADL
- ☐ **NSSP 14-11.09** Minimal Disturbance of Regulated ADL
- ☐ **NSSP 14-11.10** Naturally Occurring Asbestos
- ☐ **NSSP 14-11.11** Department Generated Contaminated Waste

Task Orders Required:

- ☐ Lead Paint/Asbestos
- ☐ ADL
- ☐ ISA
- ☐ SI

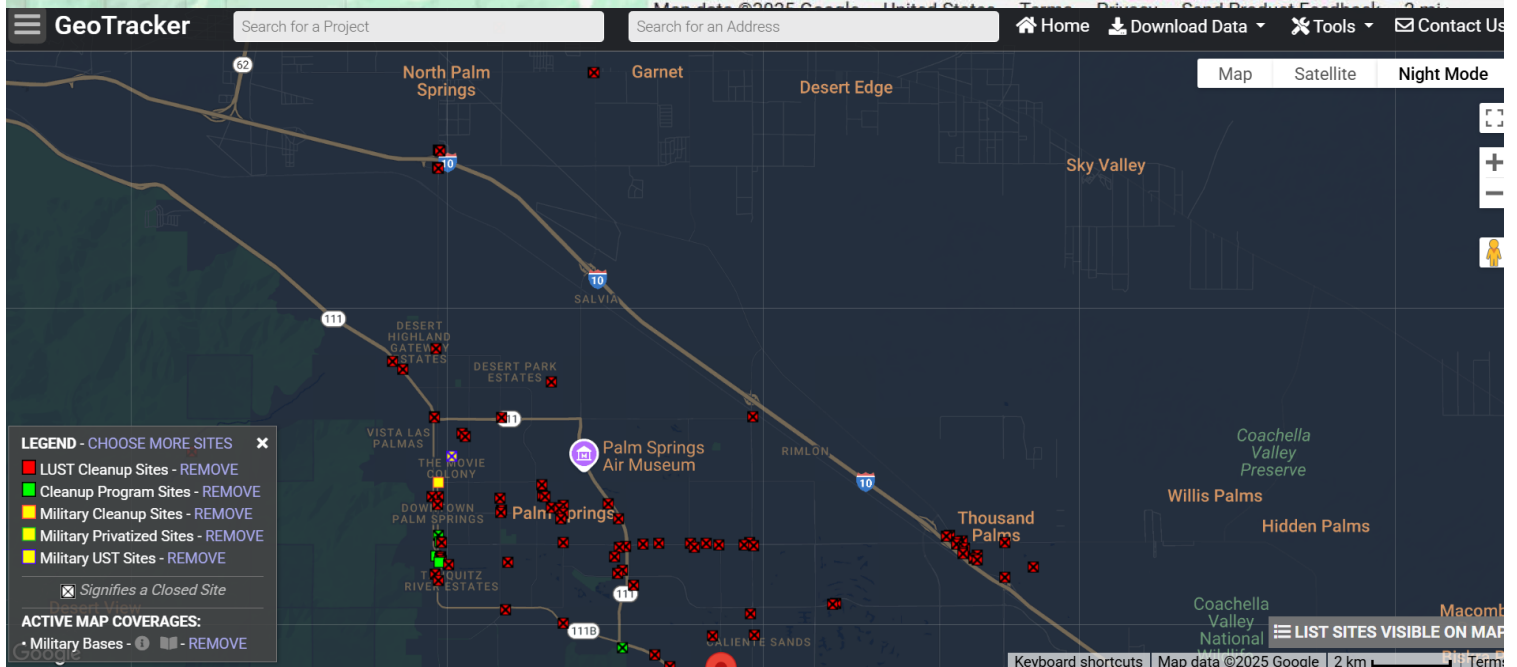
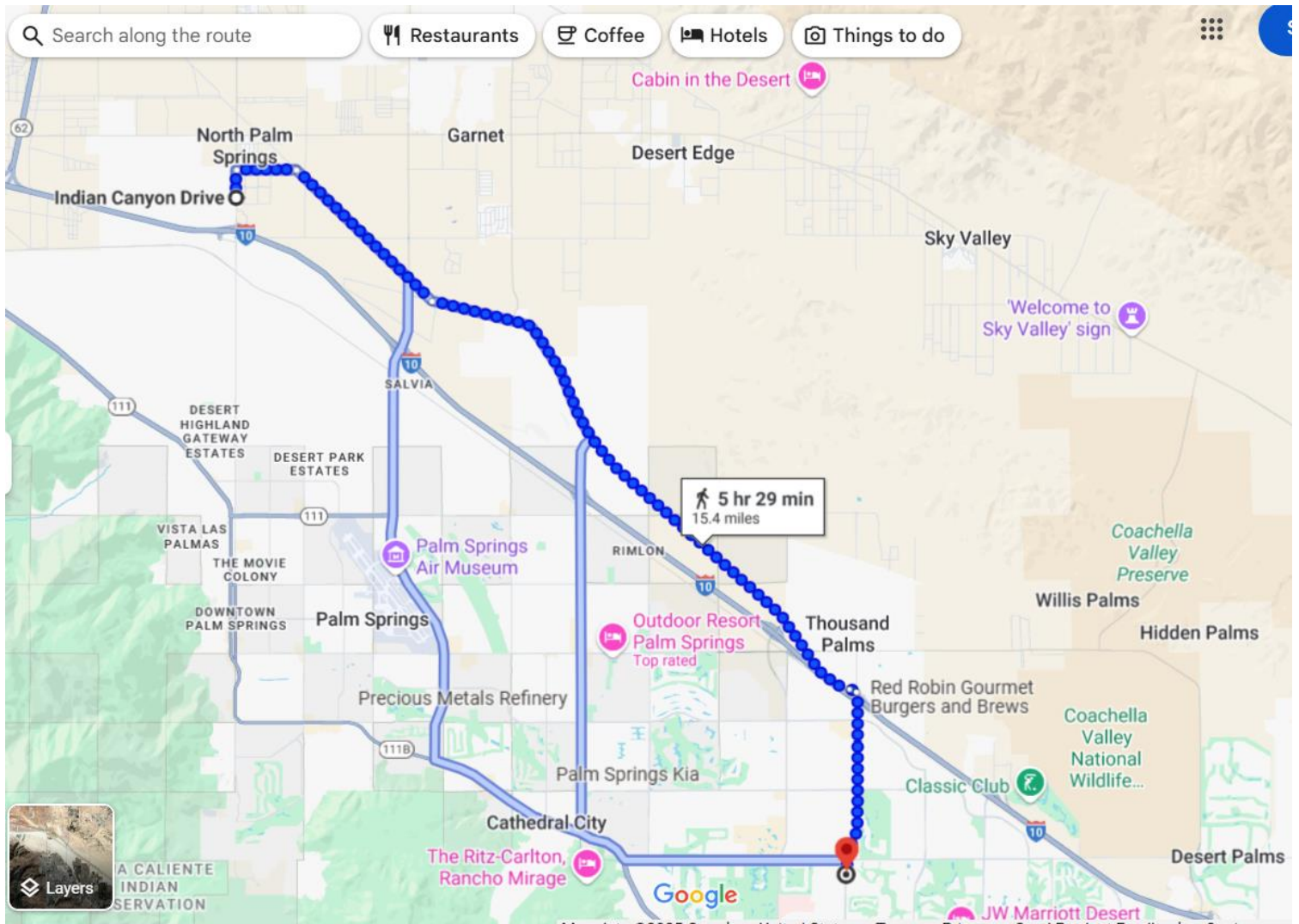
Risk Level

- ☒ Low
- ☐ Medium
- ☐ High
- ☐ Undetermined

ISA CONDUCTED BY: Donald Cheng **DATE:** 4/8/26
Hazardous Waste Coordinator

PROJECT INFORMATION:

District 8 County RIV Route 10 Postmile 32.6-44.4 EA 1M360



Attachment G

Value Analysis Study Report



Preliminary Value Analysis Study Report

08-1M360 RIV 10 CAPM



EA 08-1M360; PN 0821000109

08-RIV-10 (32.6/44.4)

Contract No. 53A0282

Task Order No. 1480

June 18, 2025

Prepared by



Date: June 18, 2025

To: Nivine Georges, District 8 DVAC

Subject: Preliminary Value Analysis Study Report
08-1M360 RIV 10 CAPM, Task Order No. 1480

Dear Nivine:

Bremmer Consulting Inc. (BCI), on behalf of Value Management Strategies, Inc. (VMS), is pleased to submit this *Preliminary Value Analysis Study Report* for the referenced project. This report summarizes the results and events of the virtual value analysis (VA) study conducted for California Department of Transportation (Caltrans) District 8 June 2–4, 2025 using the MS Teams virtual meeting platform.

Decision-Makers please note: An implementation meeting will be scheduled at a future date. You will be asked to accept or reject each VA alternative included in this report. In addition, you will be asked to agree or disagree with the cost savings and performance attribute ratings the VA team applied to each accepted VA alternative.

Acceptance of alternatives denotes intent to implement, based on current information, in the Project Approval and Environmental Document (PA&ED) project development phase. It is recognized that future conditions may change this disposition.

The validation of disposition, the cost changes, and performance changes for the alternative are required by Caltrans to ensure that the project decision-makers agree with the study results. Furthermore, these validated results become the basis for the VA Program reportables.

The VA process is complete when the implementation decisions for every VA Alternative have been received from the project manager and documented in the final VA study report. The *Assess Alternatives and Resolve Alternatives* activities provide the VA team, the PM, and district/region management the assurance that the alternatives are properly evaluated, and the implementation of decisions are based on the merit of each concept. This process helps to eliminate inaccurate alternatives and legitimizes the results of the study and the VA Program.

Please complete your review of the VA Alternatives and provide your written comments on the project stakeholder VA Alternative Implementation Forms. We will target July 2, 2025, to receive the completed forms. Please send them to me at anna@bremmer-inc.com and copy Eric Trimble, Vice President, Value Management Strategies, Inc. at eric.trimble@vms-inc.com.

08-1M360 RIV 10 CAPM

Preliminary Value Analysis Study Report

Caltrans District 8

June 18, 2025, Page 2



During the implementation meeting, we will review the individual Implementation Action Recommendation Form responses, develop a consensus for each VA alternative, document the responses to each alternative, and conclude decisions related to implementation. After that meeting, we will integrate the results into the final VA study report.

It was a pleasure working with District 8 on this project, and I look forward to the next one. If you have any questions or comments concerning this preliminary report, please contact me at (206) 605-6657 or anna@bremmer-inc.com.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Anna M. Bremmer'.

Bremmer Consulting Inc.

Anna M. Bremmer

SAVE International CVS #201105500; USGBC LEED AP

VA Study Team Leader

anna@bremmer-inc.com

(206) 605-6657

Copy: (PDF) Dalia Alaskan, PDT Project Manager
(PDF) Nassim Elias, PDT Design Manager
(PDF) Jarek Kusz, Office of Innovative Design and Delivery
(PDF) Erika Barrick, HQ VA Program Administrator

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VA STUDY SUMMARY REPORT— PRELIMINARY FINDINGS

PN 0821000109

EA 08-1M360

08-RIV-10

PM 32.6–44.4

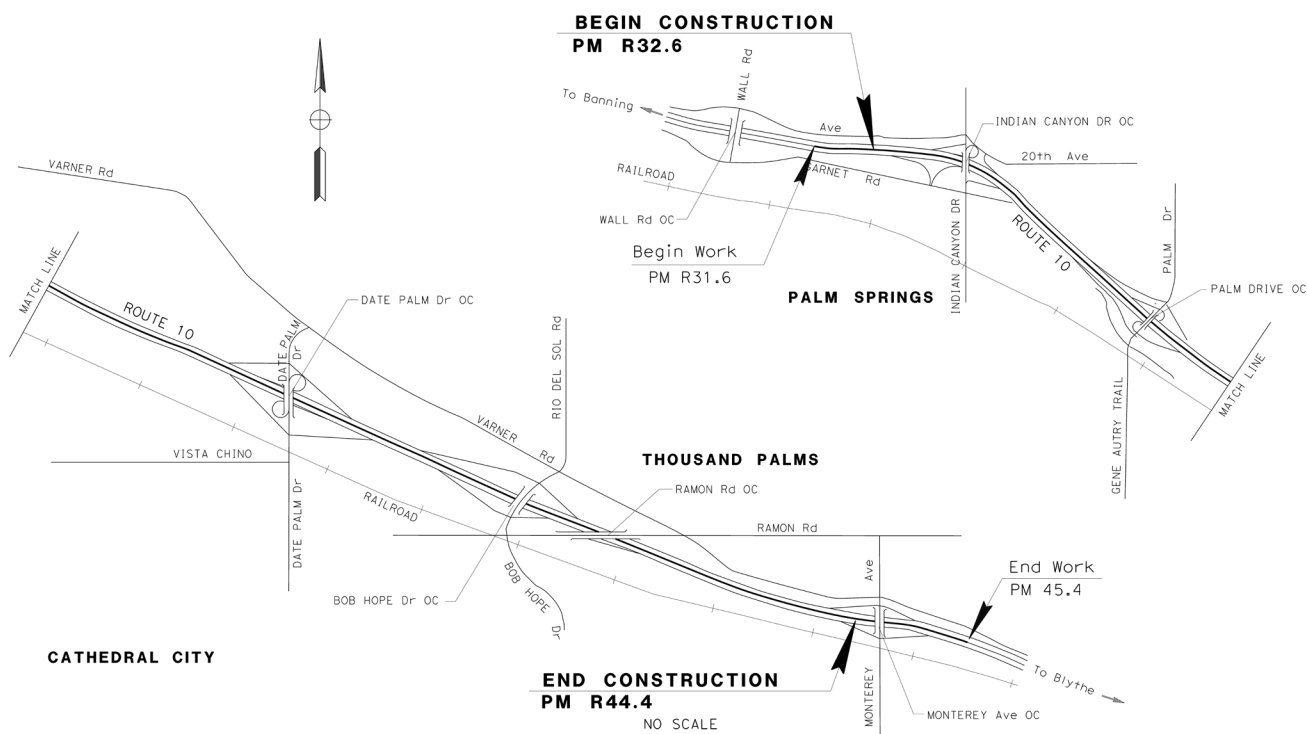


Figure 1. 08-1M360 RIV 10 CAPM Project Limits

A virtual Value Analysis (VA) study, sponsored by the California Department of Transportation (Caltrans) District 8 and facilitated by Bremmer Consulting Inc. (BCI) on behalf of Value Management Strategies, Inc. (VMS), was conducted for the 08-1M360 RIV 10 CAPM project located in Riverside County, California. The workshop was facilitated June 2–4, 2025 using the MS Teams virtual meeting platform. This *VA Study Summary Report—Preliminary Findings* provides an overview of the project, key findings, and the alternative developed by the VA team.

Note to reviewer: This is a summary of the VA study results. Please contact the DVAC if you would like a copy of the entire Preliminary VA Study Report with the detailed VA Alternatives.

PROJECT SUMMARY

This project proposes to extend pavement service life of mainline and shoulders by cold planning existing pavement and overlay with rubberized asphalt concrete. The project also includes replacing shoulder rumble strips, improving or upgrading culverts, upgrading existing guardrails to Midwest Guardrail System (MGS), upgrading transportation management systems (TMS) and ramp metering systems (RMS), upgrading striping to enhanced wet night visibility at crosswalks, marking Class II bike lanes with green conflict paint, installing a flashing beacon to improve pedestrian and bicycle facilities, and installing rock blankets to improve roadside safety. Other hydraulic work includes installing 12 check dams, six sediment basins, and other trash capture devices.

The project occurs along Route 10 (I-10) between the project limits in and near cities of Palm Springs, Cathedral City, and Thousand Palms in Riverside County. The freeway is generally flat. It is heavily traveled with a rush-hour traffic level of service (LOS) at C and D. At other times, traffic LOS is around A or B.

The posted speed limit on I-10 in Cathedral City and Thousand Palms is 70 miles per hour. The Annual Average Daily Traffic (AADT) of the heavily used freeway is projected to increase 87% by 2042, with truck usage increasing 15% to 21%.

As indicated by the Caltrans project manager during the June 4, 2025, meeting that presented the results of the VA study, the current total escalated capital outlay cost is estimated to be \$59,925,000.

VA STUDY TIMING

The VA study was conducted during the beginning of the Project Approval and Environmental Document (PA&ED) phase of the project, which is estimated to be completed May 1, 2026.

The project is scheduled for Ready to List (RTL) December 2, 2027. Construction begins May 2028 and Construction Completion is anticipated for December 2029 with final project closeout December 1, 2032. The total number of working days is 210.

The following table indicates the timing of the VA study relative to the project's milestones. All dates provided, except construction start and completion, are indicated in the *Draft Project Report*. The project milestones and VA study timing are summarized in the table below.

Project Milestones and VA Study Timing

Project Milestone	Completion Date
PA&ED	May 1, 2026
VA Study	June 2–6, 2025
PS&E	May 3, 2027

Project Milestone	Completion Date
RTL	December 2, 2027
Award	June 5, 2028
Approve Contract	July 12, 2028
Contract Acceptance	December 1, 2030
Construction Start	May 2028
Construction Complete	December 31, 2029
Final Project Closeout	July 5, 2032

PROJECT PURPOSE AND NEED

Purpose

The purpose of this project is to maintain existing pavement in good condition before more expensive rehabilitation is required, extend the life of the facility, improve the ride quality, and upgrade other highway appurtenances and facilities that are worn out or functionally obsolete. Caltrans' goal for this CAPM project is to extend facility life by 5 to 10 years.

Need

This project is needed to address deficiencies of the pavement. Due to the heavy and continuous traffic, the existing pavement is showing distress and deterioration. As indicated in the Department of Transportation's (Caltrans) Pavement Condition Survey (PCS), there are excessive areas of cracking and poor ride quality that are beyond routine maintenance.

VA STUDY OBJECTIVES

The overall objectives of the VA study were to:

1. Analyze the current project design, estimate, and schedule.
2. Provide possible cost- and/or schedule-saving recommendations.
3. Provide performance improvement recommendations.

Specific objectives included the following:

- Reduce cost, if possible. It is important that the cost is right, however. If it needs to be higher to fulfill purpose and need, the VA study can help determine this. The project is accountable to the programmed amount (PA) of \$52,475,000. Explore options and strategies to determine whether it is achievable. District 8 will need to fund additional cost.
- Address maintainability.
- The construction office is in Palm Desert. Community is highly vocal about projects that affect them. Minimize community impacts, particularly impacts to commuters. This is a high-level issue and impacts traffic cost.
- Traffic in the area is heavy. Rush-hour traffic LOS at C and D. At other times, traffic LOS is around A or B.
- The cost of all materials has increased. Must maintain budget during construction. When reducing cost, be sure it is still reasonable—want accurate contractor bids. Avoid high bids.

KEY PROJECT ISSUES

The items listed below are the key issues being addressed by the project and considered during this VA study to identify possible improvements.

Project Budget

As indicated during the June 4, 2025, meeting which presented the results of the VA study, the total escalated PA for the project was \$52,475,000 and the total escalated capital outlay cost was estimated at \$59,925,000, also indicated in the May 14, 2025, estimate.

Environmental Impacts

Environmental impacts are not a significant concern on the project.

Construction Staging

There are many areas within the project limits that can be used for construction staging.

Constraints

Constraints center on meeting the needs of the community in terms of impacts to traffic, particularly during commute timeframes.

Risks

Project Budget—The project is currently estimated to be 14.2% over budget. The project will need to identify several cost-saving options, and/or District 8 may need to fund the additional cost.

Risk Register—The April 2022 risk register included in the Project Initiation Report lists no risks rated above moderate. The listed risks center on a sediment basin that may impact utilities. The *Draft Project Report* does not include an updated risk register. During the VA study, a high risk of flooding during storm events was also identified.

EVALUATION OF BASELINE CONCEPT

During the VA study, a number of analytical tools and techniques were applied to develop a better understanding of the baseline concept. A major component of this analysis was Value Metrics, which seeks to assess the elements of cost, performance, time, and risk as they related to project value. These elements require a deeper level of analysis, the results of which are detailed in the Project Analysis section of this report. The key performance attributes identified for the project are listed in the table, “Performance Attributes.” A summary of the major observations and conclusions identified during the evaluation of the baseline concept, which led the VA team to develop the alternatives and recommendations presented in this report follows.

Performance Attributes and Weight of Importance

Performance Attribute	Weight	
Multi-Modal Connectivity	14%	The stakeholders rated the five performance attributes identified as each having a major contribution to the success of the project. Through a paired comparison process, study participants determined the following:
Long-Term Environmental Impacts	20%	
Construction Impacts (Short-Term Environmental Impacts)	21%	Maintainability was weighed the highest at 24%, as this is a Capital Preventative Maintenance (CAPM) project to extend the useful life of the project for 5 to 10 years. Construction impacts and traffic operations were rated on the next tier of importance at 21%, followed by long-term environmental impacts at 20%. Multi-modal connectivity weighed the lowest at 14% but was still viewed as being important to the overall success of the project.
Maintainability	24%	
Traffic Operations	21%	

The initial evaluation of the current basis, or baseline concept, for the project by the stakeholders determined that it represents an effective and responsible approach to maintain the roadway while fulfilling the purpose and need of the project in a conventional and proven way. Although there are still some details that need to be further developed, the baseline concept performed well relative to the performance attributes (6.38 out of 10.0) for a project of this nature and indicate that a great deal of work and effort have been applied to the current design.

Overall, the stakeholders concluded that the baseline concept for the project was good and addressed many of the key concerns well; however, there is still room for potential project value improvement.

VA ALTERNATIVES

The VA team originally developed six VA alternatives for improvement of the project. The following are the alternatives identified, along with their associated potential initial cost savings, potential change in schedule, performance change, and a brief discussion of each.

Proposed VA Alternatives with Descriptions

The following table is a summary of proposed VA Alternatives. Of note, Alternatives 3.0 and 5.0 were dropped by the VA team from further consideration and, therefore, are not included in the table below.

Mutual Exclusivity

Of the proposed alternatives, the VA team noted that Alternatives 1.0 and 2.0 are mutually exclusive.

Proposed Alternative No., Title, and Description	Initial Cost Savings	Change in Schedule	Change in Performance
1.0 (M-05)—Apply epoxy seal to shoulders in lieu of RHMA or HMA The baseline concept is to cold plane 0.15' and overlay 0.15' RHMA-G on shoulders (5- to 10-year service life). The alternative concept proposes to apply epoxy seal on the inside and outside shoulder.	\$4,922,000	3-month reduction	- 1.6%
2.0 (ML-04)—Reduce shoulder depth in both directions to 0.10' cold plane and 0.10' HMA-A overlay for inside and outside shoulders The baseline concept will cold plane 0.15' and overlay 0.15' RHMA-G on shoulders. The alternative concept proposes to reduce cold plane depth to 0.10' and overlay 0.10' HMA-A on the inside and outside shoulders.	\$3,264,000	No change	+ 0.0%
4.0 (ML-05)—Reduce mainline RHMA depth from 0.2' to 0.15' The baseline concept is an RHMA depth of 0.2' on the mainline. The alternative concept proposes to reduce RHMA depth to 0.15' on the mainline.	\$5,841,000	0.65-month reduction	- 2.6%

Proposed Alternative No., Title, and Description	Initial Cost Savings	Change in Schedule	Change in Performance
6.0 (M-08)—On EB side, pave only Lanes 2 and 3 and slurry seal on Lanes 1 and 4	\$12,267,000	No change	- 3.4%
The alternative concept proposes to proceed with paving eastbound (EB) Lanes 2 and 3. Lanes 1 and 4 will undergo crack sealing, pending further inspection to evaluate pavement condition, and determine if additional treatment is needed.			

VA STUDY RESULTS

The VA team recommended one VA Strategy (combination of VA alternatives) for consideration by the project development team (PDT) and District 8 management. The recommended VA Strategy incorporates the VA alternative(s) 2.0, 4.0, and 6.0.

This strategy proposes to

- Reduce shoulder depth in both directions to 0.10' cold plane and 0.10' HMA-A overlay for inside and outside shoulders.
- Reduce mainline RHMA depth from 0.2' to 0.15'.
- On EB side, pave only Lanes 2 and 3 and slurry seal on Lanes 1 and 4.

The overall benefits of this strategy are to reduce cost and shorten schedule.

The three alternatives within this strategy have the net effect of reducing the baseline concept performance by 2.0%. Together, the anticipated cost impact is roughly \$21,372,000 in savings and a schedule reduction of 1 month. When these value elements are combined, they represent an overall value improvement over the baseline concept of 29.3%.

A summary of the recommended VA strategy is provided in the following table and chart. The chart illustrates the relative tradeoffs between performance (shown by the dark-blue columns), cost (shown by the light-blue columns), and schedule (shown by the fuchsia columns). The blue value line indicates the net % change in total value relative to the baseline concept. Please refer to the Project Analysis section of the report for additional details on this analysis.

