

ROAD REPAIR AND ACCOUNTABILITY ACT OF 2017
PROJECT BASELINE AGREEMENT

04-3W200

Resolution **SHOPP-P-2526-06B**

(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 **May 14, 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 **04-3W200**, 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.)*



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 04-3W200
Resolution SHOPP-P-2526-06B
(to be completed by CTC)

Emmanuel Okereke Digitally signed by Emmanuel Okereke
Date: 2026.03.13 13:07:26 -07'00' 3/13/2026
Date
Emmanuel Okereke
Project Manager
Project Applicant

David Ambuehl
David Ambuehl (Mar 23, 2026 10:37:13 PDT) 03/23/2026
Date
David Ambuehl
Acting District Director
California Department of Transportation

Cory Binns
Cory Binns (Apr 27, 2026 14:58:36 PDT) 04/27/2026
Date
FOR **Dina El-Tawansy**
Director
California Department of Transportation

Tanisha Taylor for 05/20/2026
Date
Tanisha Taylor
Executive Director
California Transportation Commission

Memorandum

To: RICHARD J. STONE
Office Chief, SHOPP
Division Of Financial Programming

Date: 03, 16, 2026

File: EA: 04-3W200
EFIS: 0421000325
PM: R31.132/45.658

Emmanuel Okereke

From: EMMANUEL OKEREKE
Project Manager
Alameda 580 /Tri-Valley
Division of PPM East
District 04

Subject: PROJECT STATUS UPDATE FOR SHOPP SB-1 BASELINE AGREEMENT

This memorandum is written to update project status and explain differences in project documents.

The project schedule in the December 18, 2025 approved project report has been updated to reflect current project status and to match with the delivery schedule in the 2026 SHOPP as follows:

Milestone	Date
Right of Way (R/W) Certificate M410	08/27/2027
Ready To List (RTL) M460	09/28/2027
Approve Contract (AC) M500	12/12/2029

The current project budget as adopted in the 2026 SHOPP includes:

Phase	Budget (\$)
Capital Outlay Support (COS)	14,862,000
Capital Outlay Construction	52,389,000
Capital Outlay Right of Way	53,000

The postmiles PM R32.1 / 45.7 in the PPR Equivalent and project report differ from PM R32.132 / 45.658 in CTIPs because of rounding. Project beginning and end locations remain the same. Therefore, project change request is not pursued.

Should you have any questions, please contact me at (510) 715-9293 or Email at Emmanuel.Okereke@dot.ca.gov.

March 16, 2026

Page 2

Copied:

Doanh Nguyen, Rui Gao, Ron Kiaaina, Michael Nguyen

Mort Azimi, Mansue Mamoodi

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:	04/10/26 02:15:49 PM
District	EA	Project ID		PPNO	Project Manager		
04	3W200	0421000325		2913J	OKEREKE, EMMANUEL U		
County	Route	Begin Postmile	End Postmile	Implementing Agency			
ALA	580	R 32.1	45.7	PA&ED	Caltrans		
				PS&E	Caltrans		
				Right of Way	Caltrans		
				Construction	Caltrans		
Project Nickname							
Upgrade Median Concrete Barrier & Install Freeway Safety Lighting							
Location/Description							
In and near San Leandro and Oakland, from 0.2 mile west of 159th Avenue to 0.1 mile east of Market Street; also on Route 13, from Route 580 to Mountain Boulevard Undercrossing (PM 4.262/4.319). Replace median barrier, overhead structures and sign panels, install Light Emitting Diode (LED) safety lights, and upgrade guardrail.							
Legislative Districts							
Assembly:	18, 20		Senate:	07, 09		Congressional:	12, 14
PERFORMANCE MEASURES							
	Primary Asset	Good	Fair	Poor	New	Total	Units
Existing Condition				6.95		6.95	
Programmed Condition		6.95				6.95	
Project Milestone						Actual	Planned
Project Approval and Environmental Document Milestone						12/18/25	
Right of Way Certification Milestone							08/27/27
Ready to List for Advertisement Milestone							09/28/27
Begin Construction Milestone (Approve Contract)							12/12/29
FUNDING (Allocated amounts are shaded)							
Component	Fiscal Year	SHOPP					Total
PA&ED	24/25	3,777					3,777
PS&E	25/26	4,676					4,676
RW Support	25/26	64					64
Const Support	29/30	6,345					6,345
RW Capital	29/30	53					53
Const Capital	29/30	52,389					52,389
Total		67,304					67,304

Project Report

For Project Approval

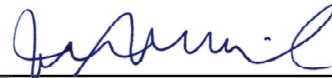
On Route 580 in Alameda County

Between 0.2 mile east of 159th Avenue

And 0.1 mile east of Peralta Street Overcrossing also

On Route 13 at Calaveras Avenue Undercrossing

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:

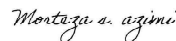


Julie McDaniel, Deputy District Director,
Right of Way and Land Surveys

APPROVAL RECOMMENDED:



Emmanuel Okereke, Project Manager



Morteza (Mort) Azimi,
District Office Chief, Design Alameda

PROJECT APPROVED:

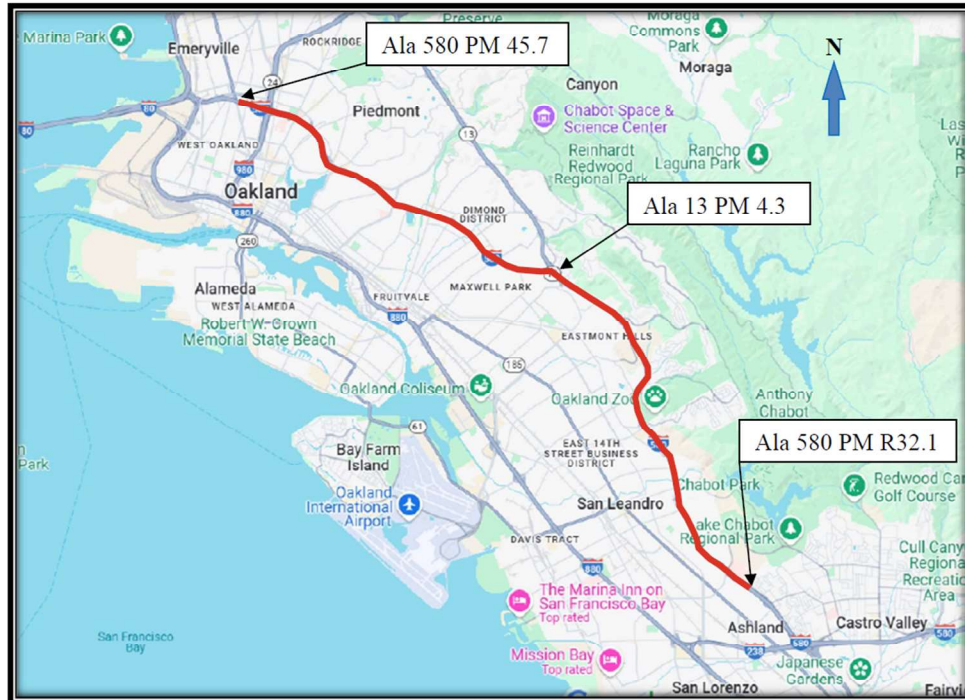


Wajahat Nyaz, Deputy District Director, Design

12/18/2025

Date

Vicinity Map



In Alameda Along Interstate 580 from Postmile (PM) R32.1 to PM 45.7 Median Barrier Replacement, Safety Lighting Installation

Ala 13 PM 4.3 Transition Barrier Replacement

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.

Nicholas Grgich

REGISTERED CIVIL ENGINEER

11/13/2025

DATE



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1. INTRODUCTION

Project Description:

The project proposes to upgrade nonstandard median concrete barrier to Type 60M series concrete barrier, upgrade median bridge railing to Type 836 concrete barrier, install light-emitting diode (LED) safety lighting in the median at two locations (from post mile [PM] R32.6 to PM R33.0 and from PM 43.4 to PM 44.7), and replace overhead signage on Interstate (I-) 580 in Alameda County (Ala). The project also proposes to remove and replace 150 linear feet (LF) of nonstandard metal beam guard railing (MBGR) with 1,700 LF of Midwest Guardrail System (MGS), and place concrete blocks to accommodate transition railing (Type AGT) on State Route (SR) 13. Table 1-1 provides details about the project. Attachment A includes a vicinity map for the project.

Table 1-1. Project Details

Project Limits	04-Ala-580-PM R32.1/45.7 04-Ala-13-PM-4.3	
Number of Alternatives	Two (including the No-Build Alternative)	
	Current Cost Estimate (\$1,000):	Escalated Cost Estimate (\$1,000):
Capital Outlay Support	13,106	14,652
Capital Outlay Construction	52,618	54,309
Capital Outlay Right of Way	0	0
Funding Source	SHOPP 201.015	
Funding Year	2026/2027	
Type of Facility	Freeway Interstate-580 (I-580): 8 to 10 lanes and SR-13: 2 lanes	
Number of Structures	Four components (barrier on retaining wall, barrier transitions, soil nail stabilization, and steel brackets).	
SHOPP Project Output¹	Install MGS – 1,900 LF Install Median Barrier – 65,604 LF Collisions Reduced – 139.081 EA Proactive Safety Enhancement for Vehicles – 6.952 EA Overhead Signs – 19 EA	
Environmental Determination or Document	California Environmental Quality Act (CEQA): Categorical Exemption (CE) National Environmental Policy Act (NEPA): Categorical Exclusion (CE)	
Legal Description	In Alameda County in and near San Leandro and Oakland on Route 580 from 0.2 mile east of 159th Avenue Overcrossing to 0.1 mile east of Peralta Street Overcrossing and on Route 13 at Calaveras Avenue Undercrossing.	
Project Development Category	5	

SHOPP = State Highway Operation and Protection Program

¹Asset Performance Measures Provided as Attachment L

2. RECOMMENDATION

It is recommended that this Project Report be approved using the Build Alternative and that this project proceed to the plans, specifications, and estimate (PS&E) phase.

3. BACKGROUND

This project is listed in the 2024 SHOPP cycle under SHOPP ID 21275. District Office of Traffic Safety prepared a Conceptual Report in the Project Initiation Report (PIR) dated June 11, 2019, to summarize existing conditions and propose recommendations to improve the safety of the roadway.

I-580 is a four- to five-lane, 12-foot-wide expressway extending in the east and west direction with a posted speed limit of 65 miles per hour. Trucks weighing 4.5 tons are prohibited between Foothill Boulevard in San Leandro (PM 34.89) and Grand Avenue in Oakland (PM 43.76). Existing nonstandard median barrier (Type 50) with an effective height of 32 inches is found within the project limits. The existing concrete median barriers along this project limit have minimal to no exposed base due to overlays of pavement by previous projects, and the barrier also exhibits chipping, cracking and tire marks caused by errant vehicles.

Based on the Safety Evaluation (Spot Improvement) analysis of the Conceptual Report in the PIR, the proposed freeway segment addressed by this project has a generally higher than average accident rate than similar State of California (State) highways with 1,600 total collisions in the 3-year period from (January 2014 to December 2016). At two spot locations within the project limits (PM R32.6 to PM R33.0 and PM 43.422 to PM 44.7), a high concentration of dark night-time accidents occurred a total of 426 times, 3 of which were fatal and 154 of which involved serious injury. An updated Traffic Accident Surveillance and Analysis System (TASAS) Crash Data Analysis had been provided for crash rates during July 2019 to June 2024). The results are summarized in Section 4C. In general, total accident rates are lower than state average, however, fatal accident rates are higher than state average.

The District Office of Traffic Safety requested that a Minor B Improvement project (EA 04-4W540) be initiated to install MGS on I-580 (PM R38.915 to PM R39.061) and SR-13 (PM 4.262 to PM 4.319) to prevent roadway departure collisions. Due to funding constraints, EA 04-4W540 was not selected for delivery in Fiscal Year (FY) 2022-2023 by the Minor Program, but its scope was added to this current project.

Furthermore, District 4 Office of Maintenance received two Customer Service Requests (CSRs 797000 and 805247) from a resident of the City of Oakland on May 23, 2020 and July 30, 2020, respectively. The resident expressed concerns that a lack of guardrails adjacent to a Mountain Boulevard (a local street) caused vehicles to run off the State's facility, hitting trees and damaging the chain link fence near pedestrian and bicycle pathways. Additionally, one fatal incident has occurred nearby at Calaveras Avenue Undercrossing (Bridge #33-0348R).

The Project Initiation Report (PIR) was approved on June 26, 2023, for programming in the 2024 SHOPP under the Safety Collision Severity Reduction program (201.015).

4. PURPOSE AND NEED

Purpose

The purpose of this project is to improve traffic safety and nighttime visibility, thereby reducing the potential for and severity of collisions along this stretch of I-580 and a spot location along SR13. The proposed improvements will help to reduce the severity of collision and improve performance measures of the asset from “Poor” to “Good.” These improvements will help prevent severe injuries, protect the structural integrity of the freeway, and maintain its functionality.

Need

This project proposes installing LED safety lights along I-580 to address visibility and replacing standard concrete median barriers on I-580 and upgrading guardrails on I-580 and SR 13 to reduce the potential for and severity of collisions.

4A. Problem, Deficiencies, Justification

In general, this segment of freeway has higher than average accident rates compared to similar State highways, with 1,600 total collisions, based on the 3-year period (January 1, 2014, to December 31, 2016). In addition, there were an elevated number of concentrated nighttime collisions from PM R32.6 to PM R33.0 and from PM 43.422 to PM 44.7. Deficiencies are the following:

- The existing median barrier is no longer standard.
- Past overlays have raised the roadway surface, thereby reducing the effective height of the barrier relative to the shoulder surface. Future overlays are expected to further increase the roadway elevation, which may lower the overall proposed barrier height below standard.
- Portions of existing median barrier exhibit distress in the form of chipping and cracking.
- Metal beam guardrail is no longer standard and needs to be upgraded to MGS.
- Customer service requests have expressed concerns about the lack of guardrail adjacent to Mountain Boulevard.

In addition, 19 overhead signs (13 one-post signs and 6 two-post signs) have been identified for replacement by Traffic Signing. The current project will bring this segment of I-580 (and spot location on SR 13) into compliance with current standards and improve traffic safety. A set of preliminary plans is provided in Attachment B.

4B. Regional and System Planning

The Metropolitan Transportation Commission (MTC) functions as both the State-designated Regional Transportation Planning Agency and federally designated Metropolitan Planning Organization (MPO). As such, it is responsible for the update of the Regional Transportation Plan (RTP), a long-range transportation and land use plan for the region. Under Senate Bill (SB) 375, along with an updated RTP, each region in California must develop a Sustainable

Communities Strategy (SCS) that promotes active transportation within mixed-use commercial and residential development that is found close to mass transit, jobs, schools, shopping, parks, recreation, and other amenities. MTC's Plan Bay Area (PBA) 2050 was adopted by the Association of Bay Area Governments and MTC on October 21, 2021; it serves as the San Francisco Bay Area's RTP and SCS.

4C. Traffic

Current and Forecasted Traffic

Table 4-1 presents current and forecast I-580 traffic volumes from San Pablo Avenue to west of Golf Links Road.

Table 4-1. Traffic Volume - Section 1 - San Pablo Avenue to West of Golf Links Road

Year	Present Year	Construction Year	10 Year	20 Year	40 Year
	2024	2027	2034	2047	2067
ADT	207,500	213,200	226,700	251,600	289,900
DHV				19,200	
% Truck	1.11%				
Traffic Index (TI) - Median Lanes			8.50	9.00	10.00
ESAL - Median Lanes			560,000	1,169,000	2,530,000
Traffic Index (TI) - Right Lanes			10.00	11.00	12.00
ESAL - Right Lanes			2,243,000	4,678,000	4,678,000
D%	55.7%				

% Truck = trucks as a percentage of overall traffic

ADT = average daily traffic

D% = percentage of traffic in the peak direction during the peak hour

DHV = design hourly volume

ESAL = equivalent single-axle load constant

Table 4-2 presents current and forecast I-580 traffic volumes from Golf Links Road to 150th Avenue.

Table 4-2. Traffic Volume - Section 2 - Golf Links Road to 150th Avenue

Year	Present Year	Construction Year	10 Year	20 Year	40 Year
	2024	2027	2034	2047	2067
ADT	164,600	170,400	184,000	209,100	247,800
DHV				16,400	
% Truck	1.11%				
Traffic Index (TI) - Median Lanes			8.00	9.00	10.00
ESAL - Median Lanes			452,000	953,000	2,108,000

Traffic Index (TI) - Right Lanes			9.50	10.50	11.50
ESAL - Right Lanes			1,808,000	3,816,000	3,816,000
D%	54.7%				

Table 4-3 presents current and forecast SR-13 traffic volumes from PM 4.26 to PM 4.32, near the I-580 ramps.

Table 4-3. Traffic Volume - Section 3 - SR 13 PM 4.26 to PM 4.32 - Near I-580 Ramps

Year	Present Year	Construction Year	10 Year	20 Year	40 Year
	2024	2027	2034	2047	2067
ADT	62,400	64,400	69,200	77,900	91,400
DHV				6,800	
% Truck	1.15%				
Traffic Index (TI) - Median Lanes			6.50	7.00	8.00
ESAL - Median Lanes			73,000	156,000	339,000
Traffic Index (TI) - Right Lanes			8.00	8.50	9.50
ESAL - Right Lanes			293,000	617,000	617,000
D%	53.1%				

The Table B report identified in Tables 4-4 through 4-12 was generated on April 21, 2025 and it presents collision rates per million vehicles for the most recent 5-year period from July 1, 2019, to June 30, 2024, from the Traffic Accident Surveillance and Analysis System (TASAS).

TABLE 4-4. TASAS Table B Collision Rates (July 1, 2019 – June 30, 2024)

Segment	Number of Collisions					Collision Rates (per million vehicle miles)					
	Total	Fatal	Serious Injury	Other Injury	PDO	Actual			Average		
						F	F + I	Total ⁽¹⁾	F	F + I	Total ⁽¹⁾
Ala I-580 (PM 32.13 to PM 32.6) mainline only	60	0	2	24	34	0.000	0.20	0.46	0.004	0.33	1.03

¹All reported collisions (including property damage only [PDO] collisions)

Table 4-4 (TASAS Table B Crash Rates (July 1, 2019, to June 30, 2024)) summarizes and compares the actual crash rates for the segment Ala I-580 PM 32.13 to PM 32.6 to the average rates for similar facilities throughout the state. The total crash rates include all reported crashes: fatal, injury, and PDO.

Analysis of the TASAS Table B records shows a total of 60 crashes within the segment and study period identified in Table 4-4, with a total rate of fatal and injury-related crash rate that is below the average crash rate for similar facilities statewide, and a total crash rate that is below the average for similar facilities statewide.

Detailed analysis per the TASAS Selective Accident Retrieval (TSAR) report generated on April 21, 2025 shows that the primary collision factors in the segment were:

- 2 (3.3%) Influence Alcohol,
- 26 (43.3%) Improper Turn,
- 15 (25.0%) Speeding,
- 13 (21.7%) Other Violations, and
- 4 (6.7%) Other Than Driver.

The types of collisions included:

- 17 (28.3%) Sideswipe,
- 13 (21.7%) Rear End,
- 2 (3.3%) Broadside,
- 24 (40.0%) Hit Object, and
- 4 (6.7%) Overturn.

The primary location of collisions were the following:

- 12 (20.0%) Beyond Shoulder Drivers Left,
- 11 (18.3%) Left Lane,
- 27 (45.0%) Interior Lanes,
- 13 (21.7%) Right Lane,
- 1 (1.7%) Right Shoulder Area,
- 11 (18.3%) Beyond Shoulder Drivers Right,
- 1 (1.7%) Gore Area,
- 1 (1.7%) Not Stated, and
- 8 (13.3%) Does Not Apply.

The objects struck were the following:

- 1 (1.7%) End of Guardrail,
- 1 (1.7%) Guardrail,
- 11 (18.3%) Median Barrier,
- 4 (6.7%) Dike or Curb,
- 4 (6.7%) Cut Slope or Embankment,
- 1 (1.7%) Trees,
- 1 (1.7%) Other Object on Road,
- 1 (1.7%) Overturned,
- 1 (1.7%) Crash Cushion (Other),
- 1 (1.7%) Unknown Object Struck,
- 1 (1.7%) No Object Involved,
- 33 (55.0%) V1 Through V9 Vehicle 1 To 9, and
- 8 (13.3%) Does Not Apply.

Table 4-5 (TASAS Table B Crash Rates July 1, 2019, to June 30, 2024) summarizes and compares the actual crash rates for I-580 from PM 32.6 to PM 33.0 to the average rates for similar facilities throughout the state. The total crash rates include all reported crashes: fatal, injury, and PDO.

TABLE 4-5. TASAS Table B Collision Rates (July 1, 2019 – June 30, 2024)

Segment	Number of Collisions					Collision Rates (per million vehicle miles)					
	Total	Fatal	Serious Injury	Other Injury	PDO	Actual			Average		
						F	F + I	Total ⁽¹⁾	F	F + I	Total ⁽¹⁾
Ala I-580 (PM 32.6 to PM 33.0) mainline only	95	0	1	28	56	0.000	0.30	0.73	0.004	0.33	1.03

¹All reported collisions (including property damage only [PDO] collisions)

Analysis of the TASAS Table B records shows a total of 95 crashes within the PM 32.6 to PM 33.0 segment of I-580 during July 1, 2019 to June 30, 2024, with a total rate of fatal and injury related crash rate that is below as the average crash rate for similar facilities statewide, and a total crash rate that is below the average for similar facilities statewide.

Detailed analysis per the TSAR report generated on April 21, 2025, shows that the primary collision factors in the segment were:

- 11 (11.6%) Influence Alcohol,
- 22 (23.2%) Improper Turn,
- 34 (35.8%) Speeding,
- 17 (17.9%) Other Violations,
- 10 (10.5%) Other Than Driver, and
- 1 (1.1%) Unknown.

The types of collisions included:

- 22 (23.2%) Sideswipe,
- 30 (31.6%) Rear End,
- 1 (1.1%) Broadside,
- 39 (41.1%) Hit Object,
- 2 (2.1%) Overturn, and
- 1 (1.1%) Other.

The primary locations of collisions were the following:

- 14 (14.7%) Beyond Shoulder Drivers Left,
- 17 (17.9%) Left Lane,
- 50 (52.6%) Interior Lanes, 13 (13.7%) Right Lane,
- 1 (1.1%) Right Shoulder Area,
- 13 (13.7%) Beyond Shoulder Drivers Right,

- 1 (1.1%) Not Stated, and
- 19 (20.0%) Does Not Apply.

The objects struck were the following:

- 4 (4.2%) Guardrail,
- 14 (14.7%) Median Barrier,
- 2 (3.2%) Wall (Except Sound Wall)
- 3 (3.2%) Dike or Curb,
- 2 (2.1%) Cut Slope or Embankment,
- 1 (1.1%) Sound Wall,
- 7 (7.4%) Other Object on Road,
- 1 (1.1%) Overturned,
- 1 (1.7%) Unknown Object Struck,
- 60 (63.2%) V1 Through V9 Vehicle 1 To 9, and
- 19 (20.0%) Does Not Apply.

Table 4-6 (TASAS Table B Crash Rates July 1, 2019 to June 30, 2024) summarizes and compares the actual crash rates for the segment of I-580 between PM R 33.0 and R 35.421 to the average rates for similar facilities throughout the State. The Total crash rates include all reported crashes: fatal, injury, and PDO.

TABLE 4-6. TASAS Table B Collision Rates (July 1, 2019 – June 30, 2024)

Segment	Number of Collisions					Collision Rates (per million vehicle miles)					
	Total	Fatal	Serious Injury	Other Injury	PDO	Actual			Average		
						F	F + I	Total ⁽¹⁾	F	F + I	Total ⁽¹⁾
Ala I-580 (PM R 33.0 to PM R 35.421) mainline only	370	4	13	108	245	0.006	0.19	0.57	0.004	0.35	1.08

¹All reported collisions (including property damage only [PDO] collisions)

Analysis of the TASAS Table B records shows a total of 370 crashes within the ALA I-580 PM R 33.0- R 35.421 and study periods summarized above, with a total rate of fatal and injury related crash rate that is below as the average crash rate for similar facilities statewide, and a total crash rate that is below the average for similar facilities statewide.

Detailed analysis per the TASAS Selective Accident Retrieval (TSAR) generated on **04-21-2025** shows that the primary collision factors in the segment were:

- 30 (8.1%) Influence Alcohol,
- 2 (0.5%) Follow Too Close,
- 2 (0.5%) Failure To Yield,
- 93 (25.1%) Improper Turn,
- 118 (31.9%) Speeding,
- 98 (26.5%) Other Violations,

- 1 (0.3%) Improper Driving,
- 21 (5.7%) Other Than Driver, and
- 5 (1.4%) Unknown.

The types of collisions included the following:

- 1 (0.3%) Head-on,
- 121 (32.7%) Sideswipe,
- 124 (33.5%) Rear End,
- 5 (1.4%) Broadside,
- 101 (27.3%) Hit Object,
- 8 (2.2%) Overturn,
- 2 (0.5%) Auto-Pedestrian, and
- 8 (2.2%) Other.

The primary locations of collisions were the following:

- 2 (0.5%) Beyond Median or Stripe-Left,
- 53 (2.5%) Beyond Shoulder Drivers Left,
- 4 (1.1%) Left Shoulder Area,
- 76 (20.5%) Left Lane,
- 181 (48.9%) Interior Lanes,
- 99 (26.8%) Right Lane,
- 6 (1.6%) Right Shoulder Area,
- 27 (7.3%) Beyond Shoulder Drivers Right,
- 4 (1.1%) Gore Area,
- 7 (1.9%) Not Stated, and
- 63 (17.0%) Does Not Apply.

The objects struck were the following:

- 4 (1.1%) Side of Bridge Railing,
- 1 (0.3%) End of Guardrail,
- 1 (0.3%) Bridge Approach Guardrail,
- 3 (0.8%) Traffic Sign/Sign Post,
- 9 (2.4%) Guardrail,
- 46 (12.4%) Median Barrier,
- 2 (0.5%) Wall (Except Sound Wall)
- 7 (1.9%) Dike or Curb,
- 1 (0.3%) Raised Bars,
- 2 (0.5%) Cut Slope or Embankment,
- 1 (0.3%) Trees,
- 4 (1.1%) Sound Wall,
- 1 (0.3%) Temp Barricades, Cones
- 7 (1.9%) Other Object on Road,

- 1 (2.7%) Overturned,
- 3 (0.8%) Crash Cushion (Other)
- 1 (0.3%) Unknown Object Struck,
- 3 (0.8%) No Object Struck,
- 264 (71.4%) V1 Through V9 Vehicle 1 To 9, and
- 63 (17.0%) Does Not Apply.

Table 4-7 (TASAS Table B Collision Rates July 1, 2019, to June 30, 2024) summarizes and compares the actual crash rates for the I-580 segment from PM R35.422 to PM R37.421 to the average rates for similar facilities throughout the state. The total crash rates include all reported crashes: fatal, injury, and PDO.

TABLE 4-7. TASAS Table B Collision Rates (July 1, 2019 – June 30, 2024)

Segment	Number of Collisions					Collision Rates (per million vehicle miles)					
	Total	Fatal	Serious Injury	Other Injury	PDO	Actual			Average		
						F	F + I	Total ⁽¹⁾	F	F + I	Total ⁽¹⁾
Ala I-580 (PM R 35.422 to PM R 37.421) mainline only	374	2	14	95	263	0.004	0.20	0.66	0.004	0.35	1.09

¹All reported collisions (including property damage only [PDO] Collisions)

Analysis of the TASAS Table B records shows a total of 374 crashes within the I-580 segment from PM R 35.422 to PM R 37.41 during July1, 2019, to June 30, 2024, with a total rate of fatal and injury related crash rate that is below the average crash rate for similar facilities statewide, and a total crash rate that is below the average for similar facilities statewide.

Detailed analysis per the TSAR report generated on April 21, 2025, shows that the primary collision factors in the segment were:

- 32 (8.6%) Influence Alcohol,
- 48 (12.8%) Improper Turn,
- 162 (43.3%) Speeding,
- 94 (25.1%) Other Violations,
- 36 (9.6%) Other Than Driver, and
- 2 (0.5%) Unknown.

The types of collisions included the following:

- 9 (2.4%) Head-on,
- 107 (28.6%) Sideswipe,
- 148 (39.6%) Rear End,
- 4 (1.1%) Broadside,
- 90 (24.1%) Hit Object,
- 8 (2.1%) Overturn, and
- 8 (2.1%) Other.

The primary locations of collisions were as follows:

- 2 (0.5%) Beyond Median or Stripe - Left
- 45 (12.0%) Beyond Shoulder Drivers Left,
- 2 (0.5%) Left Shoulder Area,
- 68 (18.2%) Left Lane,
- 167 (44.7%) Interior Lanes,
- 121 (32.4%) Right Lane,
- 6 (1.6%) Right Shoulder Area,
- 34 (9.1%) Beyond Shoulder Drivers Right,
- 2 (0.5%) Gore Area,
- 7 (1.9%) Not Stated, and
- 74 (19.8%) Does Not Apply.

The objects struck were the following:

- 2 (0.5%) End of Guardrail,
- 1 (0.3%) Bridge Approach Guardrail,
- 1 (0.3%) Light or Signal Pole,
- 1 (0.3%) Traffic Sign/Sign Post,
- 15 (4.0%) Guardrail,
- 45 (12.0%) Median Barrier,
- 1 (1.6%) Wall (Except Sound Wall)
- 2 (0.5%) Dike or Curb,
- 2 (0.5%) Cut Slope or Embankment,
- 6 (1.6%) Over Embankment,
- 2 (0.5%) Trees,
- 1 (0.3%) Natural Material Road,
- 18 (4.8%) Other Object on Road,
- 4. (1.1%) Overturned,
- 1 (0.3%) Crash Cushion (Sand),
- 2 (0.5%) Crash Cushion (Other)
- 1 (0.3%) Unknown Object Struck,
- 269 (71.9%) V1 Through V9 Vehicle 1 To 9, and
- 74 (19.8%) Does Not Apply.

Table 4-8 (TASAS Table B Crash Rates July 1, 2019 to June 30, 2024) summarizes and compares the actual crash rates for the segment of I-580 PM R 37.422 to PM R 39.421 to the average rates for similar facilities throughout the State. The Total crash rates include all reported crashes: fatal, injury, and PDO.

TABLE 4-8. TASAS Table B Collision Rates (July 1, 2019 – June 30, 2024)

Segment	Number of Collisions					Collision Rates (per million vehicle miles)						
	Total	Fatal	Serious Injury	Other Injury	PDO	Actual			Average			
						F	F + I	Total ⁽¹⁾	F	F + I	Total ⁽¹⁾	

Ala I-580 (PM R 37.422 to PM R 39.421) Mainline only	437	5	19	105	308	0.008	0.21	0.73	0.004	0.35	1.09
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¹All reported collisions (including property damage only [PDO] collisions)

Analysis of the TASAS Table B records shows a total of 437 crashes within the segment of I-580 PM R 37.422- R 39.421 and study periods summarized above, with a total rate of fatal and injury related crash rate that is below as the average crash rate for similar facilities statewide, and a total crash rate that is below the average for similar facilities statewide.

Detailed analysis per the TSAR report generated on April 21, 2025, shows that the primary collision factors in the segment were:

- 27 (6.2%) Influence Alcohol,
- 1 (0.2%) Failure to Yield,
- 67 (15.3%) Improper Turn,
- 205 (46.9%) Speeding,
- 105 (24.0%) Other Violations,
- 4 (0.9%) Improper Driving,
- 24 (5.5%) Other Than Driver, and
- 4 (0.9%) Unknown.

The types of collisions included the following:

- 5 (1.1%) Head-on,
- 120 (27.5%) Sideswipe,
- 208 (47.6%) Rear End,
- 3 (0.7%) Broadside,
- 84 (19.2%) Hit Object,
- 9 (2.1%) Overturn,
- 1 (0.2%) Auto-Pedestrian, and
- 7 (1.6%) Other.

The primary locations of collisions were as follows:

- 1 (0.2%) Beyond Median or Stripe-Left
- 41 (9.4%) Beyond Shoulder Drivers Left,
- 2 (0.5%) Left Shoulder Area,
- 79 (18.1%) Left Lane,
- 214 (49.0%) Interior Lanes,
- 140 (32.0%) Right Lane,
- 7 (1.6%) Right Shoulder Area,
- 27 (6.2%) Beyond Shoulder Drivers Right,
- 3 (0.7%) Gore Area,
- 4 (0.9%) Other,
- 9 (2.1%) Not Stated, and

- 91 (20.8%) Does Not Apply.

The objects struck were as follows:

- 2 (0.5%) End of Guardrail,
- 2 (0.5%) Traffic Sign/Sign Post,
- 10 (2.3%) Guardrail,
- 40 (9.2%) Median Barrier,
- 1 (0.5%) Wall (Except Sound Wall)
- 8 (1.8%) Dike or Curb,
- 2 (0.5%) Raised Bars,
- 3 (0.7%) Cut Slope or Embankment,
- 2 (0.5%) Over Embankment,
- 1 (0.2%) Trees,
- 2 (0.5%) Plants,
- 1 (0.2%) Natural Material on Road,
- 1 (0.2%) Temp Barricades, Cones
- 12 (2.7%) Other Object on Road,
- 6. (1.4%) Overturned,
- 1 (0.2%) Crash Cushion (Other)
- 1 (0.2%) Unknown Object Struck,
- 1 (0.2%) No Object Involved,
- 341 (78.0%) V1 Through V9 Vehicle 1 To 9, and
- 91 (20.8%) Does Not Apply.

Table 4-9 (TASAS Table B Crash Rates July 1, 2019, to June 30, 2024) summarizes and compares the actual crash rates for the segment of I-580 from PM R 39.422 to PM R 41.422 to the average rates for similar facilities throughout the State. The total crash rates include all reported crashes: fatal, injury, and PDO.

TABLE 4-9. TASAS Table B Collision Rates (July 1, 2019 – June 30, 2024)

Segment	Number of Collisions					Collision Rates (per million vehicle miles)					
	Total	Fatal	Serious Injury	Other Injury	PDO	Actual			Average		
						F	F + I	Total ⁽¹⁾	F	F + I	Total ⁽¹⁾
Ala I-580 (PM R 39.422 to PM R 41.422) mainline only	574	7	11	154	402	0.012	0.29	0.97	0.004	0.35	1.08

¹All reported collisions (includes Property Damage Only (PDO) Collisions)

Analysis of the TASAS Table B records shows a total of 574 crashes within the I-580 segment of PM R 39.422 to PM R 41.422 during July 1, 2019, to June 30, 2024, with a total rate of fatal and injury related crash rate that is below as the average crash rate for similar facilities statewide, and a total crash rate that is below the average for similar facilities statewide.

Detailed analysis per the TSAR report generated on April 21, 2025 shows that the primary collision factors in the segment were:

- 39 (6.8%) Influence Alcohol,
- 1 (0.2%) Follow Too Close,
- 1 (0.2%) Failure to Yield,
- 60 (10.5%) Improper Turn,
- 295 (51.4%) Speeding,
- 134 (23.3%) Other Violations,
- 3 (0.5%) Improper Driving, and
- 7 (1.2%) Unknown.

The types of collisions included the following:

- 5 (0.9%) Head-on,
- 139 (24.2%) Sideswipe,
- 303 (52.8%) Rear End,
- 8 (1.4%) Broadside,
- 105 (18.3%) Hit Object,
- 4 (0.7%) Overturn,
- 2 (0.3%) Auto-Pedestrian, and
- 8 (1.4%) Other.

The primary locations of collisions were as follows:

- 1 (0.2%) Beyond Median or Stripe- Left
- 48 (8.4%) Beyond Shoulder Drivers Left,
- 2 (0.3%) Left Shoulder Area,
- 148 (25.8%) Left Lane,
- 271 (47.2%) Interior Lanes,
- 149 (26.0%) Right Lane,
- 6 (1.0%) Right Shoulder Area,
- 35 (6.1%) Beyond Shoulder Drivers Right,
- 5 (0.9%) Gore Area,
- 3 (0.5%) Other
- 1 (0.2%) High-Occupancy Vehicle Lane(s),
- 4 (0.7%) Not Stated and
- 130 (22.6%) Does Not Apply.

The objects struck were as follows:

- 2 (0.3%) End of Guardrail,
- 21 (3.7%) Guardrail,
- 48 (8.4%) Median Barrier,
- 1 (0.3%) Wall (Except Sound Wall)
- 2 (0.3%) Dike or Curb,
- 5 (0.9%) Cut Slope or Embankment,

- 2 (0.3%) Over Embankment,
- 1 (0.2%) Natural Material on Road,
- 1 (0.2%) Temp Barricades, Cones
- 20 (3.5%) Other Object on Road,
- 3 (0.5%) Overturned,
- 6 (1.0%) Crash Cushion (Other)
- 2 (0.3%) Unknown Object Struck,
- 3 (0.5%) No Object Involved,
- 457 (78.0%) V1 Through V9 Vehicle 1 To 9,
- 2 (0.3%) Not Stated, and
- 128 (22.3%) Does Not Apply.

Table 4-10 (TASAS Table B Crash Rates July 1, 2019 to June 30, 2024) summarizes and compares the actual crash rates for the I-580 segment PM R 41.422 to PM 43.422 to the average rates for similar facilities throughout the state. The total crash rates include all reported crashes: fatal, injury, and PDO.

TABLE 4-10. TASAS Table B Collision Rates (July 1, 2019 – June 30, 2024)

Segment	Number of Collisions					Collision Rates (per million vehicle miles)					
	Total	Fatal	Serious Injury	Other Injury	PDO	Actual			Average		
						F	F + I	Total ⁽¹⁾	F	F + I	Total ⁽¹⁾
ALA I-580 (PM R 41.422 to PM 43.422) Mainline only	587	8	15	132	432	0.014	0.27	1.03	0.004	0.36	1.10

¹All reported collisions (includes Property Damage Only (PDO) Collisions)

Analysis of the TASAS Table B records shows a total of 587 crashes within the I-580 segment PM R41.422 to PM 43.422 during July 1, 2019, to June 30, 2024, with a total rate of fatal and injury related crash rate that is below the average crash rate for similar facilities statewide, and a total crash rate that is below the average for similar facilities statewide.

Detailed analysis per the TSAR report generated on April 21, 2025 shows that the primary collision factors in the segment were:

- 39 (6.8%) Influence Alcohol,
- 1 (0.2%) Failure to Yield,
- 94 (16.0%) Improper Turn,
- 273 (46.5%) Speeding,
- 151 (25.7%) Other Violations,
- 5 (0.7%) Improper Driving,
- 24 (4.1%) Other Than Driver, and
- 1 (0.2%) Unknown.

The types of collisions included:

- 7 (1.2%) Head-on,
- 156 (26.6%) Sideswipe,
- 242 (41.2%) Rear End,
- 11 (1.9%) Broadside,
- 155 (26.4%) Hit Object,
- 13 (2.2%) Overturn,
- 1 (0.2%) Auto-Pedestrian, and
- 2 (0.3%) Other.

The primary locations of collision were the following:

- 2 (0.3%) Beyond Median or Stripe-Left,
- 96 (16.4%) Beyond Shoulder Drivers Left,
- 2 (0.3%) Left Shoulder Area,
- 104 (17.7%) Left Lane,
- 261 (44.5%) Interior Lanes,
- 168 (28.6%) Right Lane,
- 7 (1.2%) Right Shoulder Area,
- 42 (7.2%) Beyond Shoulder Drivers Right,
- 3 (0.5%) Gore Area,
- 4 (0.7%) Other,
- 3 (0.5%) Not Stated, and
- 133 (22.7%) Does Not Apply.

The objects struck included the following:

- 3 (0.5%) Side of Bridge Railing,
- 5 (0.9%) End of Guardrail,
- 1 (0.2%) Traffic Sign/ Sign Post,
- 9 (1.5%) Guardrail,
- 95 (16.2%) Median Barrier,
- 4 (1.9%) Wall (Except Sound Wall)
- 2 (0.3%) Dike or Curb,
- 1 (0.2%) Raised Bars,
- 1 (0.2%) Guidepost, Culvert, PM,
- 10 (1.7%) Cut Slope or Embankment,
- 2 (0.3%) Over Embankment,
- 3 (0.5%) Fence,
- 2 (0.3%) Trees,
- 3 (0.5%) Sound Wall,
- 14 (2.4%) Other Object on Road,
- 10 (1.7%) Overturned,
- 4 (0.7%) Crash Cushion (Other),
- 3 (0.5%) No Object Involved,
- 415 (70.7%) V1 Through V9 Vehicle 1 To 9, and
- 133 (22.7%) Does Not Apply.

Table 4-11 (TASAS Table B Crash Rates July 1, 2019 to June 30, 2024) summarizes and compares the actual crash rates for the segment of I-580 from PM 43.422 to PM 44.70 to the average rates for similar facilities throughout the state. The total crash rates include all reported crashes: fatal, injury, and PDO.

TABLE 4-11. TASAS Table B Collision Rates (July 1, 2019 – June 30, 2024)

Segment	Number of Collisions					Collision Rates (per million vehicle miles)					
	Total	Fatal	Serious Injury	Other Injury	PDO	Actual			Average		
						F	F + I	Total ⁽¹⁾	F	F + I	Total ⁽¹⁾
ALA I-580 (PM 43.422 to PM 44.70) Mainline only	390	2	10	100	278	0.005	0.29	1.01	0.004	0.36	1.10

¹All reported collisions (including PDO collisions)

Analysis of the TASAS Table B records shows a total of 390 crashes within the segment of I-580 between PM 43.422 and PM 44.70 during July 1, 2019, to June 30, 2024, with a total rate of fatal and injury related crash rate that is below as the average crash rate for similar facilities statewide, and a total crash rate that is below the average for similar facilities statewide.

Detailed analysis per the TSAR report generated on April 21, 2025 shows that the primary collision factors in the segment were:

- 36 (9.2%) Influence Alcohol,
- 3 (0.8%) Failure to Yield,
- 65 (16.7%) Improper Turn,
- 146 (37.4%) Speeding,
- 122 (31.3%) Other Violations,
- 1 (0.3%) Improper Driving,
- 16 (4.1%) Other Than Driver, and
- 1 (0.3%) Unknown.

The types of collisions included:

- 3 (0.8%) Head-on,
- 137 (35.1%) Sideswipe,
- 143 (36.7%) Rear End,
- 9 (2.3%) Broadside,
- 88 (22.6%) Hit Object,
- 6 (1.5%) Overturn,
- 3 (0.8%) Auto-Pedestrian, and
- 1 (0.3%) Other.

The primary locations of collisions included the following:

- 2 (0.5%) Beyond Median or Stripe-Left,

- 47 (12.1%) Beyond Shoulder Drivers Left,
- 8 (2.1%) Left Shoulder Area,
- 76 (19.5%) Left Lane,
- 221 (56.7%) Interior Lanes,
- 87 (22.3%) Right Lane,
- 3 (0.8%) Right Shoulder Area,
- 33 (8.5%) Beyond Shoulder Drivers Right,
- 5 (1.3%) Gore Area,
- 3 (0.8%) Not Stated, and
- 69 (17.7%) Does Not Apply.

Objects Struck include the following:

- 7 (1.8%) Side of Bridge Railing,
- 1 (0.3%) End of Guardrail,
- 3 (0.8%) Traffic Sign/ Sign Post,
- 14 (3.6%) Guardrail,
- 47 (12.1%) Median Barrier,
- 1 (0.5%) Wall (Except Sound Wall)
- 2 (0.5%) Dike or Curb,
- 1 (0.3%) Cut Slope or Embankment,
- 2 (0.5%) Over Embankment,
- 2 (0.5%) Trees,
- 1 (0.3%) Plants,
- 1 (0.3%) Natural Material on Road,
- 4 (1.0%) Other Object on Road,
- 2 (0.5%) Overturned,
- 4 (1.0%) Crash Cushion (Other),
- 1 (0.3%) Unknown Object Struck,
- 297 (76.2%) V1 Through V9 Vehicle 1 To 9,
- 1 (0.3%) Not Stated, and
- 68 (17.4%) Does Not Apply.

Table 4-12 (TASAS Table B Crash Rates (July 1, 2019 to July 30, 2024) summarizes and compares the actual crash rates for the segment of I-580 from PM 44.70 to PM 45.65 to the average rates for similar facilities throughout the State. The Total crash rates include all reported crashes: fatal, injury, and PDO.

TABLE 4-12. TASAS Table B Collision Rates (July 1, 2019 – June 30, 2024)

Segment	Number of Collisions					Collision Rates (per million vehicle miles)					
	Total	Fatal	Serious Injury	Other Injury	PDO	Actual			Average		
						F	F + I	Total ⁽¹⁾	F	F + I	Total ⁽¹⁾
Ala I-580 (PM 44.70 to	327	1	7	69	250	0.003	0.27	1.14	0.006	0.42	1.27

PM 45.65) Mainline only												
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¹All reported collisions (including PDO collisions)

Analysis of the TASAS Table B records shows a total of 327 crashes within the I-580 segment PM 44.70 to PM 45.65 during July 1, 2019, to June 30, 2024, with a total rate of fatal and injury-related crash rate that is below as the average crash rate for similar facilities statewide, and a total crash rate that is below the average for similar facilities statewide.

Detailed analysis per the TSAR report generated on April 21, 2025 shows that the primary collision factors in the segment were:

- 23 (7.0%) Influence Alcohol,
- 2 (0.6%) Failure to Yield,
- 55 (16.8%) Improper Turn,
- 139 (42.5%) Speeding,
- 85 (26.0%) Other Violations,
- 10 (3.1%) Improper Driving, and
- 24 (4.1%) Other Than Driver.

The types of collisions included the following:

- 1 (0.3%) Head-on,
- 99 (30.3%) Sideswipe,
- 147 (45.0%) Rear End,
- 4 (1.2%) Broadside,
- 73 (22.3%) Hit Object,
- 2 (0.6%) Auto-Pedestrian, and
- 1 (0.3%) Other.

The primary locations of collisions included the following:

- 19 (5.8%) Beyond Shoulder Drivers Left,
- 1 (0.3%) Left Shoulder Area,
- 43 (13.1%) Left Lane,
- 180 (55.0%) Interior Lanes,
- 84 (25.7%) Right Lane,
- 5 (1.5%) Right Shoulder Area,
- 33 (10.1%) Beyond Shoulder Drivers Right,
- 8 (2.4%) Gore Area,
- 11 (3.4%) Other,
- 2 (0.6%) Not Stated, and
- 73 (22.3%) Does Not Apply.

Objects struck included the following:

- 1 (0.3%) Side of Bridge Railing,
- 9 (2.8%) Guardrail,

- 19 (5.8%) Median Barrier,
- 2 (0.6%) Wall (Except Sound Wall)
- 29 (8.9%) Dike or Curb,
- 8 (2.4%) Other Object on Road,
- 1 (0.3%) Overturned,
- 5 (1.5%) Crash Cushion (Other),
- 1 (0.3%) Unknown Object Struck,
- 252 (77.1%) V1 Through V9 Vehicle 1 To 9, and 73 (22.3%) Does Not Apply.

Collision Analysis

Caltrans Traffic Engineering conducted a traffic safety analysis of the nine freeway segments along I-580 within Alameda County under review to assess the impact of nonstandard features on roadway safety. This project proposes to replace the median barrier, replace overhead sign structures and sign panels, install LED safety lights, and upgrade the guardrail.

The total collision rate is consistently below the state average, though several segments show a higher fatal collision rate. The most common collision types are rear-end, sideswipe, and hit-object, with speeding and improper turns as the leading contributing factors. Importantly, most fatal collisions occurred outside the left shoulder vicinity.

A collision analysis was performed on the following segments:

- Alameda I-580 PM 32.13 to PM 32.6
- Alameda I-580 PM 32.6 to PM 33.0
- Alameda I-580 PM R33.0 to PM R35.421
- Alameda I-580 PM R35.422 to PM R37.421
- Alameda I-580 PM R37.422 to PM R39.421
- Alameda I-580 PM R39.422 to PM R41.422
- Alameda I-580 PM R41.422 to PM 43.422
- Alameda I-580 PM 43.422 to PM 44.70
- Alameda I-580 PM 44.70 to PM 45.65

Segment 1: Ala I-580 PM 32.13 to PM 32.6 Mainline

Based on the latest 5-year (July 1, 2019 to June 30, 2024) collision data, PM 32.13 to PM 32.6 falls under the freeway segment where the actual collision rate is less than that of the state average. Of these, most collisions were hit-object type (40.0%) followed by sideswipe (28.3%), rear-end (21.7%), overturn (6.7%) and broadside (3.3%). The primary collision factors were improper turn (43.3%), speeding (25.0%), other violations (21.7%), other than driver (6.7%), and under the influence of alcohol (3.3%).

The primary focus of this analysis is on sideswipe and hit object type collisions for the left shoulder nonstandard feature. The primary collision factor for the sideswipe collisions was improper turn (13.3%) and other violations (15%), with the minority of collisions occurring in the left lane (10%). The primary collision factor for the hit object collisions was improper turn

(25%), speeding (6.7%), other than driver (5.0%), and driver under influence of alcohol (3.3%), with collisions occurring beyond the shoulder on the driver's left (18.3%), and in the left lane (1.7%). A minority of collisions occurred in dark – no streetlight conditions (10.0%). The primary object being struck was the median barrier (18.3%); however no fatal or serious injury resulted from these collisions within the segment. There are no proposed new overhead signs within this project segment because the project will maintain the existing nonstandard left shoulder width. Most of the collisions were not related to the nonstandard shoulder width and the associated minimum horizontal clearance to objects. Most of these collisions occurred in the right lane and interior lanes.

Implementing the Safe Systems approach, the following mitigation measure is recommended: Install rumble strips on the left shoulder, and install retroreflective markers on the median barrier.

Segment 2: Ala I-580 PM 32.6 to PM 33.0 Mainline

Based on the latest five-year (July 1, 2019 to June 30, 2024) collision data, PM 32.6 to PM 33.0 falls under the freeway segment where the actual collision rate is less than that of the state average. Of these, the majority were hit-object type (41.1%) followed by rear end (31.6%), sideswipe (23.2%), overturn type (2.1%), broadside (1.1%), and other (1.1%). The primary collision factors were improper turn (23.2%), speeding (35.8%), other violations (17.9%), other than driver (10.5%), under the influence of Alcohol (11.6%), and unknown (1.1%).

The primary focus of this analysis is on sideswipe and hit object type collisions for the left shoulder nonstandard feature. The primary collision factor for sideswipe collisions was other violations (13.7%), improper turn (5.3%), under influence of alcohol (3.2%), and speeding (1.1%), with the minority of collisions occurring in the left lane (6.3%). The primary collision factor for hit object collisions was improper turn (14.7%), speeding (7.4%), other than driver (9.5%), other violations (3.2%) and driver under the influence of alcohol (6.3%) with collisions occurring beyond the shoulder on the driver's left (14.7%), and in left lane (1.1%). A minority of collisions occurred in dark–no streetlight conditions (8.4%) and wet conditions (8.4%). The primary object being struck was the median barrier (14.7%) and other objects in the road (7.4%). No fatal or serious injuries resulted within the beyond shoulder drivers left or in the left lane categories that related to left shoulder width; the only major injury collision occurred in the beyond shoulder driver's right category. There are no proposed new overhead signs within this project segment; the project is maintaining the existing nonstandard left shoulder width. Most of the collisions were not related to nonstandard shoulder width and the associated minimum horizontal clearance from objects. Most collisions occurred in the beyond shoulder drivers right and interior lanes categories.

Implementing the Safe Systems approach, the following mitigation measures are recommended: Install rumble strips on the left shoulder, and install retroreflective markers on median barrier.

Segment 3: Ala I-580 PM R33.0 to PM R35.421 Mainline

Based on the latest 5-year (July 1, 2019 to June 30, 2024) collision data, the PM 33.0 to PM R35.421 segment is part of the freeway segment where the actual total collision rate is less than that of the state average, however the fatal collision rate is higher than the state average. Of

these, the majority of collisions were rear end (33.5%) followed by sideswipe (32.7%), hit object (27.3%), overturn (2.2%), other (3.3%), broadside (1.4%), auto-pedestrian (0.5%), and head-on (0.3%). The primary collision factors were improper turn (25.1%), speeding (31.9%), other violations (26.5%), other than driver (5.7%), under the influence of alcohol (3.3%), unknown (1.4%), following too closely (0.5%), failure to yield (0.5%), and improper driving (0.5%).

The primary focus of this analysis is on sideswipe and hit object type collisions for the left shoulder nonstandard feature. The primary collision factor for the sideswipe collisions was improper turn (8.1%), other violations (20.3%), under influence of alcohol (1.9%), speeding (0.8%), other than driver (0.8%), and unknown (0.8%) with the minority of collisions occurring in the left lane (10.0%), left shoulder area (0.5%), and beyond shoulder drivers left (0.5%). A small number of collisions occurred in dark-no streetlight (5.4%) and wet roadway surface condition (3.0%). The primary collision factor for the hit object collisions was improper turn (14.6%), speeding (4.1%), other than driver (3.2%), driver under influence of alcohol (3.5%), and other violations (1.9%) with collisions occurring beyond median or stripe left (0.3%), and beyond shoulder drivers left (13.0%), left shoulder area (0.3%) and in left lane (1.1%). Minority of collisions occurred in dark-no streetlight conditions (6.8%) and on wet roadway condition (4.6%). The primary object being struck was median barrier (11.9%). The only fatal collision was a sideswipe that occurred in the interior lanes which is outside of the left shoulder width vicinity. There are two new overhead signs being proposed that will result in narrowing the shoulder width at spot locations at PMs 33.784 and 34.609; however there were no collisions recorded at these locations.

To mitigate the collision rate, and implement the Safe Systems approach, the following mitigation measures are recommended: Install rumble strips on the left shoulder and install retroreflective markers on median barrier. To mitigate the potential effect on the left shoulder width at overhead sign locations, the design will incorporate a vertical face barrier at the affected spots.

Segment 4: Ala I-580 PM R35.422 to PM R37.421 Mainline

Based on the latest 5-year (July 1, 2019 to June 30, 2024) collision data, the PM R35.422 to R37.421 segment is part of the freeway segment where the actual total collision rate is less than that of the state average. Of these, the majority were rear end (39.6%) followed by sideswipe (28.6%), hit object (24.1%), head-on (2.4%), other (2.1%), and broadside (1.1%). The primary collision factors were improper turn (12.8%), speeding (43.3%), other violations (25.1%), other than driver (9.6%), under the influence of alcohol (8.6%), and unknown (0.5%).

The primary focus of this analysis is on sideswipe and hit object type collisions for the left shoulder nonstandard feature. The primary collision factor for the sideswipe collisions was improper turn (2.1%), other violations (21.7%), under the influence of alcohol (1.3%), speeding (2.1%), and other than driver (1.3%). With the minority of collisions occurring in the left lane (9.1%), left shoulder area (0.5%), and beyond the shoulder driver's left (1.3%). A small number of collisions occurred in dark-no streetlight (5.1%) and wet roadway surface conditions (2.7%). The primary collision factor for the hit object collisions was improper turn (9.5%), speeding (4.5%), other than driver (5.6%), driver under influence of alcohol (4.0%), and other violations (0.5%) with collisions occurring beyond the shoulder driver's left (10.4%), and in the left lane

(0.8%). A minority of collisions occurred in dark–no streetlight conditions (7.0%) and on wet roadway condition (6.4%). The primary object being struck was median barrier (10.4%), and other objects in the road (4.5%). There are three new overhead signs are being proposed for this segment of the project that will result in narrowing the shoulder width at spot locations at PMs 35.742, 36.305, and 37.018; however there were no collisions recorded at these locations.

Implementing the Safe Systems approach, the following mitigation measures are recommended: Install rumble strips on the left shoulder and install retroreflective markers on the median barrier.

To mitigate the potential effect on the left shoulder width at overhead sign locations, the design may incorporate a vertical face barrier or a steel plate pedestal at the affected spots.

Segment 5: Ala I-580 PM R37.422 to R39.421 Mainline

Based on the latest five-year (July 1, 2019 to June 30, 2024) collision data, the PM R37.422 to PM R39.421 segment is part of the freeway segment where the actual total collision rate is less than that of the state average; however the fatal collision rate is higher than the state average. Of these, the majority were rear end (47.6%) followed by sideswipe (27.5%), hit object (19.2%), overturn type (2.1%), other (2.1%), broadside (0.7%), auto-pedestrian (0.2%), and head-on (1.1%). The primary collision factors were improper turn (15.3%), speeding (46.9%), other violations (24.0%), other than driver (5.5%), under the influence of alcohol (6.2%), unknown (0.9%), failure to yield (0.2%), and improper driving (0.9%).

The primary focus of this analysis is on sideswipe and hit object type collisions for the left shoulder nonstandard feature. The primary collision factor for the sideswipe collisions was improper turn (2.1%), other violations (21.3%), under the influence of alcohol (1.1%), speeding (1.8%), improper driving (0.9%) and unknown (0.2%), with the minority of collisions occurring in the left lane (6.9%), left shoulder area (0.2%), and beyond the shoulder driver's left (0.6%). A small number of sideswipe collisions occurred in dark-no streetlight (3.0%) and wet roadway surface conditions (2.3%). The primary collision factor for the hit object collisions was improper turn (10.8%), speeding (0.9%), other than driver (3.9%), driver under the influence of alcohol (3.2%), and other violations (0.5%), with collisions occurring beyond the shoulder driver's left (8.5%), and in the left lane (0.7%). A minority of hit object collisions occurred in Dark – no streetlight conditions (5.0%) and on wet roadway condition (0.9%). The primary object being struck was the median barrier (8.2%) and other objects in the road (2.7%). Two fatal collisions that were hit object type collisions occurred beyond the shoulder driver's right striking a dike or curb, and in a gore area striking a dike or curb, which is outside of the left shoulder width vicinity. Two new overhead signs are being proposed that will result in narrowing the shoulder width at spot locations at PMs 38.237 and 39.053; however, no collisions have been recorded at these locations.

To mitigate the collision rate, and implement the Safe Systems approach, the following measures are recommended: install rumble strips on the left shoulder and install retroreflective markers on the median barrier. To mitigate the potential effect on the left shoulder width at overhead sign locations, the design may incorporate a vertical face barrier or a steel plate pedestal at the affected spots.

Segment 6: Ala I-580 PM R39.422 to PM R41.422 Mainline

Based on the latest 5-year collision data (July 1, 2019 to June 30, 2024), the PM R 37.422 to PM R39.421 segment is part of the freeway segment where the actual total collision rate is less than that of the state average; however, the fatal collision rate is higher than the state average. Of these, the majority were rear end (52.8%) followed by sideswipe (24.2%), hit object (18.3%), overturn type (0.7%), other (1.4%), broadside (1.4%), auto-pedestrian (0.3%), and head-on (0.9%). The primary collision factors were improper turn (10.5%), speeding (51.4%), other violations (23.3%), under the influence of alcohol (6.8%), unknown (1.2%), failure to yield (0.2%), improper driving (10.5%), and following too closely (0.2%).

The primary focus of this analysis is on sideswipe and hit object type collisions for the left shoulder nonstandard feature. The primary collision factor for the sideswipe collisions was improper turn (1.6%), other violations (18.6%), under the influence of alcohol (1.0%), speeding (1.6%), improper driving (0.2%), unknown (0.3%), following too closely (0.2%), and other than driver (0.7%) with the minority of collisions occurring in the left lane (7.8%), left shoulder area (0.3%), and beyond the shoulder driver's left (0.3%). A small number of sideswipe collisions occurred in dark-no streetlight (4.5%) and wet roadway surface conditions (1.2%). The primary collision factor for the hit object collision was improper turn (6.4%), speeding (3.8%), other than driver (3.8%), driver under the influence of alcohol (2.6%), other violations (1.2%), and improper driving (0.3%) with collisions occurring beyond the shoulder driver's left (7.5%), in the left lane (0.8%), and beyond the median or stripe-left (0.2%). A minority of hit object collisions occurred in dark-no streetlight conditions (4.2%) and on wet roadway condition (3.3%). The primary object being struck was the median barrier (7.5%), guardrail (3.0%), and other objects in the road (3.0%). One fatal collision was a result of a sideswipe collision that occurred in the interior lanes, which are outside of the left shoulder width vicinity. Two fatal collisions were hit-object-type collisions that occurred in beyond the shoulder driver's right striking a crash cushion (other) and a cut slope or embankment, which is outside of the left shoulder width vicinity. Four new overhead signs are proposed that will result in narrowing the shoulder width at spot locations at PMs 39.548, 39.743, 40.115, and 41.406; however, no collisions have been recorded at these locations.

To mitigate the collision rate, and implement the Safe Systems approach, the following mitigation measures are recommended: install rumble strips on the left shoulder, and install retroreflective markers on the median barrier. To mitigate the potential effect on the left shoulder width at overhead sign locations, the design may incorporate a vertical face barrier or a steel plate pedestal at the affected spots.

Segment 7: Ala I-580 PM R41.422 to PM R43.422 Mainline

Based on the latest 5-year (July 1, 2019, to June 30, 2024) collision data, the PM R 41.422 to PM R43.422 segment is part of the freeway segment where the actual total collision rate is less than that of the state average; however, the fatal collision rate is higher than the state average. Of these, most collisions were rear end (41.2%) followed by sideswipe (26.6%), hit object (26.4%), overturn type (2.2%), other (0.3%), broadside (1.9%), auto-pedestrian (0.2%), and head-on (1.2%). The primary collision factors were improper turn (16.0%), speeding (46.5%), other violations (0.7%), under the influence of alcohol (6.8%), unknown (0.2%), failure to yield (0.2%), improper driving (0.7%), and other than driver (4.1%).

The primary focus of this analysis is on sideswipe and hit object type collisions for the left shoulder nonstandard feature. The primary collision factor for the sideswipe was improper turn (1.5%), other violations (21.8%), under the influence of alcohol (0.7%), speeding (1.5%), improper driving (1.5%), unknown (0.2%), and other than driver (0.2%), with the minority of collisions occurring in left lane (6.1%), left shoulder area (0.3%), and beyond shoulder drivers left (0.7%). A small number of sideswipe collisions occurred in dark-no streetlight (3.9%) and wet roadway surface condition (4.8%). The primary collision factor for the hit object collisions was improper turn (10.9%), speeding (8.0%), other than driver (2.7%), driver under the influence of alcohol (3.9%), and other violations (0.9%) with collisions occurring beyond the shoulder driver's left (14.8%), in the left lane (1.0%). Hit object collisions also occurred in dark-no streetlight conditions (9.5%) and on wet roadway conditions (10.2%). The primary object being struck was the median barrier (14.7%), guardrail (1.5%), and other objects in the road (2.2%). One fatal collision was the result of a sideswipe collision that occurred in the interior lanes which are outside of the left shoulder width vicinity. Two fatal collisions were hit-object-type collisions; one of which occurred beyond the shoulder driver's right, striking a cut slope or embankment, which is outside of the left shoulder width vicinity. The second one of these fatal collisions was a hit-object collision that occurred beyond the shoulder driver's left, striking a bridge rail because of an improper turn, which may not have been related to the nonstandard feature. No new overhead signs are proposed within this project segment; the project is maintaining the existing nonstandard left shoulder width.

Implementing the Safe Systems approach, the following measures are recommended: install rumble strips on the left shoulder and install retroreflective markers on median barrier. To mitigate the potential effect on the left shoulder width at overhead sign locations, the design may incorporate a vertical face barrier or a steel plate pedestal at the affected spots.

Segment 8: Ala I-580 PM 43.422 to PM 44.70 Mainline

Based on the latest 5-year (July 1, 2019 to June 30, 2024) collision data, PM 43.422 to PM 44.70 is part of the freeway segment where the actual total collision rate is less than that of the state average; however, the fatal collision rate is higher than the state average. Of these, most collisions were rear end (36.7%) followed by sideswipe (35.1%), hit object (22.6%), overturn type (1.5%), other (0.3%), broadside (2.3%), auto-pedestrian (0.8%), and head-on (0.8%). The primary collision factors were improper turn (16.7%), speeding (37.4%), other violations (31.3%), under the influence of alcohol (9.2%), unknown (0.3%), failure to yield (0.8%), improper driving (0.3%), and other than driver (4.1%).

The primary focus of this analysis is on sideswipe and hit object type collisions for the left shoulder nonstandard feature. The primary collision factor for the sideswipe collisions was improper turn (3.1%), other violations (26.9%), under the influence of alcohol (2.1%), speeding (2.3%), improper driving (0.3%), and other than driver (0.5%), with the minority of collisions occurring in the left lane (10.3%), left shoulder area (1.8%), and beyond the shoulder driver's left (0.8%). A small number of sideswipe collisions occurred in dark-no streetlight (5.1%) and wet roadway surface conditions (2.1%). The primary collision factor for the hit object collisions was improper turn (11.3%), speeding (4.4%), other than driver (1.8%), driver under the influence of alcohol (4.4%), and other violations (0.8%), with collisions occurring beyond the shoulder driver's left (11.0%), and in the left lane (0.3%). A minority of hit-object collisions occurred in

dark-no streetlight conditions (5.6%) and on wet roadway conditions (4.9%). The primary object being struck was the median barrier (11.0%), guardrail (3.3%), and side of the bridge railing (1.8%). One fatal collision was a sideswipe that occurred in the interior lanes, which are outside of the left shoulder width vicinity. Three new overhead signs are being proposed that will result in narrowing the shoulder width at spot locations at PMs 43.434, 44.366, and 44.23. At PM 44.23, one rear-end collision in the interior lane was recorded; no collisions were recorded in the other two locations.

To mitigate the collision rate, and implement the Safe Systems approach, the following mitigation measures are recommended: Install rumble strips on the left shoulder, and install retroreflective markers on the median barrier. To mitigate the potential effect on the left shoulder width at overhead sign locations, the design may incorporate a vertical face barrier or a steel plate pedestal at the affected spots.

Segment 9: Ala I-580 PM 44.70 to PM 45.65 Mainline

Based on the latest 5-year (July 1, 2019 to June 30, 2024) collision data, PM 44.70 to PM 45.65 is part of the freeway segment where the actual total collision rate is less than that of the state average. Of these, the majority were rear end (45.0%) followed by sideswipe (30.3%), hit object (22.3%), other (0.3%), broadside (1.2%), auto-pedestrian (0.6%), and head-on (0.3%). The primary collision factors were improper turn (16.8%), speeding (42.5%), other violations (26.0%), under the influence of alcohol (7.0%), failure to yield (0.6%), improper driving (3.1%), and other than driver (4.1%).

The primary focus of this analysis is on sideswipe and hit-object-type collisions for the left shoulder nonstandard feature. The primary collision factor for the sideswipe collisions was improper turn (1.5%), other violations (22.9%), under the influence of alcohol (0.6%), speeding (1.8%), improper driving (3.1%), and other than driver (0.3%), with the minority of collisions occurring in the left lane (4.6%), and left shoulder area (0.3%). A small number of sideswipe collisions occurred in dark-no streetlight (3.1%) and wet roadway surface condition (0.9%). The primary collision factor for the hit object collisions was improper turn (14.1%), speeding (0.9%), other than driver (3.4%), driver under the influence of alcohol (3.7%), and other violations (0.3%), with a minority of collisions occurring beyond the shoulder driver's left (5.5%), and in the left lane (0.9%). A minority of hit-object collisions occurred in dark-no streetlight conditions (6.1%), dark inoperative streetlight (0.3%) and on wet roadway conditions (2.1%). The primary object being struck was a dike or curb (8.6%), median barrier (5.5%), guardrail (2.8%), and other object in the road (2.4%). One fatal collision was a sideswipe that occurred in the interior lanes, which are outside the left shoulder width vicinity. Five new overhead signs are being proposed that will narrow the shoulder width at spot locations at PMs 44.853, 44.968, 45.43, 45.563, and 45.664; however, only one location, at PM 45.43, recorded a collision that occurred in the interior lane, striking "other object on road." Most collisions were not related to a nonstandard shoulder width and the associated minimum horizontal clearance to objects. Most collisions occurred in the right lane and interior lanes.

Implementing the Safe Systems approach, the following mitigation measures are recommended: install rumble strips on the left shoulder and install retroreflective markers on the median barrier.

To mitigate the potential effect on the left shoulder width at overhead sign locations, the design may incorporate a vertical face barrier or a steel plate pedestal at the affected spots.

5. ALTERNATIVES

5A. Build Alternative

Proposed Engineering Features

The Build Alternative consists of upgrading the nonstandard concrete median barrier along the median, providing transition barrier to bridge columns, and replacing overhead sign structures, installing safety lighting, upgrading metal beam guardrail to Midwest Guardrail System (MGS), and installing transitional barrier blocks for MGS. Attachment B show the project Layout Plans and Typical Sections. Attachment C provides the capital cost estimate.

Nonstandard Design Features

The Caltrans Highway Design Manual (HDM), Tables 82.1A and 82.1B provide details for delegated approval authority for boldface standards and underlined standards, respectively. A Design Standard Decision Document (DSDD) was approved on November 15, 2025 and it was determined that the proposed nonstandard features will not contribute adversely to collision rates based on past collision data and proposed mitigation measures. Tables 5-1 through 5-3 provide a summary of the nonstandard design features of this project.

