ROAD REPAIR AND ACCOUNTABILITY ACT OF 2017
PROJECT BASELINE AGREEMENT
SR-60 Pavement Rehabilitation Near Beaumont (EA 1C090)

Resolution SHOPP-P-1819-01B
(will 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) for the *SR-60 Pavement Rehabilitation Near Beaumont (EA 1C090)*, effective on, AUGUST 15, 2018 (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

3.2 Whereas at its March 22, 2018 meeting the Commission approved the State Highway Operation and Protection Program, and included in this program of projects the *SR-60 Pavement Rehabilitation Near Beaumont (EA 1C090)*, 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 and the Project Report attached hereto as Exhibit B, as the baseline for project monitoring by the Commission.

3.3 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 *Insert Number*, "Adoption of Program of Projects for the Active Transportation Program", dated
- ☐ Resolution *Insert Number*, "Adoption of Program of Projects for the Local Partnership Program", dated
- ☐ Resolution *Insert Number*, "Adoption of Program of Projects for the Solutions for Congested Corridors Program", dated
- ☒ Resolution G-18-13, "Adoption of Program of Projects for the State Highway Operation and Protection Program", dated March 22, 2018
- ☐ Resolution *Insert Number*, "Adoption of Program of Projects for the Trade Corridor Enhancement Program", dated

4.3 All signatories agree to adhere to the Commission's State Highway Operation and Protection Program, 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; after July 2019, reports will be on a semi-annual basis on the progress made toward the implementation of the project, including scope, cost, schedule, outcomes, and anticipated benefits.

4.7 Caltrans agrees to prepare program progress reports on a quarterly basis; after July 2019, reports will be 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 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 during the course of the project, and retain those records for four years from the date of the final closeout of the project. Financial records will be maintained in accordance with Generally Accepted Accounting Principles.

4.10 The Transportation 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 four 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 Other Project Specific Provisions and Conditions

This project is a Financial Contribution Only (FCO) provided to Riverside County Transportation Commission (RCTC) and will be constructed as part of 0N69U (the truck lanes project on SR-60).

Attachments:

Exhibit A: Project Programming Request Form
Exhibit B: Project Report

SIGNATURE PAGE
TO
PROJECT BASELINE AGREEMENT

SR-60 Pavement Rehabilitation Near Beaumont (EA 1C090)

Resolution SHOPP - P-1819-01B

John Bulinski — Date 8/3/18

District Director

California Department of Transportation
(Project Applicant/Implementing Agency)

Laurie Berman — Date 8/3/2018

Director

California Department of Transportation

Susan Bransen — Date 8/15/18

Executive Director

California Transportation Commission

Exhibit A

Project Programming Request

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:	07/31/18 03:24:48 PM

District	EA	Project ID	PPNO	Project Manager
08	1C090	0812000287	0033N	RADHAKRISHNAN, RAGHURAM

County	Route	Begin Postmile	End Postmile	Implementing Agency	
RIV	60	22.1	26.6	PA&ED	Caltrans
				PS&E	Caltrans
				Right of Way	Caltrans
				Construction	Riverside County Trans Commission (RCTC)

Project Nickname

Riv 60 Rehab Pavement near Beaumont

Location/Description

Near Beaumont, from Gilman Springs Road to 1.4 miles west of Jack Rabbit Trail. Rehabilitate pavement.

Legislative Districts

Assembly:	42	Senate:	23	Congressional:	36

PERFORMANCE MEASURES

	Primary Asset	Good	Fair	Poor	New	Total	Units
Existing Condition	Pavement			17.6		17.6	Lane miles
Programmed Condition	Pavement	17.6				17.6	Lane miles

Project Milestone	Actual	Planned
Project Approval and Environmental Document Milestone	05/16/16	
Right of Way Certification Milestone	06/11/18	
Ready to List for Advertisement Milestone		08/14/18
Begin Construction Milestone (Approve Contract)		12/04/18

FUNDING

Component	Fiscal Year	SHOPP					Total
PA&ED							0
PS&E							0
RW Support							0
Const Support							0
RW Capital							0
Const Capital	18/19	15,000					15,000
Total		15,000					15,000

2018 State Highway and Operation Protection Program

Riverside County

Document Year 2018, Version Number 7

PPNO: 0033N

(Dollars in Thousands)

DIST:	PPNO :	EA :	CTIPS ID:
08	0033N	1C090	109-0000-3512

CT PROJECT ID: 0812000287

COUNTY:	ROUTE:	PM:
Riverside County	60	22.1/26.6

TITLE (DESCRIPTION):

(Near Beaumont, from Gilman Springs Road to 1.4 miles west of Jack Rabbit Trail. Rehabilitate pavement.)

Performance Measure: Lane mile(s) Quantity: 17.60

ELEMENT: SHOPP Major Const.