Recommended VA Strategy

VA Strategy Description	Initial Cost Savings	Change in Schedule	Change in Performance	Value Change
Recommended Strategy —VA Alternatives 2.0, 4.0, and 6.0	\$21,372,000	0.65-month reduction	- 2.0%	+ 28.2%

Comparison of Value—Baseline Concept and Proposed VA Strategy

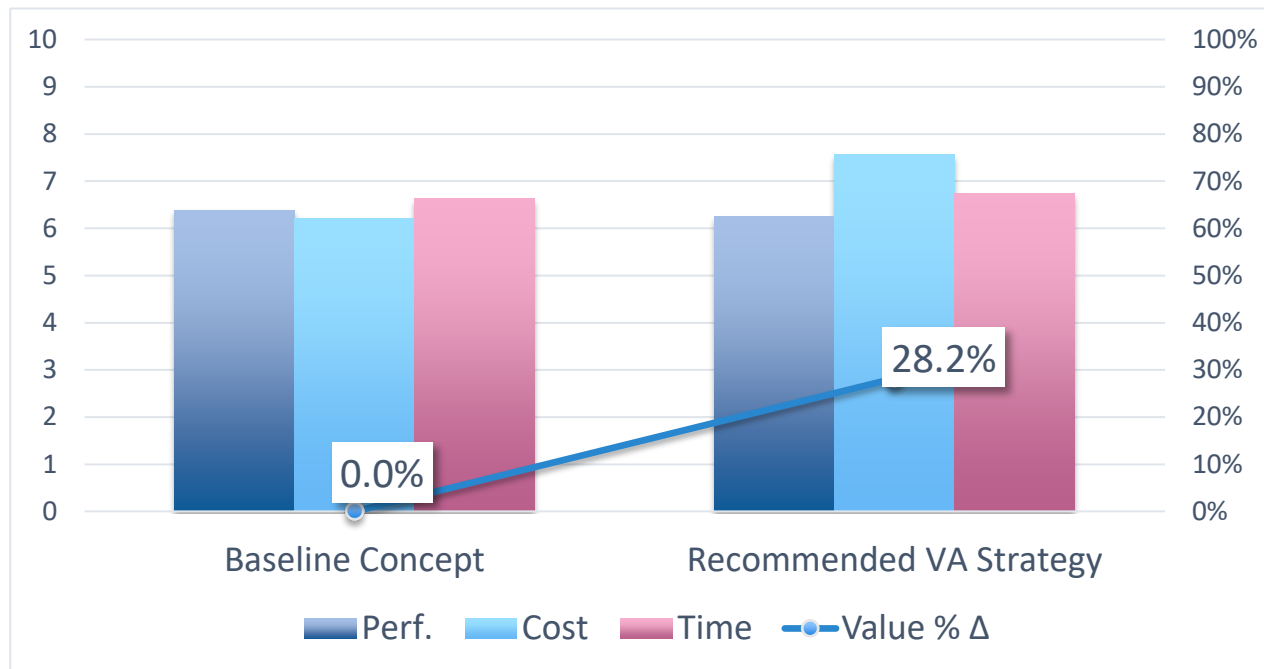


Figure 2. Comparison of Value—Baseline Concept and VA Strategy

VA TEAM

VA Study Team

Name	Organization	Role
Anna Bremmer	Bremmer Consulting Inc.	Facilitator
Francisco Codling	Caltrans District 8	Design
Bijor Decena	Caltrans District 8	District Hydraulics
Nivine Georges	Caltrans District 8	DVAC
Andrew Kuria	Caltrans District 8	Environmental; PDT
Francisco Montellano	Caltrans District 8	Construction
Dang Nguyen	Caltrans District 8	Materials Engineering
Jorge Ochoa	Caltrans District 8	Traffic Operations; PDT
Lesley Rojas-Higuera	Caltrans District 8	Materials Engineering
Harmeek Sangha	Caltrans District 8	Maintenance; PDT

Key Project Contacts

Name	Organization	Title
Dalia Alarkan	Caltrans District 8	PDT—Project Manager
Perinpanathan Ananthanathan	Caltrans District 8	PDT—PE
Nassim Elias	Caltrans District 8	PDT—Design Manager
Sadique Hossain	Caltrans District 8	Management—Proxy for Christy Connors
Anthony Liao	Caltrans District 8	Management—PPM Deputy
Xavier Quintanar	Caltrans District 8	Management/PDT
James A. Shankel	Caltrans District 8	Management
Awais Sheikh	Caltrans District 8	Management—Office Chief Project Management
Antonia Toledo	Caltrans District 8	Management—Acting Environmental
Haissam Yahya	Caltrans District 8	Management—Traffic Operations Deputy

VA ALTERNATIVES

The results of this study are presented as individual alternatives to the baseline concept. Each alternative consists of a summary of the baseline concept, a description of the suggested change, a listing of its advantages and disadvantages, a cost comparison, change in performance and value, discussion of schedule and risk impacts (if applicable), and a brief narrative comparing the baseline concept with the alternative. (Please refer to the Project Analysis section of this report for an explanation of how the performance attributes and value are calculated.) Sketches, calculations, and performance attribute ratings are also presented where applicable. The cost comparisons reflect a similar level of detail as in the baseline estimate.

VA STRATEGIES

VA studies result in the development of a number of alternatives. While it is possible for all alternatives to be implemented, typically there are combinations of some alternatives that may provide the best solution for the project. This is due to the fact that some alternatives may be competing ideas or different ways to address the same issue. Some alternatives are developed to answer a question raised by a decision-maker or to resolve an open issue and found not to be beneficial to the ultimate project.

As a result of these factors, the VA team developed a VA Strategy that represents their opinion of the best combination of alternatives for the project to assist the decision-makers in their evaluation of the VA alternatives. The VA strategy is based on factors that include improved performance, likelihood of implementation, least community impact, cost savings, or any combination of the project's performance attributes. This information is a guide and is not intended to reject the other alternatives from project stakeholder consideration.

PROPOSED VA ALTERNATIVE SUMMARY TABLE

Summary of Proposed VA Alternatives

Alternative No. and Title	Initial Cost Savings	Change in Schedule	Change in Performance	Value Change
1.0 (M-05)—Apply epoxy seal to shoulders in lieu of RHMA or HMA	\$4,922,000	3-month reduction	- 1.6%	+ 4.5%
2.0 (ML-04)—Reduce shoulder depth in both directions to 0.10' cold plane and 0.10' HMA-A overlay for inside and outside shoulders	\$3,264,000	No change	0.0%	+ 1.7%

Alternative No. and Title	Initial Cost Savings	Change in Schedule	Change in Performance	Value Change
4.0 (ML-05)—Reduce mainline RHMA depth from 0.2' to 0.15'	\$5,841,000	0.65-month reduction	- 2.6%	+ 1.1%
6.0 (M-08)—On EB side, pave only Lanes 2 and 3 and slurry seal on Lanes 1 and 4	\$12,267,000	No change	- 3.4%	+ 3.7%

VA Alternatives Included but Not Recommended by VA Study Team

The following alternatives were developed by the VA study team but are not recommended. The developed ideas are included in this report in the VA Alternatives Documentation section.

- 3.0 (M-06)—Use recycled materials for base via CCPR method material using recycle train
- 5.0 (M-02)—Recycle asphalt concrete from base material using recycle train

Recommended VA Strategy

VA Strategy Description	Initial Cost Savings	Change in Schedule	Change in Performance	Value Change
Recommended Strategy —VA Alternatives 2.0, 4.0, and 6.0	\$21,372,000	0.65-month reduction	- 2.0%	+ 28.2%

OTHER CONSIDERATIONS

Design Suggestions

The VA team identified the following design suggestions for consideration by the Project Development Team (PDT).

- ESL-02—Apply lime to aggregates.
- ESL-04—Use fiber-reinforced asphalt.
- ESL-05—Optimize aggregate gradation.
- M-01—Use mumble strips instead of rumble strips on shoulders. Note: A detailed description of this is included at the end of the VA Alternative Documentation section.
- M-09—Consider 0.15' RHMA depth for the mainline. A recent contractor value engineering change proposal (VECP) was accepted using RHMA for the mainline with an HMA shoulder.

- MA-01—Minimize weekday closures by performing weekend closures as much as possible. The baseline allows weeknight and weekend work; the challenge is that community may not like weekend work. The transportation management plan (TMP) allows a 20-minute delay.
- MA-03—Use rapid set concrete (RSC) for ramp terminals to minimize ramp closures.
- MA-04—Do not place vegetation control at MGS locations. Check baseline design to see if it is already being done; also check with Jorge in Maintenance.
- MA-06—Allow contractor to work long shifts, e.g., 7:30 PM to 6:00 AM. This could increase production by 31%.
- ML-03—Perform construction work from 9:00 PM to 5:00 AM. TMP is based on traffic volumes; max 20-minute delay.

Alignment With Safe System Objectives

The VA process considers the degree to which the baseline concept and VA alternatives align with and support the five USDOT Safe System objectives for all road users. These objectives include:

Safe Road Users focuses on people and behaviors with the goal to support safe, responsible behavior by people who use the roads; this prioritizes their ability to reach the destination unharmed. This often takes the form of improvement through clear signage, roadway facilities that are consistent with expectations, and items that affect driver behavior and predictability.

Safe Vehicles expands the availability of vehicle systems and roadway features that facilitate the operation of safer vehicles; this additionally aims to help prevent crashes and minimize the impact of crashes for both occupants and non-occupants. This currently focuses primarily on transportation management systems (TMS) and its communication with drivers in addition to shoulder width accommodations for law enforcement, emergency medical services (EMS), and distressed vehicles.

Safe Speeds promotes safer speeds in all roadway environments through a combination of thoughtful, context-appropriate roadway design, targeted education and outreach campaigns, and enforcement. This category often includes aspects such as signage, traffic management, and road characteristics including speedbumps, roundabouts, crosswalks, etc.

Safe Roads aims to mitigate human mistakes and account for injury tolerances, encourage safer behaviors, and facilitate safe travel for the most vulnerable users. This encompasses the geometry and logistics of a roadway with items such as roadway sight distance, stopping sight distance, shoulder and buffer widths, and roadway delineation.

Post-Crash Care provides roadway features that support post-crash care and enhances the survivability of crashes through expedient access to emergency medical care while simultaneously creating a safe working environment for vital first responders. This also helps prevent secondary crashes through robust traffic incident management practices. This category often encompasses

features such as shoulder width suitable for supporting first responders and emergency vehicle turn-arounds, pullouts, or other access points.

Each VA alternative was assessed by the VA team with respect to its influence on alignment with Safe System objectives and is included in each VA alternative form.

SUMMARY OF PROPOSED VA ALTERNATIVES' PERFORMANCE IMPROVEMENTS

The Caltrans HQ VA Program requires the following information to enable reporting of performance to the FHWA. Only the six standard Caltrans performance attributes, shown in the table below, are to be documented. Caltrans does not require reporting of the performance of any other attributes utilized in this study.

Alt No.	Multi-Modal Connectivity	Long-Term Environmental Impacts	Construction Impacts	Maintain-ability	Traffic Operations	Project Schedule
1.0			Improved			
2.0						
4.0						
6.0			Improved			

VA ALTERNATIVE DOCUMENTATION

The following pages detail the individual VA alternatives.

VA Alternative 1.0 (M-05)—Apply epoxy seal to shoulders in lieu of RHMA or HMA

Initial Cost Savings:	\$4,922,000
Change in Schedule:	3-month reduction
Performance Change:	- 1.6%
Value Change:	+ 4.5%

Description of Baseline Concept

The baseline concept is to cold plane 0.15' and overlay 0.15' RHMA-G on the shoulders (5- to 10-year service life).

Description of Alternative Concept

The alternative concept proposes to apply epoxy seal on the inside and outside shoulder.

Advantages

- Reduces construction duration.
- Once completed, it could be used for a traffic detour.

Disadvantages

- May have a shorter service life.
- May require more maintenance.

Discussion

The main benefit of this alternative is that it would reduce cost while still meeting a 5- to 10-year service life.

Epoxy coatings are highly durable and long-lasting, resisting wear-and-tear for extended periods. This means that there would be reduced needs for frequent replacements or repairs, saving time and money. Epoxy sealants offer excellent protection against various environmental hazards, including dirt and grime. They also protect the concrete underneath from moisture infiltration and cracking. The project proposes to mill and overlay 0.15' RHMA. In recent Google Earth images, the shoulders seem to be in relatively good condition. During the lifetime of the pavement, shoulders get very little traffic, so the need to mill and overlay the shoulders may not be necessary. By epoxy/fog-sealing the shoulders, it will reduce construction time and project cost.

Project Management Considerations

This alternative will require coordination with District 8 Maintenance to determine the feasibility of this approach.

Discussion of Schedule Impacts

This alternative represents a negligible impact to the project schedule's critical path. The baseline will mill and overlay 0.5 mile per 8-hour shift. At 48 miles, 96 8-hour shifts are required, resulting in a duration of 96 days. Conservatively, the baseline would take 100 days. The alternative seals 30 miles per 8-hour shift. At 48 miles/30, the duration is four 8-hour shifts or 4.0 days. The VA team estimates an overall schedule savings of 3 months for this proposal.

Discussion of Risk Impacts

This alternative will not have a significant impact on reducing overall project risk.

Alignment with Safe System Objectives

Increased Alignment: Δ No Change in Alignment: $\bigcirc$ Decreased Alignment ∇		
Objective	Effect	Rationale
Safe Road Users	$\bigcirc$	This VA alternative would not affect roadway user behavior.
Safe Vehicles	$\bigcirc$	This VA alternative would not affect vehicle safety performance.
Safe Speeds	$\bigcirc$	This VA alternative would not affect vehicle speed.
Safe Roads	$\bigcirc$	This VA alternative would not affect road safety.
Post-Crash Care	$\bigcirc$	This VA alternative would not affect pos-crash care.

Comparison of Performance

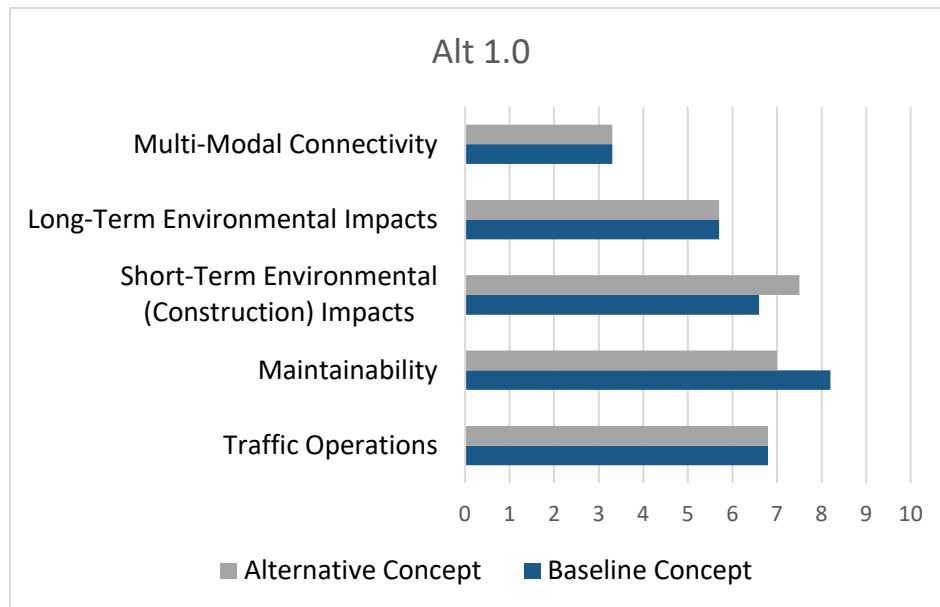


Figure 3. Alt 1.0—comparison of performance rating (weighted performance decreased 1.6%)

Performance Change Rationale

Objective	Rationale
Multi-Modal Connectivity	No change.
Long-Term Environmental Impacts	No significant change.
Construction Impacts	This alternative will improve construction impacts by reducing construction duration.
Maintainability	This alternative will reduce maintainability by protecting the existing surface for a minimum of its service life.
Traffic Operations	No significant change.

Baseline Concept Image



Figure 4. Alt. 1.0—baseline concept: current condition

Alternative Concept Image



Figure 5. Alt. 1.0—alternative concept: epoxy seal shoulders

Initial Cost Estimate

CONSTRUCTION ELEMENT		BASELINE CONCEPT			ALTERNATIVE CONCEPT		
Description	Unit	Quantity	Cost/Unit	Total	Quantity	Cost/Unit	Total
ROADWAY ITEMS							
RHMA (.15') Shoulders only	TON	24,805	\$141	\$3,497,505			\$0
Cold plane .15' Shoulders only	SY	253,440	\$3	\$861,696			
Epoxy Seal (Fox Seal Coat)	TON			\$0	965	\$1,700	\$1,640,537
				\$0			\$0
ROADWAY SUBTOTAL				\$4,359,201			\$1,640,537
ROADWAY MARK-UP	81.0%			\$3,532,620			\$1,329,462
ROADWAY TOTAL				\$7,891,821			\$2,969,999
TIME RELATED OVERHEAD (TRO) ITEMS							
Time Related Overhead	WD			\$0			\$0
TRO SUBTOTAL				\$0			\$0
TRO MARK-UP (Contingency and Escalation only)	39.9%			\$0			\$0
TRO TOTAL				\$0			\$0
R/W or OTHER MATERIALS and EXPENSES							
				\$0			\$0
R/W or OTHER SUBTOTAL				\$0			\$0
R/W or OTHER MARK-UP (Cont. and Esc. only)	11.0%			\$0			\$0
R/W or OTHER TOTAL				\$0			\$0
STRUCTURES ITEMS							
				\$0			\$0
STRUCTURES SUBTOTAL				\$0			\$0
STRUCTURES MARK-UP (Escalation only)	44.0%			\$0			\$0
STRUCTURES TOTAL				\$0			\$0
TOTAL				\$7,891,821			\$2,969,999
TOTAL (Rounded)				\$7,892,000			\$2,970,000
						SAVINGS	\$4,922,000

VA Alternative 2.0 (ML-04)—Reduce shoulder depth in both directions to 0.10' cold plane and 0.10' HMA-A overlay for inside and outside shoulders

Initial Cost Savings:	\$3,264,000
Change in Schedule:	No change
Performance Change:	No change
Value Change:	+ 1.7%

Description of Baseline Concept

The baseline concept will cold plane 0.15' and overlay 0.15' RHMA-G on shoulders.

Description of Alternative Concept

The alternative concept proposes to reduce cold plane depth to 0.10' and overlay 0.10' HMA-A on the inside and outside shoulders.

Advantages

- Reduces RHMA-G material cost for the shoulders.
- Sufficient service life for the shoulder pavement.

Disadvantages

- May not fix damages deeper than 0.10' depth.

Discussion

The main benefit of this alternative is that it would reduce cost.

The project scope calls for a cold plane depth of 0.15' and to overlay with 0.15' RHMA-G on shoulders (8' inside, 10' outside). By reducing the cold plane depth of shoulders to 0.10' and overlaying with 0.10' RHMA-G, there are cost savings for both the labor required to cold plane and the materials of RHMA-G. Pavement thickness of 0.10' would be sufficient for 5 years of service life.

There is a concern that construction resident engineers have indicated that it is challenging to achieve compaction requirements with 0.10' RHMA-G.

Project Management Considerations

This alternative will require coordination with construction to determine the feasibility of this approach. The PDT would need to do additional research to identify any existing shoulder segments within the project scope that need repairs deeper than 0.10'.

Discussion of Schedule Impacts

This alternative should not have a significant impact on the schedule of the project. There is little difference between the production rate of the baseline and alternative.

Discussion of Risk Impacts

This alternative may increase overall project risk. A higher contingency may be required if the existing condition of the shoulders' pavement is worse than expected when construction starts.

Alignment with Safe System Objectives

Increased Alignment: Δ No Change in Alignment: $\bigcirc$ Decreased Alignment ∇		
Objective	Effect	Rationale
Safe Road Users	$\bigcirc$	This VA alternative would not affect roadway user behavior.
Safe Vehicles	$\bigcirc$	This VA alternative would not affect vehicle safety performance.
Safe Speeds	$\bigcirc$	This VA alternative would not affect vehicle speed.
Safe Roads	$\bigcirc$	This VA alternative would not affect road safety.
Post-Crash Care	$\bigcirc$	This VA alternative would not affect pos-crash care.

Comparison of Performance

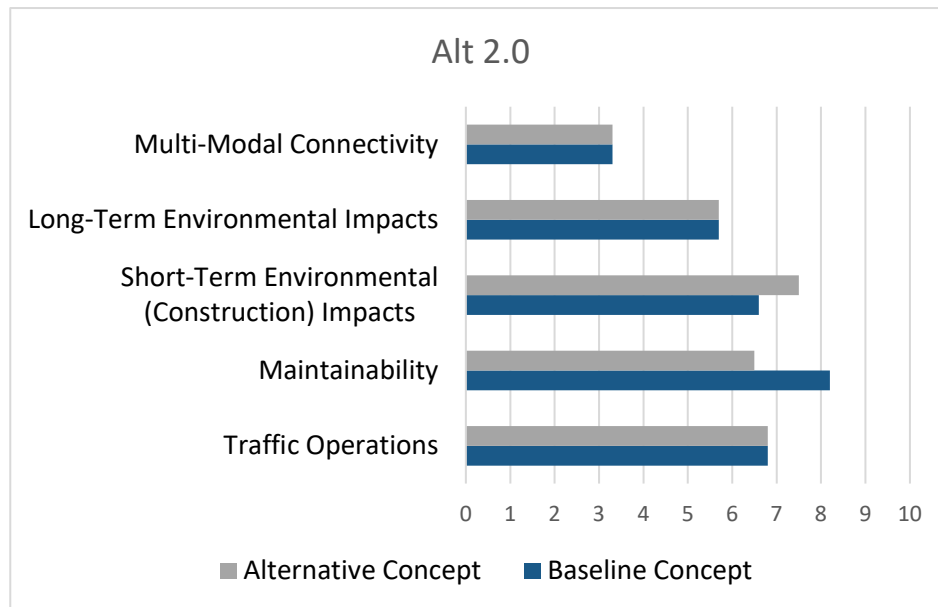


Figure 6. Alt 2.0—comparison of performance rating (weighted performance unchanged)

Performance Change Rationale

Objective	Rationale
Multi-Modal Connectivity	No change.
Long-Term Environmental Impacts	No significant change.
Construction Impacts	This alternative will improve construction impacts by reducing the duration of noise impacts.
Maintainability	This alternative will reduce maintainability by shortening service life to 5 years.
Traffic Operations	No significant change.

Baseline Concept Image

NOTES:

1. NO WORK SHALL BE ALLOWED ON BRIDGES, NOT COLDPLANE AND OVERLAY WILL BE PERFORMED ON LOCATIONS OF EXISTING CONCRETE PAVEMENT AND DRAINAGE INLET
2. PAVEMENT CLIMATE REGION: DESERT

STRUCTURAL SECTION:

1 COLD PLANE 0.20' AND OVERLAY WITH 0.20' RHMA-G

2 COLD PLANE 0.15' AND OVERLAY WITH 0.15' RHMA-G

ABBREVIATION:

RHMA-G RUBBERIZED HOT MIX ASPHALT-GAP GRADED

PROJECT	DATE	REVISION	TOTAL	DATE	BY	CHK'D
08 Riv 10	10	32.6/44.4	X	X		

REGISTERED CIVIL ENGINEER DATE

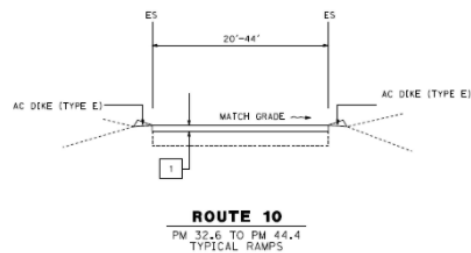
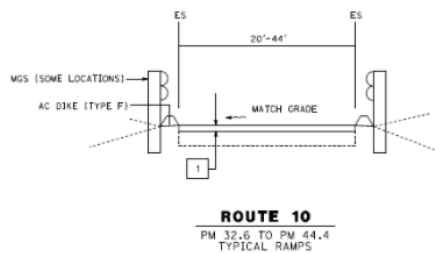
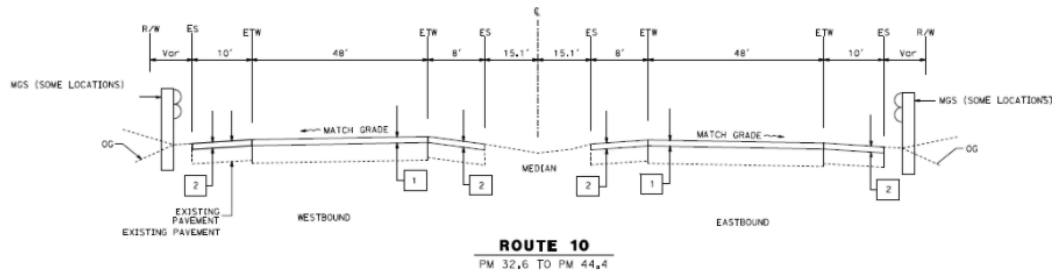
PLANS APPROVAL DATE

STATE OF CALIFORNIA DEPT. OF TRANSPORTATION

DATE OF EXAMINATION

NO. OF SHEETS

NO. OF SHEETS



TYPICAL CROSS SECTION
NO SCALE X-1

Figure 7. Alt. 2.0—baseline concept: 2) cold plane 0.15' and overlay 0.15' RHMA-G on shoulders

Alternative Concept Image

NOTES:

1. NO WORK SHALL BE ALLOWED ON BRIDGES, NOT COLDPLANE AND OVERLAY WILL BE PERFORMED ON LOCATIONS OF EXISTING CONCRETE PAVEMENT AND DRAINAGE INLET
2. PAVEMENT CLIMATE REGION: DESERT

STRUCTURAL SECTION:

- 1 COLD PLANE 0.20' AND OVERLAY WITH 0.20' RHMA-G
- 2 COLD PLANE 0.15' AND OVERLAY WITH 0.15' RHMA-G

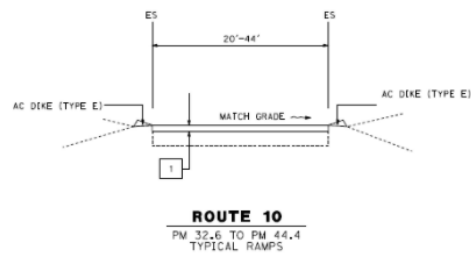
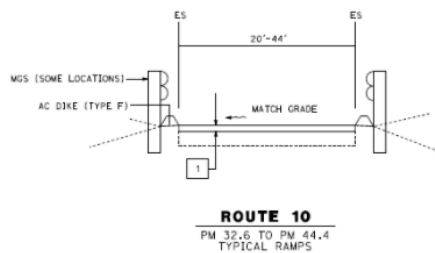
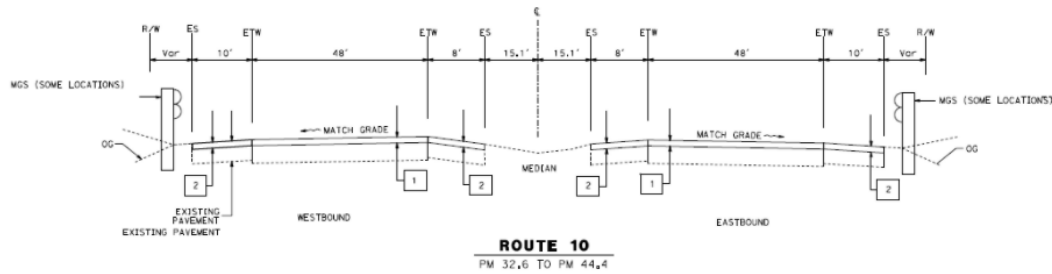
ABBREVIATION:

RHMA-G RUBBERIZED HOT MIX ASPHALT-GAP GRADED

PROJECT	DATE	REVISION	TOTAL PROJECT	NO. SHEETS
08 Riv 10	10	32.6/44.4	X	X

REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	

THE STATE OF CALIFORNIA OR ITS DEPTHS
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TYPICAL CROSS SECTION
NO SCALE **X-1**

Figure 8. Alt. 2.0—alternative concept: 2) cold plane 0.10' and overlay 0.10' RHMA-G on shoulders

Assumptions and Calculations

- 390137 - RHMA-G - 97,000 ton (\$80)
- 398200 - Cold plane - 944,200 SY (\$2.50)
- Estimate includes lane + shoulder. Need to isolate shoulders
- Reduce cost by 33% for savings

Initial Cost Estimate

CONSTRUCTION ELEMENT		BASELINE CONCEPT			ALTERNATIVE CONCEPT		
Description	Unit	Quantity	Cost/Unit	Total	Quantity	Cost/Unit	Total
ROADWAY ITEMS							
0.15' cold plane shoulders		253,440	\$3	\$861,696			\$0
0.15' RHMA-G overlay shoulders		24,805	\$141	\$3,497,505			\$0
0.10' cold plane shoulders			\$3	\$0	168,791	\$3	\$573,890
0.10' HMA overlay shoulders				\$0	16,520	\$120	\$1,982,416
				\$0			\$0
ROADWAY SUBTOTAL				\$4,359,201			\$2,556,305
ROADWAY MARK-UP	81.0%			\$3,532,620			\$2,071,585
ROADWAY TOTAL				\$7,891,821			\$4,627,890
TIME RELATED OVERHEAD (TRO) ITEMS							
Time Related Overhead	WD			\$0			\$0
TRO SUBTOTAL				\$0			\$0
TRO MARK-UP (Contingency and Escalation only)	39.9%			\$0			\$0
TRO TOTAL				\$0			\$0
R/W or OTHER MATERIALS and EXPENSES							
				\$0			\$0
R/W or OTHER SUBTOTAL				\$0			\$0
R/W or OTHER MARK-UP (Cont. and Esc. only)	11.0%			\$0			\$0
R/W or OTHER TOTAL				\$0			\$0
STRUCTURES ITEMS							
				\$0			\$0
STRUCTURES SUBTOTAL				\$0			\$0
STRUCTURES MARK-UP (Escalation only)	44.0%			\$0			\$0
STRUCTURES TOTAL				\$0			\$0
TOTAL				\$7,891,821			\$4,627,890
TOTAL (Rounded)				\$7,892,000			\$4,628,000
						SAVINGS	\$3,264,000

VA Alternative 3.0 (M-06)—Use recycled materials for base via CCPR method (DROPPED)

This alternative was dropped from further consideration by the VA team because asphalt concrete (AC) for the base material can only be recycled at the plant.