Table 5-1. Nonstandard Shoulders

Segment No.	NsFN	Alignment Name And Station Limits	Dir.	Existing Shoulder Width	Proposed Shoulder Width	HDM 302.1 Standard	Plan Sheet No./ Reference
Segment 1 (PM 32.130 to PM 32.600)	A1.18	Outside Shoulder "F" Line 862+50.0 0 to 875+50.0 0	WB	6' to 10'	6' to 10'	10'	L-57
	A4.33	Inside Shoulder "F" Line 862+50.0 0 to 875+50.0 0	EB	7.2' to 10'	7.2' to 10'	10'	L-57

Segment No.	NsFN	Alignment Name And Station Limits	Dir.	Existing Shoulder Width	Proposed Shoulder Width	HDM 302.1 Standard	Plan Sheet No./ Reference
	A2.34	Inside Shoulder "F" Line 848+50.00 to 862+50.00	WB	9' to 10'	9' to 10'	10'	L-56
	A3.19	Outside Shoulder "F" Line 848+50.00 to 862+50.00	EB	9' to 10'	9' to 10'	10'	L-56
	A4.32	Inside Shoulder "F" Line 848+50.00 to 862+50.00	EB	9.5' to 10'	9.5' to 10'	10'	L-56
Segment 2 (PM 32.600 to PM 33.000)	A2.33	Inside Shoulder "F" Line 820+50.00 to 834+50.00	WB	8' to 10'	8' to 10'	10'	L-54
	A3.20	Outside Shoulder "F" Line 820+50.00 to 834+50.00	EB	8.5' to 10'	8.5' to 10'	10'	L-54
	A4.31	Inside Shoulder "F" Line 820+50.00 to	EB	8.5' to 10'	8.5' to 10'	10'	L-54

Segment No.	NsFN	Alignment Name And Station Limits	Dir.	Existing Shoulder Width	Proposed Shoulder Width	HDM 302.1 Standard	Plan Sheet No./ Reference
		834+50.0 0					
Segment 3 (PM 33.000 to PM 35.422)	A2.32	Inside Shoulder 'F' Line 806+50.0 0 to 820+50.0 0	WB	8' to 10'	7' to 10'	10'	L-53
	A2.31	Inside Shoulder "F" Line 793+50.0 0 to 806+50.0 0	WB	8' to 10'	8' to 10'	10'	L-52
	A2.30	Inside Shoulder "F" Line 780+50.0 0 to 793+50.0 0	WB	7.5' to 10'	7.5' to 10'	10'	L-51
	A4.30	Inside Shoulder "F" Line 780+50.0 0 to 793+50.0 0	EB	7' to 10'	7' to 10'	10'	L-51
	A4.29	Inside Shoulder "F" Line 767+50.0 0 to 780+50.0 0	EB	8' to 10'	7' to 10'	10'	L-50

Segment No.	NsFN	Alignment Name And Station Limits	Dir.	Existing Shoulder Width	Proposed Shoulder Width	HDM 302.1 Standard	Plan Sheet No./ Reference
	A2.29	Inside Shoulder "F" Line 767+50.0 0 to 780+50.0 0	WB	8' to 10'	7' to 10'	10'	L-50
	A2.28	Inside Shoulder "F" Line 753+50.0 0 to 767+50.0 0	WB	8' to 10'	8' to 10'	10'	L-49
	A3.18	Outside Shoulder "F" Line 753+50.0 0 to 767+50.0 0	EB	9' to 10'	9' to 10'	10'	L-49
	A4.28	Inside Shoulder "F" Line 753+50.0 0 to 767+50.0 0	EB	8' to 10'	8' to 10'	10'	L-49
	A2.27	Inside Shoulder "F" Line 739+50.0 0 to 753+50.0 0	WB	8' to 10'	8' to 10'	10'	L-48
	A3.17	Outside Shoulder "F" Line 739+50.0 0 to	EB	9.5' to 10'	9.5' to 10'	10'	L-48

Segment No.	NsFN	Alignment Name And Station Limits	Dir.	Existing Shoulder Width	Proposed Shoulder Width	HDM 302.1 Standard	Plan Sheet No./ Reference
		753+50.0 0					
	A4.27	Inside Shoulder "F" Line 739+50.0 0 to 753+50.0 0	EB	9.5' to 10'	9.5' to 10'	10'	L-48
	A2.26	Inside Shoulder "F" Line 726+50.0 0 to 739+50.0 0	WB	8' to 10'	7' to 10'	10'	L-47
	A4.26	Inside Shoulder "F" Line 726+50.0 0 to 739+50.0 0	EB	9.7' to 10'	8.7' to 10'	10'	L-47
	A1.17	Outside Shoulder "F" Line 713+50.0 0 to 726+50.0 0	WB	3.5' to 10'	3.5' to 10'	10'	L-46
	A2.25	Inside Shoulder "F" Line 699+50.0 0 to 713+50.0 0	WB	9.5' to 10'	9.5' to 10'	10'	L-45

Segment No.	NsFN	Alignment Name And Station Limits	Dir.	Existing Shoulder Width	Proposed Shoulder Width	HDM 302.1 Standard	Plan Sheet No./ Reference
	A4.25	Inside Shoulder "F" Line 699+50.0 0 to 713+50.0 0	EB	9.5' to 10'	9.5' to 10'	10'	L-45
Segment 4 (PM 35.422 to PM 37.422)	A2.24	Inside Shoulder "F" Line 554+50.0 0 to 568+50.0 0	WB	9' to 10'	8' to 10'	10'	L-42
	A4.24	Inside Shoulder "F" Line 554+50.0 0 to 568+50.0 0	EB	9' to 10'	8' to 10'	10'	L-42
	A2.23	Inside Shoulder "F" Line 526+50.0 0 to 540+50.0 0	WB	9' to 10'	8' to 10'	10'	L-40
	A4.23	Inside Shoulder "F" Line 526+50.0 0 to 540+50.0 0	EB	9' to 10'	8' to 10'	10'	L-40
	A1.16	Outside Shoulder "F" Line 512+50.0 0 to	WB	8' to 10'	8' to 10'	10'	L-39

Segment No.	NsFN	Alignment Name And Station Limits	Dir.	Existing Shoulder Width	Proposed Shoulder Width	HDM 302.1 Standard	Plan Sheet No./ Reference
		526+50.0 0					
	A2.22 -2	Inside Shoulder "F" Line 499+50.0 0 to 512+50.0 0	WB	8' to 10'	8' to 10'	10'	L-38
	A4.22 -2	Inside Shoulder "F" Line 499+50.0 0 to 512+50.0 0	EB	8' to 10'	8' to 10'	10'	L-38
	A2.22 -1	Inside Shoulder "F" Line 487+50.0 0 to 499+50.0 0	WB	9' to 10'	8' to 10'	10'	L-37
	A4.22 -1	Inside Shoulder "F" Line 487+50.0 0 to 499+50.0 0	EB	9' to 10'	8' to 10'	10'	L-37
Segment 5 (PM 37.422 to PM 39.422)	A3.14	Outside Shoulder "F" Line 458+50.0 0 to 472+50.0 0	EB	8' to 10'	8' to 10'	10'	L-35

Segment No.	NsFN	Alignment Name And Station Limits	Dir.	Existing Shoulder Width	Proposed Shoulder Width	HDM 302.1 Standard	Plan Sheet No./ Reference
	A1.15	Outside Shoulder "F" Line 449+96.97 to 458+50.00	WB	8.3' to 10'	8.3' to 10'	10'	L-34
	A2.21	Inside Shoulder "F" Line 444+50.00 to 458+50.00	WB	8.5' to 10'	8.5' to 10'	10'	L-34
	A4.21	Inside Shoulder "F" Line 444+50.00 to 458+50.00	EB	8.5' to 10'	8.5' to 10'	10'	L-34
	A2.20	Inside Shoulder "F" Line 430+50.00 to 444+50.00	WB	8.5' to 10'	7.5' to 10'	10'	L-33
	A4.20	Inside Shoulder "F" Line 430+50.00 to 444+50.00	EB	8.5' to 10'	7.5' to 10'	10'	L-33
	A1.14	Outside Shoulder "F" Line 423+97.93 to	WB	7.1' to 10'	7.1' to 10'	10'	L-32

Segment No.	NsFN	Alignment Name And Station Limits	Dir.	Existing Shoulder Width	Proposed Shoulder Width	HDM 302.1 Standard	Plan Sheet No./ Reference
		430+50.0 0					
	A2.19	Inside Shoulder "F" Line 386+50.0 0 to 402+50.0 0	WB	8.5' to 10'	7.5' to 10'	10'	L-30
	A4.19	Inside Shoulder "F" Line 386+50.0 0 to 402+50.0 0	EB	8.5' to 10'	7.5' to 10'	10'	L-30
	A2.18	Inside Shoulder "F" Line 372+50.0 0 to 386+50.0 0	WB	7' to 10'	7' to 10'	10'	L-29
	A4.18	Inside Shoulder "F" Line 372+50.0 0 to 386+50.0 0	EB	7' to 10'	7' to 10'	10'	L-29
Segment 5 (PM 37.422 to PM 39.422) & Segment 6 (PM 39.422 to PM 41.422)	A2.17	Inside Shoulder "F" Line 359+50.0 0 to 372+50.0 0	WB	5' to 10'	4' to 10'	10'	L-28

Segment No.	NsFN	Alignment Name And Station Limits	Dir.	Existing Shoulder Width	Proposed Shoulder Width	HDM 302.1 Standard	Plan Sheet No./ Reference
	A4.17	Inside Shoulder "F" Line 359+50.0 0 to 372+50.0 0	EB	5' to 10'	4' to 10'	10'	L-28
Segment 6 (PM 39.422 to PM 41.422)	A2.16 -2	Inside Shoulder "F" Line 345+50.0 0 to 359+50.0 0	WB	10'	9' to 10'	10'	L-27
	A4.16 -2	Inside Shoulder "F" Line 345+50.0 0 to 359+50.0 0	EB	10'	9' to 10'	10'	L-27
	A2.16 -1	Inside Shoulder "F" Line 332+50.0 0 to 345+50.0 0	WB	7' to 10'	7' to 10'	10'	L-26
	A4.16 -1	Inside Shoulder "F" Line 332+50.0 0 to 345+50.0 0	EB	7' to 10'	7' to 10'	10'	L-26
	A2.15	Inside Shoulder "F" Line 319+50.0 0 to	WB	9.5' to 10'	8.5' to 10'	10'	L-25

Segment No.	NsFN	Alignment Name And Station Limits	Dir.	Existing Shoulder Width	Proposed Shoulder Width	HDM 302.1 Standard	Plan Sheet No./ Reference
		332+50.0 0					
	A4.15	Inside Shoulder "F" Line 319+50.0 0 to 332+50.0 0	EB	9' to 10'	8' to 10'	10'	L-25
	A1.13	Outside Shoulder "F" Line 280+50.0 0 to 292+50.0 0	WB	3' to 10'	3' to 10'	10'	L-22
	A3.13	Outside Shoulder "F" Line 280+50.0 0 to 292+50.0 0	EB	8' to 10'	8' to 10'	10'	L-22
Segment 6 (PM 39.422 to PM 41.422) & Segment 7 (PM 41.422 to PM 43.422)	A2.14	Inside Shoulder "F1" Line 261+50.0 0 to "F" Line 276+50.0 0	WB	9.1' to 10'	8.1' to 10'	10'	L-20
	A4.14	Inside Shoulder "F1" Line 261+50.0 0 to	EB	7.7' to 10'	6.7' to 10'	10'	L-20

Segment No.	NsFN	Alignment Name And Station Limits	Dir.	Existing Shoulder Width	Proposed Shoulder Width	HDM 302.1 Standard	Plan Sheet No./ Reference
		"F" Line 266+50.0 0					
Segment 7 (PM 41.422 to PM 43.422)	A3.12	Outside Shoulder "F1" Line 247+50.0 0 to 261+50.0 0	EB	1.7' to 5.5'	1.7' to 5.5'	10'	L-19
	A1.11	Outside Shoulder "F1" Line 224+50.0 0 to 247+50.0 0	WB	8.1' to 10'	8.1' to 10'	10'	L-17, L-18
	A2.13	Inside Shoulder "F1" Line 224+50.0 0 to 247+50.0 0	WB	9.3' to 10'	9.3' to 10'	10'	L-18
	A3.11	Outside Shoulder "F1" Line 224+50.0 0 to 247+50.0 0	EB	5' to 7'	5' to 7'	10'	L-18
	A4.13	Inside Shoulder "F1" Line	EB	8.3' to 10'	8.3' to 10'	10'	L-18

Segment No.	NsFN	Alignment Name And Station Limits	Dir.	Existing Shoulder Width	Proposed Shoulder Width	HDM 302.1 Standard	Plan Sheet No./ Reference
		224+50.0 0 to 247+50.0 0					
	A2.12	Inside Shoulder "F1" Line 210+50.0 0 to 224+50.0 0	WB	8.1' to 10'	8.1' to 10'	10'	L-17
	A3.10	Outside Shoulder "F1" Line 210+50.0 0 to 224+50.0 0	EB	9.1' to 10'	9.1' to 10'	10'	L-17
	A2.11	Inside Shoulder "F" Line 196+50.0 0 to "F1" Line 210+50.0 0	WB	8.5' to 10'	8.5' to 10'	10'	L-16
	A4.12	Inside Shoulder "F" Line 196+50.0 0 to "F1" Line 210+50.0 0	EB	3.8' to 10'	3.8' to 10'	10'	L-16

Segment No.	NsFN	Alignment Name And Station Limits	Dir.	Existing Shoulder Width	Proposed Shoulder Width	HDM 302.1 Standard	Plan Sheet No./ Reference
	A1.10	Outside Shoulder "F" Line 182+50.00 to 196+50.00	WB	6.4' to 10'	6.4' to 10'	10'	L-15
	A2.10	Inside Shoulder "F" Line 182+50.00 to 196+50.00	WB	7' to 10'	7' to 10'	10'	L-15
	A4.11	Inside Shoulder "F" Line 182+50.00 to 196+50.00	EB	2.5' to 3.5'	2.5' to 3.5'	10'	L-15
	A4.10	Inside Shoulder "F" Line 168+50.00 to 182+50.00	EB	2.6' to 3.5'	2.6' to 3.5'	10'	L-14
	A1.9	Outside Shoulder "F" Line 154+50.00 to 168+50.00	WB	7' to 10'	7' to 10'	10'	L-13
Segment 7 (PM 41.422 to 43.422) & Segment 8	A2.9-2	Inside Shoulder "F" Line 154+50.00 to	WB	10'	9' to 10'	10'	L-13

Segment No.	NsFN	Alignment Name And Station Limits	Dir.	Existing Shoulder Width	Proposed Shoulder Width	HDM 302.1 Standard	Plan Sheet No./ Reference
(PM 43.422 to 44.700)		168+50.0 0					
	A3.9	Outside Shoulder "F" Line 154+50.0 0 to 168+50.0 0	EB	6' to 10'	6' to 10'	10'	L-13
	A4.9	Inside Shoulder "F" Line 154+50.0 0 to 168+50.0 0	EB	1.6' to 9'	1.6' to 9'	10'	L-13
Segment 8 (PM 43.422 to 44.700)	A1.8	Outside Shoulder "F" Line 141+50.0 0 to 154+50.0 0	WB	8.1' to 10'	8.1' to 10'	10'	L-12
	A2.9-1	Inside Shoulder "F" Line 141+50.0 0 to 154+50.0 0	WB	9' to 10'	9' to 10'	10'	L-12
	A3.8	Outside Shoulder "F" Line 141+50.0 0 to 154+50.0 0	EB	9' to 10'	9' to 10'	10'	L-12

Segment No.	NsFN	Alignment Name And Station Limits	Dir.	Existing Shoulder Width	Proposed Shoulder Width	HDM 302.1 Standard	Plan Sheet No./ Reference
	A1.7	Outside Shoulder "F" Line 127+50.00 to 141+50.00	WB	9.1' to 10'	9.1' to 10'	10'	L-11
	A2.8	Inside Shoulder "F" Line 127+50.00 to 141+50.00	WB	9.6' to 10'	9.6' to 10'	10'	L-11
	A3.7	Outside Shoulder "F" Line 127+50.00 to 141+50.00	EB	8.5' to 10'	8.5' to 10'	10'	L-11
	A4.8	Inside Shoulder "F" Line 127+50.00 to 141+50.00	EB	9.7' to 10'	9.7' to 10'	10'	L-11
	A2.7	Inside Shoulder "F" Line 114+50.00 to 127+50.00	WB	9.6' to 10'	9.6' to 10'	10'	L-10
	A2.6	Inside Shoulder "F" Line 100+50.00 to	WB	8.6' to 10'	7.6' to 10'	10'	L-9

Segment No.	NsFN	Alignment Name And Station Limits	Dir.	Existing Shoulder Width	Proposed Shoulder Width	HDM 302.1 Standard	Plan Sheet No./ Reference
		114+50.0 0					
	A4.7	Inside Shoulder "F" Line 100+50.0 0 to 114+50.0 0	EB	8.8' to 10'	7.8' to 10'	10'	L-9
Segment 8 (PM 43.422 to 44.700) & Segment 9 (44.700 to 45.650)	A1.6	Outside Shoulder "F" Line 86+50.00 to 100+50.0 0	WB	0' to 8.5'	0' to 8.5'	10'	L-8
	A3.6	Outside Shoulder "F" Line 86+50.00 to 100+50.0 0	EB	0' to 10'	0' to 10'	10'	L-8
	A4.6	Inside Shoulder "F" Line 86+50.00 to 100+50.0 0	EB	9.7' to 10'	9.7' to 10'	10'	L-8
Segment 9 (44.700 to 45.650)	A1.5	Outside Shoulder "F" Line 72+50.00 to 86+50.00	WB	8.1' to 9'	8.1' to 9'	10'	L-7

Segment No.	NsFN	Alignment Name And Station Limits	Dir.	Existing Shoulder Width	Proposed Shoulder Width	HDM 302.1 Standard	Plan Sheet No./ Reference
	A2.5	Inside Shoulder "F" Line 72+50.00 to 86+50.00	WB	8.4' to 10'	7.4' to 10'	10'	L-7
	A3.5	Outside Shoulder "F" Line 82+57.97 to 86+50.00	EB	6.5' to 7.5'	6.5' to 7.5'	10'	L-7
	A4.5	Inside Shoulder "F" Line 72+50.00 to 86+50.00	EB	8.8' to 10'	7.8' to 10'	10'	L-7
	A1.4	Outside Shoulder "F" Line 57+50.00 to 72+50.00	WB	6.8' to 10'	6.8' to 10'	10'	L-6
	A2.4	Inside Shoulder "F" Line 57+50.00 to 72+50.00	WB	7.5' to 10'	7.5' to 10'	10'	L-6
	A3.4	Outside Shoulder "F" Line 57+50.00 to 64+46.30	EB	6.6' to 10'	6.6' to 10'	10'	L-6
	A4.4	Inside Shoulder "F" Line 57+50.00	EB	8.4' to 10'	8.4' to 10'	10'	L-6

Segment No.	NsFN	Alignment Name And Station Limits	Dir.	Existing Shoulder Width	Proposed Shoulder Width	HDM 302.1 Standard	Plan Sheet No./ Reference
		to 72+50.00					
	A1.3	Outside Shoulder "F" Line 48+50.00 to 51+78.92	WB	6.5' to 9'	6.5' to 9'	10'	L-5
	A2.3	Inside Shoulder "F" Line 48+50.00 to 57+50.00	WB	5.9' to 10'	5.9' to 10'	10'	L-5
	A3.3	Outside Shoulder "F" Line 48+50.00 to 50+27.39	EB	5.5' to 7'	5.5' to 7'	10'	L-5
	A4.3	Inside Shoulder "F" Line 48+50.00 to 57+50.00	EB	9.6' to 10'	9' to 10'	10'	L-5
	A1.2	Outside Shoulder "W" Line 33+50.00 to 40+98.00 "F" Line 41+00.00 to 48+50.00	WB	8.3' to 10'	8.3' to 10'	10'	L-4

Segment No.	NsFN	Alignment Name And Station Limits	Dir.	Existing Shoulder Width	Proposed Shoulder Width	HDM 302.1 Standard	Plan Sheet No./ Reference
	A2.2	Inside Shoulder "W" Line 33+50.00 to 40+98.00 "F" Line 41+00.00 to 48+50.00	WB	2.6' to 5.3'	2.6' to 5.3'	10'	L-4
	A3.2	Outside Shoulder "W" Line 33+50.00 to 40+98.00 "F" Line 41+00.00 to 48+50.00	EB	4.2' to 7.5'	4.2' to 7.5'	10'	L-4
	A4.2	Inside Shoulder "W" Line 33+50.00 to 40+98.00 "F" Line 41+00.00 to 48+50.00	EB	3' to 9.5'	3' to 9.5'	10'	L-4
	A1.1	Outside Shoulder "W" Line 26+21.21 to 33+50.00	WB	9.6' to 10'	9.6' to 10'	10'	L-3
	A2.1	Inside Shoulder "W" Line 26+21.21	WB	4.5' to 6'	4.5' to 6'	10'	L-3

Segment No.	NsFN	Alignment Name And Station Limits	Dir.	Existing Shoulder Width	Proposed Shoulder Width	HDM 302.1 Standard	Plan Sheet No./ Reference
		to 33+50.00					
	A3.1	Outside Shoulder "W" Line 26+21.21 to 33+50.00	EB	6.5' to 8.6'	6.5' to 8.6'	10'	L-3
	A4.1	Inside Shoulder "W" Line 26+21.21 to 33+50.00	EB	2.8' to 4.5'	2.8' to 4.5'	10'	L-3

Table 5-2. Nonstandard Minimum Horizontal Clearances

Segment No.	Label	Alignment Name and Station Limits	Dir.	Existing Feature	Proposed Feature	HDM 309.1 Standard	Attachment No. / Reference
Segment 1 (PM 32.130 to PM 32.600)	B2.33	"F" Line 862+50.00 to 875+50.00	EB	7.2' to 10'	7.2' to 10'	10'	L-57
	B2.32	"F" Line 848+50.00 to 862+50.00	EB	9' to 9.5'	9' to 9.5'	10'	L-56
	B1.33	"F" Line 848+50.00 to 862+50.00	WB	8' to 10'	8' to 10'	10'	L-56
Segment 2 (PM 32.600 to PM 33.000)	B1.34	"F" Line 820+50.00 to 834+50.00	WB	9' to 10'	9' to 10'	10'	L-54

	B2.31	"F" Line 820+50.00 to 834+50.00	EB	8' to 10'	8' to 10'	10'	L-54
Segment 2 (PM 32.600 to PM 33.000) & Segment 3 (PM 33.000 to PM 35.422)	B1.32	"F" Line 806+50.00 to 820+50.00	WB	7.5' to 9.5'	7.5' to 9.5'	10'	L-53
Segment 3 (PM 33.000 to PM 35.422)	B1.31	"F" Line 793+50.00 to 806+50.00	WB	8' to 10'	8' to 10'	10'	L-52
	B1.30	"F" Line 780+50.00 to 793+50.00	WB	7.5' to 10	7.5' to 10	10'	L-51
	B2.30	"F" Line 780+50.00 to 793+50.00	EB	7' to 10'	7' to 10'	10'	L-51
	B1.29	"F" Line 767+50.00 to 780+50.00	WB	8' to 10'	7' to 10'	10'	L-50
	B2.29	"F" Line 767+50.00 to 780+50.00	EB	8' to 10'	7' to 10'	10'	L-50
	B1.28	"F" Line 753+50.00 to 767+50.00	WB	8' to 10'	8' to 10'	10'	L-49
	B2.28	"F" Line 753+50.00 to 767+50.00	EB	9' to 10'	9' to 10'	10'	L-49
	B1.27	"F" Line 739+50.00 to 753+50.00	WB	8' to 10'	8' to 10'	10'	L-48
	B2.27	"F" Line 739+50.00 to 753+50.00	EB	9.5' to 10'	9.5' to 10'	10'	L-48
	B1.26	"F" Line 726+50.00 to 739+50.00	WB	8' to 9.5'	7' to 9.5'	10'	L-47
	B2.26	"F" Line 726+50.00 to 739+50.00	EB	9.7' to 10'	8.7' to 10'	10'	L-47
	B1.25	"F" Line 699+50.00 to 713+50.00	WB	9.5' to 10'	9.5' to 10'	10'	L-45

	B2.25	"F" Line 699+50.00 to 713+50.00	EB	9.5' to 10'	9.5' to 10'	10'	L-45
Segment 4 (PM 35.422 to PM 37.422)	B1.24	"F" Line 554+50.00 to 568+50.00	WB	9' to 10'	8' to 10'	10'	L-42
	B2.24	"F" Line 554+50.00 to 568+50.00	EB	9' to 10'	8' to 10'	10'	L-42
	B1.23	"F" Line 526+50.00 to 540+50.00	WB	9' to 10'	8' to 10'	10'	L-40
	B2.23	"F" Line 526+50.00 to 540+50.00	EB	9' to 10'	8' to 10'	10'	L-40
	B1.22 -2	"F" Line 499+50.00 to 512+50.00	WB	8' to 10'	8' to 10'	10'	L-38
	B2.22 -2	"F" Line 499+50.00 to 512+50.00	EB	8' to 10'	8' to 10'	10'	L-38
	B1.22 -1	"F" Line 487+50.00 to 499+50.00	WB	9' to 10'	8' to 10'	10'	L-37
	B2.22 -1	"F" Line 487+50.00 to 499+50.00	EB	9' to 10'	8' to 10'	10'	L-37
Segment 5 (PM 37.422 to PM 39.422)	B1.21	"F" Line 444+50.00 to 458+50.00	WB	8.5' to 10	8.5' to 10	10'	L-34
	B2.21	"F" Line 444+50.00 to 458+50.00	EB	8.5' to 10	8.5' to 10	10'	L-34
	B1.20	"F" Line 430+50.00 to 444+50.00	WB	8.5' to 10'	7.5' to 10'	10'	L-33
	B2.20	"F" Line 430+50.00 to 444+50.00	EB	8.5' to 10'	7.5' to 10'	10'	L-33
	B1.19	"F" Line 386+50.00 to 402+50.00	WB	8.5' to 10'	7.5' to 10'	10'	L-30
	B2.19	"F" Line 386+50.00 to 402+50.00	EB	8.5' to 10'	7.5' to 10'	10'	L-30
	B1.18	"F" Line 372+50.00 to 386+50.00	WB	7' to 10'	7' to 10'	10'	L-29

	B2.18	“F” Line 372+50.00 to 386+50.00	EB	7' to 10'	7' to 10'	10'	L-29
Segment 5 (PM 37.422 to PM 39.422) & Segment 6 (PM 39.422 to PM 41.422)	B1.17	“F” Line 359+50.00 to 372+50.00	WB	5' to 10'	4' to 10'	10'	L-28
	B2.17	“F” Line 359+50.00 to 372+50.00	EB	5' to 10'	4' to 10'	10'	L-28
Segment 6 (PM 39.422 to PM 41.422)	B1.16 -2	“F” Line 345+50.00 to 359+50.00	WB	10'	9' to 10'	10'	L-27
	B2.16 -2	“F” Line 345+50.00 to 359+50.00	EB	10'	9' to 10'	10'	L-27
	B1.16 -1	“F” Line 332+50.00 to 345+50.00	WB	7' to 10'	7' to 10'	10'	L-26
	B2.16 -1	“F” Line 332+50.00 to 345+50.00	EB	7' to 10'	7' to 10'	10'	L-26
	B1.15	“F” Line 319+50.00 to 332+50.00	WB	9.5' to 10'	8.5' to 10'	10'	L-25
	B2.15	“F” Line 319+50.00 to 332+50.00	EB	9' to 10'	8.5' to 10'	10'	L-25
Segment 6 (PM 39.422 to PM 41.422) & Segment 7 (PM 41.422 to PM 43.422)	B1.14	“F1” Line 261+50.00 to “F” Line 276+50.00	WB	7.7' to 9.1'	7.7' to 8.1'	10'	L-20
	B2.14	“F1” Line 261+50.00 to “F” Line 276+50.00	EB	7.7' to 10'	6.7' to 10'	10'	L-20
Segment 7 (PM 41.422 to PM 43.422)	B1.13	“F1” Line 224+50.00 to 247+50.00	WB	8.1' to 9.3'	8.1' to 9.3'	10'	L-18
	B2.13	“F1” Line 224+50.00 to 247+50.00	EB	5' to 8.3'	5' to 8.3'	10'	L-18

	B1.12	"F1" Line 210+50.00 to 224+50.00	WB	8.1' to 9.1'	8.1' to 9.1'	10'	L-17
	B1.11	"F" Line 196+50.00 to "F1" Line 210+50.00	WB	8.5' to 10'	8.5' to 10'	10'	L-16
	B2.12	"F" Line 196+50.00 to "F1" Line 210+50.00	EB	3.8' to 10'	3.8' to 10'	10'	L-16
	B1.10	"F" Line 182+50.00 to 196+50.00	WB	6.4' to 7'	6.4' to 7'	10'	L-15
	B2.11	"F" Line 182+50.00 to 196+50.00	EB	2.5' to 3.5'	2.5' to 3.5'	10'	L-15
	B2.10	"F" Line 168+50.00 to 182+50.00	EB	2.6' to 3.5'	2.6' to 3.5'	10'	L-14
	B1.9- 2	"F" Line 154+50.00 to 168+50.00	WB	10'	9' to 10'	10'	L-13
	B2.9	"F" Line 154+50.00 to 168+50.00	EB	1.6' to 9'	1.6' to 9'	10'	L-13
Segment 8 (PM 43.422 to PM 44.700)	B1.9- 1	"F" Line 141+50.00 to 154+50.00	WB	8.1' to 9'	8.1' to 9'	10'	L-12
	B1.8	"F" Line 127+50.00 to 141+50.00	WB	9.1' to 9.6"	9.1' to 9.6"	10'	L-11
	B2.8	"F" Line 127+50.00 to 141+50.00	EB	8.5' to 9.7'	8.5' to 9.7'	10'	L-11
	B1.7	"F" Line 114+50.00 to 127+50.00	WB	9.6' to 10'	9.6' to 10'	10'	L-10
	B1.6	"F" Line 100+50.00 to 114+50.00	WB	8.6' to 10'	7.6' to 10'	10'	L-9
	B2.7	"F" Line 100+50.00 to 114+50.00	EB	8.8' to 10'	7.8' to 10'	10'	L-9

Segment 8 (PM 43.422 to PM 44.700 & Segment 9 (PM 44.700 to PM 45.650)	B2.6	"F" Line 86+50.00 to 100+50.00	EB	0' to 9.7'	0' to 9.7'	10'	L-8
Segment 9 (PM 44.700 to PM 45.650)	B1.5	"F" Line 72+50.00 to 86+50.00	WB	8.1' to 9'	7.4' to 9'	10'	L-7
	B2.5	"F" Line 72+50.00 to 86+50.00	EB	6.5' to 8'	6.5' to 8'	10'	L-7
	B1.4	"F" Line 57+50.00 to 72+50.00	WB	6.8' to 7.5'	6.8' to 7.5'	10'	L-6
	B2.4	"F" Line 57+50.00 to 72+50.00	EB	6.6' to 8.4'	6.6' to 8.4'	10'	L-6
	B1.3	"F" Line 48+50.00 to 57+50.00	WB	5.9' to 6.5'	5.9' to 6.5'	10'	L-5
	B2.3	"F" Line 48+50.00 to 57+50.00	EB	5.5' to 9.6'	5.5' to 9.6'	10'	L-5
	B1.2	"W" Line 33+50.00 to 40+98.00 "F" Line 41+00.00 to 48+50.00	WB	2.6' to 8.3'	2.6' to 8.3'	10'	L-4
	B2.2	"W" Line 33+50.00 to 40+98.00 "F" Line 41+00.00 to 48+50.00	EB	4.2' to 7.5'	4.2' to 7.5'	10'	L-4
	B1.1	"W" Line 26+21.21 to 33+50.00	WB	4.5' to 9.6'	4.5' to 9.6'	10'	L-3
	B2.1	"W" Line 26+21.21 to 33+50.00	EB	2.8' to 6.5'	2.8' to 6.5'	10'	L-3

Table 5-3. Nonstandard Stopping Sight Distance

Segment No.	Label	Alignment Name and Station Limits	Dir.	Existing SSD	Proposed SSD	HDM 201.6 Standard	Attachment No. / Reference
Segment 2 (PM 32.600 to PM 33.000)	C2.9	"F" Line 833+81.79 to "F" Line 839+31.59	EB	482'	482'	660'	L-54, L-55
	C1.7	"F" Line 816+65.78 to "F" Line 824+70.46	WB	588'	588'	660'	L-53, L-54
Segment 3 (PM 33.000 to PM 35.422)	C2.8	"F" Line 791+86.87 to "F" Line 812+70.37	EB	620'	620'	660'	L-51, L-52, L-53
	C2.7	"F" Line 749+87.92 to "F" Line 760+21.34	EB	518'	518'	660'	L48, L-49
	C1.7	"F" Line 702+81.85 to "F" Line 713+50.01	WB	467'	467'	660'	L-45
Segment 4 (PM 35.422 to PM 37.422)	C2.6	"F" Line 692+4.11 to "F" Line 697+4.09	EB	506'	506'	660'	L-44
	C1.6	"F" Line 680+34.73 to "F" Line 686+42.62	WB	506'	506'	660'	L-43
	C2.5	"F" Line 561+38.69 to "F" Line 570+79.80	EB	473'	473'	660'	L-42, L-43
	C2.4	"F" Line 528+70.29 to "F" Line 545+99.99	EB	423'	423'	660'	L-40, L-41
	C1.5	"F" Line 500+46.73 to "F" Line 522+84.52	WB	423'	423'	660'	L-38, L-39
Segment 5 (PM 37.422 to PM 39.422)	C1.4	"F" Line 373+17.17 to "F" Line 383+40.96	WB	299'	299'	660'	L-29

Segment No.	Label	Alignment Name and Station Limits	Dir.	Existing SSD	Proposed SSD	HDM 201.6 Standard	Attachment No. / Reference
Segment 6 (PM 39.422 to PM 41.422)	C2.3	“F” Line 304+41.92 to “F” Line 315+65.74	EB	620'	620'	660'	L-23, L-24
	C1.3	“F” Line 281+82.58 to “F” Line 293+98.97	WB	620'	620'	660'	L-22, L-23
	C1.2	“F” Line 263+60 to “F” Line 270+35.31	WB	582'	582'	660'	L-20, L-21
Segment 7 (PM 41.422 to PM 43.422)	C2.2	“F1” Line 216+76.36 to “F1” Line 227+39.67	EB	506'	506'	660'	L-16, L-17
Segment 8 (PM 43.422 to PM 44.700)	C2.1	“F” Line 136+99.91 to “F” Line 148+63.11	EB	384'	384'	660'	L-11, L-12
	C1.1	“F” Line 110+99.87 to “F” Line 125+27.32	WB	549'	549'	660'	L-9, L-10

' = foot (feet)

Dir = direction

EB = eastbound

WB = westbound

NsFN = Nonstandard Feature Name

5B. Rejected Alternatives

The No-Build Alternative would leave the existing condition as is and would not meet the needs and purpose of the project. The No-Build Alternative would not reduce the incidence of collisions in the project area. Reducing collisions is needed to meet SHOPPs safety improvements and be consistent with Caltrans' goal of improving public safety.

6. CONSIDERATIONS REQUIRING DISCUSSION

6A. Hazardous Waste

A site investigation during PS&E is required due to the excavation and disposal of soil needed in the proposed upgrade to concrete barriers Type 60MF. The upgrade is meant to protect various

bridge columns and overhead sign posts. In addition, excavation will be needed for the lighting installation in the highway median. Based on previous site investigations it is expected that regulated soil will be encountered during this project due to the presence of aerially deposited lead (ADL). Additionally, the removal of guardrail will generate treated wood waste (TWW) that must be properly handled and disposed of.

6B. Value Analysis

According to the New Value Analysis Threshold District Directors Memorandum (February 5, 2019), a value analysis (VA) study must be considered for all projects over \$25 million. A value analysis will be conducted in the plans, specifications, and estimate (PS&E) phase.

6C. Resource Conservation

This topic does not have a known impact on the project's cost, schedule, or program's requirements.

6D. Right of Way

- **General** - A right of way data sheet has been prepared based on the scope of work described and on maps provided by Design. Estimated cost information is contained in the Right of Way Data sheet in attachment "E" of this report.

Additional R/W acquisition will not be required for this project.

- **Railroad** – Railroad involvement will not be required for this project.
- **Utilities** – Verifications of utilities will be required. The need for potholing will be ascertained following the verification process during PS&E.

6E. Environmental Compliance

This project is categorically exempt (CE) under California Environmental Quality Act (CEQA) and categorically excluded under the National Environmental Protection Act (NEPA). The CE/CE is provided as Attachment D.

6F. Air Quality Conformity

This project is exempt from the requirement to determine air quality conformity per 40 CFR 93.126, (Table 2- Safety - Guardrails, median barriers, crash cushions). Therefore, an Air Quality Study is not required.

6G. Title VI Considerations

Caltrans Director's Policy (DP) 28-R2 provides consideration for Title VI of the Civil Rights Act of 1964 in the planning and project delivery process, and with Caltrans partners, to ensure the public is not discriminated against, either intentionally or unintentionally, because of a

transportation decision. This project is required to comply with Caltrans policies regarding Title VI considerations.

6H. Noise Abatement Decision Report

This project does not qualify as either a Type I or Type II project under 23 CFR 772. Noise abatement need not be considered and a Noise Study Report is not required.

6I. Stormwater Compliance

A long form Stormwater Data Report (SWDR) was prepared and is included as Attachment F. The disturbed soil area for the project is expected to be more than one acre. To comply with the conditions of the Caltrans National Pollutant Discharge Elimination System permit and address the temporary water quality impacts resulting from the construction activities in this project, the construction activities need to comply with the Construction General Permit (CGP) and the Stormwater Pollution Prevention Plan (SWPPP). The cost of stormwater related items is as shown in the SWDR and has been incorporated in the project cost estimate.

7. OTHER CONSIDERATIONS AS APPROPRIATE

Construction Green House Gas Emissions

Implementation of Caltrans Standard Specifications, such as complying with air-pollution-control rules, regulations, ordinances, and statutes that apply to work performed under the Contract and the use of construction best management practices, would result in reducing GHG emissions from construction activities, including but not limited to:

1. Regular vehicle and equipment maintenance
2. Limit idling of vehicles and equipment onsite
3. If practicable, recycle non-hazardous waste and excess material. If recycling is not practicable, dispose of material
4. Use solar-powered signal boards, if feasible
5. Use tier 4 interim or tier 4 final engines

Public Hearing Process

Because this project is a CE/CE and does not directly impact local roads, a public hearing is not expected. However, because there was a resident complaint, this issue will be further evaluated in the PS&E phase. This issue does not have a known impact on the project's cost schedule or program's requirements.

Route Matters

The project will have no impacts relating to the items listed under the Caltrans Route Matters policy. These items include route adoptions, transfer of highway locations, re-designations, rescissions, relinquishments, and access control modifications.

Transportation Management Plan

A Transportation Management Plan (TMP) is a special program that will be implemented during construction to minimize and prevent delay and inconvenience to the traveling public. The proposed construction will include the removal and installation of concrete median barrier, guardrail, transitional barrier, and the repaving of asphalt in the median. This will require partial freeway lane closures and detours. Further analysis of the TMP during the final design phase (PS&E) will be supported by detailed traffic studies to evaluate traffic operations.

The TMP includes press releases to notify and inform motorists, businesses, community groups, local entities, and emergency services of upcoming closures and detours affecting travel lanes. Various TMP elements such as portable changeable message signs and a California Highway Patrol Construction Zone Enhanced Enforcement Program (COZEEP) will be used to alleviate or minimize traffic delays. A TMP Data Sheet was approved on September 30, 2022, and is included as Attachment G. The total cost estimate for TMP is \$2,070,000.

Stage Construction

This project will be constructed in stages while leaving traveled lanes operational and keeping traffic disruption to a minimum. Partial lane closures and traffic shifts are to be expected. To achieve this and to minimize some of the risks associated with traffic management, construction is proposed both during and outside standard construction hours, including night-time closures if needed. The impact of this issue has been mitigated in the project cost, schedule and program requirements.

Geotechnical Recommendation

Lighting Foundation

The proposed Lighting Standard Type 21 D (median barrier mounted) standard plan design parameters require a minimum friction angle (ϕ) of 30 degrees and a total unit weight of 120 pounds per cubic foot for cohesionless soils, or an undrained shear strength of 1.5 kips per square foot for cohesive soils. Also required are ground slopes flatter than 2 horizontal (H) to 1 vertical (V) with no groundwater present along the pile length. Based on a review of the nearest as-built log of test boring (LOTB) for the proposed lighting locations the subsurface conditions meet the standard plans design parameters. Geotechnical Design recommends using the Caltrans Standard Plan design for the CIDH pile foundations of median barrier mounted lighting at the proposed locations.

Overhead Sign Foundation

Based on the nearest as-built LOTBs, overhead sign locations 3, 8A and 12 do not meet Standard Plans soil parameters. Overhead sign locations 5, 7, 8A, 10, 11, 12 and 13 are expected to have groundwater present along the pile length. The Office of Design and Technical Services (ODTS) will need to provide a Foundation Data Table for the overhead sign locations presented in Table 8. To supplement existing subsurface data, Geotechnical Design recommends additional field investigation and laboratory testing as summarized in Table 9 of the Preliminary Geotechnical

Report (DPGR) for Overhead Signs. The Preliminary Geotechnical Report (DPGR) for Overhead Signs, as well as for lighting foundations, is provided as Attachment I.

Maintenance Recommendation

The proposed construction improvements in the median of I-580, within the project limits, do not require routine maintenance, except for the rare occasion to repair facilities because of property damage, or for lighting equipment replacement. Hence, this topic is not applicable. The Materials Recommendation is provided as Attachment J.

Materials Recommendation

Structural section work is confined to the inside shoulders except for a portion at the western end of project limits for I-580, where the repaving will partially encroach on the inside travel lane. Recommendations are as follows:

Existing AC Shoulders

After removal and replacement of the barrier, we recommend to cold plane 3.5' (width)*of adjoining median shoulder pavement to a depth of 0.25' and backfill with new HMA(A). 42" width is selected to allow compaction of the HMA layer with a small roller.

Existing PCC Shoulders

Further recommendations will be provided once any specific issues are identified by Maintenance or Design during the PSE phase.

Metal Guard Railing

Refer to the 2024 Standard Plans for vegetation control strips under the new metal guard railing.

Concrete Formwork Sliver

If a sliver is required for the concrete formwork, it is recommended to construct a 1-foot wide sliver with full-depth HMA(A) backfill. If a wood frame is needed to confine an area for pouring concrete for construction of the median barrier, any excavation required to place formwork for the concrete barrier is to be backfilled with full AC with a minimum width of 1-foot.

Graffiti Control

This topic does not have a known impact on the project's cost, schedule, or program's requirements.

Asset Management

This project proposes to improve the following performance measures:

Install 1,900 linear feet of Midwest guardrail system (MGS), install 65,604 linear feet of median barrier, reduce by 111.8 each the number of collisions, proactively reduce the annual number of fatal and serious injury collisions by 5.69 each, rehabilitate 19 overhead signs, and replace 19 sign panels. The Asset SHOPP Performance Measures are provided as Attachment L.

Complete Streets

This project is 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. Therefore, the project is exempt from further complete streets evaluation. The Complete Streets Decision Document (CSDD) evaluation is provided as Attachment M.

Hazardous Materials

Based on previous site investigations, it is expected that regulated soil will be encountered during this project due to the presence of Aerially Deposited Lead (ADL). A site investigation will be performed during the PS&E phase for soil sampling and testing. Additionally, the removal of guardrail will result in Treated Wood Waste (TWW) that must be properly handled and disposed of.

Landscaping

Provisional funding in the amount of approximately \$65,000.00 is provided for erosion control, landscaping, and irrigation in the cost estimate. The full extent of this work will be identified in the PS&E phase.

Highway Planting

The project corridor is an officially designated State Scenic Highway on I-580 at PM R34.5/45.2 and is eligible for State Scenic Highway designation on SR-13 at PM 4.26/4.32. The project corridor is also a Classified Landscaped Freeway on I-580 at PM R32.13/43.5 and PM 43.63/45.6. This classification assists in the control and placement of outdoor advertising and the preservation of the visual quality along the highway corridor. Plantings will require protection from damage to the maximum extent feasible to maintain Classified Landscaped Freeway status.

Existing Highway Planting and Irrigation systems are present within the project limits. Vegetation throughout the corridor consists of trees, shrubs, and naturalized vegetation. To avoid damages to tree roots and the removal of trees and vegetation, construction staging areas should be located away from areas with existing trees and vegetation. Signage structure foundations should be located outside of the driplines of mature trees where feasible. Installation of MGS should be completed with the least impacts to the root systems of existing trees and shrubs, as well as irrigation supply lines, sprinkler heads, electrical conductors and related equipment.

As currently shown, the project is expected to affect existing highway planting and irrigation facilities at various locations. Replacement Planting will be provided in any areas of highway planting removal where right of way allows, and existing operational irrigation systems damaged shall be repaired to be functional to support planting. Any irrigation disrupted by construction operations will require interim watering by truck and repairs of the damaged irrigation facilities. Replacement planting will include trees, shrubs and groundcover to ensure that areas of Classified Landscape Freeway can maintain their classification status. Replacement planting will be completed with this contract and will include a one-year plant establishment period. Detailed

planting plans and irrigation plans along with their estimates will be developed and refined during the PS&E phase.

Erosion Control

To protect the transportation facility and to meet water quality discharge requirements, all disturbed soil areas from construction activities and staging operations shall be covered with permanent erosion control measures such as compost, hydroseed, hydromulch, rolled erosion control product (netting) and related materials. Appropriate and specific locations for erosion control treatments will be developed during the project design PS&E (plans, specifications, and estimate) phase.

Visual/Aesthetics

This project proposes aesthetic treatment on the median barrier along I-580 between PM R33.608 and PM 41.967 in Alameda County. This stretch of I-580 is a heavily travelled Classified Landscaped Freeway and an officially designated Scenic Highway, which would benefit from barrier treatments that enhance the aesthetic experience of the corridor. The aesthetic treatment will be a visually pleasing, context sensitive solution for the highway project. The method used to form the median barrier with the aesthetic treatment is cast in place form liner. The design of the aesthetic treatment includes both sides of the barrier and will be compatible with the concrete median barrier, except at the transitional areas around luminaires and bridge columns. The estimated cost for the barrier aesthetic treatment is \$2.2 million.

Drainage Work

Provisional funding in the amount of approximately \$3,234,000.00 is provided for potential reconstruction of drainage features that may be encountered within the median of Route I-580. The full extent of drainage work will be identified in the PS&E phase.

8. FUNDING, PROGRAMMING AND ESTIMATE

Funding

The project is programmed in 2024 SHOPP under the Collision Safety Reduction category (201.015). The proposed funding fiscal year for this project is 2026-2027 and the proposed programming by fiscal year is shown in Table 8-1.

Federal-aid Funding:

It has been determined that this project is eligible for Federal-aid funding.

Programming

The project's programming details are provided on the following page in Table 8-1.

Table 8-1. Programmed Capital and Support Costs

Fund Source	Funding Fiscal Year of Programmable Alternative						
	2023/2024	2024/2025 Current FY	2025/2026	2026/2027 RTL	2027/2028	2027/2028	Total
Component	In thousands of dollars (\$1,000)						
PA&ED Support		3,777					3,777
PS&E Support			4,370				4,370
Right of Way Support			60				60
Construction Support				5,930			5,930
Total Capital Outlay Support Cost							14,137
Right of Way				50			50
Construction				49,424			49,424
Total Capital Outlay Construction Cost							49,474
Grand Total		3,777	4,430	55,404			63,611

The support to capital cost ratio is 28.57%.

Estimate

The current escalated construction capital cost estimate of this \$53,309,000 project is approximately 10% over the programmed amount. The reason for the cost variance is due to the following reasons that were not considered in the PIR: The cost to place concrete barrier on top of the existing retaining walls increased significantly, and it was determined that the existing retaining wall cannot support the weight of the concrete barrier without mitigation.

Lighting is proposed in two segments. In one segment, three bridges are included (Lakeshore Parkway Undercrossing (Bridge No. 33-0131), Broadway-Richmond Boulevard Undercrossing (Bridge No. 33-0285), and Oakland Avenue Undercrossing (Bridge No. 33-0288)). In order to provide median lighting on these bridges, it is necessary to upgrade the median bridge barrier. The upgraded concrete barrier requires additional support for its weight, this support will be provided by steel brackets to strengthen the overhang located in the median.

For the existing barrier around the overcrossing bridge columns, it was determined that the bridge columns require additional support to withstand loads from collisions. The proposed barrier design includes a concrete slab with a depth of 1foot, 8 inches.

The Electrical estimate increased with the accounting of "modifying traffic monitoring station systems".

9. DELIVERY SCHEDULE

Table 9-1 on the following page lists the project milestones, the milestone dates, and their current designation.

Table 9-1. Project Milestones

Project Milestones		Milestone Date (Month/Day/Year)
PROGRAM PROJECT	M015	03/18/2024
BEGIN ENVIRONMENTAL	M020	08/19/2024
PA & ED	M200	12/18/2025
PS&E TO DOE	M377	11/16/2026
PROJECT PS&E	M380	02/16/2027
RIGHT OF WAY CERTIFICATION	M410	04/15/2027
READY TO LIST	M460	05/17/2027
FUND ALLOCATION	M470	08/16/2027
HEADQUARTERS ADVERTISE	M480	10/20/2027
AWARD	M495	12/20/2027
APPROVE CONTRACT	M500	01/17/2028
CONTRACT ACCEPTANCE	M600	03/19/2029
END PROJECT	M800	09/19/2030

Notes:

DOE = District Office Engineer
M = milestone

PS&E = Plans, Specifications, and Estimate
PA&ED = Project Approval and Environmental Document

10. RISKS

The project has identified 36 active risks having low to moderate impacts on costs and/or time. The following six fall within the moderate range. For all other risks, refer to Risk Register in Attachment H.

- Risk ID # 14 – (Increased Scope of Work) – Any changes in Project scope may increase the originally programmed amount, leading to extra design effort resulting in additional cost and schedule delays to ready to list (RTL) the project. There are unresolved structures scope for barriers on OH bridges, Additional lighting locations may be necessary and other possibilities yet unknown. This risk is normally retired at final stages of PS&E phase.
- Risk ID # 15 – (Support Cost Increase) – Unforeseen project design issues may arise which could lead to a spike in support cost resulting in additional support cost and possible schedule delay.
- Risk ID # 18 – (Utility Design Constraint) – Existing utility infrastructure to remain in place may impose design constraints leading to redesign or relocation, resulting in additional costs and schedule delays.
- Risk ID # 22 – (Inadequate Power / Service Connection) – Project site may not have adequate power or service connection to meet the need of the electrical improvement leading to modifications to the power service provider’s system to accommodate connection required by this project, resulting in additional cost and schedule delays.

- Risk ID # 34 – (Insufficient fund due to unforeseen design features) – Any changes in design scope may result in additional cost and schedule delays.
- Risk ID # 35 – (Existing Retaining Wall Type 1 Adequacy) – Performance of structural and geotechnical analysis in the design phase may result in the need to rehabilitate existing retaining walls to carry median barriers or lighting standards, resulting in an increase in support and capital costs.

11. EXTERNAL AGENCY COORDINATION

Federal Highway Administration (FHWA)

This project is considered to be a delegated project in accordance with the current Stewardship and Oversight Agreement signed between the Federal Highway Administration (FHWA) and Caltrans on May 28, 2015. There are no permits or approvals expected for the project.

12. PROJECT REVIEWS

Table 12-1 on the following page lists the project reviews that have been conducted for the project, the names of the reviewers, and the dates of the reviews.

Table 12-1. Project Reviews

Type of Review	Reviewer(s)	Date of Review
District Program Advisor	Saif Mamoon	10/27/2025
District Maintenance	Monique Nguyen	10/27/2025
Headquarters Project Delivery Coordinator	Eduardo Simonsen	10/27/2025
Project Manager	Emmanuel Okereke	10/27/2025
Scoping Team Field Review	See Attachment K	10/27/2025
District Design Liaison	Bach-Yen Nguyen	10/27/2025
District Safety Review	Amir Mahboubi	10/27/2025
Constructability Review	Jeffrey Hupe	10/27/2025
District Asset Manager	Deepthi Madabushi	10/27/2025
Environmental Analysis	Wahida Rashid	10/27/2025
District Design Review	Mansue Mamoodi	10/27/2025

13. PROJECT PERSONNEL

Table 13-1 on the following page lists the project personnel, their project titles, and their telephone numbers.

Table 13-1. Project Personnel

Name	Title, Functional Area	Phone Number
Michael Nguyen	Regional Project Manager	(510) 715-9216
Emmanuel Okereke	Project Manager	(510) 715-9293
Morteza (Mort) Azimi	Chief, Office of Design Alameda	(510) 715-7717
Mansue Mamoodi	Senior Engineer, Design Alameda	(510) 407-8417
Nicholas Grgich	Project Engineer, Design Alameda	(510) 421-6335
Deepthi Madabushi	District Asset Manager	(510) 708-5586
Saif Mamoon	District Program Advisor	(510) 206-1721
Reto Schaerli	DES Project Liaison Engineer	(916) 639-5548
Richard Melko	Structure Engineer, DES	(279) 766-1782
Evan Franciliso	ODTS Branch B Chief	(916) 279-0928
Jeffrey Woody	ODTS (Special Design)	(916) 214-6533
Christian Noriega	Transportation Engineer, Design Alameda	(510) 504-6265
Wahida Rashid	Senior Environmental Planner	(510) 504-3139
Mojgan Osooli	Storm Water Coordinator	(510) 926-0380
Bahram Teheranian	Project Engineer Water Quality	(510) 421-6291
Allison Paich	Office Chief of RW Acquisitions and Project Management Services	(510) 715-6726
Shella Orson	Senior Right of Way	(510) 908-9183
David Mars	Associate Right of Way Agent	(510) 286-5497
Brian Rowley	Chief, Water Quality Branch	(510) 496-9313
Stan Kung	Senior Engineer (TMP)	(510) 421-8041
Claudia Fang	Branch Chief, Traffic Signing	(510) 421-7367
Amir Mahboubi	Senior Traffic Safety Coordinator	(510) 807-1612
Mohammad Zabolzadeh	Branch Chief, Design Materials	(510) 286-4831
Shawn Hung	Project Engineer, Design Materials	(510) 406-4459
Jeffrey Hupe	Transportation Engineer, Constructability	(510) 859-6871
Lydia Mac	Senior Landscape Architect	(510) 407-9474
Doris Zeng	Landscape Associate	(510) 496-9384
Einar Acuna	Senior Electrical Engineer	(510) 715-9592
Pierre Lassalle	Electrical Engineer	(510) 421-6455
Monique Nguyen	Office Chief, Maintenance	(510) 220-0033
Guang-Ru Li	Branch Chief, Hydraulics	(510) 301-4054
Nicholas Toy	Transportation Engineer, Hydraulics	(510) 406-9831

DES = Division of Engineering Services

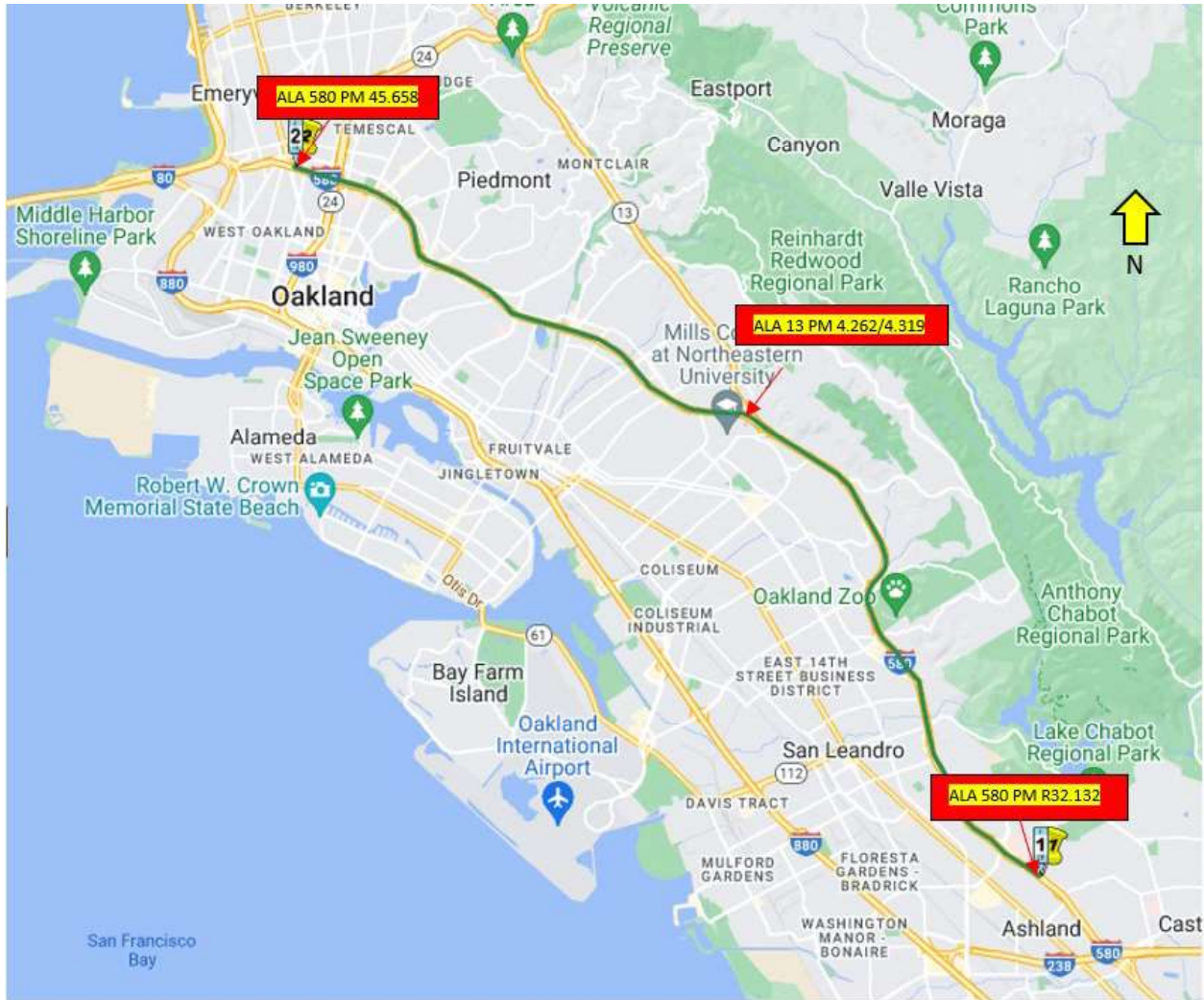
14. ATTACHMENTS (Number of Pages)

- A. Vicinity Map (1)
- B. Preliminary Plans (87)
- C. Cost Estimate (11)
- D. CE/CE (9)
- E. ROW Data Sheet (8)
- F. SWDR (17)
- G. TMP Data Sheet (2)
- H. Risk Register (4)
- I. Geotechnical Reports (Lighting and Overhead Sign Foundations) (10 and 18)
- J. Materials Recommendation (4)
- K. Scoping Team Field Review Attendance (1)
- L. Asset Performance Measures (1)
- M. Complete Streets Decision Document (CSDD) (5)

ATTACHMENT A

VICINITY MAP

Vicinity Map



ALA 580 PM R32.132/45.658 Median Barrier & Safety Lighting
ALA 13 PM 4.262/4.319 Transitional Barrier

ATTACHMENT B
PRELIMINARY PLANS

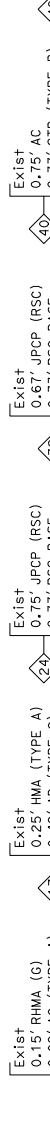
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REGISTERED CIVIL ENGINEER			DATE	PLANS APPROVAL DATE		
THE STATE OF CALIFORNIA OFFICE OF THE REGISTERED PROFESSIONAL ENGINEERS I HEREBY CERTIFY THAT THE ACCURACY OF THIS PLAN SHEET IS AS SHOWN ON THE PLAN.			REGISTERED PROFESSIONAL ENGINEER No. _____ Exp. _____ CIVIL ENGINEER			

ABBREVIATIONS:
 GPI GEOSYNTHETIC PAVEMENT INTERLAYER
 LCBRS LEAN CONCRETE BASE RAPID SETTING
 RIMA-G RUBBERIZED HOT MIX ASPHALT-GAP GRADED
 RSC RAPID STRENGTH CONCRETE

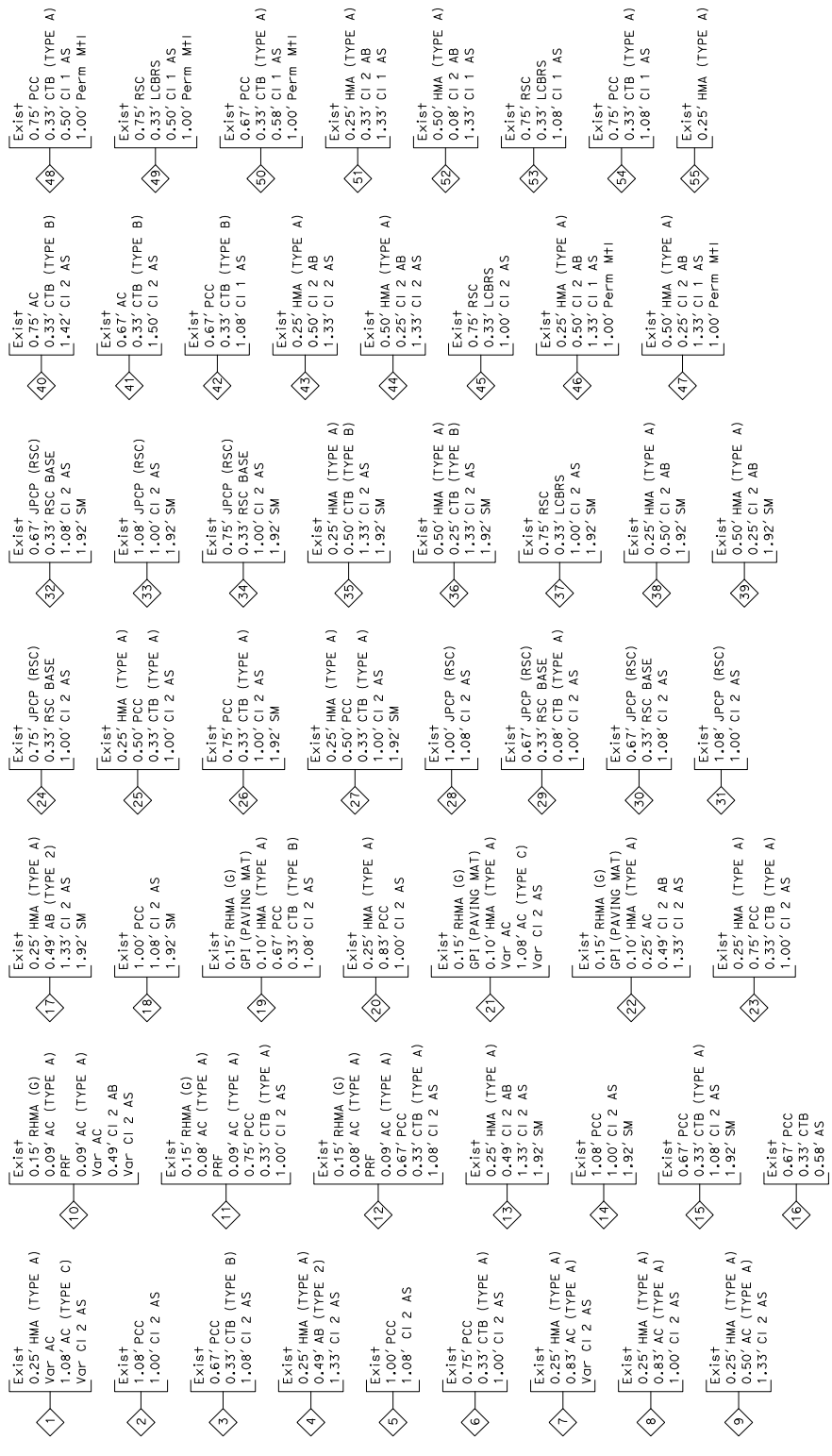
LEGEND:
 (No.) Exist STRUCTURAL SECTION NUMBER
 (No.) PROPOSED STRUCTURAL SECTION NUMBER

NOTES:
 1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
 2. DO NOT GRIND BRIDGE DECKS AND APPROACH SLABS.

PROPOSED TYPICAL PAVEMENT STRUCTURE SECTION



EXIST TYPICAL PAVEMENT STRUCTURE SECTIONS

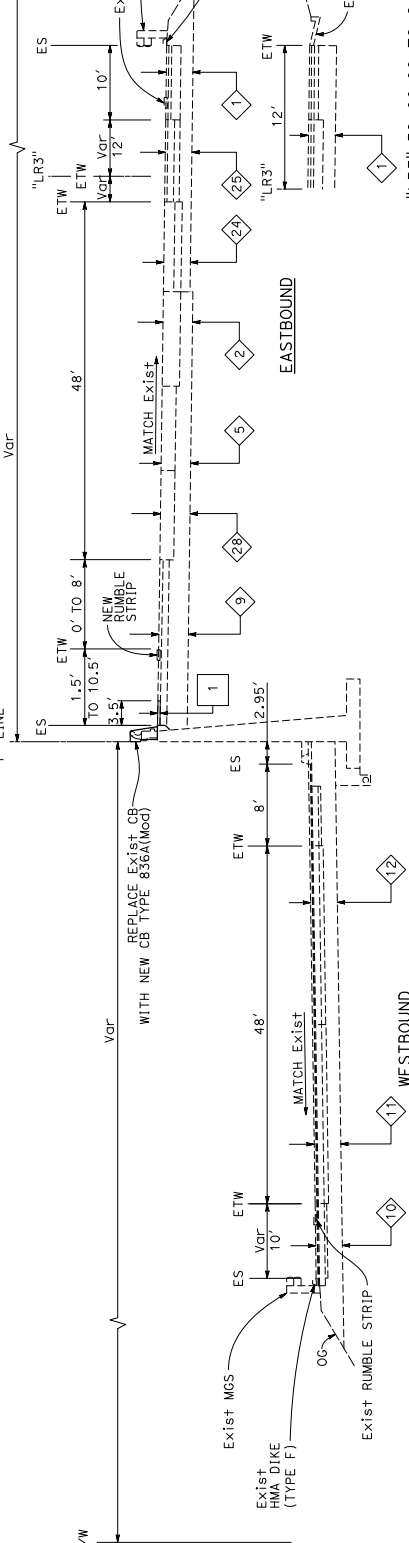
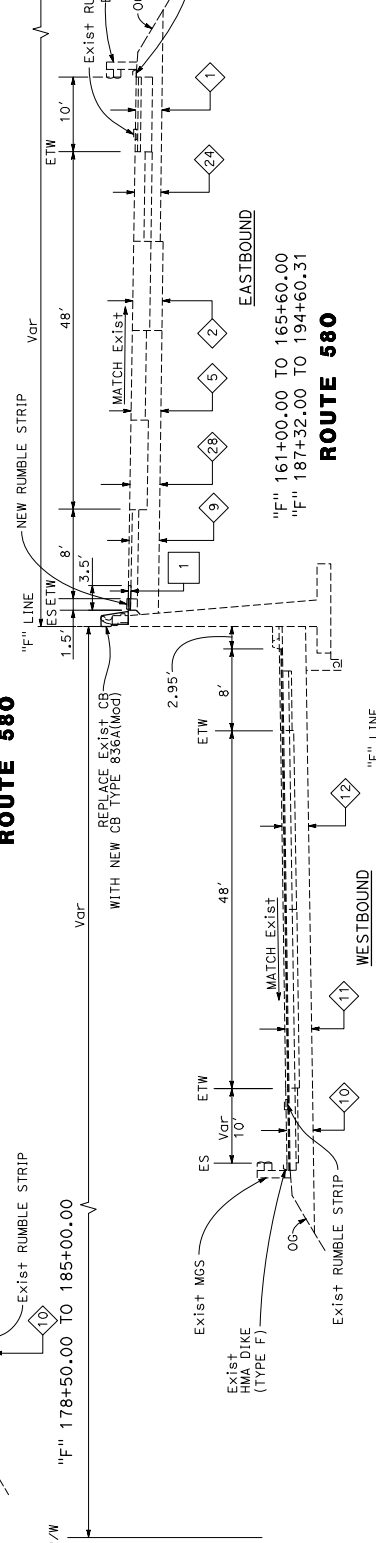
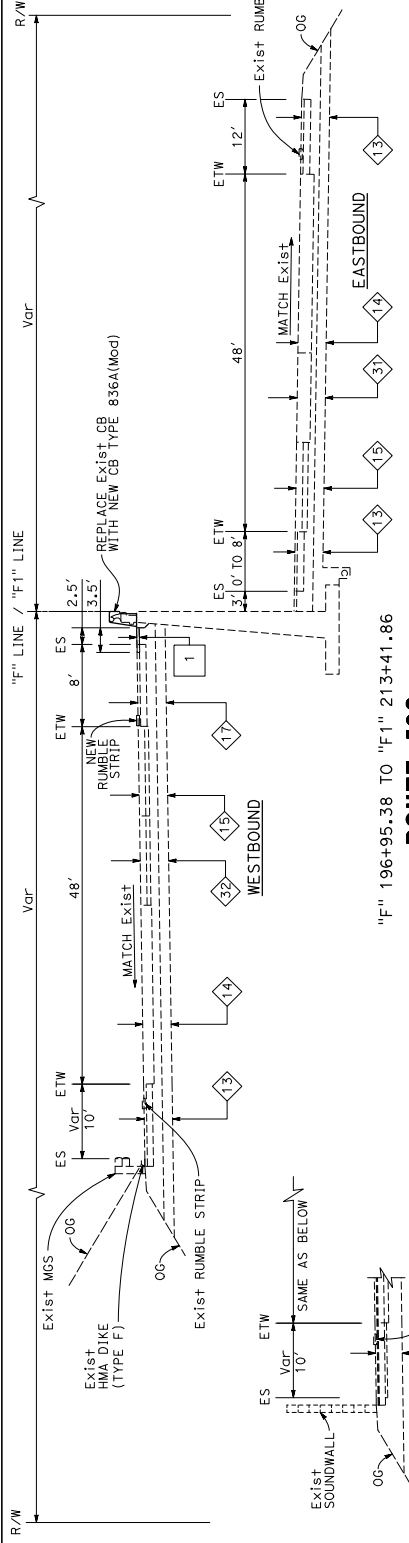


TYPICAL CROSS SECTIONS
 NO SCALE

X-1

Dist	County	Route	Post Miles	Total Miles	Sheet Total
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					X XXX

REGISTERED CIVIL ENGINEER DATE _____
 PLANS APPROVAL DATE _____
 THE STATE OF CALIFORNIA OR ITS OFFICERS
 HEREBY CERTIFY THAT THE ENGINEER HAS
 REVIEWED THESE PLANS AND THE ACCURACY OF
 THE INFORMATION THEREON AND THE
 CORRECTNESS OF THIS PLAN SHEET.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	CHECKED BY	DESIGNED BY	DATE REVISOR	REVISOR

TYPICAL CROSS SECTIONS
 NO SCALE

FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE SHEET X-1

"F" LINE / "F1" LINE

ROUTE 580

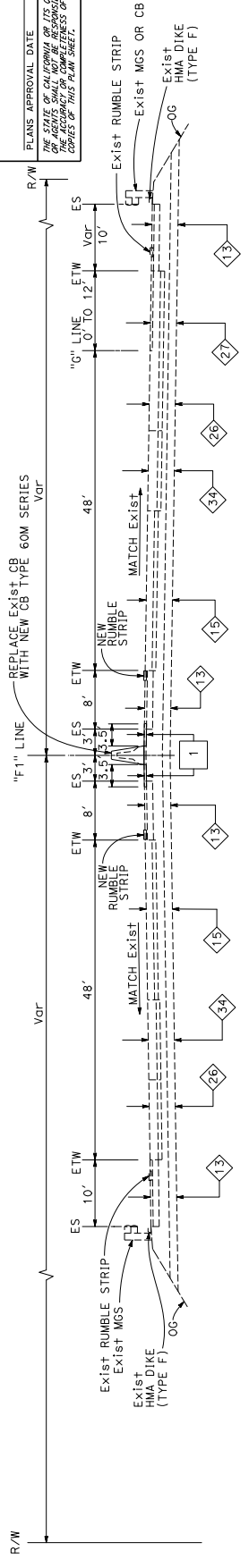
ROUTE 580

ROUTE 580

ROUTE 580

Dist#	COUNTY	ROUTE	POST MILES	SHEET TOTAL
04	Alameda	13, 580	0.00	NO. SHEETS
			0.00	X
			0.00	XXX

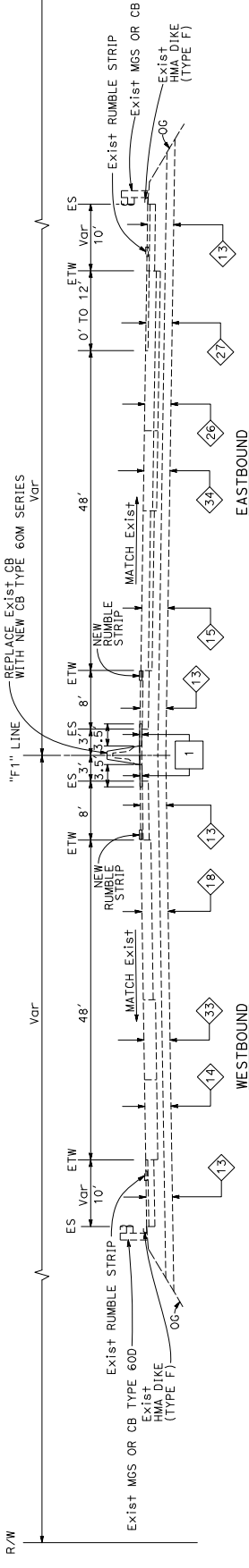
REGISTERED CIVIL ENGINEER DATE _____
 PLANS APPROVAL DATE _____
 THE STATE OF CALIFORNIA OR ITS OFFICERS
 HEREBY CERTIFY THAT THE ACCURACY OF THE INFORMATION
 CONTAINED ON THIS PLAN SHEET IS TRUE AND CORRECT.



EASTBOUND

"F1" 263+35.89 TO 272+00.00
 "F1" 248+62.20 TO 257+59.20

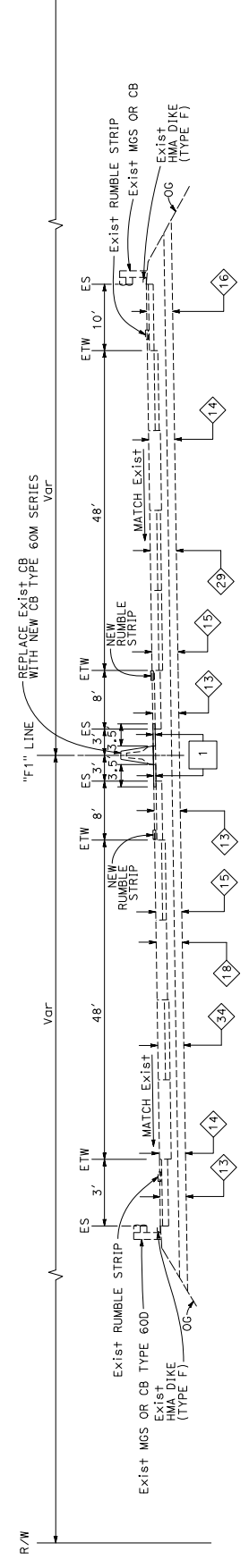
ROUTE 580



WESTBOUND

"F1" 229+55.54 TO 248+62.20
 "F1" 223+79.43 TO 228+48.00

ROUTE 580



WESTBOUND

"F1" 213+41.86 TO 221+95.41

ROUTE 580

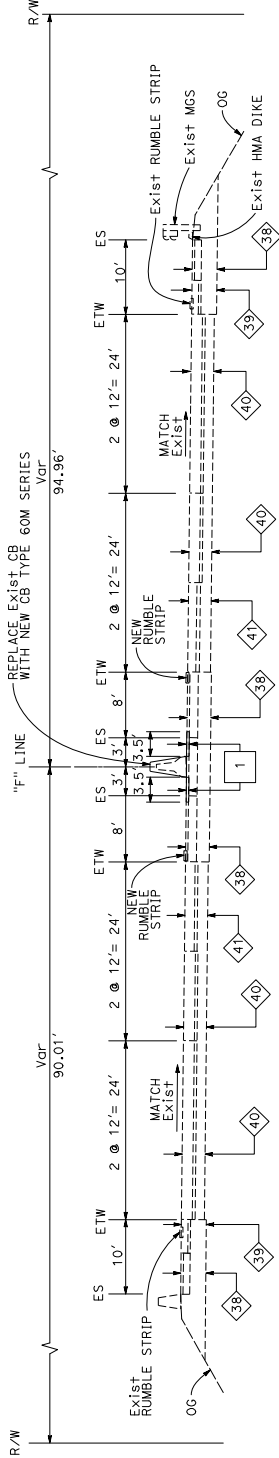
TYPICAL CROSS SECTIONS
 NO SCALE

FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE SHEET X-1

X-5

Dist	County	Route	Post Miles	Total Project	SHEET TOTAL
04	Alameda	13, 580	R22.12/45.65	R22.12/45.65	No. SHEETS
					X XXX

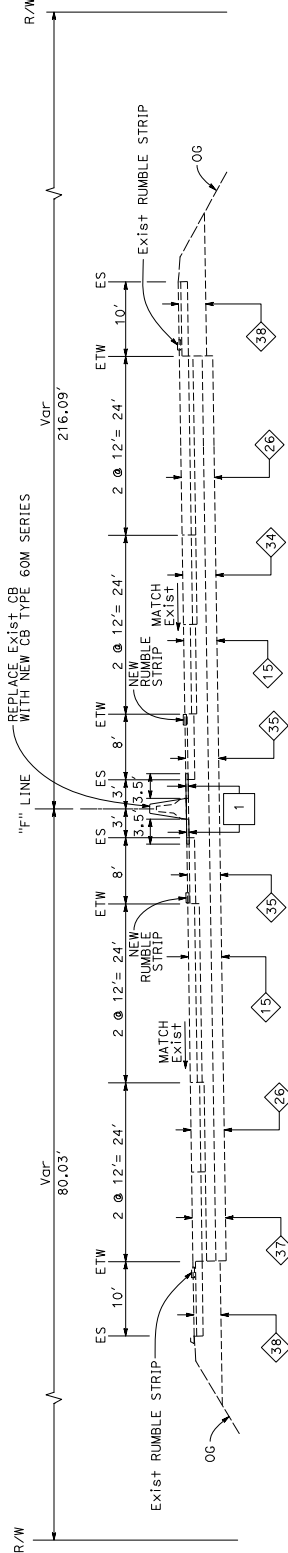
REGISTERED CIVIL ENGINEER DATE _____
 PROFESSIONAL ENGINEER No. _____
 CIVIL ENGINEER No. _____
 STATE OF CALIFORNIA



EASTBOUND

WESTBOUND

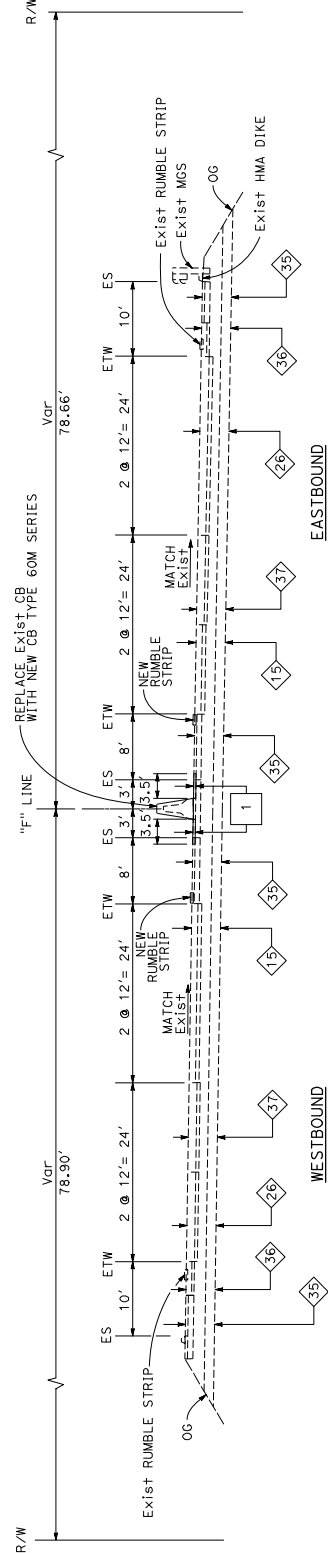
"F" 348+02.00 TO 572+25.00
ROUTE 580



EASTBOUND

WESTBOUND

"F" 341+00.00 TO 348+02.00
ROUTE 580



EASTBOUND

WESTBOUND

"F" 263+02.77 TO 341+00.00
ROUTE 580

TYPICAL CROSS SECTIONS

NO SCALE

X-6

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET X-1

DATE PLOTTED = 29-OCT-2025 16:38

PROJECT NUMBER & PHASE

UNIT 0733

3

RELATIVE BORDER SCALE 15 IN INCHES

USERNAME => s160145 DON FILE => 0421000325c=006.dgn

BORDER LAST REVISED 7/2/2010

04210003251

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	CHECKED BY	DESIGNED BY	DATE REVISED	REVISOR

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL SHEETS
04	Alameda	13, 580	0.00 / 1.00	1 / 1
REGISTERED CIVIL ENGINEER			DATE	
PLANS APPROVAL DATE				
THE STATE OF CALIFORNIA OR ITS OFFICERS SHALL NOT BE LIABLE FOR THE ACCURACY OR COMPLETENESS OF ANY PORTION OF THIS PLAN SHEET.				

REGISTERED CIVIL ENGINEER

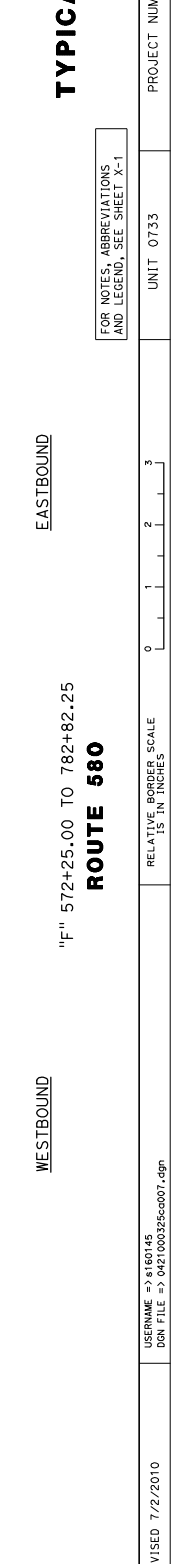
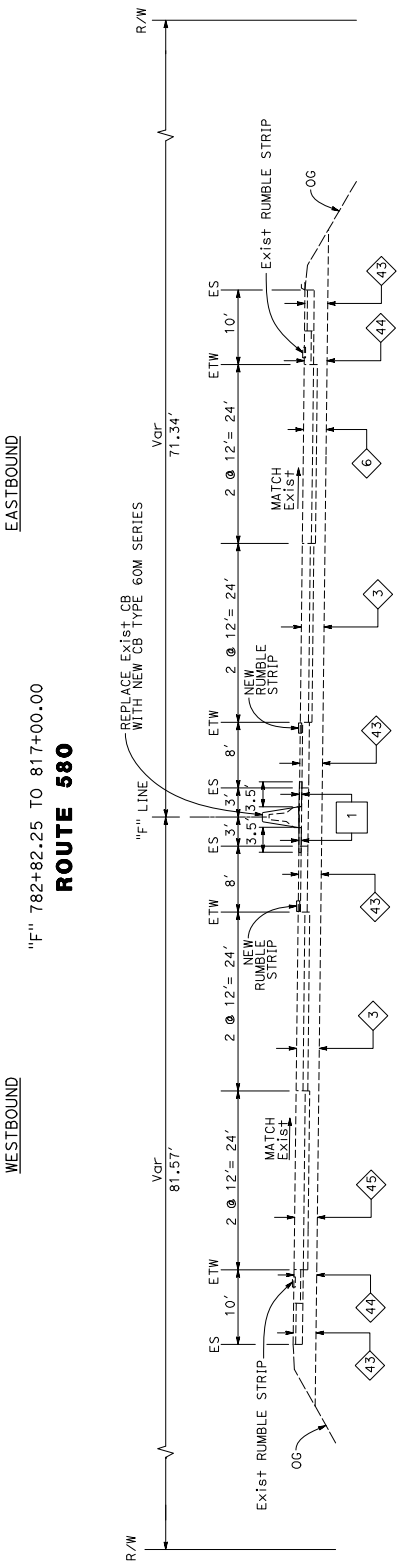
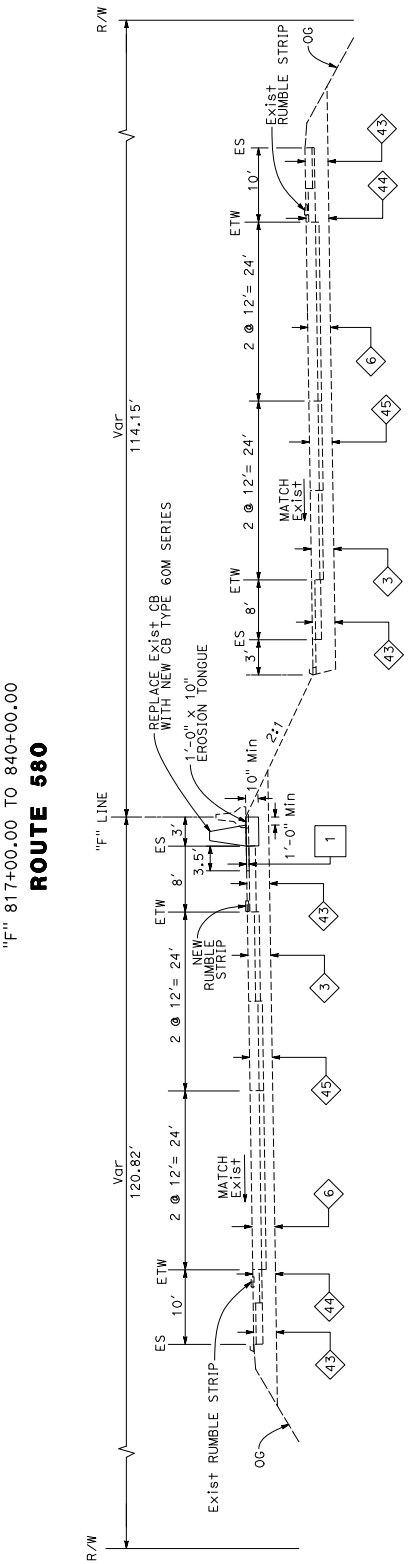
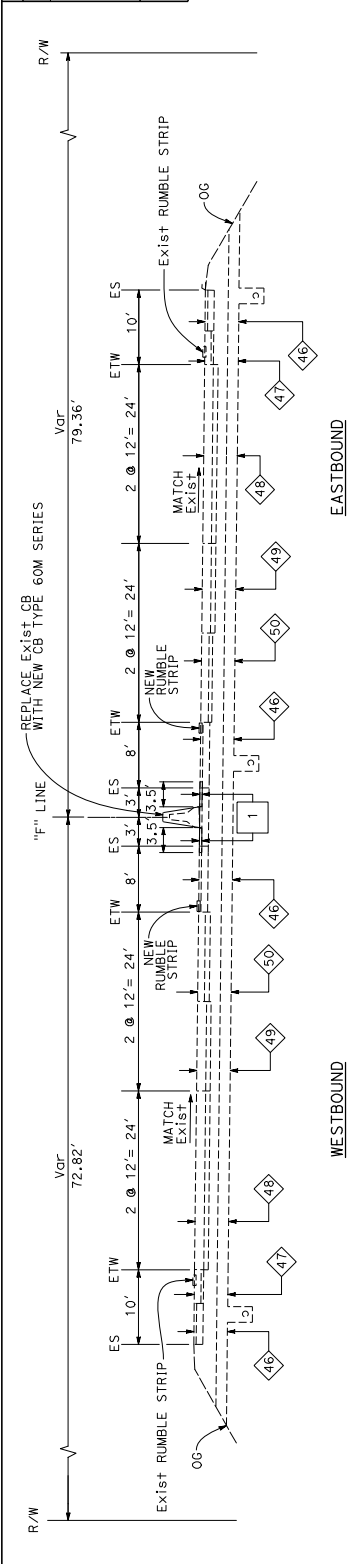
PROFESSIONAL ENGINEER

NO. _____

EXPIRES _____

CIVIL

STATE OF CALIFORNIA



TYPICAL CROSS SECTIONS
 NO SCALE

FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE SHEET X-1

UNIT 0733

PROJECT NUMBER & PHASE

0 1 2 3

RELATIVE BORDER SCALE

15 IN INCHES

USER NAME => s160145

DGN FILE => 0421000325c-e007.dgn

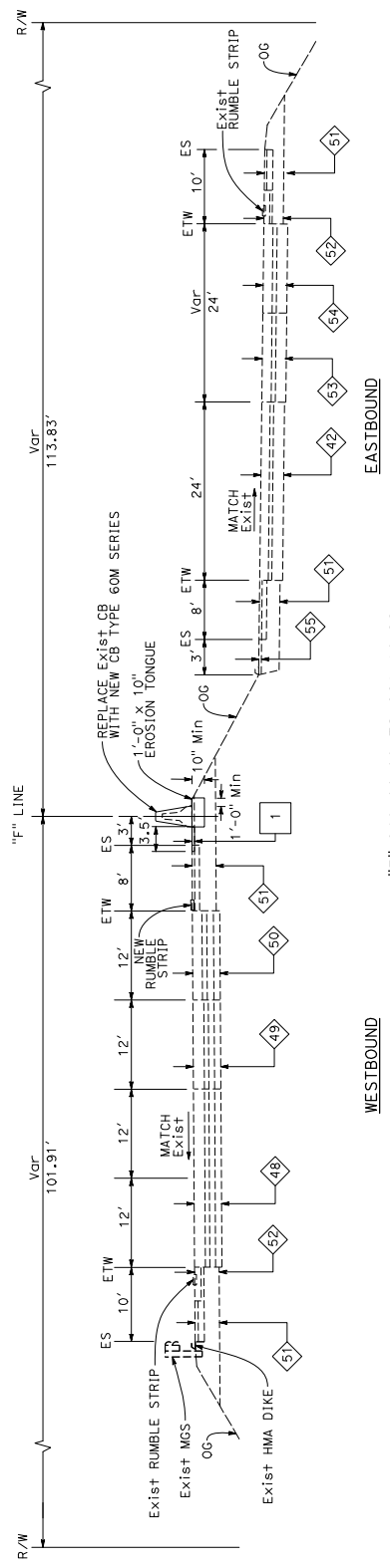
BORDER LAST REVISED 7/2/2010

04210003251

X-7

TYPICAL CROSS SECTIONS
 NO SCALE
X-8

FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE SHEET X-1



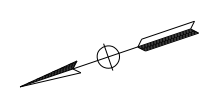
Dist	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	SHEET TOTAL
04	Alameda	13, 580	13.00	13.00	XXX
			R32.12/45.65	R32.12/45.65	X XXX

REGISTERED CIVIL ENGINEER DATE _____
 PLANS APPROVAL DATE _____
 THE STATE OF CALIFORNIA OFFICIALS
 THE ACCURACY OF THIS PLAN SHEET.
 REGISTERED CIVIL ENGINEER
 No. _____ Exp. _____
 PROFESSIONAL ENGINEER

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	DESIGNED BY	REVISOR	DATE REVISED

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	X	CHECKED BY	X	DATE REVISED	X	REVISOR	X
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NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



DIST	COUNTY	ROUTE	POST MILES	SHEET TOTAL
04	Alameda	13, 580	R32.17/45.165	NO. SHEETS
				X XXX

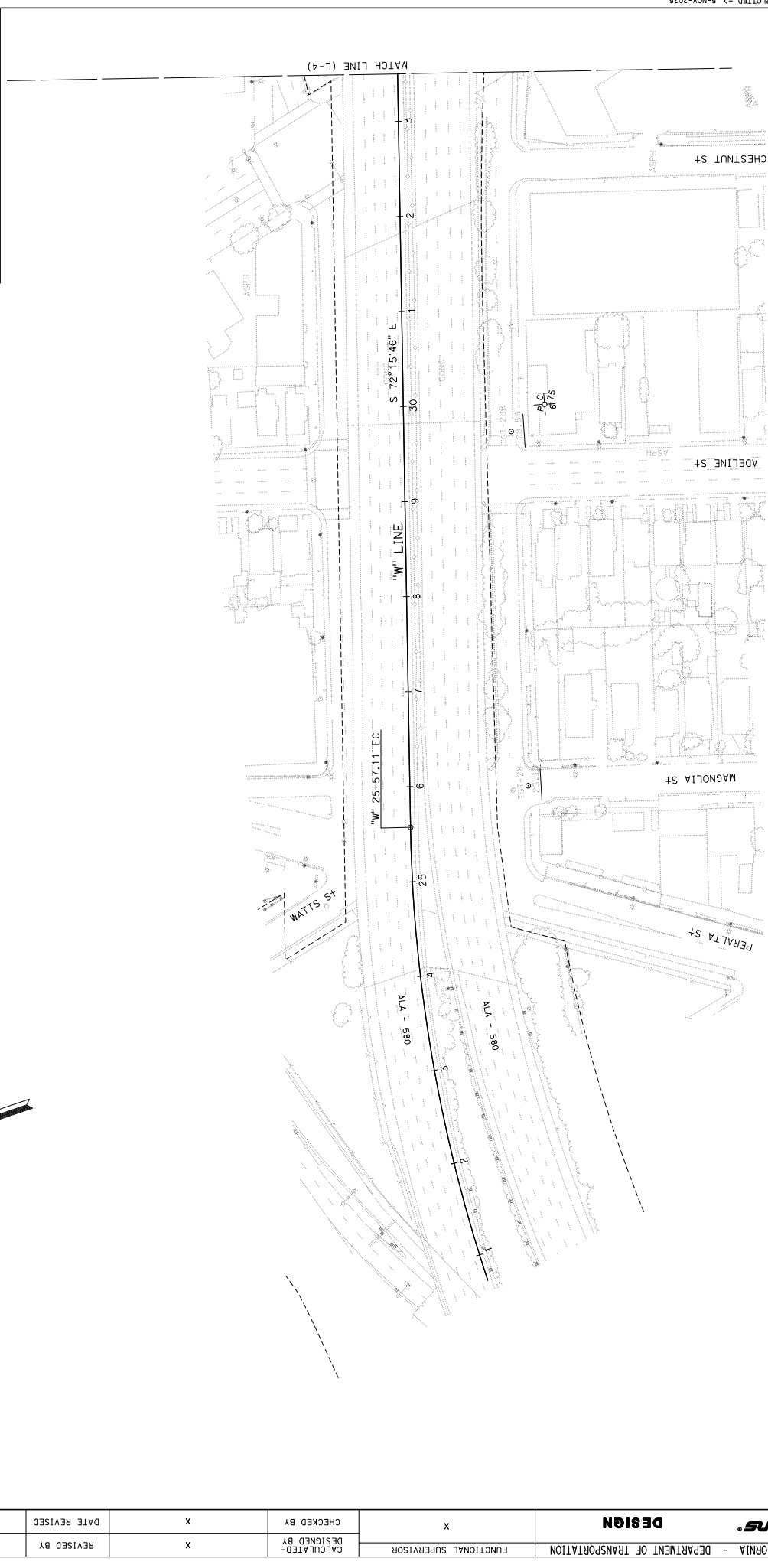
REGISTERED CIVIL ENGINEER DATE _____

PLANS APPROVAL DATE _____

NO. _____

REGISTERED PROFESSIONAL ENGINEER

THE STATE OF CALIFORNIA OR ITS OFFICERS
CERTIFY THAT THIS IS A TRUE AND CORRECT
COPY OF THIS PLAN SHEET.