SPONSOR: Caltrans

MPO: Southern California Association of Governments

CORRIDOR:

PRJ MGR:

PHONE:

MPO ID: 9 LAW: 12

ASSEMBLY: 42
SENATE: 23
CONGRESS: 36

Implementing Agencies: PAED - RW -
PSE - CON -

PROJECT VERSION HISTORY *(Printed Version is Shaded)* **(Last 9 versions displayed)**

Version	Status	Date	Updated By	Change Reason	Amend No.	Vote	Cum Award	Prog Con	Prog RW	PA & ED	PS & E	RW Sup	Con Sup
								Programmed Dollars in Thousands - Total For Project					
7	Official	3/21/2018	LSTOCKTO	Adoption - Carry Over	18H-000			15,000					
6	Official	6/28/2017	GVASQUEZ	Amendment - Cost/Scope/Sch. Change	16H-014			15,000					
5	Official	4/15/2016	DBERRY	Approved - Carry Over	16H-000			15,000					
4	Official	3/16/2016	MWEBSTER	Amendment - Cost/Scope/Sch. Change	14H-495			15,000					
3	Official	10/22/2015	MWEBSTER	Amendment - Cost/Scope/Sch. Change	14H-492			15,000					
2	Official	8/1/2014	LSTOCKTO	Amendment - Split/Combined - Split Into	14H-187			15,000					
1	Official	3/26/2014	DBERRY	Approved - New Project				27,155	7	734	1,787	22	2,285

Fund Source 1 of 1 SHOPP - Roadway Preservation

Fund Type:
National Hwy System

Program Code: 20.XX.201.121
Pavement Rehabilitation

Funding Agency:

VOTE	DATE	AMOUNT

	PRIOR	18/19	19/20	20/21	21/22	22/23	23/24	FUTURE	TOTAL
PA&ED									
PS&E									
R/W SUP									
CON SUP									
R/W									
CON		15,000							15,000
TOTAL		15,000							15,000

HQ Comments:
****** Version 7 - 03/21/2018 ******
Carryover project from 2016 to 2018 SHOPP.
******** Version 2 - 11/01/2017 ********
Added sequential programming for 2018 SHOPP – SL
7/14/17 Changed Funding $15,000k from R/W to Con. -gv
7/12/17 Made amendment official. Delay FY 17-18 to 18-19. - MW
******** Version 6 - 07/05/2017 ********
Entered Amendment #16H-014 - RW
******** Version 5 - 04/15/2016 ********
Carryover project from 2014 to 2016 SHOPP
3/21/16 Made amendment official. Update PM/Location and delay to 17/18. - MW
******** Version 4 - 03/17/2016 ********
Entered in as amendment #14H-495 but action was taken by CTC on the 4.18 BI - RW
10/22/15 Made Amendment Official - MW
******** Version 3 - 10/02/2015 ********
Entered Amendment #14H-492 - RW
8/1/14 Made amend official. Split to child EA 1C091. Changed PM, Description, R/W, Const., FY, and support. Combine with EA 0Q180 and STIP project EA 0N690 for construction under EA 0N69U. - LS
******** Version 2 - 08/01/2014 ********
Entered amendment #14H-187 - RW
^^^^^^^^ Version 1 - 03/26/2014 ^^^^^^^^
New 2014 SHOPP project

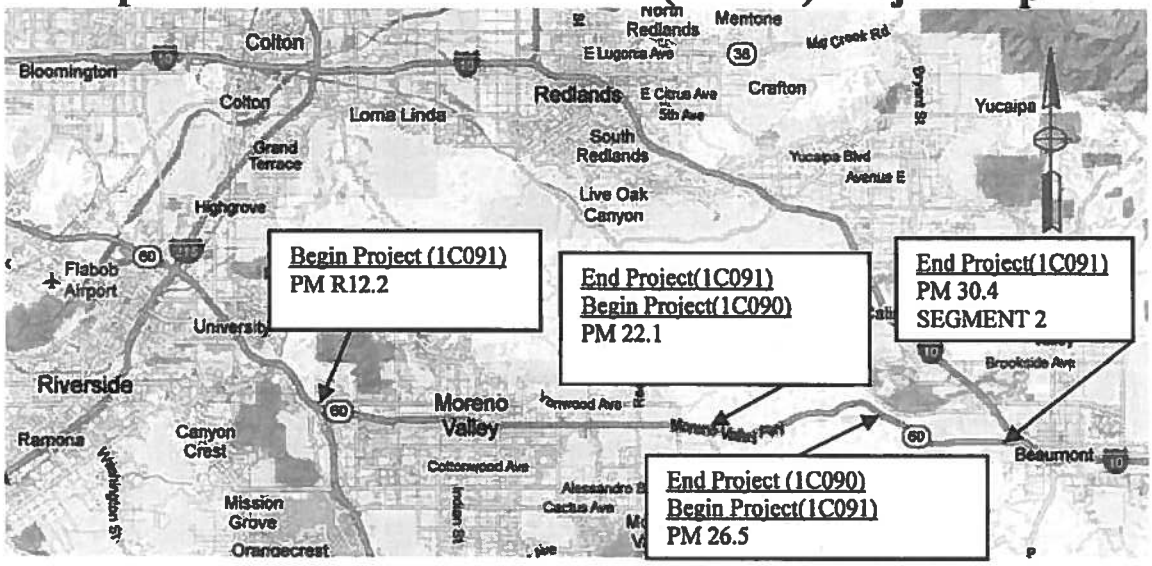
Exhibit B

Project Report

08 - Riv - 60 – R12.2/22.1 & 26.5/30.4 (1C091)
08 – Riv – 60 – 22.1/26.5 (1C090)
20.XX.201.121
EFIS/PPNO 0812000287/0033N/EA 1C090
EFIS/PPNO 0814000223/0040M /EA 1C091