Initial Cost Savings:	Not calculated
Change in Schedule:	Not calculated
Performance Change:	Not calculated
Value Change:	Not calculated

Description of Baseline Concept

The baseline concept does not use recycled materials.

Description of Alternative Concept

The alternative concept proposes to use the cold-central-plant recycling (CCPR) method.

Advantages

- Design life is over 10 years.

Disadvantages

- Requires traffic detour.
- CCPR is better suited for conventional highway.

Discussion

Cold-central-plant recycling (CCPR) is a process where materials are milled to the required depth, transported to a nearby cold central plant, processed, and then transported back to the road. CCPR can be used for both partial and full-depth recycling.

CCPR may be a competitive alternative, if the baseline cold plane depth is 0.25' or deeper. A minimum depth of 0.25' is required to mix AC and additive efficiently. Also, the minimum depth is required to achieve proper compaction.

We would also need detour traffic for CCPR reconstruction. The worksite location will need to be considered for the CCPR equipment. Staging area is required for CCPR plant production.

I-10 has heavy truck traffic, and PDR (partial depth recycling) surface cannot open the lane until it is fully cured (may take 2–14 days). Temporary traffic will need to be considered.

CCPR can be more cost effective for reconstructing lanes.

CCPR is better suited for conventional highways with less truck traffic.

Project Management Considerations

A plant would need to be available and nearby to process.

Discussion of Schedule Impacts

This alternative may increase construction duration. The baseline construction schedule is 17 months. The alternative would require more closures for truck traffic. It is 15 minutes to the nearest plant one-way. Loading, processing, and unloading at the plant will take 2 hours.

Discussion of Risk Impacts

This alternative would not have a significant impact on overall project risk.

Alignment with Safe System Objectives

Increased Alignment: Δ No Change in Alignment: $\bigcirc$ Decreased Alignment ∇		
Objective	Effect	Rationale
Safe Road Users	$\bigcirc$	This VA alternative would not affect roadway user behavior.
Safe Vehicles	$\bigcirc$	This VA alternative would not affect vehicle safety performance.
Safe Speeds	$\bigcirc$	This VA alternative would not affect vehicle speed.
Safe Roads	$\bigcirc$	This VA alternative would not affect road safety.
Post-Crash Care	$\bigcirc$	This VA alternative would not affect pos-crash care.

Comparison of Performance

Because this alternative was dropped from consideration, performance was not rated.

Baseline Concept Image



Figure 9. Alt. 3.0—baseline concept: HMA overlay

Alternative Concept Image



Figure 10. Alt. 3.0—alternative concept: CCPR

Initial Cost Estimate

Because this alternative was dropped from consideration, its cost was not estimated.

VA Alternative 4.0 (ML-05)—Reduce mainline RHMA depth from 0.2' to 0.15'

Initial Cost Savings:	\$5,841,000
Change in Schedule:	0.65-month reduction
Performance Change:	- 2.6%
Value Change:	+ 1.1%

Description of Baseline Concept

The baseline concept is an RHMA depth of 0.2' on the mainline.

Description of Alternative Concept

The alternative concept proposes to reduce RHMA depth to 0.15' on the mainline.

Advantages

- The construction schedule may be accelerated via the reduction in work.
- The local community will experience fewer impacts from lane closures.

Disadvantages

- Service life may be reduced.
- Future cracking may occur earlier than expected with the smaller structural section.

Discussion

The main benefit of this alternative is that it would shorten the construction schedule.

The reduction in the depth will potentially reduce the number of working days, since there is less material to place. The faster schedule will have fewer impacts on the locals during construction of the project. For example, the duration of lane closures will be shorter than the baseline. Winter suspension will potentially not be a problem since the work schedule would be reduced.

The reduction meets the minimum depth requirement and reduces the cost and working days while still fulfilling the purpose and need of the project.

Project Management Considerations

This alternative will require coordination with the PDT to determine the feasibility of this approach.

The PDT would need to monitor the future pavement when it is closer to Phase 1 to analyze if the reduction in structural section is still feasible. Pavement conditions may be worse in the future.

Discussion of Schedule Impacts

This alternative represents a 0.65-month reduction in schedule, as it would reduce the amount of material needed to be placed. In the baseline, 1,750 tons of RHMA can be placed per 8-hour shift. At 89,718 tons, it would be 51 days. The alternative places 67,288 tons, resulting in 38 days (saving 13 workdays out of a 20-workday month).

Discussion of Risk Impacts

This alternative will not have a significant impact on reducing overall project risk. However, there may be a need to revert back to 0.20' or even deeper depending on the conditions of the future pavement

Alignment with Safe System Objectives

Increased Alignment: Δ No Change in Alignment: $\bigcirc$ Decreased Alignment ∇		
Objective	Effect	Rationale
Safe Road Users	$\bigcirc$	This VA alternative would not affect roadway user behavior.
Safe Vehicles	$\bigcirc$	This VA alternative would not affect vehicle safety performance.
Safe Speeds	$\bigcirc$	This VA alternative would not affect vehicle speed.
Safe Roads	$\bigcirc$	This VA alternative would not affect road safety.
Post-Crash Care	$\bigcirc$	This VA alternative would not affect pos-crash care.

Comparison of Performance

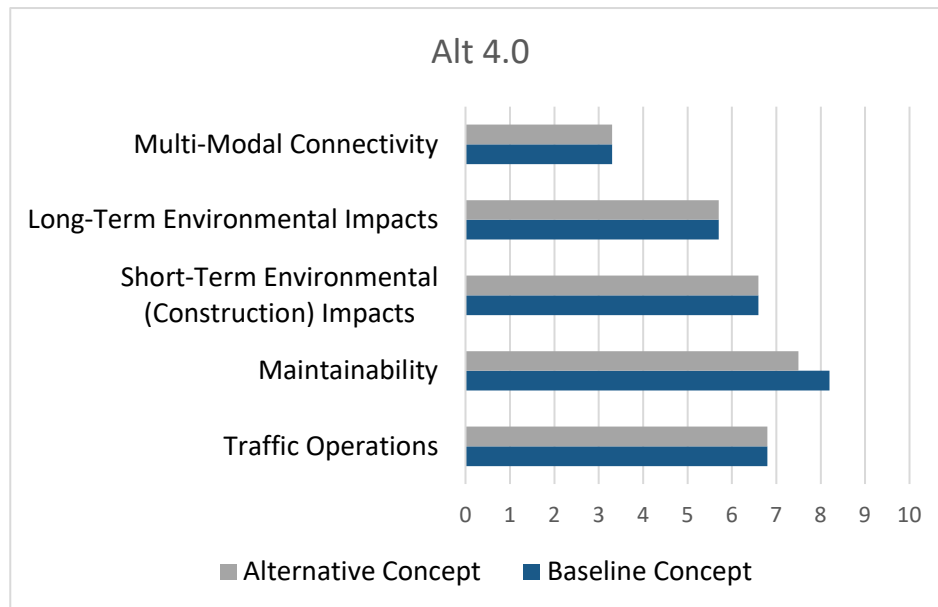


Figure 11. Alt 4.0—comparison of performance rating (weighted performance decreased 2.6%)

Performance Change Rationale

Objective	Rationale
Multi-Modal Connectivity	No significant change.
Long-Term Environmental Impacts	No significant change.
Construction Impacts	No significant change.
Maintainability	This alternative will reduce maintainability by shortening service life to 5 years.
Traffic Operations	No significant change.

Baseline Concept Image

NOTES:

1. NO WORK SHALL BE ALLOWED ON BRIDGES, NOT COLDPLANE AND OVERLAY WILL BE PERFORMED ON LOCATIONS OF EXISTING CONCRETE PAVEMENT AND DRAINAGE INLET
2. PAVEMENT CLIMATE REGION: DESERT

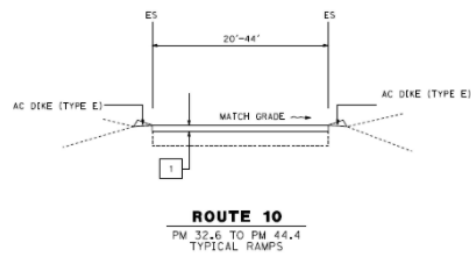
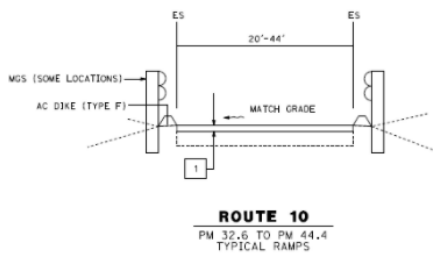
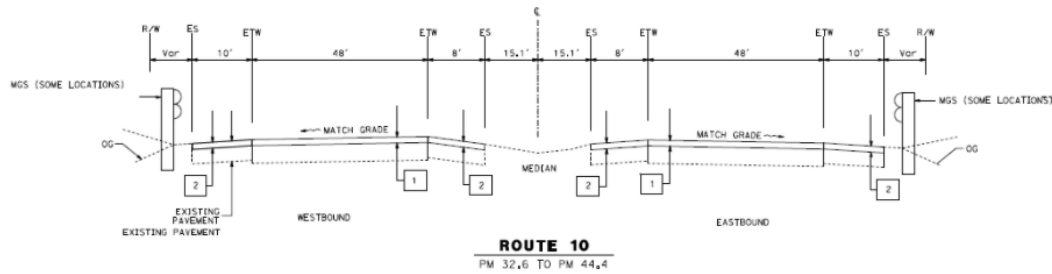
STRUCTURAL SECTION:

- 1 COLD PLANE 0.20" AND OVERLAY WITH 0.20" RHMA-G
- 2 COLD PLANE 0.20" AND OVERLAY WITH 0.20" RHMA-G

ABBREVIATION:

RHMA-G RUBBERIZED HOT MIX ASPHALT-GAP GRADED

PROJECT	DATE	REVISION	TOTAL PROJECT	NO. SHEETS
08 Riv 10	10	32.6/44.4	X	X
REGISTERED CIVIL ENGINEER DATE				
PLANS APPROVAL DATE				
THE STATE OF CALIFORNIA OR ITS DEPARTMENT OF TRANSPORTATION HAS REVIEWED THESE PLANS AND APPROVES THEM FOR CONSTRUCTION.				



TYPICAL CROSS SECTION
NO SCALE **X-1**

Figure 12. Alt. 4.0—baseline concept: RHMA depth of 0.2' on the mainline

Alternative Concept Image

NOTES:

1. NO WORK SHALL BE ALLOWED ON BRIDGES, NOT COLDPLANE AND OVERLAY WILL BE PERFORMED ON LOCATIONS OF EXISTING CONCRETE PAVEMENT AND DRAINAGE INLET
2. PAVEMENT CLIMATE REGION: DESERT

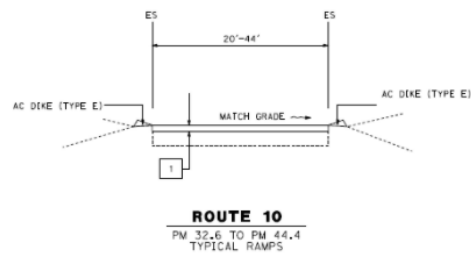
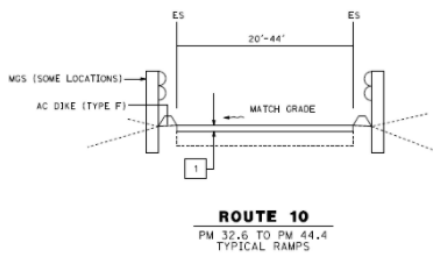
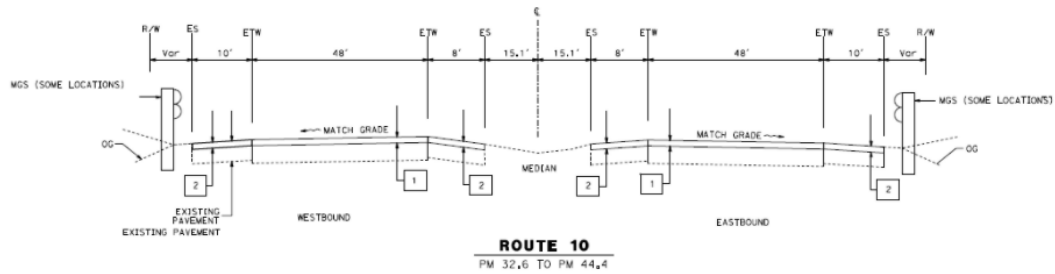
STRUCTURAL SECTION:

- 1 COLD PLANE 0.20' AND OVERLAY WITH 0.20' RHMA-G
- 2 COLD PLANE 0.15' AND OVERLAY WITH 0.15' RHMA-G

ABBREVIATION:

RHMA-G RUBBERIZED HOT MIX ASPHALT-GAP GRADED

PROJECT	08 RIV	10	TOTAL MILEAGE	32.6/44.4	NO. SHEETS	X	X
REGISTERED CIVIL ENGINEER	DATE						
PLANS APPROVAL DATE							
THE STATE OF CALIFORNIA OR ITS OFFICERS THE COUNTY OF SAN DIEGO COPIES OF THIS PLAN SHEET:							



TYPICAL CROSS SECTION
NO SCALE **X-1**

Figure 13. Alt. 4.0—alternative concept: RHMA depth of 0.15' on the mainline

Assumptions and Calculations

This alternative would have the following effects on cost:

- Difference between 0.15' and 0.20'
- Length of Project: 11.8 miles = 62,304 LF
Proposed Depth: 0.20' RHMA
Density = 150 lb./cubic foot (CF)
48' lanes width for one bound, total width for both bounds is 96'.
- Using 0.20' depth, 89,718 tons
- Using 0.15' depth, 67,289 tons
- Difference is 22,429 tons

Initial Cost Estimate

CONSTRUCTION ELEMENT		BASELINE CONCEPT			ALTERNATIVE CONCEPT		
Description	Unit	Quantity	Cost/Unit	Total	Quantity	Cost/Unit	Total
ROADWAY ITEMS							
0.2' RHMA mainline	TON	89,718	\$141	\$12,650,204			\$0
0.15' RHMA mainline	TON	0		\$0	67,288	\$141	\$9,487,653
				\$0			\$0
ROADWAY SUBTOTAL				\$12,650,204			\$9,487,653
ROADWAY MARK-UP	81.0%			\$10,251,505			\$7,688,628
ROADWAY TOTAL				\$22,901,709			\$17,176,282
TIME RELATED OVERHEAD (TRO) ITEMS							
Time Related Overhead	WD	210	\$6,378	\$1,339,380	197	\$6,378	\$1,256,466
TRO SUBTOTAL				\$1,339,380			\$1,256,466
TRO MARK-UP (Contingency and Escalation only)	39.9%			\$534,999			\$501,880
TRO TOTAL				\$1,874,379			\$1,758,346
R/W or OTHER MATERIALS and EXPENSES							
				\$0			\$0
R/W or OTHER SUBTOTAL				\$0			\$0
R/W or OTHER MARK-UP (Cont. and Esc. only)	11.0%			\$0			\$0
R/W or OTHER TOTAL				\$0			\$0
STRUCTURES ITEMS							
				\$0			\$0
STRUCTURES SUBTOTAL				\$0			\$0
STRUCTURES MARK-UP (Escalation only)	44.0%			\$0			\$0
STRUCTURES TOTAL				\$0			\$0
TOTAL				\$24,776,087			\$18,934,627
TOTAL (Rounded)				\$24,776,000			\$18,935,000
						SAVINGS	\$5,841,000

VA Alternative 5.0 (M-02)—Recycle asphalt concrete from base material using recycle train (DROPPED)

This alternative was dropped from consideration by the VA team due to cost impacts and the need to cold plane the HMA placed by the recycle train to meet the required pavement depth.

Initial Cost Savings:	(\$11,526,000)
Change in Schedule:	1.5-month increase
Performance Change:	Not calculated
Value Change:	Not calculated

Description of Baseline Concept

The baseline concept does not use recycled asphalt concrete (AC) materials.

Description of Alternative Concept

The alternative concept would use a continuous train operation for cold-in-place recycling (CIR) with 0.15' RHMA over 0.25' partial depth recycling (PDR).

Advantages

- Reduces environmental impact.
- Eliminates need to haul material, reducing greenhouse gas (GHG) emissions.
- Disposal of grindings is minimal.

Disadvantages

- Requires warmer temperatures.
- Only a few contractors have the equipment and skill to perform the work.
- Limited HMA placement depth (3.0" to 6.0").
- If cracks are deeper than 0.5', PDR cannot be used.

Discussion

The main benefit of this alternative is that it would reduce material disposal and GHG emissions.

However, train cold-planing and HMA replacement for this project would be significantly more expensive compared to the baseline and would require the additional steps of cold-planing 0.05' (500,000 square yards) of the HMA placed by the train and then placing a 0.15' RHMA cap over the HMA.

Partial-depth recycling (PDR) and full-depth recycling (FDR) are both types of cold-in-place recycling (CIR). Caltrans describes PDR as follows.

“PDR consists of recycling asphalt pavement without the application of heat. PDR is a pavement preservation and corrective maintenance technique that when combined with an asphalt overlay, can be classified as major or structural overlay rehabilitation. The PDR process commonly uses tanker trucks, cold-planing machines, crushing/screening or mixing chambers, mixers, pavers, and compaction rollers. PDR occurs within the roadway to be recycled and uses 100 percent of the RAP generated during the process. PDR treatment depths are generally 3 to 6 inches with good underlying support. Bituminous recycling agents are required and consist of foamed asphalt or emulsified asphalt. Chemical additives, such as cement, may be used in addition to the recycling agent to improve early strength gain and resistance to moisture induced damage. New aggregate may be added to improve the recycled mixture properties. There are different types of PDR equipment with varying configurations. PDR equipment differ from one another in how the RAP is removed and sized, how the recycling agents and additives are added, how they are mixed and controlled, and how the recycled mixture is placed. Advantages of PDR include

- Conservation of non-renewable resources
- Energy conservation compared to other maintenance/rehabilitation methods
- Surface irregularities are corrected
- A portion of existing cracks are removed and reflective cracking mitigated
- Base and subgrade materials are not disturbed with PDR during the construction process
- Pavement cross-slope and profile are improved
- Problems with existing aggregate gradation and/or asphalt binder can be corrected
- Reduced traffic disruptions and user inconvenience
- Reduced or no edge drop offs with PDR
- Cost savings compared to other maintenance/rehabilitation methods”

Caltrans describes some challenges with CIR as follows:

“CIR is best suited for moderate to low-volume roadways that are structurally sufficient. One of the shortcomings of CIR rehabilitation strategy is the reliance on very limited field investigation during project design. It is not uncommon to encounter inadequate structural section support during recycling process. On CIR projects, Caltrans specification requires that Intelligent Compaction is used to map the stiffness of the underlying material of the existing pavement in order to establish the baseline stiffness of the materials and to identify areas of

weak support. The stiffness of the material is depicted by Intelligent Compaction Measurement Value (ICMV). ICMV is a roller-dependent value that is calculated based on the displacement measured by the accelerometer. Upon identification of the weak location, the resident engineer may ask the contractor to core the pavement and subsequently repair the pavement.”

Compaction of CIR is achieved with combination of vibratory/static steel and pneumatic-rubber-tired roller. The maximum field density of the CIR is achieved following rolling pattern established at the test strip. Using intelligent compaction, the roller operator can monitor the number of passes that is required to achieve the density.

PDR minimizes the need for hauling in new materials and reduces waste. It includes a recycled plastic binder derived from high amounts of recycled, single-use plastic bottles. This process reduces greenhouse gas emissions, diverts plastic from landfills, and potentially lowers reliance on fossil fuels. It also eliminates the need for hauling materials in and out of the job site. Caltrans recently used this technology on a stretch of Highway 162, between the Feather River and Christian Avenue in Oroville.

During the typical construction season in the Palm Springs area (May through mid-October), the average low temperature does not drop below 50 degrees. Assuming a May 31, 2028, construction start with December 31, 2029, completion, this allows 10 months during which paving can be reliably completed. The PDR requires a smoothness test. If profile is altered, it may require grinding. The grindings can be used for shoulder backing. PDR is limited to 0.5' depth. If road conditions have cracks deeper than this at the time construction begins, PDR cannot be used. If conditions are fairly good and dig-outs are not required, 0.25' would suffice.

Additional information can be found at <https://etapnews.transportation.org/caltrans-repaves-road-with-completely-recycled-material/#:~:text=Caltrans%20Repaves%20Road%20with%20Completely%20Recycled%20Material%20%E2%80%93%20Environmental%20Technical%20Assistance%20Program%20Newsletter.&text=Using%20new%20technology%20developed%20by%20TechniSoil%20Industrial>.

Project Management Considerations

There are two companies in Southern California that perform this work, which could impact the start date. The large equipment and testing must be certified every 6 months. The PDT would need to review all the submittals.

Three years from now, the demand for this may be higher. Contractors consider the high capital cost of the equipment.

Discussion of Schedule Impacts

This alternative represents a negligible impact to the project schedule's critical path.

The baseline involves regular paving 1.8 miles per 8-hour shift (RHMA). At 144 lane miles, this will take 80 days. The alternative using PDR completes 1.6 miles per 8-hour shift. At 144 lane miles, this would take 90 days. Including a PDR cure time of 5 days, the total would be 95 days. Inspection and testing would be needed to verify compaction and smoothness. RHMA would be placed after the cure and simultaneously throughout the site.

Submittals regarding equipment will take additional time and cannot be completed simultaneously during construction. They must be approved prior to starting work.

The schedule impact is assumed to be a 2-week delay.

There is a possibility that contractor availability to perform the work could impact the schedule. Further, if equipment breaks down, it takes time to repair.

Discussion of Risk Impacts

This alternative will not have a significant impact on reducing overall project risk; however, the schedule risks described above are considerations.