LAYOUT
SCALE: 1" = 50'

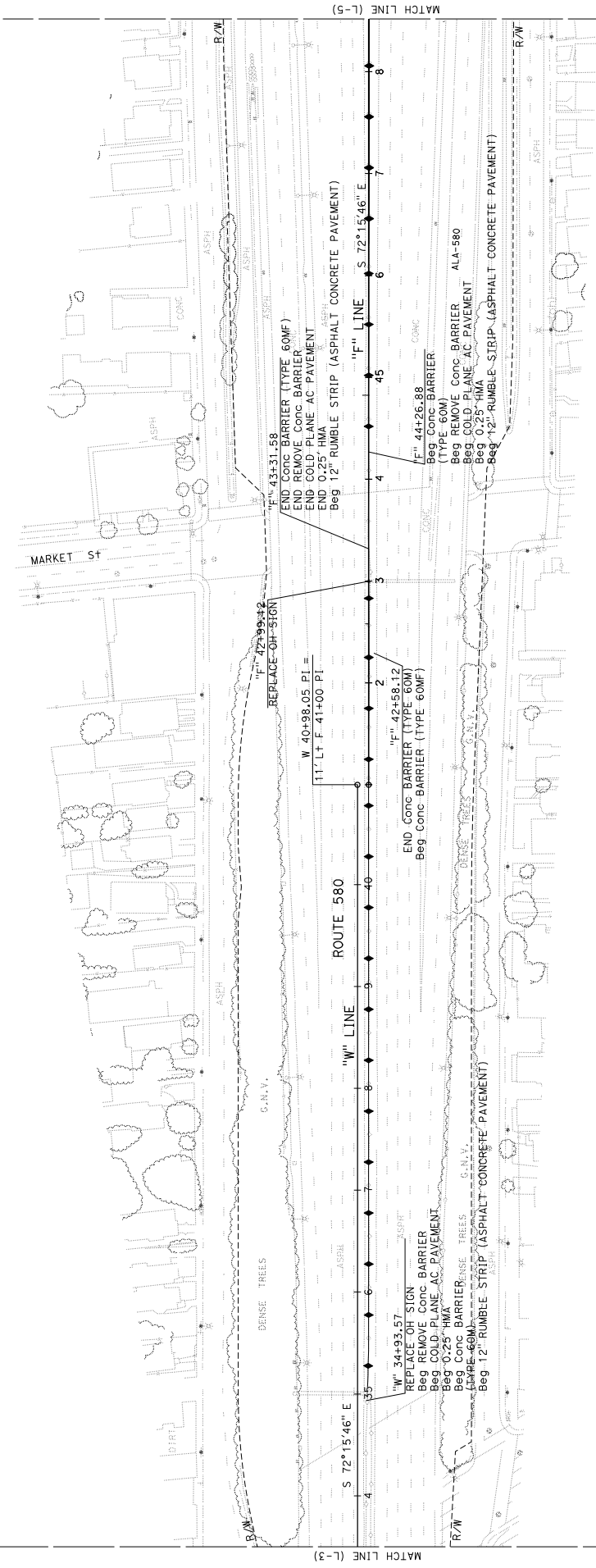
FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

04	Alameda	13, 580	R22.1.17/45.165	X	XXX	
REGISTERED CIVIL ENGINEER		DATE	PROFESSIONAL ENGINEER			
PLANS APPROVAL DATE		NO. _____				
X		THE STATE OF CALIFORNIA OR ITS OFFICERS				
		THE ACCURACY OF THIS PLAN SHEET				



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

DESIGNED BY	CHECKED BY	DATE REVISED	REVISOR



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

LAYOUT
SCALE: 1" = 50'

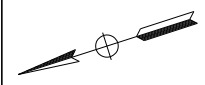
FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

UNIT 0733	PROJECT NUMBER & PHASE		
0	1	2	3

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

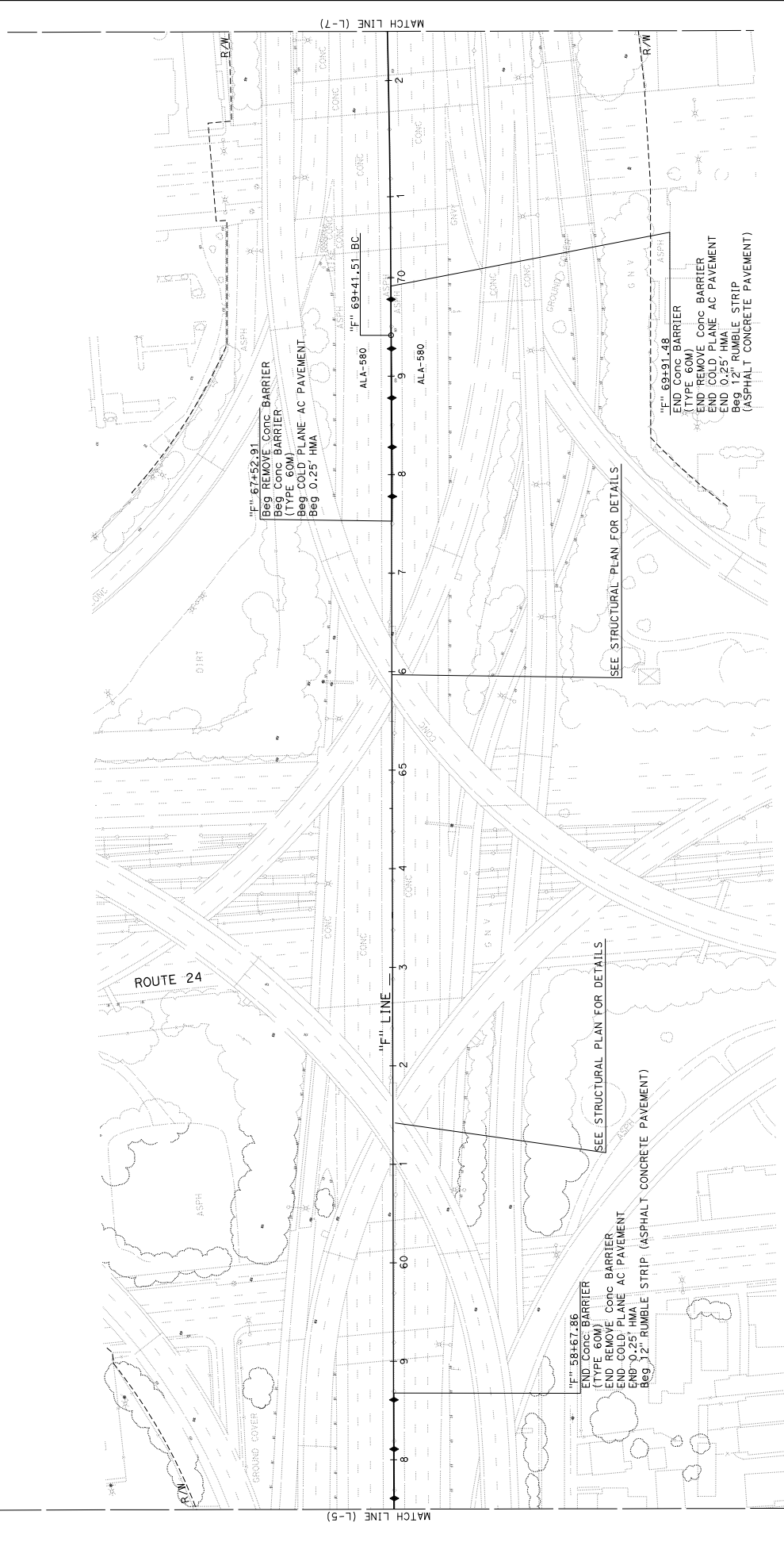
NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

DIST	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	SHEET TOTAL
04	Alameda	13, 580	R32.17/45.65	XXX	XXX



REGISTERED CIVIL ENGINEER	DATE	PLANS APPROVAL DATE
No.	No.	No.

REGISTERED CIVIL ENGINEER
THE STATE OF CALIFORNIA OR ITS OFFICERS
CERTIFY THAT THE ENGINEER HAS REVIEWED
THE ACCURACY OF COMPLETENESS OF SCANNED
COPIES OF THIS PLAN SHEET.



CLAYTONS

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN

DATE PLOTTED = 5-NOV-2025

TIME PLOTTED = 16:18

PROJECT NUMBER & PHASE

UNIT 0733

RELATIVE BORDER SCALE IS IN INCHES

0 1 2 3

L-6

SCALE: 1" = 50'

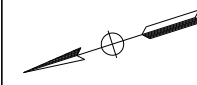
FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET L-1

04210003251

USERNAME => s160145
DGN FILE => 0421000325e=006.dgn

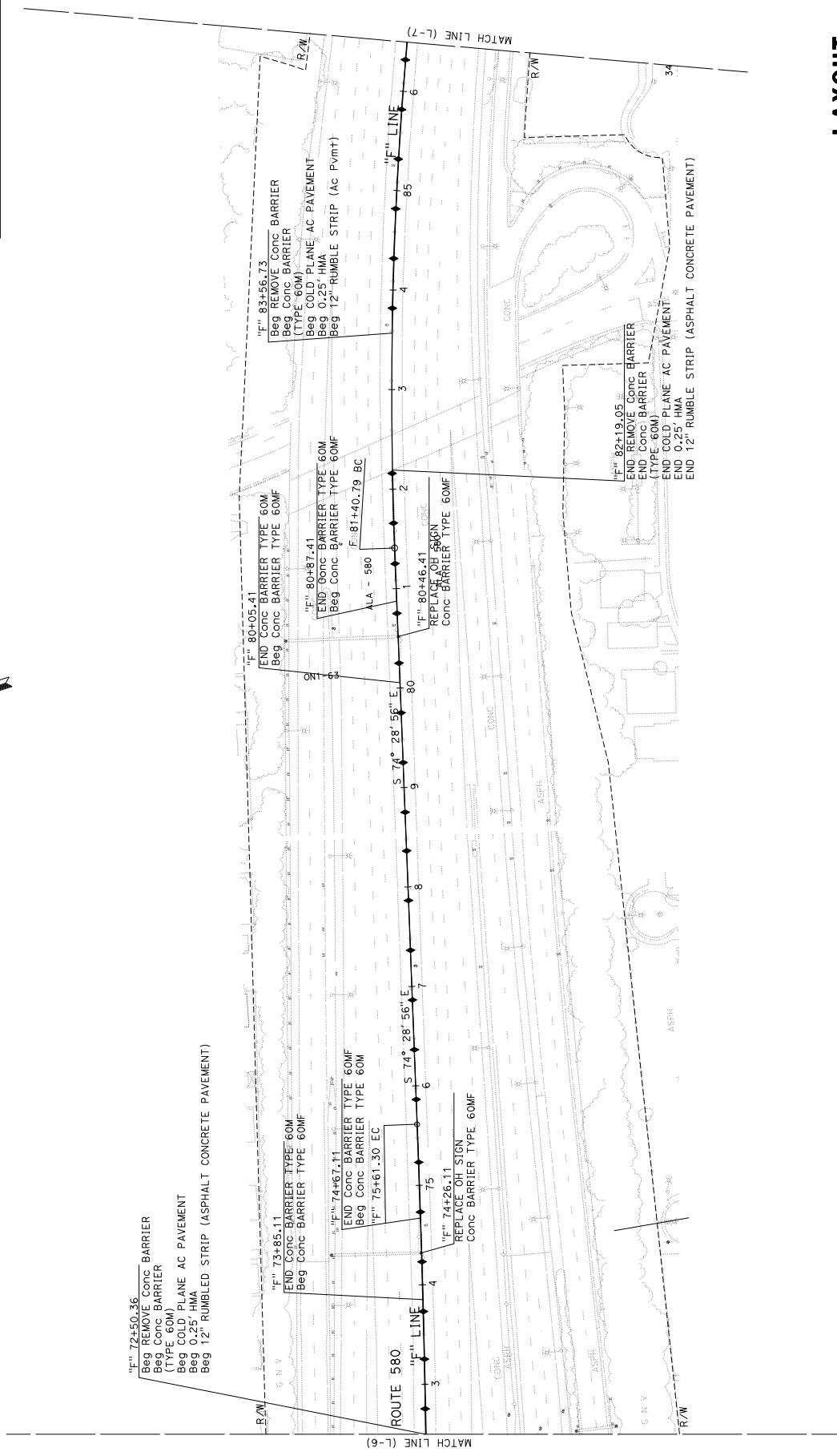
BORDER LAST REVISED 7/2/2010

DIS#	COUNTY	ROUTE	POST MILES	SHEET TOTAL
04	Alameda	13, 580	R32.17/45.65	XXX
REGISTERED CIVIL ENGINEER				DATE
PLANS APPROVAL DATE				NO.
X THE STATE OF CALIFORNIA OR ITS OFFICERS HEREBY CERTIFY THAT THE ACCURACY OF THIS PLAN SHEET COMES FROM A COMPLETE REVIEW OF THE ORIGINAL DRAWINGS AND THE ACCURACY OF THE ORIGINAL DRAWINGS COMES FROM A COMPLETE REVIEW OF THE ORIGINAL DRAWINGS				REGISTERED PROFESSIONAL ENGINEER CIVIL No. _____ Exp. _____ State of Cal. _____



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

REVISOR	DATE	REVISION
X		
X		



LAYOUT
SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1



UNIT 0733 PROJECT NUMBER & PHASE 04210003251

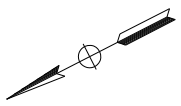
DATE PLOTTED = 5-NOV-2025 16:18
LAST REVISION

USER: 4160145
DON FILE: 0421000325e007.dgn

BORDER LAST REVISED 7/2/2010

	DESIGN	FUNCTIONAL SUPERVISOR	CHECKED BY	DATE REVISOR	REVISOR
	STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION				

Dist	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	SHEET TOTAL
04	Alameda	13, 580	R32.1, 17, 15, 16.5	X	XXX



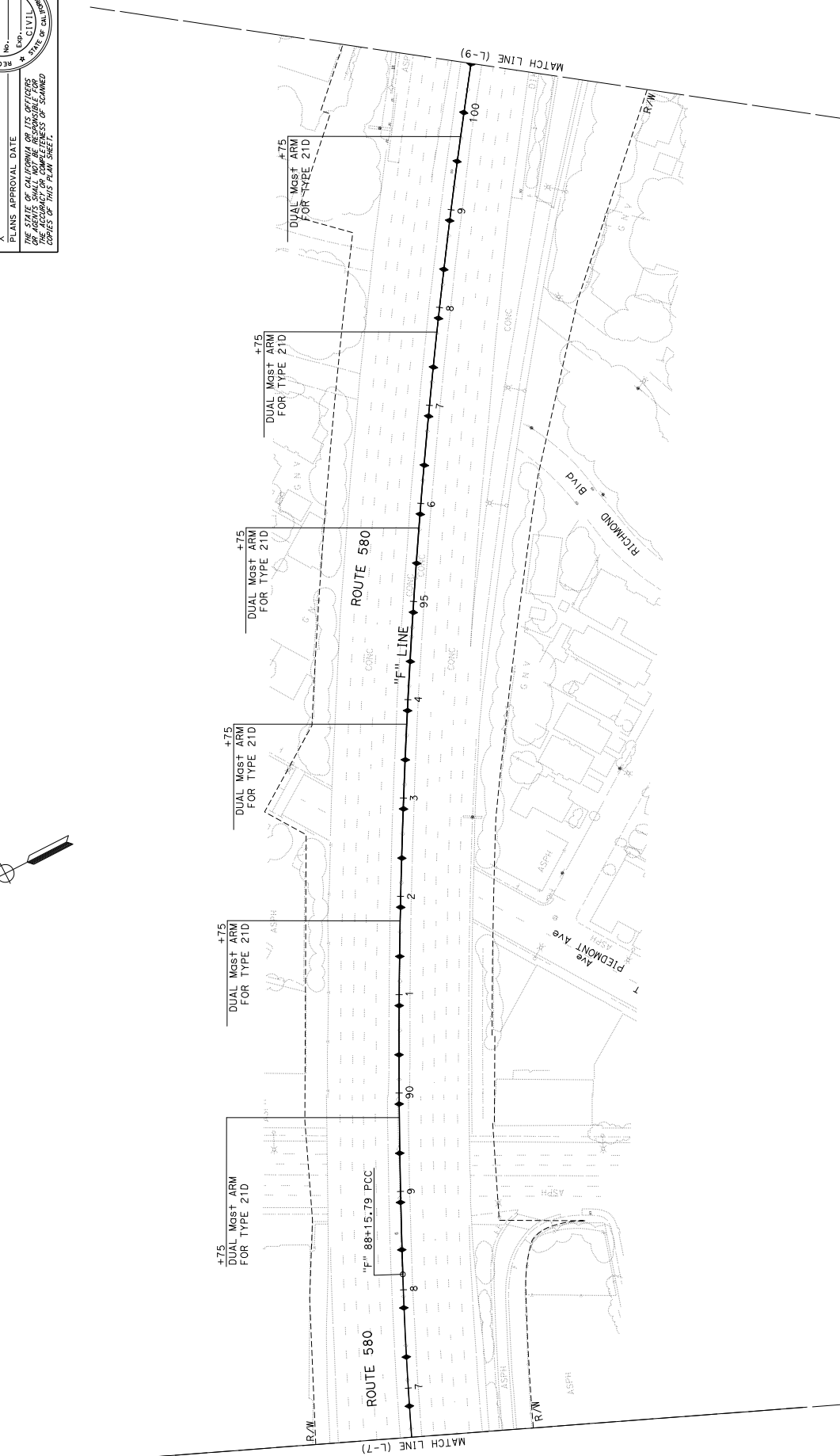
NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

DATE REVISIED	X
REVISIED BY	X

REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
NO. EXP. CIVIL
PROFESSIONAL ENGINEER



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	CHECKED BY	DATE REVISIED	REVISIED BY
				X	X



LAYOUT
SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

BORDER LAST REVISED 7/2/2010	UNIT 0733	PROJECT NUMBER & PHASE	04210003251
USERNAME => s160145	RELATIVE BORDER SCALE		
DGN FILE => 0421000325e008.dgn	15 IN INCHES		

LAST REVISION

DATE PLOTTED => 5-NOV-2025

TIME

16:18

L-8

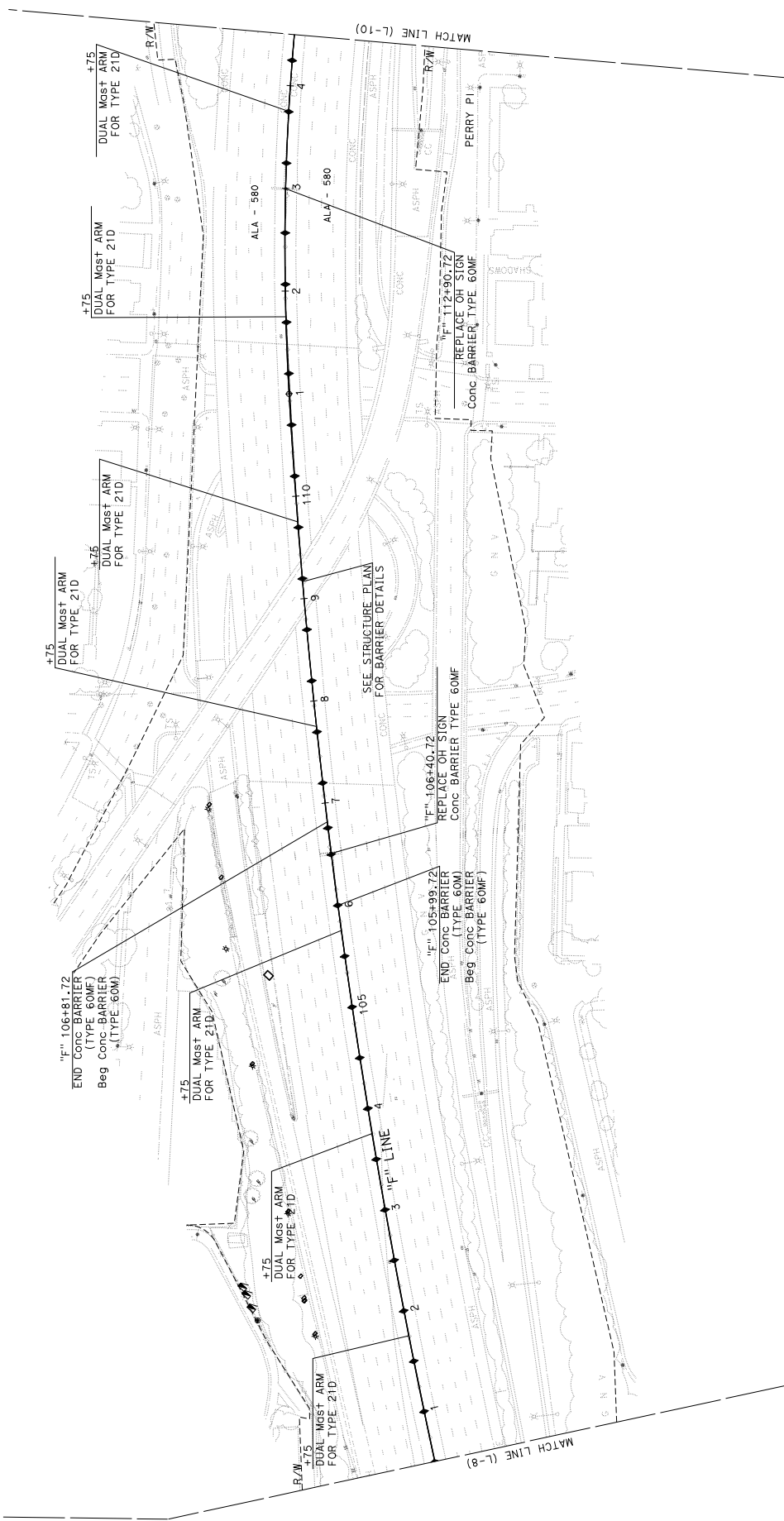
DIS#	COUNTY	ROUTE	POST MILES	TOTAL PROJECT MILES	SHEET TOTAL NO.
04	Alameda	13, 580	R32.12/45.65	X	XXX

REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	

NO.	EXP.	CIVIL

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

REVISOR	DATE	DESCRIPTION
X		



LAYOUT
SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

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

BORDER LAST REVISED 7/2/2010	UNIT 0733	PROJECT NUMBER & PHASE	04210003251
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RELATIVE BORDER SCALE 15 IN INCHES	0	1	2	3
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USER NAME => s160145	04210003251.dwg
DGN FILE =>	

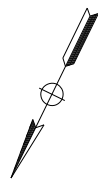
DATE PLOTTED => 5-NOV-2025 16:18

DIS#	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	SHEET TOTAL
04	Alameda	13, 580	R32.1, 17, 145, 165	X	XXX

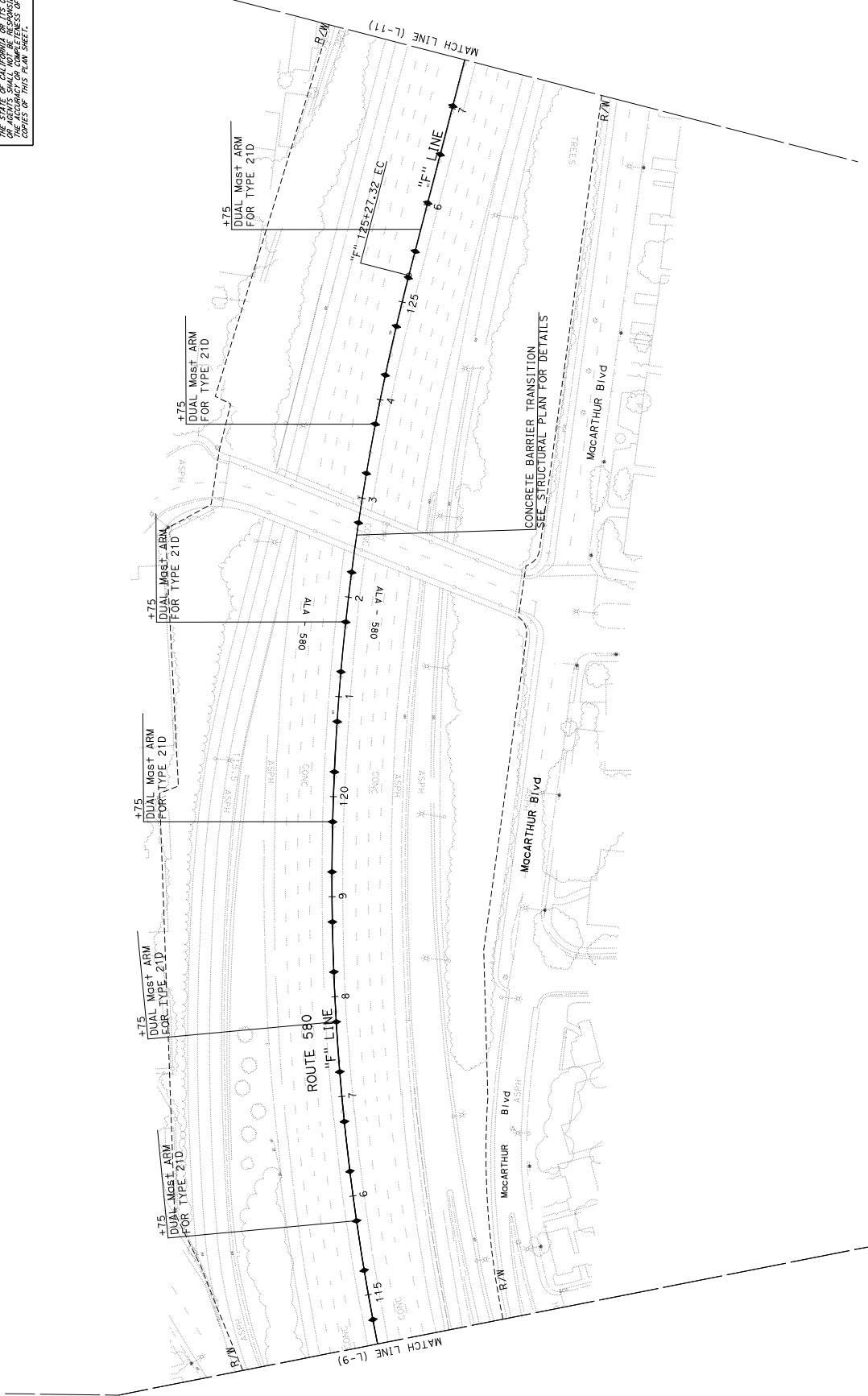
REGISTERED CIVIL ENGINEER	DATE	PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 No. _____ Exp. _____
 CIVIL ENGINEER
 STATE OF CALIFORNIA
 THE STATE OF CALIFORNIA OR ITS OFFICERS
 DO NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF ANY
 COPIES OF THIS PLAN SHEET.

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



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	CHECKED BY	DATE REVISIED	REVISIED BY
				X	X



LAYOUT
 SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE SHEET L-1

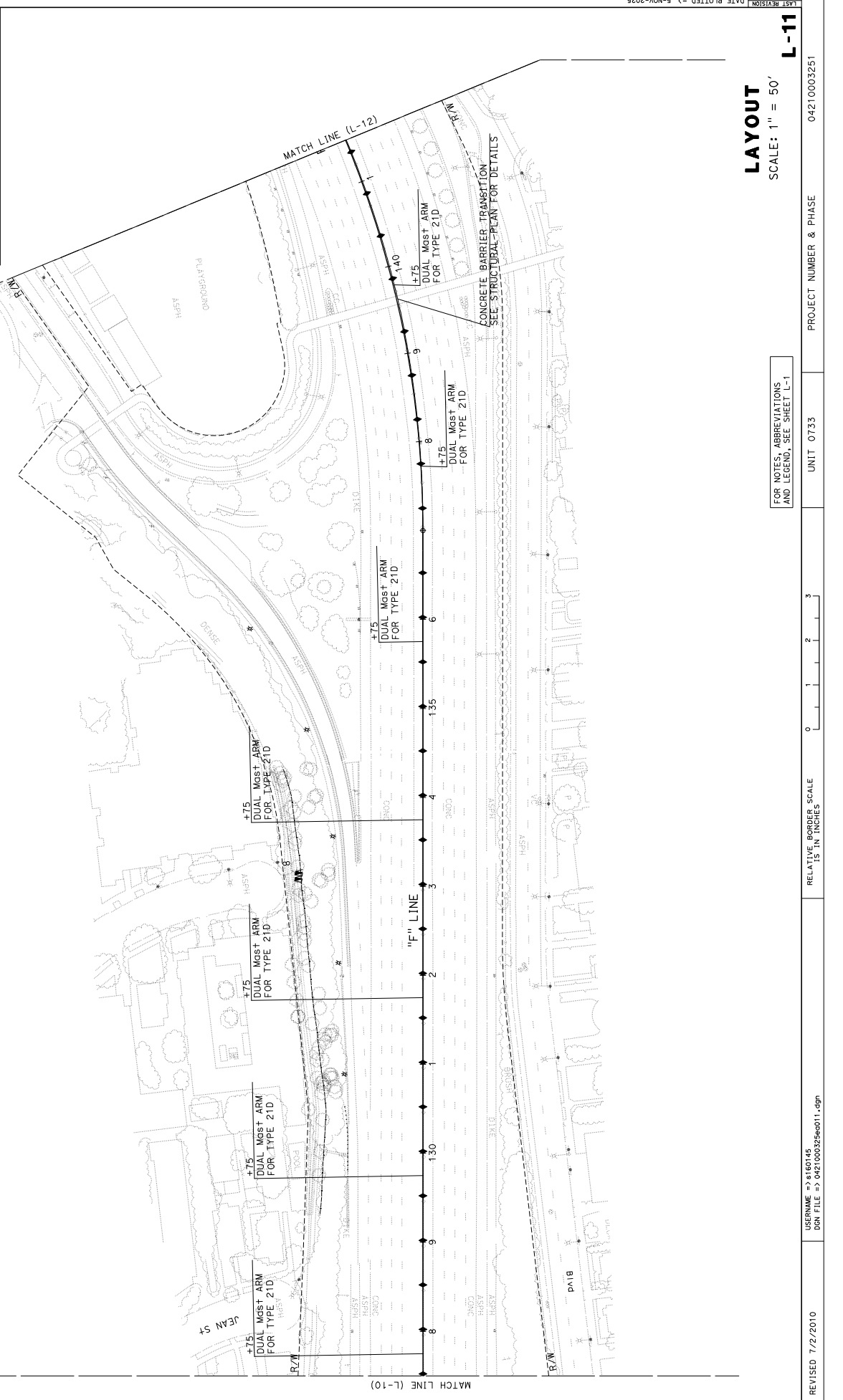
DIS#	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	SHEET TOTAL
04	Alameda	13, 580	R22.12/45.65	X	XXX

REGISTERED CIVIL ENGINEER	DATE	PLANS APPROVAL DATE

PROFESSIONAL ENGINEER	NO.	EXPIRES

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

DESIGNED BY	CHECKED BY	DATE REVISED	REVISOR



LAYOUT
SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

L-11

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

UNIT	0733	PROJECT NUMBER & PHASE	04210003251
RELATIVE BORDER SCALE	15 IN INCHES	BORDER LAST REVISED	7/2/2010

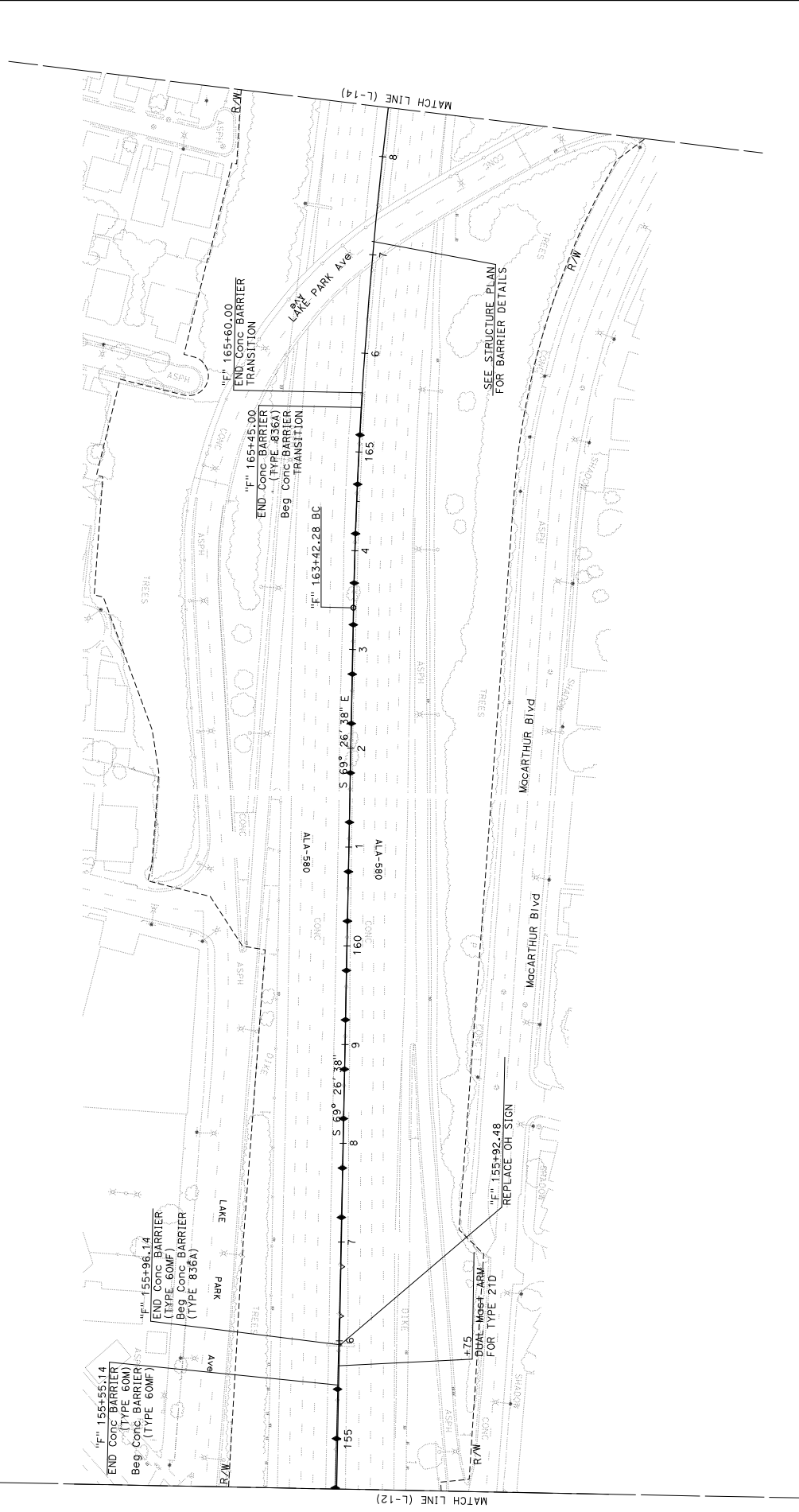
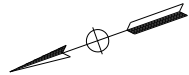
USERNAME => s160145
DGN FILE => 0421000325e0011.dgn

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	CHECKED BY	DESIGNED BY	REVISOR	DATE REVISED
		X			X	X

BORDER LAST REVISED 7/2/2010
 USER: 4160145
 DON FILE 0421000326e013.dgn
 PROJECT NUMBER & PHASE: UNIT 0733
 SCALE: 1" = 50'

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

DIST	COUNTY	ROUTE	POST MILES	TOTAL SHEETS
04	Alameda	13, 580	R32.12/45.165	X XXX



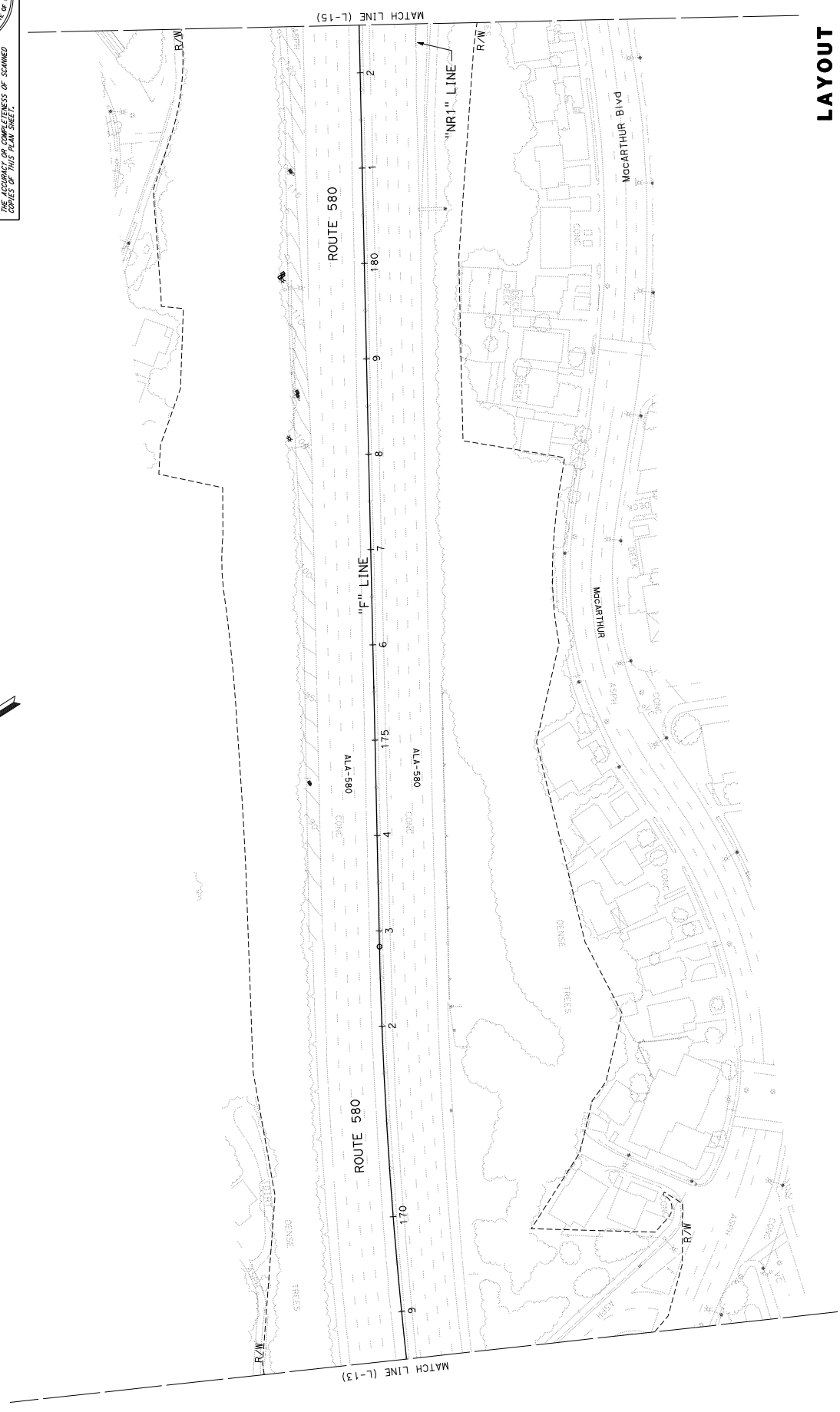
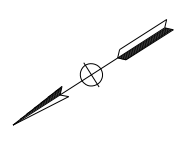
LAYOUT
 SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE SHEET L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	CHECKED BY	DATE REVISIED	REVISIED BY
		X		X	X

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

DIS#	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	SHEET TOTAL
04	Alameda	13, 580	0.00	13, 580	13, 580
			R32.12/45.65		X XXX



LAYOUT
SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

L-14

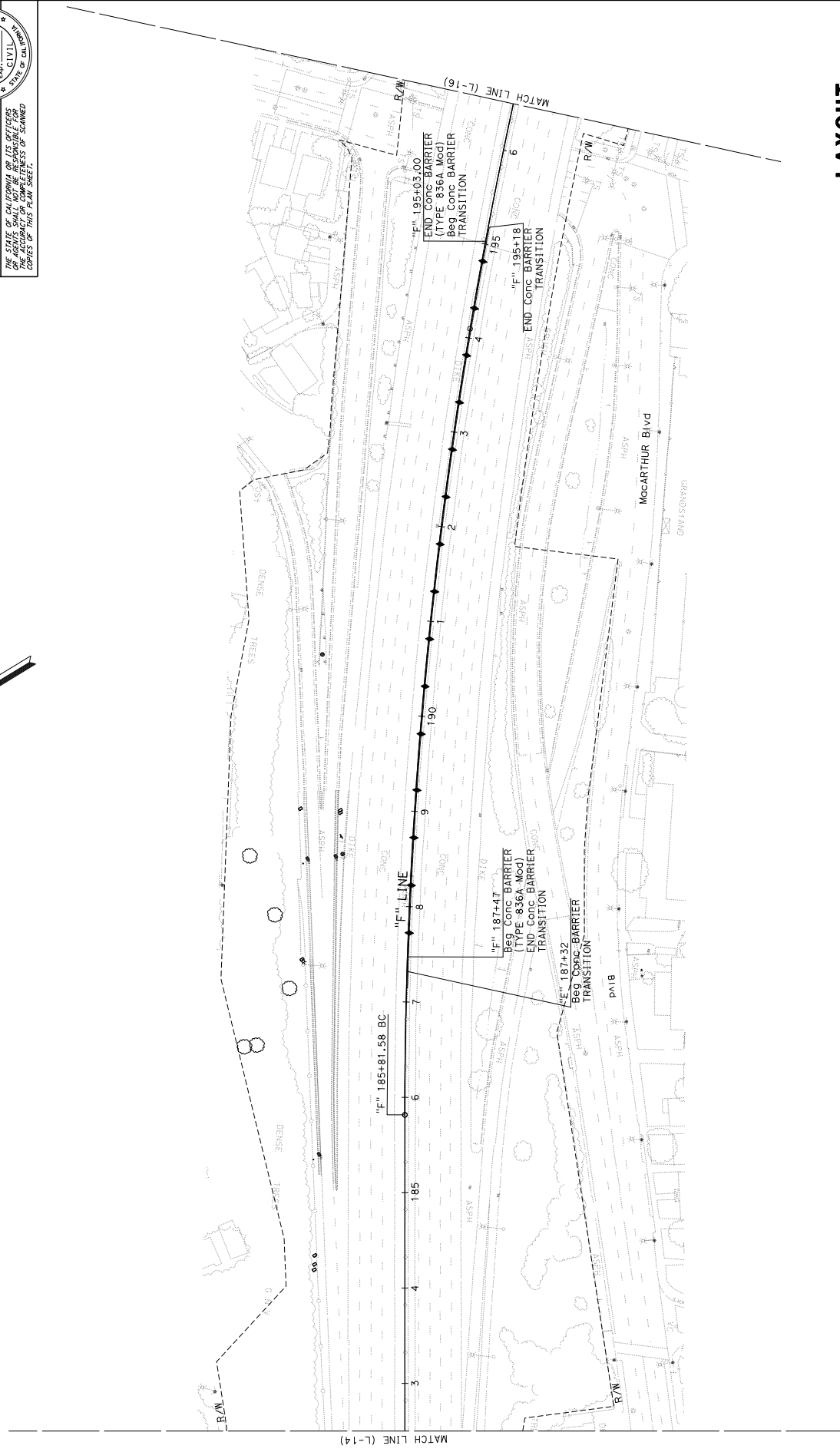
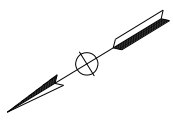
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	CHECKED BY	DATE REVISED	REVISOR

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

DIS#	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	SHEET TOTAL
04	Alameda	13, 580	R32.12/45.65	1	XXX

REGISTERED CIVIL ENGINEER	DATE	PLANS APPROVAL DATE

PROFESSIONAL ENGINEER	NO.	EXPIRES



LAYOUT
SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

UNIT	0733	PROJECT NUMBER & PHASE	04210003251
RELATIVE BORDER SCALE	15 IN INCHES		
DATE PLOTTED	5-NOV-2025		
LAST REVISION			

BORDER LAST REVISED 7/2/2010

USERNAME => s160145
DGN FILE => 0421000325e0015.dgn

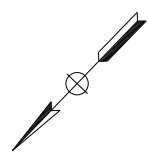
L-15

DIS#	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	SHEET TOTAL
04	Alameda	13, 580	R32.117+15.65	X	XXX

REGISTERED CIVIL ENGINEER	DATE	NO.	EXPIRES
_____	_____	_____	_____

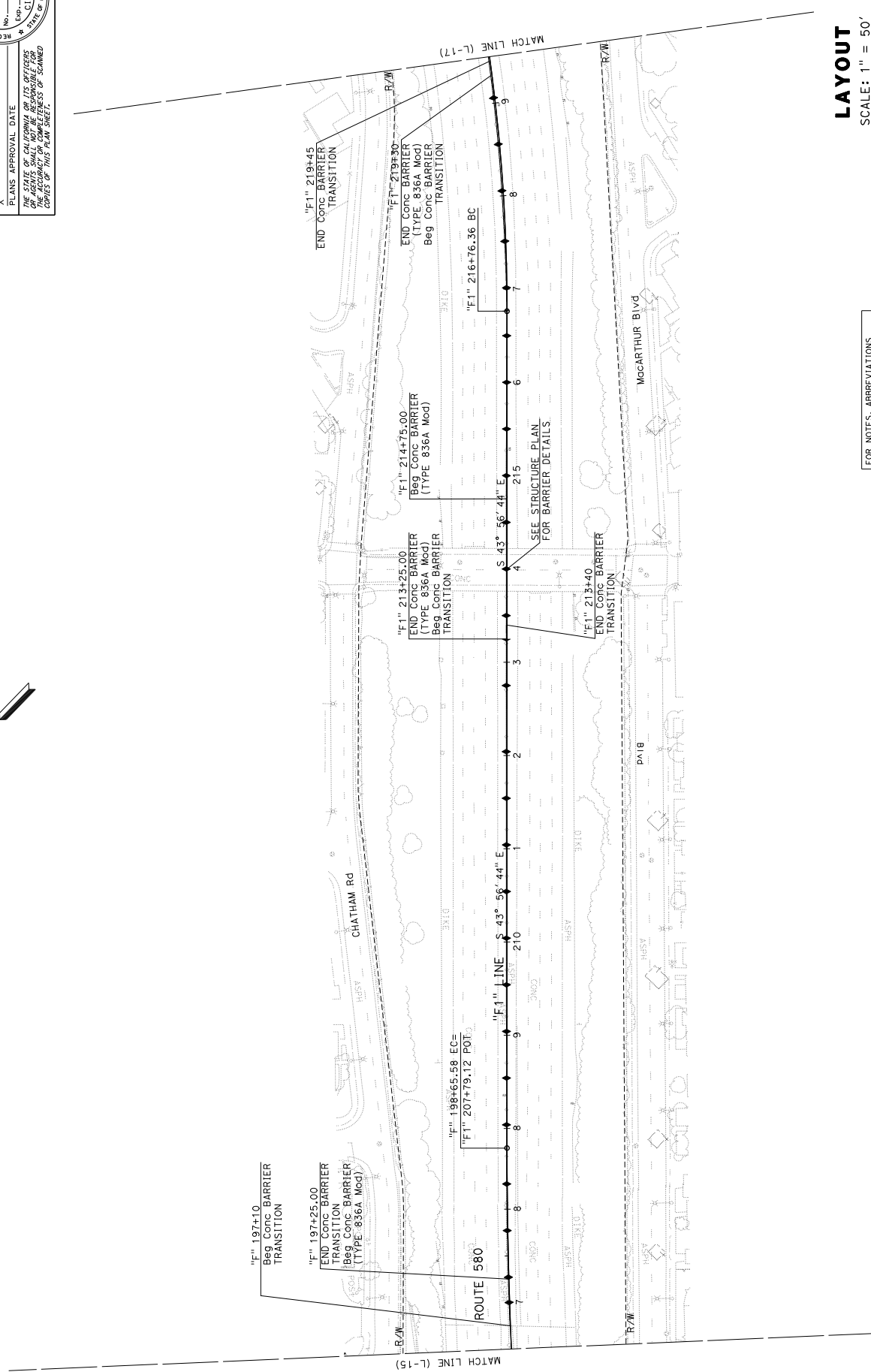
PLANS APPROVAL DATE	REGISTERED PROFESSIONAL ENGINEER
_____	_____

THE STATE OF CALIFORNIA OR ITS OFFICERS
 ACCEPTS THE ACCURACY OF THIS PLAN SHEET.
 THE ACCURACY OF THIS PLAN SHEET IS
 THE RESPONSIBILITY OF THE REGISTERED CIVIL ENGINEER.



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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	CHECKED BY	DATE REVISED	REVISOR



LAYOUT
 SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE SHEET L-1

04	Alameda	13, 580	R32.12/145.65	X	XXX
04	Alameda	13, 580	R32.12/145.65	X	XXX

REGISTERED CIVIL ENGINEER DATE _____
 PLANS APPROVAL DATE _____
 THE STATE OF CALIFORNIA OR ITS OFFICERS
 THE ACCURACY OR COMPLETENESS OF
 ANY INFORMATION CONTAINED HEREIN
 BEING OF THIS PLAN SHEET.



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

DATE REVISIONS
 X
 REVISION BY

CHECKED BY
 X
 DESIGNED BY

FUNCTIONAL SUPERVISOR
 X

DESIGN
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DATE 7/2/2010
 REVISION 7/2/2010

USERNAME => s160145
 DON FILE => 042100032se0017.dgn

BORDER LAST REVISION

UNIT 0733

PROJECT NUMBER & PHASE

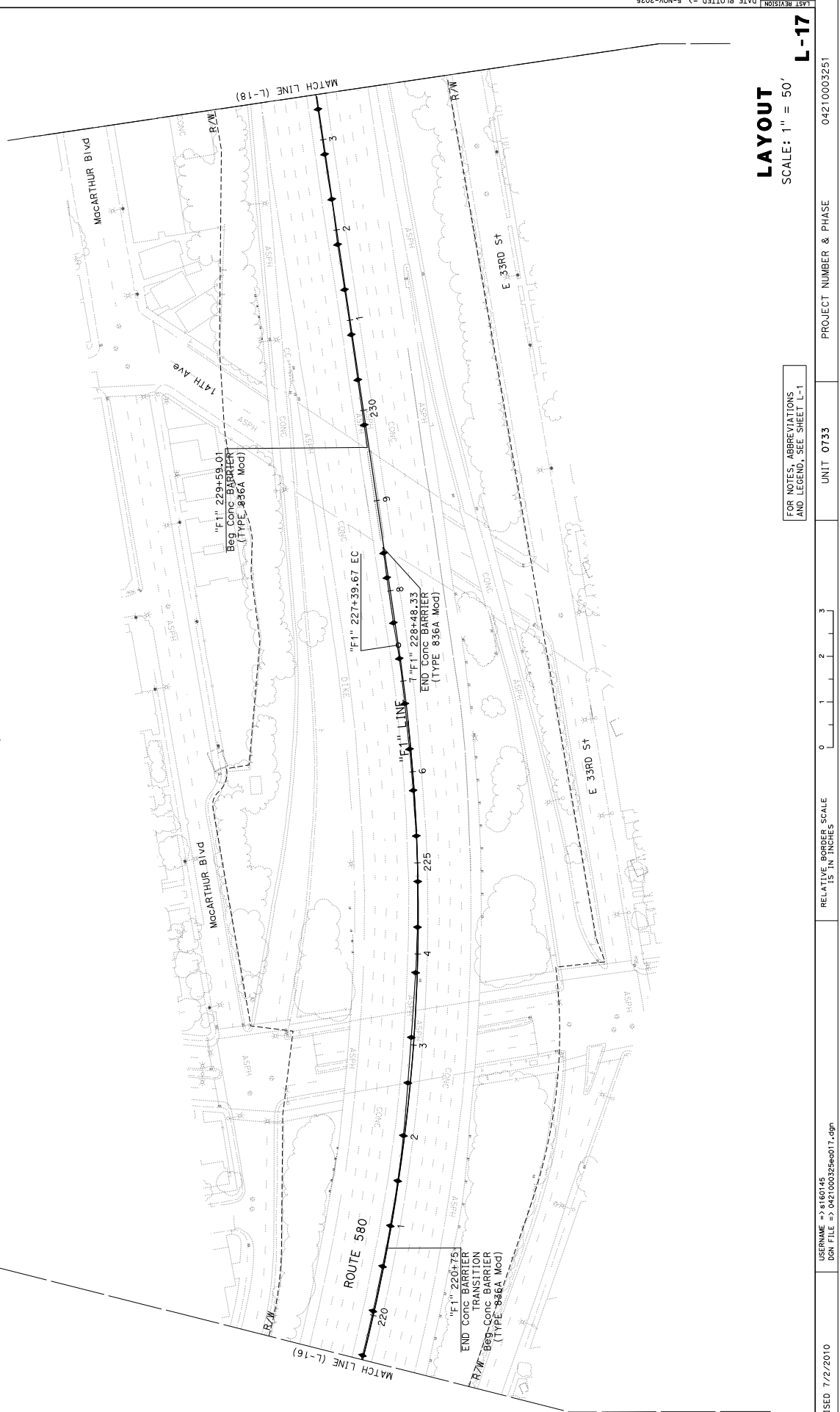
04210003251

L-17

SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE SHEET L-1

DATE PLOTTED => 5-NOV-2025
 TIME PLOTTED => 16:19



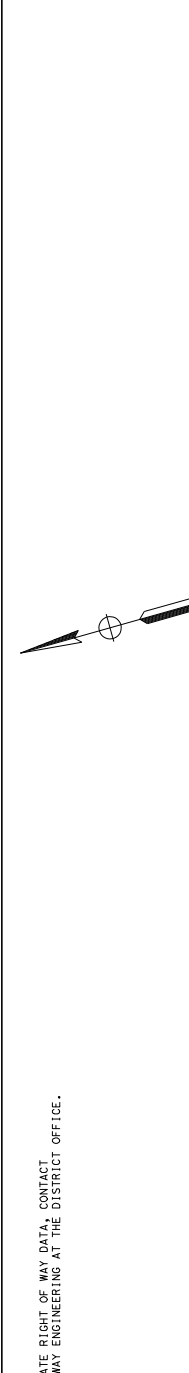
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	X	CHECKED BY	X	DATE REVISIONS	X
REVISION BY	X	DESIGNED BY	X	CALCULATED	X	FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.	
UNIT 0733	PROJECT NUMBER & PHASE	04210003251					
SCALE: 1" = 50'	L-17						
DATE PLOTTED => 5-NOV-2025	TIME PLOTTED => 16:19						

DIS#	COUNTY	ROUTE	POST MILES	TOTAL PROJECT SHEETS	SHEET TOTAL
04	Alameda	13, 580	R32.1, 1745.1, 65	X	XXX

REGISTERED CIVIL ENGINEER	DATE	PLANS APPROVAL DATE

PROFESSIONAL ENGINEER	NO.	EXPIRES
CIVIL		

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



MATCH LINE (L-17)

MATCH LINE (L-19)

SEE STRUCTURE PLAN FOR BARRIER DETAILS

SEE STRUCTURE PLAN FOR BARRIER DETAILS

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	CHECKED BY	DATE REVISIED	REVISIED BY

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET L-1

UNIT 0733 PROJECT NUMBER & PHASE

RELATIVE BORDER SCALE 15 IN INCHES

SCALE: 1" = 50'

L-18

DATE PLOTTED => 5-NOV-2025

USERNAME => s160145 DON FILE => 0421000326e018.dgn

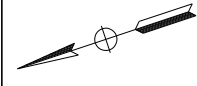
BORDER LAST REVISED 7/2/2010

04210003251

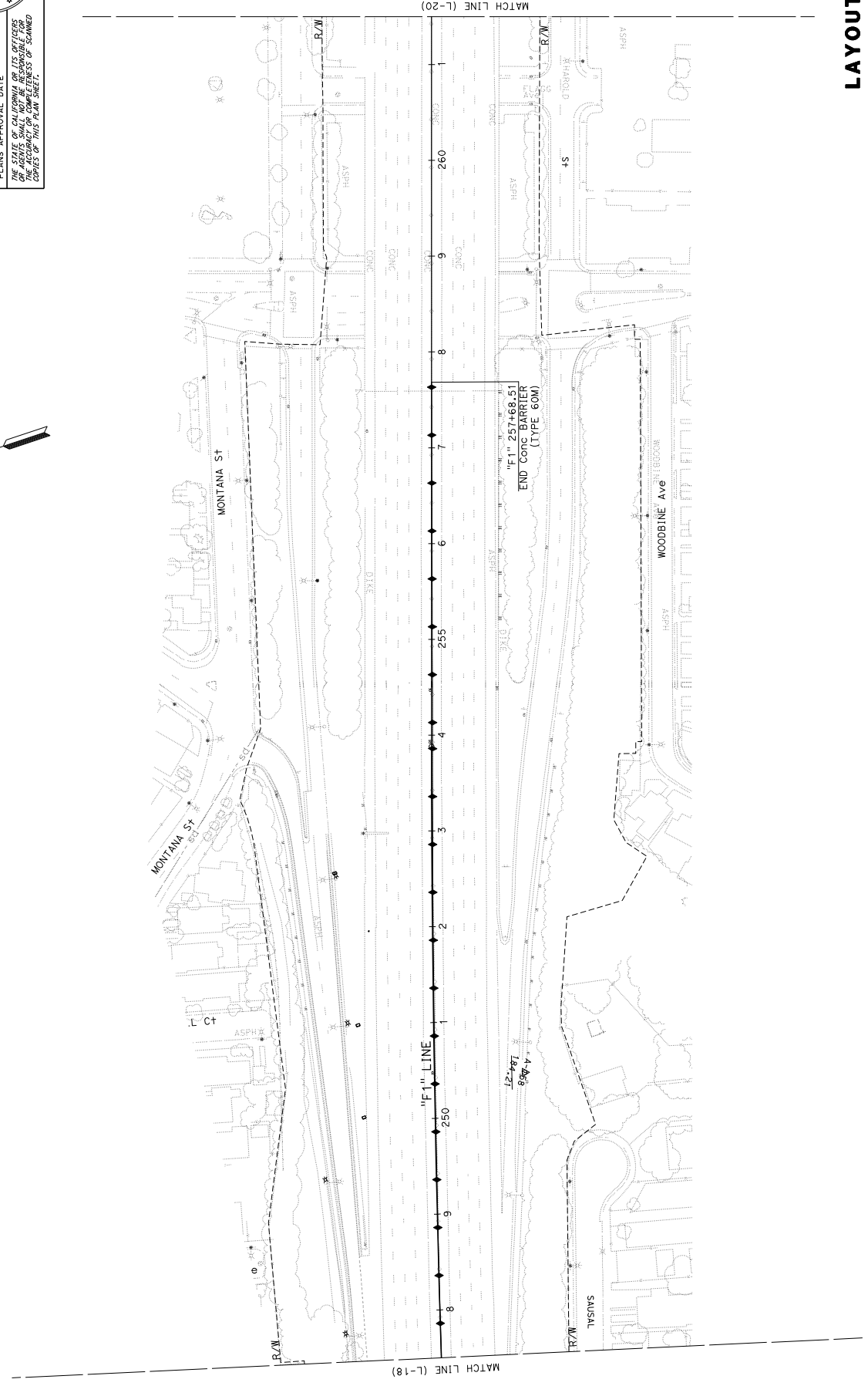
Dist	County	Route	Post Miles	Total Project	SHEET TOTAL
04	Alameda	13, 580	0.00	0.00	No. SHEETS
			R24.12/145.165		X XXX

REGISTERED CIVIL ENGINEER	DATE	PLANS APPROVAL DATE

PROFESSIONAL ENGINEER	No.	EXPIRES



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



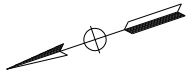
LAYOUT
SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

L-19

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	CHECKED BY	DATE REVISED

04	Alameda	13,580	07/15/16	04	XXX
POST MILES	TOTAL PROJECT	DATE	NO.	SHEET TOTAL	TOTAL SHEETS
0.7	13,580	07/15/16	04	04	XXX

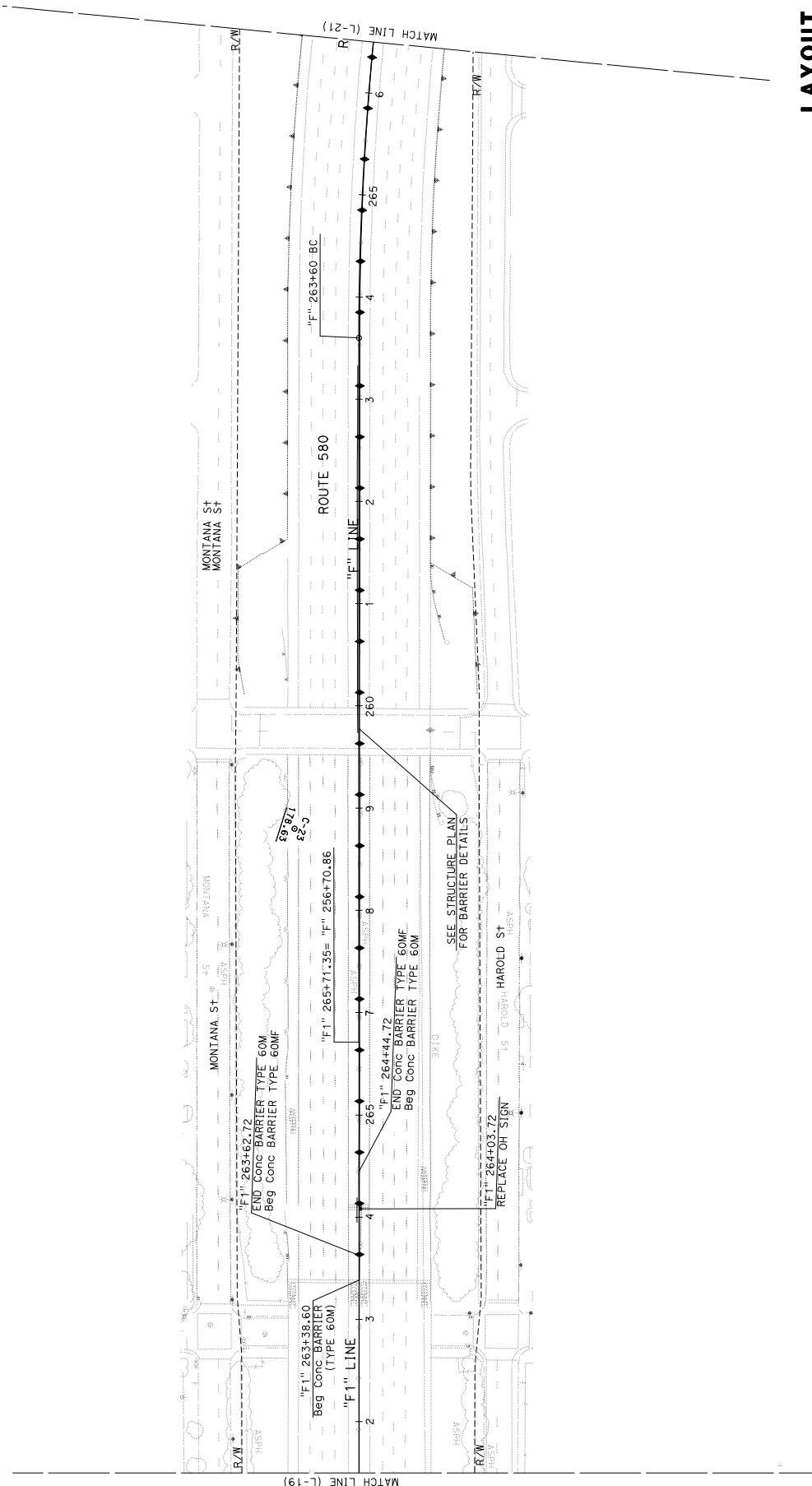


NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

REGISTERED CIVIL ENGINEER DATE _____

PLANS APPROVAL DATE _____

THE STATE OF CALIFORNIA OR ITS OFFICERS
CERTIFY THAT THIS ENGINEER IS LICENSED
AND THE ACCURACY OF THIS PLAN SHEET IS
BASED UPON THE COMPLETENESS OF THE
CONSTRUCTION OF THIS PLAN SHEET.



LAYOUT
SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

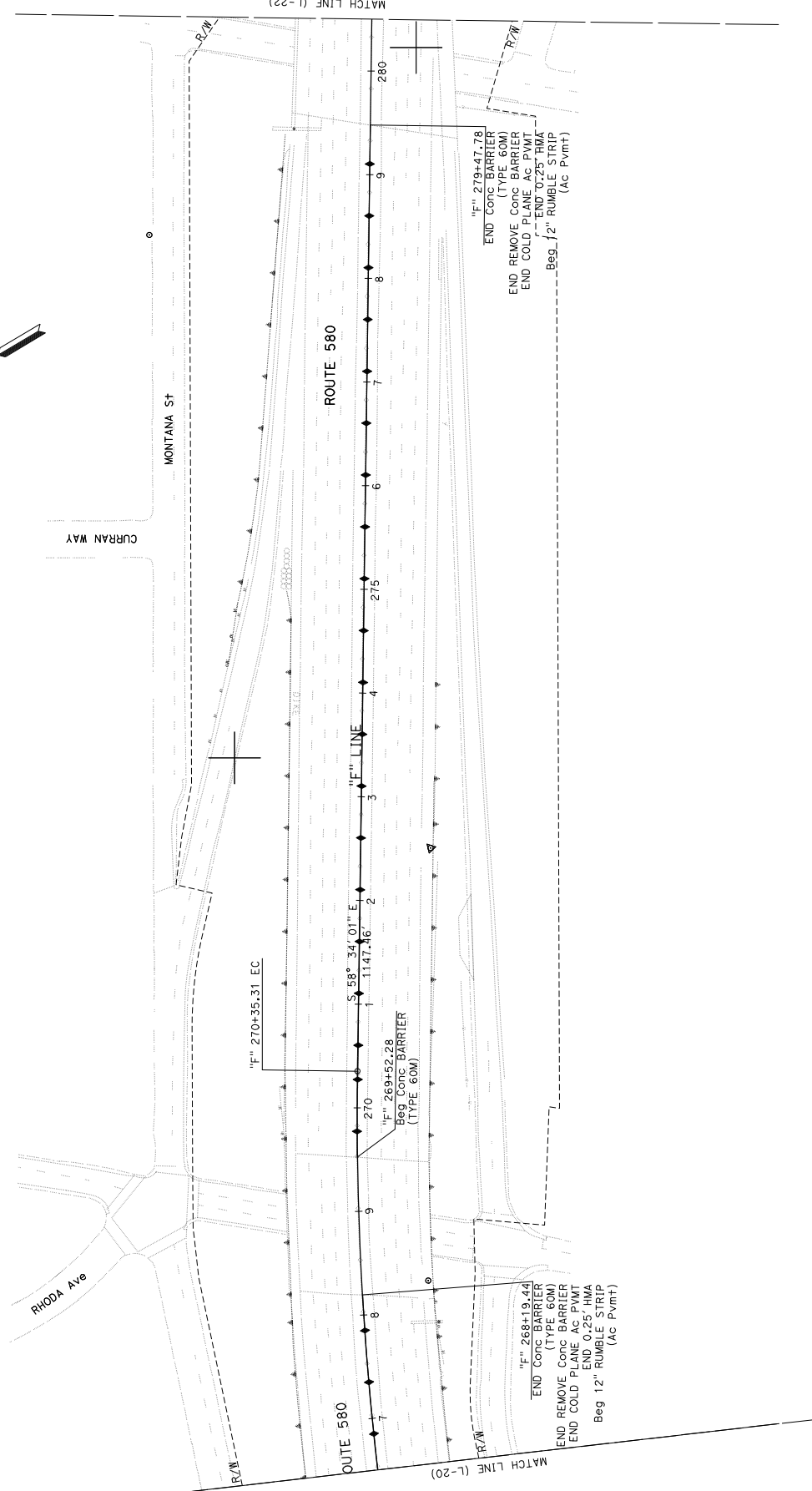
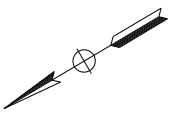
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	CHECKED BY	DATE REVISED	REVISOR

BORDER LAST REVISED 7/2/2010 USERNAME => s160145 DON FILE => 042100326e021.dgn

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

DIS#	COUNTY	ROUTE	POST MILES	SHEET TOTAL
04	Alameda	13, 580	0.00	NO. SHEETS
			R32.17/45.65	X XXX

REGISTERED CIVIL ENGINEER DATE _____
 PLANS APPROVAL DATE _____
 THE STATE OF CALIFORNIA OR ITS OFFICERS
 THE ACCURACY OF THE INFORMATION CONTAINED
 HEREIN AND THE COMPLETENESS OF THE SCANNED
 COPIES OF THIS PLAN SHEET.