May/2014

SUPPLEMENTAL
Capital Preventive Maintenance (CAPM) Project Report



In Riverside County, in and near Moreno Valley, on State Route 60 from State Route 60/215 Separation to Gilman Springs Road, and from 1.47 miles west of Jack Rabbit Trail to State Route 10/60 Separation (1C091); and from Gilman Springs Road to 1.47 miles west of Jack Rabbit Trail (1C090)

APPROVAL RECOMMENDED:

***Raghuram Radhakrishnan**, PROJECT MANAGER*

APPROVED:

***Basem E. Muallem PE**, DISTRICT DIRECTOR* — *Date* 5/15/14

ROAD REPAIR AND ACCOUNTABILITY ACT OF 2017
PROJECT BASELINE AGREEMENT
SR-60 Shoulder Widening Near Beaumont (EA 0Q180)

Resolution SHOPP-P-1819-01B
(will 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) for the *SR-60 Shoulder Widening Near Beaumont (EA 0Q180)*, effective on, AUGUST 15, 2018 (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

3.2 Whereas at its March 22, 2018 meeting the Commission approved the State Highway Operation and Protection Program, and included in this program of projects the *SR-60 Shoulder Widening Near Beaumont (EA 0Q180)*, 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 and the Project Report attached hereto as Exhibit B, as the baseline for project monitoring by the Commission.

3.3 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 *Insert Number* , "Adoption of Program of Projects for the Active Transportation Program", dated
- ☐ Resolution *Insert Number* , "Adoption of Program of Projects for the Local Partnership Program", dated
- ☐ Resolution *Insert Number* , "Adoption of Program of Projects for the Solutions for Congested Corridors Program", dated
- ☒ Resolution G-18-13, "Adoption of Program of Projects for the State Highway Operation and Protection Program", dated March 22, 2018
- ☐ Resolution *Insert Number* , "Adoption of Program of Projects for the Trade Corridor Enhancement Program", dated

4.3 All signatories agree to adhere to the Commission's State Highway Operation and Protection Program, 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; after July 2019, reports will be on a semi-annual basis on the progress made toward the implementation of the project, including scope, cost, schedule, outcomes, and anticipated benefits.

4.7 Caltrans agrees to prepare program progress reports on a quarterly basis; after July 2019, reports will be 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 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 during the course of the project, and retain those records for four years from the date of the final closeout of the project. Financial records will be maintained in accordance with Generally Accepted Accounting Principles.

4.10 The Transportation 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 four 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 Other Project Specific Provisions and Conditions

This project is a Financial Contribution Only (FCO) provided to Riverside County Transportation Commission (RCTC) and will be constructed as part of 0N69U (the truck lanes project on SR-60).

Attachments:

Exhibit A: Project Programming Request Form
Exhibit B: Project Report

SIGNATURE PAGE
TO
PROJECT BASELINE AGREEMENT

SR-60 Shoulder Widening Near Beaumont (EA 0Q180)

Resolution SHOPP - P-1819-01B

John Bulinski — Date 8/3/18

District Director

California Department of Transportation
(Project Applicant/Implementing Agency)

Laurie Berman — Date 8/3/18

Director

California Department of Transportation

Susan Bransen — Date 8/15/18

Executive Director

California Transportation Commission

Exhibit A

Project Programming Request

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:	07/31/18 03:23:07 PM

District	EA	Project ID	PPNO	Project Manager
08	0Q180	0800020220	0045G	RADHAKRISHNAN, RAGHURAM

County	Route	Begin Postmile	End Postmile	Implementing Agency	
RIV	60	22.2	26.6	PA&ED	Caltrans
				PS&E	Caltrans
				Right of Way	Caltrans
				Construction	Riverside County Trans Commission (RCTC)

Project Nickname

RIV 60 WB Shoulder Widening

Location/Description

Near Beaumont, from Gilman Springs Road to 1.4 miles west of Jack Rabbit Trail. Construct left and right shoulders for westbound direction.

Legislative Districts

Assembly:	65	Senate:	37	Congressional:	41

PERFORMANCE MEASURES

	Primary Asset	Good	Fair	Poor	New	Total	Units
Existing Condition						0	
Programmed Condition					382	382	Collision reduction

Project Milestone	Actual	Planned
Project Approval and Environmental Document Milestone	05/16/16	
Right of Way Certification Milestone	06/11/18	
Ready to List for Advertisement Milestone		08/14/18
Begin Construction Milestone (Approve Contract)		12/04/18

FUNDING

Component	Fiscal Year	SHOPP					Total
PA&ED	17/18	2,000					2,000
PS&E	17/18	1,500					1,500
RW Support	17/18	200					200
Const Support	18/19	3,700					3,700
RW Capital	18/19	250					250
Const Capital	18/19	25,000					25,000
Total		32,650					32,650

2018 State Highway and Operation Protection Program

Riverside County

Document Year 2018, Version Number 8

PPNO: 0045G

(Dollars in Thousands)

DIST:	PPNO:	EA:	CTIPS ID:
08	0045G	0Q180	109-0000-3273

CT PROJECT ID: 0800020220

COUNTY:	ROUTE:	PM:
Riverside County	60	22.2/26.6

TITLE (DESCRIPTION):

(Near Beaumont, from Gilman Springs Road to 1.4 miles west of Jack Rabbit Trail. Construct left and right shoulders for westbound direction.)