Alignment with Safe System Objectives

Increased Alignment: Δ No Change in Alignment: $\bigcirc$ Decreased Alignment ∇		
Objective	Effect	Rationale
Safe Road Users	$\bigcirc$	This VA alternative would not affect roadway user behavior.
Safe Vehicles	$\bigcirc$	This VA alternative would not affect vehicle safety performance.
Safe Speeds	$\bigcirc$	This VA alternative would not affect vehicle speed.
Safe Roads	$\bigcirc$	This VA alternative would not affect road safety.
Post-Crash Care	$\bigcirc$	This VA alternative would not affect pos-crash care.

Comparison of Performance

Because this alternative was dropped from consideration, performance was not rated.

Baseline Concept Image



Figure 14. Alt. 5.0—baseline concept: mill and overlay

Alternative Concept Images



Figure 15. Alt. 5.0—alternative concept: single-unit recycle train

Assumptions and Calculations

This alternative would impact cost in the following ways:

- \$73,817/mile for PDR (material, labor, and equipment), traffic control same as baseline, if operations are kept near each other.
- Unit cost per mile of RHMA over the PDR varies significantly depending on the PDR depth, project location, and length of project.
- \$300,000 to \$400,000 per lane mile, approximately.
- This includes 0.25' CCPR + 0.15' RHMA-G capping surface course.

Initial Cost Estimate

CONSTRUCTION ELEMENT		BASELINE CONCEPT			ALTERNATIVE CONCEPT		
Description	Unit	Quantity	Cost/Unit	Total	Quantity	Cost/Unit	Total
ROADWAY ITEMS							
Mill and Overlay (Cold plane, includes hauling and disposal)	SY	944,200	\$3	\$3,210,280			\$0
Train Cold Plane PDR (minimul hauling and disposal) Grinds .25', then Lays down .15' HMA	Lane Mile			\$0	138	\$73,817	\$10,186,746
Cold plane the HMA placed by the train. <i>Because this is required and the overall cost is significantly greater, the idea was dropped.</i>	SY		\$0	\$0	500,000	\$3	\$1,700,000
RHMA (.15')	TON	108,918	\$141	\$15,357,438			\$0
HMA (.10')	TON	3,000	\$120	\$360,000			\$0
RHMA Cap On Top of the PDR Overlay (.15')	TON			\$0	95,088	\$141	\$13,407,340
				\$0			\$0
ROADWAY SUBTOTAL				\$18,927,718			\$25,294,086
ROADWAY MARK-UP	81.0%			\$15,338,692			\$20,497,886
ROADWAY TOTAL				\$34,266,410			\$45,791,972
TIME RELATED OVERHEAD (TRO) ITEMS							
Time Related Overhead	WD			\$0			\$0
TRO SUBTOTAL				\$0			\$0
TRO MARK-UP (Contingency and Escalation only)	39.9%			\$0			\$0
TRO TOTAL				\$0			\$0
R/W or OTHER MATERIALS and EXPENSES							
				\$0			\$0
R/W or OTHER SUBTOTAL				\$0			\$0
R/W or OTHER MARK-UP (Cont. and Esc. only)	11.0%			\$0			\$0
R/W or OTHER TOTAL				\$0			\$0
STRUCTURES ITEMS							
				\$0			\$0
STRUCTURES SUBTOTAL				\$0			\$0
STRUCTURES MARK-UP (Escalation only)	44.0%			\$0			\$0
STRUCTURES TOTAL				\$0			\$0
TOTAL				\$34,266,410			\$45,791,972
TOTAL (Rounded)				\$34,266,000			\$45,792,000
						SAVINGS	(\$11,526,000)

VA Alternative 6.0 (M-08)—On EB side, pave only Lanes 2 and 3 and slurry seal on Lanes 1 and 4

Initial Cost Savings:	\$12,267,000
Change in Schedule:	No change
Performance Change:	- 3.4%
Value Change:	+ 3.7%

Description of Baseline Concept

The baseline concept is to pave all four lanes.

Description of Alternative Concept

The alternative concept proposes to proceed with paving eastbound (EB) Lanes 2 and 3. Lanes 1 and 4 will undergo crack sealing, pending further inspection to evaluate pavement condition and the determination whether additional treatment is needed.

Advantages

- Limits construction costs.
- Shorter construction duration times.
- Will minimize lane closures/traffic disruptions.
- Less material is used, and construction activities may reduce environmental footprint.
- Allows the remaining lanes to be further evaluated to determine future needs.

Disadvantages

- If Lanes 1 and 4 are left as is, future repairs may be more costly due to further deterioration.
- Varying treatment methods could result in uneven surface performance and driver experience.
- Stakeholders may view this alternative as a compromise for long-term durability.
- Service life is 3 to 5 years.

Discussion

The main benefit of this alternative is that it would reduce cost.

This alternative offers a cost-effective approach that addresses the most critical pavement needs without overextending constraints related to cost, scope, and schedule. By focusing paving efforts on Lanes 2 and 3 where deterioration is most pronounced, the project ensures that the highest-risk areas

are improved first, enhancing safety and ride quality for the majority of users. At the same time, applying crack sealing on Lanes 1 and 4 preserves structural integrity, prevents further damage, and provides valuable time before more intensive repairs are needed. This approach reduces immediate construction impacts and minimizes disruptions to traffic. By adopting this alternative, the District maintains flexibility to reassess conditions, adjust future scopes as needed, and better manage budget and scheduling constraints. Ultimately, this approach delivers timely, targeted improvements while supporting long-term pavement performance.

Project Management Considerations

This alternative will require validation that the approach is fiscally responsible and aligned with best practices in pavement preservation. Further, it needs to reflect best practices relative to the specific pavement conditions along the roadway and consider truck traffic in Lane 4.

Ensure that crack sealing is sufficient to preserve these lanes in the short term. Identify any areas that may require spot repairs before being deferred.

Discussion of Schedule Impacts

The alternative would improve the current project timeline but should not have a significant impact on the schedule.

Discussion of Risk Impacts

This alternative may have an impact on increasing overall project risk.

Portions of Lane 4, and possibly Lane 1, may already have structural damage similar to Lanes 2 and 3. Crack sealing may be insufficient to prevent worsening conditions.

Alignment with Safe System Objectives

Increased Alignment: Δ No Change in Alignment: $\bigcirc$ Decreased Alignment ∇		
Objective	Effect	Rationale
Safe Road Users	$\bigcirc$	This VA alternative would not affect roadway user behavior.
Safe Vehicles	$\bigcirc$	This VA alternative would not affect vehicle safety performance.
Safe Speeds	$\bigcirc$	This VA alternative would not affect vehicle speed.
Safe Roads	$\bigcirc$	This VA alternative would not affect road safety.
Post-Crash Care	$\bigcirc$	This VA alternative would not affect post-crash care.

Comparison of Performance

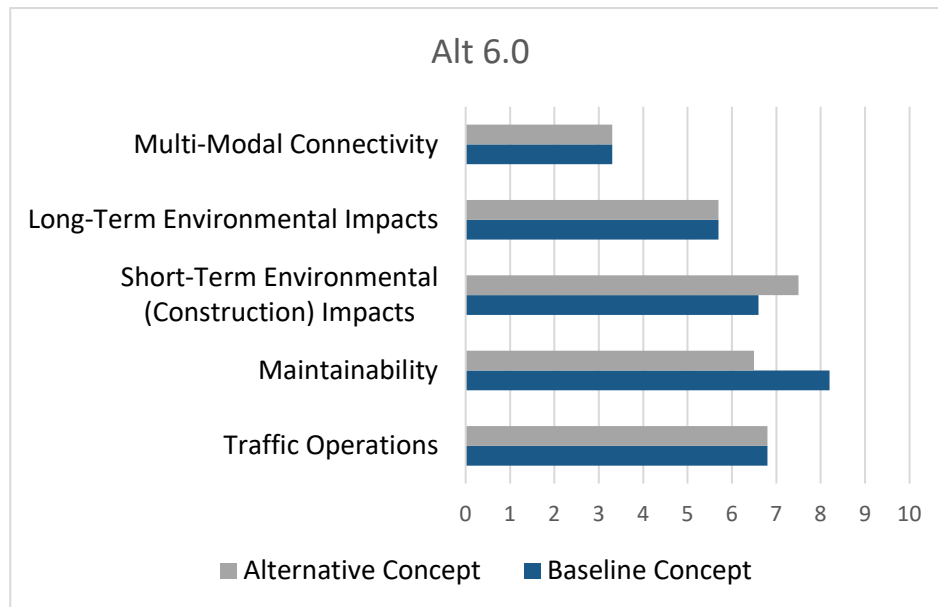


Figure 16. Alt 6.0—comparison of performance rating (weighted performance decreased 3.4%)

Performance Change Rationale

Objective	Rationale
Multi-Modal Connectivity	No significant change.
Long-Term Environmental Impacts	No significant change.
Construction Impacts	This alternative will improve construction impacts by reducing impacts of construction closures.
Maintainability	This alternative will reduce maintainability by reducing service life to 3 to 5 years, which is below the minimum requirement.
Traffic Operations	No significant change.

Baseline Concept Image



Figure 17. Alt. 6.0—baseline concept: sample image of roadway conditions (not representative of entire roadway)

Alternative Concept Image



Figure 18. Alt. 6.0—alternative concept: pave only Lanes 2 and 3

Initial Cost Estimate

CONSTRUCTION ELEMENT		BASELINE CONCEPT			ALTERNATIVE CONCEPT		
Description	Unit	Quantity	Cost/Unit	Total	Quantity	Cost/Unit	Total
ROADWAY ITEMS							
RHMA (0.2 to .15') Mainline	TON	108,918	\$141	\$15,357,438	63,085	\$141	\$8,894,950
Cold plane Mainline	TON	690,760	\$3	\$2,348,584	518,070	\$3	\$1,761,438
Slurry Seal Rough Estimate (Lanes 1 and 4)	TON			\$0	1,287	\$213	\$274,066
				\$0			\$0
ROADWAY SUBTOTAL				\$17,706,022			\$10,930,454
ROADWAY MARK-UP	81.0%			\$14,348,651			\$8,857,849
ROADWAY TOTAL				\$32,054,673			\$19,788,303
TIME RELATED OVERHEAD (TRO) ITEMS							
Time Related Overhead	WD			\$0			\$0
TRO SUBTOTAL				\$0			\$0
TRO MARK-UP (Contingency and Escalation only)	39.9%			\$0			\$0
TRO TOTAL				\$0			\$0
R/W or OTHER MATERIALS and EXPENSES							
				\$0			\$0
R/W or OTHER SUBTOTAL				\$0			\$0
R/W or OTHER MARK-UP (Cont. and Esc. only)	11.0%			\$0			\$0
R/W or OTHER TOTAL				\$0			\$0
STRUCTURES ITEMS							
				\$0			\$0
				\$0			\$0
				\$0			\$0
STRUCTURES SUBTOTAL				\$0			\$0
STRUCTURES MARK-UP (Escalation only)	44.0%			\$0			\$0
STRUCTURES TOTAL				\$0			\$0
TOTAL				\$32,054,673			\$19,788,303
TOTAL (Rounded)				\$32,055,000			\$19,788,000
						SAVINGS	\$12,267,000

Detailed Design Suggestion (M-01)—Use mumble strips (sinusoidal stripping) instead of rumble strips

This alternative was proposed and accepted on the 05-1M310 Guadalupe Active Partnership for Signalization and CAPM to Santa Maria (GAPS-CAPM) VA study held September 16–19, 2024. In that case, it had a minor cost savings of \$66,000, no schedule impact, and a 16.8% improvement in performance on the 9.33-mile project for the two-lane highway, with an escalated total project cost of \$41,194,000.

It is included here as a detailed design suggestion for District 8 to consider because it is an option being used in other Caltrans districts.

Initial Cost Savings:	Not calculated
Change in Schedule:	No change expected
Performance Change:	Not rated
Value Change:	Not rated

Description of Baseline Concept

The baseline concept is to mill traditional rumble strips as a roadway lane departure countermeasure.

Description of Alternative Concept

The alternative concept proposes to use a mumble/sinusoidal stripping pattern.

Advantages

- Reduces noise.
- Improves long-term durability.
- Increases safety by better reducing roadway lane departures.
- Fosters positive relationships with neighborhood communities.

Disadvantages

- None noted.

Discussion

The main benefit of this alternative is to meet safe road objectives with an improved, less expensive approach. It would also reduce noise, potentially engendering good will in communities.

The lifesaving benefits of rumble strips are well established, but the traditional rumble strips that are rectangular in shape produce external noise. In addition to this, the grinding process for the traditional rumble strips results in removing a considerable amount of pavement material. This can

lead to early maintenance and lowering the long-term performance of the pavement. Installing sinusoidal rumble strips, also known as mumble strips, would improve the performance and reduce the noise issues associated with rumble strips. One of the advantages of this type of lane departure countermeasure is that they are continuous over the pavement median, which can increase the safety on two-lane highways. In addition, as a lower depth of material is dug from the pavement, this would help the pavement last longer with relatively reduced maintenance.

During the 08-1M360 RIV 10 CAPM VA study, the VA team indicated that mumble strips have rarely been used in District 8 and expressed concerns that heavy-truck (tractor-trailer) drivers may rely on the noise generated by traditional rumble strips to alert them. The VA team chose to focus on other VA alternatives for the project.

Caltrans' Technical Report No. CTHWANP-RT-18-365.01.2, Design and Acoustic Evaluation of Optimal Sinusoidal Mumble Strips versus Conventional Ground-In Rumble Strips, April 2018, includes the following discussion.

“The results of all of these measurements indicated that, compared with conventional warning devices, mumble strips reduced the overall A-weighted exterior noise levels by more than 6 decibels (dB) for four different types of passenger vehicles. For the fifth vehicle, a medium duty, 4-yard dump truck, the reduction with the mumble strips was slightly more than 3 dB compared with the ground rumble strips.

In general, the interior disturbance levels created by the mumble strips were comparable to those generated by the ground rumble strips. For the passenger vehicles, the differences in interior noise, and seat track and steering column vibration were about 13 dB during travel on either the mumble strips or ground rumble strips compared with travel off the warning strips. For the truck, these differences were lower, although the steering column vibration was 7.2 dB greater during travel on the mumble strips compared with travel off the mumble strips, which was greater than the difference measured for the ground rumble strips. Subjectively, it was observed that the noise and vibration generated by both types of warning devices were adequate to alert vehicle operators and occupants.”

It is important to note that the study of mumble strips and their performance is ongoing.

Project Management Considerations

This alternative would have no apparent impact on project management.

Discussion of Schedule Impacts

This alternative would have no impact on the project schedule.

Discussion of Risk Impacts

This alternative would reduce road safety risk by improving drivers' alertness better than traditional rumble strips.

Alignment with Safe System Objectives

Increased Alignment: Δ No Change in Alignment: $\bigcirc$ Decreased Alignment ∇		
Objective	Effect	Rationale
Safe Road Users	$\bigcirc$	This VA alternative would not affect roadway user behavior.
Safe Vehicles	$\bigcirc$	This VA alternative would not affect vehicle safety performance.
Safe Speeds	$\bigcirc$	This VA alternative would not affect vehicle speed.
Safe Roads	Δ	This VA alternative features an improvement over rumble strips by providing continuous roadway departure countermeasures over the entire length of the pavement. It increases the alertness of the drivers if traveling into other lanes.
Post-Crash Care	$\bigcirc$	This VA alternative would not affect post-crash care.

Performance Change Rationale

Objective	Rationale
Multi-Modal Connectivity	No significant change.
Long-Term Environmental Impacts	This alternative would improve long-term environmental impacts by reducing the noise and decreasing the frequency of maintenance, reducing GHG emissions.
Construction Impacts	This alternative would improve construction impacts by lessening the need for additional treatment, such as applying fog seals and tack coats on the rumble strips over 27 miles (shoulders and median).
Maintainability	This alternative would improve maintainability by reducing cracking along the rumble strips and joints.
Traffic Operations	This alternative would improve traffic operations by mitigating weaving movements.

Baseline Concept Image



Figure 19. Other Design Consideration (M-01)—baseline concept: traditional rumble strips

Alternative Concept Images



Figure 20. Other Design Consideration (M-01)—alternative concept: mumble strips (close-up view)



Figure 21. Other Design Consideration (M-01) —alternative concept: mumble strips (vehicle view)

Assumptions and Calculations

- This alternative would reduce the cost per milled unit by \$28.

PROJECT INFORMATION

BACKGROUND

This project proposes to extend pavement service life of mainline and shoulders by cold planning existing pavement and overlay with rubberized asphalt concrete. The project also includes replacing shoulder rumble strips, improve or upgrade culverts, upgrading existing guardrails to MGS, upgrading TMS and RMS, upgrading striping to enhanced wet night visibility at crosswalks, marking Class II bike lanes with green conflict paint, installing a flashing beacon to improve pedestrian and bicycle facilities, and installing rock blankets to improve roadside safety. Other hydraulic work includes installing twelve check dams, six sediment basins and other trash capture devices.

The purpose of this project is to maintain existing pavement in good condition before more expensive rehabilitation is required, extend the life of the facility, improve the ride quality, and upgrade other highway appurtenances and facilities that are worn out or functionally obsolete. Caltrans' purpose of a CAPM project is to extend facility life by 5–10 years.

PROJECT DESCRIPTION

During the June 2, 2025, presentation of the project by the PDT on the first day of the VA study, the scope of the project was updated as follows. This scope is reflected in May 14, 2025 estimate and subject to change.

- Cold plane 0.20' and overlay 0.20' RHMA-G mainlines, cold plane 0.15' and overlay 0.15' RHMA-G on shoulders (5- to 10-year service life).
- Replace shoulder rumble strips. Need to pave shoulder and mainline separately—current baseline is same material at same time.
- Replace two culverts at PM 39.87 and PM 43.27 and modify inlet and outlet for one culvert at PM 44.31 (original scope: replace one).
- Update ADA curb ramps: 17—might change due to damage or going out of compliance.
- Upgrade existing guardrails to MGS—approximately 50 replacements.
- Upgrade traffic signals and ramp meters.
- Upgrade traffic striping to thermoplastic enhanced wet night visibility striping, green conflict painting and install one activated flashing beacon at crosswalks and bicycle facilities.
- Install rock blankets at gore areas to improve worker safety.
- Stormwater mitigations, which include 12 check dams, six sediment basins, and trash capture devices. Erosion control measures including RSP at two locations, concrete apron at one location,

and slope paving at one location. Now: sedimentation basins are still included but might not be included if conditions warrant. Those areas get a lot of wind-transported material. May have to rehabilitate those areas.

- Planting areas: the area has been identified as of June 2, 2025.

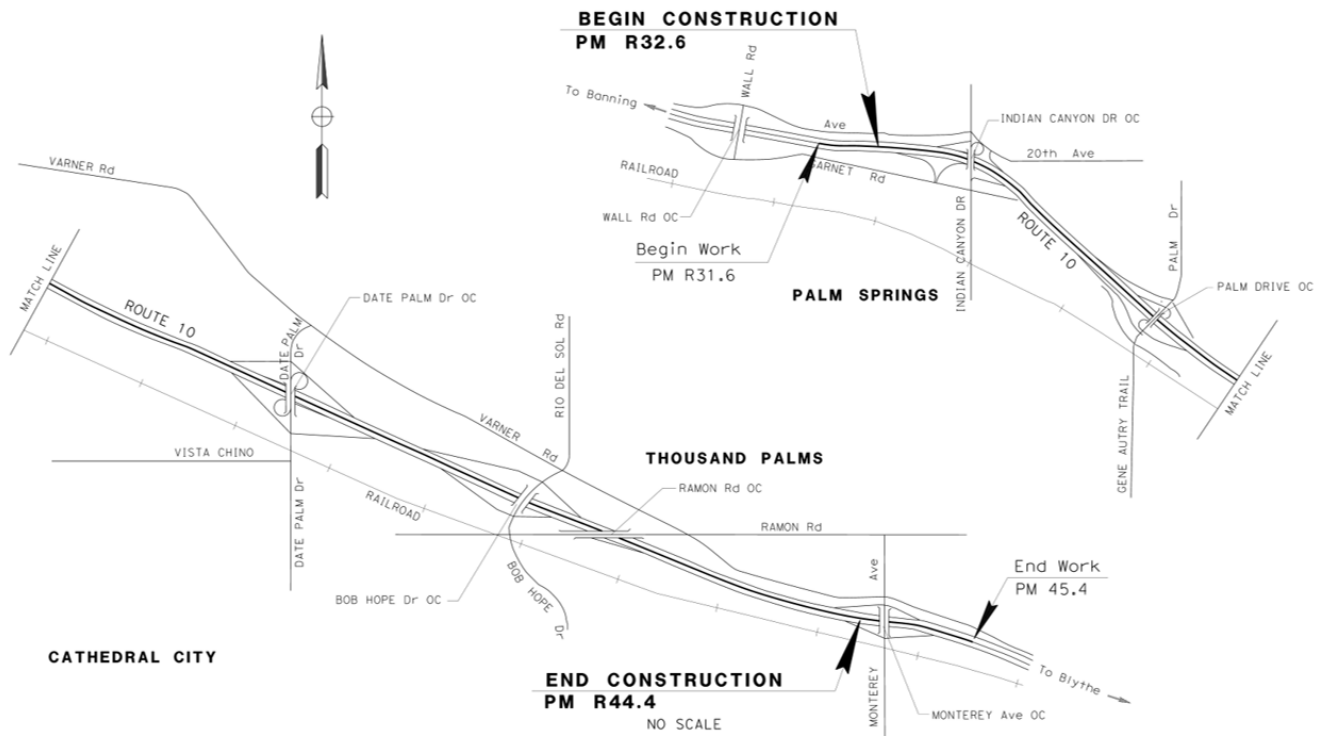


Figure 22. Project limits

PROJECT DESIGN EXCEPTIONS

At the time of the study, no mandatory or advisory design exceptions were noted.

INFORMATION PROVIDED TO THE VA TEAM

The following project documents were provided to the VA team for their use during the study:

- **Draft Project Report for Authorization to Circulate Draft Environmental Document, Route 10, Between 0.5 mile West of Indian Avenue and 0.1 mile West of Monterey Avenue—DPR—**Caltrans District 8—(Incomplete; Estimated Date May 2025)
- **Project Initiation Report to Request Programming in the 2024 SHOPP, Interstate 10, Between 0.53 mile West of Indian Avenue Overcrossing (PM 32.6) and 0.10 mile West of Monterey Avenue Overcrossing (PM 44.4)—PIR—**Caltrans District 8—May 9, 2022
- **Project Planning Cost Estimate, EA 08-1M360, PID 0821000109—Cost Estimate—**Caltrans District 8—May 14, 2025
- **Materials Recommendation Memorandum from Sittampalam Sathiskumar, Office Chief, Materials Engineering, Division of Design to Mutapha Raouf, Office Chief Design A—**Memorandum—Caltrans Division of Design—February 18, 2025

PROJECT DRAWINGS

The project team provided preliminary project layouts and cross-sections for the VA team during the VA study. The project location and the typical cross-section drawings will be included in the forthcoming project report when applicable and are available from the PDT upon request.

The following pages contain images used for discussions during the PDT's presentation of the project on the first day of the VA study.