LAYOUT
SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	X	CHECKED BY	X	DATE REVISED	X	REVISOR	X
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NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

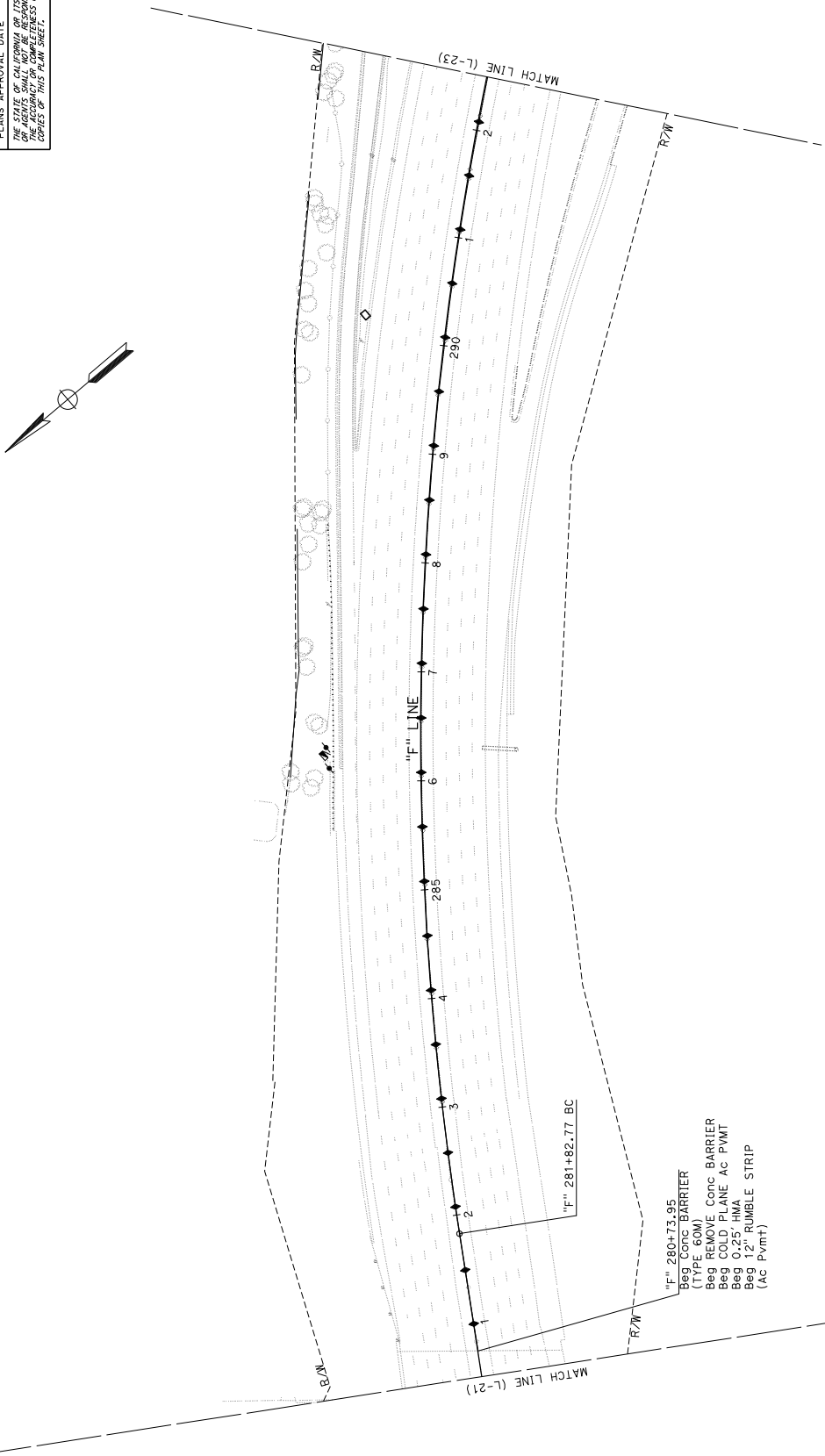
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL NO. SHEETS
04	Alameda	13, 580	0.000 R242.12/415.165	X XXX

REGISTERED CIVIL ENGINEER DATE _____

PLANS APPROVAL DATE _____

THE STATE OF CALIFORNIA OR ITS OFFICERS
HEREBY CERTIFY THAT THE ENGINEER HAS
THE ACCURACY OF COMPLETENESS OF SCANNED
COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
No. _____ Exp. _____
CIVIL ENGINEER



- "F" 280+73.95
Type 1 Conc BARRIER
- Bag 12" RUMBLE STRIP
- Bag REMOVE CONC BARRIER
- Bag COLD PLANE AC PVT
- Bag 0.25' HMA
- Bag 12" RUMBLE STRIP
(AC PVT)

LAYOUT

SCALE: 1" = 50'

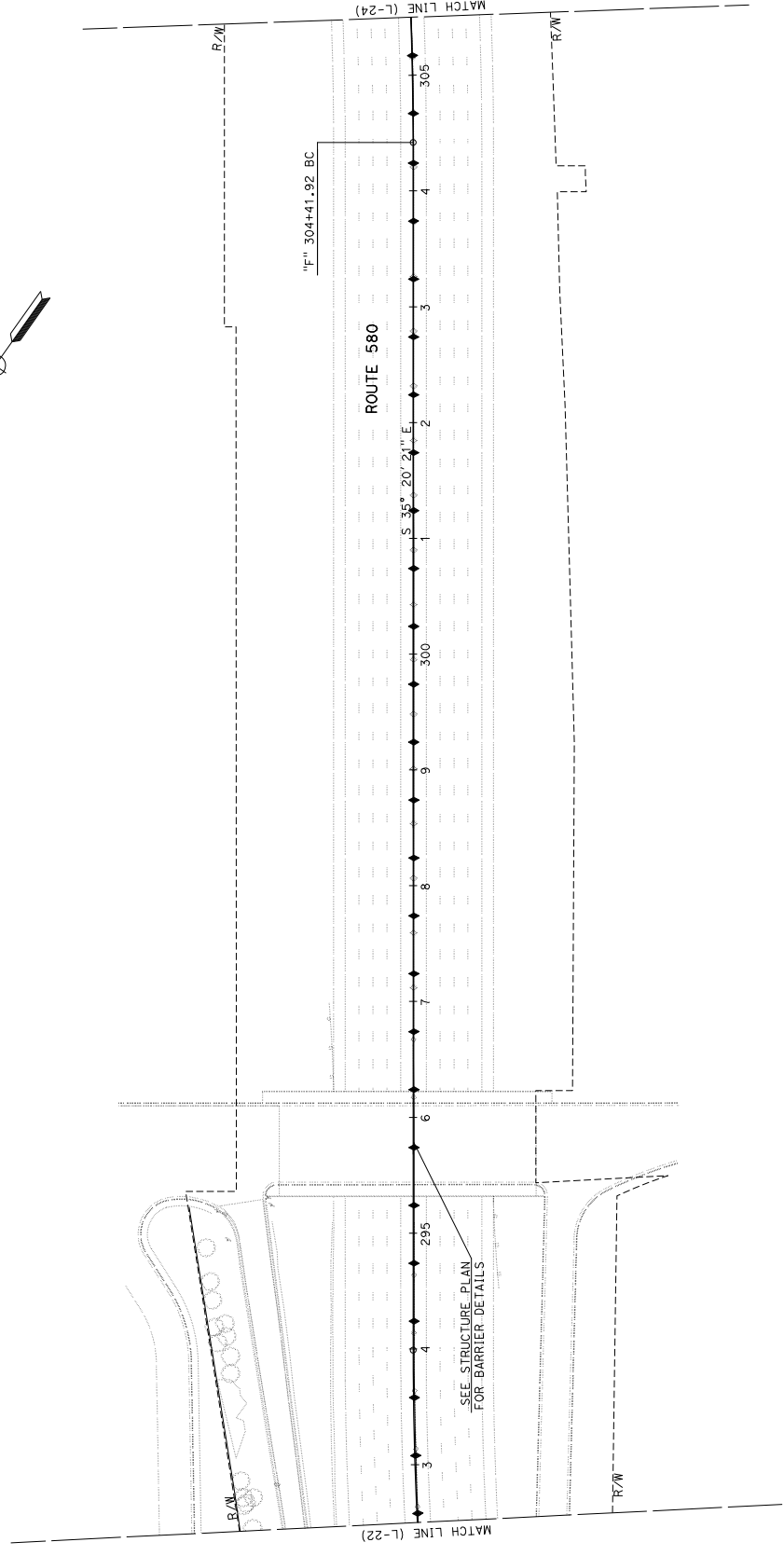
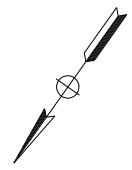
FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	DESIGNED BY	CHECKED BY	DATE REVISION	REVISION
		X				
			X	X	X	X

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL NO. SHEETS
04	Alameda	13, 580	0.00 R242.12/45.65	X XXX

REGISTERED CIVIL ENGINEER DATE _____
PLANS APPROVAL DATE _____
X
THE STATE OF CALIFORNIA OFFICERS
REGISTERED CIVIL ENGINEER
CONFIRMS THE ACCURACY OF THE DATA
CONTAINED ON THIS PLAN SHEET.



LAYOUT
SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	DESIGNED BY	CHECKED BY	DATE REVISED	REVISOR

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

DIST	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	SHEET TOTAL
04	Alameda	13, 580	0.00	132.17	132
			R24.12/15.65		XXX

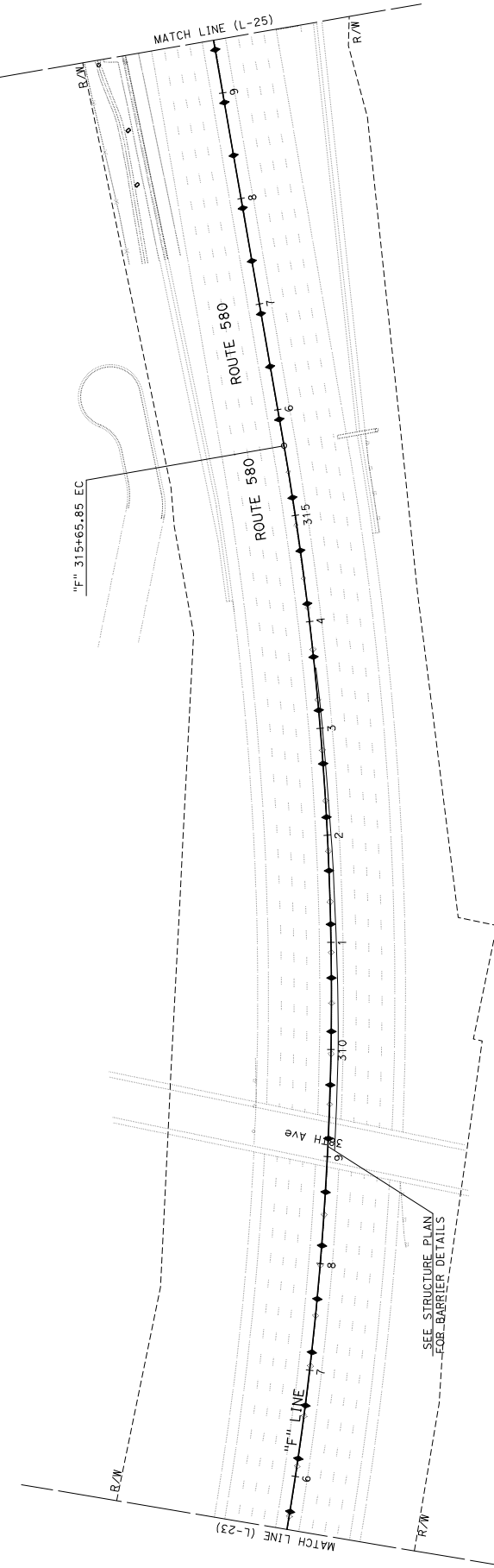
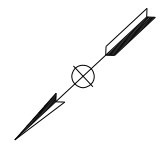
REGISTERED CIVIL ENGINEER DATE _____

PLANS APPROVAL DATE _____

NO. _____

REGISTERED PROFESSIONAL ENGINEER

THE STATE OF CALIFORNIA OR ITS OFFICERS
CERTIFY THAT THIS ENGINEER IS LICENSED
AND THE ACCURACY OF THE PLAN SHEET
COPIES OF THIS PLAN SHEET.



LAYOUT
SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	CHECKED BY	DATE REVISIED	REVISIED BY

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

DIST	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	SHEET TOTAL
04	Alameda	13, 580	0.00	0.00	NO. SHEETS
			R32.117/15.165		X XXX

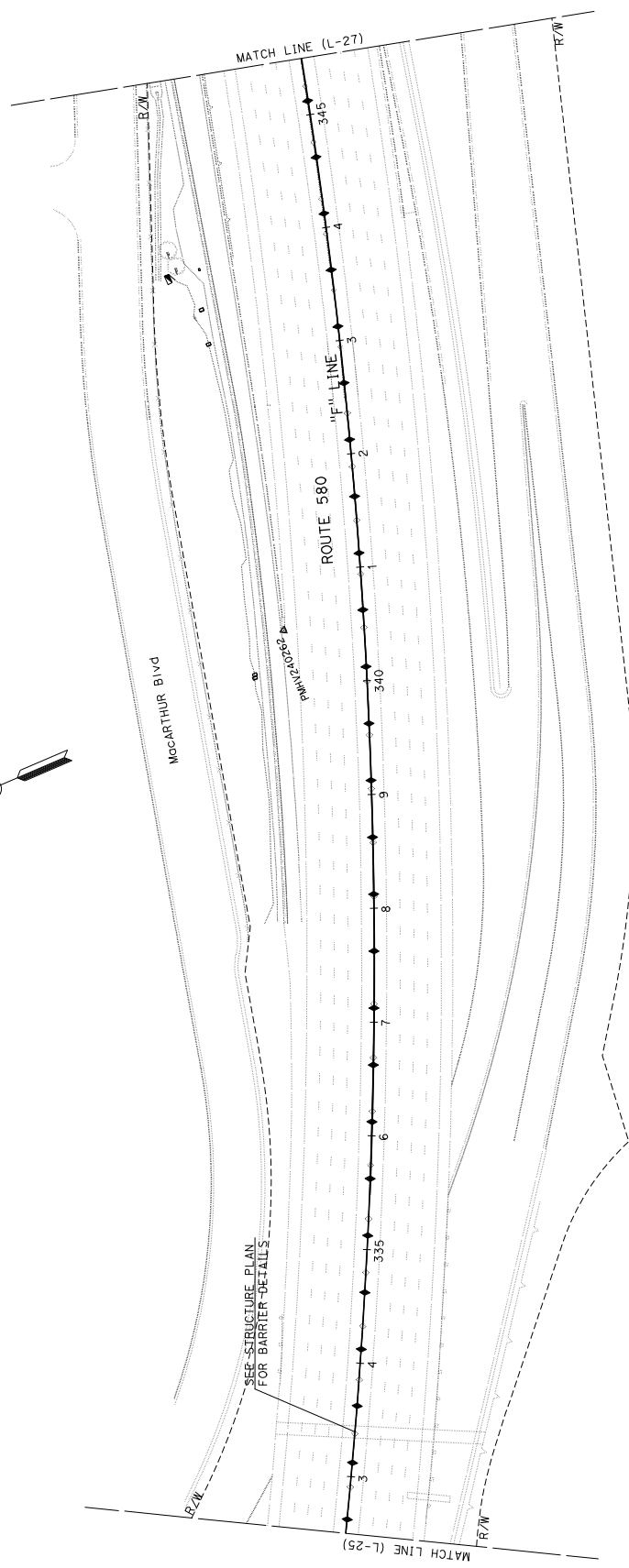
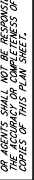
REGISTERED CIVIL ENGINEER DATE _____

PLANS APPROVAL DATE _____

NO. _____

REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF CALIFORNIA OR ITS OFFICERS

THE ACCURACY OF THIS PLAN SHEET IS THE RESPONSIBILITY OF THE REGISTERED CIVIL ENGINEER

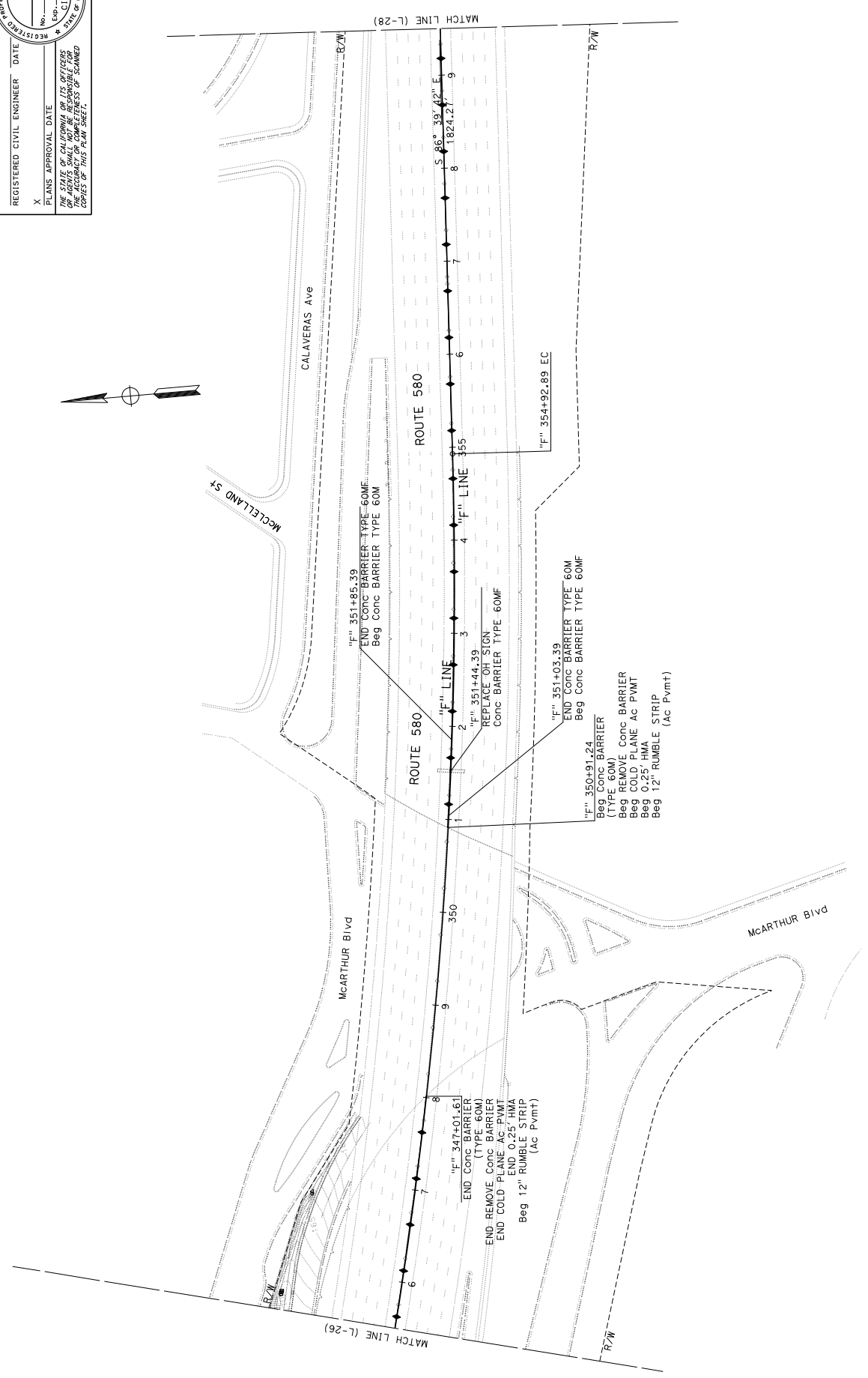


LAYOUT
SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	CHECKED BY	DATE REVISED	REVISOR

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



DIST	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	SHEET TOTAL
04	Alameda	13, 580	0.75	175	175
			R32.12/45.65	X	XXX



REGISTERED CIVIL ENGINEER DATE _____
PLANS APPROVAL DATE _____
THE STATE OF CALIFORNIA OR ITS OFFICERS
CERTIFY THAT THE ENGINEER HAS
THE ACCURACY OF COMPLETENESS OF SCANNED
COPIES OF THIS PLAN SHEET.

LAYOUT
SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	CHECKED BY	DATE REVISED	REVISOR

CALCULATED BY	DESIGNED BY	REVISOR	DATE REVISED	REVISOR

BORDER LAST REVISED 7/2/2010

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

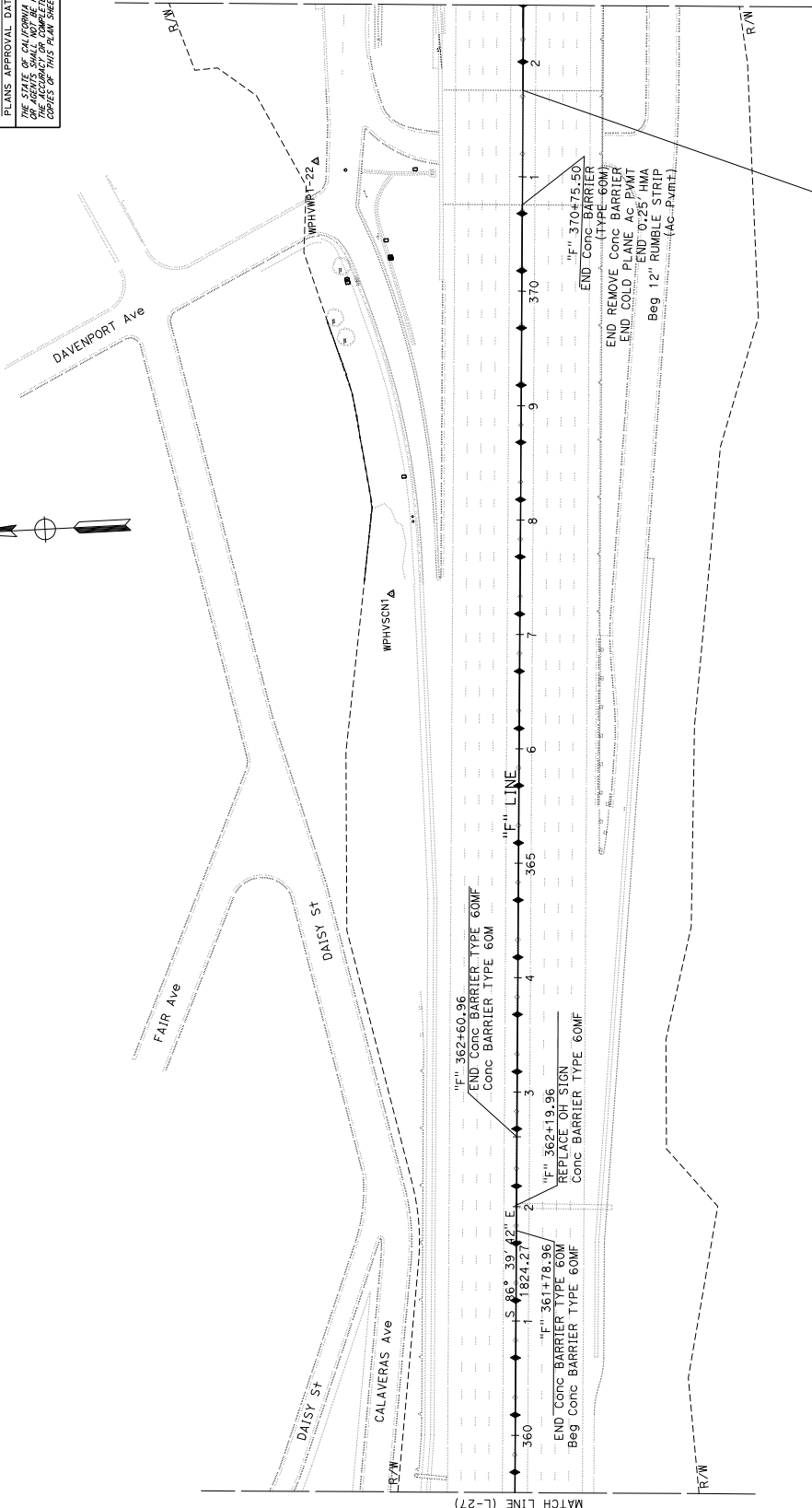
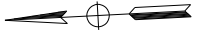
DIST	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	SHEET TOTAL
04	Alameda	13, 580	0.33	13	13
			R32.117/15.165		XXX

REGISTERED CIVIL ENGINEER DATE _____

PLANS APPROVAL DATE _____

NO. _____ EXP. _____

REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF CALIFORNIA OR ITS OFFICERS THE ACCURACY OF COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



- "F" 371+75.51
Beg Conc Barrier
(Type 60M)
- Beg Remove Conc Barrier
- Beg Cold Plane AC PWMT
- Beg 0.25' HMA
- Beg 12" Rumble Strip
(Ac Pwmt)

LAYOUT
SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	CHECKED BY	DATE REVISED	REVISOR

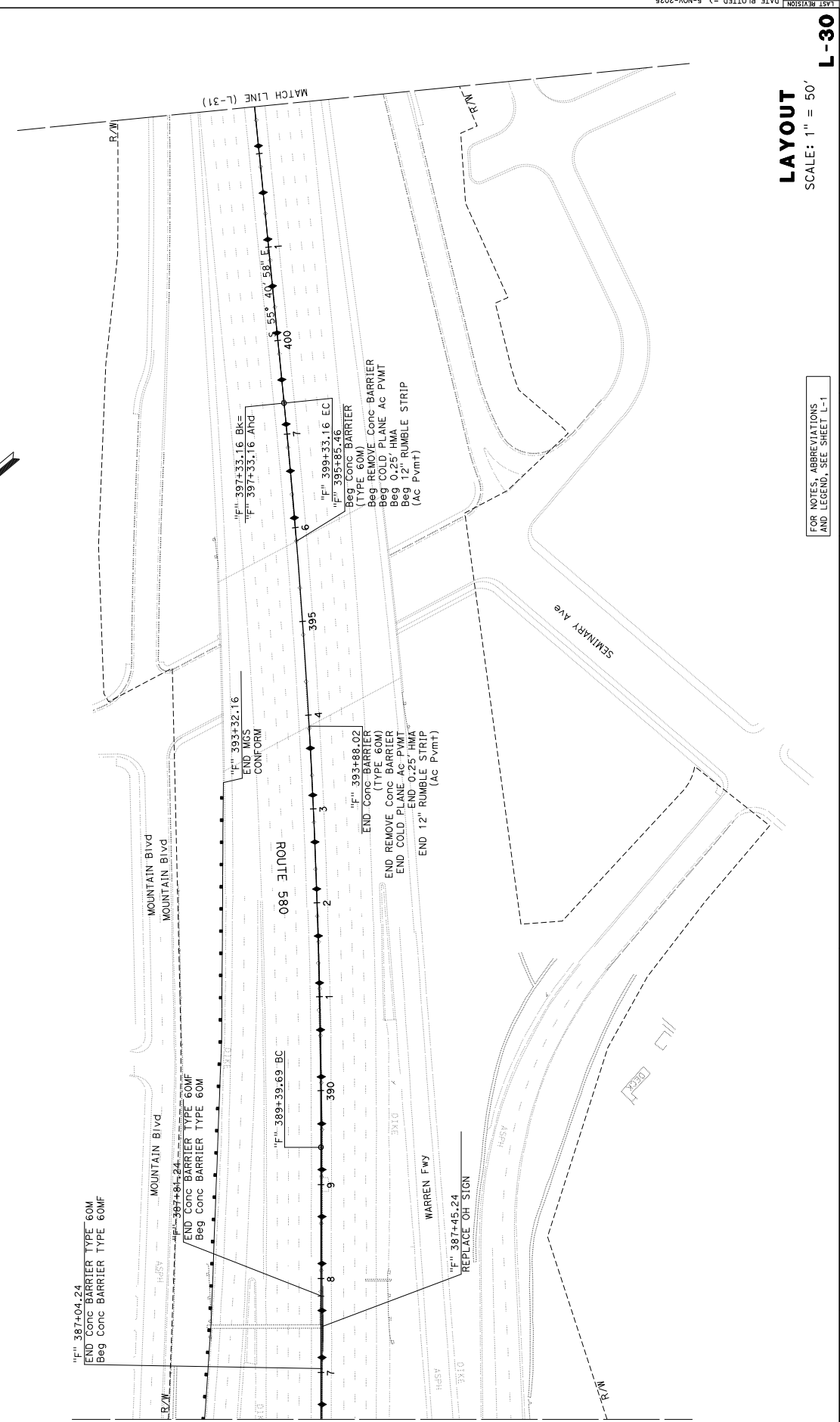
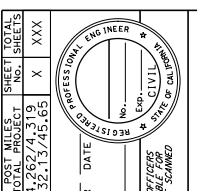
CALCULATED BY	DESIGNED BY	REVISOR	DATE REVISED

POST MILES	TOTAL PROJECT	SHEET TOTAL
04	13, 580	13, 580
ROUTE	13, 580	R32.12/45.65
COUNTY	Alameda	X
DIST	04	XXX

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

REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS
THE ACCURACY OR COMPLETENESS OF ANY
COPIES OF THIS PLAN SHEET.

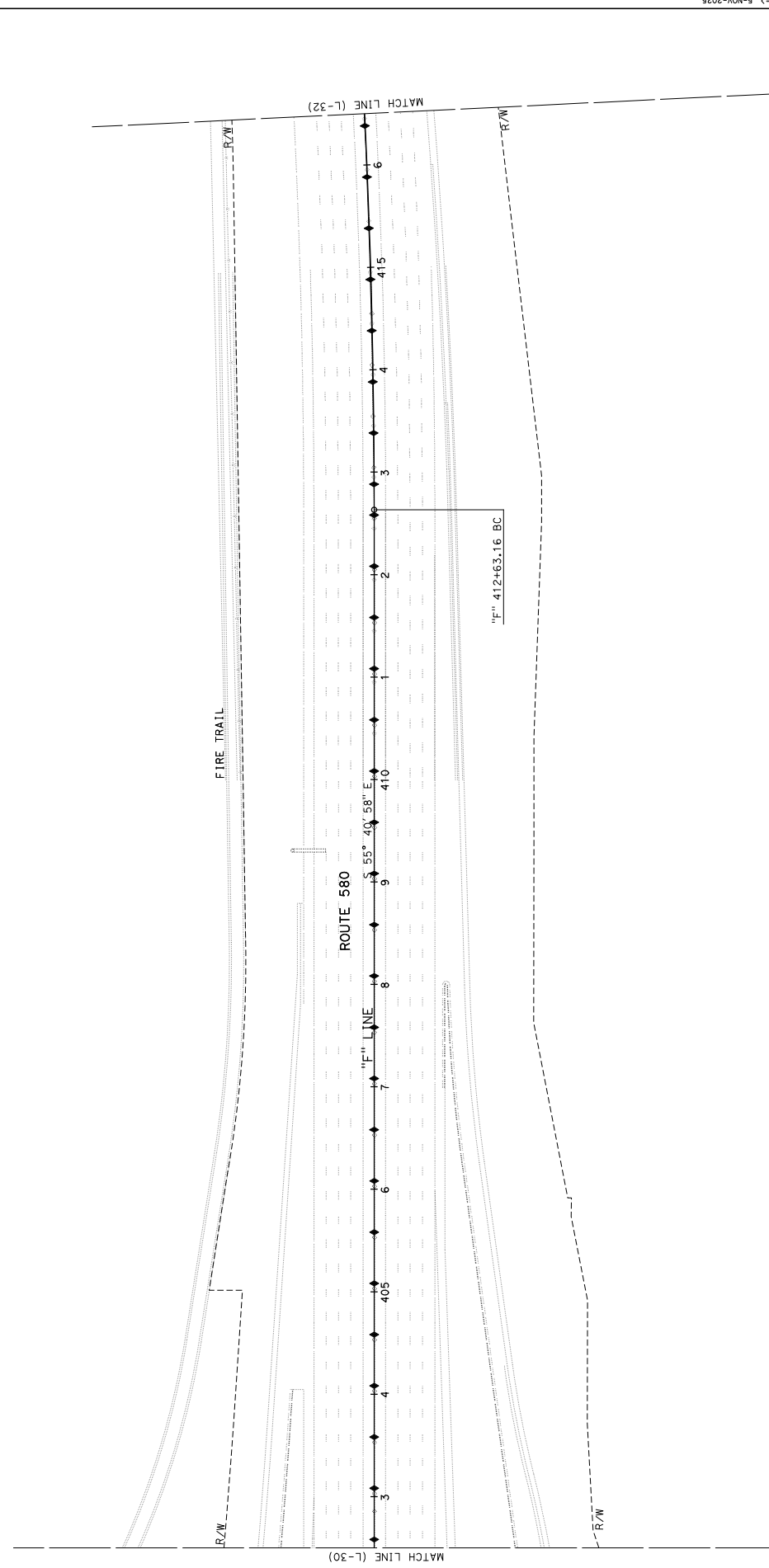
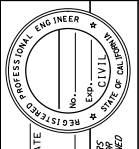
DATE PLOTTED => 5-NOV-2025
TIME PLOTTED => 16:20
LAST REVISION
PROJECT NUMBER & PHASE
UNIT 0733
04210003251
L-30
SCALE: 1" = 50'



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	CHECKED BY	DATE REVIS	REVIS

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL NO. SHEETS
04	Alameda	13, 580	0.000	XXX
			R24.12/145.165	X



LAYOUT
SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

L-31

04	Alameda	13, 580	07/15/05	XXXX
04	Alameda	13, 580	R22.17/15.65	XXXX

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS
 THE ACCURACY OR COMPLETENESS OF
 COPIES OF THIS PLAN SHEET.

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

"F" 417+68.57 EC

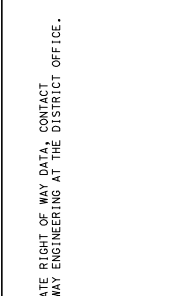
"F" 429+99.80
 Beg Conc Barrier
 (Type 60M)
 Beg REMOVE Conc Barrier
 Beg COLD PLANE AC PVT
 Beg 0.25' HMA
 Beg 12" RUMBLE STRIP
 (AC PVT)

"F" 428+85.43
 END Conc Barrier
 (Type 60M)
 END REMOVE Conc Barrier
 END COLD PLANE AC PVT
 END 0.25' HMA
 END 12" RUMBLE STRIP
 (AC PVT)

MATCH LINE (L-31)

ROUTE 580

MATCH LINE (L-33)



REVISOR	DATE	REVISION
X		
X		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

DESIGN

FUNCTIONAL SUPERVISOR

CHECKED BY

CALCULATED BY

REVISOR

DATE

REVISION

UNIT 0733

PROJECT NUMBER & PHASE

04210003251

SCALE: 1" = 50'

LAYOUT

L-32

DATE PLOTTED => 5-NOV-2025

TIME PLOTTED => 16:21

LAST REVISION

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET L-1

RELATIVE BORDER SCALE IS IN INCHES

0 1 2 3

USER NAME => s160145
 DON FILE => 04210003251e0032.dgn

BORDER LAST REVISED 7/2/2010

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	CHECKED BY	DATE REVISIED	REVISIED BY

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

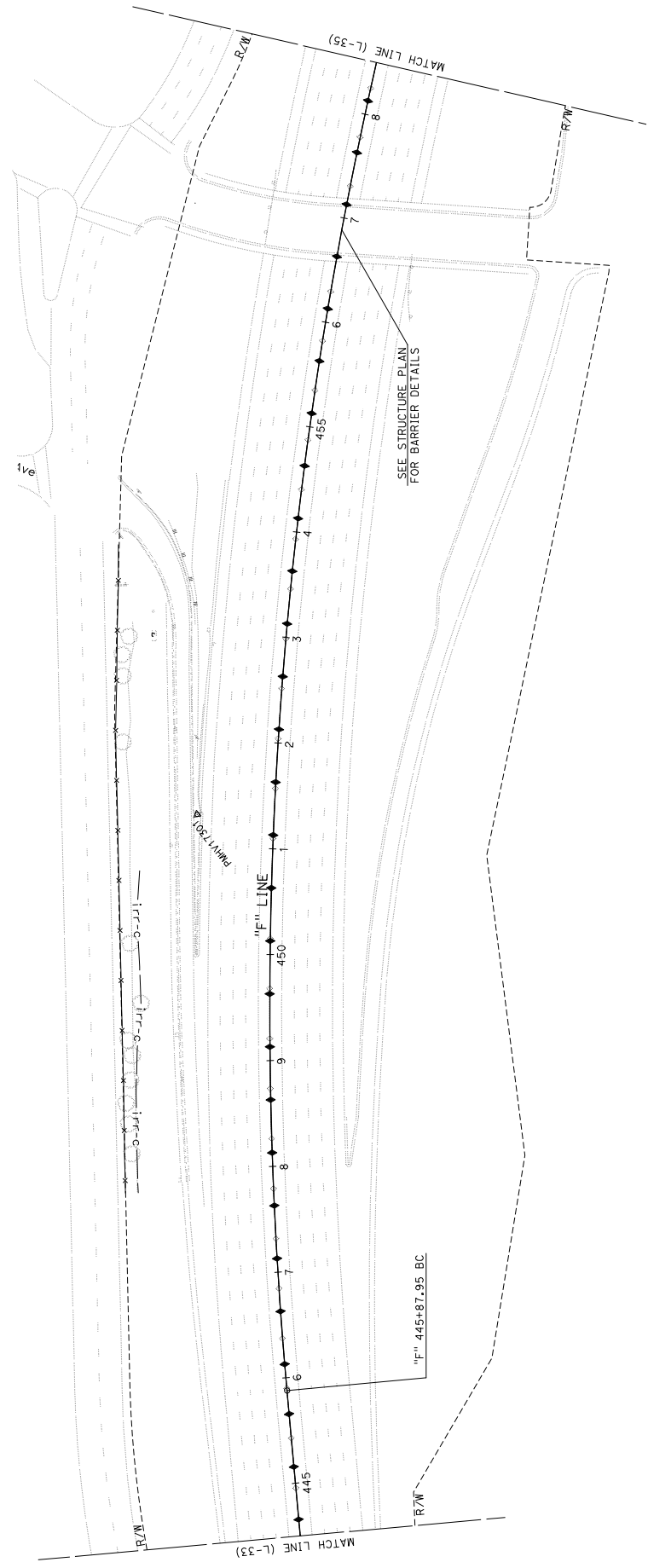
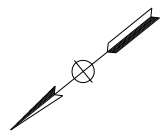
DIS#	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL NO. SHEETS
04	Alameda	13, 580	0.000 / 1.65	XXX / XXX
			R32.12/45.65	X

REGISTERED CIVIL ENGINEER DATE _____

PLANS APPROVAL DATE _____

NO. _____ EXP. _____

REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF CALIFORNIA OR ITS OFFICES THE ACCURACY OF COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



LAYOUT
SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	DESIGNED BY	CHECKED BY	DATE REVISED	REVISOR
		X			X	X

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

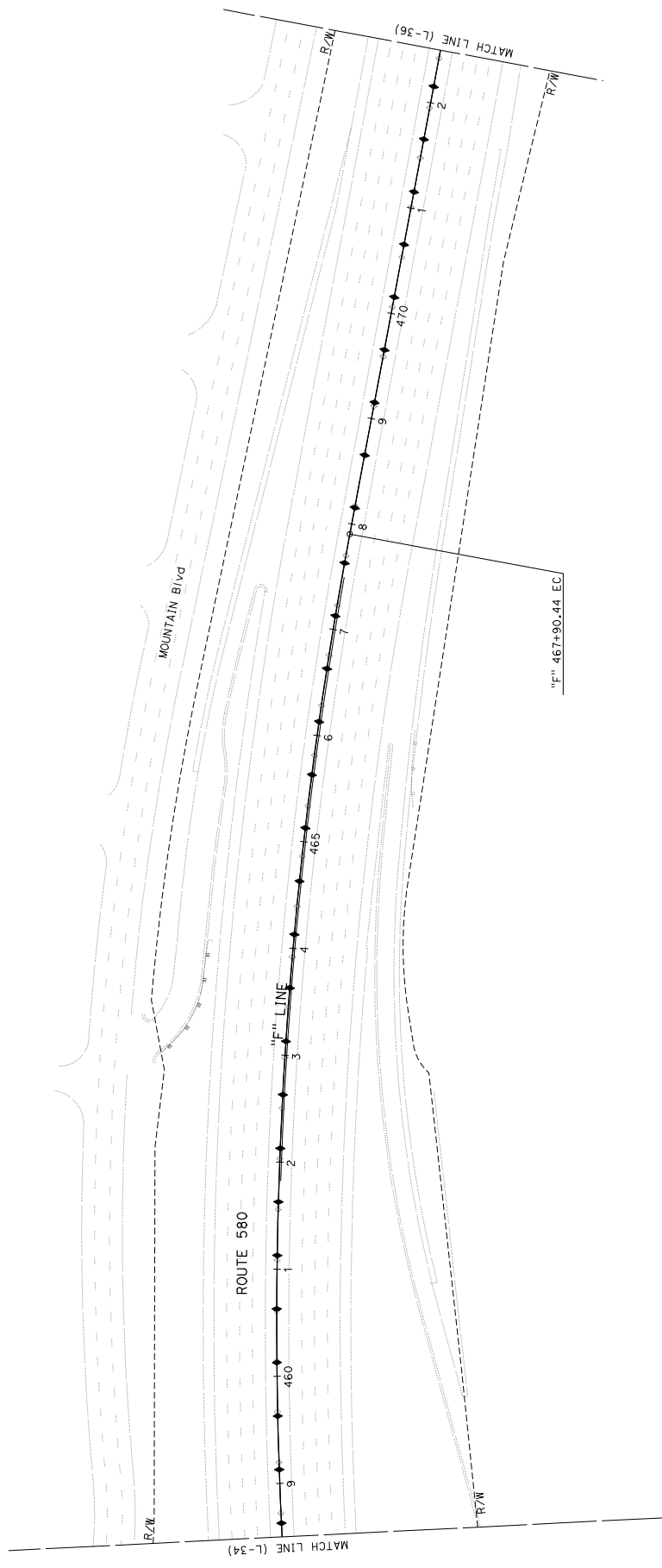
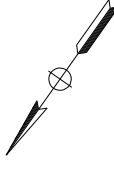
DIST	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	SHEET TOTAL
04	Alameda	13, 580	0.00	0.00	XXX
			R24.12/45.65		X

REGISTERED CIVIL ENGINEER DATE _____

PLANS APPROVAL DATE _____

NO. _____ EXP. _____

REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF CALIFORNIA OR ITS OFFICERS THE ACCURACY OF COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



LAYOUT
SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

L-35

RELATIVE BORDER SCALE
IS IN INCHES

0 1 2 3

UNIT 0733

PROJECT NUMBER & PHASE

SCALE: 1" = 50'

L-35

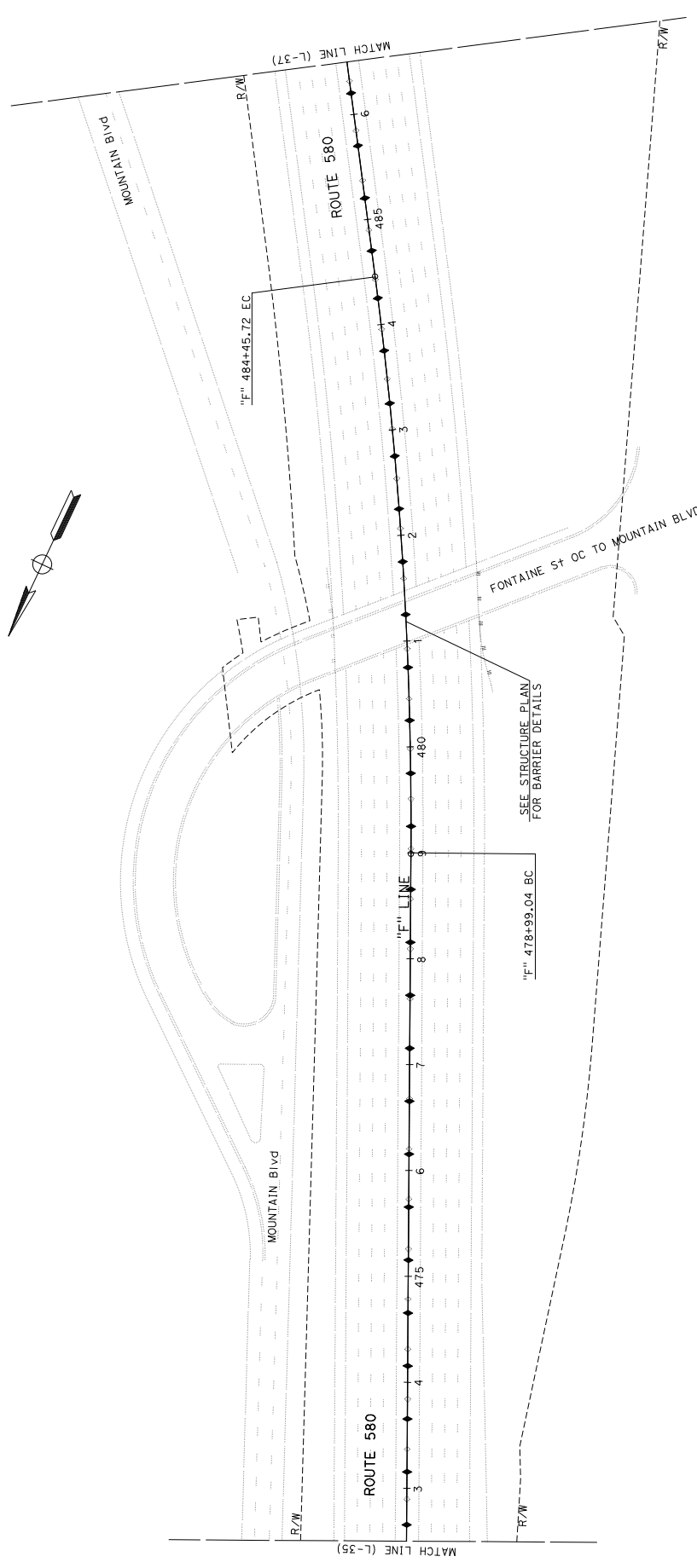
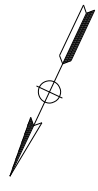
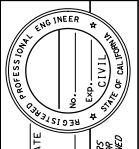
LAST REVISION

DATE PLOTTED => 5-NOV-2025
TIME PLOTTED => 16:21

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	CHECKED BY	DATE REVISED	REVISOR

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

DIST	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	SHEET TOTAL
04	Alameda	13, 580	R32.117+5.65	R32.117+5.65	XXX



LAYOUT
SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

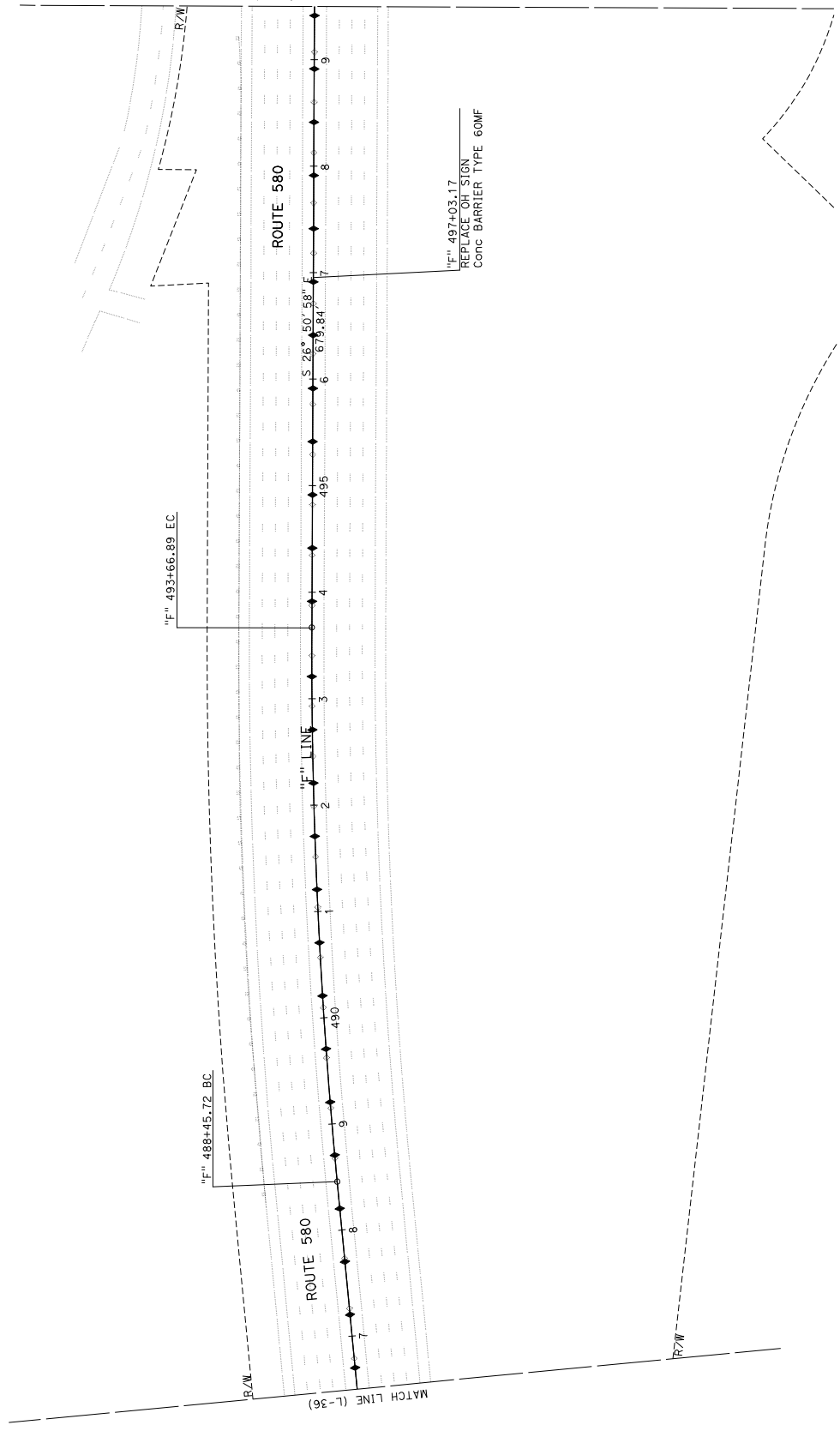
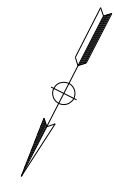
L-36

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	CHECKED BY	DATE REVISIED	REVISIED BY

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

DIST	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	SHEET TOTAL
04	Alameda	13, 580	0.00	0.00	NO. SHEETS
			R32.117/45.165		X XXX

REGISTERED CIVIL ENGINEER DATE _____
 PLANS APPROVAL DATE _____
 THE STATE OF CALIFORNIA OR ITS OFFICERS
 THE ACCURACY OR COMPLETENESS OF SCANNED
 COPIES OF THIS PLAN SHEET.



LAYOUT
 SCALE: 1" = 50'

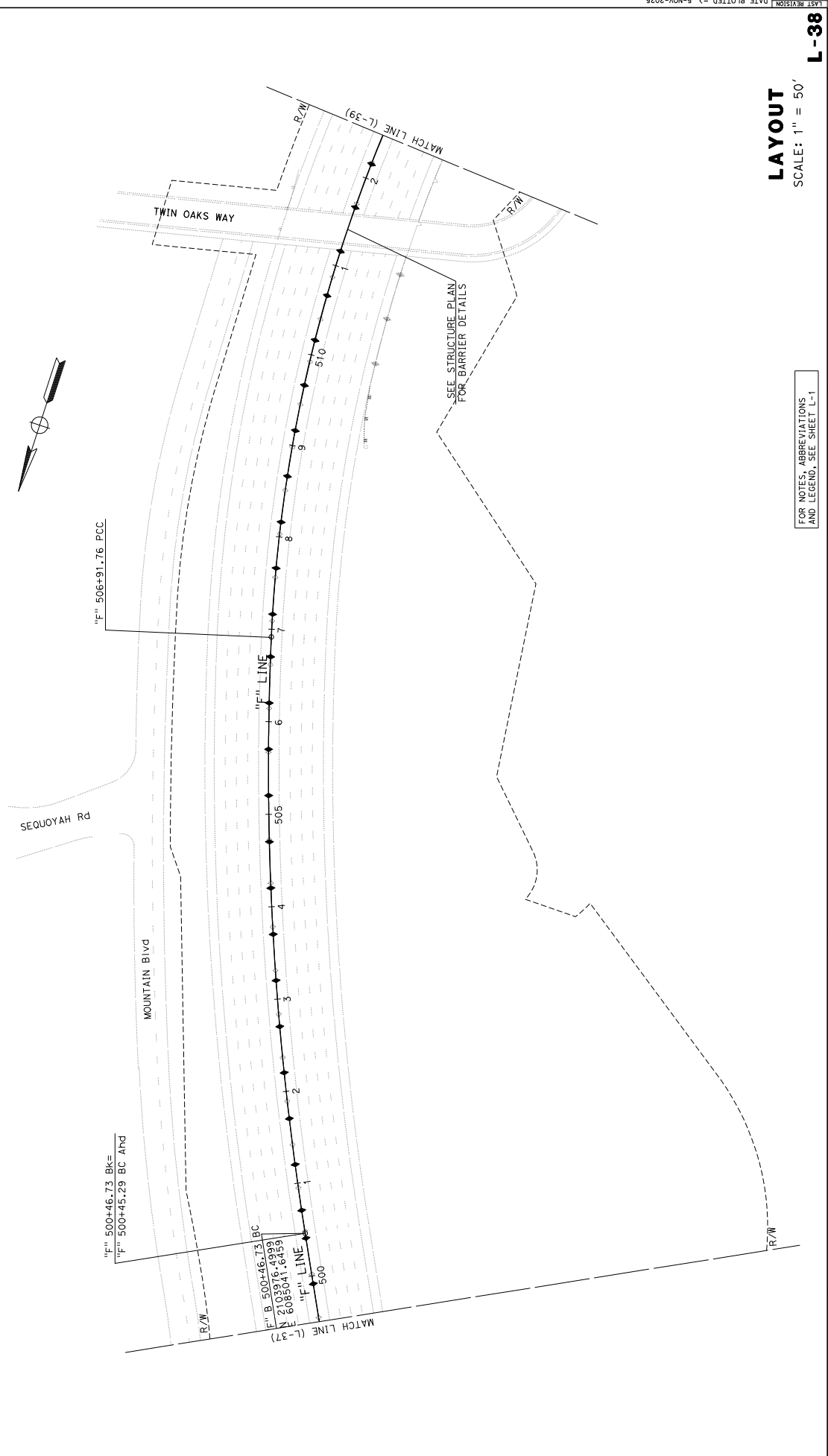
FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE SHEET L-1

DIS#	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	SHEET TOTAL
04	Alameda	13, 580	R24.12/45.65	XXX	XXX



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

REGISTERED CIVIL ENGINEER DATE _____
PLANS APPROVAL DATE _____
THE STATE OF CALIFORNIA OR ITS OFFICERS
DO NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF ANY
COPIES OF THIS PLAN SHEET.



LAYOUT
SCALE: 1" = 50'

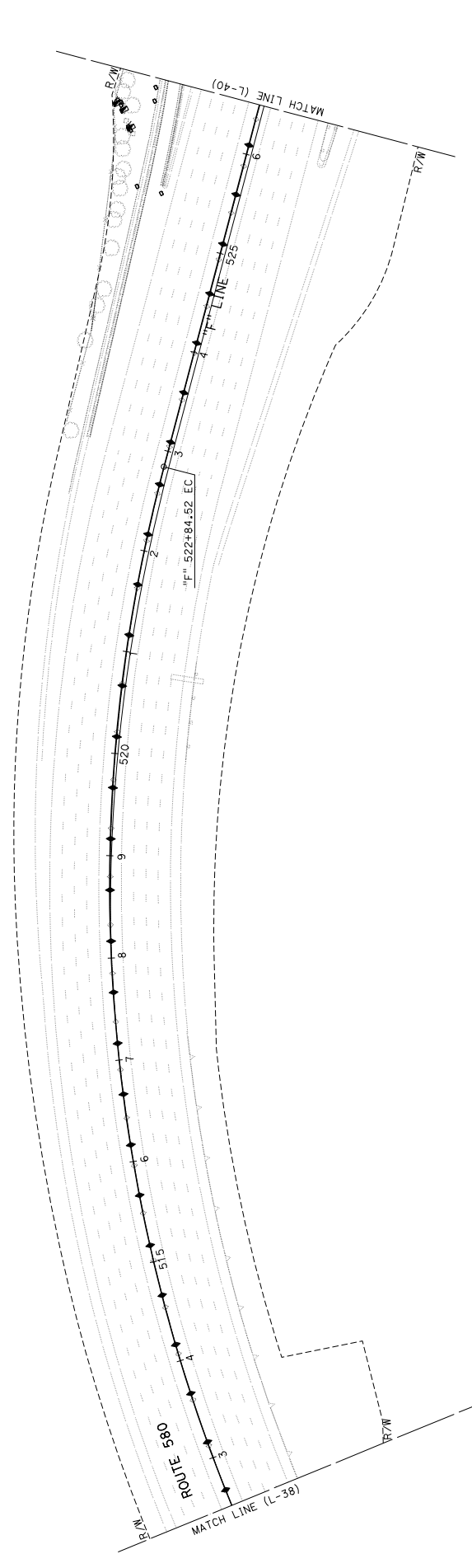
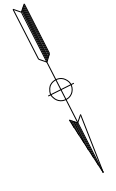
FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	DESIGNED BY	CHECKED BY	DATE REVISED	REVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	DESIGNED BY	CHECKED BY	DATE REVISOR	REVISOR
		X			X	X

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

DIST	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	SHEET TOTAL
04	Alameda	13, 580	0.00	0.00	NO. SHEETS
			R24.117/45.165		X XXX



LAYOUT
SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

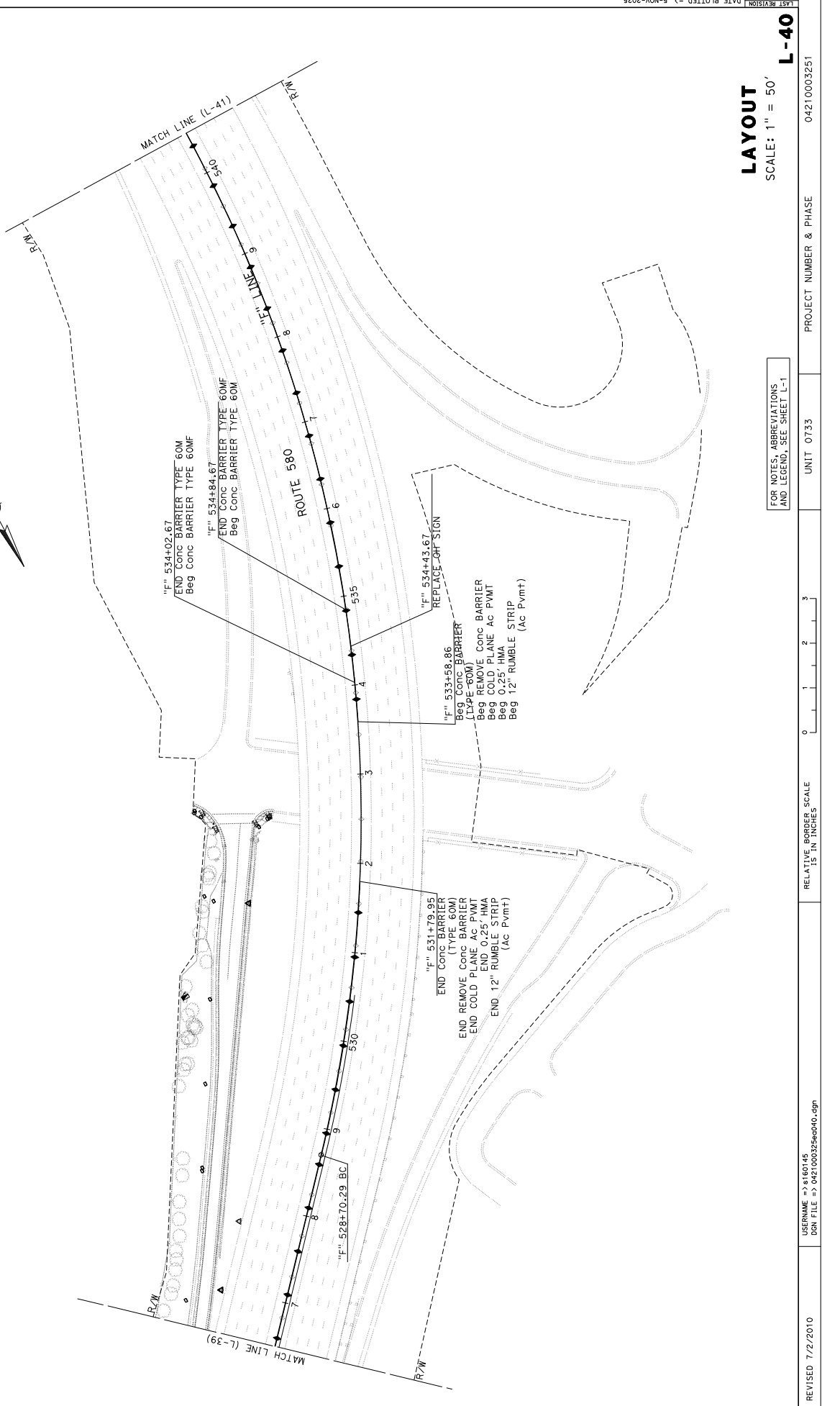
DIS#	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	SHEET TOTAL
04	Alameda	13, 580	R32.12/45.65	XXX	XXX

REGISTERED CIVIL ENGINEER	DATE	PLANS APPROVAL DATE
_____	_____	_____

PROFESSIONAL ENGINEER	NO.	EXPIRES
CIVIL	_____	_____

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

DATE REVISIED BY	X
REVISIED BY	X



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	CHECKED BY	DATE REVISIED BY
_____	_____	_____	_____	_____

LAYOUT
SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1



UNIT 0733 PROJECT NUMBER & PHASE

BORDER LAST REVISED 7/2/2010

USERNAME => s160145
DGN FILE => 0421000325e040.dgn

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL NO. SHEETS
04	Alameda	13, 580	0.75	XXX
			R24.1.17/15.165	X

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

NO. EXP. CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER

THE STATE OF CALIFORNIA OFFICIALS CERTIFY THAT THE ACCURACY OF THIS PLAN SHEET IS BASED UPON THE ACCURACY OF THE SCANNED COPIES OF THIS PLAN SHEET.



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

FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

SCALE: 1" = 50'

PROJECT NUMBER & PHASE

UNIT 0733

RELATIVE BORDER SCALE
IS IN INCHES

0 1 2 3

USERNAME => s160145
DON FILE => 042100032se001.dgn

BORDER LAST REVISED 7/2/2010

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN

FUNCTIONAL SUPERVISOR

CHECKED BY

DESIGNED BY

REVISOR

DATE REVISED

X

X

X

X

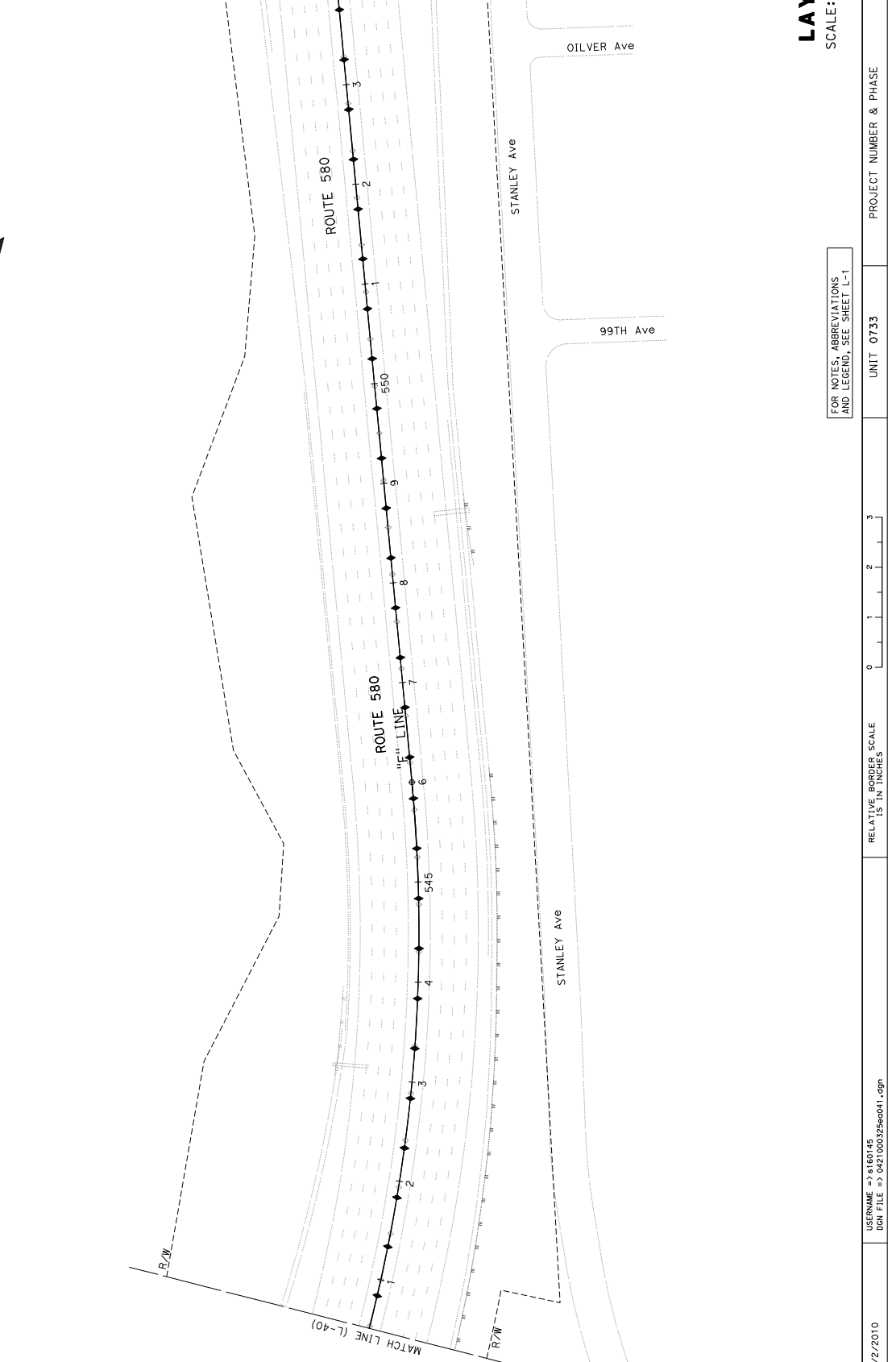
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X

X

X

X



DATE PLOTTED => 5-NOV-2025

TIME PLOTTED => 16:22

LAST REVISION

L-41

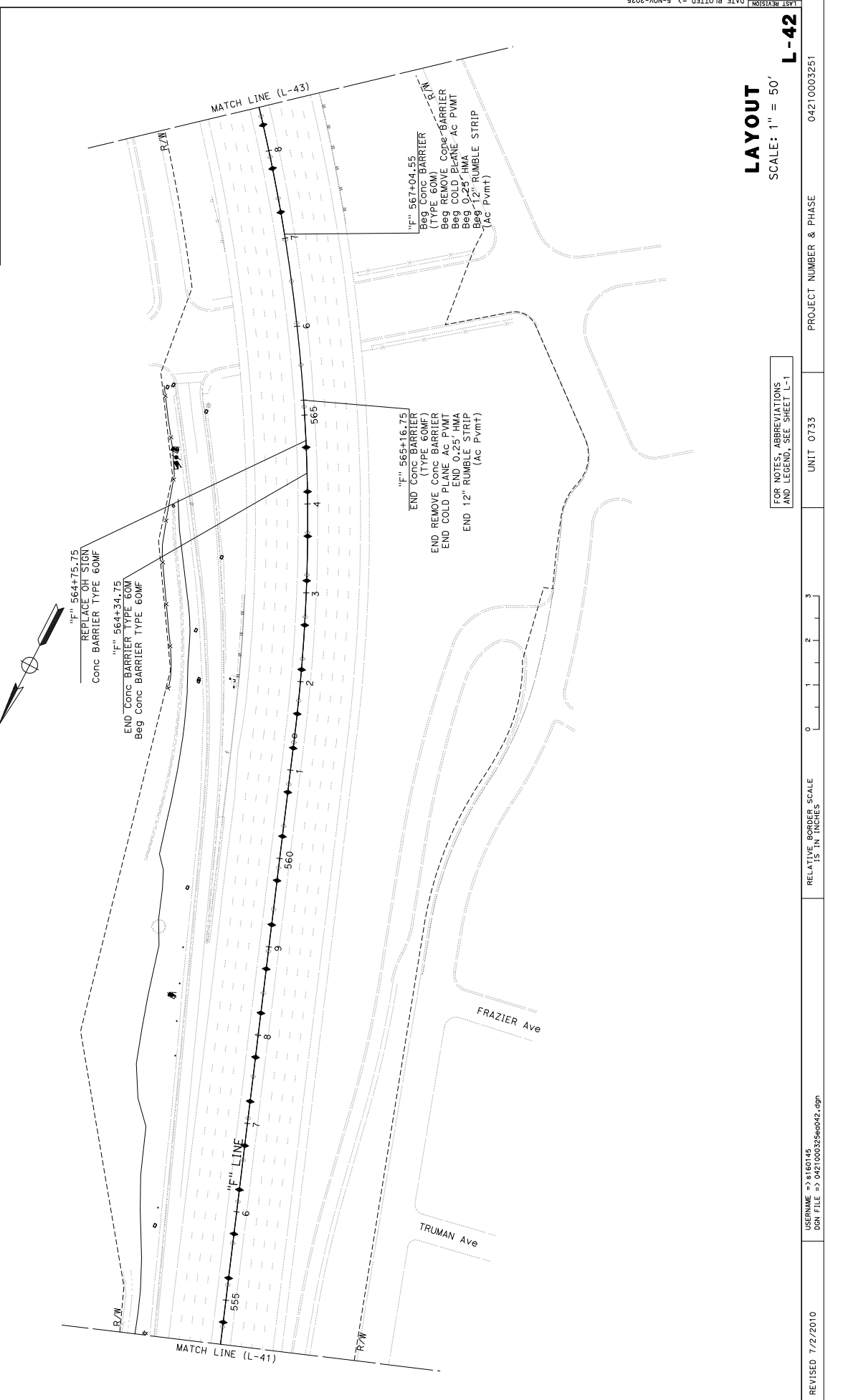
04210003251

DIS#	COUNTY	ROUTE	POST MILES	TOTAL PROJECT MILES	SHEET TOTAL
04	Alameda	13, 580	R32.117/45.165	X	XXX

REGISTERED CIVIL ENGINEER	DATE	PLANS APPROVAL DATE

PROFESSIONAL ENGINEER	NO.	EXPIRES

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



REVISION	DATE	BY	DESCRIPTION

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	CHECKED BY	DATE REVISIED	REVISIED BY

LAYOUT
SCALE: 1" = 50'

PROJECT NUMBER & PHASE	UNIT	UNIT 0733
04210003251		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	DESIGNED BY	CHECKED BY	DATE REVISED	REVISOR
	X			X	X

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

DIS#	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	SHEET TOTAL
04	Alameda	13, 580	0.00	0.00	XXX
			R24.1.17/15.1.65		X

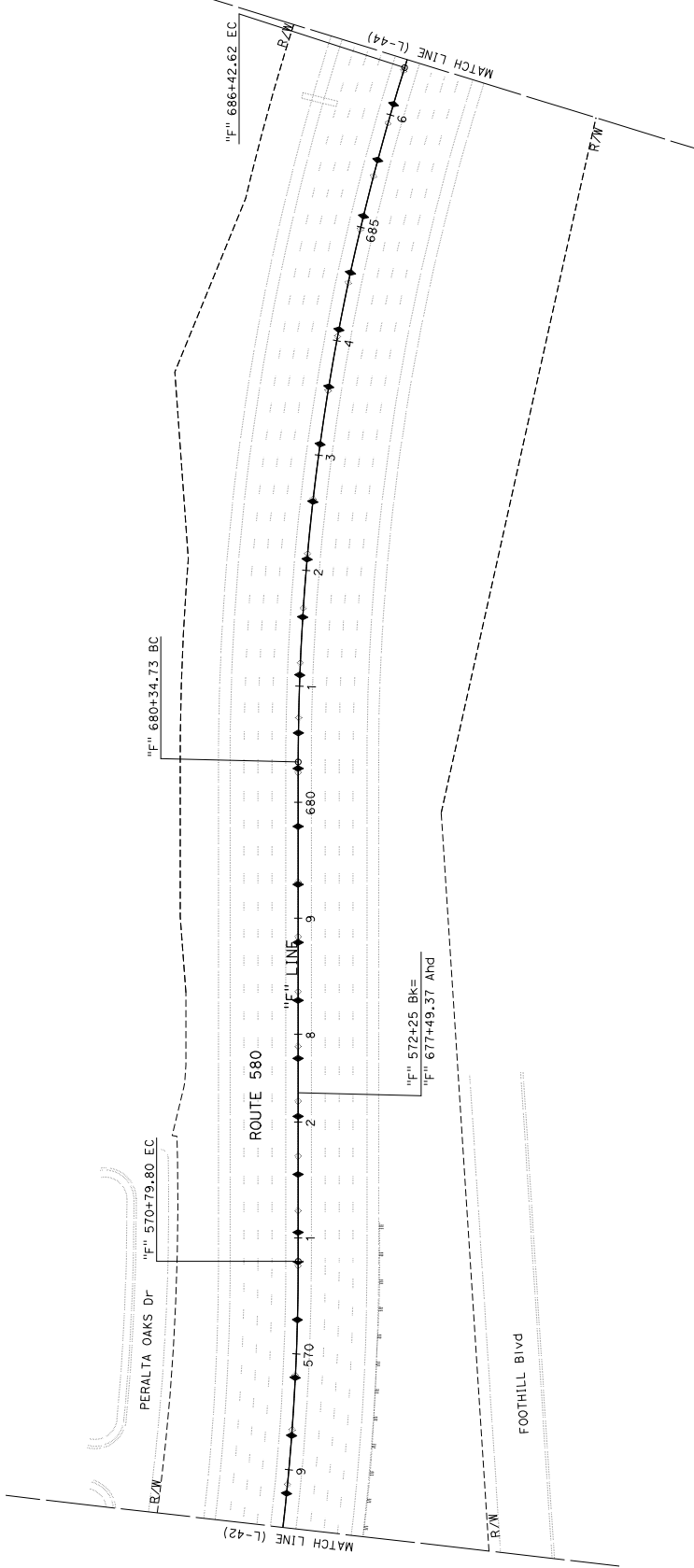
REGISTERED CIVIL ENGINEER DATE _____

PLANS APPROVAL DATE _____

NO. _____

EXP. _____

REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF CALIFORNIA OR ITS OFFICERS THE ACCURACY OF COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



LAYOUT
SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET L-1

USERNAME => s160145
DGN FILE => 0421000325e0043.dgn

RELATIVE BORDER SCALE IS IN INCHES

0 1 2 3

DATE PLOTTED => 5-NOV-2025

LAST REVISION

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL NO. SHEETS
04	Alameda	13, 580	0.000	XXX
			R24.1.17/15.165	X

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

NO. OF CALIFORNIA OR LTD. OFFICERS THE STATE OF CALIFORNIA HAS ISSUED TO THE ENGINEER TO VERIFY THE ACCURACY OF THE PLAN SHEET. THE ACCURACY OF THIS PLAN SHEET.