Performance Measure: Collision(s) reduced Quantity: 382.00

ELEMENT: SHOPP Major Const.

SPONSOR: Caltrans

MPO: Southern California Association of Governments

CORRIDOR:

PRJ MGR: RK

PHONE: (909) 383-6288

MPO ID: 9 LAW: 12

ASSEMBLY: 65
SENATE: 37
CONGRESS: 41

Implementing Agencies: PAED - RW -
PSE - CON -

PROJECT VERSION HISTORY *(Printed Version is Shaded)* **(Last 9 versions displayed)**

Version	Status	Date	Updated By	Change Reason	Amend No.	Vote	Cum Award	Programmed Dollars in Thousands - Total For Project: Prog Con	Prog RW	PA & ED	PS & E	RW Sup	Con Sup
8	Official	3/21/2018	LSTOCKTO	Adoption - Carry Over	18H-000	2,000		25,000	250	2,000	1,500	200	3,700
7	Official	10/18/2017	RWHITE	Allocation - CTC Vote	FP-17-13	2,000		25,000	250	2,000	1,500	200	3,700
6	Official	6/28/2017	RWHITE	Amendment - Cost/Scope/Sch. Change	16H-014			25,000	250	2,000	1,500	200	3,700
5	Official	4/15/2016	DBERRY	Approved - Carry Over	16H-000			25,000	250	2,000	1,500	200	3,700
4	Official	3/16/2016	MWEBSTER	Amendment - Cost/Scope/Sch. Change	14H-495			25,000	250	2,000	1,500	200	3,700
3	Official	10/22/2015	MWEBSTER	Amendment - Split/Combined - Combined With	14H-492			25,000	250	2,000	1,500	200	3,700
2	Official	3/26/2014	DBERRY	Approved - Carry Over				25,000	250	2,000	1,500	200	3,700
1	Official	6/15/2012	DBERRY	Amendment - New Project	12H-042			25,000	250	2,000	1,500	200	3,700

Fund Source 1 of 1 SHOPP - Collision Reduction

Fund Type:
Surface Transportation Program

Program Code: 20.XX.201.010
Safety Improvements

Funding Agency:

VOTE	DATE	AMOUNT
PAED	10/18/17	2,000

	PRIOR	18/19	19/20	20/21	21/22	22/23	23/24	FUTURE	TOTAL
PA&ED	2,000								2,000
PS&E	1,500								1,500
R/W SUP	200								200
CON SUP		3,700							3,700
R/W		250							250
CON		25,000							25,000
TOTAL	3,700	28,950							32,650

HQ Comments:
****** Version 8 - 03/21/2018 ******
Carryover project from 2016 to 2018 SHOPP.
******** Version 2 - 11/01/2017 ********
Added sequential programming for 2018 SHOPP – SL
10/20/17 Made COS Allocation(s) official – SL
******** Version 7 - 10/19/2017 ********
Entered COS allocation (PA&ED) – RW
7/12/17 Made amendment official. Delay FY 17-18 to 18-19. - MW
******** Version 6 - 07/05/2017 ********
Entered Amendment #16H-014 - RW
******** Version 5 - 04/15/2016 ********
Carryover project from 2014 to 2016 SHOPP
3/21/16 Made amendment official. Update PM/Location and delay to 17/18. - MW
******** Version 4 - 03/17/2016 ********
Entered in as amendment #14H-495 but action was taken by CTC on the 4.18 BI - RW
10/22/15 Made Amendment Official. Combine with EA 1C090 for construction. - MW
******** Version 3 - 10/02/2015 ********
Entered Amendment #14H-492 - RW
******** Version 2 - 03/26/2014 ********
Carryover project from 2012 to 2014 SHOPP
2/4/13: Approved PCR to combine with local project EA 0N690 for construction under EA 0N69U - DB

6/20/12 Made amend official. New project. - LS
^^^^^^^^ Version 1 - 06/20/2012 ^^^^^^^^
Entered new 2012 SHOPP project - RW

Exhibit B

Project Report

08-Riv-60 PM 22.10/26.61
(EA 08-0N69U0) - Project Number 0812000307
Planning Program Number (PPNO) 0046J
Program Code: 201.010, 201.121, 75.600, 400.100, 400.210 (HB1/HB4N)
May 2016

PROJECT REPORT

On Route 60

Between Gilman Springs Road Interchange

And 1.37 miles west of Jack Rabbit Trail

I have reviewed the right of way information contained in this project report and the Right of Way Data Sheet attached hereto and find the data to be complete, current and accurate.

5/2/16

J.T. REBECCA GUIRADO, Deputy District Director, Right of Way Date

APPROVAL RECOMMENDED:

4-29-16

RAGHURAM RADHAKRISHNAN Date
Project Manager

5/16/16

DAVID BRICKER Date
Deputy District Director, Environmental Planning

5-2-16

CATALINO A. PINING III Date
Deputy District Director, Traffic Operations

5/2/16

CHRISTY CONNORS Date
Deputy District Director, Design

4-29-16

APPROVED:

5/16/16

JOHN BULINSKI, District Director Date

08-Riv-60 PM 22.10/26.61
(EA 08-0N69U0) - Project Number 0812000307
Planning Program Number (PPNO) 0046J
Program Code: 201.010, 201.121, 75.600, 400.100, 400.210 (HB1/HB4N)
May 2016

VICINITY MAP

08-Riv-60 PM 22.10/26.61
(EA 08-0N69U0) - Project Number 0812000307
Planning Program Number (PPNO) 0046J
Program Code: 201.010, 201.121, 75.600, 400.100, 400.210 (HB1/HB4N)
May 2016

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.