Figure 23. Aerial image of PM 34.0 to PM 40.0

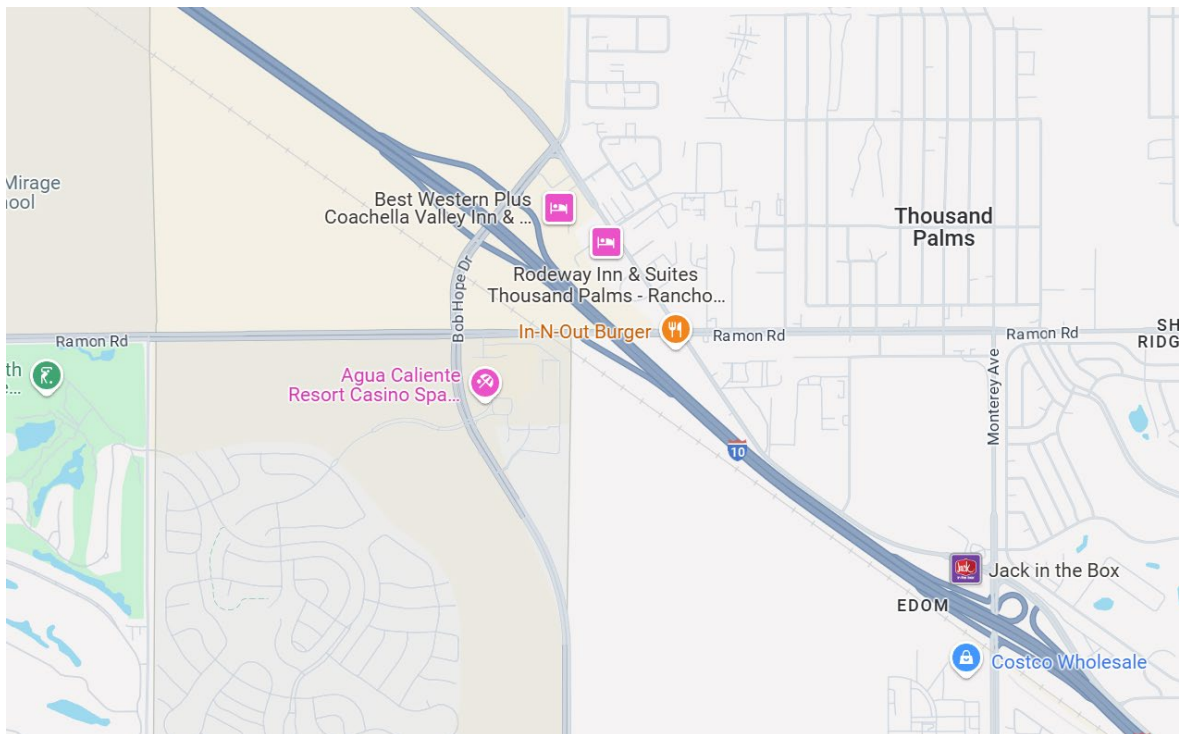


Figure 24. Bing Maps image of Thousand Palms area of project limits



Figure 25. Area to be landscaped



Figure 26. California Highway Patrol (CHP) turnaround

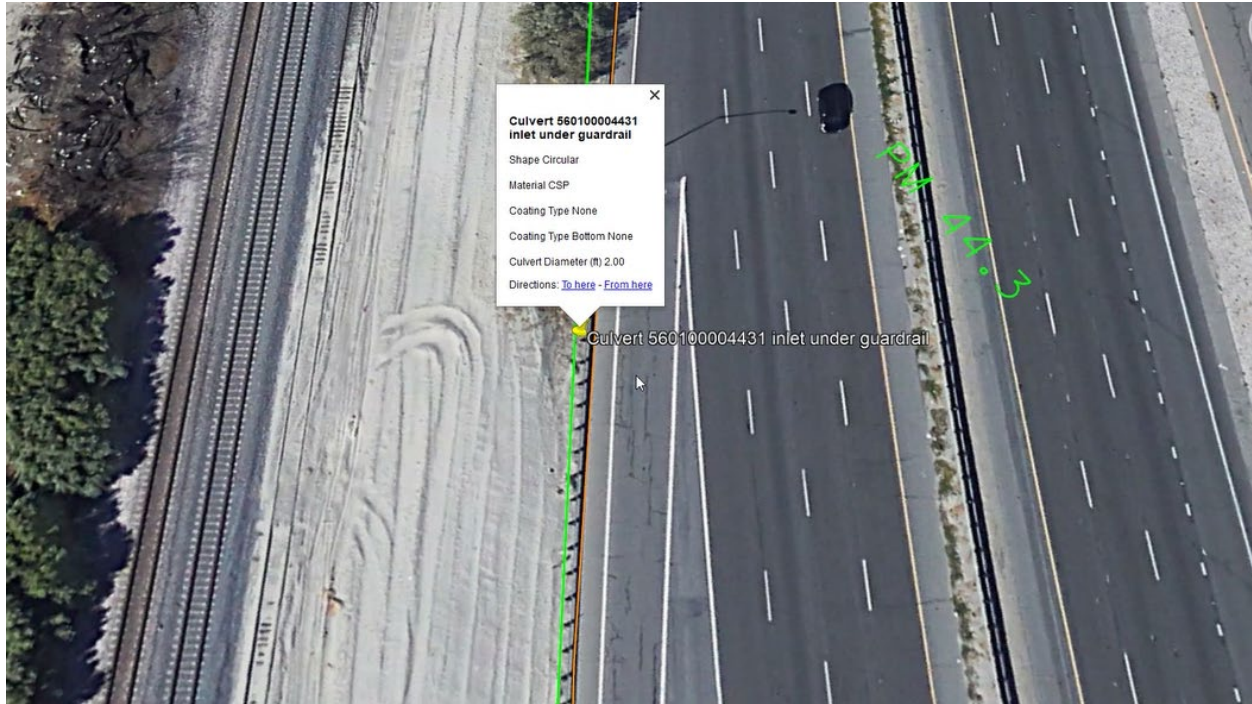


Figure 27. Limited Caltrans right-of-way

PROJECT COST ESTIMATE

The VA study used the most current cost estimate for the project dated May 14, 2025. This estimate reflects the preferred design option at the time of the study and details the fully supported and escalated total project cost of \$70,500,000, including a total escalated capital outlay cost of \$59,925,000.

As indicated during the June 4, 2025, meeting that presented the results of the VA study, the total escalated programmed amount for the project is \$52,475,000.

PROJECT ANALYSIS

SUMMARY OF ANALYSIS

The following analysis tools were used to study the project:

- Key Project Factors
- Cost Model
- Function Analysis
- Value Metrics

KEY PROJECT FACTORS

The first day of the VA study included meetings with the project stakeholders. The following summarizes key project issues and site visit observations identified during these sessions.

Project Issues

The following are some of the issues and concerns associated with the project:

Project Budget

As indicated during the June 4, 2025, meeting that presented the results of the VA study, the Total Escalated PA for the project was \$52,475,000 and the Total Escalated Capital Outlay Cost was estimated at \$59,925,000, also indicated in the May 14, 2025 estimate.

Environmental Impacts

Environmental impacts are not a significant concern on the project.

Construction Staging

There are many areas within the project limits that can be used for construction staging.

Constraints

Constraints center on meeting the needs of the community in terms of impacts to traffic, particularly during commute timeframes.

Risks

Project Budget—The project is currently estimated to be 14.2% over budget. The project will need to identify several cost-saving options, and/or District 8 may need to fund the additional cost.

Risk Register—The April 2022 risk register included in the Project Initiation Report lists no risks rated above moderate. The listed risks center on a sediment basin that may impact utilities. The *Draft Project Report* does not include an updated risk register. During the VA study, a high risk of flooding during storm events was also identified.

Site Visit Observations

A virtual site visit was conducted by the VA study team using Google Earth and Caltrans proprietary software, etc. order to visually assess the project’s site conditions and to provide context to all project design components. Through this effort and through the use of several project plan sheets, the VA team was able to more accurately understand the constraints, challenges, and issues relating to the project.

COST MODELS AND PARETO CHARTS

The VA team leader prepared cost models from the cost estimate presented in the project report. The models is/are based on the updated project cost estimate dated May 15, 2025, which was made available during the VA study and is organized to identify major construction elements or trade categories, the original estimated costs, and the percent of total project cost for the significant cost items. The cost model(s) and Pareto chart(s) on the following pages provide a concise perspective of where major cost items reside within the project cost estimate.

Overall Project Cost Model

Element	Cost	% Total	Cumul.
01. Earthwork	\$ 15,000	0%	0%
04. Specialty Items	\$ 1,050,400	2%	2%
03. Drainage	\$ 1,166,800	2%	5%
11. State-Furnished	\$ 1,325,700	3%	7%
12. TRO	\$ 1,339,380	3%	10%
10. Supplemental Work	\$ 1,781,300	4%	14%
08. Minor Items	\$ 2,750,100	6%	20%
06. Traffic Items	\$ 2,985,800	6%	26%
09. Mobilization	\$ 3,248,100	7%	32%
05. Environmental	\$ 4,837,200	10%	43%
13. Roadway Contingency	\$ 8,035,000	17%	59%
02. Pavement Structural	\$ 19,674,900	41%	100%

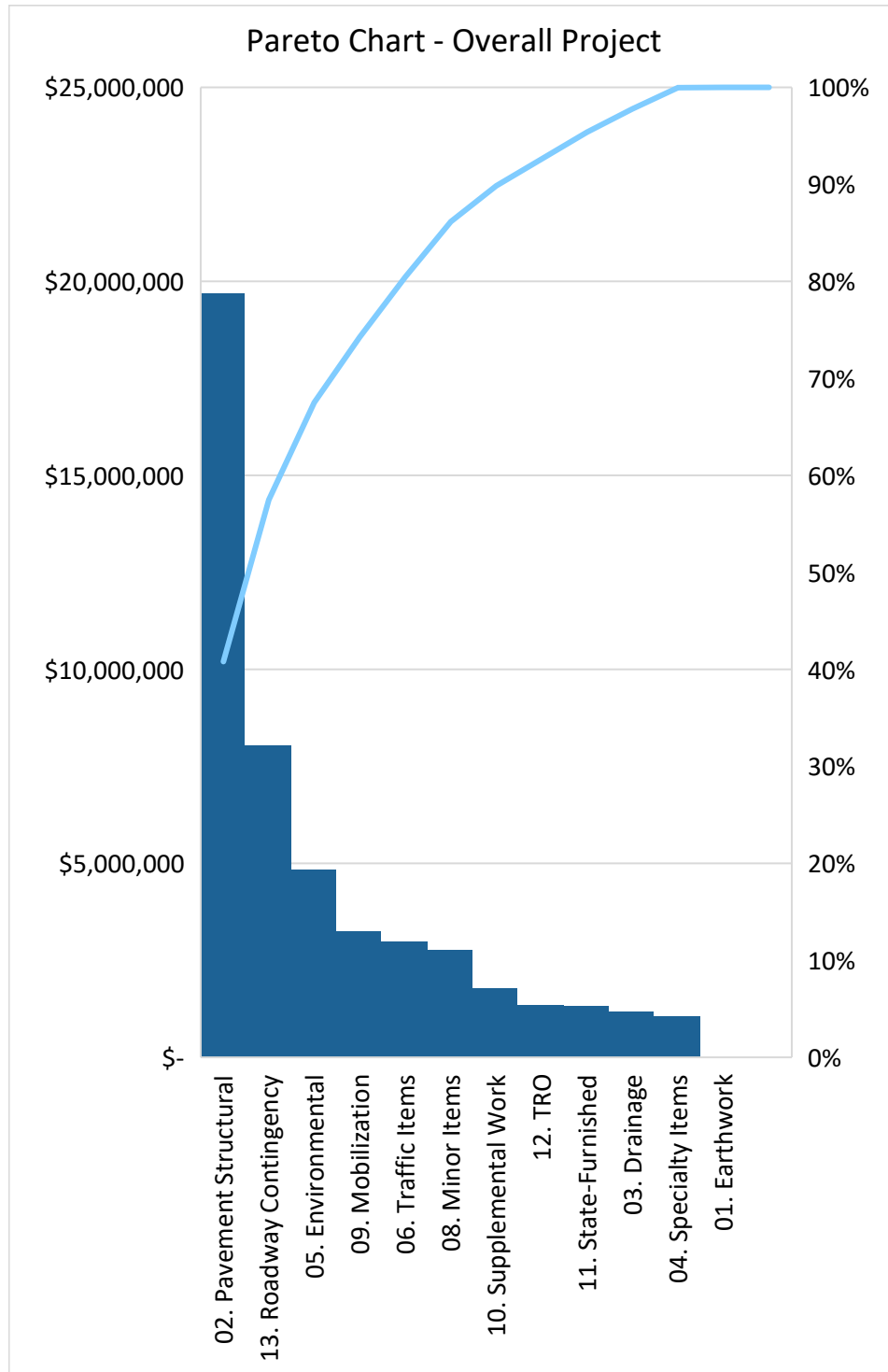


Figure 28. Overall project Pareto Chart

Pavement Structural Cost Model

Element	Cost	% Total	Cumul.
Asphaltic Emulsion (Fog Seal)	\$ 11,200	0%	0%
Pedestrian Barricade	\$ 12,000	0%	0%
Remove Concrete (Curb, Gutter, Sidewalk)	\$ 38,136	0%	0%
Place Hot Mix Asphalt Dike (Type C)	\$ 52,000	0%	1%
Remove Asphalt Concrete Dike	\$ 54,600	0%	1%
Concrete Barrier Transition	\$ 86,925	0%	1%
Minor Concrete (Curb, Sidewalk, Curb Ramp)	\$ 144,732	1%	2%
12" Rumble Strip (AC Pavement)	\$ 163,500	1%	3%
Tack Coat	\$ 184,000	1%	4%
HMA (Type A)	\$ 360,000	2%	6%
Cold-Plane Asphalt Concrete Pavement	\$ 3,210,280	16%	22%
RHMA (Gap Graded)	\$ 15,357,438	78%	100%

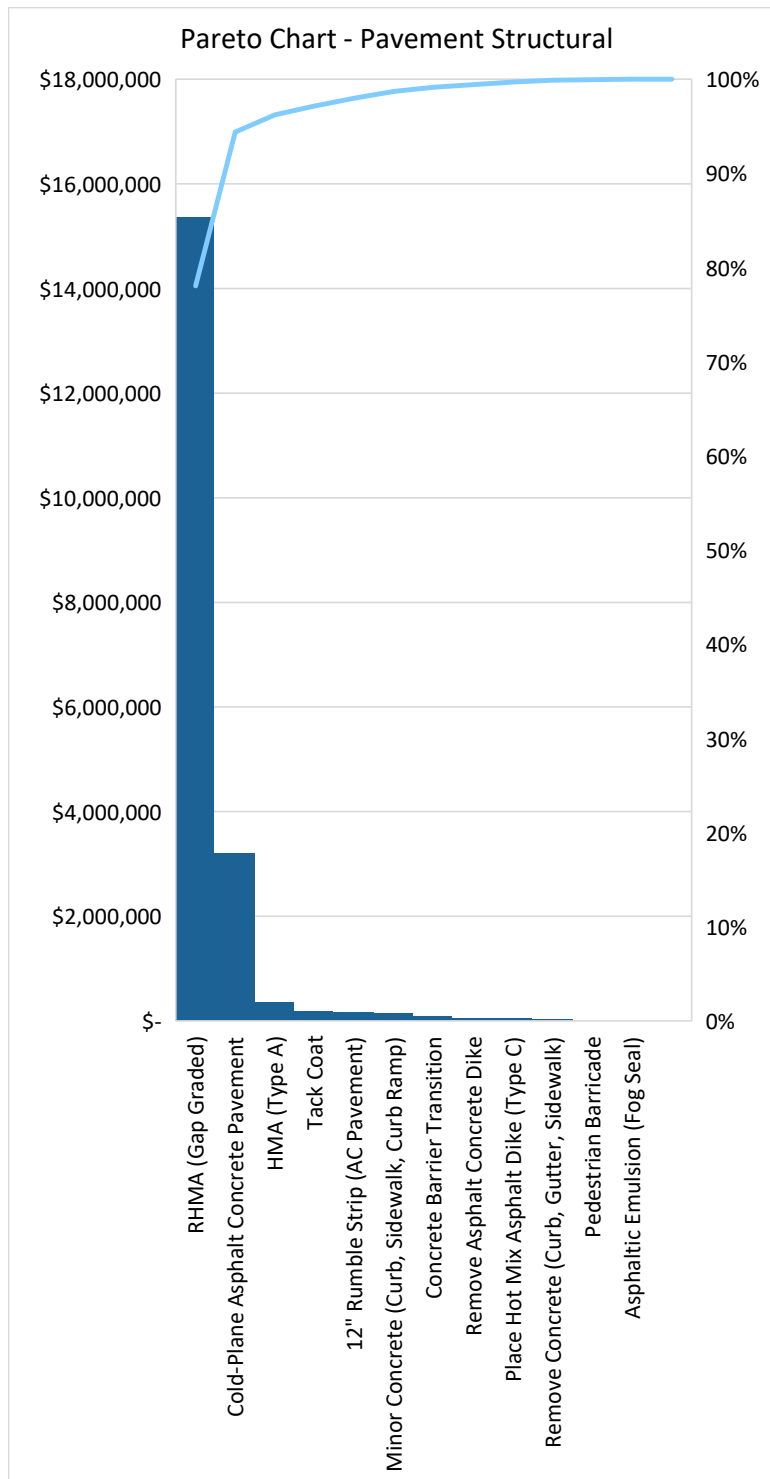


Figure 29. Pavement structural Pareto Chart

Cost Estimate and VA Alternative Mark-Ups

For VA alternative development, additional percentage-based cumulative mark-ups not included in the initial cost of construction are reflected within the total project estimate. These mark-ups include 9% for Minor Items, 10% for Mobilization, 5% for Supplemental Work, 5% for State Furnished Materials and Expenses, 20% for Roadway Contingency, and 18.3% for escalation. The mark-up for each initial construction cost items cumulatively amounts to 81.0% for roadway construction items. This mark-up total was used for the purpose of developing initial construction costs for analyzing individual VA alternatives.

FUNCTION ANALYSIS

Random Function Identification

Random function identification was used to identify specific project elements and their associated functions, as indicated in the table below.

Project Element	Function
Project Need	Preserve Roadway
Project Purpose	Extend Service Life Improve Pavement Condition
Design	Improve Smoothness Improve Rideability Enhance Safety Optimize Maintenance Meet Standards
Project Management	Maintain Operations/LOS Maintain Access Meet Schedule Mitigate Risk Reduce Construction Impacts
Construction	Stage Construction Remove Existing Prepare Site
1. Earthwork	Contour Site
2. Pavement Structural Section Materials	Protect Roadway Increase Longevity

Project Element	Function
	Minimize Maintenance
3. Drainage/Hydraulics	Channelize Water
4. Specialty Items Guard Rail	Deflect Vehicles
5A. Environmental Mitigation	Protect Environment
5B. Landscaping	Resist Erosion
6B. Traffic Signing and Striping	Delineate Space Improve Accessibility

The VA study team concluded that the Higher-Order function of the project is to *Preserve Roadway* through the Basic functions of *Extend Service Life and Improve Pavement Condition*. Key secondary functions include *Protect Roadway, Increase Longevity, and Minimize Maintenance*. Essential requirements [Design Objectives, One-Time (project management), and All-the-Time functions] included *Meet Schedule, Improve Smoothness, Improve Rideability, Enhance Safety, Optimize Maintenance, and Meet Standards*.

A Function Analysis System Technique (FAST) diagram was not prepared for the VA Study.

VALUE METRICS

Value Metrics provides a systematic and structured means of considering the relationship of a project's performance, cost, time (schedule), and risk as they relate to value. Project performance must be properly defined and agreed upon by the stakeholders at the beginning of the VA study. The basic equation for value is:

$$Value = \frac{Performance}{Cost + Time}$$

The performance attributes and requirements developed are then used throughout the study to identify, evaluate, and document changes to performance and value. OptionLab® was used to facilitate Value Metrics during the VA Study.

The following pages describe the steps in the Value Metrics process.

Defined Performance Requirements

Performance requirements represent essential, non-discretionary aspects of project performance. Any concept that fails to meet the project's performance requirements, regardless of whether it was developed during the project's design process or during the VA study, cannot be considered as a viable solution. Concepts that do not meet a performance requirement cannot be considered further unless such shortcomings are addressed through the VA study process in the form of VA alternatives. It should be noted that in some cases, a performance requirement may also represent the minimum acceptable level of a performance attribute. The following performance requirements, as defined below, were selected for this project.

Performance Requirement	Definition																
Highway Design Standards	Any deviation from the Caltrans' Highway Design Manual must be approvable by the District's Design Reviewer.																
Structural Design Standards	Any structure on the project must comply with current seismic design standards and meet the Load Resistance Design Factor.																
Environmental Review Process	Any concept or design modification considered must comply with state and federal environmental law and be compatible with the environmental review process.																
Project Milestones	Several critical schedule milestones must be met in order to meet legislative and/or funding requirements. <table> <tr> <td>PA&ED</td><td>May 1, 2026</td></tr> <tr> <td>VA Study</td><td>June 2–4, 2025</td></tr> <tr> <td>PS&E</td><td>May 3, 2027</td></tr> <tr> <td>RTL</td><td>December 2, 2027</td></tr> <tr> <td>Award</td><td>June 5, 2028</td></tr> <tr> <td>Construction Start</td><td>May 2028</td></tr> <tr> <td>Construction Complete</td><td>December 31, 2029</td></tr> <tr> <td>Final Project Closeout</td><td>July 5, 2032</td></tr> </table>	PA&ED	May 1, 2026	VA Study	June 2–4, 2025	PS&E	May 3, 2027	RTL	December 2, 2027	Award	June 5, 2028	Construction Start	May 2028	Construction Complete	December 31, 2029	Final Project Closeout	July 5, 2032
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Construction Complete	December 31, 2029																
Final Project Closeout	July 5, 2032																

Define Performance Attributes and Scales

The Project Development Team (PDT) identified several performance attributes that represent those aspects of a project's scope that possess a range of potential acceptable values. A standard numeric scale is used for each attribute ranging from 1 to 10 where (Minimum Acceptable = 1) to an ideal level of performance (Ideal = 10). The following performance attributes were selected for this project.

Multi-Modal Connectivity

The degree to which the project is contributing to the overall connectivity of the transportation network and access to modal options. Enhancements in multi-modal connectivity should correlate to reductions in greenhouse gases (GHGs) and vehicle miles traveled (VMTs). Possible sub-attributes that may be considered include bicycles, pedestrians, and transit.

Rating		Description
8–10	Ideal	The highest reasonable level of performance is achieved. The scope of this CAPM project has little, if any impact on multi-modal connectivity, with the exception of some bike lane striping. Ideal performance would avoid any impacts to multi-modal connectivity.
6–8	High	A high level of performance is achieved.
4–6	Medium	A medium level of performance is achieved.
2–4	Low	A low level of performance is achieved.
0–2	Minimum Acceptable	The minimum acceptable level of performance is achieved.

Long-Term Environmental Impacts

These are impacts to the environment that extends beyond the completion of construction. This category includes multiple different types of environmental considerations such as ecological (both air and water quality); biological (both animals and plants); cultural (such as parks, historical buildings, and other resources related to the built environment); archaeological (sites and resources that could be disturbed); visual; noise; equity; and economic impacts.

Rating		Description
8–10	Ideal	The highest reasonable level of performance is achieved. For this project, which would mean that stormwater is effectively managed, and materials used would contain a maximum possible amount of recycled content.
6–8	High	A high level of performance is achieved.
4–6	Medium	A medium level of performance is achieved.

Rating		Description
2–4	Low	A low level of performance is achieved.
0–2	Minimum Acceptable	The minimum acceptable level of performance is achieved.

Construction Impacts (Short-Term Environmental Impacts)

These are impacts to the environment that encompasses the construction time up through the completion of construction. This category includes multiple different types of short-term environmental and construction impacts such as ecological (both air and water quality); biological (both animal and plant); cultural (such as parks, historical buildings and other resources related to the built environment), archaeological (sites and resources that could be disturbed); visual, noise (including vibration and dust); equity, economic, and interim traffic operations.

Rating		Description
8–10	Ideal	The highest reasonable level of performance is achieved. This will keep impacts on commuters to an absolute minimum, minimize noise to adjacent communities, and avoid impacting biological resources in the construction staging areas.
6–8	High	A high level of performance is achieved.
4–6	Medium	A medium level of performance is achieved.
2–4	Low	A low level of performance is achieved.
0–2	Minimum Acceptable	The minimum acceptable level of performance is achieved.

Maintainability

The impact to long-term maintenance and operations of the infrastructure. This attribute is focused on life-cycle costs and maintenance access considerations. Maintainability may also consider the resiliency of the infrastructure which includes design and service life in the face of uncertainty. This category encompasses items such as long-term maintenance costs; energy costs related to lighting and technology; maintenance access; service and design life; preservation of critical lifelines; and resiliency of the infrastructure to climate change, seismic events, forest fires, drought, sea-level rise, and surface drainage.

Rating		Description
8–10	Ideal	The highest reasonable level of performance is achieved. Ideally, maintenance would not be needed during the 10- to 15-year CAPM service life.
6–8	High	A high level of performance is achieved.
4–6	Medium	A medium level of performance is achieved.
2–4	Low	A low level of performance is achieved.
0–2	Minimum Acceptable	The minimum acceptable level of performance is achieved.

Traffic Operations

This category considers the degree to which the project improves or degrades traffic operations and conforms to design standards on the transportation system. Included are items such as mainline operations (traffic movement on mainline facilities and/or specific ramp or weaving movement) and local operations (traffic movement on specific local arterials and streets).

Rating		Description
8–10	Ideal	The highest reasonable level of performance is achieved. The scope of this project has little effect on traffic operations. Ideally, traffic operations will mirror the existing condition.
6–8	High	A high level of performance is achieved.
4–6	Medium	A medium level of performance is achieved.
2–4	Low	A low level of performance is achieved.
0–2	Minimum Acceptable	The minimum acceptable level of performance is achieved.

Prioritize Performance Attributes

Once the performance attributes were defined and their scales developed, the PDT and stakeholders prioritized them based on their relative importance to the project using OptionLab®. The performance attributes were systematically compared to each other using the software. Participants were then asked to indicate their priorities and the relative intensities of their preferences. The chart below provides the results of this analysis and includes the complete breakdown of the priorities, expressed as a percentage of the whole.

Prioritized Performance Attributes

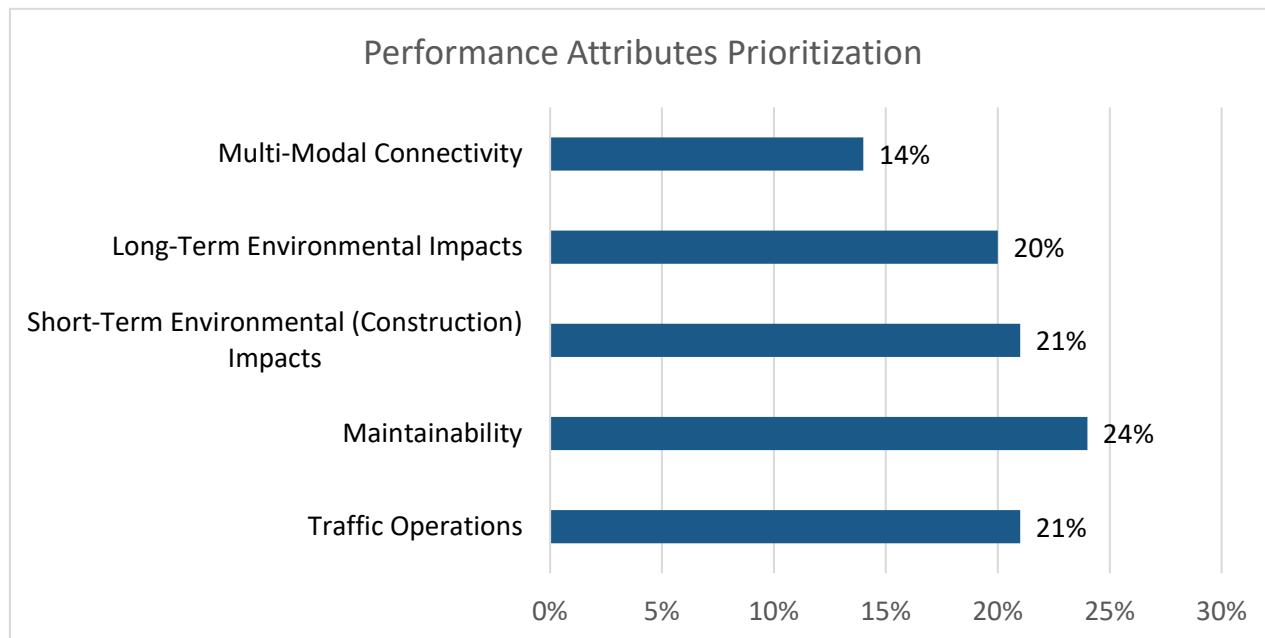


Figure 30. Prioritized performance attributes

Measure Performance of Baseline Concept

The PDT and stakeholders evaluated the performance of the baseline concept and design options relative to the performance attribute definitions and scales previously identified. The information below reflects the performance ratings and associated rationale for each attribute.