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

DATE REVISIED X

REVISIED BY X

CHECKED BY X

DESIGNED BY X

FUNCTIONAL SUPERVISOR X

DESIGN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

USERNAME => s160145
DON FILE => 0421000325e004.dgn

BORDER LAST REVISED 7/2/2010

PROJECT NUMBER & PHASE

UNIT 0733

RELATIVE BORDER SCALE IS IN INCHES

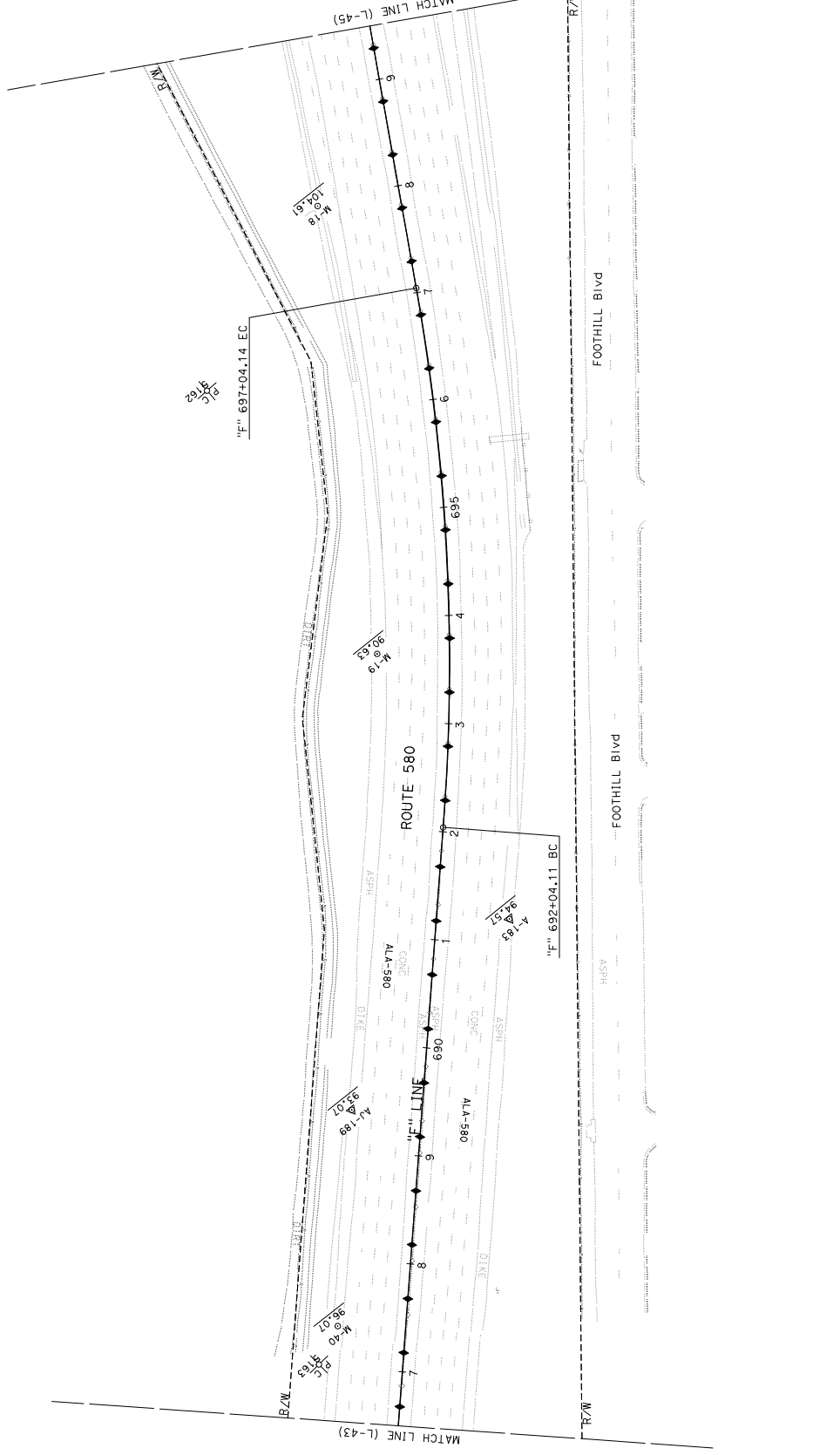
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FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET L-1

SCALE: 1" = 50'

L-44

04210003251



DATE PLOTTED => 5-NOV-2025	TIME PLOTTED => 16:22	LAST REVISION
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DIS#	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	SHEET TOTAL
04	Alameda	13, 580	0.00	13.580	13
			R32.1.17/45.165		XXX



REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

NO. _____ EXP. _____

REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF CALIFORNIA OR ITS OFFICERS THE ACCURACY OF COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

DATE PLOTTED => 5-NOV-2025
LAST REVISION

PROJECT NUMBER & PHASE 04210003251

UNIT 0733

RELATIVE BORDER SCALE 15 IN INCHES

0 1 2 3

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET L-1

SCALE: 1" = 50'

L-46

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN

FUNCTIONAL SUPERVISOR

CALCULATED BY

DESIGNED BY

REVISOR

DATE REVISOR

REVISION

REVISION

REVISION

REVISION

REVISION

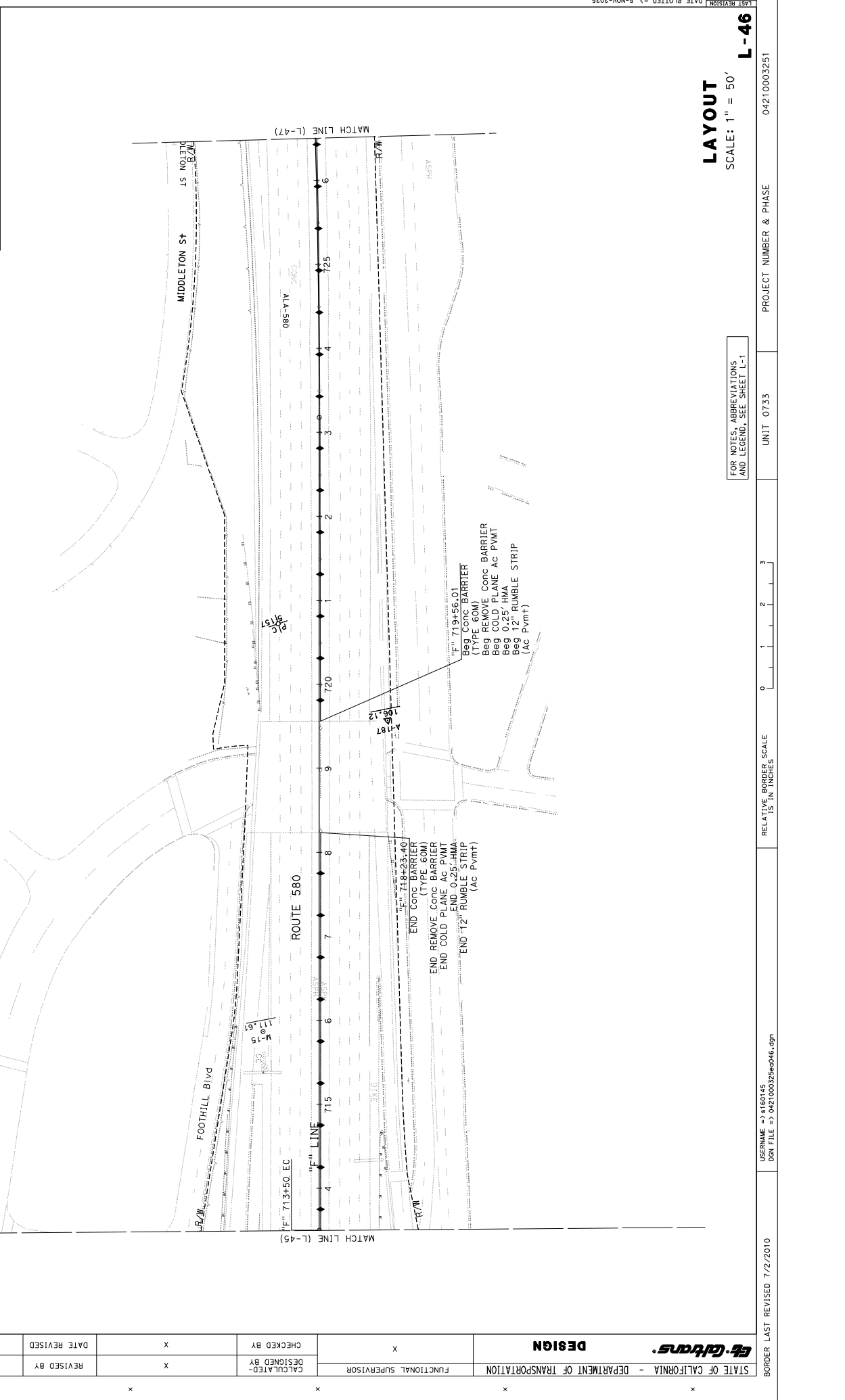
REVISION

REVISION

REVISION

REVISION

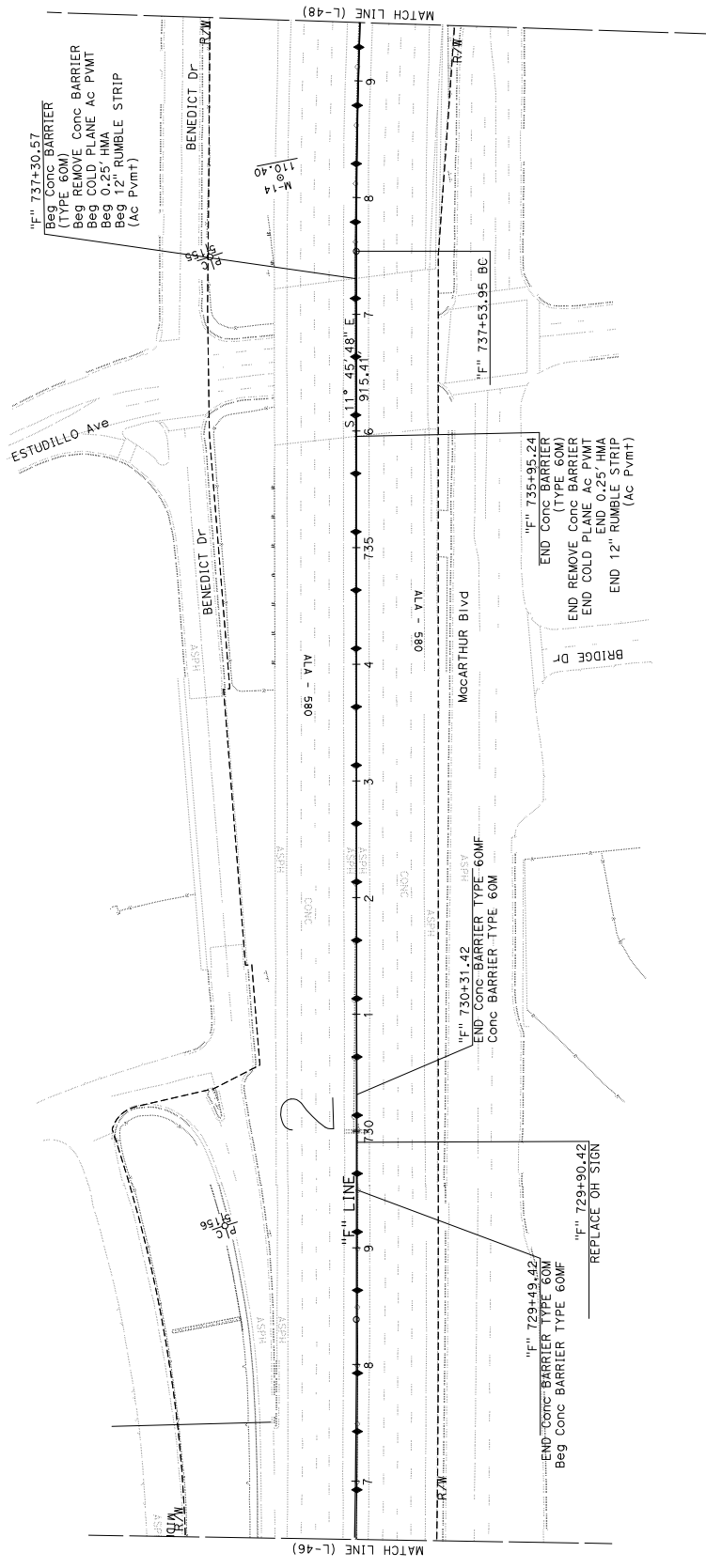
REVISION



DIS#	COUNTY	ROUTE	POST MILES	TOTAL PROJECT MILES	SHEET TOTAL NO. SHEETS
04	Alameda	13, 580	R32.117/45.165	X	XXX

REGISTERED CIVIL ENGINEER DATE _____
 PLANS APPROVAL DATE _____
 X
 THE STATE OF CALIFORNIA OR ITS OFFICERS
 HEREBY CERTIFIES THAT THE ACCURACY OF THIS PLAN SHEET
 COMES FROM THE ORIGINAL ENGINEER'S DRAWINGS
 AND THE ACCURACY OF THE ORIGINAL ENGINEER'S DRAWINGS
 COMES FROM THE ORIGINAL ENGINEER'S MEASUREMENTS
 AND THE ACCURACY OF THE ORIGINAL ENGINEER'S MEASUREMENTS
 COMES FROM THE ORIGINAL ENGINEER'S MEASUREMENTS

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



LAYOUT
 SCALE: 1" = 50'

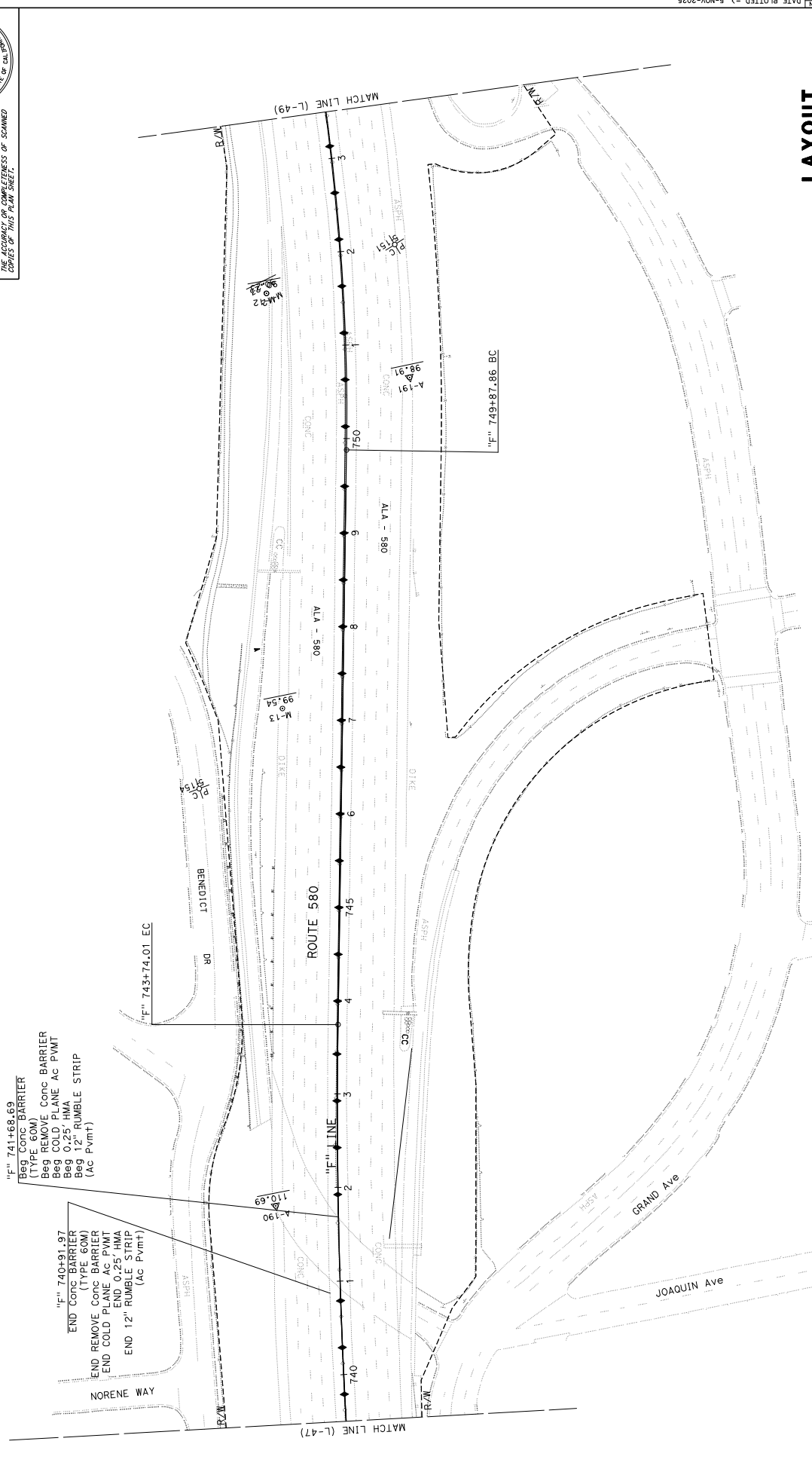
FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE SHEET L-1

DIS#	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	SHEET TOTAL
04	Alameda	13, 580	R32.12/45.65	13	XXX
REGISTERED CIVIL ENGINEER DATE _____ PLANS APPROVAL DATE _____ NO. _____ EXPIRES _____ THE STATE OF CALIFORNIA OR ITS OFFICERS HEREBY CERTIFY THAT THE ENGINEER HAS THE ACCURACY AND COMPLETENESS OF THIS PLAN SHEET.					

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

"F" 741+68.69
Beg. Conc Barrier
(Type 60M)
Beg Cold Plane AC PWT
Beg 0.25' HMA
Beg 12" Rumble Strip
(AC Pwmt)

"F" 740+91.97
END Conc Barrier
(Type 60M)
END REMOVE Conc Barrier
END COLD PLANE AC PWT
END 0.25' HMA
END 12" Rumble Strip
(AC Pwmt)



LAYOUT
SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

UNIT 0733 PROJECT NUMBER & PHASE

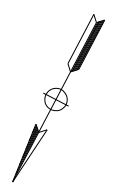
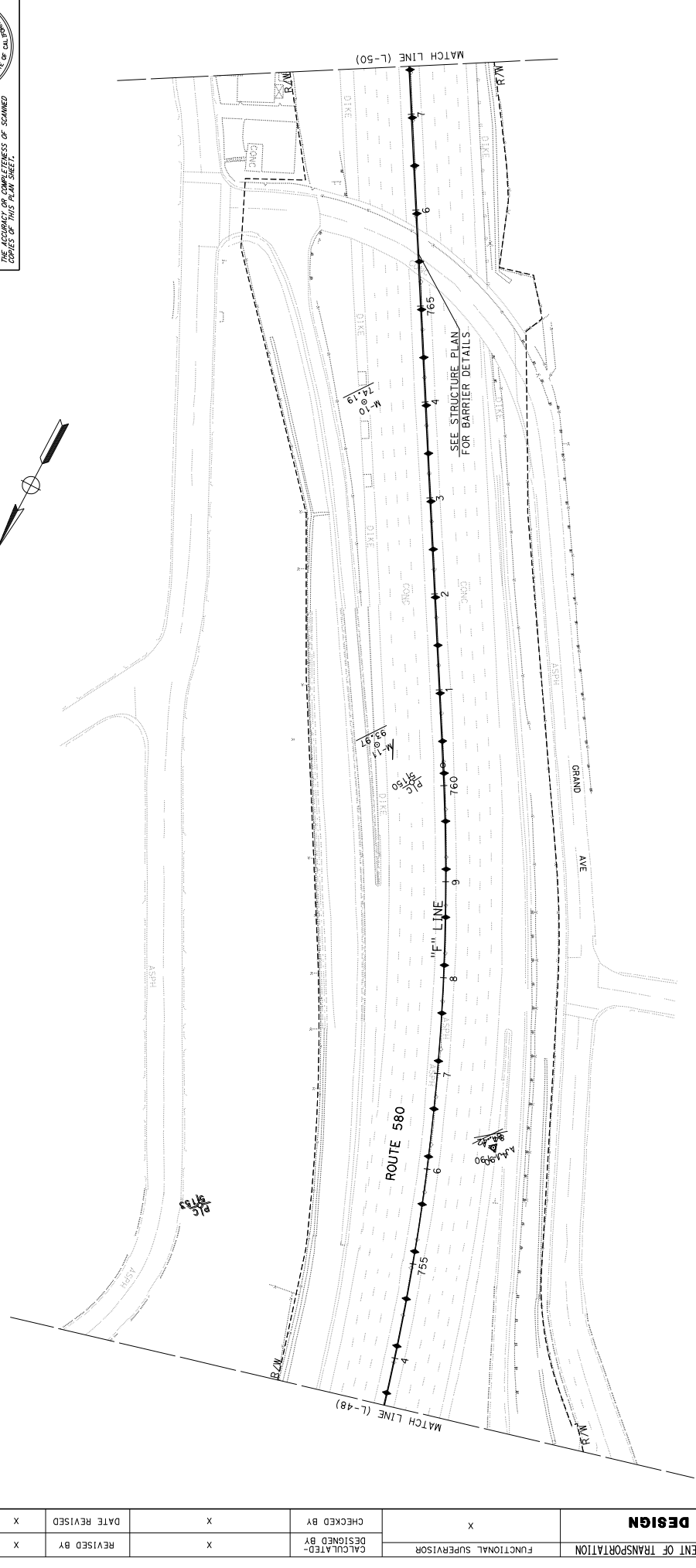
RELATIVE BORDER SCALE
15 IN INCHES

DATE PLOTTED = 16:23
LAST REVISION

04	Alameda	13, 580	R32.1.17/15.165	X	XXX	
REGISTERED CIVIL ENGINEER		DATE				
PLANS APPROVAL DATE		THE STATE OF CALIFORNIA OR ITS OFFICERS DO NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF ANY COPIES OF THIS PLAN SHEET.				

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	DESIGNED BY	CHECKED BY	DATE REVISED	REVISOR



LAYOUT
 SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE SHEET L-1

UNIT 0733 PROJECT NUMBER & PHASE

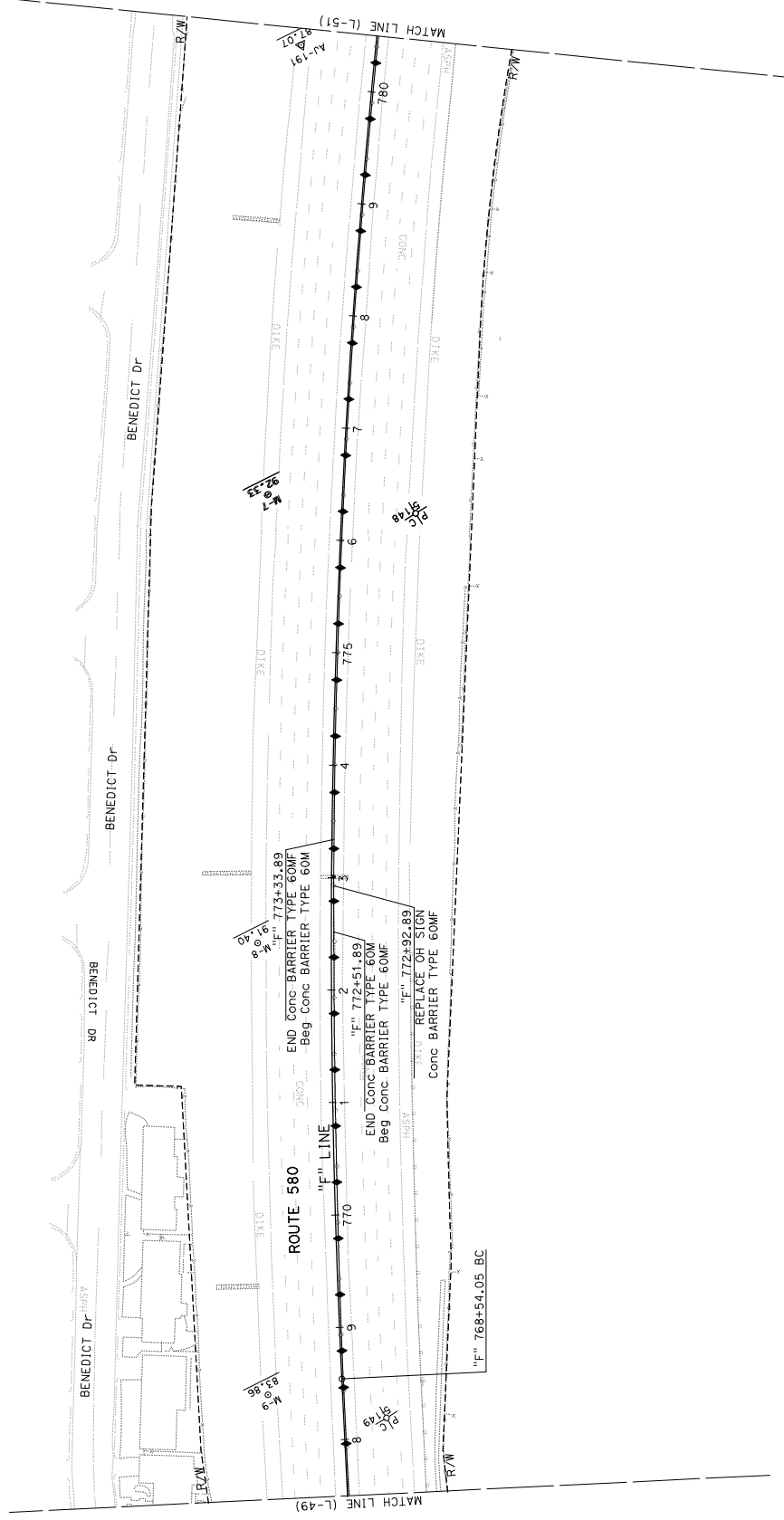
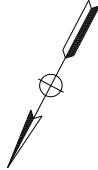
04210003251 LAST REVISION

DIS#	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	SHEET TOTAL
04	Alameda	13, 580	R32.12/45.65	XXX	XXX

REGISTERED CIVIL ENGINEER	DATE	PLANS APPROVAL DATE

PROFESSIONAL ENGINEER	NO.	EXPIRES
CIVIL		

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



LAYOUT
SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

DATE PLOTTED => 5-NOV-2025	LAST REVISION	04210003251
PROJECT NUMBER & PHASE	UNIT 0733	0
RELATIVE BORDER SCALE	15 IN INCHES	0 1 2 3
USERNAME => s160145	DGN FILE => 0421000325e=050.dgn	
BORDER LAST REVISED 7/2/2010		

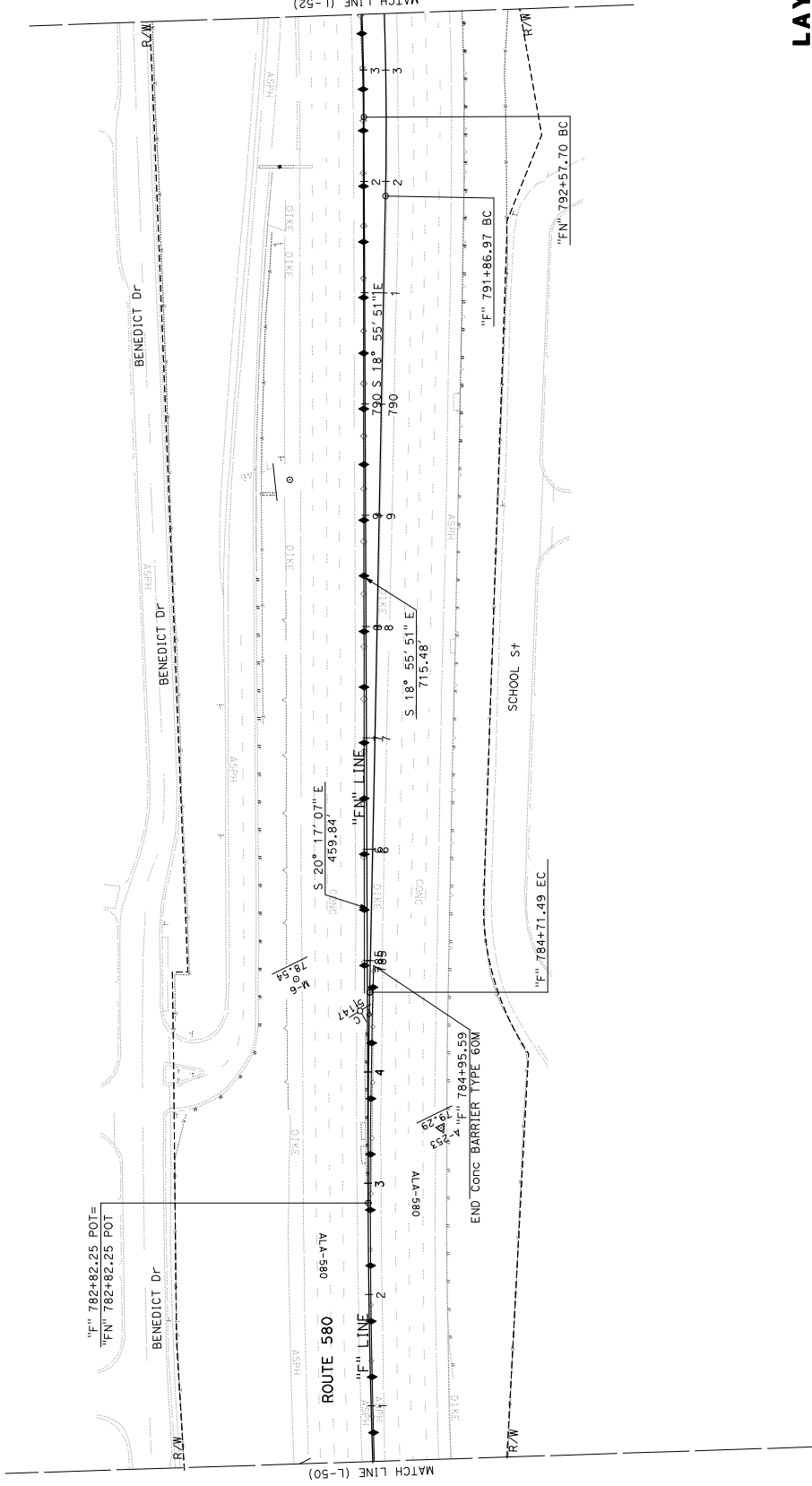
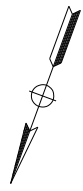
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	
FUNCTIONAL SUPERVISOR		
CALCULATED BY		
CHECKED BY		
DESIGNED BY		
REVISOR		
DATE REVISED		

DIS#	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	SHEET TOTAL
04	Alameda	13, 580	0.00	0.00	NO. SHEETS
			R24.12/45.65	X	XXX



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

REVISOR	DATE	DESCRIPTION
X		DATE REVISED
X		REVISOR



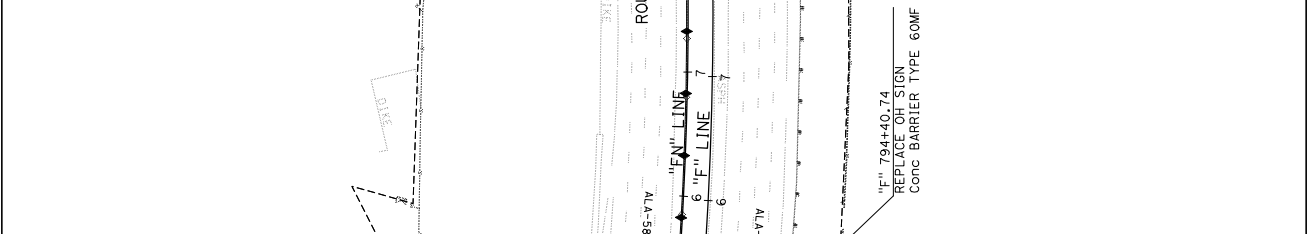
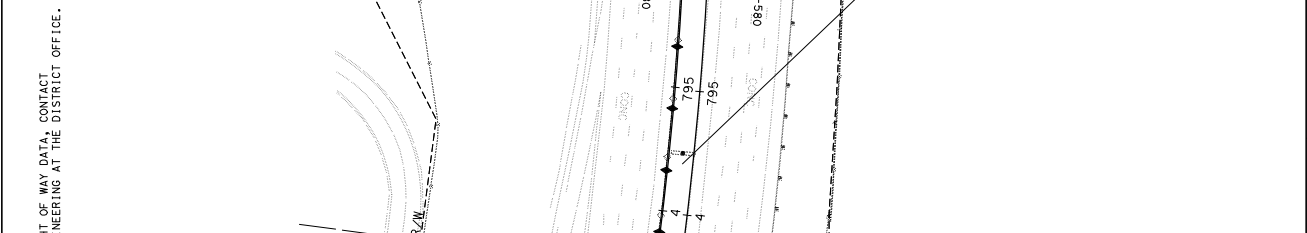
LAYOUT
SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

L-51

FUNCTIONAL SUPERVISOR	X
CALCULATED/DESIGNED BY	X
REVISOR	X
DATE REVISED	X

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

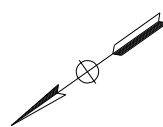


DIST	COUNTY	ROUTE	POST MILES	TOTAL PROJECT MILES	SHEET TOTAL NO. SHEETS
04	Alameda	13, 580	13.00	13.00	XXX
REGISTERED CIVIL ENGINEER DATE					NO. OF SHEETS
PLANS APPROVAL DATE					NO. OF SHEETS
REGISTERED CIVIL ENGINEER NO. _____ EXP. DATE _____ CIVIL ENGINEER STATE OF CALIFORNIA THE STATE OF CALIFORNIA OFFICIALS HEREBY CERTIFY THAT THE ENGINEER'S SIGNATURE AND SEAL ARE TRUE AND CORRECT COPIES OF THIS PLAN SHEET.					

LAYOUT
SCALE: 1" = 50'

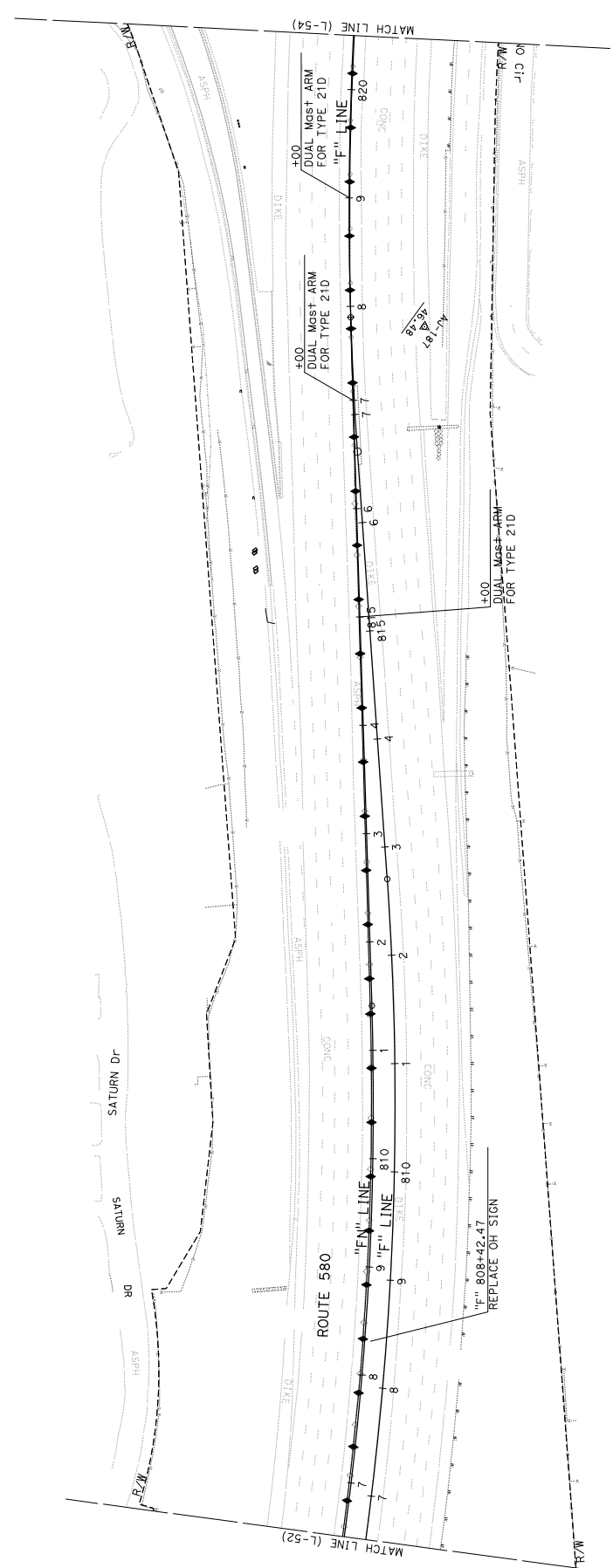
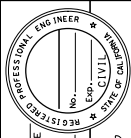
FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

Dist	County	Route	Post Miles	Total Project	SHEET TOTAL
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			R32.12/145.65		X XXX



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

REGISTERED CIVIL ENGINEER DATE _____
PLANS APPROVAL DATE _____
THE STATE OF CALIFORNIA OR ITS OFFICERS
HEREBY CERTIFY THAT THE ENGINEER HAS
THE ACCURACY OF COMPLETENESS OF SCANNED
COPIES OF THIS PLAN SHEET.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	CHECKED BY	DATE REVISOR	REVISOR

LAYOUT
SCALE: 1" = 50'

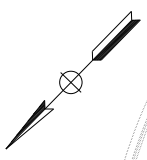
FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	CHECKED BY	DATE REVISED	REVISOR

BORDER LAST REVISED 7/2/2010
 USERNAME => s160145
 DON FILE => 042100032se004.dgn
 PROJECT NUMBER & PHASE
 UNIT 0733
 RELATIVE BORDER SCALE
 IS IN INCHES
 0 1 2 3
 FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE SHEET L-1
 L-54
 SCALE: 1" = 50'
 LAYOUT
 DATE PLOTTED => 5-NOV-2025
 TIME PLOTTED => 16:23
 LAST REVISION

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

DIST	COUNTY	ROUTE	POST MILES	SHEET TOTAL
04	Alameda	13, 580	0.00	NO. SHEETS
			R242.12/45.65	X XXX



REGISTERED CIVIL ENGINEER DATE

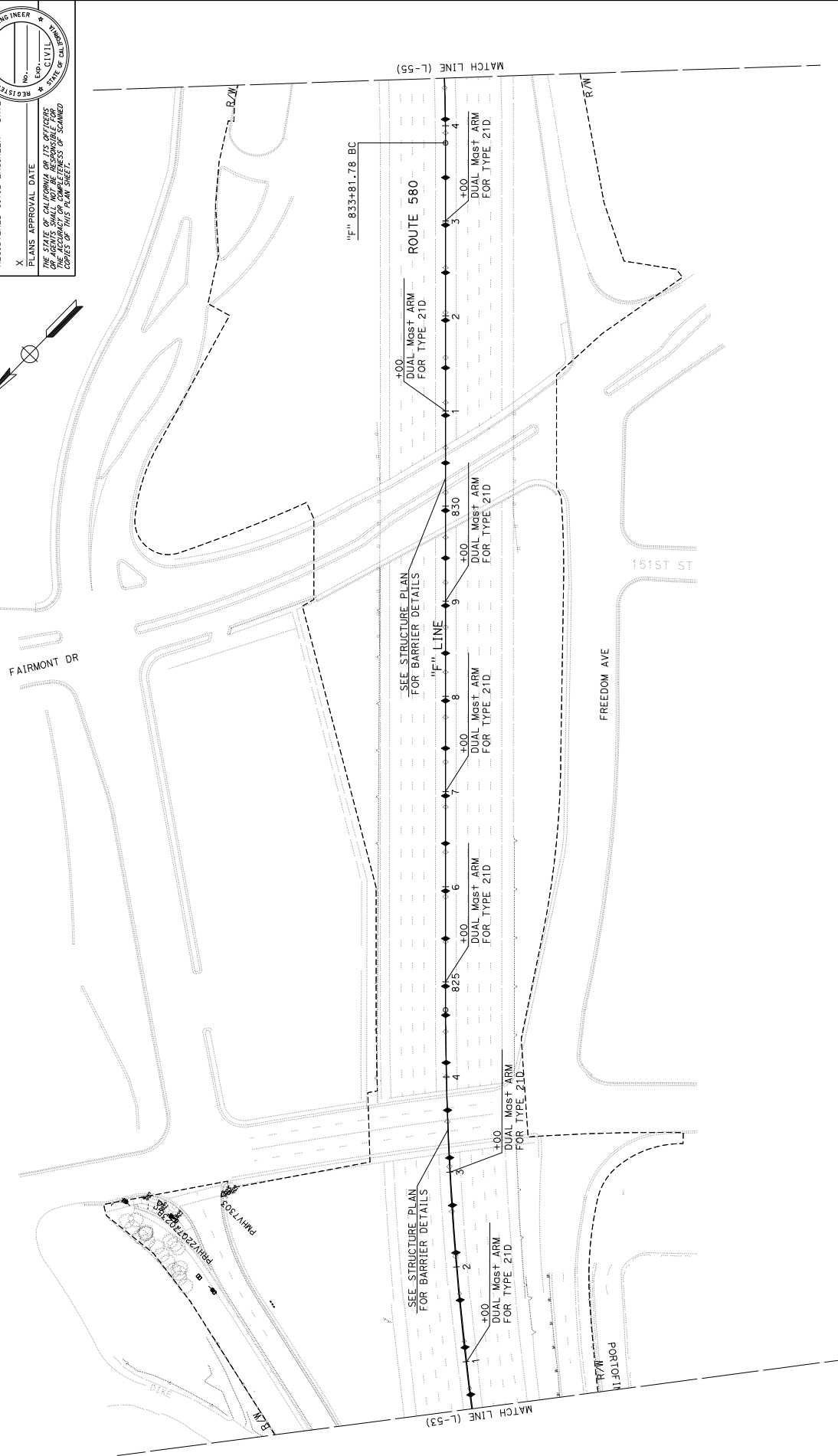
PLANS APPROVAL DATE

NO. OF SHEETS

NO. OF SHEETS

REGISTERED PROFESSIONAL ENGINEER

THE STATE OF CALIFORNIA OR ITS OFFICERS
 HEREBY CERTIFY THAT THE ACCURACY OF THIS PLAN SHEET
 IS BASED UPON THE INFORMATION PROVIDED BY THE REGISTERED CIVIL ENGINEER



FAIRMONT DR

FREEDOM AVE

151ST ST

ROUTE 580

DUAL MAST ARM FOR TYPE 21D

DUAL MAST ARM FOR TYPE 21D

DUAL MAST ARM FOR TYPE 21D

DUAL MAST ARM FOR TYPE 21D

DUAL MAST ARM FOR TYPE 21D

DUAL MAST ARM FOR TYPE 21D

DUAL MAST ARM FOR TYPE 21D

DUAL MAST ARM FOR TYPE 21D

DUAL MAST ARM FOR TYPE 21D

DUAL MAST ARM FOR TYPE 21D

DUAL MAST ARM FOR TYPE 21D

DUAL MAST ARM FOR TYPE 21D

Dist	County	Route	Post Miles	Total Project	SHEET TOTAL
04	Alameda	13, 580	0.00	0.00	No. SHEETS
			R24.1.17/15.165		X XXX

REGISTERED CIVIL ENGINEER DATE

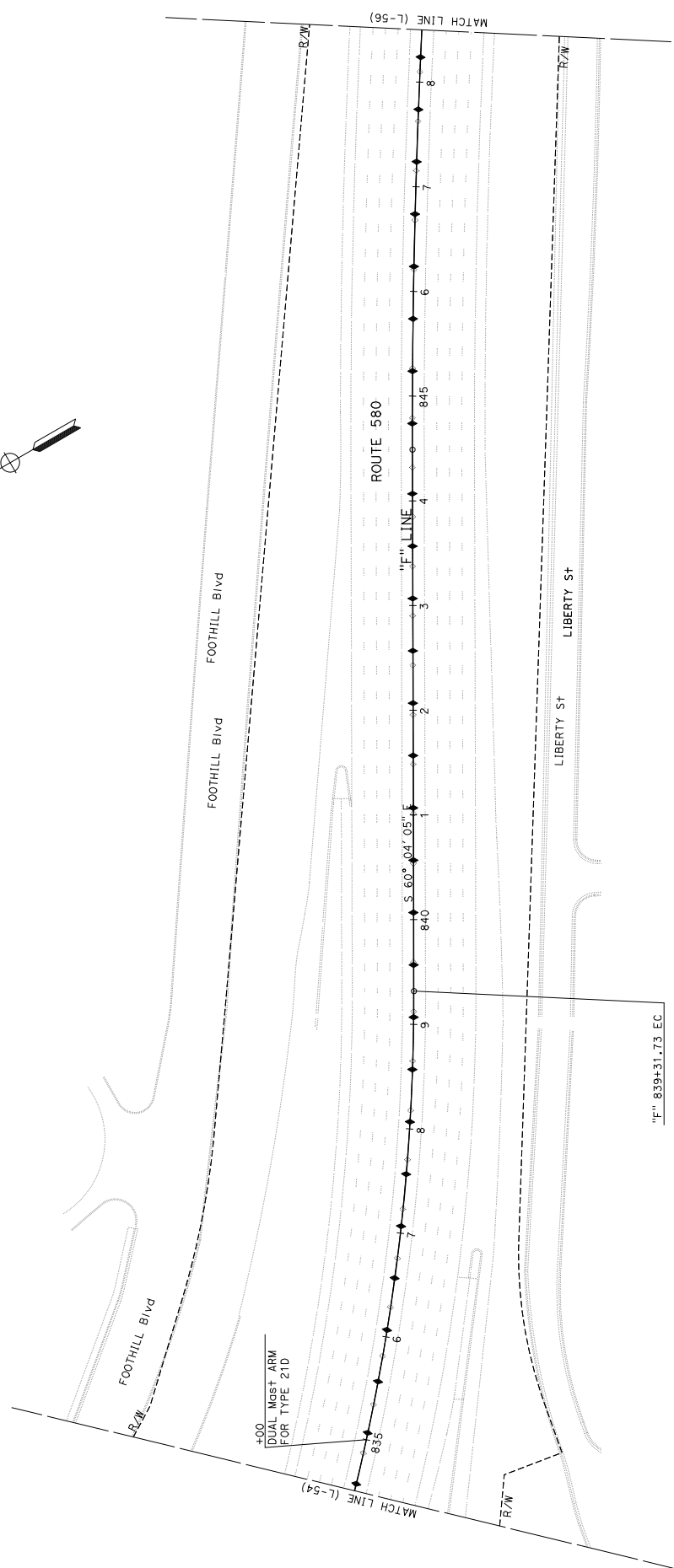
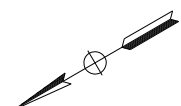
PLANS APPROVAL DATE

NO. EXP. CIVIL

REGISTERED PROFESSIONAL ENGINEER

THE STATE OF CALIFORNIA OR ITS OFFICERS
 THE ACCURACY OR COMPLETENESS OF
 COPIES OF THIS PLAN SHEET.

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



LAYOUT
 SCALE: 1" = 50'

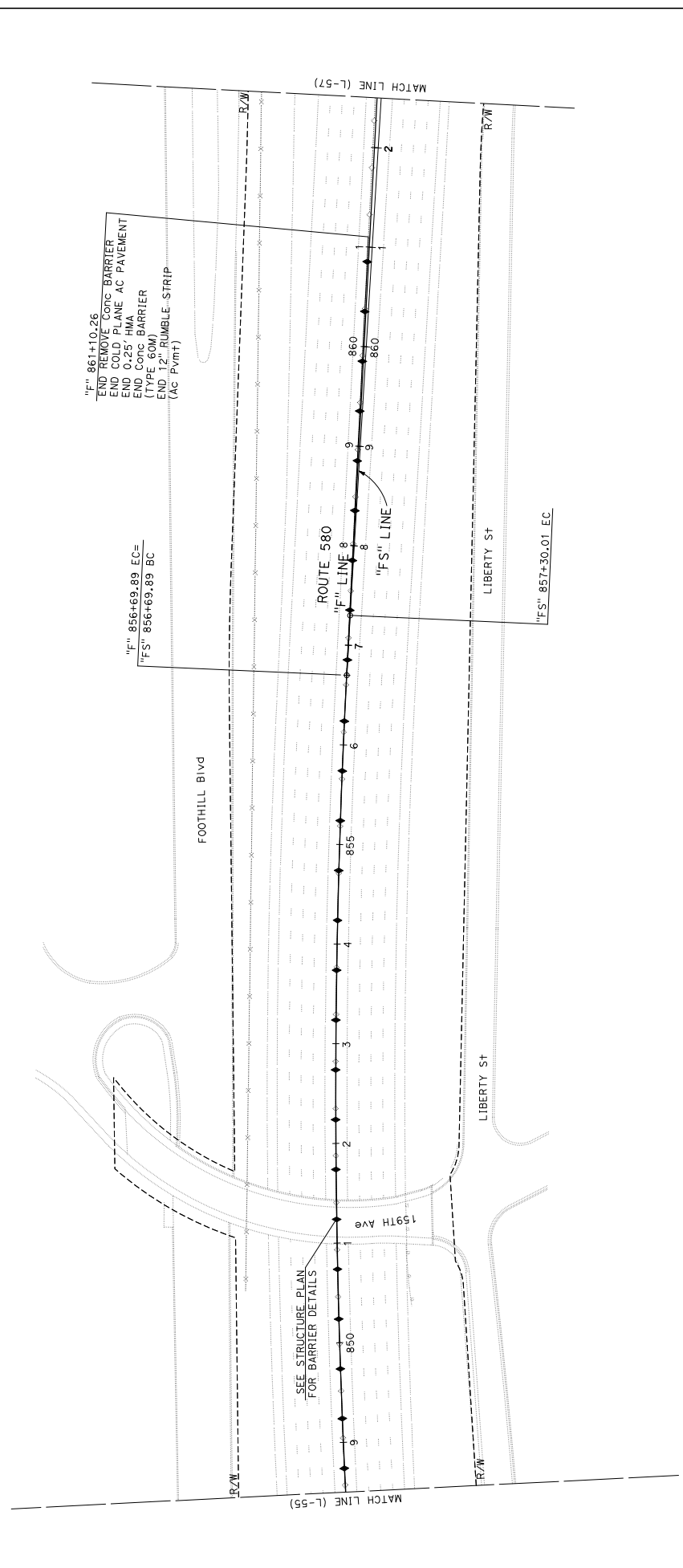
FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE SHEET L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	CHECKED BY	DATE REVISED	REVISOR

04	Alameda	13, 580	R32.1.17/15.165	X	XXX	
REGISTERED CIVIL ENGINEER		DATE	PROFESSIONAL ENGINEER No. _____ Exp. _____ STATE OF CALIFORNIA CIVIL			
PLANS APPROVAL DATE		THE STATE OF CALIFORNIA OR ITS OFFICERS DO NOT WARRANT OR GUARANTEE THE ACCURACY OR COMPLETENESS OF COPIES OF THIS PLAN SHEET.				

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

REVISOR	DATE	REVISION
X		
X		



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Design

FUNCTIONAL SUPERVISOR

CHECKED BY

DESIGNED BY

DATE REVISION

REVISOR

DATE

REVISION

UNIT 0733

PROJECT NUMBER & PHASE

04210003251

RELATIVE BORDER SCALE IS IN INCHES

0 1 2 3

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET L-1

LAYOUT

SCALE: 1" = 50'

L-56

DATE PLOTTED => 5-NOV-2025

TIME PLOTTED => 16:23

LAST REVISION

USERNAME => s160145

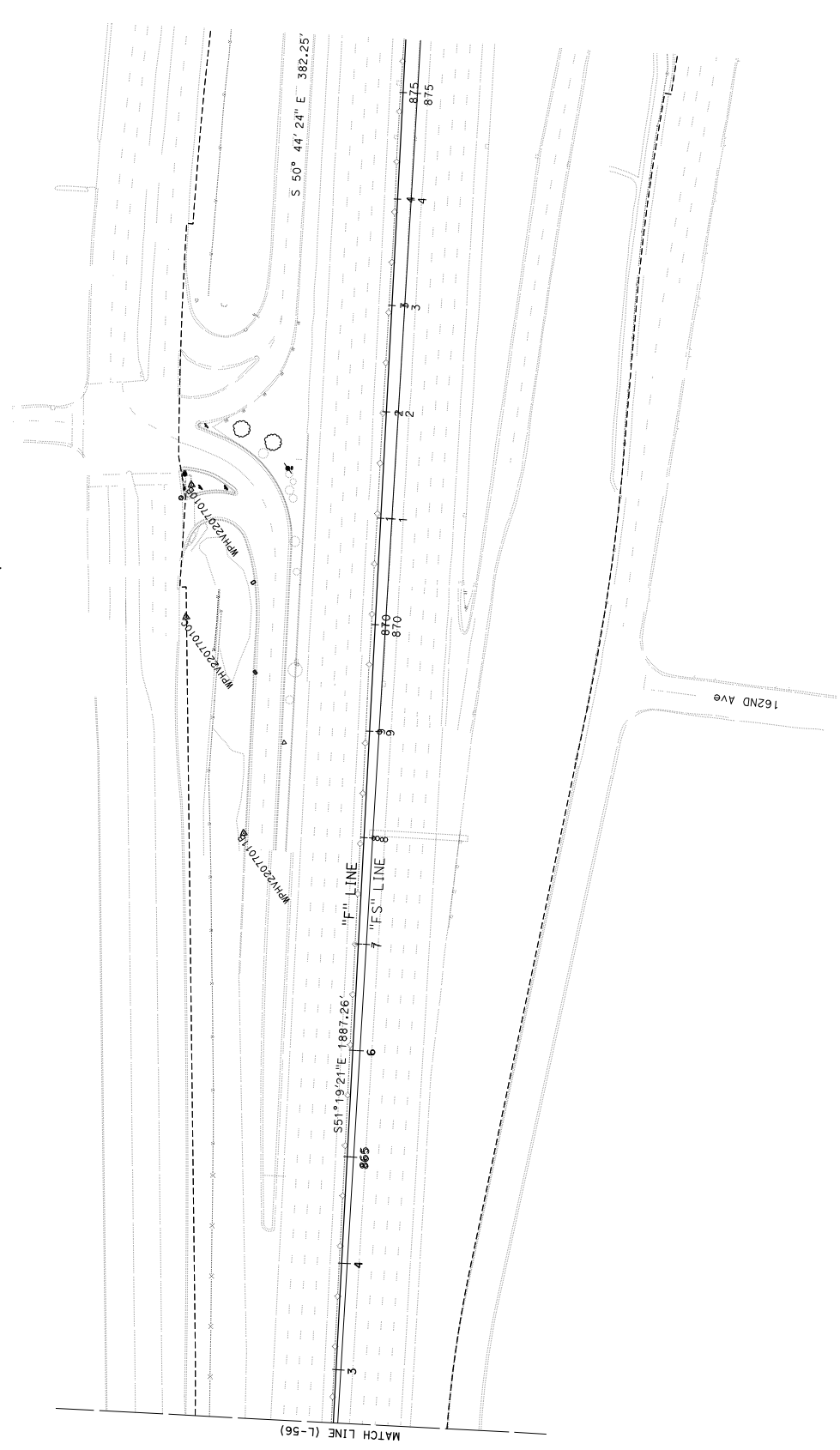
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BORDER LAST REVISED 7/2/2010

04	Alameda	13,580	07/15/15	04	XXX
DIS#	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
REGISTERED CIVIL ENGINEER DATE PLANS APPROVAL DATE THE STATE OF CALIFORNIA OR ITS OFFICERS THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					

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

DESIGNED BY	REVISOR	DATE REVISOR
CHECKED BY	DESIGNER	DATE REVISOR



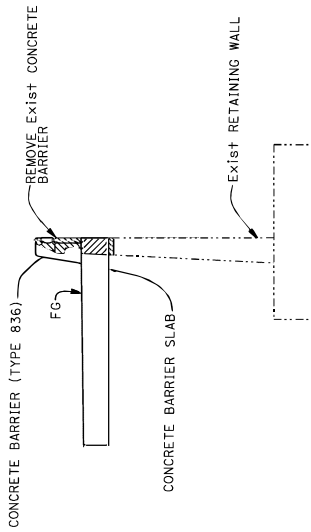
LAYOUT
 SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE SHEET L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN

DATE PLOTTED => 5-NOV-2025	LAST REVISION	UNIT 0733	PROJECT NUMBER & PHASE	04210003251
USER NAME => s160145	DDN FILE => 0421000325e007.dgn	RELATIVE BORDER SCALE IS IN INCHES	0 1 2 3	
BORDER LAST REVISED 7/2/2010				

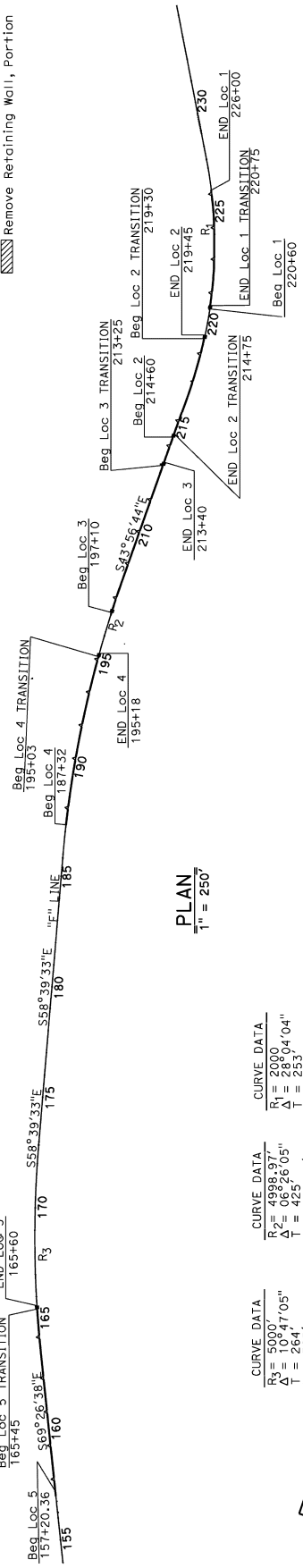
Zone	Dist.	COUNTY	ROUTE	POST MILE
3	4	A.L.A.	580	41.97/43.42



TYPICAL SECTION
1/4" = 1'-0"

LEGEND:
 - - - - Existing structure
 [Hatched Box] Remove existing concrete barrier and replace with Concrete Barrier Slab and concrete Barrier Type 836
 [Hatched Box] Remove Retaining Wall, Portion

Location	Barrier Type	Begin STA	End STA	Length (ft)
1	Concrete Barrier Slab with Concrete Barrier Type 836	STA 220+60	STA 226+00	540
2	Concrete Barrier Slab with Concrete Barrier Type 836	STA 214+60	STA 219+45	485
3	Concrete Barrier Slab with Concrete Barrier Type 837	STA 197+10	STA 213+40	1630
4	Concrete Barrier Slab with Concrete Barrier Type 838	STA 187+32	STA 195+18	786
5	Concrete Barrier Slab with Concrete Barrier Type 836	STA 155+96.14	STA 165+60	964



PLAN
1" = 250'

CURVE DATA	CURVE DATA	CURVE DATA
R ₁ = 5000' Δ ₁ = 10° 47' 05" T = 264' L = 325'	R ₂ = 4998.97' Δ ₂ = 08° 26' 05" T = 425.741' L = 561.41'	R ₃ = 2600' Δ ₃ = 28° 04' 04" T = 253' L = 979.75'



ALTERNATIVE 1	
BRIDGE DESIGN	PLANNING STUDY 01 OF 02
BRANCH	RETAINING WALL BARRIER REPLACEMENT
UNIT: 357.9	BRIDGE No.: XX-XXX
PROJECT EA: 04-3W200	PROJECT No. & PHASE: 04E1000351

DESIGNED BY Vicent Coyrin	DATE 10/01/25
DRAWN BY S. Hossen	DATE 10/01/25
CHECKED BY Omar Al Barghouti	DATE 10/01/25
APPROVED Ab Tern	DATE 10/01/25

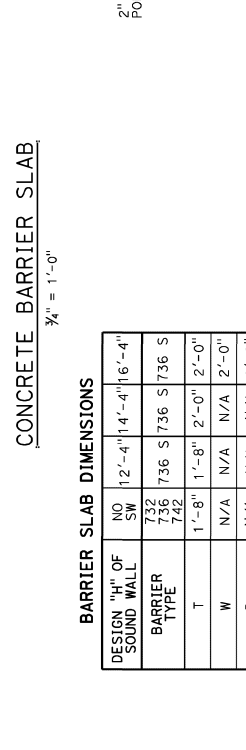
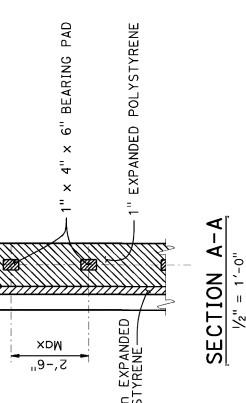
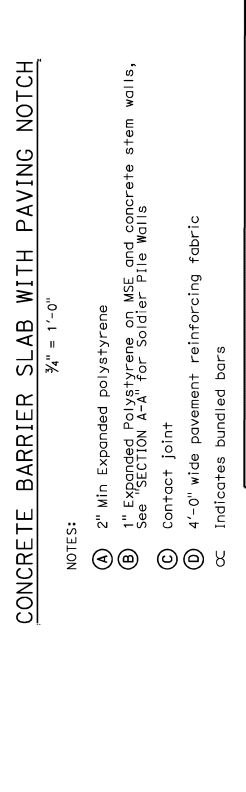
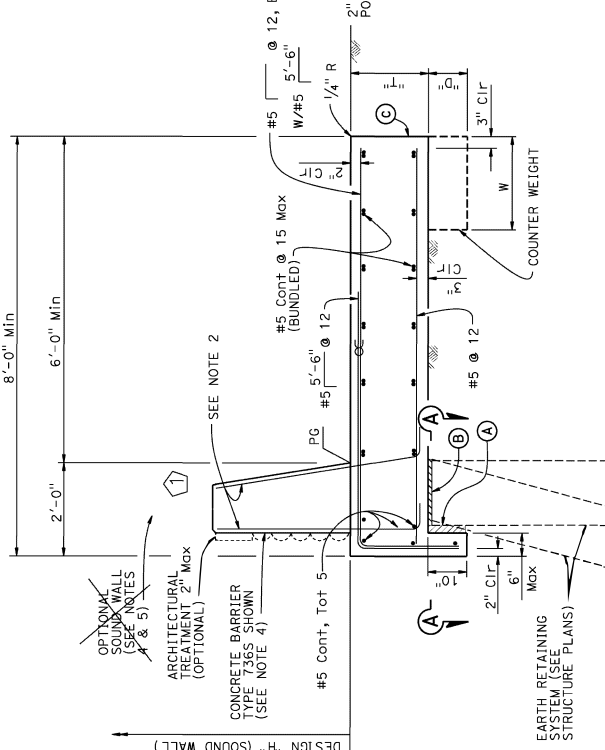
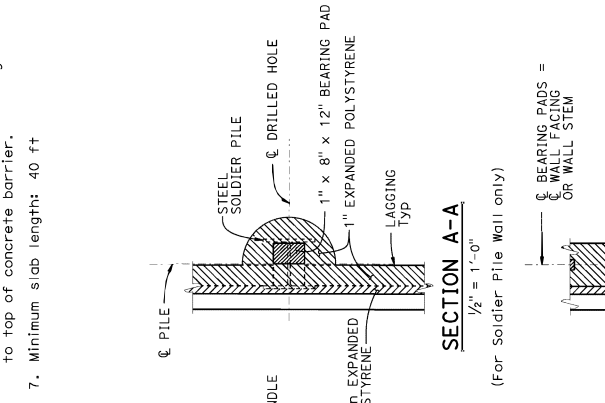
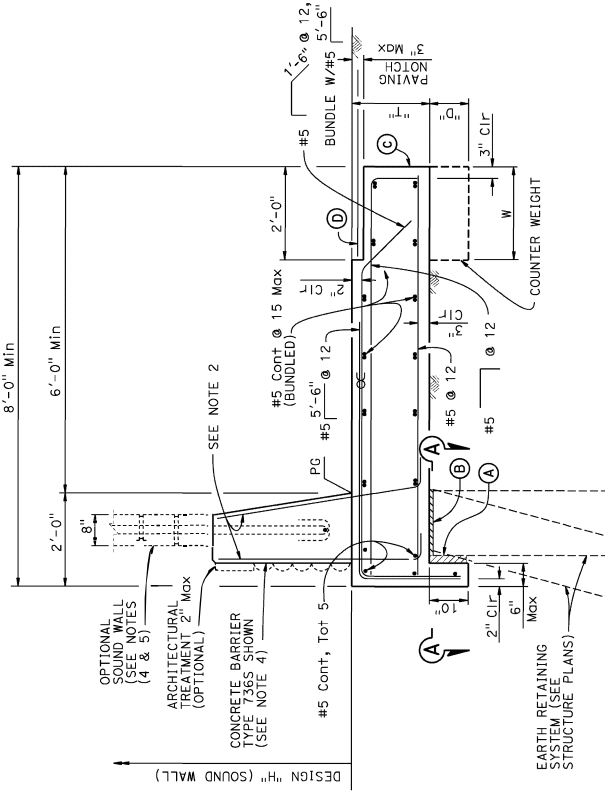
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--	---

- NOTES:**
1. Clearance to reinforcing steel in concrete barrier to be 1".
 2. Not all barrier reinforcement shown.
 3. No expansion joints in concrete barrier or barrier slab within wall limits.
 4. Specific concrete barrier to be used is shown elsewhere in Project Plans.
 5. Sound Wall not permitted on MSE walls unless supported by a CIDH pile foundation. (See "Mechanically Stabilized Embankment Detail No. 5" sheet).
 6. Install cable railing or chain link railing when indicated in Project Plans. Refer to Standard Plans B11-7 and B11-47 for anchorage details to top of concrete barrier.
 7. Minimum slab length: 40 ft

DESIGN DATA

AASHTO LRFD Bridge Design Specifications,
 4th Edition with California Amendments.
 WS: 33 psf on sound wall
 Ft: 54 kips on barrier
 EOE: $K_h = 0.2$
 $K_v = 0.0$

REINFORCED CONCRETE:
 $f'_c = 3600$ psi
 $f_y = 60$ ksi
 $n = 8$



BARRIER SLAB DIMENSIONS

DESIGN "H" OF SOUND WALL	NW	SW	732	736 S	742	736 S	736 S	736 S
T	1'-8"	1'-8"	2'-0"	2'-0"	N/A	N/A	2'-0"	2'-0"
D	N/A	N/A	N/A	N/A	N/A	N/A	0'-9"	0'-9"

CONCRETE BARRIER SLAB WITH PAVING NOTCH
 $3/4" = 1'-0"$

NOTES:

- (A) 2" Min Expanded polystyrene
- (B) 1" Expanded Polystyrene on MSE and concrete stem walls, See SECTION A-A for Soldier Pile Walls
- (C) Contact joint
- (D) 4'-0" wide pavement reinforcing fabric
- OC Indicates bundled bars

ALTERNATIVE 1

PLANNING STUDY 02 OF 02

CONCRETE BARRIER SLAB DETAILS

REVISIONS:

NO.	DATE	DESCRIPTION
1	JULY 2014	MODIFIED DETAIL

FILE NO.: **XS12-080**
 DESIGN DATE: JULY 2014
 PERSONAL DATE:

DIVISION OF ENGINEERING SERVICES
 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
 PROJECT NUMBER & PHASE: 04210003251
 CONTRACT NO.: 04-3P200
 SHEET NO.: 02 OF 02
 SHEET TITLE: CONCRETE BARRIER SLAB DETAILS
 ORIGINAL SCALE: AS SHOWN
 DATE PLOTTED: 7/20/14
 FILE NO.: 04-3P200-SS12-080.dgn
 UPDATE: 7/23/14

Zone Dist	COUNTY	ROUTE	POST MILE
3	ALA	13/580	38.92/4.32

ALAMEDA COUNTY CONCRETE BARRIER TRANSITIONS LOCATION TABLE

BRIDGE NO	BRIDGE NAME	ROUTE	POSTMILE	EXISTING BARRIER TYPE	DIRECTION AND SIDE	APPROACH DEPARTURE	TRENCH FOOTING/ BARRIER SLAB	LIMITS OF PAVEMENT (LF)	SLAB DIMENSIONS (LF)
33 0342	Kuhnie Ave UC	580	38.92	Type 1	WB, Right	Departure	Trench Footing	15'-0"	--
33 0348R	Calaveras Ave UC	13	4.32	Type 1	WB, Right	Approach	Barrier Slab	40'-0"	40' x 8' x 1'-8"
					EB, Right	Departure	Barrier Slab	40'-0"	40'x8 x1'-8"

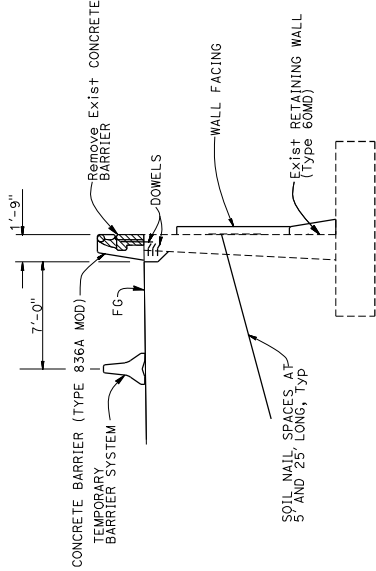
BRIDGE DESIGN		BRIDGE DESIGN	
DESIGNED BY	DATE	DATE	DATE
Espenardo Martinez	4-16-25	4-16-25	4-16-25
CHECKED BY	DATE	DATE	DATE
S. Hossen	4-16-25	4-16-25	4-16-25
APPROVED	DATE	DATE	DATE
Dillon Meyer	4-16-25	4-16-25	4-16-25
Richard Melko	4-16-25	4-16-25	4-16-25

PLANNING STUDY 02		CONCRETE BARRIER TRANSITIONS	
BRANCH		BRIDGE No.: XX-XXXX	
4		PROJECT No. & PHASE: 04210003251	
UNIT: 3479		PROJECT EN-04-3W200	

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET
 (ENGLISH) (REVISION 6/25/2025)
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Zone Dist	COUNTY	ROUTE	POST MILE
3	ALA	580	41.97/43.42

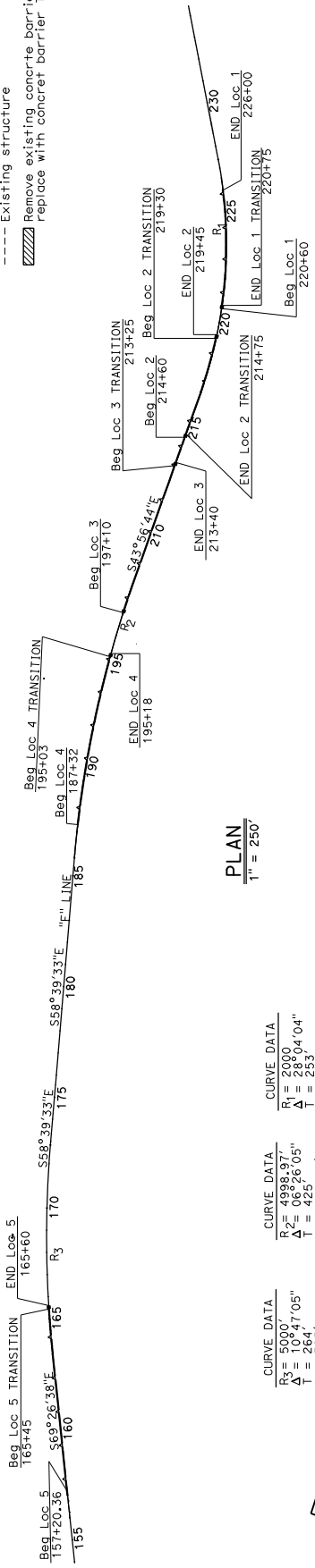
Location	Barrier Type	Beg STA	End STA	Length (ft)	Soil Nail Length (ft)
1	SOIL NAIL WITH WALL FACING	STA 220+60	STA 226+00	540	2700
2	SOIL NAIL WITH WALL FACING	STA 214+60	STA 219+45	485	2425
3	SOIL NAIL WITH WALL FACING	STA 197+10	STA 213+40	1630	8150
4	SOIL NAIL WITH WALL FACING	STA 187+32	STA 195+18	786	3950
5	SOIL NAIL WITH WALL FACING	STA 155+96.14	STA 165+60	963.86	4825



TYPICAL SECTION
1/4" = 1'-0"

NOTE:
For Concrete Barrier (Type 836A MOD) and Barrier Transition cost, see the estimate submitted on 5/22/2025

LEGEND:
--- Existing structure
▨ Remove existing concrete barrier and replace with concrete barrier Type 836A (Mod)



PLAN
1" = 250'



ALTERNATIVE 02	
BRIDGE DESIGN	BRIDGE BRANCH
DATE: 10/01/25	BRIDGE No.: XX-XXX
BY: Vincent Coyrin	PROJECT No. & PHASE: 0421000251
CHECKED BY: S. Hossen	UNIT: 3.5 / 9
APPROVED BY: Omar Al Barghouti	PROJECT EN: 04-3W200
DATE: 10/01/25	

PLANNING STUDY 01 OF 03	
RETAINING WALL BARRIER REPLACEMENT	
4	

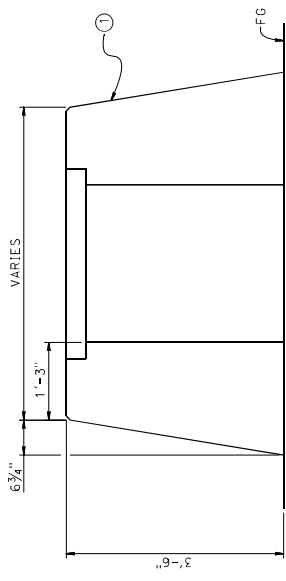
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FILE => 04-3W200-opn-02_01.dgn USERNAME => e150890

ALAMEDA COUNTY, ROUTE 580, LOCATION TABLE					
WORK LOCATION NUMBER	BRIDGE NAME OR FACILITY DESCRIPTION	DIRECTION	POST MILE	LIMITS OF PAYMENT FOR CONCRETE BARRIER REMOVAL TRANSITION, LP, LLP)	CONCRETE REMOVAL (LF)
1	159th Ave OC	Med	R32.32	130'-7"	130'-7"

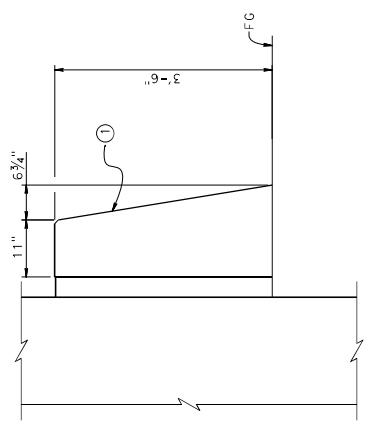
Zone Dist	COUNTY	ROUTE	POST MILE
3	04 ALA	580	32.132/45.16

LEGEND: Existing Structure

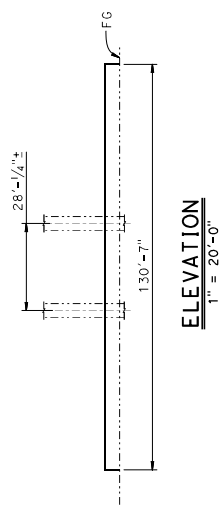
NOTE:
 ① Concrete Barrier Transition



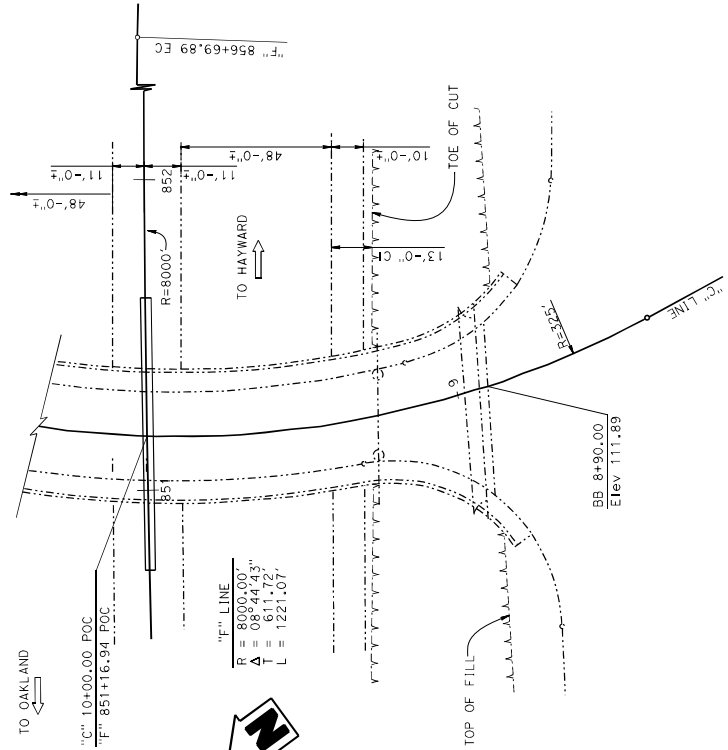
TYPICAL SECTION AT TRANSITION
 1" = 1'-0"



TYPICAL SECTION AT BENT
 1" = 1'-0"



ELEVATION
 1" = 20'-0"



PLAN
 1" = 20'-0"

DESIGNED BY E. C. Ferreira	DATE 07/30/25	OFFICE OF DESIGN AND TECHNICAL SERVICES	PLANNING STUDY
DRAWN BY S. Ngm	DATE 07/11/25	BRANCH B	3W200 SAFETY - COLLISION REDUCTION
CHECKED BY A. McTtison	DATE 08/11/25	UNIT: 3619	BRIDGE No.: 33-0338
APPROVED X	DATE X	PROJECT: EA-04-3W200	PROJECT No. & PHASE: 04210003250

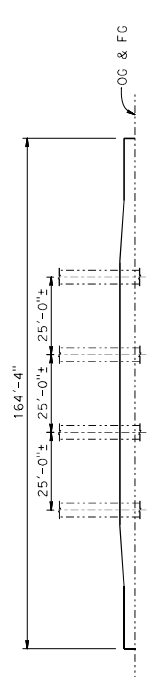
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ALAMEDA COUNTY, ROUTE 580, LOCATION TABLE			
WORK LOCATION NUMBER	BRIDGE NAME OR FACILITY DESCRIPTION	DIRECTION	POST MILE
2	33-0337 FAIRMONT DRIVE OC	Med	R32.72
			164'-4"
			164'-4"
			CONCRETE REMOVAL (LF)
			164'-4"

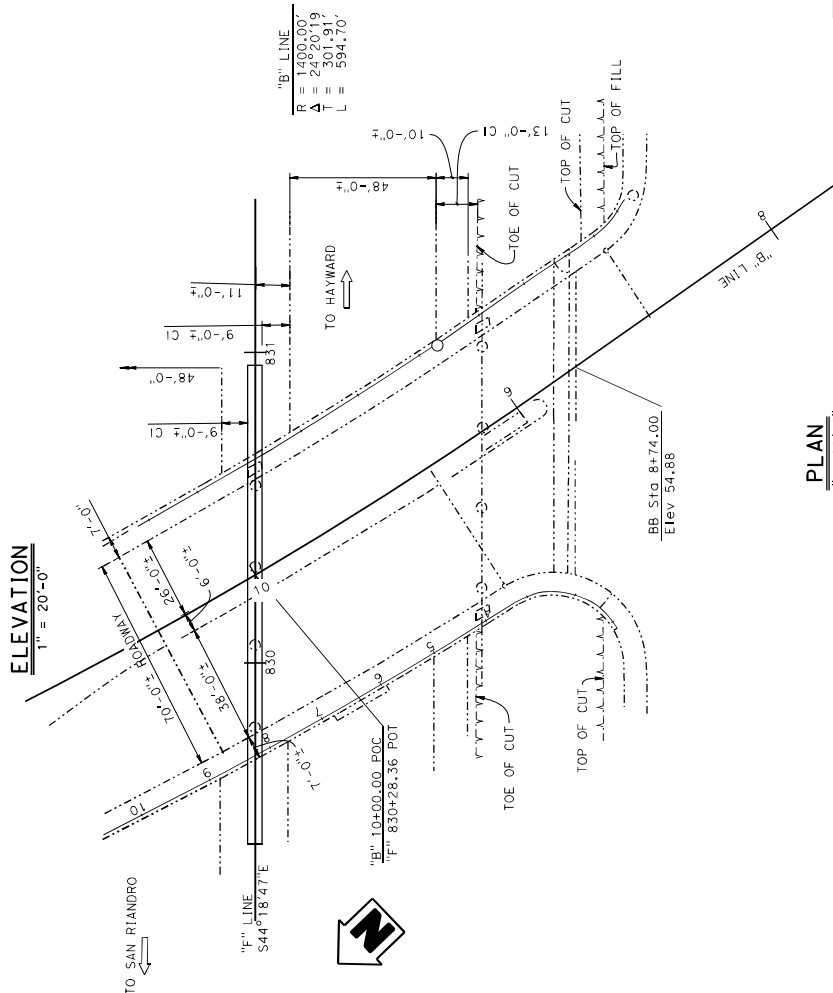
Zone Dist	COUNTY	ROUTE	POST MILE
3	04 ALA	580	32.132/45.16

LEGEND: Existing Structure

NOTE:
 ① Concrete Barrier Transition

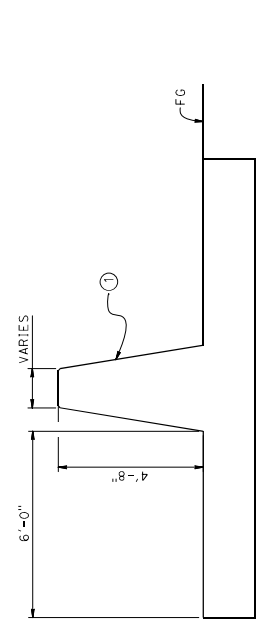


ELEVATION
 1" = 20'-0"

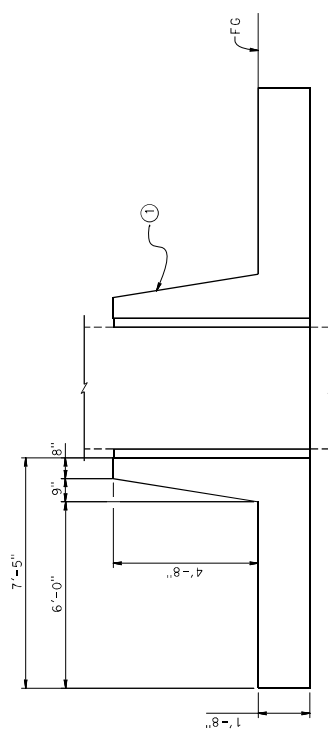


PLAN
 1" = 20'-0"

TYPICAL SECTION AT TRANSITION
 1/2" = 1'-0"



TYPICAL SECTION AT BENT
 1/2" = 1'-0"



DESIGNED BY E. Colaresreiro	DATE 07/30/25	OFFICE OF DESIGN AND TECHNICAL SERVICES	BRANCH B	PLANNING STUDY
DRAWN BY S. Ngm	DATE 07/11/25			
CHECKED BY A. McGittson	DATE 08/11/25	3W200 SAFETY - COLLISION REDUCTION		
APPROVED X	DATE X	UNIT: 361.9		
		PROJECT: EA-04-3W200 PROJECT No. & PHASE: 04210003250		

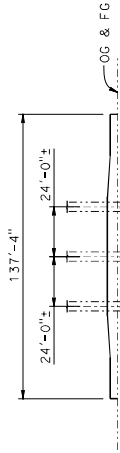
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ALAMEDA COUNTY, ROUTE 580, LOCATION TABLE					
WORK LOCATION NUMBER	BRIDGE NAME OR FACILITY DESCRIPTION	DIRECTION	POST MILE	LIMITS OF PAYMENT FOR CONCRETE BARRIER TRANSITION, LP, LLP	CONCRETE REMOVAL (LF)
3	150th Ave OC	Med	R32.84	137'-4"	137'-4"

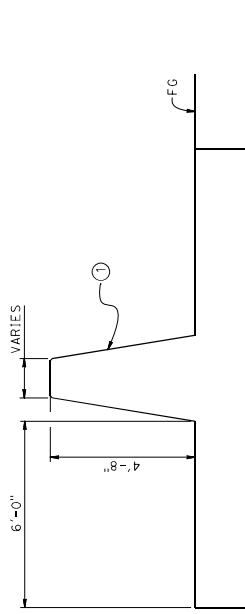
LEGEND: Existing Structure

Zone Dist	COUNTY	ROUTE	POST MILE
3	04 A.L.A.	580	32.132/45.16

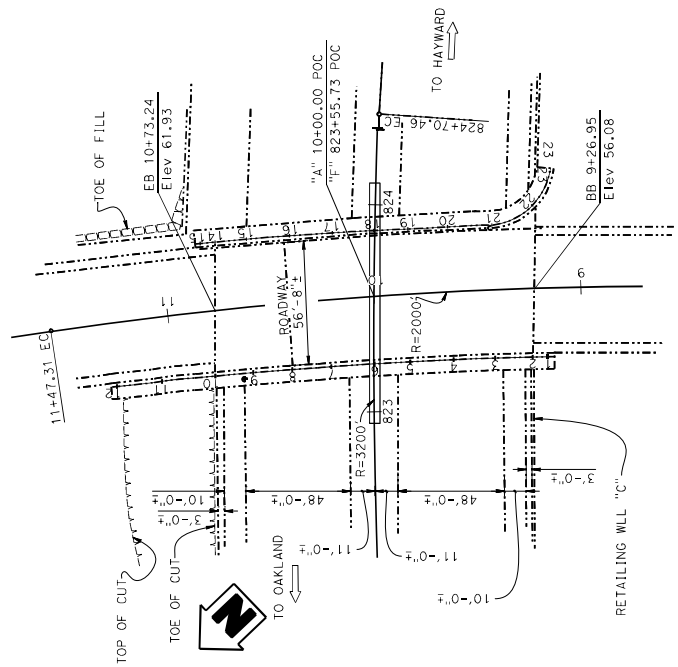
NOTE:
① Concrete Barrier Transition



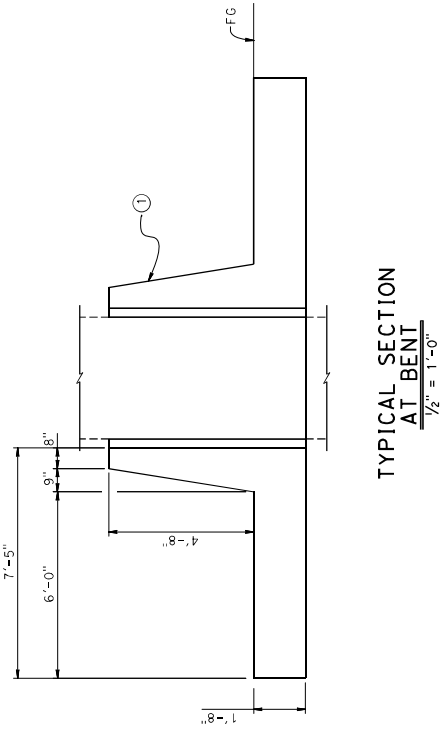
ELEVATION
1" = 30'-0"