4-26-2016

AHMAD SHAH
Project Engineer
Design C

Date

Concurred By:

4-26-2016

TRAN HOANG
Office Chief (Acting)
Design C

Date

Table of Contents

1. INTRODUCTION

It is proposed to construct a truck-climbing lane and a truck-descending lane, as well as inside and outside standard shoulders in both eastbound and westbound directions of State Route 60 (SR-60). This project is located in the County of Riverside between Gilman Springs Road Interchange, Post Mile (PM) 22.10 and approximately 1.37 miles west of the Jack Rabbit Trail Intersection, PM 26.61 (see Attachment A).

The total project capital construction cost is estimated at $107,211,284. The total capital right of way estimate is $1,879,000 (see Attachment G). The Riverside County Transportation Commission (RCTC) is the main project sponsor. This is a mixed-funded project, using funds from Local Measure A funds, local federal funds and State funds drawing from Safety and Roadway Rehabilitation programs under the State Highway Operation and Protection Program (SHOPP). This project is scheduled for delivery into construction in the 2017/18 Fiscal Year. Caltrans is the lead agency under the California Environmental Quality Act (CEQA) and also the lead agency under the National Environmental Policy Act (NEPA).

This project is classified as "Category 4B", as defined in Chapter 8, Section 5 of the Caltrans Project Development Procedures Manual because it does not require substantial right of way nor does it increase traffic capacity. An Initial Study/Environmental Assessment study has been undertaken and is anticipated to result in a Mitigated Negative Declaration determination. As a result the criteria for Categories 5 or 6 are not met. A Project Category Assignment approval was granted on June, 8, 2015 (see Attachment N).

Table 1- Project Report Information Summary

Project Limits	08-Riv-60 PM 22.10-26.61
Number of Alternatives	2 (including No-Build)
Current Capital Outlay Support Estimate	$13,538,000
Current Capital Outlay Construction Estimate	$107,211,284
Current Capital Outlay Right of Way Estimate	$1,879,000
Funding Source	Measure A-RCTC 400.100 /SHOPP 201.010/ STIP RIP 075.600,CMAQ 400.210 201
Funding Year	2016/18 Fiscal Year
Type of Facility	Freeway/Expressway
Number of Structures	9

Environmental Determination or Document	An Initial Study leading to a Mitigated Negative Declaration (MND) under CEQA and an Environmental Assessment leading to a Finding of No Significant Impact (FONSI) under NEPA, prepared as a joint Environmental Document.
Legal Description	On SR-60 in Unincorporated Riverside County: Construct new eastbound and westbound truck lanes from Gilman Springs Rd to approx. 1.37 miles west of Jack Rabbit Trail and upgrade existing inside and outside shoulders to standard widths (10-ft inside shoulder and 12-ft outside shoulder) (EA: 0N69U) - Congestion Mitigation and Air Quality (CMAQ) pm2.5 benefits project. $802.9 TC will be utilized for (CMAQ) Eng in FY 14/15
Project Development Category	4B

2. RECOMMENDATION

It is recommended that this project be approved using the Preferred Alternative described herein and that the project proceeds to the design phase.

3. BACKGROUND

SR-60 is an east-west freeway traversing urbanized and rural areas of Los Angeles, San Bernardino, and Riverside Counties. The facility begins at its junction with Interstate 10 (I-10) in the City of Los Angeles in the County of Los Angeles and ends at the junction with I-10 in the City of Beaumont in the County of Riverside. The total length of SR-60 is 70.9 miles.

SR-60 serves intraregional, interregional and interstate travel. Section 253.1 of the California Streets and Highway Code lists SR-60 in the State Freeway and Expressway System. As part of the National Highway System (NHS), SR-60 is classified as an "other NHS route" for its entire length. "Other NHS routes" are highways in rural and urban areas that provide access between an arterial and a major port, airport, public transportation facility or other inter-modal transportation facility. The entire route is included in the National Network for Federal Surface Transportation Assistance Act for Oversized Trucks.

SR-60 is classified as a Transportation Gateway of Major Statewide Significance in the Caltrans June 1998 Interregional Transportation Strategic Plan (ITSP). ITSP gateways are principal centers or transportation facilities that provide access to major state, national or international trade and commerce, goods movement and inter-modal transfer.

The Transportation Concept Report (TCR) for SR-60 is a long-range planning document to guide the logical development of transportation systems, as required by law and as necessitated by the public, stakeholders and system users. The purpose of the TCR is to evaluate current and projected conditions along the route and communicate the vision for the development of each route in each Caltrans District during a 20–25-year planning horizon. The TCR is developed with the goals of increasing safety, improving mobility, providing excellent stewardship and meeting community and environmental needs along the studied corridor. According to the TCR for SR-60, the segment of SR-60 that starts at the Los Angeles/ San Bernardino County Line east to Gilman Springs Road carries heavy amounts of commuter traffic, including those destined for employment centers in Orange and Los Angeles Counties. SR-60 serves the industrial/commercial centers of Los Angeles County and the Inland Empire, including Ontario International Airport (ONT). The segment of SR-60 from Gilman Springs Road east to the I-10/SR-60 Interchange mostly serves interregional and interstate traffic. The TCR states that a significant increase in freight and commuter traffic is expected throughout the corridor.