Performance Attribute	Rating
Multi-Modal Connectivity	3.3
Rating Rationale: Low—The project scope does not support multi-modal connectivity, with the exception of improving bicycle lane markings and adding an activated flashing beacon at a crosswalk and bicycle facility	
Long-Term Environmental Impacts	5.7
Rating Rationale: Medium—The project has only minor long-term impacts to the area, which can be mitigated through typical efforts.	

Performance Attribute	Rating
Construction Impacts (Short-Term Environmental Impacts)	6.6
Rating Rationale: High—The project is expected to minimize construction impacts, especially relating to commuter traffic.	
Maintainability	8.2
Rating Rationale: High—The project will address pavement within the project limits that needs repair and improvement to meet current standards. This work should improve asset durability and reset the anticipated lifespan while reducing the future anticipated life cycle costs of the facility.	
Traffic Operations	
Rating Rationale: High—The project should provide a facility that will maintain the mainline operations.	6.8

Measure Performance of VA Alternatives

The VA team prepared performance assessments of each of the VA alternatives during the Development Phase of the VA study. For each VA alternative, the VA team rated its performance using the previously defined scale for each performance attribute. The rationale for any change in performance as compared to the baseline concept was recorded. Please refer to the individual performance assessments for each VA alternative as presented in the VA Alternatives section of this report.

Define VA Strategy

The VA team identified a single VA strategy for consideration. The Recommended VA Strategy reflects the combination of complimentary VA alternatives recommended by the team and is summarized in the table below.

Recommended VA Strategy

VA Strategy Description	Initial Cost Savings	Change in Schedule	Change in Performance	Value Change
Recommended Strategy —VA Alternatives 2.0, 4.0, and 6.0	\$21,372,000	0.65-month Reduction	- 2.0%	+ 28.2%

Compare Performance—Baseline Concept and Recommended VA Strategy

The VA team considered the combined effect of all VA alternatives for the Recommended VA Strategy. The total performance scores reflect the performance rating for each attribute multiplied by its overall priority (weight) expressed using a ration scale. A total performance score of “10” would indicate the highest level of desired performance (i.e., “ideal” performance). The chart below compares the total performance scores for the baseline concept and the VA strategy.

Comparison of Performance

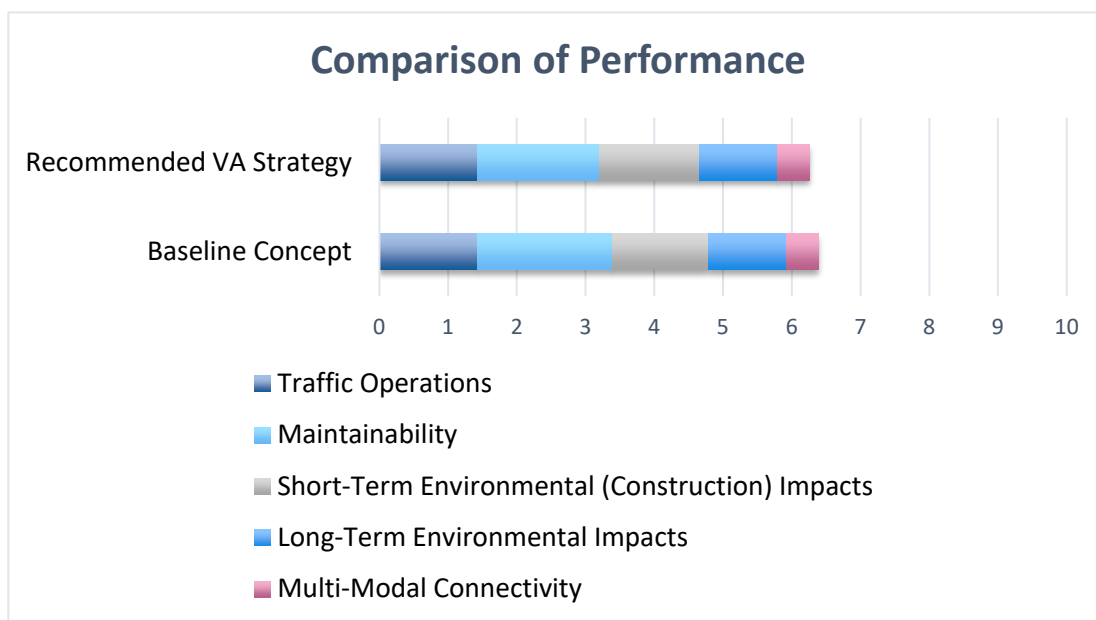


Figure 31. Comparison of baseline concept and recommended strategy performance

Rating Rationale for Recommended VA Strategy

The rating rationale for the performance of the baseline concept was presented previously in this section. The rating rationale for the VA strategy developed by the VA team is provided below.

Recommended VA Strategy—Alternatives 2.0, 4.0, and 6.0

Recommended Alternative Titles

- 2.0 (ML-04)—Reduce shoulder depth in both directions to 0.10' cold plane and 0.10' HMA-A overlay for inside and outside shoulders
- 4.0 (ML-05)—Reduce mainline RHMA depth from 0.2' to 0.15'
- 6.0 (M-08)—On EB side, pave only Lanes 2 and 3 and slurry seal on Lanes 1 and 4

Performance Attribute	Rating
Multi-Modal Connectivity	3.3
Rating Rationale: No change.	
Long-Term Environmental Impacts	5.7
Rating Rationale: No change.	
Construction Impacts (Short-Term Environmental Impacts)	6.9
Rating Rationale: Improved. Alt. 6.0 slightly improves construction impacts by shortening construction duration.	
Maintainability	7.4
Rating Rationale: Reduced. Alts. 2.0, 4.0, and 6.0 all somewhat reduce durability.	
Traffic Operations	6.8
Rating Rationale: No change.	

Compare Value

Cost and Time

The cost and time (i.e., schedule) elements were compared and prioritized by the project decision makers. The relative importance of cost and time is shown on the following table. These factors were applied to the cost and time scores and incorporated into the value calculations.

- Cost: 60.0%
- Time: 40.0%

Value Index

Once relative scores for performance, cost, and time have been derived, the next step is to synthesize a value index for the baseline concept and each VA strategy. This is achieved by applying the following algorithm for value:

$$V_f(P, C, t)_{total} = \frac{\sum_{n=1}^{\infty} P_n \cdot \alpha}{\sum_{n=1}^{\infty} [(C_n \cdot \alpha) + (t_n \cdot \alpha)]}$$

V = Value

P = Performance

t = Time

f = Function

C = Cost

α = Risk

Value Matrix

A Value Matrix was prepared that facilitated the comparison of competing strategies by organizing and summarizing this data into a tabular format. The performance scores for each strategy were divided by the total cost/time scores for each strategy to derive a value index. The value indices for the VA strategy are then compared against the value index of the baseline concept and the difference is expressed as a percent ($\pm\%$) deviation.

Comparison of Value—Baseline Concept and VA Strategy

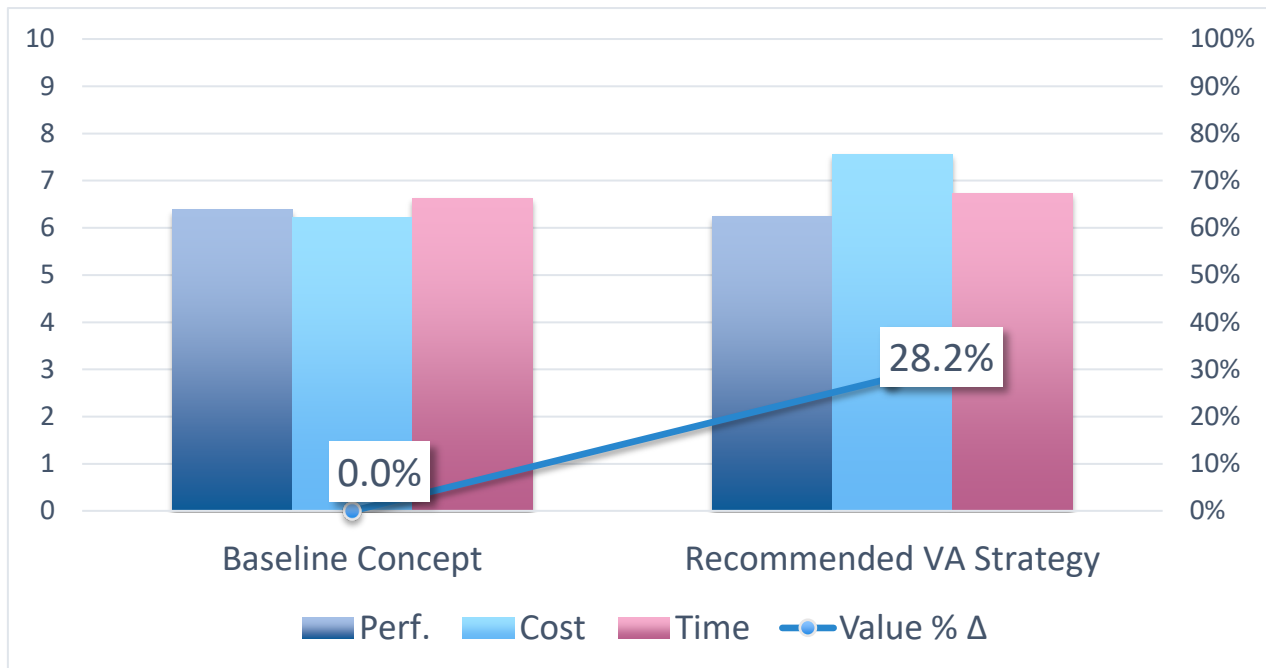


Figure 32. Comparison of value—baseline concept and VA strategy

Value Matrix—Baseline Concept and Proposed VA Alternatives

Strategy	Performance Score	Net Change	Cost/Time Score	Net Change	Value Index	Change in Value
Baseline Concept	6.834		0.36		1.8	
Proposed VA Alternatives	6.255	- 0.579	0.27	- 0.09	2.3	29.3%

IDEA EVALUATION

The ideas generated by the VA team were carefully evaluated, and project-specific attributes were applied to each idea to assure an objective evaluation.

PERFORMANCE ATTRIBUTES

The following are key performance attributes identified for this project and used to assist the VA team in evaluating the ideas:

- Multi-Modal Connectivity
- Long-Term Environmental Impacts
- Construction Impacts
- Maintainability
- Traffic Operations

The VA team enlisted the assistance of the stakeholders and project team (when available) to develop these attributes so that the evaluation would reflect their specific requirements.

EVALUATION PROCESS

The VA team generated and evaluated ideas on how to perform the various project functions using other approaches. The idea list was grouped by function or major project element. Each idea was evaluated with respect to the functional requirements of the project. Performance, cost, time, and risk may also have been considered during this evaluation.

Once each idea was fully evaluated, it was rated to determine which ideas had the greatest potential for value improvement. Ideas identified for development as VA alternatives or as other considerations are documented in the *VA Alternatives* section of this report.

IDEA SUMMARY

All the ideas generated during the Creativity Phase using brainstorming techniques are recorded on the following pages. The team created and evaluated these ideas together using Miro. Each idea received an idea code based on the function statement under which it was brainstormed. The following table indicates the functions prioritized for brainstorming during the Creativity Phase, their abbreviated function code, and number of ideas generated.

Prioritized Functions

Function Code	Related Function	Number of Ideas Generated
CS	Channelize Surface Water	2
ESL	Extend Service Life	6
IS	Improve Smoothness	1
MA	Maintain Freeway Access	9
ML	Maintain LOS	5
MS	Meet Schedule	5
M	Miscellaneous	9

CREATIVE IDEA LIST

The following table includes the ideas generated, comments made by the VA team during the evaluation process, and comments received from the PDT and stakeholders during the technical review meeting.

Ideas are coded with a function code prefix followed by the idea number generated as an alternative way to perform the given function.

Idea Code and Description	Rating
CS-01 Consider larger size aggregate (course aggregate on the surface to act as a subdrain) Discussion: May be more suitable in areas with more rainfall.	Dismiss
CS-02 Construct drainage basins/systems to manage stormwater	Dismiss
ESL-01 Use a more durable binder, i.e., PG 64-28	Develop
ESL-02 Apply lime to aggregates	Other Consideration
ESL-03 Full-depth AC: Remove and replace 0.4' Note: Dig-outs not needed; RHMA max depth is .25'—would need two lift.	Dismiss
ESL-04 Use fiber-reinforced asphalt	Other Consideration
ESL-05 Optimize aggregate gradation	Other Consideration
ESL-06 Use Portland cement concrete (PCC) throughout	Dismiss
IS-01 Use a skilled contractor	Dismiss

Idea Code and Description	Rating
Discussion: How can it be selected? Normal projects are lump-sum bid. Bidder anomalies, e.g., lowest bid unusually low, are further investigated.	
M-01 Use mumble strips instead of rumble strips on shoulders	Other Consideration
M-02 Recycle AC from base material using recycle train	Develop
M-03 Use variable cold-plane, overlay, and anticipated dig-out depths based on pavement condition for three segments	Dismiss
Segment Breakdown:	
Segment 1: PM 32.6 to PM 34.5: 0.15' cold plane and 0.15' RHMA-G overlay; 0.35' dig-outs	
Segment 2: PM 34.5 to PM 40.0: 0.20' cold plane and 0.20' RHMA-G overlay; 0.40' dig-outs	
Segment 3: PM 40.0 to PM 44.4: 0.15' cold plane and 0.15' RHMA-G overlay; 0.35' dig-outs	
Need up-to-date condition data to be practical. See also M-04 (mutually exclusive for strategies).	
M-04 Use differing cold-plane, overlay, and anticipated dig-out depths eastbound and westbound.	Dismiss
Pavement Strategy:	
Eastbound direction (PM 32.6/44.4): 0.20' cold plane and 0.20' RHMA-G overlay; 0.40' dig-outs	
Westbound direction (PM 32.6/44.4): 0.15' cold plane and 0.15' RHMA-G overlay; 0.30' dig-outs	
Need up-to-date condition data to be practical. See also M-03 (mutually exclusive for strategies).	
M-05 Apply epoxy seal to shoulders in lieu of RHMA or HMA	Develop
M-06 Use recycled materials for base (take back to plant, mix, and take back to site)	Develop
M-07 Recycle AC in place	Duplicate
M-08 On EB side, pave only Lanes 2 and 3 and seal cracks on Lanes 1 and 4 will require additional inspection to determine condition	Develop
M-09 Consider 0.15' RHMA depth for the mainline	Other Consideration
MA-01 Minimize weekday closures by performing weekend closures as much as possible	Other Consideration

Idea Code and Description	Rating
Baseline allows weeknight and weekend work; the challenge is that the community may not like weekend work; TMP allows a 20-minute delay.	
MA-02 With nighttime work, open freeway ramps before 5:00 a.m. to accommodate commuters Duplicate of ML-03.	Duplicate
MA-03 Use rapid set concrete (RSC) for ramp terminals to minimize ramp closures	Other Consideration
MA-04 Do not place vegetation control at metal guardrail system (MGS) locations Check baseline design, to see if it is already being done; also check with maintenance (Jorge).	Other Consideration
MA-05 Identify staging areas, e.g., areas on outside shoulders near on/off ramps	Already Being Done
MA-06 Allow contractor to work long shifts, 7:30 p.m. to 6:00 a.m. (could increase production 31%)	Other Consideration
MA-07 Avoid wintertime and major city festivals	Already Being Done
MA-08 Determine dig-out depth specification during design by coring existing AC down through base for more accurate bids This would require Materials to do samples, closing lanes, etc. (dig-out depths should be deeper than cold plane depths). Contingency covers unforeseen conditions.	Dismiss
MA-09 Allow contractor to pave the entire length of a given lane at one time requires closing an additional lane More efficient construction; closures of a single lane are less confusing to the traveling public. Requires closing an additional lane.	Dismiss
ML-01 Break project into 2–3 segments with separate contracts for shorter lane closures With ML-01: Allow contractor to break the project into smaller sections to minimize commuter impact This would require new project scope/contracts.	Dismiss
ML-02 Reduce dig-out depth from 0.40' to 0.35'	Dismiss
ML-03 Perform construction work from 9:00 p.m. to 5:00 a.m. TMP is based on traffic volumes; max 20-minute delay.	Other Consideration

Idea Code and Description	Rating
ML-04 Reduce shoulder depth in both directions to 0.10' cold plane and 0.10' HMA-A overlay for inside and outside shoulders Aggregates play a big role in compaction, depending on size (use smaller- requires two mixes, increasing time).	Develop
ML-05 Reduce mainline RHMA depth from 0.2' to 0.15'	Develop
MS-01 Reduce number of lanes	Duplicate
MS-02 Receive input from locals for when lane closures occur	Already Being Done
MS-03 Have a separate lane closure chart for winter season to continue work MGS can work, but no paving (RE and contractor determine what type of work could be done).	Already Being Done
MS-04 Consult with city regarding the best time for closures	Already Being Done
MS-05 Use public involvement strategies, e.g., meetings to determine community priorities	Already Being Done

VA PROCESS

The Caltrans Value Analysis (VA) process involves 16 activities needed to accomplish a VA study, and is organized into three parts: Pre-Study, VA Study, and Report. Integral to Caltrans' VA process is the Value Metrics. Value Metrics provides a systematic and structured means of considering the relationship of a project's performance, cost, time (schedule), and risk as they relate to value.

Project performance must be properly defined and agreed upon by the stakeholders at the beginning of the VA study. The performance attributes and requirements developed are then used throughout the study to identify, evaluate, and document changes to performance and value. OptionLab® was used to facilitate the Value Metrics portions of the VA Study.

The following provides an overview of the Caltrans approach to VA. The Caltrans VA Study Activity Chart at the end of this narrative identifies the steps in each activity, which are detailed as follows.

PRE-STUDY

Meaningful and measurable results are directly related to the pre-study work performed. Depending on the type of study, all or part of the following information needs to be determined during the pre-study phase:

- Clear definition of the current situation and study objectives
- Identification of study team members
- Identification of project stakeholders
- Definition of how stakeholders are impacted by the project
- Identification of key issues and concerns
- Identification of project's performance requirements and attributes
- Status of project cost estimate
- Project data gathered to be distributed to VA team

In preparation for the VA study, the team leader confers with owners and stakeholders to outline the VA process; initiate data gathering; refine project scope and objectives; structure the scope, team members, and technical specialists; and finalize study plans. Specific deliverables are provided.

Following the initial planning meeting, the team leader reviews the data collected for the project and develops a cost model. The team leader also consults with the technical specialists to prepare them for the VA study.

VA STUDY

This VA study was conducted in a virtual environment using MS Teams and Miro. MS Teams is a virtual meeting platform that supports audiovisual communications and facilitates the use of breakout sessions to allow for multiple, parallel meetings. Miro is a collaborative whiteboard platform that supports a variety of activities. This platform was used extensively to allow participants to share information visually. It was used explicitly to support the Information, Function Analysis, Creativity, and Evaluation Phases of the VM Process.

The VA Job Plan guides the VA team in their search to enhance value in the project or process. Caltrans follows a seven-phase VA Job Plan:

1. Information Phase
2. Function Analysis Phase
3. Creativity Phase
4. Evaluation Phase
5. Development Phase
6. Presentation Phase
7. Implementation Phase

Information Phase

At the beginning of the VA study, the design team presents a more detailed review of the design and the various systems. This includes an overview of the project and its various requirements, which further enhances the VA team's knowledge and understanding of the project.

The project team also responds to questions posed by the VA team. The project's performance requirements and attributes are discussed, and the performance of the baseline concept is evaluated.

Function Analysis Phase

Key to the VA process are the function analysis techniques used during the Function Analysis Phase. These techniques may include but are not limited to:

- Random Function Identification
- Function-Resource Allocation
- Function Analysis System Technique (FAST) Diagrams
- Graphic Function Identification

Analyzing the functions of a project is essential to assuring an owner that the project has been designed to meet the stated criteria and its need and purpose. The analysis of these functions in terms of cost, performance, time, and risk is a primary focus in a VA study and is used to identify areas within a project for value improvement. This procedure is beneficial to the VA team, as it forces the participants to think in terms of functions and their relative value in meeting the project's need and purpose. This facilitates a deeper understanding of the project.

Creativity Phase

The Creativity Phase involves identifying and listing creative ideas. During this phase, the VA team participates in a brainstorming session to identify as many means as possible to provide the necessary project functions. The judgement of the ideas is not permitted in order to generate a broad range of ideas. The idea list includes all of the ideas suggested during the study. These ideas should be reviewed further by the project team since they may contain ideas worthy of further evaluation and may be used as the design develops. These ideas could also help stimulate additional ideas by others.

Evaluation Phase

The purpose of the Evaluation Phase is to systematically assess the potential impacts of ideas generated during the Creativity Phase relative to their potential for value improvement. Each idea is evaluated in terms of its potential impact to performance, cost, time, and risk. Once each idea is fully evaluated, it is classified as an idea to either "Develop" or "Dismiss." Some ideas can also be "Combined" with other promising ideas or ideas which are "Already Being Done." The rationale for why ideas were rated highly but not developed as alternatives is documented in the Idea Evaluation section of the report.

Development Phase

During the Development Phase, the highly rated ideas are expanded and developed into VA alternatives. The development process considers the impact to performance, cost, time, and risk of the alternative concepts relative to the baseline concept. This analysis is prepared as appropriate for each alternative, and the information may include a performance assessment, initial cost and life-cycle cost comparisons, schedule analysis, and an assessment of risk. Each alternative describes the baseline concept and proposed changes and includes a technical discussion. Sketches and calculations are also prepared for each alternative as appropriate.

Presentation Phase

The VA study concludes with a preliminary presentation of the VA team's assessment of the project and VA alternatives. The presentation provides an opportunity for the owner, project team, and stakeholders to preview the alternatives and develop an understanding of the rationale behind them.

Implementation Phase

After the stakeholders have had an opportunity to review the alternatives identified by the VA team, the team leader conducts an implementation meeting to discuss the alternatives and resolve appropriate action for each VA alternative. If necessary, any other VA report edits requested by the representatives are also made by the VA team leader and a final report is issued. This implementation meeting helps to ensure that savings or process improvements are not lost due to a lack of communication, and that those VA alternatives that are accepted are properly integrated into the project design.

VA REPORT

Preliminary Report—Following the completion of the VA study, the team leader compiles the information developed during the VA study into the Preliminary Value Analysis Study Report. This report, documenting viable alternatives, is provided to the customer within the timeframe requested (usually within two weeks of study completion). The preliminary report also contains a *VA Study Summary Report—Preliminary Findings*, designed to highlight critical elements of the VA study, including detailed documentation of VA alternatives, in a concise manner for the use of parties without the opportunity to review the report in its entirety. More details can be found in the complete preliminary report, which consists of the following documentation: Executive Summary, VA Alternatives, Project Information, Project Analysis, Idea Evaluation, and VA Process.

Final Report—Once all VA alternatives have been either accepted or rejected, the team leader updates the *Preliminary Value Analysis Study Report* to show the final results of the study in a *Final Value Analysis Study Report*. In addition, a Value Analysis Study Summary Report (VASSR) is sent to Caltrans HQ to permit easy documentation into the Caltrans Annual Report to FHWA.

CALTRANS VA STUDY ACTIVITIES

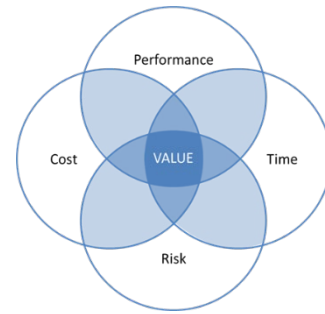
The following Caltrans VA Study Activity Chart describes each activity for a VA study.