TYPICAL SECTION AT TRANSITION
1/2" = 1'-0"



PLAN
1" = 30'-0"



TYPICAL SECTION AT BENT
1/2" = 1'-0"

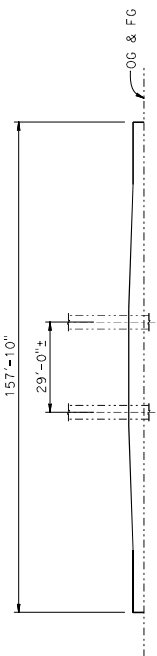
DESIGNED BY E. C. Ferreira	DATE 07/30/25	OFFICE OF DESIGN AND TECHNICAL SERVICES	PLANNING STUDY
	CHECKED BY S. Ngm		
APPROVED A. McTison	DATE 08/11/25	BRANCH B	PROJECT No.: 3W200 PROJECT No. & PHASE: 04210003250
UNIT: 3619	DATE 08/11/25		

ALAMEDA COUNTY, ROUTE 580, LOCATION TABLE			
WORK LOCATION NUMBER	BRIDGE NAME OR FACILITY DESCRIPTION	DIRECTION	POST MILE
4	GRAND Ave OC	Med	R33.94
			157'-10"
			157'-10"
			CONCRETE BARRIER REMOVAL (LF)
			CONCRETE BARRIER REMOVAL (LF)

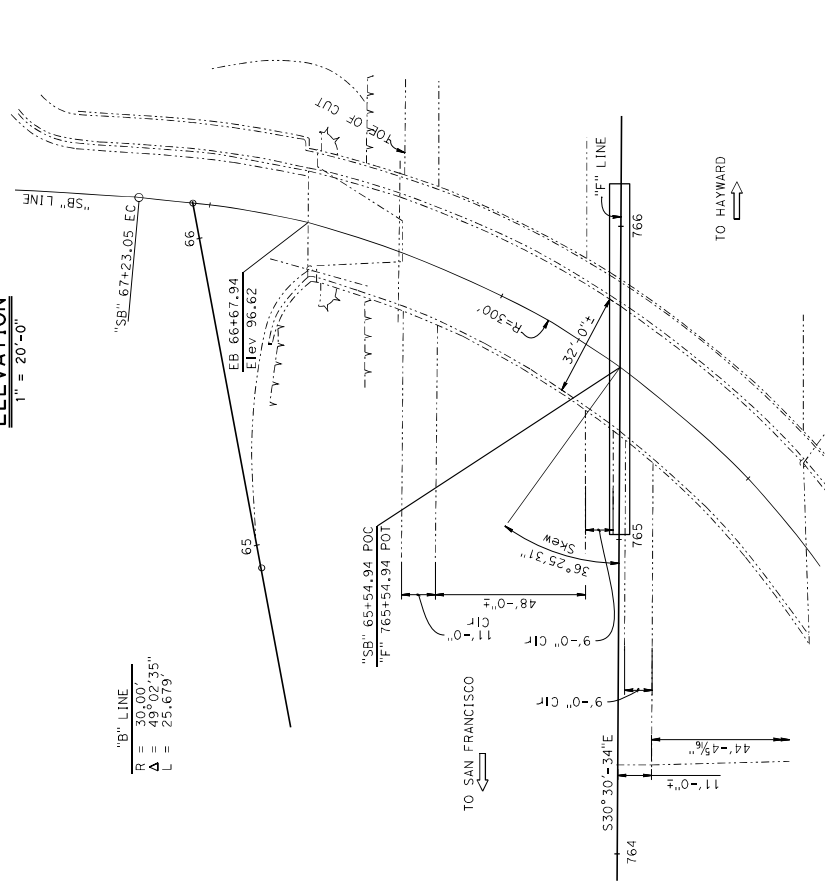
LEGEND:
 ----- Existing Structure

Zone Dist	COUNTY	ROUTE	POST MILE
3	04 ALA	580	32.132/45.16

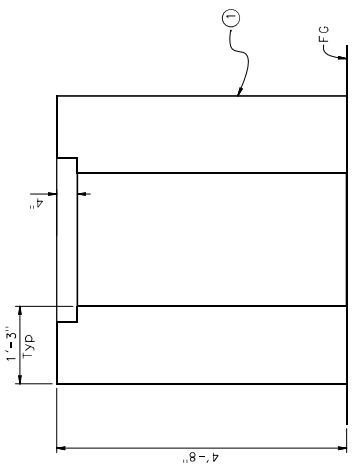
NOTES:
 ① Concrete Barrier Transition
 ② Steel Cover Plate



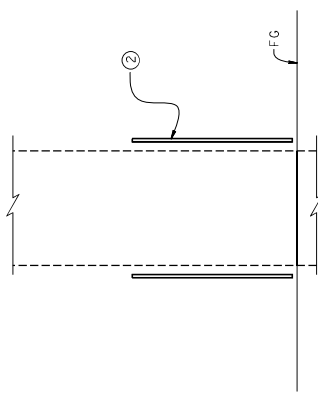
ELEVATION
 1" = 20'-0"



PLAN
 1" = 20'-0"



TYPICAL SECTION AT BENT
 1" = 1'-0"



TYPICAL SECTION AT BENT
 1" = 1'-0"

OFFICE OF DESIGN AND TECHNICAL SERVICES		BRANCH		PLANNING STUDY	
DESIGNED BY	C. O. Ferreira	DATE	07/30/25	3W200 SAFETY - COLLISION REDUCTION	
DRAWN BY	S. Ngm	DATE	07/14/25	UNIT: 3619	BRIDGE No.: 33-0330
CHECKED BY	A. Mattson	DATE	08/11/25	PROJECT EAO-4-3W200	PROJECT No. & PHASE: 04210003250
APPROVED	X	DATE	X		

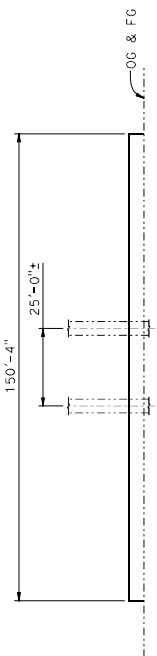
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ALAMEDA COUNTY, ROUTE 580, LOCATION TABLE			
WORK LOCATION NUMBER	BRIDGE NAME OR FACILITY DESCRIPTION	DIRECTION	POST MILE
5	TWIN OAKS KNOLL BIVD OC	Med	R36.76
			150'-4"
			150'-4"

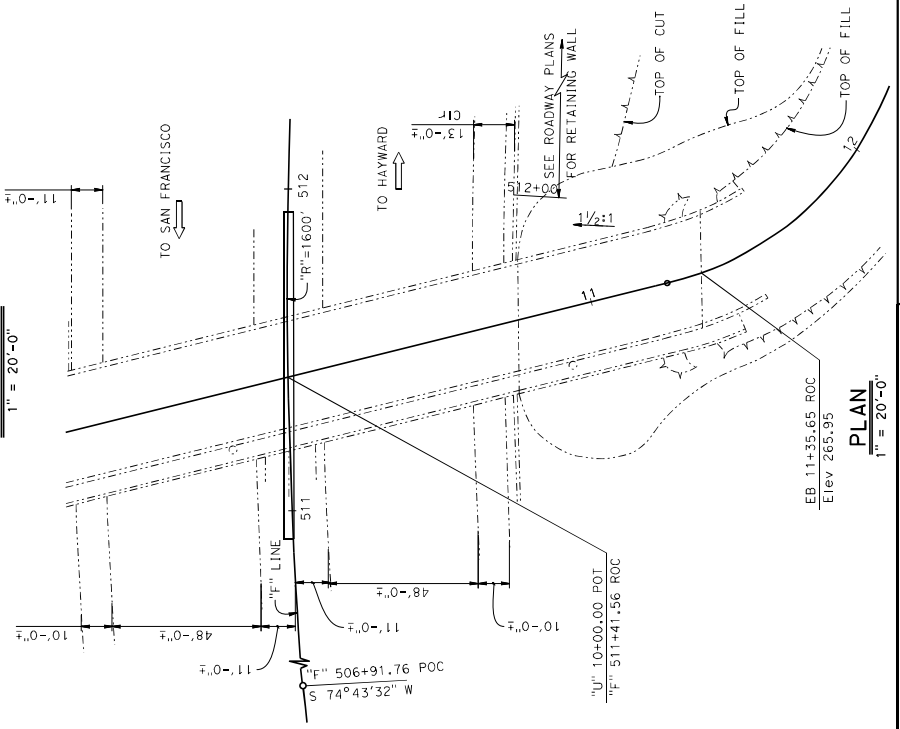
LEGEND: Existing Structure

Zone Dist	COUNTY	ROUTE	POST MILE
3	04 ALA	580	32.132/45.16

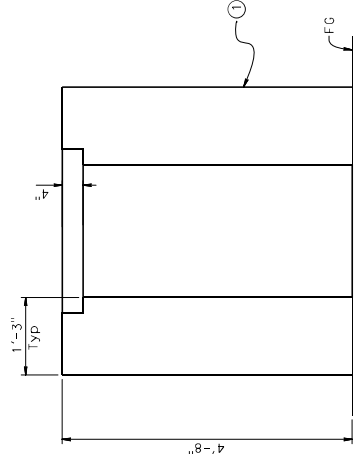
- NOTES:
 ① Concrete Barrier Transition
 ② Steel Cover Plate



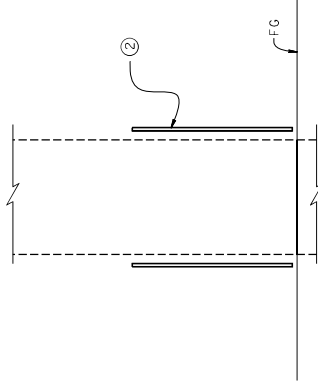
ELEVATION
1" = 20'-0"



PLAN
1" = 20'-0"



TYPICAL SECTION
1" = 1'-0"



TYPICAL SECTION
AT BENT
1" = 1'-0"

DESIGNED BY S. C. Queiroz	DATE 07/30/25	OFFICE OF DESIGN AND TECHNICAL SERVICES BRANCH B	PLANNING STUDY 3W200 SAFETY - COLLISION REDUCTION
CHECKED BY A. McGilton	DATE 08/11/25		
APPROVED X	DATE X	UNIT: 3619	BRIDGE No.: 33-0353
		PROJECT EAO-4-3W200 PROJECT No. & PHASE: 04210003250	

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET
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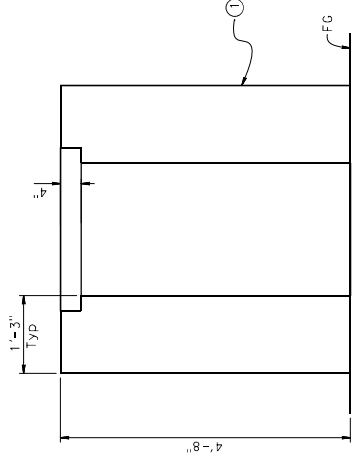
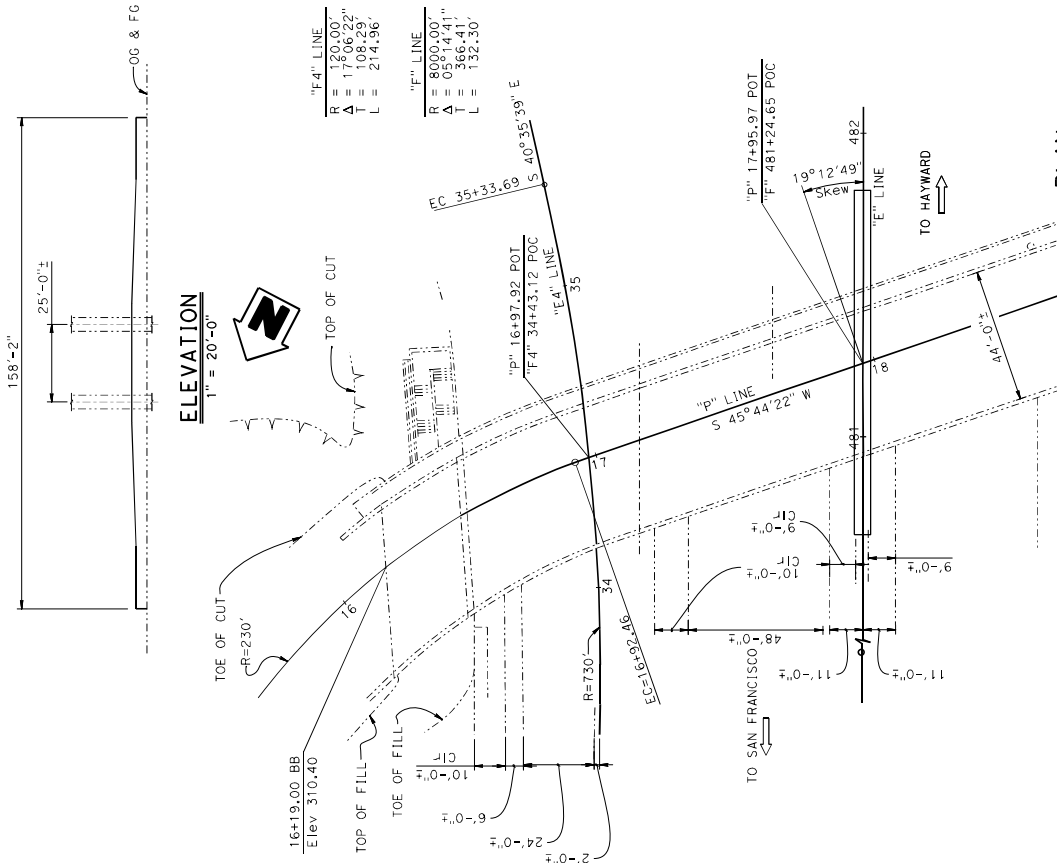
ALAMEDA COUNTY, ROUTE 580, LOCATION TABLE

WORK LOCATION NUMBER	BRIDGE NUMBER	BRIDGE NAME OR FACILITY DESCRIPTION	DIRECTION	POST MILE	LIMITS OF PAYMENT FOR CONCRETE BARRIER REMOVAL TRANSITION, L.P. (L.F.)	CONCRETE REMOVAL (L.F.)
6	33-0339	FOUNTAIN ST OC TO MOUNTAIN Blvd	Med	R37.33	158'-2"	158'-2"

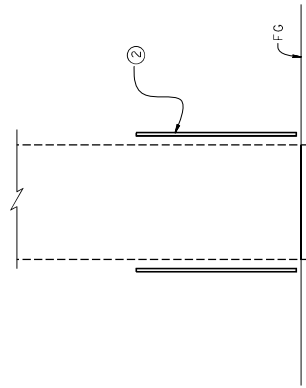
Zone Dist	COUNTY	ROUTE	POST MILE
3	04 ALA	580	32.132/45.16

LEGEND: Existing Structure

- NOTES:
 ① Concrete Barrier Transition
 ② Steel Cover Plate



TYPICAL SECTION
1" = 1'-0"



TYPICAL SECTION
AT BENT
1" = 1'-0"

OFFICE OF DESIGN AND TECHNICAL SERVICES		PLANNING STUDY	
DESIGNED BY S. Coler-Reiro	DATE 07/30/25	BRANCH B	
DRAWN BY S. Ngm	DATE 07/14/25	PROJECT 3W200 SAFETY - COLLISION REDUCTION	
CHECKED BY A. McGilton	DATE 08/11/25	UNIT: 361.9	BRIDGE No.: 33-0339
APPROVED X	DATE X	PROJECT No.: 3W200	PROJECT No. & PHASE: 04210003250

PLAN
1" = 20'-0"

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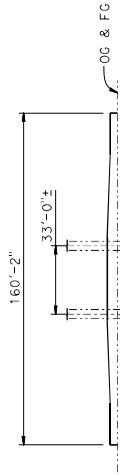
STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET
 (ENGLISH) (REVISION: 6/25/2025)

ALAMEDA COUNTY, ROUTE 580, LOCATION TABLE					
WORK LOCATION NUMBER	BRIDGE NAME OR FACILITY DESCRIPTION	DIRECTION	POST MILE	LIMITS OF PAYMENT FOR CONCRETE BARRIER TRANSITION, L.P. (L.F)	CONCRETE REMOVAL (L.F)
7	KELLER Ave OC	Med	R37.79	160'-2"	160'-2"

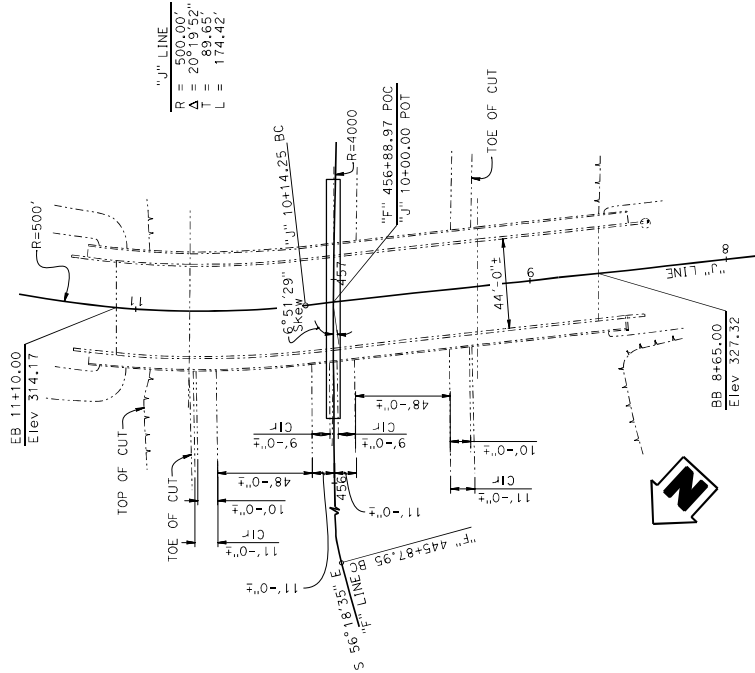
LEGEND: Existing Structure

Zone Dist	COUNTY	ROUTE	POST MILE
3	04 ALA	580	32.132/45.16

- NOTES:
- ① Concrete Barrier Transition
 - ② Steel Cover Plate

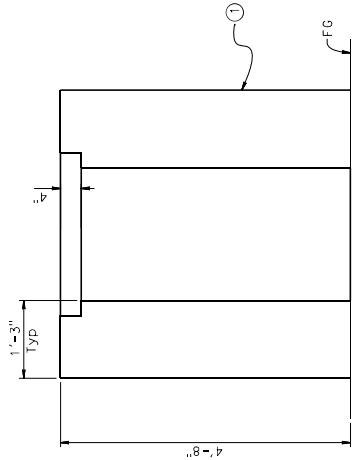


ELEVATION
1" = 30'-0"

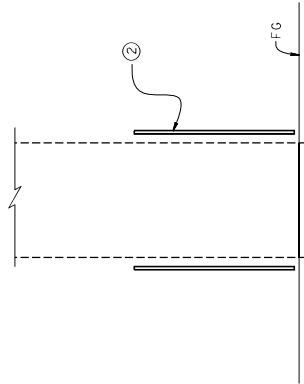


"U" LINE
 $R = 500.00'$
 $\Delta = 20^\circ 19' 52''$
 $T = 89.65'$
 $L = 174.42'$

PLAN
1" = 30'-0"



TYPICAL SECTION
1" = 1'-0"



TYPICAL SECTION AT BENT
1" = 1'-0"

DESIGNED BY E. Colerrei	DATE 07/30/25	OFFICE OF DESIGN AND TECHNICAL SERVICES	PLANNING STUDY
DRAWN BY S. Ngm	DATE 07/15/25	BRANCH	3W200 SAFETY - COLLISION REDUCTION
CHECKED BY A. McTtson	DATE 08/11/25	UNIT: 3619	BRIDGE No.: 33-0340
APPROVED	DATE	PROJECT: EA0-4-3W200	PROJECT No. & PHASE: 04210003250

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 (ENGLISH) (REVISION: 6/25/2025)
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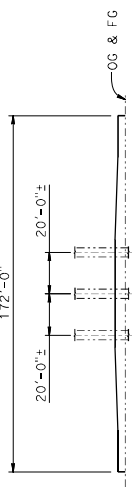
ALAMEDA COUNTY, ROUTE 580, LOCATION TABLE

WORK LOCATION NUMBER	BRIDGE NAME OR FACILITY DESCRIPTION	DIRECTION	POST MILE	LIMITS OF PAYMENT FOR CONCRETE BARRIER TRANSITION, E.P. (LF)	CONCRETE REMOVAL (LF)
8	33-0344F S13-E580 CONNECTOR OC (WARREN FWY)	Med	R39.24	172'-0"	172'-0"

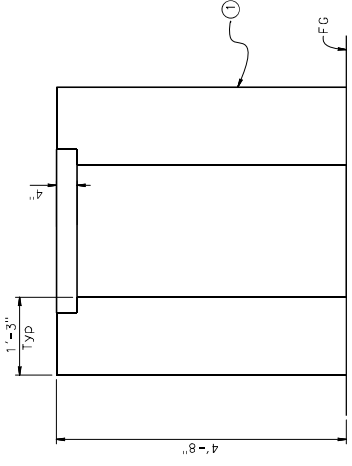
LEGEND: Existing Structure

Zone Dist	COUNTY	ROUTE	POST MILE
3	04 ALA	580	32.132/45.16

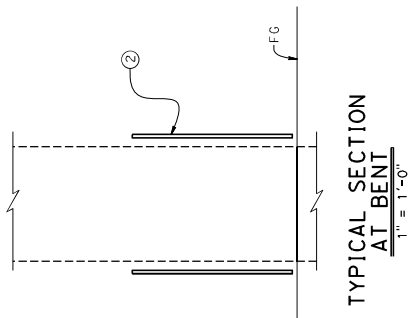
- NOTES:
 ① Concrete Barrier Transition
 ② Steel Cover Plate



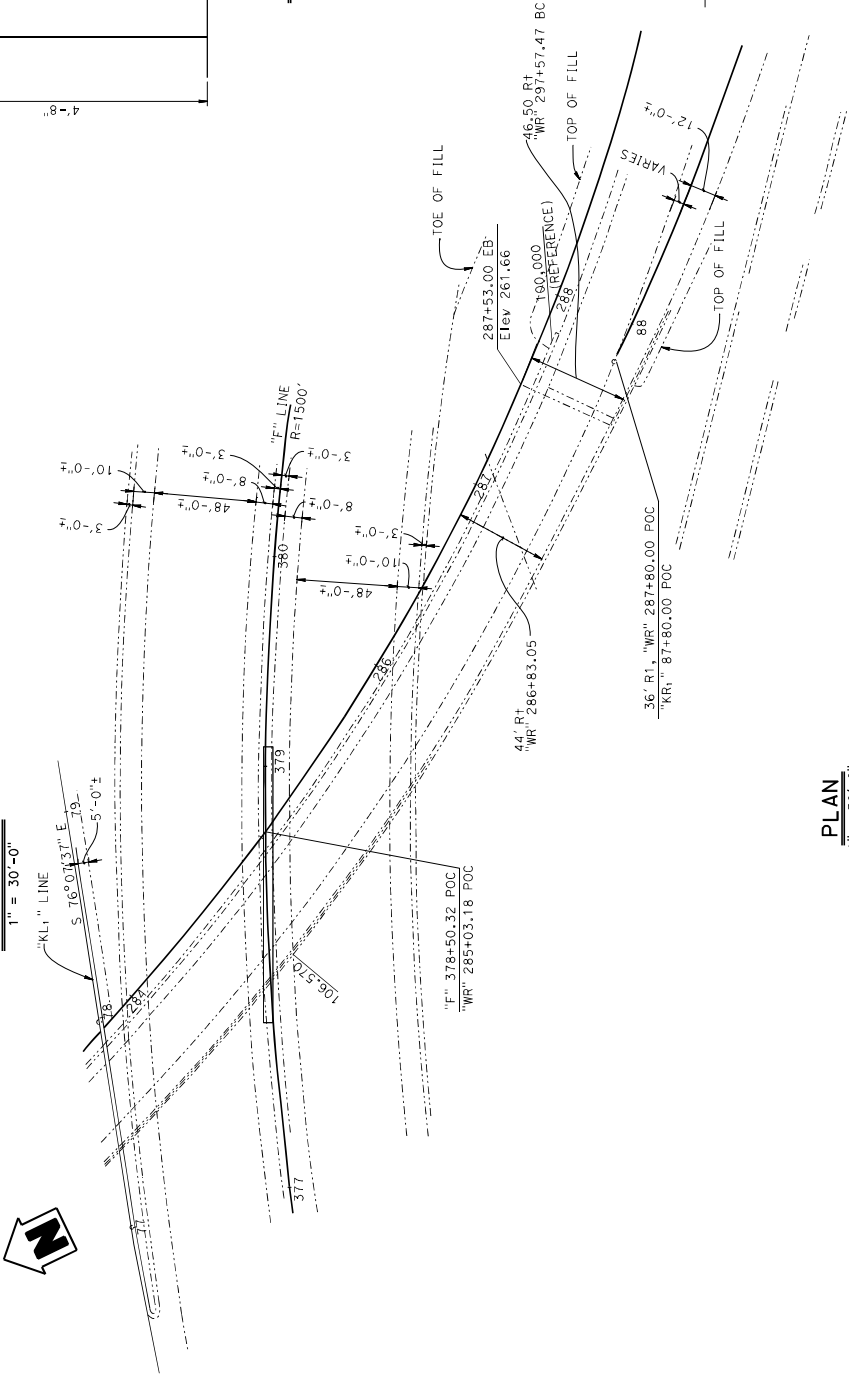
ELEVATION
1" = 30'-0"



TYPICAL SECTION
1" = 1'-0"



TYPICAL SECTION AT BENT
1" = 1'-0"



PLAN
1" = 30'-0"

OFFICE OF DESIGN AND TECHNICAL SERVICES		BRANCH		PLANNING STUDY	
DESIGNED BY	07/30/25	B		3W200 SAFETY - COLLISION REDUCTION	
DRAWN BY	07/15/25			UNIT: 361.9	BRIDGE No.: 33-0344F
CHECKED BY	08/11/25			PROJECT EAO-04-3W200	PROJECT No. & PHASE: 04210003250
APPROVED					

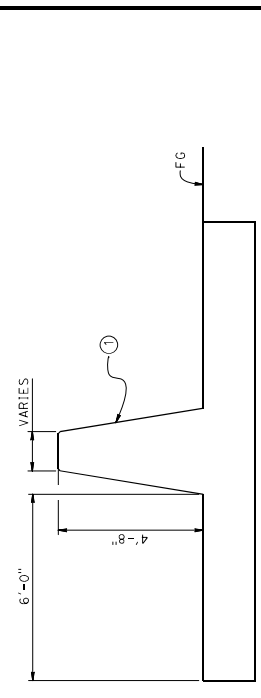
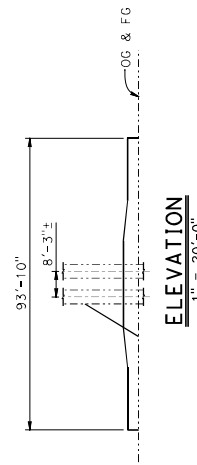
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 (ENGLISH) (REVISION: 6/25/2025)
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ALAMEDA COUNTY, ROUTE 580, LOCATION TABLE					
WORK LOCATION NUMBER	BRIDGE NAME OR FACILITY DESCRIPTION	DIRECTION	POST MILE	LIMITS OF PAYMENT FOR CONCRETE BARRIER TRANSITION, LP, LLP	CONCRETE REMOVAL (LF)
9	BIRDSALL Ave POC	Med	R39.93	93'-10"	93'-10"

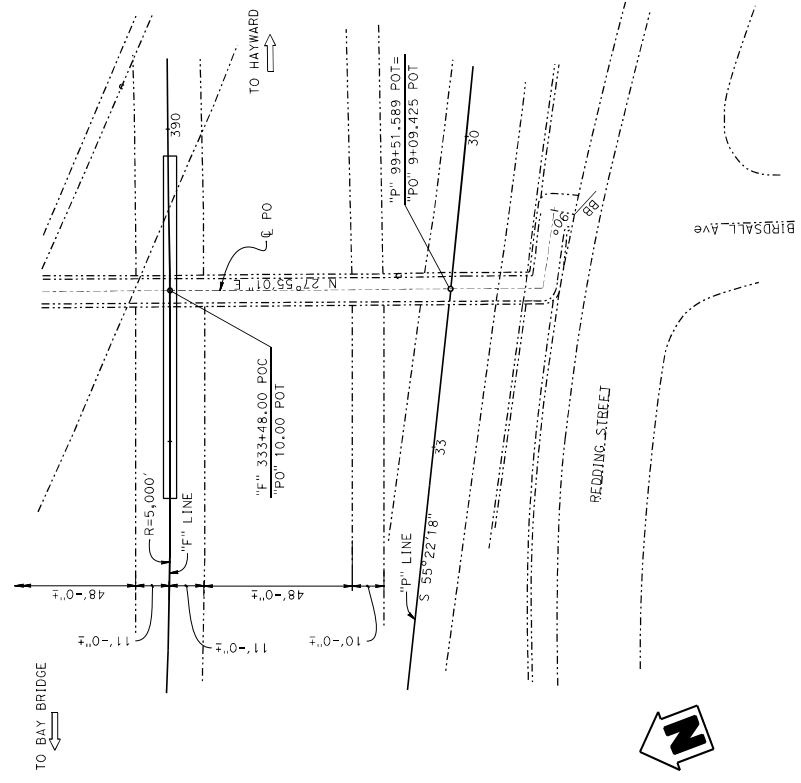
LEGEND: Existing Structure

Zone Dist	COUNTY	ROUTE	POST MILE
3	04 A.L.A.	580	32.132/45.16

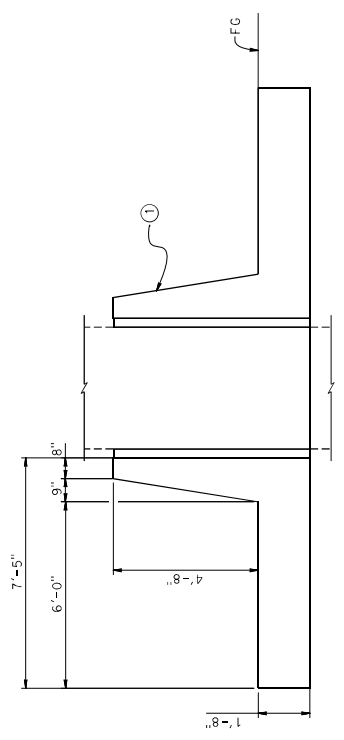
NOTE:
① Concrete Barrier Transition



TYPICAL SECTION AT TRANSITION
1/2" = 1'-0"



PLAN
1" = 20'-0"



TYPICAL SECTION AT BENT
1/2" = 1'-0"

DESIGNED BY E. Colterreiro	DATE 07/30/25	OFFICE OF DESIGN AND TECHNICAL SERVICES	PLANNING STUDY
DRAWN BY S. Ngm	DATE 07/11/25	BRANCH B	3W200 SAFETY - COLLISION REDUCTION
CHECKED BY A. McGilton	DATE 08/11/25	UNIT: 361.9	BRIDGE No.: 33-0328
APPROVED X	DATE X	PROJECT: EAO-4-3W200	PROJECT No. & PHASE: 04210003250

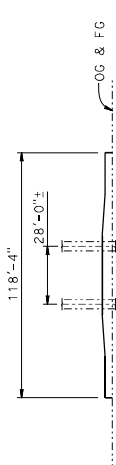
STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET
(ENGLISH) (REVISION: 6/25/2025)
DATE PLOTTED => 8/11/2025 TIME PLOTTED => 3:43:48 PM
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ALAMEDA COUNTY, ROUTE 580, LOCATION TABLE					
WORK LOCATION NUMBER	BRIDGE NAME OR FACILITY DESCRIPTION	DIRECTION	POST MILE	LIMITS OF PAYMENT FOR CONCRETE BARRIER REMOVAL TRANSITION, LP, LLP	CONCRETE REMOVAL (LP, LLP)
10	38th Ave OC	Med	R40.39	118'-4"	118'-4"

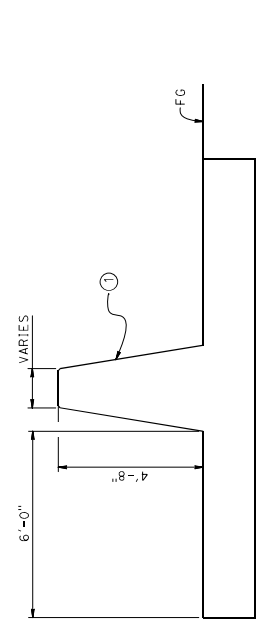
LEGEND: Existing Structure

Zone Dist	COUNTY	ROUTE	POST MILE
3	04 A.L.A.	580	32.132/45.16

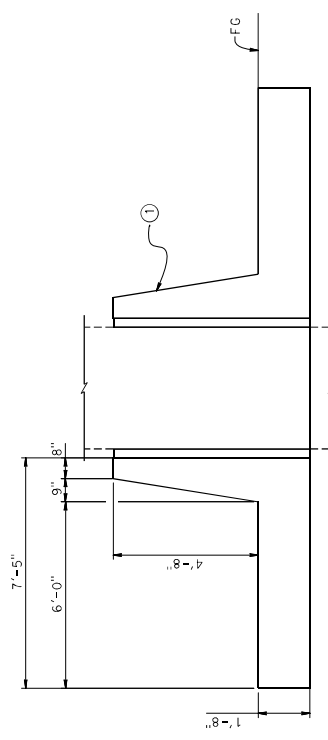
NOTE:
① Concrete Barrier Transition



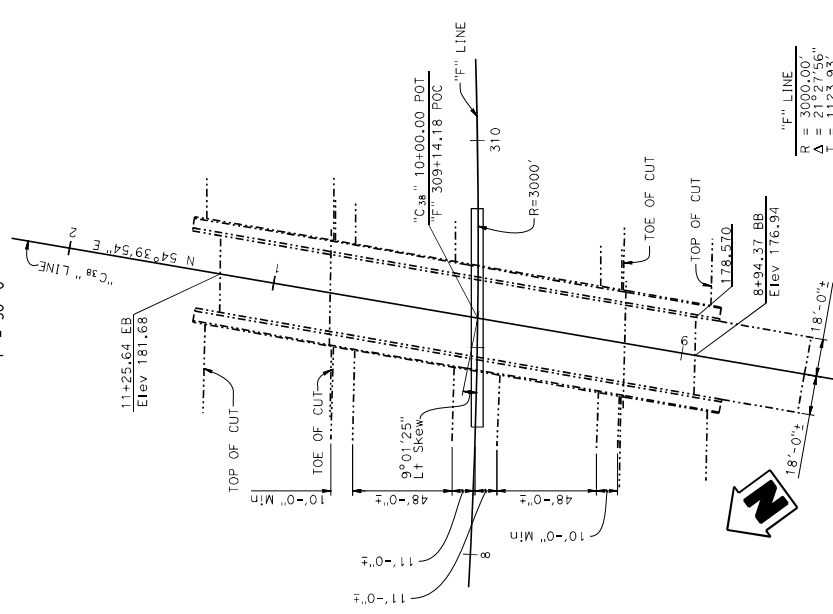
ELEVATION
1" = 30'-0"



TYPICAL SECTION AT TRANSITION
1/2" = 1'-0"



TYPICAL SECTION AT BENT
1/2" = 1'-0"



PLAN
1" = 30'-0"

"F" LINE
R = 3000.00'
Δ = 219°27'56"
T = 1123.93'
L = 566.63'

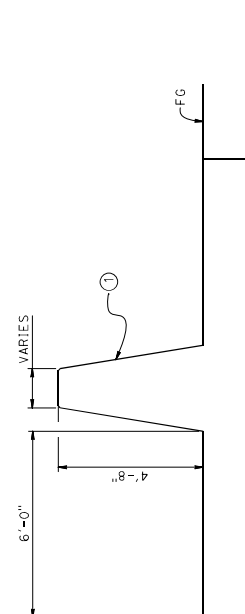
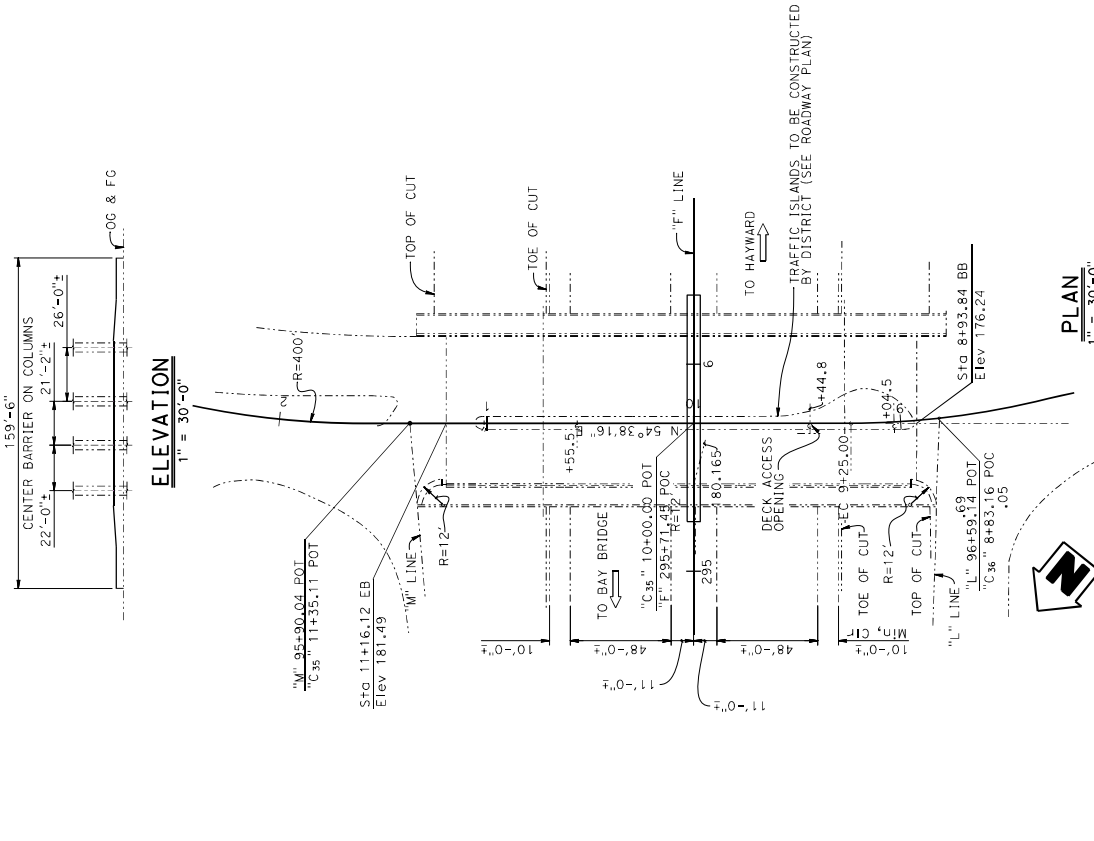
DESIGNED BY E. Colterreiro	DATE 07/30/25	OFFICE OF DESIGN AND TECHNICAL SERVICES
DRAWN BY S. Ngm	DATE 07/15/25	BRANCH B
CHECKED BY A. McGilton	DATE 08/11/25	PLANNING STUDY 3W200 SAFETY - COLLISION REDUCTION
APPROVED X	DATE X	UNIT: 3619 PROJECT No.: 33-0319 PROJECT No. & PHASE: 04210003250

ALAMEDA COUNTY, ROUTE 580, LOCATION TABLE						
WORK LOCATION NUMBER	BRIDGE NAME OR FACILITY DESCRIPTION	DIRECTION	POST MILE	LIMITS OF PAYMENT FOR CONCRETE BARRIER REMOVAL TRANSITION, LP, LLP	CONCRETE REMOVAL (LF)	
11	33-0320	35th Ave OC	Med	R40.65	159'-6"	159'-6"

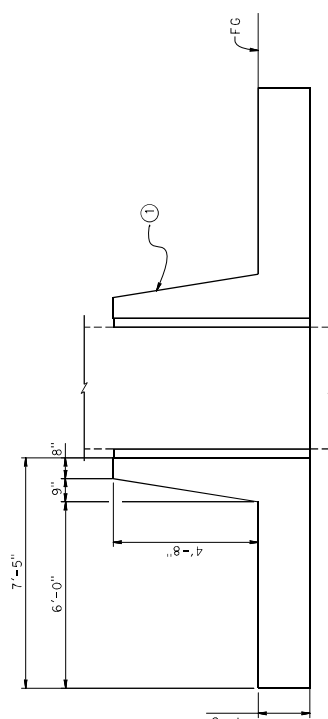
Zone Dist	COUNTY	ROUTE	POST MILE
3	04	ALA	580
32.132/45.16			

LEGEND: Existing Structure

NOTE:
 ① Concrete Barrier Transition



TYPICAL SECTION AT TRANSITION
 1/2" = 1'-0"



TYPICAL SECTION AT BENT
 1/2" = 1'-0"

DESIGNED BY E. Coler-Reiro	DATE 07/30/25	OFFICE OF DESIGN AND TECHNICAL SERVICES	PLANNING STUDY
DRAWN BY S. Ngm	DATE 07/21/25	BRANCH	3W200 SAFETY - COLLISION REDUCTION
CHECKED BY A. McGilton	DATE 08/11/25	UNIT: 3619	BRIDGE No.: 33-0320
APPROVED	DATE	PROJECT: EA-04-3W200	PROJECT No. & PHASE: 042100032250

DATE PLOTTED → 8/17/2025	TIME PLOTTED → 3:46:58
FILE → ...\\04-3w200\04-3w200-ops\tdsname →	
STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET	
(ENGLISH) (REVISION: 6/25/2025)	

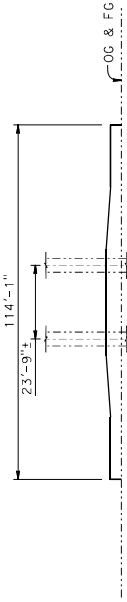
ALAMEDA COUNTY, ROUTE 580, LOCATION TABLE				
WORK LOCATION NUMBER	BRIDGE NAME OR FACILITY DESCRIPTION	DIRECTION	POST MILE	LIMITS OF PAYMENT FOR CONCRETE BARRIER TRANSITION, L.D., (LF)
12	BOSTON Ave OC	Med	R41.33	114'-1"
				CONCRETE REMOVAL (LF)
				114'-1"

LEGEND:

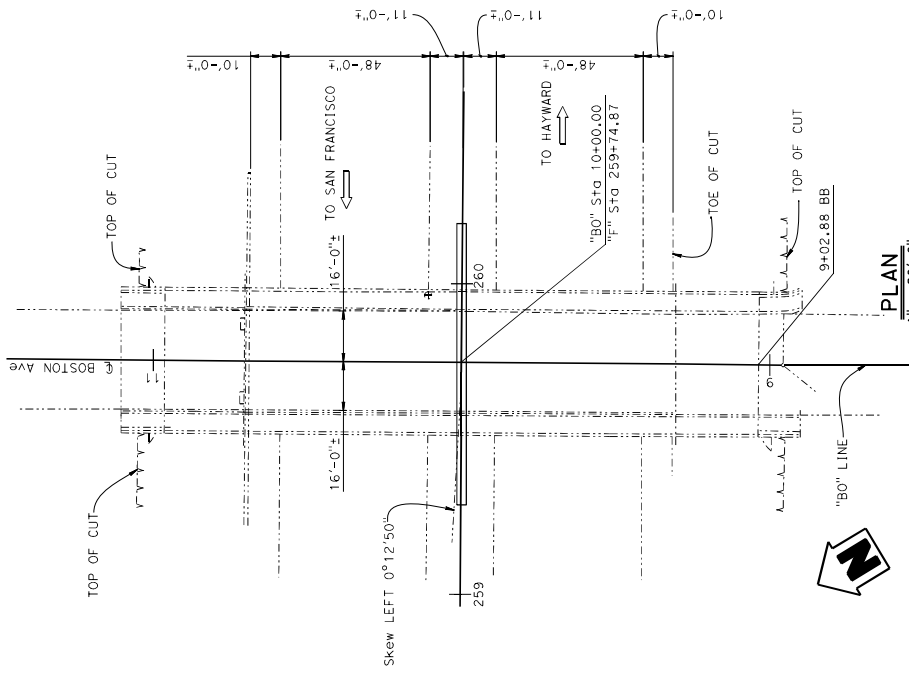
Existing Structure

Zone	Dist	COUNTY	ROUTE	POST MILE
3	04	ALA	580	32.132/45.16

NOTE:
 ① Concrete Barrier Transition

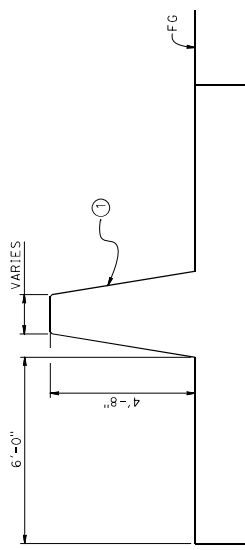


ELEVATION
 1" = 20'-0"

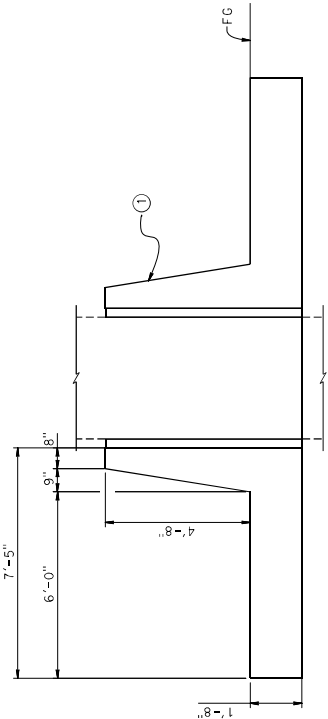


PLAN
 1" = 20'-0"

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET
 (ENGLISH) (REVISION: 6/25/2023)
 DATE PLOTTED => 8/17/2025
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TYPICAL SECTION AT TRANSITION
 1/2" = 1'-0"



TYPICAL SECTION AT BENT
 1/2" = 1'-0"

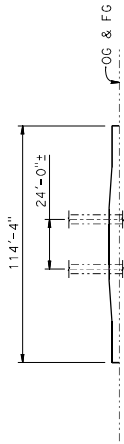
DESIGNED BY S. Colerrei	DATE 07/30/25	OFFICE OF DESIGN AND TECHNICAL SERVICES	BRANCH B	PLANNING STUDY
DRAWN BY S. Ngm	DATE 07/22/25			3W200 SAFETY - COLLISION REDUCTION
CHECKED BY A. McGittson	DATE 08/11/25			UNIT: 361.9
APPROVED				PROJECT No.: 33-0323
				PROJECT No.: 3W200
				PROJECT No. & PHASE: 04210003250

ALAMEDA COUNTY, ROUTE 580, LOCATION TABLE					
WORK LOCATION NUMBER	BRIDGE NAME OR FACILITY DESCRIPTION	DIRECTION	POST MILE	LIMITS OF PAYMENT FOR CONCRETE BARRIER TRANSITION, L.D., (LF)	CONCRETE REMOVAL (LF)
1.3	33-0325 SHEFFIELD Ave. OC	Med	R41.75	114'-4"	114'-1"

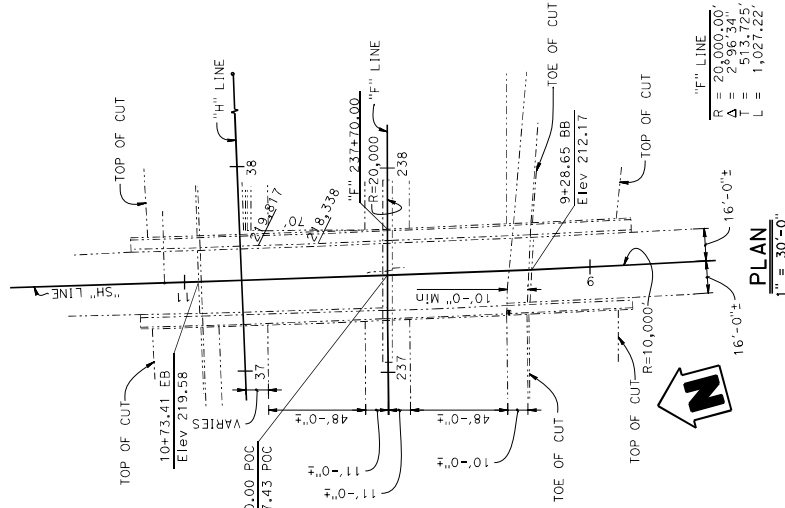
Zone Dist	COUNTY	ROUTE	POST MILE
3	O.A.	580	32.132/45.16

LEGEND: Existing Structure

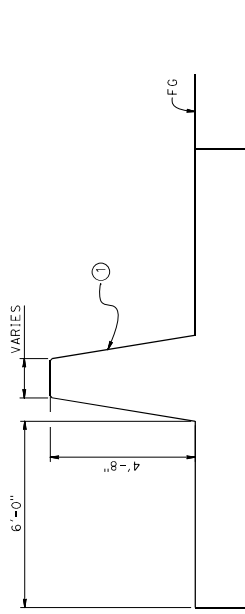
NOTE: ① Concrete Barrier Transition



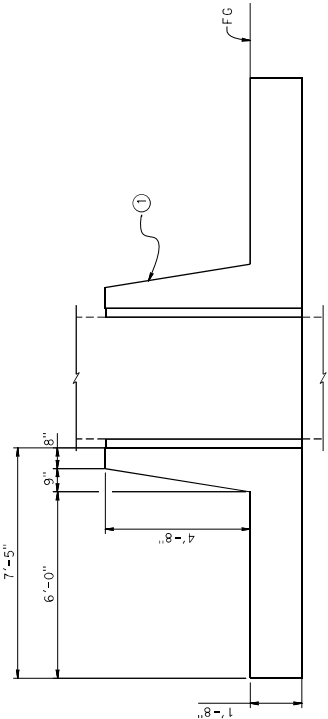
ELEVATION
1" = 30'-0"



PLAN
1" = 30'-0"



TYPICAL SECTION AT TRANSITION
1/2" = 1'-0"



TYPICAL SECTION AT BENT
1/2" = 1'-0"

DESIGNED BY S. Colterreiro	DATE 07/30/25	OFFICE OF DESIGN AND TECHNICAL SERVICES	PLANNING STUDY
DRAWN BY S. Ngm	DATE 07/22/25	BRANCH B	3W200 SAFETY - COLLISION REDUCTION
CHECKED BY A. McGilton	DATE 08/11/25	UNIT: 3619	BRIDGE No.: 33-0325
APPROVED X	DATE X	PROJECT: EAO-4-3W200	PROJECT No. & PHASE: 04210003250

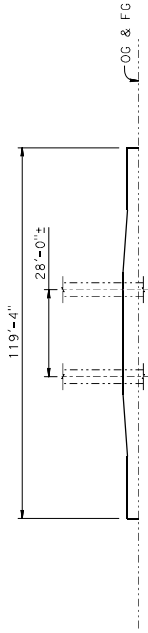
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DATE PLOTTED => 8/17/2025 TIME PLOTTED => 3:50:23 PM
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ALAMEDA COUNTY, ROUTE 580, LOCATION TABLE					
WORK LOCATION NUMBER	BRIDGE NAME OR FACILITY DESCRIPTION	DIRECTION	POST MILE	LIMITS OF PAYMENT FOR CONCRETE BARRIER TRANSITION, L.D., (LF)	CONCRETE REMOVAL (LF)
14	ARDLEY Ave OC	Med	R41.93	119'-4"	119'-4"

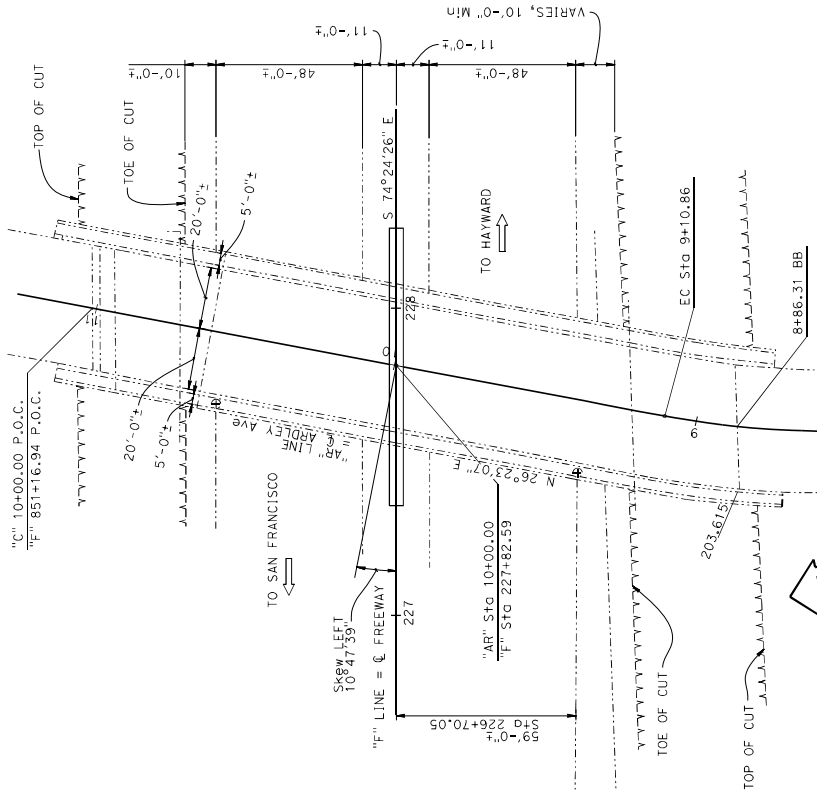
Zone Dist	COUNTY	ROUTE	POST MILE
3	O4	580	32.132/45.16

LEGEND: Existing Structure

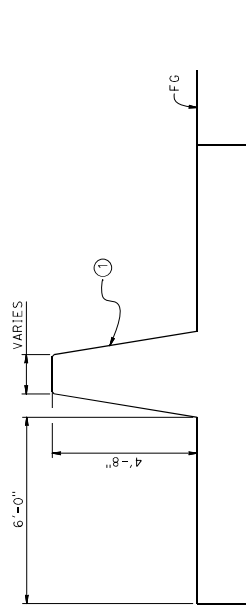
NOTE:
 ① Concrete Barrier Transition



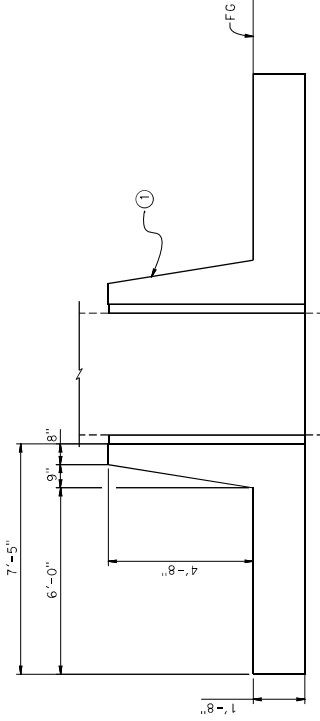
ELEVATION
 1" = 20'-0"



PLAN
 1" = 20'-0"



TYPICAL SECTION AT TRANSITION
 1/2" = 1'-0"



TYPICAL SECTION AT BENT
 1/2" = 1'-0"

DESIGNED BY E. C. O. Ferreira	DATE 07/30/25	OFFICE OF DESIGN AND TECHNICAL SERVICES	PLANNING STUDY
DRAWN BY S. Ngm	DATE 07/23/25	BRANCH	3W200 SAFETY - COLLISION REDUCTION
CHECKED BY A. McTtison	DATE 08/11/25	UNIT: 361.9	BRIDGE No.: 33-0308
APPROVED	DATE	PROJECT: EA-04-3W200	PROJECT No. & PHASE: 04210003250

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET
 (ENGLISH) (REVISION: 6/25/2025)
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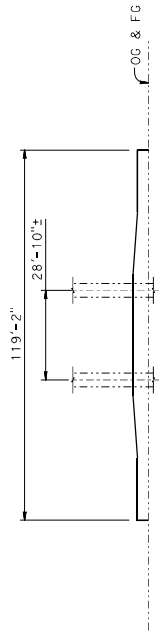
ALAMEDA COUNTY, ROUTE 580, LOCATION TABLE			
WORK LOCATION NUMBER	BRIDGE NAME OR FACILITY DESCRIPTION	DIRECTION	POST MILE
15	13th Ave DC	Med	R42.37
			119'-2"
			119'-2"
			CONCRETE REMOVAL (LF)

LEGEND:

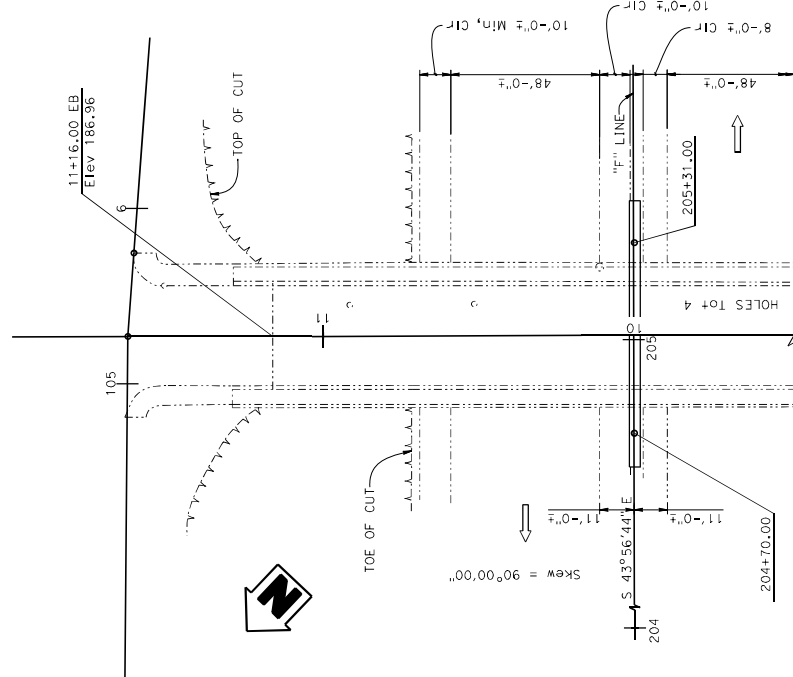
Existing Structure

Zone Dist	COUNTY	ROUTE	POST MILE
3	04 A.L.A.	580	32.132/45.16

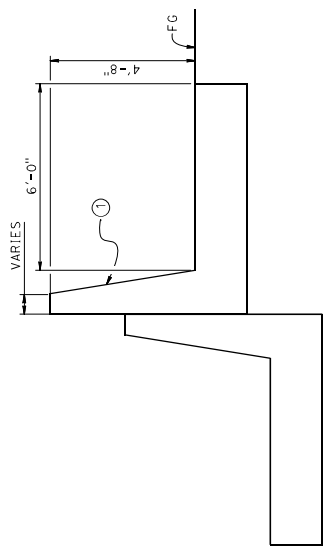
NOTE:
 ① Concrete Barrier Transition



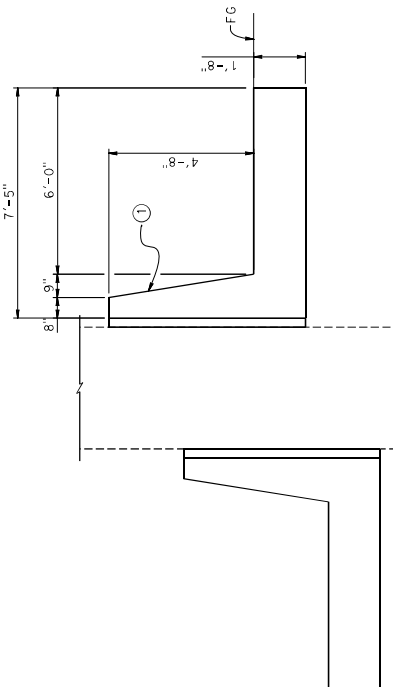
ELEVATION
 1" = 20'-0"



PLAN
 1" = 20'-0"



TYPICAL SECTION AT TRANSITION
 1/2" = 1'-0"



TYPICAL SECTION AT BENT
 1/2" = 1'-0"

DESIGNED BY: S. Cuatrecasas
 DRAWN BY: S. Ngom
 CHECKED BY: A. McTison
 APPROVED: X

DATE: 07/30/25
 DATE: 07/23/25
 DATE: 08/11/25
 DATE: X

OFFICE OF DESIGN AND TECHNICAL SERVICES

BRANCH

B

PLANNING STUDY

3W200 SAFETY - COLLISION REDUCTION

UNIT: 361.9
 PROJECT: EA-0-4-3W200
 BRIDGE No.: 33-0311
 PROJECT No. & PHASE: 04210003250

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET
 (ENGLISH) (REVISION: 6/25/2025)
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 TIME PLOTTED => 3:53:48 PM
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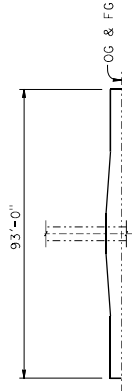
ALAMEDA COUNTY, ROUTE 580, LOCATION TABLE					
WORK LOCATION NUMBER	BRIDGE NAME OR FACILITY DESCRIPTION	DIRECTION	POST MILE	LIMITS OF PAYMENT FOR CONCRETE BARRIER TRANSITION, L.D., (LF)	CONCRETE REMOVAL (LF)
16	LAKE PARK AVE OC	Med	R43.23	93'-0"	93'-0"

LEGEND:

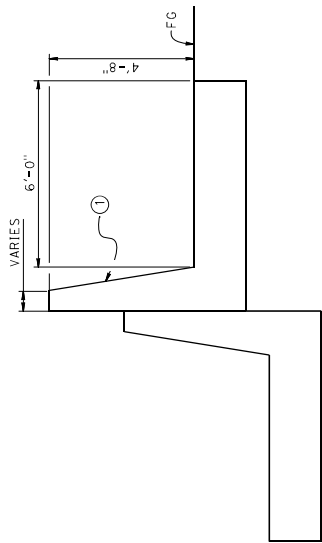
Existing Structure

Zone Dist	COUNTY	ROUTE	POST MILE
3 04	ALA	580	32.132/45.16

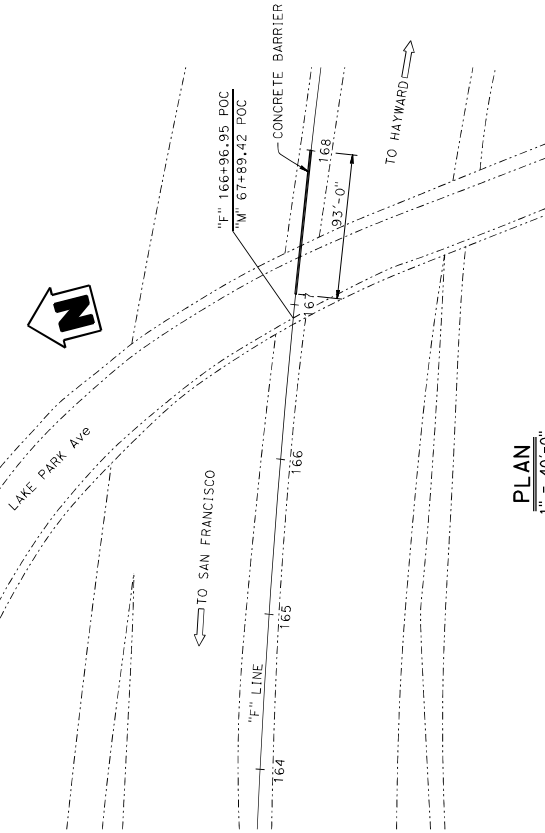
NOTE:
 ① Concrete Barrier Transition



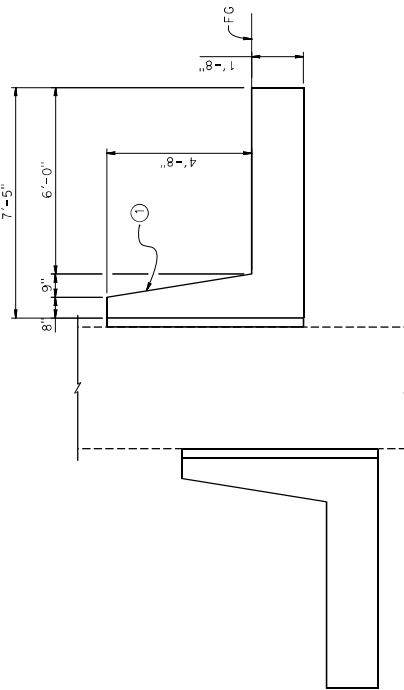
ELEVATION
 1" = 20'-0"



TYPICAL SECTION
 AT TRANSITION
 1/2" = 1'-0"



PLAN
 1" = 40'-0"



TYPICAL SECTION
 AT BENT
 1/2" = 1'-0"

DESIGNED BY E. Cuatrecasas	DATE 07/30/25	OFFICE OF DESIGN AND TECHNICAL SERVICES	PLANNING STUDY
DRAWN BY A. Villegas	DATE 07/24/25	BRANCH	3W200 SAFETY - COLLISION REDUCTION
CHECKED BY A. McTison	DATE 08/11/25	B	UNIT: 361.9 PROJECT No.: 33-0314
APPROVED X	DATE X		PROJECT No.: 3W200 PROJECT No. & PHASE: 04210003250

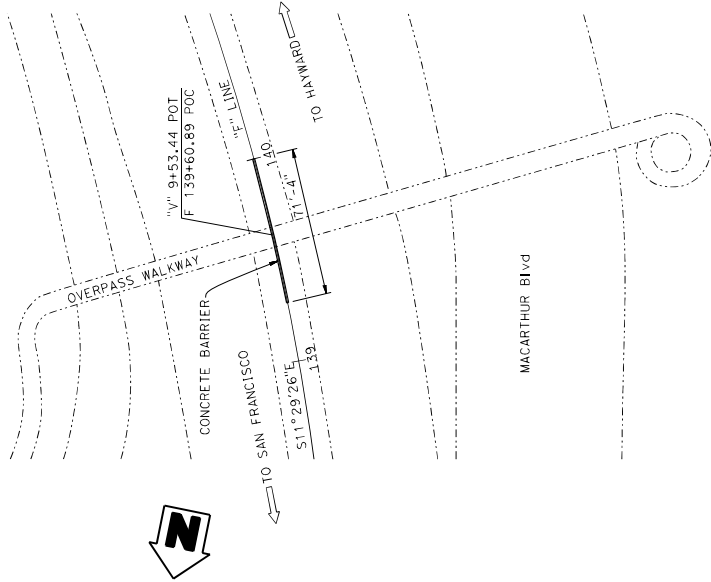
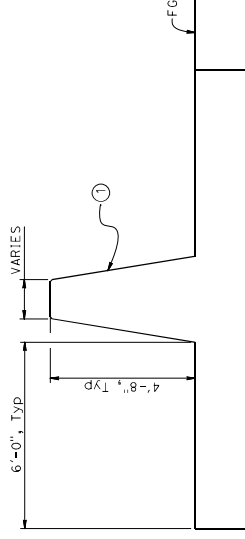
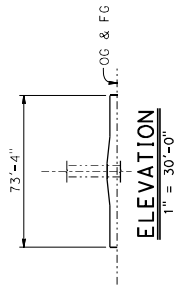
STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET
 (ENGLISH) (REVISION: 6/25/2025)
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ALAMEDA COUNTY, ROUTE 580, LOCATION TABLE				
WORK LOCATION NUMBER	BRIDGE NAME OR FACILITY DESCRIPTION	DIRECTION	POST MILE	LIMITS OF PAYMENT FOR CONCRETE BARRIER TRANSITION, L.D., (LF)
1.7	VAN BUREN Ave POC	Med	R43.75	73'-4"
				73'-4"

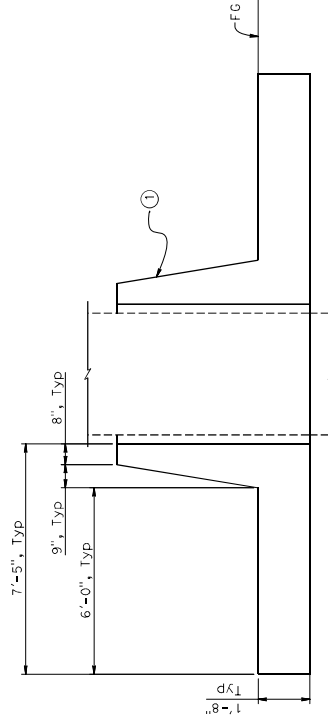
Zone Dist	COUNTY	ROUTE	POST MILE
3.04	ALA	580	32.132/45.16

LEGEND: Existing Structure

NOTE:
 ① Concrete Barrier Transition



TYPICAL SECTION AT TRANSITION
 1/2" = 1'-0"



DESIGNED BY E. Colasreireiro	DATE 07/30/25	OFFICE OF DESIGN AND TECHNICAL SERVICES	PLANNING STUDY
CHECKED BY A. Villegas	DATE 07/23/25		
APPROVED A. McGilton	DATE 08/11/25	B	3W200 SAFETY - COLLISION REDUCTION
PROJECT: EAO-4 - 3W200		BRIDGE No.: 33-0313	
UNIT: 361.9		PROJECT No.: 10003250	

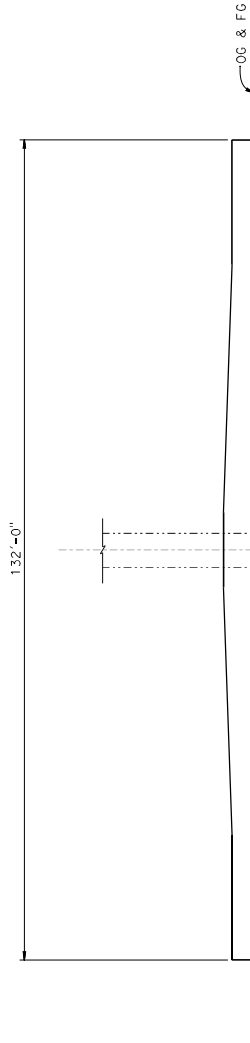
ALAMEDA COUNTY, ROUTE 580, LOCATION TABLE					
WORK LOCATION NUMBER	BRIDGE NAME OR FACILITY DESCRIPTION	DIRECTION	POST MILE	LIMITS OF PAYMENT FOR CONCRETE BARRIER TRANSITION, LP, (LF)	CONCRETE REMOVAL (LF)
1B	33-0290 CHETWOOD STREET OC	Med	R44.07	132'-0"	132'-0"

LEGEND:

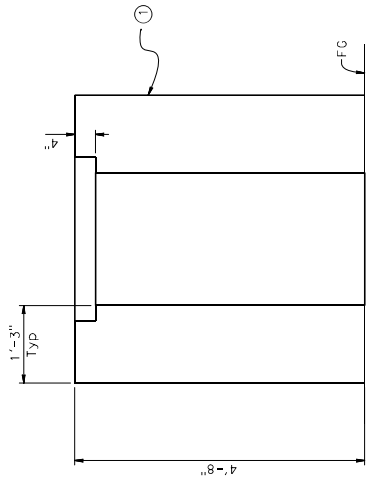
Existing Structure

Zone Dist	COUNTY	ROUTE	POST MILE
3	04 ALA	580	32.132/45.16

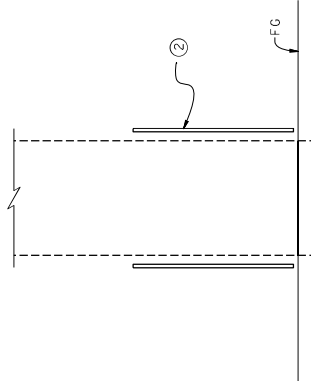
- NOTES:
- ① Concrete Barrier Transition
 - ② Steel Cover Plate



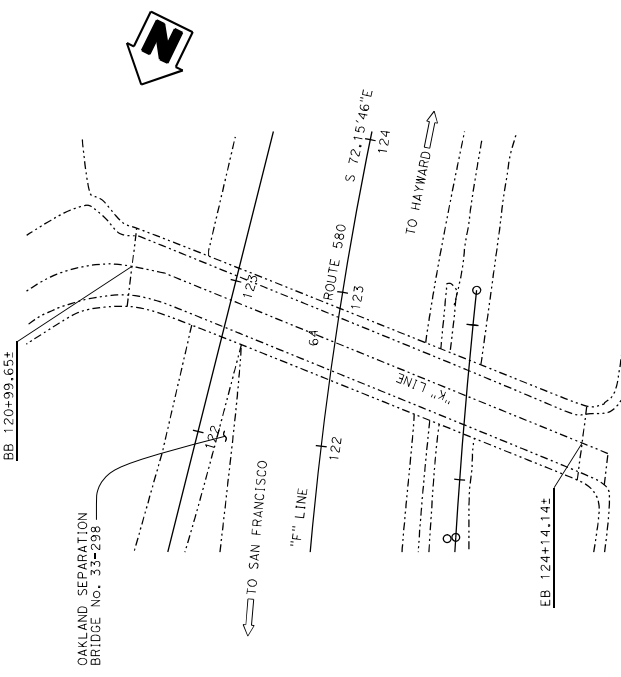
ELEVATION
1" = 10'-0"



TYPICAL SECTION
1" = 1'-0"



TYPICAL SECTION AT BENT
1" = 1'-0"



PLAN
1" = 40'-0"

DESIGNED BY		DATE		OFFICE OF DESIGN AND TECHNICAL SERVICES		BRANCH		PLANNING STUDY	
E. Cuatrecasas		07/30/25		3W200		SAFETY - COLLISION REDUCTION		PROJECT No. 33-0290	
DRAWN BY		DATE		BRIDGE No. 33-0290		UNIT: 3619		PROJECT No. & PHASE: 04210003250	
A. Villegas		07/22/25		3W200		SAFETY - COLLISION REDUCTION		PROJECT No. 33-0290	
CHECKED BY		DATE		BRIDGE No. 33-0290		UNIT: 3619		PROJECT No. & PHASE: 04210003250	
A. McTison		08/11/25		3W200		SAFETY - COLLISION REDUCTION		PROJECT No. 33-0290	
APPROVED		DATE		BRIDGE No. 33-0290		UNIT: 3619		PROJECT No. & PHASE: 04210003250	
X		X		X		X		X	

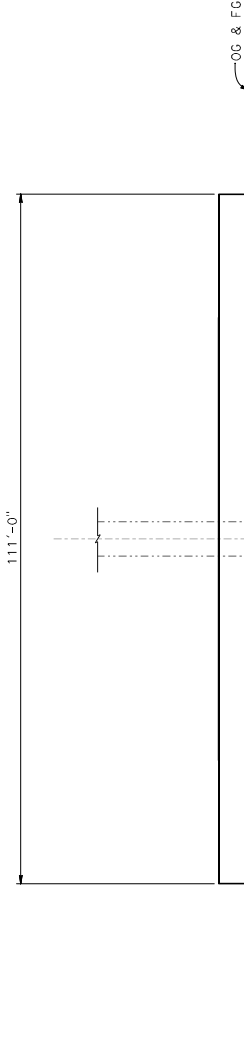
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ALAMEDA COUNTY, ROUTE 580, LOCATION TABLE			
WORK LOCATION NUMBER	BRIDGE NAME OR FACILITY DESCRIPTION	DIRECTION	POST MILE
19	MACARTHUR Blvd OC	Med	R44.32
			111'-0"
			111'-0"
			CONCRETE BARRIER REMOVAL (LF)
			111'-0"

LEGEND: Existing Structure

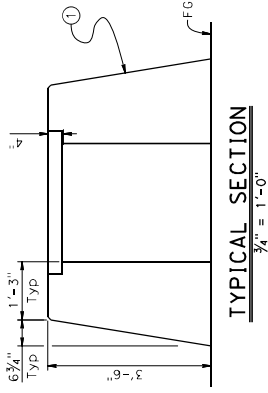
Zone Dist	COUNTY	ROUTE	POST MILE
3	04 ALA	580	32.132/45.16

NOTES:
 (1) Concrete Barrier Transition

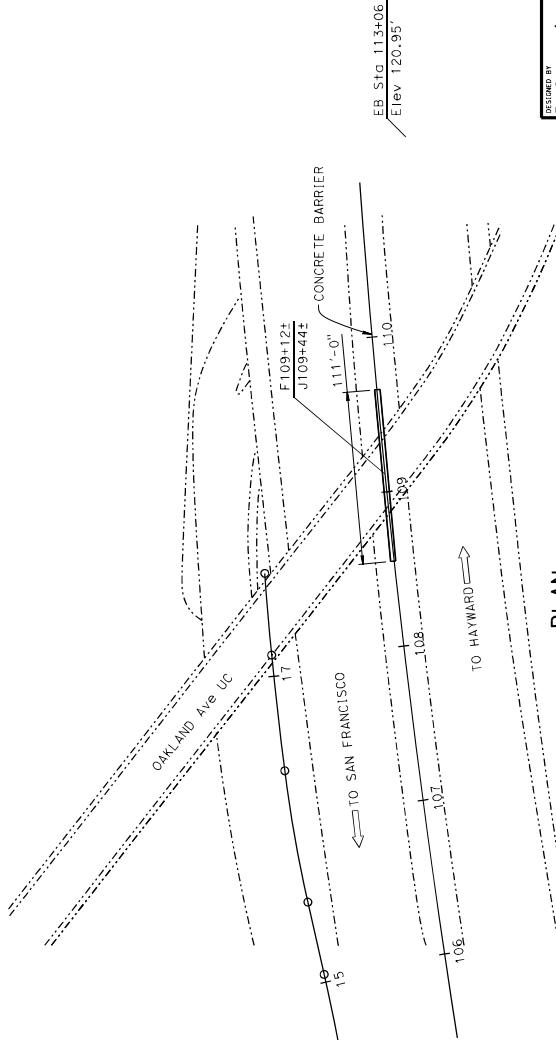


ELEVATION
 1" = 10'-0"

BB 120+99.65±



TYPICAL SECTION
 3/4" = 1'-0"



PLAN
 1" = 40'-0"

DESIGNED BY	DATE	OFFICE OF DESIGN AND TECHNICAL SERVICES
Checked by	DATE	BRANCH
APPROVED	DATE	

PLANNING STUDY	PROJECT No. 33-0287
3W200 SAFETY - COLLISION REDUCTION	PROJECT No. 4-3W200
UNIT: 361.9	PROJECT No. & PHASE: 04210003250

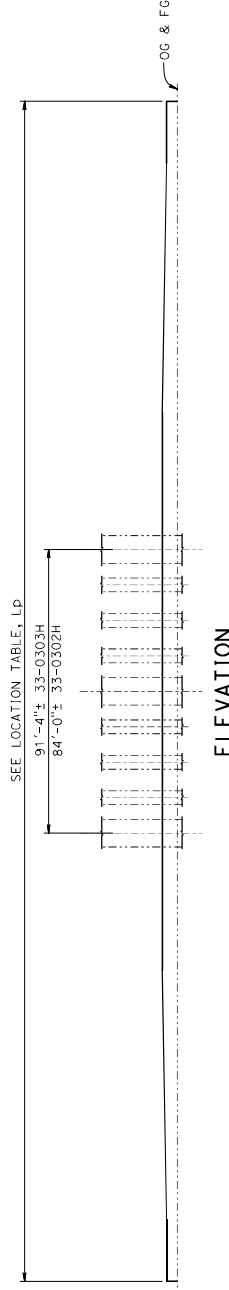
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ALAMEDA COUNTY, ROUTE 580, LOCATION TABLE						
WORK LOCATION NUMBER	BRIDGE NUMBER	BRIDGE NAME OR FACILITY DESCRIPTION	DIRECTION	POST MILE	LIMITS OF PAYMENT FOR CONCRETE BARRIER REMOVAL TRANSITION, LP, (LF)	CONCRETE REMOVAL (LF)
20	33-0303H/ 33-0305F	SOUTH CONNECTOR OC(E&W580-W980)/ W24-E&W580 CONNECTOR OC	Med	R45.14	311'-8"	311'-8"
21	33-0302H/ 33-0304G	NORTH CONNECTOR OC(E&W580-E241)/ EAST CONNECTOR OC (E980-E&W580)	Med	R45.23	302'-4"	302'-4"

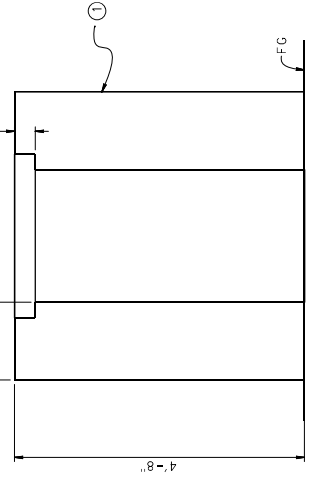
LEGEND:
----- Existing Structure

Zone Dist	COUNTY	ROUTE	POST MILE
3	04 ALA	580	32.132/45.16

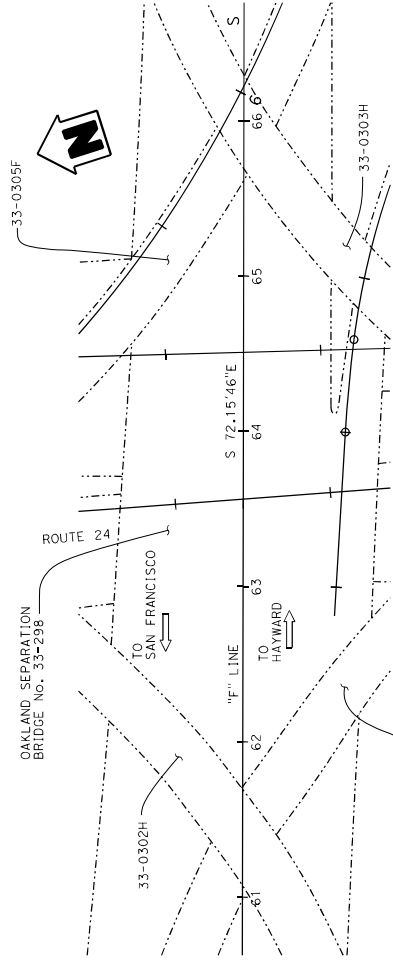
- NOTES:
 ① Concrete Barrier Transition
 ② Steel Cover Plate



ELEVATION
1" = 20'-0"



TYPICAL SECTION
1" = 1'-0"



PLAN
1" = 40'-0"

TYPICAL SECTION
AT BENT
1" = 1'-0"

DESIGNED BY C. Queiroz	DATE 07/30/25	OFFICE OF DESIGN AND TECHNICAL SERVICES	BRANCH B	PLANNING STUDY
DRAWN BY A. Villegas	DATE 07/22/25	3W200 SAFETY - COLLISION REDUCTION		
CHECKED BY A. McTison	DATE 08/11/25	UNIT: 361.9	BRIDGE No.: VARIES	
APPROVED X	DATE X	PROJECT E&O-4 - 3W200	PROJECT No. & PHASE: 04210003250	

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET
 (ENGLISH) (REVISION: 6/25/2025)
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ATTACHMENT C

COST ESTIMATE

**PROJECT
PLANNING COST ESTIMATE**

EA: 04-3W200

EA: 04-3W200 PR: 421000325

PR: 421000325

District-County-Route: 04-Ala-580

PM: R32.1 - 45.7

Type of Estimate : Draft Project Report

Program Code : 201.010

Project Limits : Ala 580 PM R32.1/45.7

Project Description: In Alameda County in and near San Leandro and Oakland on Route 580 from 0.2 mile east of 159th Avenue Overcrossing to 0.1 mile east of Peralta Street Overcrossing and on Route 13 at Calaveras Avenue Undercrossing.