The Ports of Long Beach and Los Angeles handle over 40 percent of all U.S. international containerized cargo. Trucks use SR-60 in conjunction with I-10, Interstate 15 (I-15), Interstate 40 (I-40) and Interstate 710 (I-710) to transport goods throughout the country. A significant volume of port traffic travels north from the ports using I-710 and then east on SR-60. SR-60 is a major truck route. The California 2013 Annual Average Daily Truck Traffic on the State Highway System data indicate that 16 percent of the annual average daily traffic (AADT) on SR-60 was truck traffic. Additional traffic information is contained in Table 2.

In conjunction with Interstate 5 (I-5), I-10, I-15 and I-710, SR-60 provides for the movement of people and goods in a southerly direction toward San Diego and in northerly and easterly directions through California and beyond. These highways provide access to three international airports (Los Angeles, Ontario and Palm Springs), four major seaports (Port Hueneme, Long Beach, Los Angeles and San Diego) and two rail corridors, the Burlington Northern Santa Fe and the Union Pacific lines. High volumes of seasonal Southern California recreational traffic use SR-60 as a means to connect with other State routes for access to the Colorado River and to other destinations in California, Arizona, Nevada, Utah and beyond.

In 2011, ONT handled 33,800 Tons of air cargo including freight and mail. Online retailers deliver to the Inland Empire using ONT because of improved shipping times compared to Orange County or Los Angeles International Airports. Increases in online purchasing and new

industrial/warehouse land uses in the Inland Empire are expected to increase freight traffic in the future. There are industrial and warehousing facilities adjacent to SR-60 at various locations. These facilities add freight traffic on SR-60. Over 40 million square feet of industrial space is located within the City of Chino. The City of Ontario has approximately 97 million square feet of industrial space. In east Moreno Valley, there are plans to construct the World Logistics Center (WLC) consisting of approximately 40.6 million square feet. There is currently a 1.8-million-square-foot distribution center for a major retailer in east Moreno Valley.

In 2002, Riverside County voters approved a 30-year extension to Measure A, Riverside County's half-cent sales tax for transportation projects. As part of the extension (ordinance #02-001), funds were earmarked for a truck-climbing lane on SR-60 in the badlands area east of Moreno Valley. The 10-year Western Riverside County Highway Delivery Plan approved by RCTC in December 2006 did not include the SR-60 Truck Lanes Project, but did include the truck-climbing lane project on Interstate 10 from the San Bernardino County line to SR-60.

The proposed project is a product of three projects identified under the respective Expenditure Authorizations 08-0N690K, 08-0Q180K and 08-1C090K.

The Project Study Report (PSR) for project EA 08-0N690K evaluated the feasibility of (1) constructing a truck-climbing lane with standard shoulders in the eastbound direction between PM 23.00 and 25.90 on SR-60; (2) constructing an eastbound truck-climbing lane with standard shoulders and a westbound descending lane with standard shoulders between PM 22.40 and 25.90 on SR-60 or (3) only constructing shoulders in both directions between PM 22.20 and 26.50 on SR-60. This PSR was approved on August 16, 2011.

The PSR for project EA 08-0Q180K evaluated the feasibility of proposed improvements consisting of constructing a five-foot standard inside shoulder and a 10-foot standard outside shoulder in the westbound direction of SR-60 between PM 22.20 and 26.50. This PSR was approved on May 11, 2012.

The Capital Preventive Maintenance Project Report for project EA 08-0C090K, a project initiation document providing a recommendation to program the project into the 2014 (SHOPP), was approved on June 27, 2013. The purpose of the project was to (1) preserve and extend the life of the existing pavement and improve ride quality; (2) cold plane the mainline shoulder at locations with existing median concrete barrier; and (3) overlay all shoulders with rubberized hot mix asphalt in each direction on SR-60 between PM 12.2 and 30.4. A supplemental Capital Preventive Maintenance Project Report was approved on May 15, 2014 to combine this planned work between PM 22.1 and 26.5 as part of the work to be included with the proposed SR-60 Truck Lanes Project and to proceed with development of

the other portions of the original limits (PM 12.2 to 22.1 and 26.5 to 30.4) through a different project, EA 08-1C091.

At the RCTC workshop in 2011, RCTC staff presented traffic volume and accident rate comparisons between the two projects, demonstrating that improvements to SR-60 in the Badlands area were more urgently needed than the planned I-10 truck-climbing lane project identified in the 2006 RCTC Measure A, 10-year Delivery Plan.

As a result, RCTC approved substituting the SR-60 Truck-Climbing Lane Project for the I-10 Truck-Climbing Lane Project in the 10-Year Delivery Plan at the agency's February 2012 workshop. RCTC also approved combining the SR-60 Truck Climbing Lane Project with Caltrans' planned safety project on SR-60 within the same area at the full commission meeting on June 7, 2012.