PREPARATION	1 INITIATE STUDY ➤ Identify study project ➤ Identify study roles and responsibilities ➤ Define study goals ➤ Select team leader ➤ Prepare draft Study Charter				2 ORGANIZE STUDY ➤ Conduct Pre-Study Meeting ➤ Select team members ➤ Identify stakeholders, decision-makers, and technical reviewers ➤ Identify data collection ➤ Select study dates ➤ Determine study logistics ➤ Update VA Study Charter ➤ Identify and define performance requirements				3 PREPARE DATA ➤ Collect and distribute data ➤ Develop construction cost models ➤ Develop highway user benefit/life-cycle cost (LCC) model (if required)										
VA STUDY	Segment 1	4 INFORM TEAM ➤ Review study activities and confirm reviewers ➤ Present design concept ➤ Present stakeholders’ interests ➤ Review project issues and objectives ➤ Rate performance of baseline concept ➤ Visit project site				5 ANALYZE FUNCTIONS ➤ Analyze project data ➤ Expand project functions ➤ Prepare FAST diagram ➤ Determine functional cost drivers and performance				6 CREATE IDEAS ➤ Focus on functions ➤ List all ideas ➤ Apply creativity and innovation techniques (group and individual)				7 EVALUATE IDEAS ➤ Apply key performance attributes to rate idea ➤ List advantages and disadvantages ➤ Consider cost impacts ➤ Rank all ideas ➤ Assign alternatives for development					
		Segment 2	8 DEVELOP ALTERNATIVES ➤ Develop alternative concepts ➤ Prepare sketches and calculations ➤ Measure performance ➤ Estimate costs, LCC benefits/costs				9 CRITIQUE ALTERNATIVES ➤ VA alternatives technical review ➤ VA alternatives team consensus review ➤ Identify mutually exclusive groups of alternatives ➤ Identify VA strategies ➤ Validate performance				10 PRESENT ALTERNATIVES ➤ Present findings ➤ Document feedback ➤ Confirm pending reviews ➤ Prepare preliminary report <i>*Interim presentation of study findings</i>								
			Segment 3	11 ASSESS ALTERNATIVES** ➤ Review Preliminary Report ➤ Assess alternatives for project acceptance ➤ Prepare draft implementation dispositions <i>**Activities performed by PDT, Technical Reviewers, and Stakeholders</i>				12 RESOLVE ALTERNATIVES ➤ Review implementation dispositions ➤ Resolve implementation actions with decision-makers and stakeholders ➤ Edit alternatives ➤ Revisit rejected alternatives, if needed				13 PRESENT RESULTS* ➤ Present results ➤ Obtain management approval on implemented alternatives ➤ Summarize performance, cost, and value improvements <i>*Final presentation of study results</i>							
			REPORT																
		14 DOCUMENT STUDY Document process and study findings Distribute Preliminary VA Report Distribute electronic report to HQ VA Branch Conduct Implementation Meeting				15 VA IMPLEMENTATION ACTION MEMO (If Conditionally Accepted Alternatives exist) Publish memo to document action plan to complete study Resolve Conditionally Accepted Alternatives				16 PUBLISH RESULTS Document process and study results Incorporate all comments and implementation actions Distribute Final VA Report Distribute electronic report to HQ VA Branch Update VA Study Summary Report (VASSR) Provide HQ the Final VA Report in PDF format				Note: The dashed boxes indicate steps that <i>may</i> not be required in some VA studies					

VALUE ANALYSIS STUDY AGENDA

Virtual Workshop Platform: MS Teams

The link will be sent via MS Teams meeting invite and is also provided below. Please note that all meetings for this VA study will use the same meeting link, although separate invites will be sent to attendees only for the times they are needed.



[Join the meeting now](#)

Meeting ID: 260 952 763 634 6

Passcode: ho2Wm3X8

Day 1	Monday, June 2, 2025	Participants
7:30	Facilitator Set-Up	
	Information Phase	
8:00	Introductions	Stakeholders and Decision-Makers (Management), Designers, DVAC, VA Facilitator, VA Team
8:05	Confirm Project Baseline • Discuss and Weight Performance Attributes • Discuss and Score Current Design	
9:00	Confirm Project Baseline • Discuss Cost and Schedule	
9:45	Break	Designers, DVAC, VA Facilitator, VA Team
10:00	Brief Overview of the VA Process and Study Agenda Project Overview by the Designers • Purpose and Need • Scope • Issues and Concerns • Project Design Clarifications	
11:00	VA Study Focus and Additional Q&A	
11:30	Lunch	
12:30	Virtual Site Visit and Observations	DVAC, VA Facilitator, VA Team
12:45	VA Team Discussion of Design Documentation and Estimate Review	

1:00	Miro Whiteboard Tool Introduction, Walkthrough, and Practice	
	Function Analysis Phase	
1:15	Function Identification	
1:45	Break	
2:00	Function Analysis; Prioritize Functions for Brainstorming	
	Creativity Phase	
2:30	Team Brainstorming—Ideas for Alternative Ways to Perform Functions	
4:00	Adjourn	
Day 2	Tuesday, June 3, 2025	Participants
7:45	Facilitator Set-Up	
8:00	Review Agenda	DVAC, VA Facilitator, VA Team
8:05	Team Brainstorming—Ideas for Alternative Ways to Perform Functions	
	Evaluation Phase	
8:45	VA Team Clarifies and Evaluates Brainstormed Ideas	
9:45	Break	
10:00	TBD: Technical Review of VA Ideas and VA Alternatives to Be Developed	Stakeholders and Decision-Makers (Management), Designers, DVAC, VA Facilitator, VA Team
10:45	Assign Alternatives to Be Developed; Introduction to Forms	DVAC, VA Facilitator, VA Team
	Development Phase	
11:00	Develop VA Alternatives	
12:00	Lunch	
1:00	Develop VA Alternatives	
4:00	Adjourn	
Day 3	Wednesday, June 4, 2025	Participants
7:45	Facilitator Set-Up	

8:00	Review Agenda	DVAC, VA Facilitator, VA Team
8:10	Finalize VA Alternatives and Design Suggestions	
10:00	Break	
10:15	Review Alternatives	
11:15	Determine and Score Recommended Strategy	
12:00	Lunch	
	Presentation Phase	
1:00	Final Review of VA Alternatives, Design Suggestions, and VA Study Presentation	Stakeholders and Decision-Makers (Management), Designers, DVAC, VA Facilitator, VA Team
2:30	Presentation of Initial VA Study Results (VA Team Recommended Strategy)	
4:00	Adjourn	

Tentative VA Study Process Dates:

Preliminary VA Study Report distributed June 18, 2025

Preliminary Report Comments Due July 2, 2025

Implementation Meeting: July 8, 2025

Final Report: July 22, 2025

VA STUDY MEETING ATTENDEES

06/02	06/03	06/04	IM TBD	Name	Organization	Position/Role	Email
x		x		Dalia Alarkan	Caltrans	PDT—Project Manager	dalia.alarkan@dot.ca.gov
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x		x		Perinpanathan Ananthanathan	Caltrans	PDT—Project Engineer	perinpanathan.ananthanathan@dot.ca.gov
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06/02	06/03	06/04	IM TBD	Name	Organization	Position/Role	Email
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x	x	x		Lesley Rojas-Higuera	Caltrans	VA Team—Materials Engineering	lesley.rojas-higuera@dot.ca.gov
x	x			Harmeek Sangha	Caltrans	VA Team—Maintenance; PDT	harmeek.sangha@dot.ca.gov

06/02	06/03	06/04	IM TBD	Name	Organization	Position/Role	Email
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x				Haissam Yahya	Caltrans	Management—Traffic Operations Deputy	haissam.yahya@dot.ca.gov

VA ALTERNATIVE IMPLEMENTATION FORMS

The following VA Alternative Implementation Forms have been broken-out into separate documents for Caltrans' use in completing them.

VA ALTERNATIVE IMPLEMENTATION FORM—ALT. 1.0

1.0 (M-05)—Apply epoxy seal to shoulders in lieu of RHMA or HMA

Responses prepared by:

Disposition	Accept/Reject/Further Study
Validated Initial Cost Savings	\$
Validated Schedule Savings	#-month reduction
Validated Performance Change	+ 0.0%

If Alternative is rejected: was rejection due to the VA study taking place too late in the project development process to implement the change? .

Alternative Description

The baseline concept is to cold plane 0.15' and overlay 0.15' RHMA-G on shoulders (five- to 10-year service life).

The alternative concept proposes to apply epoxy seal on inside and outside shoulder.

Decision Rationale

The project decision makers determined that this alternative should be accepted/rejected as .

Implementation Comments

The implementation meeting attendees noted that .

Acceptance of alternatives denotes intent to implement, based on current information, in the given project development phase (PID, PA&ED or PS&E). It is recognized that future conditions may change this disposition. The validation of disposition and the cost and performance changes for the alternative are required by Caltrans to ensure that the project decision makers agree with the study results. These validated results become the basis for the VA Program reportables.

VA ALTERNATIVE IMPLEMENTATION FORM—ALT. 2.0

2.0 (ML-04)—Reduce shoulder depth in both directions to 0.10' cold plane and 0.10' HMA-A overlay for inside and outside shoulders

Responses prepared by:

Disposition	Accept/Reject/Further Study
Validated Initial Cost Savings	\$
Validated Schedule Savings	#-month reduction
Validated Performance Change	+ 0.0%

***If Alternative is rejected:** was rejection due to the VA study taking place too late in the project development process to implement the change? .*

Alternative Description

The baseline concept will cold plane 0.15' and overlay 0.15' RHMA-G on shoulders.

The alternative concept proposes to reduce cold plane depth to 0.10' and overlay 0.10' HMA-A on inside and outside shoulders.

Decision Rationale

The project decision makers determined that this alternative should be accepted/rejected as .

Implementation Comments

The implementation meeting attendees noted that .

Acceptance of alternatives denotes intent to implement, based on current information, in the given project development phase (PID, PA&ED or PS&E). It is recognized that future conditions may change this disposition. The validation of disposition and the cost and performance changes for the alternative are required by Caltrans to ensure that the project decision makers agree with the study results. These validated results become the basis for the VA Program reportables.

VA ALTERNATIVE IMPLEMENTATION FORM—ALT. 4.0

4.0 (ML-05)—Reduce mainline RHMA depth from 0.2' to 0.15'

Responses prepared by: [REDACTED]

Disposition	Accept/Reject/Further Study
Validated Initial Cost Savings	\$
Validated Schedule Savings	#-month reduction
Validated Performance Change	+ 0.0%

If Alternative is rejected: was rejection due to the VA study taking place too late in the project development process to implement the change? [REDACTED].

Alternative Description

The baseline concept is an RHMA depth of 0.2' on the mainline.

The alternative concept proposes to reduce RHMA depth to 0.15' on the mainline.

Decision Rationale

The project decision makers determined that this alternative should be accepted/rejected as [REDACTED].

Implementation Comments

The implementation meeting attendees noted that [REDACTED].

Acceptance of alternatives denotes intent to implement, based on current information, in the given project development phase (PID, PA&ED or PS&E). It is recognized that future conditions may change this disposition. The validation of disposition and the cost and performance changes for the alternative are required by Caltrans to ensure that the project decision makers agree with the study results. These validated results become the basis for the VA Program reportables.

VA ALTERNATIVE IMPLEMENTATION FORM—ALT. 6.0

6.0 (M-08)—On EB side, pave only Lanes 2 and 3 and slurry seal on Lanes 1 and 4

Responses prepared by:

Disposition	Accept/Reject/Further Study
Validated Initial Cost Savings	\$
Validated Schedule Savings	#-month reduction
Validated Performance Change	+ 0.0%

If Alternative is rejected: was rejection due to the VA study taking place too late in the project development process to implement the change? .

Alternative Description

The baseline concept is to pave all four lanes.

The alternative concept proposes to proceed with paving eastbound Lanes 2 and 3. Lanes 1 and 4 will undergo crack sealing, pending further inspection to evaluate pavement condition and determine if additional treatment is needed.

Decision Rationale

The project decision makers determined that this alternative should be accepted/rejected as .

Implementation Comments

The implementation meeting attendees noted that .

Acceptance of alternatives denotes intent to implement, based on current information, in the given project development phase (PID, PA&ED or PS&E). It is recognized that future conditions may change this disposition. The validation of disposition and the cost and performance changes for the alternative are required by Caltrans to ensure that the project decision makers agree with the study results. These validated results become the basis for the VA Program reportables.

Attachment H

Transportation Management Data Sheet

For DTM use		Caltrans District 8 (Riverside & San Bernardino)					
Developer		Cuong Tieu					
TMP Data Sheet (Ver. Nov. 2024)							
Transportation Management Plan (TMP) Data Sheet is for PID, PSR, PR and PS&E considering DTM's requirements. The validity of this TMP expires at the same time the associated LRCs expires.							
The TMP Data Sheet includes background & signature, TMP elements & TMP estimate							
Requester: Complete section (A) & (B) of this page only							
Requester: Submit separate request for each roadway (Type the information in the cells below with yellow background ONLY)							
				TMP receiver: Please note that			
Project shall not be certified without the approval of the Lane Requirement Charts (LRCs) & the TMP by the DTM							
(A) Requester's info.							
1 - Date of request		12/10/2024			2 - Department		Design
3 - Full name		JUDE ANANTHANATHAN			4 - Phone No.		(213) 598-6329
5 - email address		perinpanathan.ananthanathan@dot.ca.gov					
6 - Project Manager's name		DALIA ALARKAN					
7 - Project Manager's email		dalia.alarkan@dot.ca.gov					
(B) Project information							
2-County/Route		RIV/10/EB/WB		1-EA#/ID#		1M360/0821000109	
4-Post mile (From-To)		32.6/44.4		3-phase/sub object		0/160	
5-Short description of job		Cold plane and overlay for mainline, shoulder and ramps rehabilitate signal and lighting systems, Etc					
Construction period per WPS							
6-Estimated start date		07/12/28		8-# of working days		279	
7-Estimated end date				9-Estimated Proj. cost		\$ 57,758,000	
10- Requester: Use section (H), in the bottom of the page, to add any other information that helps developing the TMP							
11- Documents to send		Requester: Please attach the location map in jpeg/pdf format to your E-mail					
12- If hard copies are requested, Send or bring them to the DTM office located on the south side of 7th. Floor, Attn: George Ebrahim Questions: (909)665-3365 13- E-mail the request to: D8DTM@dot.ca.gov							
Following is for DTM use >>>>>>>>>				Developer: Fill info in green cells only			
(C) BACKGROUND INFORMATION							
# of working days		279		Date request received		12/10/24	
Estimated Project cost (\$)		57,758,000		Job assigned to		Cuong Tieu	
TMP estimate(\$)		\$570,000		Per E-mail dated		12/10/24	
		Equal to 0.99%		Of the project cost			
(D) IMPACT		High Medium Low N/A		Developer: (Briefly, explain the high impact/mitigation):			
State Hwy.		X					
Local road		x					
Ramp/connector		X					
(E) Developer: Complete the info							
Developed by		Cuong Tieu		Original signed by:		Cuong Tieu	
Title		Transportation Engineering		Date		11/4/2025	
E-mail		cuong.tieu@dot.ca.gov					
Phone/Fax		909-856-5774					
(F) Approved by							
Name:		Mauricio Santa Cruz		Original signed by:		Mauricio Santa Cruz	
Title		District Traffic Manager		Date		11/04/25	
E-mail		mauricio.santa-cruz@dot.ca.gov					
Phone/Fax		(909) 520-5337					
(G) District's info:							
Department of Transportation							
District:		8					
Address:		464 W. Fourth St., San Bernardino, Ca., 92401-1400					
Operations, DTM, MS >>>>		711					
DTM is located on the North side of 7th. Fl. Enter from the open door & turn left. MS: 711							
(H) Remarks							

TMP Elements	EA #/ID#	1M360/0821000109	Date	11/4/2025
Note: A checkmark in the box means you need to include this in the project unless staging, material, or work hour changes eliminate the need for the item. A ? in front means TMP anticipates this - please check into this. A blank box means the item is not needed at this time based on the information received.				

Public Affairs officer's 1st. & last name	Phone number	
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1	Public Information/Public Awareness Campaign (PAC). Developer: Remember to obtain the estimate from Public affairs by contacting Emily Leinen. Procedure is in the file under 3- TMP matters	Estimated Cost \$ 10,000
	BEES 066063 (Traffic Management Plan-Public Information). Cost to be reduced by Public Affairs (PA) and Construction Liaison (CL) only. Show under State Furnished as the total of PA+CL.	

- 1.1 ☐ Include Rideshare information in PA/CL project material to encourage vehicles reduction in work area
- 1.2 ☐ Brochures and Mailers
- 1.3 ☐ Media Releases (& minority media sources)
- 1.4 ☐ Paid Advertising
- 1.5 ☐ Public Meetings/PAC Mtgs./Speakers Bureau (show cost also for room rental)
- 1.6 ☐ Hand deliver notices to vicinity
- 1.7 ☐ Broadcast fax service
- 1.8 ☐ Telephone Hotline OR
- 1.9 ☐ 1-800-COMMUTE (The telephone number is shown on CS-Info signs) -
- 1.10 ☐ Visual Information (videos, slide shows, etc.)
- 1.11 ☐ Local cable TV and News
- 1.12 ☐ Traveler Information System (Internet)
- 1.13 ☒ Internet, E-mail, Social Media
- 1.14 ☐ Notification to targeted groups:
 - ☐ Revised Transit Schedules/maps
 - ☐ Rideshare organizations
 - ☐ schools
 - ☐ organizations representing people with disabilities
 - ☐ bicycle organizations
- 1.15 ☐ Include PA/CL/Consultant resources in WPS
- 1.16 ☐ Commercial traffic reporters/feeds - e.g. brief Traffic Information people (TIP) group
- 1.17 ☐ Insert SSP's

"A representative of the Contractor, at Superintendent level or higher, and authorized to commit the Contractor, shall attend and participate in all Public Awareness Campaign meetings. Time commitment for the meeting(s) varies from two to four hours per month."

Section 1 Total	\$ 10,000
------------------------	-----------

2	Motorist Information Strategies Project team needs to coordinate with Traffic Design!
2.1	☐ Existing Overhead Changeable Message Signs (Stationary) ☐ New Installation (Stationary) - BEES 860532 CHANGEABLE MESSAGE SIGN SYSTEM - list locations
2.2	☒ Lane Closure System Website
2.3	☒ Caltrans Highway Information Network (CHIN)
2.4	☐ Portable Radar Speed Feedback Sign System Day BEES 120204 (approx. EA @ \$50,000)
2.5	☒ Bicycle and pedestrian information, e.g. Detour maps
2.6	☐ Automated Workzone Information System (AWIS) BEES 120105

Section 2 Total	\$ -
------------------------	------

3	Incident Management										
3.1	☐ CHP's Construction or Maintenance Zone Enhanced Enforcement Program – COZEEP or MAZEEP. BEES 066062 - show under "State or Agency furnished" in the Cost Estimate. Make sure to consider the LC hours and add CHP driving time to/from their office Day COZEEP: To protect active closures <table border="1"> <thead> <tr> <th># of days</th> <th>hours/day</th> <th>CHP vehicles</th> <th># of officers.</th> <th>Rate/Hr.</th> </tr> </thead> <tbody> <tr> <td></td> <td>8</td> <td>1</td> <td>1</td> <td>\$ 250</td> </tr> </tbody> </table> Night COZEEP: To protect active closures	# of days	hours/day	CHP vehicles	# of officers.	Rate/Hr.		8	1	1	\$ 250
# of days	hours/day	CHP vehicles	# of officers.	Rate/Hr.							
	8	1	1	\$ 250							

TMP Elements		EA #/ID#	1M360/0821000109		Date	11/4/2025	
# of nights	hours/night	CHP vehicles	# of officers. Nights need 2 per car	Rate/Hr.			
140	8	1	2	\$ 250		\$	560,000

- 3.2 ☐ **Tow Truck Service for Construction** \$/hr./truck \$70
BEES 120100 - Traffic Control System

of trucks # of days Hours per day
A For service within the regular Tow Truck hours

--	--	--

\$0

of trucks # of days Hours per day
B For service outside the regular Tow Truck hours

--	--	--

\$0

Section 3 Total \$ 560,000

4 Construction Strategies

Contact DTM, at 909-383-6262, to get Delay Calculations, Lane Requirement Charts (LRC), Table Z and Special events list. Inform DTM of any concerns/commitments regarding special LC days, times, seasons, events; environmental restrictions; if work may be affected by snow and low or high temperatures. E.g. excessive heat may delay HMA operations lane openings which may increase traffic impact when vehicles overheat in the queue; etc. If traffic volumes vary significantly between seasons, consider 2 sets of LRCs to avoid CCOs.

- 4.1 This TMP presumes that work is planned as below. If different, TMP needs to be revised. The Project Engineer shall ensure all appropriate lane requirement charts are included.

- ☒ Day
☒ Night
☒ Weekend

- 4.2 Expected facility closures and requirements

- ☐ Flagging
☒ Shoulder
☒ Lane
☐ Local Street
☒ Ramp
☐ Connector*
☐ Extended Weekend Closures*
☐ Total Facility Closures*

*Consult with TMP developer and the DTM regarding COZEEP & other costs. Provide proposed detour and traffic diversion plans for review.

CAUTION: If the Lane Requirement Chart (LRC) for full mainline closures, of one or both directions on a highway or freeway, does not show the maximum number of allowable closures, the PS&E shall not be certified by DTM/TMP.

- 4.3 ☐ BEES 066008 Incentives
4.4 ☐ BEES 120101 Traffic Control Supervisors (DAY)

# of days w/ Active Complex Temporary Traffic Control	# of days w/o No Active Complex Temporary traffic control	# of nights w/o 55 hour Weekend Closure	# of 55 Hour Weekend Closure

# of days	# of nights	% Workdays	WNI (Weekly Nighttime inspections)	WWZSR (Weekly Work Zone Safety Review)	% Contingency Days	Quantity Estimate	Rate/Hr.
0	0	0	0	0	0	0	\$ 900

\$ -

- 4.5 ☐ Strictly enforce construction CPM schedule
4.6 ☒ 10-Min. Delay Penalty Contact DTM at 909-383-6423 for 10 Min. Delay Penalty Calculations.

Section 4 Total \$ -

5 Demand Management (DM)

Project team needs to coordinate with RCTC/SBCTA

- 5.1 ☐ A co-op will be executed - mentioned in PSR or PR.

☐ Instead of a co-op, 15% is added to the cost of DM elements since the payment to the local agency will be routed through the contractor.

Instead of a co-op, the local agency will make their own arrangements with RCTC/SBCTA.
PA/CL or local agency need to inform commuters through RCTC/SBCTA. Funds part of PA/CL.

TMP Elements	EA #/ID#	1M360/0821000109	Date	11/4/2025
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- 5.2 ☐ HOV Lanes/Ramps (New or Convert)
- 5.3 ☐ Park-and-Ride Lots
- 5.4 ☐ Parking Management/Pricing (Coordination with local agency is required)
- 5.5 ☐ BEES 066067 Rideshare Promotion

Section 5 Total	\$	-
-----------------	----	---

6 Alternate Route Strategies

Caution - signed detours may require environmental clearance. Traffic diversion may increase available work hours. Please work with Traffic Design.

- 6.1 ☐ Add Capacity to Freeway connector
- 6.2 ☐ Ramp Closures
- 6.3 ☐ Temporary Highway Lanes or Shoulder Use
- 6.4 ☐ Parking Restrictions
- 6.5 ☐ Street Improvements
- ☐ State R/W - Signals, Widen, etc.
- ☐ Local R/W - Signals, Widen, etc. co-op or permit may be needed
- 6.6 ☐ Local Street USE - co-op or Permit may be needed
- 6.7 ☐ Traffic Control Officers (see 3.1 COZEEP)
- 6.8 ☐ Signed detour - using State routes
- 6.9 ☐ Signed detour - using local streets and roads. Coordinate with corresponding local agency.
- 6.10 ☐ Adjust signals
- 6.11 ☐ Temporary bicycle or pedestrian facilities

Section 6 Total	\$	-
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TMP Estimate					
Developed by	Cuong Tieu	EA#/ID#	1M360/0821000109	Date	11/4/2025
TMP developer: Amounts under the cost column will automatically be copied from the TMP elements					
TMP Elements			Cost		
1. Public Information			\$10,000		
2. Motorist Information Strategies			\$0		
3. Incident Management			\$560,000		
4. Construction Strategies			\$0		
5. Demand Management (DM)			\$0		
6. Alternate Route Strategies			\$0		
Total TMP Estimate			\$ 570,000		

Attachment I

SHOPP Tool Performance Output

SHOPP Project - Accomplishment - Performance Measures - Benefits																	
District: 08 Tool ID: 21623 Project ID: 0821000109 EA: 1M360 Co-Rte-PM: RIV-010-32.6/44.4 (Primary Location) Res In PID WP: 08/19/21 Project Manager: Elaheh Hadipour																	
Bridge	Pavement	Drainage	Facilities	Signs and Lighting	Mobility	Roadside	Bicycle and Pedestrian	Sustainability /Climate Change	Advance Mitigation	Major Damage & Betterments	Green-house	Relinquishment					
Performance & Accomplishments (PRG)															Review Date	Performance Change Date	Comment
	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			
1	B25	Asphalt Pavement Minor Rehab (CAPM)	Pavement Class I	Lane Miles	93.740		93.740			93.74						9/8/2023	
2	C01	Replace/Install Culverts	No Performance Objective	Each	3			1.000		1			Yes		7/11/2022		
3	C02	Replace/Install Culverts	Drainage Restoration	Linear Feet	716			97.660		97.66			Yes		7/11/2022		Upsize 506' from 24" to 30", reline 250' of 24" pipe, repair 10 ' of pipe drainage inlet, one riser and new headwalls, System No. 560104103987, 560100104327, 560100004431
4	E02	Crash Cushions	No Performance Objective in the SHSMP	Each	1			3.000		3				please include a line for safety vehicle performance for the life of project			The list of crash cushions was provided by Kevin Chen.
5	E24	Lighting - Rehabilitation	Lighting Rehabilitation	Each	0			26.000		26			Yes	IMMS IDs for the assets being programmed	11/29/2022		
0	E25	Overhead Sign Structures Rehabilitation	Overhead Sign Structures Rehabilitation	Each	0			1.000		1			Yes	Please add Structure ID #	2/1/2022		
7	E55	Proactive Safety Vehicles	Proactive Safety	& Serious Injury	0.130			0.130		0.13			Yes		6/29/2022		
8	F01	Census Station	No Performance Objective in the SHSMP	Each	0	1.000				1					6/27/2023		
9	F06	Ramp Meter	No Performance Objective in the SHSMP	Each	13.000	13.000				13					6/27/2023		
10	F39	Traffic Signals	No Performance Objective in the SHSMP	Each	8.000	8.000				8					6/27/2023		
11	F42	ADA - Location	No Performance Objective in the SHSMP	Locations	28.000			7.000		7							
12	F45	TMS Structure Component	Transportation Management System	Each	2.000	2.000				2					6/27/2023		
13	F46	TMS Technology Component	Transportation Management Systems	Each	22.000	22.000				22					6/27/2023		
14	G02	Planting (Irrigated)	Roadside Rehabilitation	Acres	0.500			0.500		0.5			Yes	OK	7/14/2022		
15	G09	Worker Safety - Miscellaneous Paving/Treatment	Roadside Safety Improvements	Locations	8.500			8.500		8.5			Yes	Good.	7/21/2022		Rock Blanket

[illegible]

Attachment J

Complete Streets Decision Document

Complete Streets Decision Document (CSDD)

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

☒ NO - Proceed to Question 2

☐ YES - Stop here. The project is exempt from further complete streets evaluation. Sign and attach to the Project Initiation Document (PID).