Scope : Replace median barrier, overhead structures and sign panels, install Light Emitting Diode (LED) safety lights, and upgrade guardrail.

Alternative : Preferred Alternative

SUMMARY OF PROJECT COST ESTIMATE

	<u>Current Year Cost</u>	<u>Escalated Cost</u>
TOTAL ROADWAY COST	\$ 42,228,400	\$ 43,585,715
TOTAL STRUCTURES COST	\$ 10,388,688	\$ 10,722,603
SUBTOTAL CONSTRUCTION COST	\$ 52,617,088	\$ 54,308,318
TOTAL RIGHT OF WAY COST	\$ -	\$ -
TOTAL CAPITAL OUTLAY COSTS	\$ 52,618,000	\$ 54,309,000
PA/ED SUPPORT	\$ 3,777,000	\$ 3,777,000
PS&E SUPPORT	\$ 4,370,000	\$ 4,589,000
RIGHT OF WAY SUPPORT	\$ 60,000	\$ 60,000
CONSTRUCTION SUPPORT	\$ 5,930,000	\$ 6,226,000
TOTAL SUPPORT COST	\$ 14,137,000	\$ 14,652,000

TOTAL PROJECT COST	\$ 66,800,000	\$ 69,000,000
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Programmed Amount

Month / Year

Date of Estimate (Month/Year) _____ 11 / 2025

Estimated Construction Start (Month/Year) _____ 10 / 2027

Number of Working Days = 250

Estimated Mid-Point of Construction (Month/Year) _____ 4 / 2028

Estimated Construction End (Month/Year) _____ 10 / 2028

Number of Plant Establishment Days 0

Estimated Project Schedule

PID Approval

PA/ED Approval 11/30/2025 (T)

PS&E 02/16/2027 (T)

RTL 05/17/2027 (T)

Begin Construction

Reviewed by District O.E. or
Cost Estimate Certifier

Nicholas Grgich 11/26/2025 (510) 421-6335

 Nicholas Grgich, Project Engineer Date Phone

Approved by Project Manager

Emmanuel Okereke 11/26/2025 (510) 715-9293

 Emmanuel Okereke, Project Manager Date Phone

I. ROADWAY ITEMS SUMMARY

Section		Cost
1	Earthwork	\$ -
2	Pavement Structural Section	\$ 1,401,200
3	Drainage	\$ 3,072,300
4	Specialty Items	\$ 16,451,100
5	Environmental	\$ 560,300
6	Traffic Items	\$ 10,657,300
7	Detours	\$ -
8	Minor Items	\$ 192,900
9	Roadway Mobilization	\$ 1,616,800
10	Supplemental Work	\$ 1,093,900
11	State Furnished	\$ 1,318,000
12	Time-Related Overhead	\$ 2,025,600
13	Total Roadway Contingency	\$ 3,839,000
TOTAL ROADWAY ITEMS		\$ 42,228,400

Estimate Prepared By :

Nicholas Grgich, Project Engineer 10/20/2025 Phone

Estimate Reviewed By :

Name and Title Date Phone

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

SECTION 1: EARTHWORK

Item code	Unit	Quantity	Unit Price (\$)	Cost
190101 Roadway Excavation	CY	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	x	= \$	-
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	\$	-
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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	9,061	x 123.50 = \$	1,119,034
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	x	= \$	-
391006 Asphalt Binder (Geosynthetic Pavement Interlayer)	TON	x	= \$	-
290201 Asphalt Treated Permeable Base	CY	x	= \$	-
374002 Asphaltic Emulsion (Fog Seal Coat)	TON	x	= \$	-
397005 Tack Coat	TON	16	x 1,140.00 = \$	18,240
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	= \$	-
39407X Place Hot Mix Asphalt Dike (Insert Type)	LF	x	= \$	-
398100 Remove Asphalt Concrete Dike	LF	x	= \$	-
420201 Grind Existing Concrete Pavement	SQYD	x	= \$	-
398300 Remove Base and Surfacing	CY	x	= \$	-
390095 Replace Asphalt Concrete Surfacing	CY	x	= \$	-
41800X Remove Concrete Pavement	SQYD/CY	x	= \$	-
394090 Place Hot Mix Asphalt (Miscellaneous Area)	SQYD	x	= \$	-
398200 Cold Plane Asphalt Concrete Pavement	SQYD	55,547	x 4.75 = \$	263,848
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	x	= \$	-
846052 12" Rumble Strip (Concrete Pavement)	STA	x	= \$	-
420102 Groove Existing Concrete Pavement	SQYD	x	= \$	-
394095 Roadside Paving (Miscellaneous Areas)	SQYD	x	= \$	-
390136 Minor Hot Mix Asphalt	TON	x	= \$	-
XXXXXX Some Item	Unit	x	= \$	-

TOTAL PAVEMENT STRUCTURAL SECTION ITEMS	\$	1,401,200
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\$

SECTION 3: DRAINAGE

Item code	Unit	Quantity	Unit Price (\$)	Cost
71013X Remove Culvert	EA/LF	x	= \$	-
710240 Modify Inlet	EA	x	= \$	-
710370 Sand Backfill	CY	x	= \$	-
71010X Abandon Culvert	EA/LF	x	= \$	-
710196 Adjust Inlet	LF	x	= \$	-
710262 Cap Inlet	EA	x	= \$	-
510501 Minor Concrete	CY	x	= \$	-
510502 Minor Concrete (Minor Structure)	CY	x	= \$	-
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	= \$	-
6901XX XX" Corrugated Steel Pipe Downdrain (0.XXX" Thi	LF	x	= \$	-
7006XX XX" Corrugated Steel Pipe Inlet (0.XXX" Thick)	LF	x	= \$	-
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	= \$	-
72901X Rock Slope Protection Fabric (Insert Class)	SQYD	x	= \$	-
721420 Concrete (Ditch Lining)	CY	x	= \$	-
721430 Concrete (Channel Lining)	CY	x	= \$	-
750001 Miscellaneous Iron and Steel	LB	x	= \$	-
510094A Total Preliminary Drainage Related Cost	LS	1	x 3,072,300.00	= \$ 3,072,300

TOTAL DRAINAGE ITEMS	\$	3,072,300
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SECTION 4: SPECIALTY ITEMS

Item code	Unit	Quantity	Unit Price (\$)	Cost
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	x	= \$	-
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 4,750.00	= \$ 4,750
141120 Treated Wood Waste	LB	3,575	x 0.29	= \$ 1,019
839750 Remove Barrier	LF	x	= \$	-
839752 Remove Guardrail	LF	x	= \$	-
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	= \$	-
8320XX Midwest Guardrail System (Insert Type)	LF	x	= \$	-
839301 Single Thrie Beam Barrier	LF	x	= \$	-
839310 Double Thrie Beam Barrier	LF	x	= \$	-
839521 Cable Railing	LF	x	= \$	-
839566 Terminal System (Type CAT)	EA	x	= \$	-
839584 Alternative In-line Terminal System	EA	x	= \$	-
839585 Alternative Flared Terminal System	EA	x	= \$	-
4906XX 60" Cast-In-Drilled-Hole Concrete Piling	LF	x	= \$	-
8396XX Crash Cushion (Insert Type)	EA	x	= \$	-
839640 Concrete Barrier (Type 60M)	LF	61,747	x 165.00	= \$ 10,188,255
475010 Retaining Wall (Masonry Wall)	SQFT	x	= \$	-
511035 Architectural Treatment	SQFT	1	x 2,090,000.00	= \$ 2,090,000
780460 Anti-Graffiti Coating	SQFT	x	= \$	-
780450 Rock Stain	SQFT	x	= \$	-
4730XX Reinforced Concrete Crib Wall (Insert Type)	SQFT	x	= \$	-
83954X Transition Railing (Insert Type)	EA	x	= \$	-
780440 Prepare and Stain Concrete	SQFT	x	= \$	-
839561 Rail Tensioning Assembly	EA	x	= \$	-
83958X End Anchor Assembly (Insert Type)	EA	x	= \$	-
190105 Type Z-2 Soil	CY	1	x 237.50	= \$ 238
120320 Temporary Barrier System	LF	143,255	x 16.15	= \$ 2,313,568
839774 Remove Concrete Barrier	LF	61,747	x 28.50	= \$ 1,759,790
839752 Remove Metal Beam Guardrail	LF	150	x 19.00	= \$ 2,850
832007 Install Midwest Guardrail System	LF	1,907	x 47.50	= \$ 90,583

TOTAL SPECIALTY ITEMS	\$	16,451,100
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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
Biological Mitigation (on-site)	LS	x	= \$	-
80010X Temporary Fence (Insert Type)	LF	x	= \$	-
130670 Temporary Reinforced Silt Fence	LF	x	= \$	-
<i>Subtotal Environmental Mitigation</i>				\$ -

5B - LANDSCAPE AND IRRIGATION

Item code	Unit	Quantity	Unit Price (\$)	Cost
204099A Highway Planting	LS	1 x	9,500.00 = \$	9,500
206300A Irrigation System	LS	1 x	28,500.00 = \$	28,500
204099 Plant Establishment Work	LS	1 x	19,000.00 = \$	19,000
20XXXX Follow-up Landscape Project	LS	x	= \$	-
206405 Remove Irrigation Facility	LS	x	= \$	-
204096 Maintain Existing Planted Areas	LS	x	= \$	-
206400 Check and Test Existing Irrigation Facilities	LS	x	= \$	-
21011X Imported Topsoil	CY/TON	x	= \$	-
200114 Rock Blanket	SQFT/SQYD	x	= \$	-
200122 Weed Germination	SQYD	x	= \$	-
995100 Water Meter Charges	LS	x	= \$	-
2087XX XX" Conduit (Use for Irrigation x-overs)	LF	x	= \$	-
20890X Extend X" Conduit (Use for Extension of Irrigation x-	LF	x	= \$	-
200052 Prune Existing Plants	LS	1 x	4,750.00 = \$	4,750
<i>Subtotal Landscape and Irrigation</i>				\$ 61,750

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	x	= \$	-
210350 Fiber Rolls	LF	x	= \$	-
210360 Compost Sock	LF	x	= \$	-
2102XX Rolled Erosion Control Product (Insert Type)	SQFT	x	= \$	-
21025X Bonded Fiber Matrix	SQFT/ACRE	x	= \$	-
210300 Hydromulch	SQFT	x	= \$	-
210420 Straw	SQFT	x	= \$	-
210430 Hydroseed	SQFT	x	= \$	-
210610 Compost	CY	x	= \$	-
210630 Incorporate Materials	SQFT	x	= \$	-
210280A Erosion Control	LS	1 x	\$ 28,500.00 = \$	28,500
<i>Subtotal Erosion Control</i>				\$ 28,500

5D - NPDES

Item code	Unit	Quantity	Unit Price (\$)	Cost
130300 Prepare SWPPP	LS	x	= \$	-
130200 Prepare WPCP	LS	x	= \$	-
130100 Job Site Management	LS	1 x	470,000.00 = \$	470,000
130330 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	x	= \$	-
130900 Temporary Concrete Washout	LS	x	= \$	-
130710 Temporary Construction Entrance	EA	x	= \$	-
130610 Temporary Check Dam	LF	x	= \$	-
130620 Temporary Drainage Inlet Protection	EA	x	= \$	-
130730 Street Sweeping	LS	x	= \$	-
<i>Subtotal NPDES</i>				\$ 470,000

TOTAL ENVIRONMENTAL \$ 560,300

Supplemental Work for NPDES

066595 Water Pollution Control Maintenance Sharing*	LS	x	= \$	-
066596 Additional Water Pollution Control**	LS	x	= \$	-
066597 Storm Water Sampling and Analysis***	LS	x	= \$	-
XXXXXX Some Item	LS	x	= \$	-
<i>Subtotal Supplemental Work for NDPS</i>				\$ -

*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	1	x 1,900,000.00 = \$	1,900,000
870300 Sign Illumination System	LS		= \$	-
870400 Signal and Lighting System	LS		= \$	-
870510 Ramp Metering System	LS		= \$	-
87181X Interconnection Conduit and Cable	LF/LS		= \$	-
5602XX Furnish Sign Structure (Insert Type)	LB		= \$	-
560218A Install Sign Structure (One Post)	EA	13	x 237,500.00 = \$	3,087,500
560208A Install Sign Structure (Two Post)	EA	6	x 475,000.00 = \$	2,850,000
4980XX XX" CIDHC Pile (Sign Foundation)	LF		= \$	-
87011X Inductive Loop Detector	EA/LS		= \$	-
870600 Traffic Monitoring Station System	LS	1	x 1,900,000.00 = \$	1,900,000
56804X Remove Sign Structure	EA/LS		= \$	-
568054 Reconstruct Sign Structure	EA		= \$	-
568060 Modify Sign Structure	EA		= \$	-
870009 Elements During Construction	LS	1	x 4,750.00 = \$	4,750
86XXXX Fiber Optic Conduit System	LS		= \$	-
872131 Modifying Lighting Systems	LS	1	x 475,000.00 = \$	475,000
Subtotal Traffic Electrical				\$ 10,217,250

6B - Traffic Signaling 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 V	LF		x = \$	-
846025 Remove Painted Pavement Marking	SQFT		x = \$	-
820250 Remove Roadside Sign	EA		x = \$	-
820530 Reset Roadside Sign	EA		x = \$	-
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 20,000.00 = \$	20,000
84XXXX Permanent Pavement Delineation	LS		x = \$	-
Subtotal Traffic Signaling and Striping				\$ 20,000

6C - Traffic Management Plan

Item code	Unit	Quantity	Unit Price (\$)	Cost
128651 Portable Changeable Message Sign	EA/LS	2	x \$ 20,000 = \$	40,000
Subtotal Traffic Management Plan				\$ 40,000

6C - Stage Construction and Traffic Handling

Item code	Unit	Quantity	Unit Price (\$)	Cost
120198 Plastic Traffic Drums	EA		x = \$	-
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 380,000.00 = \$	380,000
129110 Temporary Crash Cushion	EA		x = \$	-
129000 Temporary Railing (Type K)	LF		x = \$	-
120149 Temporary Pavement Marking (Paint)	SQFT		x = \$	-
120152 Temporary Pavement Marking (Tape)	SQFT		x = \$	-
8101XX Delineator (Insert Class)	EA		x = \$	-
Subtotal Stage Construction and Traffic Handling				\$ 380,000

TOTAL TRAFFIC ITEMS	\$ 10,657,300
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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 \$ 32,142,200

SECTION 8: MINOR ITEMS

8A - Americans with Disabilities Act Items

ADA Items 0.0% \$ -

8B - Bike Path Items

Bike Path Items 0.0% \$ -

8C - Other Minor Items

Other Minor Items 0.6% \$ 192,853

Total of Section 1-7 \$ 32,142,200 x 0.6% = \$ 192,854

TOTAL MINOR ITEMS \$ 192,900

SECTIONS 9: ROADWAY MOBILIZATION *

Item code					
999990	Total Section 1-8	\$ 32,335,100	x 5%	= \$	1,616,755
TOTAL ROADWAY MOBILIZATION					\$ 1,616,800

SECTION 10: SUPPLEMENTAL WORK

Item code	Unit	Quantity	Unit Price (\$)	Cost	
066670	Payment Adjustments For Price Index Fluctuations	LS	x 43,827.87 = \$	43,828	
066094	Value Analysis	LS	x 10,000.00 = \$	10,000	
066070	Maintain Traffic	LS	x 1,000,000.00 = \$	1,000,000	
066919	Dispute Resolution Board	LS	x 15,000.00 = \$	15,000	
066921	Dispute Resolution Advisor	LS	x 5,000.00 = \$	5,000	
066015	Federal Trainee Program	LS	x = \$	-	
066610	Partnering	LS	x 20,000.00 = \$	20,000	
066204	Remove Rock and Debris	LS	x = \$	-	
066222	Locate Existing Crossover	LS	x = \$	-	
XXXXXX	Some Item	Unit	x = \$	-	
<i>Cost of NPDES Supplemental Work specified in Section 5D</i>				<i>= \$ -</i>	
Total Section 1-8		\$ 32,335,100	0%	= \$	-
TOTAL SUPPLEMENTAL WORK \$ 1,093,900					

SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price (\$)	=	Cost
066105	Resident Engineers Office	LS	1	x	258,000.00	=	\$258,000
066063	Traffic Management Plan - Public Information	LS	1	x	10,000.00	=	\$10,000
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	LS	1	x	1,000,000.00	=	\$1,000,000
066838	Reflective Numbers and Edge Sealer	LS		x		=	\$0
066065	Tow Truck Service Patrol	LS	1	x	50,000.00	=	\$50,000
066916	Annual Construction General Permit Fee	LS		x		=	\$0
XXXXXX	Some Item	Unit		x		=	\$0
Total Section 1-8			\$ 32,335,100		0%	=	\$ -

TOTAL STATE FURNISHED \$1,318,000

SECTION 12: TIME-RELATED OVERHEAD

Total of Roadway and Structures Contract Items excluding Mobilization \$40,511,950 (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	250	X	\$8,102	=	\$2,025,600

TOTAL TIME-RELATED OVERHEAD \$2,025,600

SECTION 13: ROADWAY CONTINGENCY*

Risk Amount from Risk Register		(for Known Risks)	0%	
Additional or Residual Contingency		(for Unknown/Undefined Risks)	10%	\$3,838,940
Total Section 1-12	\$ 38,389,400	x	10%	= \$3,838,940

TOTAL CONTINGENCY* \$3,839,000

II. STRUCTURE ITEMS

	Bridge 1	Bridge 2	Bridge 3
DATE OF ESTIMATE	10/21/25	10/21/25	00/00/00
Bridge Name	Barrier Atop Ret Wall	Barrier Transitions	Soil Nail Strengthening
Bridge Number	57-XXX	57-XXX	57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF	0 LF	0 LF
Total Bridge Length (Feet)	4285 LF	120 LF	4285 LF
Total Area (Square Feet)	0 SQFT	0 SQFT	0 SQFT
Structure Depth (Feet)	0 LF	0 LF	0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
Cost Per Linear Foot	\$625	\$1,380	\$1,065
COST OF EACH	\$2,678,125	\$165,600	\$4,563,525

	Bridge 4		
DATE OF ESTIMATE	00/00/00	00/00/00	00/00/00
Bridge Name	Steel Brackets	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX	57-XXX	57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF	0 LF	0 LF
Total Bridge Length (Feet)	2368 LF	0 LF	0 LF
Total Area (Square Feet)	0 SQFT	0 SQFT	0 SQFT
Structure Depth (Feet)	0 LF	0 LF	0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$325	\$0	\$0
COST OF EACH	\$769,600	\$0	\$0

TOTAL COST OF BRIDGES	\$8,176,850
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TOTAL COST OF BUILDINGS	\$0
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Time-Related Overhead	5%	\$408,843
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STRUCTURES MOBILIZATION	10%	\$858,569
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STRUCTURES CONTINGENCY*	10%	\$944,426
--------------------------------	-----	------------------

TOTAL COST OF STRUCTURES	\$10,388,688
---------------------------------	---------------------

Estimate Prepared By: _____
 XXXXXXXXXXXXXXXXXXXX ----- Division of Structures

_____ Date

0

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	\$	0	\$ 0
	A2)	Acquisition of Offsite Mitigation	\$	0	\$ 0
	A3)	Railroad Acquisition	\$	0	\$ 0
B)	B1)	Utility Relocation (State Share)	\$	0	\$ 0
	B2)	Potholing (Design Phase)	\$	0	\$ 0
C)		Utility - Advance Engineering Estimate (Encumber with State Only Funds)	\$	0	\$ 0
D)		RAP and/or Last Resort Housing	\$	0	\$ 0
E)		Clearance & Demolition	\$	0	\$ 0
F)		Relocation Assistance (RAP and/or Last Resort Housing Costs)	\$	0	\$ 0
G)		Title and Escrow	\$	0	\$ 0
H)		Environmental Review	\$	0	\$ 0
I)		Condemnation Settlements <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** **\$0**

M) **TOTAL R/W ESTIMATE: Escalated** **\$0**

N) **RIGHT OF WAY SUPPORT** **\$60,000**

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 only

² When estimate has Utility Relocation

³ When R/W Acquisition is required

ATTACHMENT D

CE/CE



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

Project Information

Project Name (if applicable): UPGRADE MEDIAN CONCRETE BARRIER TO TYPE 60M & INSTALL FREEWAY SAFETY LIGHTING ALONG THE MEDIAN AT TWO LOCATIONS

DIST-CO-RTE: 04-ALA-580, 04-ALA-13 **PM/PM:** R32.13/45.76, R4.26/4.32

EA: 04-3W200 **Federal-Aid Project Number:** 0421000325

Project Description

The project proposes to:

1. Replace the existing Type 50 median barrier throughout I-580 between PM 32.13 to 45.6 with Type 60M median barrier.
2. To reduce nighttime collisions, proposed safety lighting along the median of Route I-580 will be installed from PM R32.6 to R33.0 and again from PM 43.4 to 44.7. The concrete median type to be proposed for the installation of the light poles are modified Type 60MG.
3. Replace overhead signage at 20 locations along 1.7 miles of the corridor of I-580 from PM R33.12 and R45.66.
4. Remove non-standard Metal Beam Guard Rail (MBGR) and install approximately 1,900 feet of Midwest Guardrail System (MGS) including concrete block, transition railing Type WB-31, and terminal system end treatments. Approximately 1,700 feet of MBGR will be upgraded on I-580 (from PM R38.915 to R39.061) and 200 feet of MBGR on SR 13 (from PM 4.26 to 4.312).

Purpose: The purpose of this project is to replace the median barrier, overhead sign structures, and sign panels, install Light Emitting Diode (LED) safety lights, and upgrade the guardrail. B.

Need: Improve traffic safety and nighttime visibility, thereby reducing the potential and severity of collisions along this stretch of Interstate (I-) 580 and respond to investigations documented under Customer Service Requests (CSRs). The upgraded concrete median barriers will reduce the severity of the collision of 108.6 injuries and improve the asset of the median barrier from "Poor" to "Good". The CSR request resulted in the investigation of incidents that occurred on westbound I-580 to the northbound State Route (SR) 13 right shoulder when a driver lost control of their vehicle and went off an embankment, crashing into a tree. These improvements will help prevent severe injuries and protect the structural integrity of the freeway and maintain its functionality.

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



**CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION
DETERMINATION FORM**

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 1c.** (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

Wahida Rashid		10/7/2025
Print Name	Signature	Date

Project Manager

Emmanuel Okereke		10/07/2025
Print Name	Signature	Date

Caltrans NEPA Determination (Check one)

Not Applicable

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

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

- 23 CFR 771.117(c): activity (c)(27)**
- 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.



**CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION
DETERMINATION FORM**

Senior Environmental Planner or Environmental Branch Chief

Wahida Rashid		10/7/2025
Print Name	Signature	Date

Project Manager/ DLA Engineer

Emmanuel Okereke	EmmanuelUOkereke	10/07/2025
Print Name	Signature	Date

Date of Categorical Exclusion Checklist completion (if applicable): 10/7/2025

Date of Environmental Commitment Record or equivalent: 10/7/2025

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).



CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION DETERMINATION FORM

Continuation sheet:

Environmental Conditions

Air Quality

Construction:

Implementation of Caltrans Standard Specifications, such as complying with air-pollution-control rules, regulations, ordinances, and statutes that apply to work performed under the Contract and the use of construction best management practices, would result in reducing GHG emissions from construction activities, including but not limited to:

1. Regular vehicle and equipment maintenance
2. Limit idling of vehicles and equipment onsite
3. If practicable, recycle nonhazardous waste and excess material. If recycling is not practicable, dispose of material
4. Use solar-powered signal boards, if feasible
5. Use tier 4 interim or tier 4 final engines

Biology

Preconstruction:

1. All construction personnel will attend a mandatory environmental education program delivered by the Department-approved Biologist(s) prior to working on the project action. At a minimum, the training will include a description of the Cooper's hawk and pallid bat, as well as instructions on how to report their sightings, whether living or dead, to the Resident Engineer and a Department-approved Biologist.
2. Pre-construction surveys for regulated species will be conducted by a Department-approved Biologist(s) no more than 7 calendar days prior to any initial ground disturbance within the BSA. These efforts will consist of walking surveys of the project limits and, if possible, accessible adjacent areas within at least 50 feet of the project limits, at the discretion of the Department-approved Biologist. The Department-approved Biologist(s) will investigate potential cover sites and potential rare plant habitats when feasible and safe to do so.

Construction:

1. All work will occur outside bird nesting season, from October 1 to January 31. If work must occur at this location during bird nesting season (February 1 to September 30), a Department-approved Biologist(s) will conduct a preconstruction survey for active bird nests no more than 72 hours prior to the start of construction activities.
2. If active bird nests are observed, a protective radius shall be established by the Department-approved Biological Monitor. The protective radius shall be, at a minimum, 300 feet for active raptor and owl nests, or 50 feet for active non-game and migratory bird nests. Buffers may be reduced through consultation with the appropriate regulatory agencies, based on nest location, topography, cover, the species' sensitivity to disturbance, and the intensity/type of potential work activities.
3. If a special-status species is observed, the contractor will immediately establish a 100-foot protective radius around the special-status species and notify the



CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION DETERMINATION FORM

Resident Engineer and Department-approved Biological Monitor. The animal will be allowed to leave the work area on its own volition, and appropriate regulatory agencies will be contacted. Under no circumstances would the capture, handling or relocation of special-status species occur unless expressly authorized by the agencies. Construction activities would not resume without approval from the Department-approved Biological Monitor.

4. Artificial lighting will be directed away from ESAs and vegetated areas and only areas where active construction is occurring will be illuminated. If lighting cannot be directed away from vegetated areas, shielding will be implemented to avoid light spillover.
5. Temporarily impacted area will be revegetated with a palette of native plant species appropriate to the area and restored to preconstruction conditions.
6. Invasive and exotic plants rated Moderate to High by the California Invasive Plant Council would be controlled to the maximum extent practicable, pursuant to Executive Order 13112- Invasive Species.
7. The potential for adverse effects to water quality will be avoided by implementing temporary and permanent BMPs outlined in Section 13 of the 2024 Caltrans Standard Specifications. The State Water Resources Control Board has issued a National Pollution Discharge Elimination System Statewide Storm Water Permit to Caltrans to regulate storm water and non-storm water discharges from Caltrans facilities. A Stormwater Pollution Prevention Plan (SWPPP) will be developed for the Project if the project will have one acre or more of soil disturbance, and a Water Pollution Control Program (WPCP) for projects with a disturbed soil area less than one acre. The SWPPP complies with the Caltrans Storm Water Management Plan (SWMP). The SWMP includes guidance for design staff to include provisions in construction contracts to include measures to protect sensitive areas and to prevent and minimize stormwater and non-stormwater discharges. The SWPPP will reference the Caltrans Construction Site BMPs Manual. The WPCP complies with the WPCP Preparation Manual.
8. To prevent special-status species from being entangled, trapped, or injured, erosion control or other materials with plastic monofilament netting will not be used.
9. Project employees will be required to comply with guidance governing vehicle use, speed limits on unpaved roads, fire prevention, and other hazards. All vehicles will always remain on pavement or disturbed roadway shoulders, unless authorized by the Department-approved Biological Monitor.
10. Construction personnel are prohibited from bringing pets to the construction site to prevent harassment, injury, or mortality of special-status species.
11. Firearms are prohibited the construction site except for those carried by authorized security personnel or law enforcement.
12. All vehicles parking, staging, laydown, and access areas within the project limits must be located on paved surfaces or areas designated by Department-approved Biological Monitor have undergone appropriate environmental clearance. All vehicle parking, staging, laydown areas, and access within the project limits must be submitted to the Resident Engineer and Department-approved Biological Monitor for authorization. If the contractor uses any property outside the BSA for



CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION DETERMINATION FORM

the sole use of the project, they must obtain all PLACs under applicable environmental laws, regulations, orders, and decrees, and submit those PLACs to the Resident Engineer and Department-approved Biological Monitor for review and approval at least 15 business days before starting work on the job site.

13. All grindings and asphaltic-concrete waste will be stored within previously disturbed areas absent of habitat, and at a minimum of 150 feet from any aquatic habitat or drainage feature.
14. No construction activity will occur in wetlands, waters, or riparian areas.
15. To prevent the inadvertent entrapment of wildlife during construction, excavated holes more than 1-foot deep with walls steeper than 30 degrees would be covered by plywood or a similar material at the close of each working day. Alternatively, an additional 4-foot-high vertical barrier, independent of exclusionary fences, would be used to prevent further inadvertent entrapment of listed species. If it is not feasible to cover an excavation or provide an additional 4-foot-high vertical barrier, independent of exclusionary fences, one or more escape ramps constructed of earth fill or wooden planks would be installed. Before such holes or trenches are filled, they would be thoroughly inspected for trapped animals.

Cultural Resources

Construction:

1. If previously unidentified cultural resources are unearthed during construction, work shall be halted in that area until a qualified archaeologist can assess the significance of the discovery.

Visual

Construction:

1. Avoid removing or damaging visual resources, such as mature trees and shrub groupings, to the extent feasible. Vegetation to remain shall be protected from construction activities with temporary fencing where vegetation is close to construction work.
2. Trees and vegetation outside of clearing and grubbing limits shall be protected from the contractor's operations, equipment, and materials storage.
3. Irrigation damaged and/or removed by project construction would require repair/replacement. Provide manual truck watering of vegetation when automatic irrigation is interrupted by construction. Maintain existing plants until the irrigation system is repaired and functioning. Any replacement planting and irrigation should be funded by the parent roadway contract.
4. All disturbed ground surfaces shall be restored and treated with erosion control.
5. During construction operations, unsightly materials and equipment in staging areas shall be placed where they are least visible and/or covered, to the extent feasible.
6. Construction activities shall limit all construction lighting to within the area of work and avoid light trespass to residential areas by utilizing directional lighting, shielding, and other measures as needed.



CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION DETERMINATION FORM

7. Minimize fugitive light from portable sources used during construction or determine if construction adjacent to residences can be limited to daylight hours to minimize nighttime impacts to sensitive viewers.

Water Quality

PS&E/ Before RTL:

1. Projects with construction costs exceeding \$5 Million located within Significant Trash Generation Areas (STGA) need to address the requirements for Total Maximum Daily Load (TMDL) implementation and trash reduction within the California Department of Transportation (Caltrans) right of way (R/W) to meet the requirements of the Caltrans Statewide National Pollutant Discharge Elimination System (NPDES) permit. Hence this project is required to implement Trash capture to extent possible. Reviewing the corridor on Google earth we determined the corridor is not suitable for installation of end of pipe Trashnet for implementing trash capture. Gross Solid Removal Devices (GSRDs) for trash removal may be possible and will be assessed as Trash Capture strategy during the PS&E phase of the project.

Construction:

1. Job Site Management: This practice implements effective handling, storage, usage, and disposal practices to control material pollution and manage waste at the job site before they enter storm drain systems and receiving waters. This practice also recommends concrete waste management to minimize or eliminate the discharge of concrete waste material to the storm drain systems.
2. Drainage inlet protections will be deployed prior to construction start. If needed fiber rolls will be placed on the toe and face of slopes to intercept runoff, reduce its flow velocity, release the runoff as sheet flow and provide removal of sediment from the runoff.
3. Waste management and materials pollution control will include: material delivery & storage, spill prevention and control, solid waste management, hazardous waste & contaminated soil management, and sanitary/septic and liquid waste management.
4. Non-storm water management will include: water conservation practices, potable water, vehicle & equipment operations (fueling, cleaning, & maintenance).
5. Stockpile Management: This practice is needed to reduce or eliminate air and storm water pollution from stockpiles of soil, and paving materials.
6. Stabilized construction entrance/ exit and street sweeping.
7. Wind erosion controls include temporary covers, hydraulic mulch, hydroseeding, and wood mulching.
8. Design pollution prevention (DPP) BMPs will be applied for post construction erosion control since project involves (DSA) within project limits to control post construction impacts resulting from the project.

Hazardous Waste

PS&E/ Before RTL:

1. A site investigation will be performed during the PS&E phase for soil sampling and testing.



**CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION
DETERMINATION FORM**

Construction:

1. The removal of guardrail will result in Treated Wood Waste (TWW) that must be properly handled and disposed of.

Please see attached Environmental Commitment Record.






3W200 CE Determination Form

Final Audit Report

2025-10-07

Created:	2025-10-07
By:	Lauren Guevara (s160932@dot.ca.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAAXyvofhzJ7ybCEiNSTq-3B17MoriUJkg6

"3W200 CE Determination Form" History

-  Document created by Lauren Guevara (s160932@dot.ca.gov)
2025-10-07 - 9:57:04 PM GMT- IP address: 149.136.25.253
-  Document emailed to Emmanuel Okereke (emmanuel.okereke@dot.ca.gov) for signature
2025-10-07 - 9:58:44 PM GMT
-  Email viewed by Emmanuel Okereke (emmanuel.okereke@dot.ca.gov)
2025-10-07 - 9:59:27 PM GMT- IP address: 149.136.25.253
-  Document e-signed by Emmanuel Okereke (emmanuel.okereke@dot.ca.gov)
Signature Date: 2025-10-07 - 10:02:24 PM GMT - Time Source: server- IP address: 149.136.25.253
-  Agreement completed.
2025-10-07 - 10:02:24 PM GMT



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ATTACHMENT E
ROW DATA SHEET

To: Design Alameda

Date: 01/31/2025
Dist 04-ALA-580- PM R32.13/45.65
04-ALA-13-PM R4.26/4.32

Attention: NICHOLAS GRGICH
Project Engineer
Design Alameda

Project ID: 04-2100-0325 (EA 3W200)

From: MONA POON
Right of Way Resource Manager

D.S. 7874

Proj. Descr. Collision Reduction Program

Subject: Current Estimated Right of Way Costs

We have completed an estimate of the right of way costs for the above referenced project based on maps we received from you on December 5, 2024 and the following assumptions and limiting conditions.

- 1. The mapping did not provide sufficient detail to determine the limits of the right of way required.
- 2. The transportation facilities have not been sufficiently designed so our estimator could determine the damages to any of the remainder parcels affected by the project.
- 3. Additional right of way requirements are anticipated, but are not defined due to the preliminary nature of the early design requirements.
- 4. This estimate does not include \$ _____ right of way costs previously incurred on the project, which may affect the total project right of way costs for programming purposes.
- 5. We have determined there are no right of way functional involvements in the proposed project at this time, as designed.
- 6. This Data Sheet is being completed without an estimate for Environmental Permit Fees or Mitigation Costs.

Right of Way Lead Time will require a minimum of 6 months after we begin receiving final right of way requirements, necessary environmental clearance has been obtained, and freeway agreements have been approved. From the date of receipt of final right of way requirements, we will require a minimum of 4 months prior to the date of certification of the project. Shorter lead times will require either more right of way resources or an increased number of condemnation suits to be filed. Either of these actions may reflect adversely on the District's other programs or our public image generally.



Right of Way Resource Manager

Attachments:

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

RIGHT OF WAY DATA SHEET

TO: Office of Design Alameda

Date 01/31/2025 D.S. # 7874

Dist. 04 Co. Ala Rte Var PM Var

EA 3W200 (04-2100-0325)

ATTN: Nicholas Grgich
 Project Engineer

Project Description: Collision Reduction Program

SUBJECT: Right of Way Data - Alternate No. _____

1. Right of Way Cost Estimate:

	Current Value (Future Use)	Escalation Rate	Escalated Value
A. Acquisition, including Excess Lands, Damages, and Goodwill	<u>\$0.00</u>	%	<u>\$0.00</u>
Permits			<u>\$0.00</u>
Environmental Mitigation			<u>\$0.00</u>
Grantor's Appraisal Cost			<u>\$0.00</u>
B. Utility Relocation (State Share)	<u>\$0.00</u>	%	<u>\$0.00</u>
C. Railroad (from page 6)			<u>\$0.00</u>
D. Relocation Assistance	<u>\$0.00</u>	%	<u>\$0.00</u>
E. Clearance Demolition	<u>\$0.00</u>	%	<u>\$0.00</u>
F. Title and Escrow Fees	<u>\$0.00</u>	%	<u>\$0.00</u>
G. <u>TOTAL ESCALATED VALUE</u>			<u>\$0.00</u>
H. Construction Contract Work	<u>\$0.00</u>		
I. Railroad Phase 4 Costs	<u>\$0.00</u>		
J. Utility Phase 4 Costs	<u>\$0.00</u>		

2. Anticipated Date of Right of Way Certification _____

4/15/2027

3. Parcel Data:

Type	Dual/Appr	Utilities Involvements	RR Involvements
X		Utility Verification <u>10+</u>	None <u>X</u>
A		Positive Identification <u>0</u>	C&M Agrmt _____
B		Utility Relocation <u>0</u>	R/W Agrmt _____
C		Other (Specify) <u>0</u>	Design _____
D			Const. _____
E	<u>XXXX</u>		Lic/RE/Clauses _____
F	<u>XXXX</u>		Misc R/W Work _____
Total	<u>0</u>		RAP Displ <u>0</u>
			Clear Demo <u>0</u>
			Const. Permits <u>0</u>
			Condemnation <u>0</u>

Areas: Right of Way _____

No. Excess Parcels _____

Excess _____

4. Are there any major items of construction contract work?
Yes No (If yes, explain)
5. Provide a general description of the right of way and excess lands required(zoning, use, major improvements critical or sensitive parcels, etc.).
No right of way required.
Work to take place in existing right of way.
6. Is there an effect on assessed valuation? (If yes explain)
Yes Not Significant No
7. Are utility facilities or rights of way affected? Yes No
(If yes, attach Utility Information Sheet Exhibit 01-01-05)
8. Are railroad facilities or rights of way affected? Yes No
(If yes, attach Railroad Information Sheet Exhibit 01-01-06)
9. Were any previously unidentified sites with hazardous waste and/or material found?
Yes None evident
(If yes, attach memorandum per Procedural Handbook Volume 1, Section 101.011)
10. Are RAP displacements required? Yes No
(If yes, provide the following information)
- No. of personal property relocations _____
- No. of single family _____ No. of business/non profit _____
- 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.
11. Are material borrow and / or disposal sites required? Yes No
(If yes, explain)
12. Are there potential relinquishments / abandonments? Yes No
(If yes, explain)
13. Are there any existing and/or potential Airspace sites? Yes No
(If yes, explain)

14. Are there Permit Fees? Yes No
(If yes, explain)
No Permit Fees per email from Nicholas Grgich, PE dated 12-16-24.
15. Are there Environmental Mitigation Costs? Yes No
(If yes, explain)
No Mitigation Costs per email from Nicholas Grgich, PE dated 12-16-24.
16. Indicate the anticipated Right of Way schedule and lead time requirements.
Based on the R/W Requirements on Page 1 of this Data Sheet, R/W will require a lead time of 6 months from the date regular appraisals can begin to project certification.
17. Is it anticipated that all Right of Way work be performed by CALTRANS staff?
Yes No (If no, discuss)

Assumptions and Limiting Conditions

- This data sheet was completed without a hazardous waste/materials report or an estimate for Permit Fees or Environmental Mitigation Costs.
- Information on this data sheet was based on maps provided by Nicholas Grigich on 12/5/2024

Evaluation Prepared By: Dan Asprogerakas

Right of Way: Name Dan Asprogerakas Date 01/22/2025

Railroad: Name Alden Chalk Date 01/22/2025

Utilities: Name Johnny Young Date 01/22/2025

Recommended for Approval:



Right of Way Capital Cost Coordinator

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



Chief, R/W Appraisal Services

01/23/2025

Date

cc: Program Manager
Project Manger

UTILITY INFORMATION SHEET

1. Utility owners located within project limits:
PG&E (gas and electric), AT&T, Comcast, EBMUD, Alameda County, City of Oakland, City of Hayward Water, City of San Leandro, Castro Valley

2. Facilities potentially impacted by project (if known, include Owners(s) & facility type(s)):
None anticipated.

3. Anticipated Workload:

<u>10+</u>	Utility Verification Required
<u>0</u>	Positive Identification
<u>0</u>	Utility Relocation
<u>0</u>	Other (Specify)

4. Additional information concerning anticipated utility involvements (include limiting conditions and a narative addressing likelihood that conflicts will occur);

_____ Involves possible relocation of electric transmission facilities
(If X'd, Data sheet should be forwarded to environmental)

_____ Utility agreements will be required for this project due to CCW on public utility facilities for all public utility relocations and adjustments, including but not limited to, manhole cover adjustments to grade (unless determined & specified in writing by the Utility Engineering Workgroup (UEW) that none are required for this project). A minimum lead-time of 12 months from PA&ED to RWC is needed to secure the utility agreement(s) and specifications as required for the RWC and PS&E milestones. Leadtime requires that UEW provide RW Utilities with a conflict memo and maps no later than the PA&ED milestone.

5. Estimated Costs:
Positive Identification \$ 0.00

None anticipated.

Utility Relocation \$ 0.00

All facilities will be worked around.

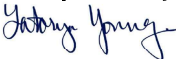
Phase 4* \$ 0.00

None anticipated.

*not apart of page 1 total

ESTIMATED STATE SHARE OF COSTS \$ 0.00

Prepared by: Latorya Young



Right of Way Utility Coordinator

01.08.2025

Date

Right of Way Workplan

Date: 3/3/25

Project ID No: 0421000325

Project Manager: E.Okereke

Programmed RW Support: \$60,000

PA&ED Date or Transmittal: 10/20/25

RWC Date: 4/15/27

Prepared by: D.Mars

Please note that this estimate only contains the hours needed by RW Agents. You must also obtain an estimate from Land Surveys for a complete support cost total for the Office of Right of Way.

150	Start Date:	
Phase K	End Date:	
(Data Sheet & PID)	Hours Needed	
0849 DDD R/W		
0850 Acq/P&M O.C.		
0852 Utilities O.C.		
0851 Appraisals O.C.		
0856 Proj. Coord.		
0859 Capital Mgmt.		
0860 Appraisals		
0867 Railroad		
0869 Utilities		

255	Start Date:	
Phase 1	End Date:	
(Certification - PSE)	Hours Needed	
0850 Acq./P&M O.C.	20	
0851 Appraisals O.C.		
0852 Utilities O.C.		
0856 Proj. Coord.	40	
0860 Appraisals		
0865 Acquisitions		
0867 Railroad		
0869 Utilities	10	

200	Start Date:	10/20/2025
Phase 2	End Date:	4/15/2028
(Utilities)	Hours Needed	
0849 DDD R/W		
0852 Utilites O.C.		
0856 Proj. Coord.		
0859 Capital Mgmt		
0869 Utilities		
0882 Clerical		

160	Start Date:	
Phase 0	End Date:	
(Util. Verifications, RR study, PR, &/or Updated Datasheet)	Hours Needed	
0849 DDD R/W		
0850 Acq./P&M O.C.		
0851 Appraisals O.C.		
0852 Utilities O.C.		
0856 Proj. Coord.		
0859 Capital Mgmt.		
0860 Appraisals		
0865 Acquisitions		
0867 Railroad		
0869 Utilities		
0876 Rap		
0882 Clerical		

100.25	Start Date:	10/20/2025
Phase 2	End Date:	4/15/2028
(Project Mgmt)	Hours Needed	
0849 DDD R/W		
0850 Acq /P&M O.C.		
0856 Proj. Coord.		
0859 Capital Mgmt		
0854 Data Mgmt O.C.		
0763 Data Mgmt Staff		

225	Start Date:	10/20/2025
Phase 2	End Date:	4/15/2027
(Pre-Cert Work)	Hours Needed	
0849 DDD R/W		
0850 Acq /P&M O.C.		
0851 Appraisals O.C.		
0856 Proj. Coord.		
0859 Capital Mgmt		
0860 Appraisals		
0865 Acquisitions		
0867 Railroad		
0868 Acq. Spec. (R.A.)		
0873 Demolition		
0876 RAP		
0882 Clerical		


195	Start Date:	
Phase 2	End Date:	
(Prop Mgmt & Excess Land)	Hours Needed	
0851 Appraisals O.C.		
0856 Proj. Coord.		
0860 Appraisals		
0872 Prop Mgmt		
0875 Excess Lands		
0874 Airspace		
0882 Clerical		

245	Start Date:	4/16/2027
Phase 2	End Date:	4/15/2028
(Post-Cert Work)	Hours Needed	
0849 DDD R/W		
0850 Acq /P&M O.C.		
0851 Appraisals O.C.		
0859 Capital Mgmt		
0860 Appraisals		
0865 Acquisitions		
0867 Railroad		
0868 Acq. Spec. (R.A.)		
0873 Demolition		
0876 RAP		
0882 Clerical		

185	Start Date:	
Phase 1	End Date:	
(Updated datasheet, if needed)	Hours Needed	
0850 Acq/P&M O.C.		
0851 Appraisals O.C.		
0856 Proj. Coord.		
0859 Capital Mgmt.		
0860 Appraisals		
0867 Railroad		
0869 Utilities		

Total hours required (RW Agents Only):	70
Total RW COS (RW Agents Only):	\$9,450
Phase 2 only COS (RW Agents Only):	\$0

Approved By:


 Shella Orson (Mar 3, 2025 12:16 PST)
 Shella Orson
 District Branch Chief
 R/W Project Coordination

Please contact 4-Land.Surveys@dot.ca.gov for Land Surveys Support Cost Estimates












data sheet 3W200

Final Audit Report

2025-03-03

Created:	2025-03-03
By:	David Mars (s136332@dot.ca.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAADWIL53rhgvqeCL00OE1rMBKkz85BH-vy

"data sheet 3W200" History

-  Document created by David Mars (s136332@dot.ca.gov)
2025-03-03 - 8:11:45 PM GMT- IP address: 157.131.72.139
-  Document emailed to Shella Orson (shella.orson@dot.ca.gov) for signature
2025-03-03 - 8:12:20 PM GMT
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Signature Date: 2025-03-03 - 8:16:23 PM GMT - Time Source: server- IP address: 149.136.25.253
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Approval Date: 2025-03-03 - 8:17:11 PM GMT - Time Source: server- IP address: 149.136.25.244
-  Document emailed to Allison Paich (allison.paich@dot.ca.gov) for acceptance
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-  Document accepted by Allison Paich (allison.paich@dot.ca.gov)
Acceptance Date: 2025-03-03 - 8:24:12 PM GMT - Time Source: server- IP address: 149.136.25.248
-  Agreement completed.
2025-03-03 - 8:24:12 PM GMT



ATTACHMENT F

SWDR

Long Form – Stormwater Data Report



Dist-County-Route: ALA-580 & ALA-13
Post Mile Limits: RT580 PM 32.13/45.65 & RT13 PM 4.26/4.32
Type of Work: Safety - Collision Severity Reduction
Project ID (EA): 0421000325, EA 3W200

Phase: PID PA/ED PS&E

Applicable Caltrans Post Construction Treatment Requirement: 2012 2022

Regional Water Quality Control Board(s): Region 2

Total Disturbed Soil Area: 3 Acres PCTA: 3 Acres

Alternative Compliance: 0.0 Acres ATA 2 (50% Rule)? Yes No

Estimated Const. Start Date: 1/06/2028 Est. Const. Completion Date: 2/15/2030

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: _____ No

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

Cyrus Vafai 3/11/2025
Cyrus Vafai, Registered Project Engineer/Landscape Architect Date

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

Emmanuel Okereke 03/12/2025
Emmanuel Okereke, Project Manager Date

Amrinder Jhaji 03/14/2025
Amrinder Jhaji, District Maintenance Stormwater
Coordinator Date

Chugiao Zeng 03/14/2025
Doris Zeng, Designated Landscape Architect
Representative Date

[Stamp Required at PS&E only] Mojgan Osoli 3/14/2025
Mojgan Osoli, District/Regional Design SW
Coordinator or Designee Date

ATTACHMENT G
TMP DATA SHEET

TRANSPORTATION MANAGEMENT PLAN DATA SHEET

(Preliminary TMP Elements and Costs)

Co-Rte-PM	<u>ALA-580-PM R32.13/45.65</u>	EA	<u>3W200</u>	Project Engineer	<u>Nicholas</u>
	<u>ALA-13-PM 4.26/4.32</u>	ID	<u>0421000325</u>		<u>Grgich</u>
Project Limit	<u>In Alameda County, on Route 580 from 0.2 mi west of 159th Ave. to 0.1 mi east of Market St.; on Route 13 from Route 580 to Mountain Blvd UC</u>				
Project Description	<u>Replace median barrier, overhead sign structures and sign panels, install Light Emitting Diode (LED) safety lights, and upgrade guardrail.</u>				

1) Public Information

- | | | | |
|-------------------------------------|--|----|--------|
| <input type="checkbox"/> | a. Brochures and Mailers | \$ | |
| <input checked="" type="checkbox"/> | b. Press Release | | |
| <input type="checkbox"/> | c. Paid Advertising | \$ | |
| <input type="checkbox"/> | d. Public Information Center/Kiosk | \$ | |
| <input type="checkbox"/> | e. Public Meeting/Speakers Bureau | | |
| <input type="checkbox"/> | f. Telephone Hotline | | |
| <input type="checkbox"/> | g. Internet, E-mail | | |
| <input type="checkbox"/> | h. Notification to impacted groups
(i.e. bicycle users, pedestrians with disabilities, others...) | | |
| <input checked="" type="checkbox"/> | i. Others <u>As determined by PIO</u> | \$ | 10,000 |

2) Traveler Information Strategies

- | | | | |
|-------------------------------------|--|----|--------|
| <input type="checkbox"/> | a. Changeable Message Signs (Fixed) | \$ | |
| <input checked="" type="checkbox"/> | b. Changeable Message Signs (Portable) | \$ | 40,000 |
| <input checked="" type="checkbox"/> | c. Ground Mounted Signs | \$ | 20,000 |
| <input type="checkbox"/> | d. Highway Advisory Radio | \$ | |
| <input type="checkbox"/> | e. Caltrans Highway Information Network (CHIN) | | |
| <input type="checkbox"/> | f. Detour maps (i.e. bicycle, vehicle, pedestrian...etc) | | |
| <input type="checkbox"/> | g. Revised Transit Schedules/maps | | |
| <input type="checkbox"/> | h. Bicycle community information | | |
| <input type="checkbox"/> | i. Others | | |
| | | \$ | |

3) Incident Management

- | | | | |
|-------------------------------------|--|----|-----------|
| <input checked="" type="checkbox"/> | a. Construction Zone Enhanced Enforcement Program (COZEEP) | \$ | 1,000,000 |
| <input type="checkbox"/> | b. Freeway Service Patrol | \$ | |
| <input type="checkbox"/> | c. Traffic Management Team | | |
| <input type="checkbox"/> | d. Helicopter Surveillance | \$ | |
| <input type="checkbox"/> | e. Traffic Surveillance Stations
(Loop Detector and CCTV) | \$ | |
| <input type="checkbox"/> | f. Others | \$ | |

TMP Data Sheet (cont.)

4) Construction Strategies

<input checked="" type="checkbox"/>	a. Lane Closure Chart	
<input type="checkbox"/>	b. Reversible Lanes	
<input type="checkbox"/>	c. Total Facility Closure	
<input type="checkbox"/>	d. Contra Flow	
<input type="checkbox"/>	e. Truck Traffic Restrictions	\$ _____
<input type="checkbox"/>	f. Reduced Speed Zone	\$ _____
<input type="checkbox"/>	g. Connector and Ramp Closures	
<input type="checkbox"/>	h. Incentive and Disincentive	\$ _____
<input type="checkbox"/>	i. Moveable Barrier	\$ _____
<input checked="" type="checkbox"/>	j. Maintain Traffic	\$ 1,000,000
<input type="checkbox"/>	k. Others _____	\$ _____

5) Demand Management

<input type="checkbox"/>	a. HOV Lanes/Ramps (New or Convert)	\$ _____
<input type="checkbox"/>	b. Park and Ride Lots	\$ _____
<input type="checkbox"/>	c. Rideshare Incentives	\$ _____
<input type="checkbox"/>	d. Variable Work Hours	
<input type="checkbox"/>	e. Telecommute	
<input type="checkbox"/>	f. Ramp Metering (Temporary Installation)	\$ _____
<input type="checkbox"/>	g. Ramp Metering (Modify Existing)	\$ _____
<input type="checkbox"/>	h. Others _____	\$ _____

6) Alternate Route Strategies

<input type="checkbox"/>	a. Add Capacity to Freeway Connector	\$ _____
<input type="checkbox"/>	b. Street Improvement (widening, traffic signal... etc)	\$ _____
<input type="checkbox"/>	c. Traffic Control Officers	\$ _____
<input type="checkbox"/>	d. Parking Restrictions	
<input type="checkbox"/>	e. Others _____	\$ _____

7) Other Strategies

<input type="checkbox"/>	a. Application of New Technology	\$ _____
<input type="checkbox"/>	e. Others _____	\$ _____

TOTAL ESTIMATED COST OF TMP ELEMENTS = **\$ 2,070,000**

*Please note that any change in project scope, schedule, or cost will require re-submittal of TMP Data Sheet request.

PREPARED BY Lore Ahmadi DATE 2/25/2025

APPROVAL RECOMMENDED BY Mike Kerns DATE 2/25/2025

ATTACHMENT H

RISK REGISTER

DISTRICT 04

Risk Register Certification Routing Slip

EA:	04-3W200	Date:	10-27-2025
Phase:	PA&ED	Risk Level:	2
Project Name:	Proactive Safety Collision Severity Reduction	Project Manager:	Emmanuel Okereke <i>EO</i>
		Phone Number:	510 715 9293

ROUTE TO:	INITIALS & DATE	COMMENTS	PID	PA&ED	PS&E	RE File
Shahrdad Mahini Office Chief, Risk Management __ Gurmukh Thiara Risk Management Coordinator			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cameron Oakes Deputy District Director, Planning			<input type="checkbox"/>			
Design Division Chief → RichllePerez – East – Betcy Joseph – North – Fariba Zohoury – South & West	RKK <i>RP</i>	10/29/25 10/31/2025	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prog/Proj Mgmt Division Chief – Robert Effinger – North – Mohammad Suleiman – West → Ron Kiaaina – East – Nick Saleh – South	RKK	10/29/25	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
→ Christopher Caputo Deputy District Director*, Environmental	<i>MM</i> 10/31/25			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Construction Division Chief – William Bornman – South & East – Jonathan Ng – North – Joy Cheung – West					<input type="checkbox"/>	<input type="checkbox"/>
Julie Mcdaniel Deputy District Director*, Right of Way					<input type="checkbox"/>	
Please return to: AGPA: Phone <input style="width: 150px;" type="text"/> Project Manager *** Phone <input style="width: 150px; text-align: center;" type="text" value="510 715 9293"/>			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*or the respective Project Delivery Division Chief,
 **or Deputy District Director, Maintenance signature for HM projects designated by District Maintenance Division
 *** cc copy of Risk Cert to Risk Management

RISK REGISTER CERTIFICATION (ACCOUNTABILITY CHECKPOINTS) FORM

PPM-0001 (REV 03/2016)

The risk register is to be approved and signed-off by the District Deputies* listed below for all scalability levels. By signing this form, you are certifying that you have reviewed the risks documented in the register and agree that they have been managed to the extent possible by the PDT.

Project Information	<input checked="" type="checkbox"/> Capital Project <input type="checkbox"/> Major Maintenance Project (Check One)	Total Estimated Cost: \$63,611,000.00
Project ID/District-EA	0421000325 / 04-3W200	Date: 10/27/2025
Project Description	Replace median barrier, overhead structures and sign	Date: 10/27/2025
Project Manager (PM)	Emmuel Okereke	Date: 10/27/2025
Project Risk Manager (For Risk Level 3 Projects)	Gurmukh Thiara	Date: 10/27/2025
<input type="checkbox"/> No Risk Register Certification Required-Check box if project is less than \$1 million in total cost and risk register not prepared. Sign below and submit this form with PID, PA&ED, PS&E submittal, and RE Handoff File (as applicable).		
Project Manager Signature	<i>Emmanuel Okereke</i>	Date: 10-27-2025

PID (Recommended for Capital Projects Only excluding Minor Projects)		
Project Manager	_____	Date: _____
Deputy District Director, Planning	_____	Date: _____
Deputy District Director*, Design**	_____	Date: _____
Deputy District Director, Project Management	_____	Date: _____

PA&ED (Required for Capital Projects Only)		
Project Manager	<i>Emmanuel Okereke</i>	Date: 10/27/2025
<input checked="" type="checkbox"/> Deputy District Director*, Environmental	<i>Moujan Mostaghimi</i>	Date: 10/31/25
<input checked="" type="checkbox"/> Deputy District Director*, Design**	<i>Richelle P. R.</i>	Date: 10/31/2025
<input checked="" type="checkbox"/> Deputy District Director, Project Management	<i>Parkin</i>	Date: 10/29/2025

Prior to PS&E (Required for Capital Projects and Major Maintenance Projects)		
Project Manager	_____	Date: _____
Deputy District Director*, Design**	_____	Date: _____
Deputy District Director*, Construction	_____	Date: _____
Deputy District Director*, Right of Way	_____	Date: _____
Deputy District Director*, Environmental	_____	Date: _____
Deputy District Director, Project Management**	_____	Date: _____

RE File hand-off (Recommended for Capital Projects and Major Maintenance Projects)		
Project Manager	_____	Date: _____
Deputy District Director*, Design**	_____	Date: _____
Deputy District Director*, Construction	_____	Date: _____
Deputy District Director, Project Management**	_____	Date: _____

*or the respective Project Delivery Division Chief signatures in the North Region or Central Region

**or Deputy District Director, Maintenance signature for HM Projects designed by the District Maintenance Division

RISK REGISTER CERTIFICATION (ACCOUNTABILITY CHECKPOINTS) FORM

PPM-0001 (REV 03/2016)

General Instructions

What's New

The Risk Register Certification Form (Accountability Checkpoints) was established by Project Delivery Directive 09 referencing Project Risk Management Manual: A Scalable Approach, effective July 1, 2012. The signing of the risk register form at the various accountability checkpoints certifies that the Deputies and Division Chiefs have reviewed the project and risks identified in the Risk Register and agree that they have been managed to the extent possible by the Project Development Team (PDT).

Requirements

Risk Register Certification Form is needed for all capital and major maintenance projects for which the Department has delivery responsibility. The minimum risk management requirements based solely on the total project cost are:

Level	Estimated Cost (Capital and Support)	Risk Management Requirements
	Minor A, Minor B and other projects less than \$1 million	Risk register encouraged
1	<\$5 million	Risk register
2	\$5 million to \$100 million	Risk register with qualitative analysis
3	>\$100 million	Risk register with quantitative analysis

However, the project's overall complexity should determine the Risk Management Requirements for that project. Project-specific changes to the above minimum levels (1 through 3) must be approved by the Deputy District Director for Program/Project Management. The risk register shall be maintained throughout the project's lifecycle.

Risk Register Certification (Accountability Checkpoints)

The Risk Register Certification Form (PPM-0001 REV 03/2016) is to be signed off by the appropriate Deputy District Director, Project Delivery Division Chief, and Project Manager at the appropriate accountability checkpoints to ensure that risks identified on a project have been captured in the project risk register and communicated the next phase of project delivery.

The Risk Register Certification Form Accountability Checkpoints are:

- Project Initiation Document (PID) Phase: Sign-off is recommended prior to the approval of the PID for [capital projects only, excluding minor projects](#).
- Project Approval and Environmental Document (PA&ED) Phase: Sign-off is required prior to the approval of the Project Report (PR) for [capital projects only](#).
- Plans, Specifications, & Estimate (PS&E): Sign-off is required prior to submittal of PS&E to DES Office Engineers (Milestone 380) for [capital and major maintenance projects](#). For Authority to Advertise District Delegation (AADD) projects, sign-off is required prior to the PS&E submittal to District Office Engineer (Milestone 377) for projects that are submitted to DES Office Engineers for advertisement.
- RE File Hand-off: Sign-off is recommended prior to the transmittal of the RE File to the Resident Engineer for [capital and major maintenance projects](#).

General Instructions for Signing Form

Project Risk Register Certification Form is to be signed-off by the District Deputy Directors or Project Delivery Division Chiefs for capital and major maintenance projects as follows:

- For [capital projects](#), sign-off from Project Manager and Deputy District Directors, Project Delivery Division Chiefs signatures are needed in the North Region or Central Region.
- For [major maintenance projects designed by Division of Maintenance](#), sign-off by Maintenance Design Engineer as Project Manager if no project manager is assigned and signature by the Deputy District Director for Maintenance under Deputy District Director, Design and Project Management signature lines.
- [Deputy District Directors or Division Chiefs not shown](#) on the Risk Register Certification Form may be requested to be added to the form by the District with approval from the Division of Project Management.
- For projects [less than \\$1 million in total cost with no risk register](#), check "No Risk Register Certification Required" with sign-off by the Project Manager or Maintenance Engineer for HM projects (if no Project Manager).

RISK REGISTER LEVEL	2	PROJECT NAME	ALA 580 - Replace median barrier, overhead structures and sign panels, install Light Emitting Diode (LED) safety lights, and upgrade guardrail.	DIST-EA	04-3W200 (0421000325)	Project Manager	Emmanuel Okereke	RISK MANAGER	Gurmukh Thiara	TOTAL COST (Capital +Support)	\$63,611,000.00									
PROJECT PHASE	PA&E	PDT MEMBERS								TOTAL DAYS (Construction + Initial review (30 days)+ Closeout (60 days))	690									
RISK ASSESSMENT INFORMATION																				
Status	ID #	Category	Title	Risk Statement	Current Status/ Assumptions	Cost Impact			Time Impact			Phase			Individual Risk			Risk Response		
						Rating	04-Moderate	8	04-Moderate	Rating	Score	ENG/ CON	C/S	Rationale	Strategy	Response Actions	Risk Owner	Updated		
Active	1	Organization	Insufficient Programmed Funds	Programmed funds during the PID phase of work may not accurately cover the scope of work leading to a shortfalls in project funding resulting in additional cost and schedule delays.	The potential for increased capital and support costs should barrier and light pole foundation require nonstandard treatment and / or electrical wiring requires trench and soil disturbance. Currently, the PDT is reviewing project scope and revising cost estimate from PID phase.	2-Low	04-Moderate	8	04-Moderate	ENG	ENG	C	Based on input of PDT and Department's experience with past projects of similar nature.	Mitigate	Mitigation effort may include preparing a PCR to increase programmed fund, downscope project at the PA&E / PS&E phase.	PM	10/23/2025			
Active	2	PM	Incoming Higher Bids than Estimated	Incoming project's bid may be higher than allocated funds due to potential inflationary economy, field worker shortages or underestimation of costs, resulting in need for additional funds and schedule delays.	Material prices tend to go up due to changing economic conditions.	2-Low	04-Moderate		04-Moderate	ENG	ENG	C	Based on input of PDT and Department's experience with past projects of similar nature.	Mitigate	Project cost estimate will be updated during PS&E phase based on the most up to date cost data. If the bid is higher than expected, project manager will consult with program advisor and explore the available options.	PM	10/23/2025			
Active	3	Design	Traffic Control	Traffic Management Plan (TMP) may need to be revised due to significant traffic delays from project site leading to need for additional traffic control measures resulting in additional costs to the project.	TMP (Traffic Management Plan) may be underestimated during PS&E phase. Project area is spread over 13 miles.	3-Moderate	02-Low		02-Low	CON	CON	S	Based on input of PDT and Department's experience with past projects of similar nature.	Accept	Design will continue to work with TMP team for traffic control during PS&E. If additional traffic control measures/devices need to be installed during construction, RE to work with Design/Traffic Operations to resolve the issue and tap into contingency funds to cover the additional cost.	Design	10/23/2025			
Active	4	Design	Asphalt Price Index Fluctuations	An increase in cost of oil based products may lead to bid item cost increases above the anticipated estimate resulting in overall capital cost increases.	Preliminary project has over ~\$600,000 of risk. Increased oil prices index could lead to price increases to the asphalt. Project scheduled for construction in 2027 with considerable uncertainty from oil prices at that time.	2-Low	02-Low	4	02-Low	CON	CON	C	Based on input of PDT and Department's experience with past projects of similar nature.	Accept	Project estimate to account for Adjustments for Price Index Fluctuations in the Supplemental Work Item. This risk will capture an internal cost contingency for the project. Contingency will be set aside in Supplemental Work as all prices are on a rising trend.	Construction	10/23/2025			
Active	5	Environmental	Hazardous Materials (unanticipated)	Unanticipated hazardous materials encountered during construction may require mitigation, removal and disposal resulting in additional costs to the project.	The work will be done in areas where there is potential of finding ADL and other hazardous material.	2-Low	02-Low		02-Low	CON	CON	C	Based on input of PDT and Department's experience with past projects of similar nature.	Accept	Unanticipated hazardous materials are being evaluated in the engineering phase. If additional hazardous materials are discovered during construction, the project's contingency will be used to cover the additional cost to remove and mitigate contaminated materials.	Environmental	10/23/2025			
Active	6	Construction	Coordination Issues With Concurrent Projects	This project may conflict with other on-going construction projects within the area leading to project delay and resulting in additional project cost and schedule delays.	Project is scheduled to be in construction by February 2028. Given the long project limits, it is assumed that there will be conflicts with other project. PDT is currently reviewing schedule for other projects on 690.	3-Moderate	02-Low		02-Low	CON	CON	S	Based on input of PDT and Department's experience with past projects of similar nature.	Accept	Coordination clause will be incorporated in the special provision. Currently, PDT does not see any major project in construction conflict with this project but given long lead time to construction, a conflict may develop then. Projects such as EA 09800 and EA 0W200 are anticipated to be in construction before start of this project.	Design	10/23/2025			
Active	7	Construction	Unidentified Utility Conflicts	Unanticipated utilities may be encountered during construction. Work for relocation or mitigation resulting in additional project costs and schedule delays.	Unidentified utilities may be in conflict with the proposed work and may need relocation resulting in increased capital costs. Any delays in relocation or mitigation would result in additional support costs and time. Utility potholing and verification is underway.	3-Moderate	02-Low		02-Low	CON	CON	C	Based on input of PDT and Department's experience with past projects of similar nature.	Mitigate	Utility verification effort is underway in engineering phase. Study will be finalized in construction phase. Cost increases will be addressed with contingency funds.	Design	10/23/2025			
Active	8	Construction	Unidentified objects and obstructive Conflicts	Unanticipated existing objects or obstructions encountered on the project site may conflict with the construction activities leading to additional costs and potential delays.	The sections of US80 highway within the project limits were built over 60 years ago and has seen a lot of rehabilitations over the years. Available as built plans will be reviewed, but there is a good chance that some subsurface installations may be missed.	3-Moderate	02-Low		02-Low	CON	CON	C	Based on input of PDT and Department's experience with past projects of similar nature.	Accept	If any unanticipated BMMO is discovered during construction, RE to work with contractor to resolve and use project contingency funds to cover any additional cost.	Construction	10/23/2025			
Active	9	Construction	Construction Noise	Construction activities may cause disturbance to nearby residents due to the noise level exceeding permissible limit leading to public concerns and complaints resulting in additional project cost.	Most of the project will take place near residential and commercial operations. Median barrier demolition operations may produce noise level higher than 90 db.	3-Moderate	02-Low		02-Low	CON	CON	C	Based on input of PDT and Department's experience with past projects of similar nature.	Accept	Mitigation measures will be incorporated into the project plans during PS&E phase. If risk materializes, the project's contingency and C-12 funds will be used to cover the cost from additional work to implement noise reduction measures.	Construction	10/23/2025			
Active	10	Construction	As-builts Do Not Reflect In-situ Conditions	Existing as-builts may not accurately reflect the existing conditions in the field, leading to unanticipated additional work or conflict mitigation resulting in additional cost and schedule delays during construction...	Design is currently using as-built information for the planned work. As built plans for all locations may not be available. Assumptions coupled with pot holing will be used to fill in the gaps	2-Low	04-Moderate		04-Moderate	CON	CON	C	Based on input of PDT and Department's experience with past projects of similar nature.	Accept	Design will be incorporating the as-builts and survey data into the plans and continue to account for the field conditions during PS&E. During construction phase, risk will be accepted upon confirming and mitigation measures will be taken.	Construction	10/23/2025			

RISK REGISTER LEVEL	2	PROJECT NAME	ALA 580 - Replace median barrier, overhead structures and sign panels, install Light Emitting Diode (LED) safety lights, and upgrade guardrail.	DIST-EA	04-3W200 (0421000325)	Project Manager	Emmanuel Okereke	RISK MANAGER	Gurmukh Thiara	TOTAL COST (Capital +Support)	\$63,611,000.00				
PROJECT PHASE	PA&E	PDT MEMBERS								TOTAL DAYS (Construction + Initial review (30 days)+ Closeout (60 days))	690				
RISK ASSESSMENT INFORMATION															
Status	ID #	Category	Title	Risk Statement	Current Status/ Assumptions	Cost Impact		Time Impact		Individual Risk		Strategy	Response Actions	Risk Owner	Updated
						Probability	Rating	Score	Rating	Score	Phase				
Active	11	Survey	Lack of Survey Data	Limited or lack of survey data or late survey data may lead to unverified design assumptions or too many revisions resulting in project delay, additional cost and scope changes in future phases.	Design has made survey map request. Further evaluations will depend on the completeness and when the survey data is received.	3-Moderate	04-Moderate	04-Moderate	04-Moderate	ENG	C	Mitigate	Design is working with Survey to ensure that all survey requirements are completed in PA&E. Any remaining survey maps can be provided in PS&E phases. Should additional funds be needed, G-12 may be sought.	Design	10/23/2025
Active	12	Traffic/Safety	Lane Closure hours / Working window	The project may have insufficient working window from current lane closure hours, leading to a need for lane closure review resulting in additional schedule delays during construction.	The PDT is currently working on the lane closure charts. Provisions shall be made for extending lanes closure hours when necessary.	2-Low	02-Low	04-Moderate	04-Moderate	ENG	C	Mitigate	PM is closely monitoring the see if the working windows are sufficient for PCC slab replacement.	PM	10/23/2025
Active	13	Organization	Public Concerns and Complaints	The project may experience public concerns or complaints during the life of the project leading to delays or additional work to mitigate concerns or complaints resulting to additional cost and schedule delays.	Project limits are long and passes through residential areas. The project may experience public concern and complaints due to construction activities and traffic controls.	3-Moderate	02-Low	02-Low	04-Moderate	ENG	S	Mitigate	PM will work with PIO office to keep the public informed and address any complaint. Any effect on capital and support cost will be covered with contingency and G-12 funds.	PM	10/23/2025
Active	14	Design	Increased Scope of Work	Project scope may increase above and beyond the originally programmed, leading to extra design effort resulting in additional cost and schedule delays to RTL the project.	Currently, discussions with the structure team indicate that additional structures or replacement of existing structures may be needed. Estimates are being prepared.	3-Moderate	04-Moderate	04-Moderate	04-Moderate	ENG	C	Accept	Any scope changes will be decided based on the availability of funds, otherwise PM to consult with management and process PCR for additional funds.	PM	10/23/2025
Active	15	PM	Support Cost Increase	Unforeseen project design issues not anticipated in the PID phase leading to spike in support cost for consumption resulting in additional support cost and possible schedule delay.	Currently, discussions on lighting, retaining walls, bridge treatment and additional structures or replacement of existing structures or new designs may be needed.	3-Moderate	04-Moderate	04-Moderate	04-Moderate	CON	S	Mitigate	Should additional support cost be needed, PM may initiate a PCR or use G-12 capacity as appropriate	PM	10/23/2025
Active	16	Construction	Material Procurement	State Furnished Materials may incur long lead times during construction leading to inefficiency resulting in additional cost and potential schedule delays.	Specialty equipment / material may take longer for delivery.	2-Low	02-Low	02-Low	04-Moderate	CON	C	Accept	Construction to work with Electrical to facilitate the placement of order for material in advance to reduce the chances of unnecessary delays.	Construction	10/23/2025
Active	17	Design	Inconsistent Quantities Estimate	The ASHTO Estimate System may underestimate quantity pricing in the PS&E phase leading to higher bids and need for additional funds to allocate	The ASHTO estimating system uses past pricing estimation. Item prices may change due to inflation.	3-Moderate	02-Low	01-Very Low	04-Moderate	ENG	C	Mitigate	PDT may be requesting G-12 or supplemental funds for award if risk materializes	Design	10/23/2025
Active	18	Design	Utility Design Constraint	Existing utility infrastructure to remain in place may impose design constraints leading to redesign or relocation resulting in additional costs and schedule delays.	Pol haling and utility investigation will be done. Project is in PA&E phase and currently no utility constraints have been discovered	3-Moderate	04-Moderate	04-Moderate	04-Moderate	ENG	C	Mitigate	Utility conflicts are yet to be discovered. If risk materializes, PM to request G12 funds to cover additional effort during PS&E phase.	Design	10/23/2025
Active	19	Environmental	Regulated Species	Federally/State listed species are protected from any harassment under FESA (Federal Endangered Species Act) and CESA (California Endangered Species Act), and if found in project site may impact construction activities leading to stopped work resulting in additional project cost and schedule delays.	Federal and state listed species may be encountered in the work zone.	2-Low	02-Low	04-Moderate	04-Moderate	CON	C	Mitigate	Perform early field reviews to evaluate and investigate potential presence of special listed species. In case of any unanticipated findings of listed species, the RE to contact the Biologist to assess the findings and wait till the work area is cleared by Biologist to continue the work.	Environmental	10/23/2025
Active	20	Environmental	Bird Nesting Season	Nesting birds, protected from harassment under the MTA (Migratory Bird Treaty Act) and CFGC (California Fish and Game Code), may require additional construction activity work around during the bird nesting season resulting to additional project cost and schedule delays.	Project area is surrounded by trees and shrubs, where bird nests may be present.	2-Low	02-Low	04-Moderate	04-Moderate	CON	C	Accept	Perform early field reviews to evaluate and investigate potential presence of nesting birds. If any nesting birds are encountered during construction, the Biologist will assess the conditions before the work area is cleared for further construction activities.	Environmental	10/23/2025