Caltrans and RCTC agreed to join efforts to deliver one combined project in order to take advantage of existing programming for the planned Caltrans safety project to widen the shoulders of SR-60 between PM 22.0 and 26.5, planned Caltrans pavement rehabilitation and the planned RCTC project to construct an eastbound truck-climbing lane and westbound truck-descending lane within the same limits. All three projects used the same route with the same post-mile limits and had similar schedules. Therefore, combining the projects would minimize support and capital cost expenditures and would also minimize impacts to the traveling public.

4. PURPOSE AND NEED

Purpose:
The purpose of the SR-60 Truck Lanes Project is to:

- Improve operational performance and safety.
- Improve traffic flow on the regional transportation system.

Due to a combination of mountainous terrain, inside narrow shoulders and the existing concrete median barrier, the horizontal alignment of the roadway is restricted. Additionally, the presence of tight-radius curves to the outside combined with narrow shoulders adjacent to steep slopes in cut along with abrupt changes in vertical profiles within the project limits add to the existing restrictive horizontal sight conditions. Providing standard shoulders and graded area next to the outside shoulder throughout the limits of the proposed project will ensure the needed room to accommodate stopped vehicles, for emergency use and for errant vehicle recovery. Providing truck-climbing and truck-descending lanes will separate slower moving vehicles (trucks, buses and recreational vehicles) from passenger vehicles.

Need:

The proposed project area is in mountainous terrain with numerous tight-radius horizontal curves, short tangent sections, steep grades and swift changes in elevation. The sustained uphill grade exceeds 2.9 percent. A few locations have uphill grades that exceed 6 percent. The overall change of elevation from one end of the project to the other is a little greater than 500 feet over a distance of 2.5 miles. Due to the mountainous terrain and the presence of a concrete median barrier, the horizontal alignment of the roadway is also restricted with little or no existing shoulder width. This is true particularly on the left side of the travelled way where there is no inside shoulder for much of the project limits.

The vehicle mix within the project limits also consists of 16 percent trucks. Because of the steep grades, automobiles with trailers, trucks and buses have difficulty maintaining a reasonable speed throughout the entire segment.

Accidents recorded between April 1, 2010 and March 31, 2013 were split between 49.4 percent in the eastbound direction and 38.1 percent in the westbound direction and involved trucks with trailers, pickups and panel trucks. The speed differential between high-speed passenger vehicles and slow-moving trucks in the uphill (eastbound) and downhill (westbound) directions is a contributing factor to these accidents.

Of these collisions, 31.2 percent were of the hitting-object types in the eastbound direction and 48 percent in the westbound direction involved vehicles striking either the median barrier to the left or the guardrail or embankment slope to the right. Additional contributing factors consisted of reduced inside and outside shoulders, restrictions on horizontal and vertical sight distances, as well as physical sight distance restrictions from existing outside steep mountain slopes located close to the outer edges of the tight horizontal curves.

As shown in (Table 2) corresponding to a Horizon Year of 2040, the No-Build Alternative would support an AADT of 107,100 vehicles, including 17,100 trucks on the existing two mixed-flow lanes. By adding the proposed truck-lane in each direction, the 2040 forecasted volume to capacity ratio would improve from 1.29 for the No-Build Alternative to 1.06 for the Build Alternative (Preferred Alternative), resulting in improved levels of service.

The volume and percentage of heavy trucks are factors in justifying the need for a truck-climbing lane in the eastbound and a truck-descending lane in the westbound direction. Standard shoulders will provide vehicles with enough room to safely stop in case of breakdowns, as well as providing space for emergency vehicles.

A. Problem, Deficiencies, Justification

Slower-moving trucks, without passing lanes on the long uphill grades, create conflicts between autos and trucks. The need for climbing lanes and their effects on capacity, Level of Service (LOS) and delay when slow-moving vehicles such as trucks, recreational vehicles, buses and automobiles with trailers are present is described in Caltrans Highway Design Manual (HDM), revised 6th Edition under Topic 204.5, Sustained Grades. Trucks characteristically exhibit the lowest level of hill-climbing performance of all vehicles on highways and freeways. One criterion used to consider the addition of a climbing lane is when the running speed of trucks falls 10 miles per hour (mph) or more below the running speed of remaining traffic.

Separate speed surveys of automobiles only and trucks only were performed for the proposed project. The surveys found that the weighted average speed of automobiles was 60 mph and of trucks was 46 mph, a drop of 14 mph. The 85th percentile speed of automobiles was 64 mph and of trucks was 54 mph, a drop of 10 mph. The 50th percentile speed (mean speed) of automobiles was 59 mph and of trucks was 44 mph, a drop of 15 mph. Based on the results of the speed surveys, there is at least a 10 mph drop in truck speeds compared to automobiles; therefore, the HDM criterion of a 10 mph drop in speed of trucks compared to automobiles is justified and the addition of an eastbound climbing lane should be considered.

Chapter 3: Elements of Design Section on Climbing Lanes from the American Association of State Highway and Transportation Officials' (AASHTO) reference*, Geometric Design of Highways and Streets*, provides three criteria that must be satisfied to justify a climbing lane:

1. Upgrade traffic flow rate in excess of 200 vehicles per hour.
2. Upgrade truck flow rate in excess of 20 vehicles per hour.
3. One of the following conditions exists:

    a. A 10-mph or greater speed reduction is expected for a typical heavy truck.
    b. LOS E or F exists on the grade.
    c. A reduction of two or more LOS levels is experienced when moving from the approach segment to the grade.