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

☒ NO - Continue to Question 3

☐ YES - Stop here. The project is exempt from further complete streets evaluation. Sign and attach to PID.

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

☐ NO – Proceed to Question 4

☒ YES – Skip to Question 5 (Note: TPSIS is attached to the PID)

- 4) Which of the following planning documents were consulted to determine bicycle, pedestrian or transit needs? Select all that apply and proceed to Question 5.

☐ a. District Active Transportation Plan

☐ b. Other Caltrans or local/regional agency bike/ped/transit/safe routes to school plans

☐ c. ADA Transition Plan/Grievances (consult with the District ADA Coordinator)

☐ d. Corridor planning documents

☐ e. Other (list here) _____

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

☐ NO – Provide brief description of findings: _____
Stop here. The project meets the requirements for consideration of Complete Streets elements.
Sign and attach to the PID.

☒ YES – Describe them here and proceed to Question 6: ADA Curb Ramps, Crosswalks,
Pedestrian Activated Flashing Beacon, Class II Bike Lanes, and Conflict Zone Green Paint

- 6) Based on the needs identified in Question 5, what would be the preferred complete streets elements to address those needs (e.g. road diet, separated bikeway, reconstructed sidewalk, etc.)? Resources include the Complete Streets Elements Toolbox, the Contextual Guidance for Bikeway Facility Selection, the Bikeway Facility Selection Guidance Memorandum, etc. List them in the table below and provide a rough estimated cost to construct preferred project complete streets elements (including right-of-way and support costs) and proceed to Question 7.

FACILITY TYPE	UNIT	QUANTITY	ESTIMATED TOTAL COST
<i>ADA Curb Ramps</i>	<i>EA</i>	<i>7</i>	<i>\$178,500</i>
<i>High Visibility Crosswalks</i>	<i>EA</i>	<i>16</i>	<i>\$24,000</i>
<i>Pedestrian Activated Flashing Beacon</i>	<i>EA</i>	<i>1</i>	<i>\$5,000</i>
<i>Class II Bike Lanes</i>	<i>LF</i>	<i>3,400</i>	<i>\$34,000</i>
<i>Conflict Zone Green Paint</i>	<i>EA</i>	<i>16</i>	<i>\$20,000</i>

- 7) Was there any known public and stakeholder opposition to any preferred complete streets elements identified for the project? Provide response and proceed to Question 8.

☒ NO

☐ YES – Describe the opposition position here: _____

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

☐ NO - Proceed to Question 9

☒ YES - Stop here. The project has met the requirements for consideration of complete streets elements. Sign and attach to PID.

- 9) Does the project include any of the complete streets elements that are identified in Question 6? Or are there any proposed incremental improvements related to the complete streets elements in Question 6? Provide response and proceed to Question 10.

☐ NO – The programmable project alternative does not include any complete streets elements, and therefore does not address identified needs for complete streets elements.

☐ YES – List them here:

FACILITY TYPE	UNIT	QUANTITY	ESTIMATED TOTAL COST

- 10) Does the project funding have constraints that would preclude the ability to incorporate additional complete streets elements into the project (For example, cannot combine funding with other sources.)? Provide response and proceed to Question 11.

☐ NO

☐ YES – Describe the constraints here: _____

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

Prepared by: MAEN SHAAR

Maen Shaar
PID Preparer in responsible charge
Planning/PID Unit

Concurred by:


Rena Vergara
District Complete Streets Coordinator

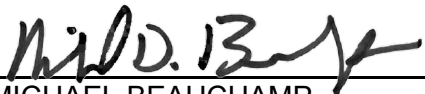
5/5/2022
Date

Ray Desselles
RAY DESSELLE
Deputy District Director, Planning

05/06/2022
Date

Jamal Elsaleh
JAMAL ELSALEH
Deputy District Director, Design

5/9/2022
Date


MICHAEL BEAUCHAMP
District Director

05-09-2022
Date

Revalidation of CSDD at PA&ED

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

 NO – Prepare a Superseding CSDD (answer Questions 1 through 11) replacing the original CSDD, obtain all certified and concurrence signatures below, and attach the superseding CSDD to the project approval document.

X YES – Certify there are no changes to the scope of complete streets elements with only the project engineer certification signature below on the original approved CSDD and attach the CSDD to the project approval document.

Certified by:


Name, Project Engineer

10/16/2025
Date

Branch/Company

Concurred by: (Only include concurrence signatures if a Superseding CSDD is prepared.)

Name
District Complete Streets Coordinator

Date

Name
Deputy District Director, Planning

Date

Name
Deputy District Director, Design or
Division Chief, Design/Project Development

Date

Revalidation of CSDD at PS&E

Does the project scope designed in the plans, specifications and estimate include the complete streets elements identified in Question 6 or 9 of the CSDD (or Superseding CSDD, if applicable) certified at the PA&ED revalidation and the project approval document?

_____ NO – Prepare a Superseding CSDD (answer Questions 1 through 11) replacing the CSDD that was approved at PA&ED revalidation, obtain all certified and concurrence signatures below, and attach to the Supplemental PR. If a Supplemental PR is not required, place in the project history file.

_____ YES – Certify there are no changes to scope of complete streets elements in the project, and that temporary bike and pedestrian facilities during construction have been considered. Include only the project engineer certification signature below on the CSDD that was approved at PA&ED revalidation and place the CSDD in the project history file.

Certified by:

Name, Project Engineer
Branch/Company

Date

Concurred by: (Only include concurrence signatures if a Superseding CSDD is prepared.)

Name
District Complete Streets Coordinator

Date

Name
Deputy District Director, Planning

Date

Name
Deputy District Director, Design or
Division Chief, Design/Project Development

Date

Attachment K
Stormwater Data
Report Signed Cover
Page

Long Form – Stormwater Data Report



Dist-County-Route: 08-RIV-10
Post Mile Limits: 32.6/44.4
Type of Work: Capital Preventive Maintenance
Project ID (EA): 0821000109 (1M3600)

Phase: ☐ PID ☒ PA/ED ☐ PS&E

Applicable Caltrans Post Construction Treatment Requirement: 2012 ☐ 2022 ☒

Regional Water Quality Control Board: Colorado River (Region 7)

Total Disturbed Soil Area: 5 acres PCTA: Not Applicable

Alternative Compliance (acres): Not Applicable ATA 2 (50% Rule)? Yes ☐ No ☒

Estimated Const. Start Date: 02/01/2029 Estimated Const. Completion: 08/01/2030

Risk Level: RL 1 ☒ RL 2 ☐ RL 3 ☐ WPCP ☐ Other: _____

Is (M)WEL0 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 ☒

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.

05/07/2026

Haider Al-Khafaji, Registered Project Engineer

Date

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

05/07/2026

Dalia Alarkan, Project Manager

Date

05/07/2026

Donald Larson, District Maintenance Stormwater Coordinator

Date

05/08/2026

Almabeth Anderson, District Landscape Architect

Date

05/12/2026

Greg Clark, District Stormwater Coordinator

Date

TT

05/11/2026

Attachment L

Risk Register

EA 1M360 QUALITATIVE RISK REGISTER

EA 1M360			Phase: 0			RIV 010 PM: 32.6/ 44.4			PM: Dalia Alarkan		Const Capital Estimate: \$48,299K		Project Description: REHABILITATE PAVEMENT, UPGRADE LIGHTING AND TRANSPORTATION MANAGEMENT SYSTEMS (TMS) ELEMENTS.				Project Location: IN AND NEAR CATHEDRAL CITY, FROM 0.5 MI W/O INDIAN AVENUE TO 0.1 W/O MONTEREY AVENUE.			
Program Code: 201.121 /			M200 Target: 5/1/26						ARM: Kimberly Portillo		R/W Capital Estimate: \$2,559K									
Risk No.	Status	Type	Date of Origin	Updated	Category	Title	Risk Statement	Root Cause/Relevancy/Current Status /Assumptions/Comments/Triggers			Probability	Cost Impact			Schedule Impact		Response Strategy	Response Actions		Risk Owner
4	Active	Threat	3/7/2022	3/10/2026	Environmental	Permits	If there is a change in the scope of the project after Environmental receives the 95% plans, unforeseen permitting delays are possible, requiring additional time for consultation with agencies, extended review times and financial resources.	Due to project studies being in preliminary stages and based on past experience with these type of projects, some items (possible relocation of utilities or additional ADA ramp improvements) may be added to the project scope. Environmental needs 95% plans 9-months before RTL to apply for any necessary permits such as 1602 and 401. These permits will require around 9-months to be processed.		Low	0				0		Mitigate	Design will avoid changes to the design/scope after 95% submittal and will try to submit 95% PSE soon enough so that there is sufficient time to process any necessary permits. Environmental will do early coordination with the agencies during PSE and throughout the permitting process to have the project assigned to available staff and to anticipate any additional requirements prior to the permits being received. PM may adjust cost and schedule as needed.	Adam Compton	
			1								Low			1	Low					
			2									9	Low	2						
			3									4	Low	3						
										11-30%										
5	Active	Threat	3/7/2022	4/7/2026	Design	Oil Price Index	Due to uncertainty in oil price, crude oil index fluctuation could impact asphalt concrete prices. This may lead to an increase in construction capital cost.	The factored cost must be based on the oil index of present month. The actual cost may vary substantially since the crude oil prices for 2028 cannot be predicted with accuracy. Oil bearing items quantities: RHMA-G : 103,812 TONS HMA-A : 3,000 TONS Tack Coat: 200 TONS		Moderate	0				0		Mitigate	A revised estimate will be done in PSE. PM may need to adjust project cost Fund Request.	Mustapha Raouf	
			1											1						
			2									9		2						
			3									4	Moderate	3						
										31-50%										
8	Active	Threat	3/8/2022	4/7/2026	Construction	Severe Weather Conditions	Project is located in an area with strong wind, excessive heat, and low temperature during winter months. Field operations may be temporary suspended due to safety and work quality reasons, this may delay project schedule and increase the cost.	According to the historic records, the HMA / RHMA paving, and thermoplastic striping must be suspended for +/- 3 winter months due to low temperatures. The actual strong winds and excessive heat delayed days during project construction phase are unknown at this time. Project Contract accounts for standard weather delays. AC M500 7-12-28 CCA M600 2-1-30		Moderate	0				0		Mitigate	The PDT should consider the weather factors when estimating project support cost and CCA commitment date. Construction/RE may implement winter suspension days if needed.	Sadique Hossain	
			1											1						
			2									9		2						
			3								Very Low	4		3	Low					
										31-50%										
11	Active	Threat	3/14/2022	3/10/2026	Environmental	Nesting Birds or Roosting Bats	There is potential for nesting birds, protected from harassment under Migratory Bird Treaty Act, or roosting bats, protected from harassment under CA Code of Regulations Title 14 section 251.1, to occur in or near the construction work area. During construction, if any nesting birds or roosting bats are identified within the construction work area (e.g., trees, culverts), this may create work window restrictions that would result in construction schedule delays and capital cost increases.	Environmental has determined that there is a suitable habitat for bird nesting or bat roosting in the project area (trees). The location of bird nesting and bat roosting can vary over time. They may not be there one year, but the following year, they may nest or roost in a new location. Therefore, it is best to do surveys shortly before construction starts. No work can occur in a buffer zone surrounding an active bird nest (bird nesting season is February 1-September 30, as identified in Caltrans Standard Specs) or bat maternity roost (April 1-August 30).		Low	0				0		Mitigate	Environmental will provide SSP 14-6.03A which includes measures for a Contractor supplied biologist (CSB) to conduct pre-construction surveys & address any bat & bird issues during construction. If a bird nest is found, CSB & RE will coordinate to determine if construction windows or buffers are needed & when nest is deemed inactive. If a bat maternity roost is found, PM and RE will coordinate to come up with proper resources and adjust the schedule if needed. Work may continue outside of no-construction buffer areas to limit delays. CSB cost is included in the MCCE.	Chun-Sheng Wang	
			1											1						
			2									9		2						
			3								Low	4	Low	3	Low					
										11-30%										



EA 1M360 QUALITATIVE RISK REGISTER

EA 1M360			Phase: 0			RIV 010 PM: 32.6/ 44.4			PM: Dalia Alarkan		Const Capital Estimate: \$48,299K		Project Description: REHABILITATE PAVEMENT, UPGRADE LIGHTING AND TRANSPORTATION MANAGEMENT SYSTEMS (TMS) ELEMENTS.				Project Location: IN AND NEAR CATHEDRAL CITY, FROM 0.5 MI W/O INDIAN AVENUE TO 0.1 W/O MONTEREY AVENUE.			
Program Code: 201.121 /			M200 Target: 5/1/26						ARM: Kimberly Portillo		R/W Capital Estimate: \$2,559K									
Risk No.	Status	Type	Date of Origin	Updated	Category	Title	Risk Statement	Root Cause/Relevancy/Current Status /Assumptions/Comments/Triggers	Probability	Cost Impact				Schedule Impact		Response Strategy	Response Actions	Risk Owner		
			Originator							Ph	Impact	Ph	Impact	Ph	Impact					
12	Active	Threat	9/12/2024	4/7/2026	Materials Engineering	Digout Quantities	If pavement conditions worsen by construction start in 2028, then digout quantities may need to be increased, resulting in increased project cost and it may also impact schedule. Target AC 7/12/28	The existing pavement is showing signs of distress (longitudinal cracking, transverse cracking, Alligator A and B cracking) in various areas which may deteriorate further from now till construction starts. Severe storm events have been occurring recently. Dig out amount is 10%.	Moderate	0				0		Mitigate	Coordination with Maintenance, Construction and Materials Engineering will be done in PSE to refine the quantities of digouts, if necessary. PM may have to adjust cost and schedule.	Sittampalam Sathiskumar		
										1				1						
		Erika Pantoja								2		9		2						
										3	Low	4	Low	3	Low					
14	Active	Threat	9/23/2024	4/2/2026	PIO	Weather Events	Weather events may result in work overlap with local special events and/or peak travel periods. Coachella and Stagecoach festivals occur in Spring and will require accommodation, if not cancellation, of work during peak travel hours. Additionally, summer traffic will require work schedule that minimizes traffic disruptions. Also, recent storms and weather events have created delays and/or increased public safety concerns on this route. This may delay the project schedule and cost.	If weather events is significant then changes to the project schedule and cost may occur.	Low	0				0		Mitigate	PIO will communicate with stakeholders that may be impacted by the project prior to construction. PIO will share project info with simple fact sheet & sign-up QR codes. Meanwhile, PIO will collect email contacts for future email campaigns. PIO will advertise the project through local newsletters/billboards. During construction, PIO will inform the public with weekly project updates via email. For full freeway closures, PIO will inform the public 3-4 weeks prior. For large events, PIO will inform the RE with dates 4 -6 weeks prior & seek a resolution to keep the travel way open during the events to prevent any unnecessary gridlock.	Emily Leinen		
										1				1						
		Carolina Rojas								2		9		2						
										3	Low	4	Low	3	Very Low					
15	Active		2/19/2025	3/10/2026	PIO	Local Agencies Coordination	Due to several construction projects in the local community, traffic scheduling and coordination may be needed with permits and partnering agencies which may impact project schedule and cost.	I-10 is a major corridor that connects several communities at intersections with SR-60 and SR-79. Many transportation projects occur locally throughout the year and may present challenges for coordinating traffic control and/or detours. Contractor crews and project team should be aware of these concerns and work to notify local agencies of upcoming work plans to better coordinate work schedules, timelines, detours, etc.	Moderate	0				0		Mitigate	PM and Construction should perform early coordination with DTM and agency partners to plan for work ahead. Improved scheduling and/or increasing costs to mitigate should be considered. PIO will work to share project information, once a final schedule is provided, with local cities and the public to better notify public about ongoing work plans.	Carolina Rojas		
										1				1						
		Carolina Rojas								2		9		2						
										3	Low	4	Low	3	Low					
16	Active	Threat	3/6/2025	3/10/2026	Construction	Material Cost Escalation	Due to political instability, construction material cost may increase and there may be shortage of certain materials. This may increase overall cost of project and impact the schedule.	Market instability is difficult to predict. Industrywide anticipation is cost of construction materials will rise significantly. Due to the recent tariffs, cost of most construction materials including pavement has increased and can increase further in future.	Moderate	0				0		Mitigate	PDT will closely monitor the cost of materials and their availability throughout the future project development phases. Revised estimate will be prepared at the end of PSE phase based on the most recent bids. PM may need to adjust the project cost during Fund Request and may need to adjust the schedule as necessary.	Dalia Alarkan		
										1				1						
		Dalia Alarkan								2		9		2						
										3		4	Low	3						



EA 1M360 QUALITATIVE RISK REGISTER

EA 1M360				Phase: 0			RIV 010 PM: 32.6/ 44.4			PM: Dalia Alarkan		Const Capital Estimate: \$48,299K		Project Description: REHABILITATE PAVEMENT, UPGRADE LIGHTING AND TRANSPORTATION MANAGEMENT SYSTEMS (TMS) ELEMENTS.				Project Location: IN AND NEAR CATHEDRAL CITY, FROM 0.5 MI W/O INDIAN AVENUE TO 0.1 W/O MONTEREY AVENUE.			
Program Code: 201.121 /				M200 Target: 5/1/26						ARM: Kimberly Portillo		R/W Capital Estimate: \$2,559K									
Risk No.	Status	Type	Date of Origin	Updated	Category	Title	Risk Statement	Root Cause/Relevancy/Current Status /Assumptions/Comments/Triggers	Probability	Cost Impact				Schedule Impact		Response Strategy	Response Actions	Risk Owner			
			Originator							Ph	Impact	Ph	Impact	Ph	Impact						
18	Active	Threat	3/10/2026	3/23/2026	Environmental	Asbestos Containing Material	If Asbestos Containing Material (ACM) is encountered in areas where the concrete culvert is being replaced, special handling and disposal may be necessary. This may increase capital cost and delay construction schedule.	Asbestos may be encountered in concrete-drilling activities. A task order is in progress to test for asbestos on culvert only. If bridge testing is requested Environmental will need a list of bridges and bridge numbers The task order has already been started and may require revision.	Low	0				0		Mitigate	The task order in progress for ACM testing during PSE. PM may need to adjust the project cost and schedule as necessary.	Olufemi Odufalu			
			1							Low			1	Low							
			2								9		2								
			3							Low	4		3	Low							
										11-30%											
19	Active	Threat	3/10/2026	4/7/2026	Geotechnical	Culvert Design Change	Due to trenchless culvert replacement methods typically requiring deeper installation depths than the existing culvert depths, a culvert design change may be needed to increase the culvert depth and additional geotechnical investigation may be required. This may impact cost and schedule.	Trenchless culvert construction manuals indicate the required depths for various trenchless methods require a minimum of 1-3 pipe diameters of cover from the surface to the top of the culvert. The existing culverts are shallower than this depth so a new culvert alignment would likely be needed if trenchless culvert methods are required. Additionally, the geotechnical investigation during PAED only hand augers to a depth of 5 feet to investigate subsurface conditions. If the culvert depth is increased than the installation depth will be deeper than 5 feet and there is a risk of differing site conditions. Typically an investigation is needed to a minimum depth of the bottom of the proposed culvert. Additional investigation may be required in PSE if the culvert is depended and this investigation is currently not researched.	Moderate	0				0		Mitigate	PDT will consider increasing culvert depth to a minimum of 1-3 pipe diameters as the recommended depth per the Caltrans Trenchless Culvert Manual. PM will consider resourcing a geotechnical investigation to the new culvert depth to mitigate differing site condition claims or having contingency funds to mitigate claims.	Michael Liao			
			1							Moderate			1	Low							
			2								9		2								
			3							Low	4	Low	3	Low							
										31-50%											
20	Active	Threat	3/10/2026	4/7/2026	Environmental	PAED Schedule Delay	Circulation of the Draft Environmental Document (DED) presents a risk to the PAED schedule. Any substantial comments received from the public, regulatory agencies, and stakeholders, combined with the constrained schedule between the FED and PAED milestone, may extend the comment resolution process beyond the projected timeframe, resulting in delays to the project schedule.	The DED is currently in public circulation for 30-days. DED ciruculation began on March 13, 2026 and will conclude on April 15, 2026. During this period, the public, regulatory agencies, and stakeholders may provide comments on the DED. The time allowed between the end of DED circulation (4/15/2026) and PAED (5/1/2026) is more constrained than we typically allow for to address any substantial comments we receive and may take more time for the district/PDT to address.	Moderate	0				0		Mitigate	District Environmental and the PDT will closely monitor incoming comments throughout the DED circulation period, to address any comments received. Comment responses will be addressed as soon as possible to maximize the available window between the close of DED circulation and PAED. If substantial comments are received, District Environmental and Project Management will revisit the the PAED schedule and determine whether an adjustment to the schedule is warranted. Communication with the PDT will be maintained throughout the comment resolution to minimize any impacts to the PAED and subsequent project delivery phases.	Dalia Alarkan			
			1										1	Low							
			2								9		2								
			3								4		3	Low							
										31-50%											



EA 1M360 QUALITATIVE RISK REGISTER

EA 1M360				Phase: 0		RIV 010 PM: 32.6/ 44.4			PM: Dalia Alarkan		Const Capital Estimate: \$48,299K		Project Description: REHABILITATE PAVEMENT, UPGRADE LIGHTING AND TRANSPORTATION MANAGEMENT SYSTEMS (TMS) ELEMENTS.				Project Location: IN AND NEAR CATHEDRAL CITY, FROM 0.5 MI W/O INDIAN AVENUE TO 0.1 W/O MONTEREY AVENUE.			
Program Code: 201.121 /				M200 Target: 5/1/26					ARM: Kimberly Portillo		R/W Capital Estimate: \$137K									
Risk No.	Status	Type	Date of Origin	Updated	Category	Title	Risk Statement	Root Cause/Relevancy/Current Status /Assumptions/Comments/Triggers			Probability	Cost Impact				Schedule Impact		Response Strategy	Response Actions	Risk Owner
			Originator									Ph	Impact	Ph	Impact	Ph	Impact			
16	Active	Threat	3/6/2025	6/3/2025	Construction	Material Cost Escalation	Due to recent 2025 LA Fires, and other political instability, construction material cost may increase and there may be shortage of certain materials. This may increase overall cost of project and impact the schedule.	Market instability is difficult to predict. Industry-wide anticipation is cost of construction materials will rise significantly.			Moderate	0				0		Mitigate	PDT will closely monitor the cost of materials and their availability throughout the future project development phases. Revised estimate will be prepared at the end of PSE phase based on the most recent bids. PM may need to adjust the project cost during Fund Request and may need to adjust the schedule as necessary.	Dalia Alarkan
			1										1							
			2										9		2					
			3										4	Moderate	3					
			31-50%																	

Attachment M

Joint Field Visit Sign-in Sheet

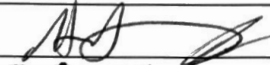
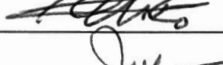
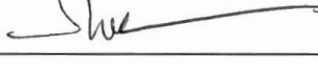
STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
DISTRICT 8 • DIVISION OF DESIGN
FIELD REVIEW MEETINGS

CLEAR

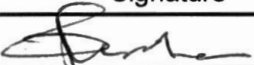
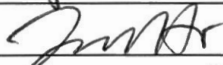
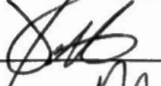
Contract Number-Project I.D. Number 08-1M360 / 0821000109	County, Route, Post Mile RIV, 010, 32.6 - 44.4	Federal Aid Number
Project Description REHABILITATE PAVEMENT, UPGRADE LIGHTING AND TRANSPORTATION MANAGEMENT SYSTEMS (TMS) ELEMENTS.		

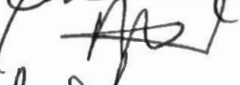
Instructions: The Project Engineer (PE) shall coordinate with the Project Manager to facilitate the field meetings with representatives from the eight Divisions. The joint field meetings shall be held pre-design/Phase 0 and within 2 weeks of the 60% design plans in Phase 1. The PE shall submit the completed sign-in sheet(s) with the design package to the District Office Engineer (DOE). Incomplete submittals will not proceed and DOE will forward to the Design Manager.

Phase 0

Division	Print Name	Signature	Date
Planning			
Design	Dang Nguyen (Traffic Design) GABRIEL QUINTANA		09/23/2025 Hydraulics 9/23/25
Maintenance			
Construction	Hector Guerrero Anthony Hernandez	 	09/23/2025 9/23/2025
Right of Way	JORGE ARELLANES		9/23/25
Environmental	ANDREW KURIA		9/23/25
PPM	Hazem Shekha		9/23/25
Traffic Operations	Huu Ngo		09/23/25

Phase 0

Division	Print Name	Signature	Date
Design	Jude Anantharaman Joshua Ho	 	9/23/25 09/23/25
Maintenance	Marcus A-stu		9-23-25
Construction			
Right of Way			
Environmental	Joshua Combs		9/23/25
PPM			
Traffic Operations	Jim Canudo		9/23/25

TOPCHIA MONJUA MOORSHI  9/23/25
Jaime Estrada  9/23/25

Attachment N

PRSM Quantity

General

M200 Note

: Must enter values for these fields when M200 is reached

Aggregate Base (CY)

0

Asphalt Concrete (TON)

122,000

Bar Reinforcing Steel (LB)

19,250

Imported Borrow (CY)

0

Cement Concrete (CY)

84

Roadway Excavation (CY)

14,100

Structural Concrete (CY)

0

Structural Steel (LB)

Save

Save And Return

Return