RISK REGISTER LEVEL	PROJECT PHASE	2	PROJECT NAME	RISK ASSESSMENT INFORMATION										TOTAL COST (Capital +Support)	Risk Owner	Updated	
				PA&ED	PDT MEMBERS	ALA 580 - Replace median barrier, overhead structures and sign panels, install Light Emitting Diode (LED) safety lights, and upgrade guardrail.	DIST-EA	04-3W200 (0421000325)	Project Manager	Emmanuel Okereke	RISK MANAGER	Phase	Capital / Support				Individual Risk
PROJECT PHASE		PA&ED	PDT MEMBERS	RISK IDENTIFICATION										TOTAL DAYS (Construction + Initial review (30 days)+ Closeout (60 days))			690
Status	ID #	Category	Title	Risk Statement	Current Status/ Assumptions	Probability	Cost Impact	Time Impact	Rating	Score	ENG/ CON	C/S	Rationale	Strategy	Response Actions	Risk Owner	Updated
Active	21	Environmental	Permits	Any changes from the project scope may lead to additional environmental permits or additional permit review time resulting in project schedule delay and increase in project cost.	Currently project is designated as CEICE and no permits.	2-Low	02-Low	04-Moderate	4	8	ENG	S	Based on input of PDT and Department's experience with past projects of similar nature.	Mitigate	Environmental & the PDT will communicate with the resource agencies early & often to determine the need for permits & work towards the timely approvals.	Environmental	10/23/2025
Active	22	Electrical	Inadequate Power / Service Connection	Project may not have adequate power or service connection to meet the need of the electrical improvement leading to reengineering from service provider resulting in additional cost and schedule delays.	Lighting is part of the scope of project. Electrical Unit is studying the potential need for PG&E power supply.	3-Moderate	02-Low	04-Moderate	6	12	CON	C	Based on input of PDT and Department's experience with past projects of similar nature..	Mitigate	Design and Electrical Design will need to coordinate effectively early on the in PS&E phase to determine service matching the current project needs.	Design	10/23/2025
Active	23	Electrical	Existing Electrical Facilities	Existing electrical facilities may be insufficient or lack capacity to accommodate proposed electrical infrastructure leading to redesign and upgrades resulting in additional cost and schedule delay.	Lighting is part of the scope of project. Electrical Unit is studying the potential need for upgrades.	3-Moderate	02-Low	02-Low	6	6	CON	C	Based on input of PDT and Department's experience with past projects of similar nature..	Accept	Design and Electrical Design will need to coordinate effectively early on the in PS&E phase to determine the adequacy of existing facilities matching the current project needs.	Design	10/23/2025
Active	24	Electrical	PG&E Service Point	PG&E service connection location may change from original location leading to redesign of service point resulting in additional cost and schedule delays.	Electrical unit is studying the potential need for PG&E power and location of service points.	2-Low	02-Low	02-Low	4	4	ENG	S	Based on input of PDT and Department's experience with past projects of similar nature..	Accept	Design to work closely with Electrical for service locations and apply for new connection at the earliest for the timely installation.	Design	10/23/2025
Active	25	Hydraulic	Drainage Modifications	Drainage modifications to the existing systems called out on plans may need additional weakening in the field leading to RFI (request for information) and CCO (Contract Change Order) resulting in additional costs and time.	The project does not anticipate major (drainage improvement).	2-Low	01-Very Low	01-Very Low	2	2	CON	C	Based on input of PDT and Department's experience with past projects of similar nature..	Accept	RE to work with contractor to resolve any unanticipated drainage improvements / conflicts during construction and use project contingency funds to cover additional cost.	Construction	10/23/2025
Active	26	Hydraulic	Existing Underground Drainage Facility	Existing underground drainage facilities may conflict with proposed project work leading to redesign or modification to avoid or relocate existing drainage infrastructure resulting in additional cost and schedule delay.	Median barrier foundation may interfere with underground drainage facilities.	3-Moderate	02-Low	02-Low	6	6	CON	C	Based on input of PDT and Department's experience with past projects of similar nature..	Accept	Known existing drainage facilities in conflict with plans. RE to work with contractor to resolve any unanticipated drainage conflict during construction.	Construction	10/23/2025
Active	27	Construction	Differential Site Conditions	Site conditions may differ during construction than assessed in project development phases. Design assumptions may be outdated or inaccurate that may lead to major cost increase.	Soil data may not match the actual field conditions.	2-Low	04-Moderate	02-Low	8	4	CON	C	Based on input of PDT and Department's experience with past projects of similar nature..	Mitigate	Design to account for all known field conditions during PS&E phase up to RTL of the project. If any differing conditions are encountered during construction, RE to work with contractor to resolve the situation by utilizing contingency funds.	Construction	10/23/2025
Active	28	Construction	Weather Delays	Unfavorable weather condition may affect certain construction activities and/or weather dependent activities leading to potential delay of critical path activities resulting in schedule delays.	Replacement of the median barrier and repair of excavated roadway may be affected by unfavorable weather. Current project scope will need three construction seasons to complete.	2-Low	02-Low	02-Low	4	4	CON	S	Based on input of PDT and Department's experience with past projects of similar nature..	Mitigate	Weather dependent activities will be prioritized and conducted looking at the favorable weather forecast days.	Construction	10/23/2025
Active	29	Construction	Additional SWPPP Work	Unfavorable weather condition may affect certain construction activities and/or weather dependent activities leading to additional SWPPP work resulting in additional support and capital cost.	Current project scope will need three construction seasons to complete. Additional SWPPP work will be necessary if work extends into another season.	2-Low	02-Low	02-Low	4	4	CON	C	Based on input of PDT and Department's experience with past projects of similar nature..	Mitigate	If project extends to another season, additional SWPPP cost will be covered by using project contingency funds.	Construction	10/23/2025
Active	30	Construction	Utility Service Activation Delay (PG&E / AT&T / ETC)	Construction project Utility activation for inspection, acceptance and Switch on may exceed contract acceptance due date as a result of delays from utility owners leading to extra construction cost and potential delay in completing the construction project on time and on budget	Currently only PG&E activation is anticipated.	2-Low	02-Low	04-Moderate	4	8	CON	S	Based on input of PDT and Department's experience with past projects of similar nature..	Mitigate	Utility activation related delays resulting support or capital cost increase will be funded via G-12, contingency and ultimately a supplemental request if necessary and as applicable. Delay in CCA will be accepted and application for approval project completion extension will be made.	Construction	10/23/2025

RISK REGISTER LEVEL	PROJECT PHASE	2	PROJECT NAME	AL A 580 - Replace median barrier, overhead structures and sign panels, install Light Emitting Diode (LED) safety lights, and upgrade guardrail.				DIST-EA (04-3W200 (0421000325))	Project Manager	Emmanuel Okerete	RISK MANAGER	Gurmukh Thiara	TOTAL COST (Capital +Support)		690	
				PA&ED	PDT MEMBERS	Probability	Cost Impact						Time Impact	Risk Response		
Status	ID #	Category	Title	Risk Statement	Current Status/ Assumptions	Risk Identification		Phase	Individual Risk		Strategy	Response Actions	Risk Owner	Updated		
						Rating	Score		Rating	Score					ENG/ CON	C/S
Active	31	Construction	Quantity Overrun/ No Method Of Payment	Construction work quantities may exceed the amounts identified in the plans or sheets resulting in cost increase and schedule delays.	Project is being developed and efforts are being made to capture all costs. However, a 10% contingency will be added given the complexity and the 13 mile length of the project. However, excess quantities may exceed the capacity of contingency fund.	2-Low	02-Low	04-Moderate	4	8	CON	C	Based on input of PDT and Department's experience with past projects of similar nature..	Overrun on quantities or omitted work items resulting in capital and support cost increases will be funded via G-12, contingency and ultimately a supplemental request if necessary and as applicable. Delay in CCA will be accepted and application for approval project completion extension will be made.	Construction	10/23/2025
Active	32	Construction	CIDH Foundation Issues	Constructability issues may occur for CIDH foundation operation leading to unanticipated additional work to mitigate or resolve problems resulting in additional cost and schedule delays to the project.	Potholing will be conducted and as built plans reviewed to predict subsurface conditions. 10% contingency may be added for unforeseen conditions	2-Low	04-Moderate	04-Moderate	8	8	CON	C	Based on input of PDT and Department's experience with past projects of similar nature..	If unforeseen subsurface conditions are encountered during construction, PE to work with contractor to resolve and cover the additional cost by utilizing project contingency funds.	Construction	10/23/2025
Active	33	Construction	Long Lead Time (contractor)	Specify items may take longer than expected to fabricate and deliver, leading to project schedule delays	Lighting fixtures and visual aesthetic design machines may not be easily available.	2-Low	02-Low	04-Moderate	4	8	CON	S	Based on input of PDT and Department's experience with past projects of similar nature..	Delays in delivery of materials or equipment for construction leading to delay in CCA will be accepted and application for approval project completion extension will be made.	Construction	10/23/2025
Active	34	Design	Insufficient fund due to unforeseen design features	Additional design features as a consequence of prescribed scope of work in PID phase may result in additional cost and schedule delays.	District Design unit is currently working with all Caltrans offices to define and fill in detail requirement of project	3-Moderate	04-Moderate	02-Low	12	6	ENG	C	Based on input of PDT and Department's experience with past projects of similar nature..	Additional design features resulting in overall construction support and capital cost increase will be resolved via G-12 funding. >100% but <120% allocation, contingency fund or scope reduction as applicable. Delays in schedule will be address by streamlining, acceleration of project phases if possible or application for approval of project delay.	PM / PE	10/23/2025
Active	35	Electrical	Need to replace other signs, install overhead sign structure on Bridge and other overhead signs TOS elements requirements.	Other Signs along the 13 mile project scope including expensive overhead Sign Structure on Bridge may need to be replaced. There may be need for additional traffic Control at Bridge and other locations. There will be other traffic items increase if Overhead Signs are carrying any TOS elements. If these items are necessary following electrical studies, they will result in capital and support cost increases, as well as schedule delays.	Electrical Office is currently evaluating necessary project scope to determine project design detailed requirements	2-Low	04-Moderate	04-Moderate			ENG	C	Based on input of PDT and Department's experience with past projects of similar nature..	If inclusion of bridge sign and other sign requirements are necessary, PDT shall review possibility of downscope and obtaining additional funds via PCR.	Design	10/23/2025

ATTACHMENT I
GEOTECHNICAL REPORTS
(LIGHTING AND OVERHEAD SIGN FOUNDATIONS)

Memorandum

To: MANSUE MAMOODI
Branch Chief – Division of Design East
Design Alameda

Date: September 29, 2025

Attn: N. Grgich

File: 04-ALA-580-R32.13/R45.65
EA 04-3W200
EFIS 0421000325
Lighting Foundation

From: GEOTECHNICAL SERVICES
Office of Geotechnical Design West
Branches B and C

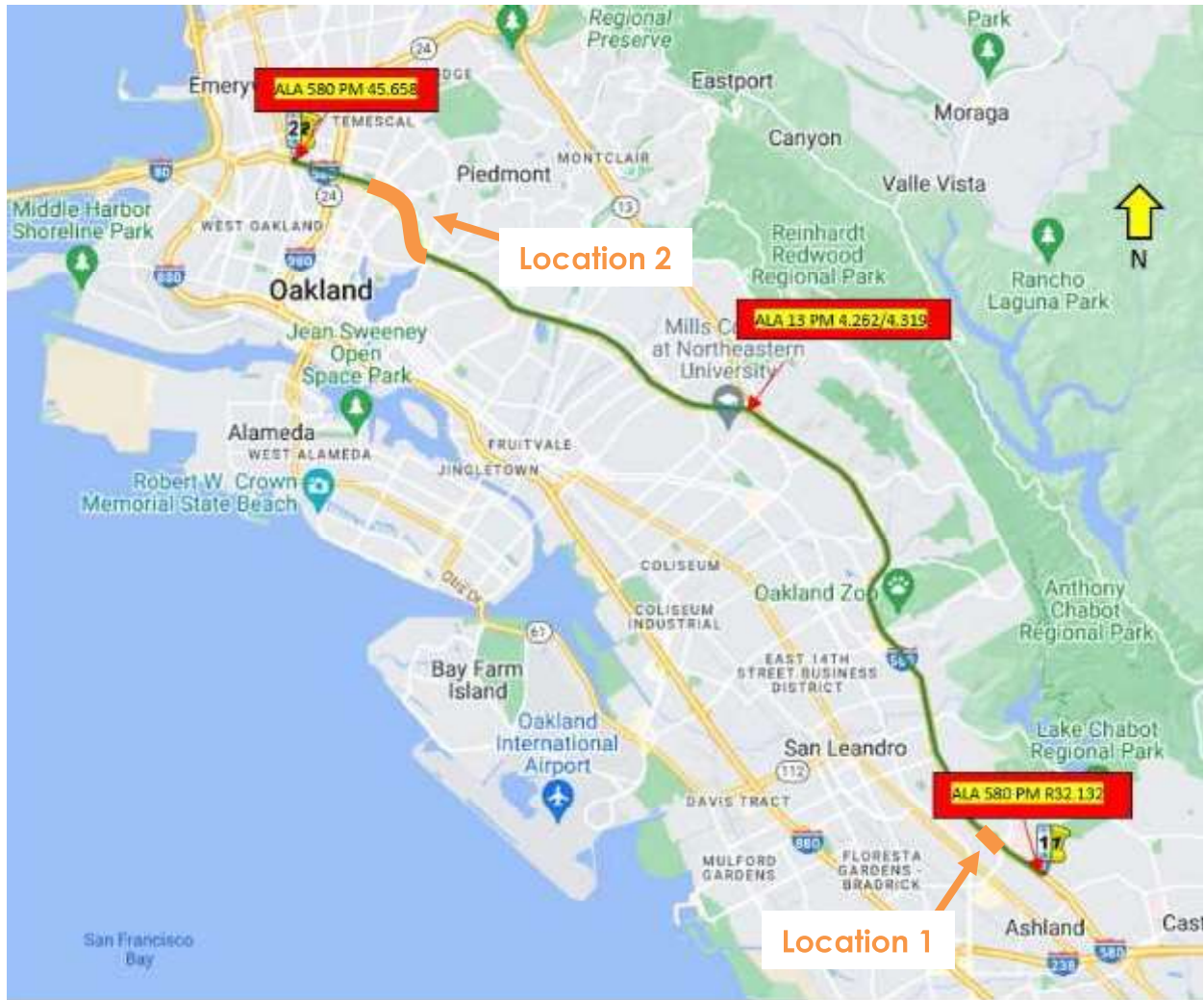
Subject: **DISTRICT PRELIMINARY GEOTECHNICAL REPORT FOR LIGHTING FOUNDATION**

INTRODUCTION

Pursuant to the email request dated July 7, 2025, this District Preliminary Geotechnical Report (DPGR) has been prepared for the new installation of lighting in the median barrier along Interstate 580. A DPGR for the overhead signs was submitted to District 4 Design East (Alameda) on June 2, 2025. The lighting foundation recommendations were not included in the original DPGR because lighting locations and foundation information were not provided. The recommendations are based on the Project Initiation Report (PIR) dated August 25, 2023, Project Description and base map received with the DPGR request dated December 20, 2024. The Project Location Map is shown in Figure 1.

Project Description

The proposed project extends from 159th Avenue Overcrossing (post mile (PM) R32.132) to the east of the Market Street Overcrossing (PM 45.65) along Interstate 580. There is also a short project segment along State Route 13 in Alameda County extending from near the intersection of State Route 13 and Interstate 580 (PM 4.26) to Mountain Boulevard Undercrossing (PM 4.32) as shown in Figure 1. The purpose of the project is to improve traffic safety and nighttime visibility along the corridor. All lighting locations are along Interstate 580. There is no new lighting proposed for State Route 13. There are two locations within the limits where new lighting will be installed. A summary of the proposed lighting locations is provided in Table 1.



ALA 580 PM R32.132/45.658 Median Barrier & Safety Lighting
ALA 13 PM 4.262/4.319 Transitional Barrier

Figure 1 Project Location Map

Table 1 – Description of Proposed Lighting Interstate 580

Lighting Locations	Post Mile Begin (Line & Station)	Post Mile End (line & Station)	Pole Type	CIDH Pile Foundation (Diameter & Depth)
1	04-ALA-580 PM 32.60 (Line "F" Station 815+00)	04-ALA-580 PM 33.0 (Line "F" Station 837+00)	21 D	Diameter 2'-6" Depth 7'-0"
2	04-ALA-580 PM 43.42 (Line "F" Station 89+75)	04-ALA-580 PM 44.70 (Line "F" Station 157+75)	21 D	Diameter 2'-6" Depth 7'-0"

All elevations referenced within this report are based on the North American Vertical Datum of 1988 (NAVD 88), unless otherwise noted. To convert an elevation at this site from National Geodetic Vertical Datum of 1929 (NGVD 29) to NAVD 88, add 2.72 feet to the NGVD 29 elevation.

GEOTECHNICAL INVESTIGATION

The Geotechnical Investigation included site visits on April 16 and 17, 2025, a review of as-built LOTB from 1958 to 1992, and published geologic maps. The as-built LOTB that were reviewed in this study are summarized in Table 2.

Table 2 – Existing Geotechnical Information

Borehole	Lighting Location	Ground Surface Elevation, ft ¹	Depth, ft	Date Completed	Notes
B-2	1	56.8	48.8	4/17/1963	As-built LOTB from 150 th Ave OC (Br. No. 33-0336), within limits of location 1.
B-6		60.0	40	4/23/1963	
B-1	2	68.7	68.7	08/01/1990	As-built LOTB from Lake Park Ave OC (Br. No. 33-0314), approximately 880 ft southeast of the eastern end of location 2 .
B-2	2	49.2	70.2	12/08/1992	As-built LOTB from Van Buren POC (Br. No. 33-0313), within limits of location 2.
B-1	2	144.8	70.8	12/12/1958	As-built LOTB from Chetwood Street OC (Br. No. 33-0290), within limits of location 2.
B-1	2	75.5	45.5	1/26/1959	As-built LOTB from Oakland Ave UC (Br. No. 33-0288), within limits of location 2

Borehole	Lighting Location	Ground Surface Elevation, ft ¹	Depth, ft	Date Completed	Notes
B-2	2	77.1	90.1	07/31/90	As-built LOTB from MacArthur Blvd OC (Br. No. 33-0287), within limits of location 2
B-17	2	58.3	46.0	08/15/1958	As-built LOTB from Broadway-Richmond Blvd UC (Br. No. 33-0285), within limits of location 2

1. Ground surface elevation in this table is reported in NGVD 29.

GEOTECHNICAL CONDITIONS

Geology

The project area lies in western Alameda County and is underlain by artificial fills, Quaternary sedimentary deposits, and the Jurassic Coast Range Ophiolite ultramafic rock (USGS, 2000). The geology map and proposed median safety lighting locations are shown in Figure 2.

The geologic map indicates that Location 1 for the proposed median lightning between postmile R32.6 and postmile R33.0 is generally underlain by Pleistocene alluvial fan and fluvial deposits (Qpaf) near a contact with greenish-gray Gabbro (Jgb) near postmile R33.0. For Location 2 between postmile 43.422 and postmile 44.7, underlying geologic units generally consist of Pleistocene alluvial fan and fluvial deposits (Qpaf), Holocene alluvial fan and fluvial deposits (Qhaf), and artificial fills (af).

Artificial fills (af) are described as man-made deposits of various materials and ages. Some are compacted and quite firm, but fills made before 1965 are nearly everywhere not compacted and consist simply of dumped materials.

Holocene alluvial fan and fluvial deposits (Qhaf) are described as alluvial fan deposits that are brown or tan, medium dense to dense, gravely sand or sandy gravel that generally grades upward to sandy or silty clay.

Pleistocene alluvial fan and fluvial deposits (Qpaf) are described as brown, dense, gravely and clayey sand or clayey gravel that fines upward to sandy clay. These deposits display various sorting and are located along most stream channels in the county.

Bedrock of the Coast Range Ophiolite (Jb) consists of massive basalt and diabase (mafic volcanics) and greenish-gray Gabbro (Jgb), a plutonic rock associated with mafic basalt flows.

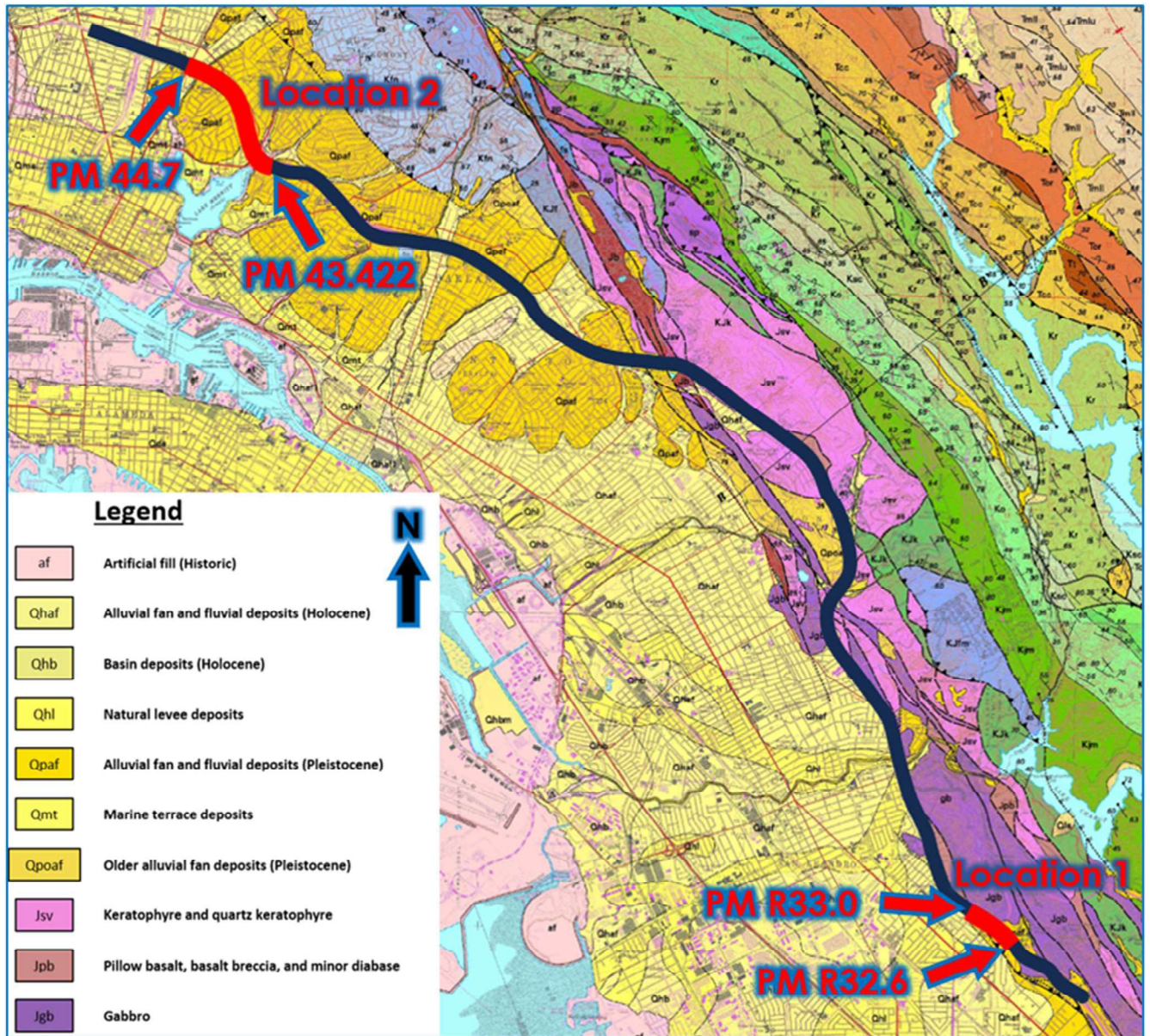


Figure 2 Project Geologic Map

(Base Map: Geologic Map and Map Database of the Oakland Metropolitan Area, Alameda, Contra Costa, and San Francisco Counties, California)

Surface Conditions

The project site lies in an urban environment, and the surrounding land use includes mixed residential and commercial development. Foothill woodlands in undeveloped areas, and ruderal grasslands and ornamental landscaping in urban and residential areas are the dominant vegetation types in the region.

The topography varies from nearly flat and gentle slopes over most of the project alignment to slightly uplifted near the middle portion of the project through the Oakland Hills. Light locations at Location 1 will generally be at cut sections and some fill sections. Light locations at Location 2 will generally be on fill sections and along existing structures. Drainage is through natural waterways, sheet flow to drainage gutters, and engineered drainage systems. All the proposed lighting (Type 21 D) will be mounted in the median barrier on flat ground.

Subsurface Conditions

Subsurface conditions are described in Table 3 for each lighting location based on available information from review of the documents summarized in the Geotechnical Investigations section. Only the top 20 feet of the soil borings are described.

Table 3 – Subsurface Conditions at each Lighting Location

Lighting Location	As-Built LOTB	Borehole Nos.	Ground Surface Elevation, ft	Depth, ft	Subsurface Conditions
1	150 th Ave OC	B-2	56.8	48.8	8 feet soft to very stiff sandy clayey gravel (fill) 10 feet soft to very stiff black clay 10 feet compact tan silty sand
		B-6	60.0	40	
2	Lake Park Ave OC	B-1	68.7	88.0	3 feet buff medium sandy clayey silt 2 feet slightly compact buff sandy silt 5 feet stiff-very stiff blue-green sandy clay 7 feet compact buff clayey sand 5 feet slightly compact buff clayey silt
2	Van Buren POC	B-2	49.2	70.2	4 feet light brown dense clayey sand 21 feet very stiff-hard green-brown sandy clay
2	Chetwood Street OC	B-1	144.8	70.0	24 feet stiff buff silty clay with organic matter
2	Oakland Ave UC	B-1	75.5	45.5	4 feet loose to slightly compact brown silty sand 8 feet dense clayey sand with gravel 7 feet stiff brown silt 5 feet compact brown silty sand
2	MacArthur Blvd OC	B-2	77.1	90.1	3 feet dense light brown sandy silt 15 feet compact light brown silty clay and silt 3 feet hard buff -dark gray silty clay
2	Broadway-Richmond Blvd OC	B-17	58.3	46.0	5 feet very stiff brown gravelly sand 15 feet stiff tan sandy silty clay

Groundwater

The as-built LOTBs from previous subsurface investigations performed for nearby projects indicate that groundwater was encountered in the vicinities of most of the proposed lighting locations as summarized in Table 4. Design groundwater elevation for each lighting location is based on groundwater data from the as-built LOTB. However, groundwater levels can vary due to reasons such as seasonal rainfall variations and irrigation.

Table 4 – Measured Groundwater Table

Reference LOTB	Borehole No.	Ground Surface Elevation (feet)	Groundwater Table		Date Measured	Roadway Surface Elevation ¹ (feet)	Approximate Depth to Groundwater ² (feet)
			Depth (feet)	Elevation (feet)			
150 th Ave OC	B-2	56.8	22.3	34.5	4/17/1963	71	36.5
Lake Park Ave OC	B-1	68.7	19.5	49.2	08/02/1990	68.7	19.5
Van Buren POC	B-2	49.2	24.0	25.2	12/08/1992	48	22.8
Chetwood Street OC ⁴	B-1	144.8	NA ³	NA ³	NA	106	NA ³
Oakland Ave UC	B-1	75.5	9.0	66.5	1/21/1959	104	37.5
MacArthur Blvd OC	B-2	77.1	10.4	66.7	8/02/1990	76	9.3
Broadway-Richmond Blvd UC ⁵	B-17	58.3	NA ³	NA ³	NA	74	NA ³

¹ Surface elevation of existing lighting based on Google Earth 2025.

² Approximate depths to groundwater are based on groundwater depths reported by the relevant as-built LOTB and existing elevation data from Google Earth

³ Groundwater elevation not indicated on LOTB

⁴ Bottom of elevation of borehole for Chetwood Street OC LOTB is approximately 74 feet

⁵ Bottom of elevation of borehole for Broadway-Richmond Blvd UC LOTB is approximately 12 feet

Seismic Hazards

The project area is susceptible to strong earthquake induced ground motions during the design life of the lighting.

Liquefaction

Based on a review of the as-built LOTBs within the limits of the proposed lighting locations, the groundwater levels are below the tip of the CIDH foundation for the Type 21 D Lighting Standard. Therefore, liquefaction is not a design consideration for the proposed lighting locations.

GEOTECHNICAL DESIGN EVALUATION

The proposed Lighting Standard Type 21 D (median barrier mounted) standard plan design parameters require a minimum friction angle (ϕ) of 30 degrees and a total unit weight of 120 pcf for cohesionless soils, or an undrained shear strength of 1.5 ksf for cohesive soils. Also required are ground slopes flatter than 2(H):1(V) with no groundwater present along the pile length.

Based on a review of the nearest as-built LOTB for the proposed lighting locations the subsurface conditions meet the standard plans design parameters.

RECOMMENDATIONS

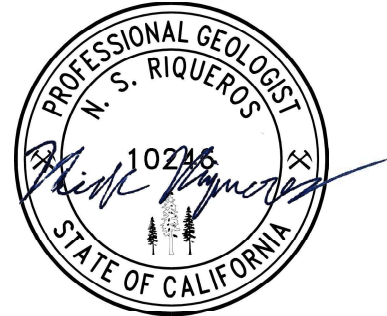
We recommend using Standard Plan design for the CIDH pile foundations of median barrier mounted lightings at location 1 and location 2.

REFERENCES

USGS, 2000, Geologic Map and Map Database of the Oakland Metropolitan Area, Alameda, Contra Costa, and San Francisco Counties, California, USGS MF-2342, <https://pubs.usgs.gov/mf/2000/2342/>.

Questions relating to this report should be directed to David Nesbitt at (925) 787-6682, Nick Riqueros at (408) 472-1377, Acting Branch Chief Nick Briffa at (650) 274-6453, or Branch Chief Chris Riden at (510) 305-2300.

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- c: Emmanuel Okereke, Project Manager, District 4
- Sara Haddadi, Project Liaison Engineer, Division of Engineering Services
- Mohammad Zabolzadeh, District Materials Engineer, District 4
- Geotechnical Archive (GeoDOG)

Memorandum

To: MANSUE MAMOODI
Branch Chief – Division of Design East
Design Alameda

Date: June 2, 2025

Attn: N. Grgich

File: 04-ALA-580-R32.13/45.65
EA 04-3W200
EFIS 0421000325
Overhead Signs

From: GEOTECHNICAL SERVICES
Office of Geotechnical Design West
Branches B and C

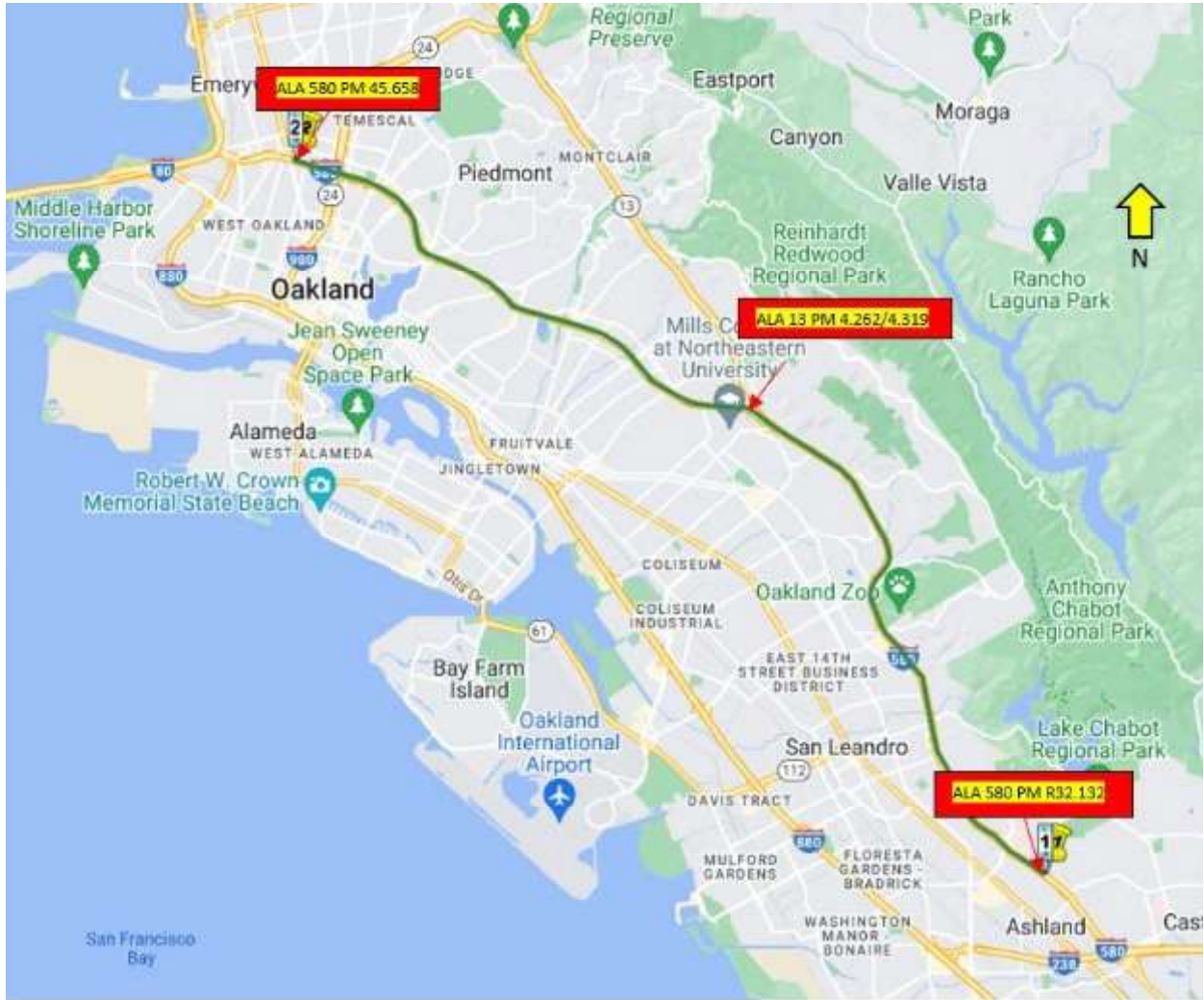
Subject: DISTRICT PRELIMINARY GEOTECHNICAL REPORT FOR OVERHEAD SIGN

Introduction

Pursuant to the request dated December 20, 2024, this District Preliminary Geotechnical Report (DPGR) has been prepared for the proposed overhead (OH) signs, and safety lighting. This report summarizes the preliminary investigations performed and provides preliminary geotechnical recommendations for the proposed overhead sign foundations. The recommendations are based on the Project Initiation Report (PIR) dated August 25, 2023, Project Description and layout sheet dated December 20, 2024, a review of as-built plans, log of test borings (LOTB), existing foundation/geotechnical reports, and site visits.

Project Description

The proposed project extends from 159th Avenue Overcrossing (post mile (PM) R32.132) to the east of the Market Street Overcrossing (PM 45.65) along Interstate 580 and from Interstate 580 (PM 4.26) to Mountain Boulevard Undercrossing (PM 4.32) along State Route 13 in Alameda County as shown in Figure 1. The purpose of the project is to improve safety along the corridor. The project includes twenty (20) overhead sign replacements (7 two-post overhead signs and 13 single-post overhead signs) and an unspecified number of safety lights (locations were not provided). All overhead sign replacements are located along Interstate 580. There are no proposed overhead sign replacements on State Route 13. A summary of the proposed overhead signs is provided in Table 1.



ALA 580 PM R32.132/45.658 Median Barrier & Safety Lighting
ALA 13 PM 4.262/4.319 Transitional Barrier

Figure 1 Project Location Map

Table 1 – Description of Proposed Overhead Sign Interstate 580

OH Sign Location No.	Post Mile Location	Latitude	Longitude	No. Post
1	04-ALA-580 PM 33.118	37.7120729	-122.1283375	1
2	04-ALA-580 PM 33.784	37.7203457	-122.1341796	1
3	04-ALA-580 PM 34.609	37.7314596	-122.1388308	1
4	04-ALA-580 PM 35.742	37.7453521	-122.1488657	1
5	04-ALA-580 PM 36.305	37.753164	-122.1514101	1
6	04-ALA-580 PM 37.018	37.7622873	-122.1491499	1
7	04-ALA-580 PM 38.237	37.7757853	-122.1627003	1
8	04-ALA-580 PM 39.053	37.7823087	-122.1754429	2
8A	04-ALA-580 PM 39.548	37.7840810	-122.183819	2
9	04-ALA-580 PM 39.743	37.784317	-122.1872924	1
10	04-ALA-580 PM 40.115	37.787058	-122.196157	1
11	04-ALA-580 PM 41.406	37.7978964	-122.2149005	1
12	04-ALA-580 PM 43.434	37.8095083	-122.2453371	1
13	04-ALA-580 PM 44.23	37.8184131	-122.2528919	1
14	04-ALA-580 PM 44.366	37.8198179	-122.2547363	1
15	04-ALA-580 PM 44.853	37.8231485	-122.2626005	2
16	04-ALA-580 PM 44.968	37.8235634	-122.2646134	2
17	04-ALA-580 PM 45.43	37.8255128	-122.2726641	2
18	04-ALA-580 PM 45.563	37.8259847	-122.2750474	2
19	04-ALA-580 PM 45.664	37.826665	-122.277750	2

All elevations referenced within this report are based on the North American Vertical Datum of NAVD88. To convert an elevation at this site from National Geodetic Vertical Datum of 1929 (NGVD 29) to NAVD 88, add 2.7 feet to the NGVD 29 elevation.

Geotechnical Investigation

The Geotechnical Investigation included site visits on April 16 and 17, 2025, a review of as-built LOTBs from 1957 to 1963 and published geologic maps. The as-built boreholes used to evaluate the new OH sign foundations are listed in the table below. The as-built LOTBs that were reviewed in this study are summarized in Table 2.

Table 2 – Existing Geotechnical Information

Borehole	OH Sign Location	Ground Surface Elevation, ft	Depth, ft	Date Completed	Notes
B-2	1	59.5	48.8	4/17/1963	As-built LOTB from 150 th Ave OC (Br. No. 33-0336), approximately 1,475 ft southeast of the proposed OH Sign 1
B-6		62.7	40	4/23/1963	
B-44	2	81.2	35	2/1/1960	As-built LOTB from Grand Ave OC (Br. No. 33-0330), approximately 730 ft southeast of the proposed OH Sign 2
B-46	3	90.0	66.3	4/21/1961	As-built LOTB from Estudillo Ave UC (Br. No. 33-0332), approximately 660 ft south of the proposed OH Sign 3
B-22		91.2	40.5	4/13/1961	
B-1	4	102.2	51.5	7/05/1961	As-built LOTB from 106 th Ave UC (Br. No. 33-0355), approximately 65 ft southeast of the proposed OH Sign 4
B-5		111.3	36.6	7/06/1961	
B-6		101.5	46.8	7/07/1961	
B-1	5	158.3	34.6	7/11/1961	As-built LOTB from Golf Links Rd UC (Br. No. 33-0354), approximately 100 ft north of the proposed OH Sign 5
B-3		158.4	38.7	7/11/1961	
B-2	6	230.5	45.8	7/13/1961	As-built LOTB from Oak Knoll Boulevard OC (Br. No. 33-0353), approximately 1450 ft southeast of the proposed OH Sign 6
B-5		213.8	43.1	7/13/1961	
B-2	7	296.6	74.6	4/06/1961	As-built LOTB from Edwards Ave UC (Br. No. 33-0341), approximately 400 ft northwest of the proposed OH Sign 7
B-1	8	263.0	35	7/18/1961	As-built LOTB from Kuhnle Ave UC (Br. No. 33-0342), approximately 725 ft southeast of the proposed OH Sign 8
B-5		264.4	50	7/19/1961	
B-1	8A	190.0	52.3	7/20/1961	As-built LOTB from Davenport Ave UC (Br. No. 33-0343),

Borehole	OH Sign Location	Ground Surface Elevation, ft	Depth, ft	Date Completed	Notes
B-5	8A	196.7	52.0	7/24/1961	approximately 900 ft east of the proposed OH Sign 8A
B-2	9	154.2	36.5	4/26/1960	As-built LOTBs from MacArthur Blvd UC (Br. No. 33-0316), approximately 75 ft west of the proposed OH Sign 9
B-12		152.7	47.0	4/25/1960	
B-98	10	160.1	32.4	3/01/1960	As-built LOTBs from High St UC (Br. No. 33-0318), approximately 110 ft southeast of the proposed OH Sign 10
B-100		159.8	20.1	3/03/1960	
B-46	11	161.8	35	1/22/1960	As-built LOTB from Fruitvale Ave UC (Br. No. 33-0324), approximately 115 ft northwest of the proposed OH Sign 11
B-3	12	11.9	60.2	10/24/1959	As-built LOTB from Lakeshore Park Ave UC (Br. No. 33-0131), approximately 210 ft southeast of the proposed OH Sign 12
B-4	13	95.0	61.0	1/19/1959	As-built LOTB from Oakland Ave UC (Br. No. 33-0288), approximately 150 ft southeast of the proposed OH Sign 13
B-1	14	78.2	45.5	1/26/1959	As-built LOTB from Oakland Ave UC (Br. No. 33-0288), approximately 100 ft northwest of the proposed OH Sign 14
B-91	15	79.6	56.9	8/24/1958	As-built LOTBs from Webster St UC (Br. No. 33-0296), approximately 210 ft southeast of the proposed OH Sign 15
B-93		94.8	72.0	8/26/1958	
B-70	16	61.6	51.0	6/17/1958	As-built LOTBs from Telegraph Ave UC (Br. No. 33-0297), approximately 250 ft northwest of the proposed OH Sign 16
B-133		60.7	50.0	7/22/1958	
B-24	17	55.1	62.0	5/21/1959	As-built LOTBs from West St UC (Br. No. 33-0300), approximately 200 ft east of the proposed OH Sign 17
B-26		53.3	65.0	5/21/1959	
B-4	18	43.0	67.3	5/12/1958	As-built LOTBs from Market St UC (Br. No. 33-0301), approximately 10 ft southeast of the proposed OH Sign 18
B-9		43.0	67.0	5/13/1959	
B-9	19	34.1	55.4	4/18/1957	As-built LOTBs from Adeline St UC (Br. No. 33-0280), approximately 75 ft northwest of the proposed OH Sign 19
B-15		35.4	65.0	4/13/1957	

Geotechnical Conditions

Geology

The project area lies in western Alameda County and is underlain by artificial fills, Quaternary sedimentary deposits, and the Jurassic Coast Range Ophiolite ultramafic rock (USGS, 2000). The geology map and OH sign locations are shown in Figure 2. Below are the descriptions of geologic units present within the project, followed by a summary of each proposed overhead sign's geology and associated geomorphic features presented in Table 3.

Artificial fills (af) are described as man-made deposits of various materials and ages. Some are compacted and quite firm, but fills made before 1965 are nearly everywhere not compacted and consist simply of dumped materials.

Holocene alluvial fan and fluvial deposits (Qhaf) are described as alluvial fan deposits that are brown or tan, medium dense to dense, gravely sand or sandy gravel that generally grades upward to sandy or silty clay.

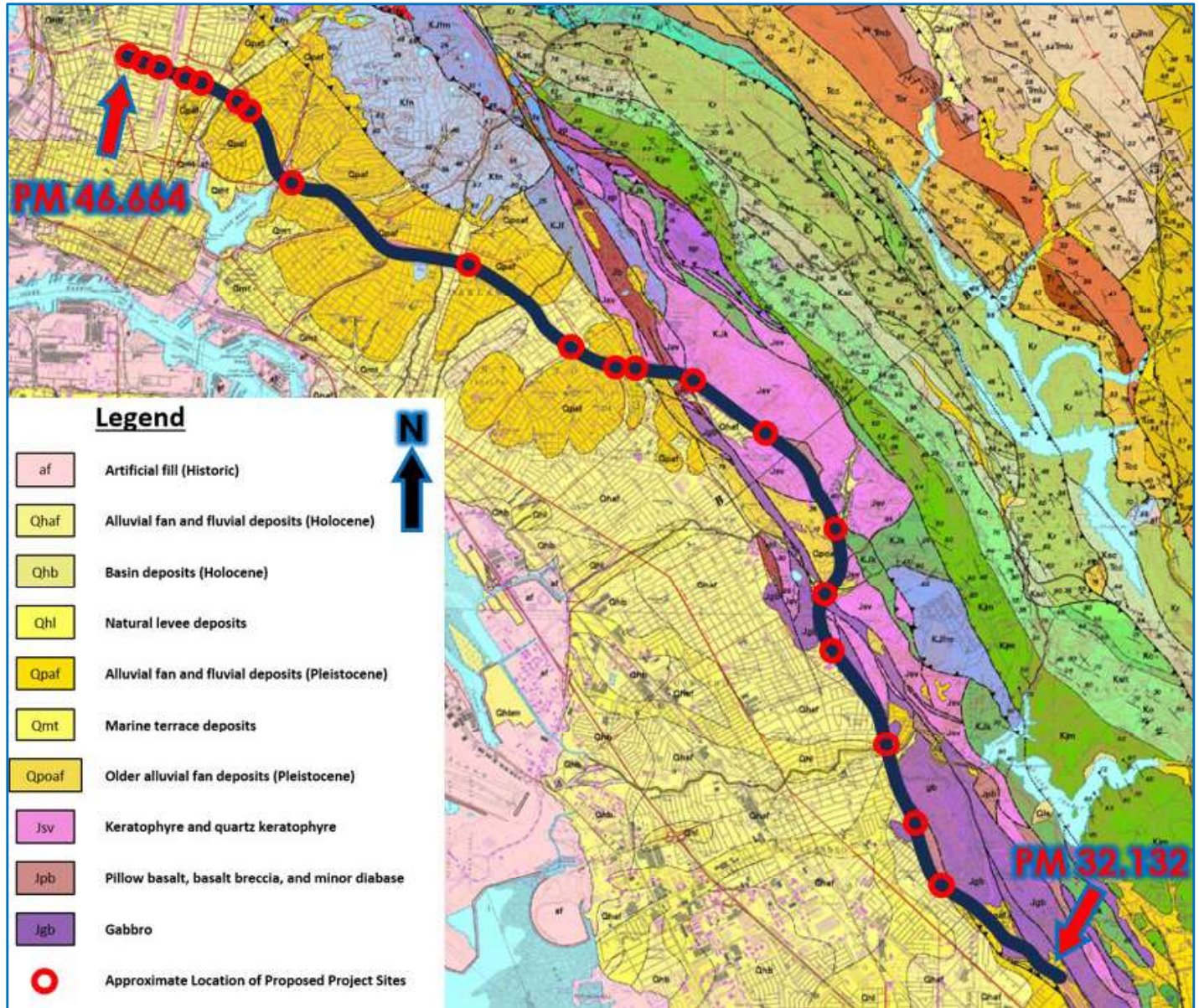
Holocene basin deposits (Qhb) are described as very fine silty clay to clay deposits occupying flat-floored basins at the distal edge of alluvial fans adjacent to the bay mud (Qhbm).

Holocene natural levee deposits (Qhl) are described as loose, moderately sorted to well-sorted sandy or clayey silt grading to sandy or silty clay. These deposits are porous and permeable and provide conduits for transport of groundwater.

Pleistocene alluvial fan and fluvial deposits (Qpaf) are described as brown, dense, gravely and clayey sand or clayey gravel that fines upward to sandy clay. These deposits display various sorting and are located along most stream channels in the county.

Pleistocene older alluvial fan deposits (Qpoaf) are described as brown dense gravely and clayey sand or clayey gravel that fines upwards to sandy clay. These deposits are located along modern stream courses and are distinguished from younger deposits by higher topographic position, greater degree of dissection, and stronger profile development.

Bedrock of the Late Jurassic Keratophyre and quartz keratophyre (Jsv) is shown within the project area and is described as highly altered intermediate and silicic volcanic and hypabyssal rocks. Bedrock of the Coast Range Ophiolite consists of: pillow basalt, basalt breccia, and minor diabase (Jpb); massive basalt and diabase (Jb); and greenish-gray Gabbro (Jgb), a plutonic rock associated with mafic basalt flows.



(Base Map: Geologic Map and Map Database of the Oakland Metropolitan Area, Alameda, Contra Costa, and San Francisco Counties, California)

Figure 2 Project Geologic Map

Table 3 – Proposed Overhead Sign and Geology

Overhead Sign Location	PM	Latitude	Longitude	Proposed Overhead Sign Type	Geologic Units
1	33.118	37.7120729	-122.1283375	1 Post	Thin Fill, Jpb:Pillow Basalt, Basalt Breccia, Minor Diabase
2	33.784	37.7203457	-122.1341769	1 Post	Thin Fill, Jgb:Gabbro
3	34.609	37.7314596	-122.1388308	1 Post	Fill, Qhl: <i>(Holocene, sandy silts, and clays)</i>
4	35.742	37.7453521	-122.1488657	1 Post	Fill, Jsv: <i>(Altered Silicic Volcanics)</i>
5	36.305	37.753164	-122.1514101	1 Post	Thin fill, Jgb:Gabbro
6	37.018	37.7622873	-122.1491499	1 Post	Fill, Qpoaf: <i>(dense gravels, clays, and sands)</i>
7	38.237	37.7757853	-122.1267003	1 Post	Fill, Jsv: <i>(Altered Silicic Volcanics)</i>
8	39.053	37.7823087	-122.1754429	2 Post	Fill, Jsv: <i>(Altered Silicic Volcanics)</i>
8A	39.548	37.7840810	-122.183819	2 Post	Thin Fill, Qpaf: <i>(Dense gravels, sands, and clays)</i>
9	39.743	37.784317	-122.1872924	1 Post	Fill, Qhaf: <i>(Gravels, sands, clays)</i>
10	40.115	37.787058	-122.196157	1 Post	Fill, Qhaf: <i>(Gravels, sands, clays)</i>
11	41.406	37.7978964	-122.2149005	1 Post	Thin Fill, Qpaf: <i>(Dense gravels, sands, and clays)</i>
12	43.434	37.8095083	-122.2453371	1 Post	Fill, Qpaf: <i>(Dense gravels, sands, and clays)</i>
13	44.23	37.8184131	-122.258919	1 Post	Fill, Qpaf: <i>(Dense gravels, sands, and clays)</i>
14	44.366	37.8198179	-122.2547363	1 Post	Thin Fill, Qpaf: <i>(Dense gravels, sands, and clays)</i>

Overhead Sign Location	PM	Latitude	Longitude	Proposed Overhead Sign Type	Geologic Units
15	44.853	37.8231485	-122.2626005	2 Post	Fill, Qhaf: (Gravels, sands, clays)
16	44.968	37.8235634	-122.2646134	2 Post	Fill, Qhaf: (Gravels, sands, clays)
17	45.43	37.8255128	-122.2726641	2 Post	Fill, Qhaf: (Gravels, sands, clays)
18	45.563	37.8259847	-122.2750474	2 Post	Fill, Qhaf: (Gravels, sands, clays)
19	45.664	37.8266658	-122.2777503	2 Post	Fill, Qhaf: (Gravels, sands, clays)

Surface Conditions

The project site lies in an urban environment, and the surrounding land use includes mixed residential and commercial development. Foothill woodlands in undeveloped areas, and ruderal grasslands and ornamental landscaping in urban and residential areas are the dominant vegetation types in the region.

The topography varies from nearly flat and gentle slopes over most of the project alignment to slightly uplifted near the middle portion of the project through the Oakland Hills. Elevations in the vicinity of the project area vary from 16 feet to 324 feet along the project alignment. Drainage is through natural waterways, sheet flow to drainage gutters, and engineered drainage systems. Surface conditions for each sign location are summarized in Table 4.

Table 4 – Surface Conditions at each Overhead Sign Location

OH Sign Location	Slope of Existing Ground (H: V) ⁽¹⁾	OH Sign Location	Slope of Existing Ground (H: V) ⁽¹⁾
1	3:1	10	Nearly flat
2	Nearly flat	11	Nearly flat
3	Nearly flat	12	Nearly flat
4	Nearly flat	13	7:1
5	15:1	14	Nearly flat
6	Nearly flat	15	1.5:1
7	Nearly flat	16	2.5:1
8	3:1	17	1.5:1
8A	3:1	18	1.5:1
9	Nearly flat	19	2.5:1

1. For proposed overhead sign locations, the existing ground slope was approximated using Google Earth.

Subsurface Conditions

Subsurface conditions are described in Table 5 for each overhead sign location based on available information from a review of the documents summarized in the Geotechnical Investigations section.

Table 5 – Subsurface Conditions at each Overhead Sign Location

Overhead Sign Location	As-Built LOTB	Borehole Nos.	Ground Surface Elevation, ft	Depth, ft	Subsurface Conditions ¹
1	150 th Ave OC	B-2	59.5	48.8	8 feet sandy clayey gravel (fill) 10 feet soft to very stiff black clay 10 feet compact tan silty sand
		B-6	62.7	40	20 feet compact to dense tan to brown silty sand / very stiff sandy clay
2	Grand Ave OC	B-44	81.2	35	3 feet soft brown gravelly clay (fill) 5 feet soft gray sandy clay 12 feet very stiff to hard brown sandy clay 15 feet blue-green serpentinized igneous rock
3	Estudillo Ave UC	B-46	90.0	66.3	25 feet loose brown silty sand 4 feet compact brown sand and gravel 6 feet slightly compact to very stiff brown silt to clay
		B-22	91.2	40.5	10 feet compact clayey silt 10 feet compact silt with gravel 10 feet hard dark brown clayey silt
4	106 th Ave UC	B-1	102.2	51.5	4 feet of stiff dark gray organic silty clay 5 feet of stiff brown silty clay
		B-5	111.3	36.6	4 feet of hard dark brown sandy clay 6 feet of dense light brown sandy silt
		B-6	101.5	46.8	12 feet of very stiff brown clay with sand 15 feet of brown weathered andesite (igneous rock)
5	Golf Links Rd UC	B-1	158.3	34.6	8 feet of compact brown gravel and clayey silt 10 feet of stiff brown sandy silt and clayey sand
		B-3	158.4	38.7	8 feet of dense tan sandy silt with gravel and silty gravel 12 feet of weathered rhyolite
6	Oak Knoll Boulevard OC	B-2	230.5	45.8	11 feet of stiff brown to dark brown sandy clay 8 feet of compact red-brown to gray clayey sand
		B-5	213.8	43.1	24 feet of dense red-brown weathered basalt
7	Edwards Ave UC	B-2	296.6	74.6	4 feet loose dark grey silty gravel 5 feet slightly compact brown silty gravel 3 feet loose brown silty sand

Overhead Sign Location	As-Built LOTB	Borehole Nos.	Ground Surface Elevation, ft	Depth, ft	Subsurface Conditions ¹
					5 feet very stiff dark grey clay 16 feet compact to dense brown silty gravel 11 feet compact grey and blue silty sand and gravel 14 feet slightly compact dark grey sandy silt w/ gravel 16 feet compact grey silty gravel
8	Kuhnle Ave UC	B-5	264.4	50	5 feet brown silty sand 10 feet slightly compact grey to red brown clayey sand 10 feet compact grey and brown clayey sand 25 feet compact to very dense reddish brown clayey to silty sand
8A	Davenport Ave UC	B-1	190.0	62	36 feet loose silty and clayey sand 14 feet slightly compact brown silty sand 12 feet weathered basalt
		B-5	196.7	52.0	
9	MacArthur Blvd UC	B-2	154.2	36.5	9 feet loose black sandy silt 5 feet slightly compact tan silty sand 16 feet slightly compact tan silt 5 feet compact tan clayey sand 10 feet dense tan silt
		B-12	152.7	47.0	
10	High St UC	B-98	160.1	32.4	10 feet stiff brown and tan silt 10 feet dense brown clayey gravel 9 feet very dense brown silty sand with gravel 3 feet very stiff greenish sandy clay with gravel
		B-100	159.8	20.1	
11	Fruitvale Ave UC	B-46	161.8	35	5 feet loose dark brown sandy silt 5 feet very stiff tan sandy clay 8 feet very stiff to hard sandy clay 17 feet dense pink clayey sand
12	Lakeshore Park Ave UC	B-3	11.9	60.2	16 feet very soft dark grey organic clay 8 feet slightly compact grey poorly sorted gravel with silt and clay 3 feet slightly compact tan clayey sand 26 feet hard blue-gray silty clay 2 feet compact blue-gray silty sand 5 feet hard blue-grey silty clay
13	Oakland Ave UC	B-4	95.0	61.0	13 feet stiff brown silt 3 feet dense brown silty sand 7 feet compact brown sandy silt 5 feet compact brown silt 10 feet compact brown sandy silt 10 feet very stiff brown silt 10 feet compact brown silty sand 3 feet hard brown silt with sand and gravel

Overhead Sign Location	As-Built LOTB	Borehole Nos.	Ground Surface Elevation, ft	Depth, ft	Subsurface Conditions ¹
14	Oakland Ave UC	B-1	78.2	45.5	4 feet loose to slightly compact brown silty sand 8 feet dense clayey sand with gravel 7 feet stiff brown silt 5 feet compact brown silty sand 14 feet very stiff silt with sand 7 feet hard brown-grey silt
15	Webster St UC	B-91	79.6	56.9	3 feet soft dark gray organic clay 7 feet stiff tan clay 7 feet very stiff light brown clay with sand 6 feet stiff light brown silt 8 feet very stiff light brown sandy silt
		B-93	94.8	72.0	2 feet dense brown poorly graded sand with gravel 15 feet stiff tan silt 6 feet compact light brown sandy silt 18 feet very stiff brown sandy silt with gravel
16	Telegraph Ave UC	B-70	61.6	51.0	8 feet compact silty sand with gravel 6 feet dense sand with gravel 5 feet compact tan sand 4 feet compact sand and gravel
		B-133	60.7	50.0	6 feet dense gravel with sand and silt 6 feet compact tan sandy silt 16 feet stiff to very stiff brown silt
17	West St UC	B-24	55.1	62.0	8 feet slightly compact dark gray silt 4 feet compact brown silt and sandy silt 12 feet loose to slightly compact brown silt with gravel 4 feet very stiff brown silt with gravel 4 feet slightly compact brown sandy silt
		B-26	53.3	65.0	6 feet compact brown silty gravel to gravelly clay 5 feet compact gray-brown silty to clayey sand 10 feet dense to compact brown sand 4 feet very dense brown gravel 5 feet compact/very stiff gray clayey sand/sandy clay 3 feet very stiff gray sandy clay
18	Market St UC	B-4	43.0	67.3	5 feet loose dark brown sandy silt 3 feet compact brown sandy silt with gravel 5 feet stiff brown clay 5 feet compact brown sandy silt with gravel 5 feet dense brown sand and gravel
		B-9	40.3	67.0	5 feet soft and loose brown silty clay and sandy silt 15 feet stiff brown silty clay 10 feet stiff brown sandy clay

Overhead Sign Location	As-Built LOTB	Borehole Nos.	Ground Surface Elevation, ft	Depth, ft	Subsurface Conditions ¹
					9 feet dense gray clayey sand 5 feet compact gray-brown silty to clayey sand
19	Adeline St UC	B-9	34.1	55.4	5 feet soft to stiff dark grey clay 7 feet grey silt 5 feet compact grey and brown silty sand 5 feet compact brown silty sand 10 feet dense brown silty sand with gravel
		B-15	35.4	65.0	5 feet soft brown silt 15 feet very stiff blue and grey clay 8 feet very stiff sandy silt to sandy clay 5 feet dense brown sand with gravel

1. Subsurface conditions are presented as layer thicknesses in order of materials encountered from top of boring (ground surface) to bottom of boring (terminal exploration depth).

Groundwater

The as-built LOTBs from previous subsurface investigations performed for nearby projects indicate that groundwater was encountered in the vicinities of most of the proposed overhead sign locations as summarized in Table 6. Design groundwater elevation for each overhead sign is based on the groundwater measurement data from the as-built LOTBs of the nearby previous projects. However, groundwater levels can vary due to reasons such as seasonal rainfall variations and irrigation.

Table 6 – Measured Groundwater Table

Reference LOTB	Borehole No.	OH Sign Location	Ground Surface Elevation (feet)	Groundwater Table		Date Measured	Roadway Surface Elevation ¹ (feet)	Approximate Depth to Groundwater ² (feet)
				Depth (feet)	Elevation (feet)			
150 th Ave OC	B-2	1	59.5	22.3	37.2	4/17/1963	71	36.5
Grand Ave OC	B-44	2	81.2	NA ³	NA ³	NA ³	89	NA ³
Estudillo Ave UC	B-25	3	89.1	29.8	59.3	4/14/1961	105	48.4
106 th Ave UC	B-1	4	102.2	35.0	67.2	7/05/1961	131	66.5
Golf Links Rd UC	B-1	5	159.3	11.8	147.5	7/12/1961	179	34.2
Oak Knoll Boulevard OC	B-5	6	213.8	17.0	196.8	7/17/1961	258	63.9

Reference LOTB	Borehole No.	OH Sign Location	Ground Surface Elevation (feet)	Groundwater Table		Date Measured	Roadway Surface Elevation ¹ (feet)	Approximate Depth to Groundwater ² (feet)
				Depth (feet)	Elevation (feet)			
Edwards Ave UC	B-2	7	296.6	8.7	287.9	4/06/1961	318	32.8
Kuhnle Ave UC	B-1	8	263.0	8.1	254.9	7/18/1961	296	43.8
Davenport Ave UC	B-1	8A	192.7	6.0	186.7	7/20/1961	192	0.7
	B-5		196.7	10.2	186.5	7/20/1961		8.2
MacArthur Blvd UC	B-2	9	154.2	NA ³	NA ³	NA	177	NA ³
	B-12		152.7	NA ³	NA ³	NA		NA ³
High St UC	B-98	10	160.1	11.0	149.1	3/01/1960	178	31.6
	B-100		159.8	3.6	156.2	3/03/1960		24.5
Fruitvale Ave UC	B-46	11	161.8	11.7	150.1	1/12/1960	178	30.3
Lakeshore Park Ave UC	B-3	12	11.9	5.0	6.9	10/24/1959	35	30.8
Oakland Ave UC	B-3	13	90.6	12.4	78.2	1/18/1959	99	23.5
Oakland Ave UC	B-1	14	78.2	9.0	69.2	1/21/1959	104	37.5
Webster St UC	B-91	15	79.6	21.1	58.5	8/24/1958	87	31.2
Telegraph Ave UC	B-70	16	61.6	11.6	50.0	5/22/1959	85	37.7
	B-133		60.7	12.7	48.0	7/24/1959	85	39.7
West St UC	B-24	17	55.1	17.7	37.4	5/21/1959	75	40.3
	B-26		53.3	17.5	35.8	5/21/1959		41.9
Market St UC	B-4	18	43.0	NA ³	NA ³	5/12/1959	74	NA ³
Market St UC	B-9	18	43.0	13.8	29.2	6/05/1959	74	47.5
Adeline St UC	B-2	19	29.4	14	15.4	4/17/1959	59	46.3

¹ Surface elevation of existing OH Sign based Google Earth 2025.

² Approximate depths to groundwater are based on groundwater depths reported by the relevant as-built LOTB and existing elevation data from Google Earth

³ Groundwater elevation not indicated on LOTB

Seismic Hazards

The project area is susceptible to strong earthquake induced ground motions during the design life of the overhead signs and safety lighting.

Liquefaction

The California Geologic Survey (CGS) Seismic Hazard Zones map indicates overhead sign locations 3, 5, 7, and 12 are located within the liquifiable zone will be refined after the proposed site investigations are complete, or OH signs are relocated outside the liquefaction zones. Preliminary liquefaction evaluation at each OH sign location is summarized in Table 7.

Table 7 – Liquefaction Evaluation

OH Sign Location No.	Latitude	Longitude	Potentially Liquefiable ¹	Groundwater Encounter within CIDH Pile limits	CIDH Pile within Liquefiable Layer
1	37.7120729	-122.1283375	No	No	No
2	37.7203457	-122.1341796	No	No	No
3	37.7314596	-122.1388308	Yes	No	No
4	37.7453521	-122.1488657	No	No	No
5	37.753164	-122.1514101	Yes	Yes	Yes
6	37.7622873	-122.1491499	No	No	No
7	37.7757853	-122.1627003	Yes	Yes	Yes
8	37.7823087	-122.1754429	No	No	No
8A	37.7840810	-122.183819	No	Yes	No
9	37.784317	-122.1872924	No	NA	No
10	37.787058	-122.196157	No	Yes	No
11	37.7978964	-122.2149005	No	Yes	No
12	37.8095083	-122.2453371	Yes	Yes	Yes
13	37.8184131	-122.2528919	No	Yes	No

14	37.8198179	-122.2547363	No	No	No
15	37.8231485	-122.2626005	No	No	No
16	37.8235634	-122.2646134	Yes	No	No
17	37.8255128	-122.2726641	Yes	No	No
18	37.8259847	-122.2750474	Yes	No	No
19	37.8266658	-122.2777503	Yes	No	No

¹ Based on California Geologic Survey Liquefaction Zone Map November 2024

Geotechnical Design Evaluation

The OH sign standard plan design parameters require a minimum friction angle (phi) of 30 degrees and a total unit weight of 120 pcf for cohesionless soils, or an undrained shear strength of 1.5 ksf for cohesive soils. Additionally, the ground slope must be flatter than 2(H):1(V) and groundwater must not be present along the pile length.

Table 8 lists sign locations that do not meet minimum soil strength parameters or will encounter groundwater.

Table 8 – Proposed OH Sign Locations not meeting Standard Plan Soil Parameters

OH Sign Location	Latitude	Longitude	Meets Standard Plan Soil Parameters	Groundwater Present Along Pile length
3	37.7314596	-122.1388308	No	No
5	37.753164	-122.1514101	Yes	Yes
7	37.7757853	-122.1627003	Yes	Yes
8A	37.7840810	-122.183819	No	Yes
10	37.787058	-122.196157	Yes	Yes
11	37.7978964	-122.2149005	Yes	Yes
12	37.8095083	-122.2453371	No	Yes
13	37.8184131	-122.2528919	Yes	Yes

Based on the nearest as-built LOTBs, OH sign locations 3, 8A and 12 do not meet standard plan soil parameters. Overhead sign locations 5, 7, 8A, 10, 11, 12 and 13 are

expected to have groundwater present along the pile length. The Office of Design and Technical Services (ODTS) will need to provide a Foundation Data Table for the OH sign locations presented in Table 8.

RECOMMENDATIONS

To supplement existing subsurface data, we recommend additional field investigation and laboratory testing as summarized in Table 9. The proposed borings will be 6" Auger borings to a maximum depth of 60 feet. Corrosion testing and lab soil testing will be performed based on the engineer's review of the samples collected.

Table 9 – Summary of Proposed Additional Field Investigation

OH Sign Location	Max Standard Design Pile Length (feet)	OH Sign Type (No. Posts)	Number (and Depth, in feet) of Proposed Exploration Borings	Anticipated Groundwater Elevation (feet)
3	33	Tubular (1)	1 (60)	48
5	33	Tubular (1)	1 (60)	34.2
7	33	Tubular (1)	1 (60)	32.0
8A	36	Versatile Truss (2)	1 (60)	0.7
10	33	Tubular (1)	1 (60)	24.5
11	33	Tubular (1)	1 (60)	30.3
12	33	Tubular (1)	1 (60)	30.5
13	33	Tubular (1)	1 (60)	23.5

REFERENCES

USGS, 2000, Geologic Map and Map Database of the Oakland Metropolitan Area, Alameda, Contra Costa, and San Francisco Counties, California, USGS MF-2342, <https://pubs.usgs.gov/mf/2000/2342/>.

Questions relating to this report should be directed to David Nesbitt at (925) 787-6682, Nick Riqueros at (408) 472-1377.



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Geotechnical Design West, Branch B

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MH
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CR
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- c: Emmanuel Okereke, Project Manager, District 4
- Tirthkumar Patel, Project Liaison Engineer, Division of Engineering Services
- Mohammad Zabolzadeh, District Materials Engineer, District 4
- Geotechnical Archive (GeoDOG)

ATTACHMENT J
MATERIALS RECOMMENDATION

Memorandum

*Making Conservation
a California Way of Life*

To: MANSUE MAMOUDI
Senior Transportation Engineer
Design Alameda

Date: December 23rd, 2024

Attn: NICHOLAS GRGICH
Project Engineer
Design Alameda

File: 04-ALA-580-PM R32.13/45.65
04-ALA-13-PM R4.26/4.32
EA: 3W200
ID: 0421000325
SHOPP 201.015
Proactive Safety
Collision Severity Reduction

From: *Shawn Hung*
SHAWN HUNG
THI TRAN
Transportation Engineer
Engineering Services – Materials A

Mohammad Zabolzadeh
Concurred by: MOHAMMAD ZABOLZADEH
District Materials Engineer
Branch Chief, Materials A

Subject: MATERIALS RECOMMENDATIONS FOR PA/ED PHASE

This memorandum is prepared in response to your request dated November 21st, 2024, for material recommendations for a project in Alameda County, specifically in and around San Leandro and Oakland, on Route 580 from 0.2 mile west of 159th Avenue to 0.1 mile east of Market Street (PM 32.13/45.65). The project also includes Route 13, from Route 580 to the Mountain Boulevard Undercrossing (PM 4.26/4.32). The proposed improvements for this project involve replacing the median barrier, overhead sign structures and sign panels, installing Light Emitting Diode (LED) safety lights, and upgrading the guardrail.

Table 1 summarizes the As-Built pavement structural sections at the proposed project locations on Interstate 580. The existing pavement structural section consists of the following:

Interstate 580 PM R32.132/45.762 (Existing Shoulder Structure)

- 0.08' OGFC (only at certain sections)
- 0.25' to 0.42' AC
- 0.50' AB
- 1.33' AS (2)
- 1.00' PM (only in cut areas)

Table 1: I-580 (PM 32.132/45.762) As-Built Pavement Structural Section

EA	Construction Date	Post Miles (From/To)	Pavement Structural Sections
04-4H2214	08-09-2016	R41.2/46.1	EB & WB Shoulders – Cold Plane and Overlay <ul style="list-style-type: none"> Cold Plane 0.25’ AC Pavement and Overlay 0.25’ HMA-A <u>Ex.</u> <ul style="list-style-type: none"> 0.25’ AC / 0.49’ AB / 1.33’ AS (2) or 0.08’ OGAC / 0.25’ AC / 0.49’ AB / 1.33’ AS (2)
04-131634	12-24-1999	R41.4/44.8	EB & SB Mainlines – Replace Concrete Pavement <ul style="list-style-type: none"> 1.00’ PCC Lane replacement
04-189724	02-28-1995	44.3/45.9	EB & SB Mainlines – Replace Concrete Pavement 1.00’ to 1.08’ PCC Lane Replacement
04-134554	05-11-1992	26.3/31.1 38.9/44.3	EB & WB Shoulders – Fog Seal <ul style="list-style-type: none"> Fog Seal
04-189514	09-01-1990	31.6/46.1	EB & SB Shoulders – Fog Seal <ul style="list-style-type: none"> Fog Seal
04-110154	08-21-1986	45.4/46.1	WB Only Mainlines & Shoulders – Overlay <ul style="list-style-type: none"> 0.08’ OGFC
04-242044	04-26-1968	35.1/38.9	EB & WB Mainlines & Shoulder – Overlay at Certain Locations <ul style="list-style-type: none"> 0.08’ to 0.17’ AC
04-119714	08-01-1962	31.5/33.5	EB & WB Mainlines – New Construction <ul style="list-style-type: none"> 0.67’ to 0.75’ PCC / 0.33’ CTB (A or B) / 1.00’ to 1.08’ AS (2) Shoulders – New Construction <ul style="list-style-type: none"> 0.25’ AC / 0.50’ AB (2) / 1.33’ AS (2)
04-122014	06-01-1961	39.3/42.1	EB & WB Mainlines – New Construction <ul style="list-style-type: none"> 0.67’ to 0.75’ PCC / 0.33’ CTB (A or B) / 1.00’ to 1.08’ AS (2) or 0.67’ to 0.75’ PCC / 0.33’ CTB (A or B) / 0.50’ to 0.58’ AS (2) / 1.00’ PM Shoulders – New Construction <ul style="list-style-type: none"> 0.25’ AC / 0.50’ AB (2) / 1.33’ AS (2) or 0.25’ AC / 0.50’ AB (2) / 1.33’ AS (2) / 1.00’ PM
61-4T13C54	01-01-1961	40.9/42.6	EB & WB Mainlines – New Construction <ul style="list-style-type: none"> 0.67’ to 0.75’ PCC / 0.33’ CTB (A or B) / 0.50’ to 0.58’ AS (2) Shoulders – New Construction <ul style="list-style-type: none"> 0.25’ AC / 0.50’ AB (2) / 1.33’ AS (2)
61-4T13C18	06-01-1960	43.5/44.5	EB & WB Mainlines – New Construction <ul style="list-style-type: none"> 0.67’ to 0.75’ PCC / 0.33’ CTB (A or B) / 0.50’ to 0.58’ AS (2)

			Shoulders – New Construction 0.25' AC / 0.50' AB (2) / 1.33' AS (2)
60-4TC58	02-01-1960	41.7/43.8	EB & WB Mainlines – New Construction <ul style="list-style-type: none"> • 0.67' to 0.75' PCC / 0.33' CTB (A or B) / 0.50' to 0.58' AS (2) Shoulders – New Construction <ul style="list-style-type: none"> • 0.25' AC / 0.50' AB (2) / 1.33' AS (2)
60-4TC54	11-01-1959	44.7/45.5	EB & WB Mainlines – New Construction <ul style="list-style-type: none"> • 0.67' to 0.75' PCC / 0.33' CTB (A or B) / 0.50' to 0.58' AS (2) Shoulders – New Construction <ul style="list-style-type: none"> • 0.17' AC / 0.50' AB (2) / 1.33' AS (2)
64-TC18	03-01-1934	30.9/32.96	EB & WB Mainlines & Shoulders – New Construction <ul style="list-style-type: none"> • 0.17' AC (A) / 0.33' AC (LC) / 0.50' Selected Material

It is important to note that the actual pavement structural sections in the field may differ from those shown in the As-Built plans. Coring is required to verify the existing pavement structural sections if necessary.

The design team must conduct its own research of the As-Built plans and review the pavement structural sections when preparing typical cross-sections. This will ensure that the cross-sections accurately represent the existing pavement and help avoid claims of 'Differing Site Conditions' from contractors.

1. PA&ED Updates

Based on the provided preliminary layout sheets and typical cross sections, **we are maintaining the same recommendations as those provided in the previous memorandum**, with additional updates outlined below:

Interstate 580 (PM 32.132/45.762) Shoulders Only @ Locations with New Proposed Concrete Median Barrier

a. Existing AC Shoulders

After removal and replacement of the barrier, we recommend to cold plane 3.5' (width)* of adjoining median shoulder pavement to a depth of 0.25' and backfill with new HMA (A). 42" width is selected to allow compaction of the HMA layer with a small roller.

b. Existing PCC Shoulders

We will provide recommendations once any specific issues are identified by Maintenance or Design during the PSE phase.

c. Metal Guardrailings

Refer to the 2024 Standard Plans for vegetation control strips under the new metal guardrailings.

d. Concrete Formwork Sliver

If a sliver is required for the concrete formwork, we recommend a 1-foot wide sliver with full-depth HMA-A backfill.

Should you have any questions, please contact Shawn Hung at shawn.hung@dot.ca.gov, or Mohammad Zabolzadeh at mohammad.zabolzadeh@dot.ca.gov.

cc: FBirang, MKaur, Daily File.

ATTACHMENT K
SCOPING TEAM FIELD REVIEW ATTENTANCE

10/15/25 3W200 Scoping Field Visit Sign-In Sheet

Name	Functional Unit	Contact Number
Emmanuel Okereke	Project Management (Project Manager)	(510) 7159293
Sam Torchia	Signing	(510) 421-6327
Rhafaël Herrera	Hydraulics	(510) 459-9945
Yonas Tekle	Hydraulics	(510) 435-9989
Amir Gilani	Design	(510) 393-4768
Nicholas Grgich	Design (Project Engineer)	(510) 421-6335
Christian Noriega	Design	(510) 504-6265
Jessica Wu	Design	(916) 694-7830

ATTACHMENT L
ASSET PERFORMANCE MEASURES

Performance & Accomplishments (PPC)											
Activity Detail	Performance Objective	Unit of Measurement	Quantity	Pre-Good	Pre-Fair	Pre-Poor	New	Post-Good	Post-Fair	Post-Poor	Comment
	No Performance Objective in the SHSMP	Linear Feet	65604.000			65604.000					63,967 LF of MCB upgraded
	No Performance Objective in the SHSMP	Linear Feet	1700.000			1700.000					1,900' MGS added. Updated 07/11/2023 to reflect 1,700' MGS.
	No Performance Objective in the SHSMP	Linear Feet	200.000			200.000					200' of MGS
	No Performance Objective in the SHSMP	Each	45.000			45.000					45 Light posts installed
	Collision Severity Reduction	Fatal/Serious Injury Collisions	0.041		0.041						Safety Performance updated to use SPET v2.7 per HQ Safety Programs request. submit amendment to address this and other similar projects.
	Collision Severity Reduction	Fatal/Serious Injury Collisions	139.040		139.040				09/04/25		Safety Performance updated to use SPET v2.7 per HQ Safety Programs request. submit amendment to address this and other similar projects.
	Overhead Sign Structures Rehabilitation	Each	19.000	1.000	18.000			19.000	05/19/23		1 GOOD OH 33S0533, 14 FAIR OH 33S0457, 33S0461, 33S0464, 33S0471, 33S0488, 33S0494, 33S0494, 33S0504, 33S0517, 33S0532, 33S0536, 33S0537, 33S0544
	Sign Panel Replacement	Each	19.000		19.000			19.000	05/19/23		Safety Performance updated to use SPET v2.7 per HQ Safety Programs request. submit amendment to address this and other similar projects.
	Proactive Safety	Annual Fatal & Serious Injury Collisions	0.002		0.002			0.002	08/19/25		Safety Performance updated to use SPET v2.7 per HQ Safety Programs request. submit amendment to address this and other similar projects.
	Proactive Safety	Annual Fatal & Serious Injury Collisions	6.950		6.950			6.950	09/04/25		Safety Performance updated to use SPET v2.7 per HQ Safety Programs request. submit amendment to address this and other similar projects.
	No Performance Objective in the SHSMP	Yes/No	No								No. Work is on mainline freeway
	No Performance Objective in the SHSMP	1,2,3									For this project (EA 3W200), GHG Emissions Analysis is being deferred to the final (PA&E) since an in-depth GHG Analysis will be performed with Environmental D

g 1:07 PM by Sharif Mohiuddin)

Performance Summary (All Locations)

Activity Category	Asset Class	Asset	Performance Value	Performance Measure	Unit	Pre-Good	Pre-Fair	Pre-Poor	Pre-Total	Post-Good	Post-Fair	Post-Poor	Post-Total
Safety - Collision reduction	Other Program Objectives		6.95	Annual fatal and serious injury collision(s)	Annual fatal and serious injury collision(s)	0.00	0.00	6.95	6.95	6.95	0.00	0.00	6.95

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

ATTACHMENT M
COMPLETE STREETS DECISION DOCUMENT (CSDD)

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:

- 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

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:

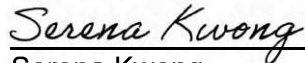
FACILITY TYPE	UNIT	QUANTITY	ESTIMATED TOTAL COST

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:



Serena Kwong
Advance Planning Branch IV

Concurred by:



Sergio Ruiz
District Complete Streets Coordinator

5/1/2023

Date



Tanzeeba Kishwar
Acting Deputy District Director,
Transportation Planning and Local Assistance

6/20/23

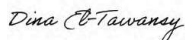
Date



For Helena "Lenka" Culik-Caro
Deputy District Director, Design or
Division Chief, Design/Project Development

6/22/23

Date



Dina El-Tawansy
District Director

06/26/2023

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.

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:



Nicholas Grgich, Project Engineer
Branch/Company

11/06/2025

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

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