The upgrade-traffic flow rate is determined by multiplying the existing design hour volume by the directional distribution factor (directional split percent/100) for the upgrade direction and dividing the result by the peak hour factor. The existing 2013 Design Hourly Volume is 4,440 vehicles per hour, directional distribution factor is 0.57 (57/100) and peak hour factor is 0.88. The traffic data used in this calculation is provided in Table 1-3. The upgrade flow rate is calculated as 2,751 vehicles per hour. This rate is in excess of

200 vehicles per hour. This supports the first AASHTO criterion in the justification of a climbing lane.

The number of upgrade trucks is obtained by multiplying the upgrade flow rate by the percentage of trucks in the upgrade direction. With 8 percent trucks in the upgrade direction, the upgrade truck flow rate is 220 vehicles per hour, which is in excess of the 20 vehicles per hour that is required. This supports the second AASHTO criterion in the justification of a climbing lane.

The speed survey determined that the weighted average speed of trucks is 14 mph lower than that of other vehicles through this segment of SR-60. This exceeds the 10 mph or greater speed reduction for typical heavy trucks. This existing condition supports the third AASHTO criterion in the justification of a climbing lane.

In more severe downgrades, heavy vehicles often use low gears to avoid gaining too much speed and running out of control. If overtaking opportunities are not available on steep grades, the speed of trucks will be as low as on equivalent upgrades and will have a similar effect on traffic flow. A descending lane is appropriate in these circumstances.

Due to the truck volume, speed differentials of trucks compared to other vehicles, sight distance, tight horizontal curves and the difficulty of overtaking, a truck-descending lane would be constructed in the westbound direction to provide satisfactory traffic operations.

Horizontal Sight Distance Requirements: Due to a combination of mountainous terrain and inside narrow or no shoulder shoulders and the existence of a concrete median barrier, the horizontal alignment of the roadway is restricted. Additionally, the presence of tight-radius horizontal curves to the outside combined with narrow shoulders adjacent to steep slopes in cut add to the existing restrictive horizontal sight conditions. The affected locations have experienced higher than average levels of traffic accidents (see Table 4).

Vertical Sight Requirements: A number of existing vertical curves within the limit of the project do not satisfy the requirement of the stopping sight distance standards. This characteristic places restrictions on the driver-related to vertical sight distance, resulting in reduced speeds and the potential for increased traffic accidents (see Table 4).

Moreover adding standard shoulders, providing additional grading in the locations of cut-slopes to the outside and providing standard outside and inside shoulders will improve the overall safety of the traveling public within the limits of the proposed project.

All the above improvements will change the profile grade and cross-slope of the existing pavement surface and will change the elevation of the new surface with respect to the existing median concrete barrier (Type 50). This will trigger the need for reconstruction

of the existing pavement and median concrete barrier. Combination of the above integrated improvements will enhance driving condition for the drivers of passenger cars, recreational vehicles and trucks.

B. Regional and System Planning

Identified Systems

SR-60 provides interregional mobility between the commercial centers of Los Angeles, Riverside and San Bernardino areas. Within District 8 in San Bernardino and Riverside Counties, SR-60 varies in width from four (4) lanes in rural areas to ten (10) lanes in urbanized areas. The total length of the route is approximately 70.4 miles beginning near the junction of I-5 and I-10 in Los Angeles County and terminates at the junction with I-10 in the City of Beaumont in Riverside County.

State Planning

Transportation Concept Report for SR-60 divides this route to seven segments, this project is within the limit of segment seven, which starts at Gilman Springs Road PM 22.1 and ends at the I-10 /SR 60 Interchange PM 30.5, per concept rational of maintaining LOS of "D" through 2035 facility concept for this segment is six mixed-flow lanes.

Regional Planning

SR-60 serves intraregional, interregional and interstate travel. The entire route is included in the National Network for Federal Surface Transportation Assistance Act for Oversized Trucks.

C. Traffic

Current and Forecasted Traffic

The existing average daily traffic (ADT) and design hour volumes (DHV), as well as forecasted design hour volumes have been developed and analyzed to assess existing operating conditions and the impacts of the proposed improvements. Existing (2013) and Forecasted (2020 and 2040) traffic data on SR-60 within the project limits are provided in the following tables:

Table2 - Traffic Data Information

	Year 2013	Opening Year 2020			Horizon Year 2040		
	Existing (MF)	No Build (MF)	Build		No Build (MF)	Build	
			MF	TCL		MF	TCL
Annual Average Daily Traffic (AADT)	46,000	58,700	49,300	9,400	107,100	90,000	17,100
Annual Average Daily Truck Traffic (AADTT)	7,400	9,400	N/A	9,400	17,100	N/A	17,100
Design Hour Volume (DHV)	4,400	5,300	4,880	420	8,570	7,880	690
Design Hour Truck Volume (DHTV)	350	420	N/A	420	690	N/A	690
One-way Peak Hour Volume (PHV)	2,510	3,020	2,780	240	4,880	4,490	390
Directional Split (%)	57%	57%	57%	N/A	57%	57%	N/A
Truck % in AADT	16%	16%	N/A	100%	16%	N/A	100%
Truck % in DHV	8%	8%	N/A	100%	8%	N/A	100%
Daily Vehicle Miles Traveled (VMT)	202,400	258,280	216,920	41,360	471,240	396,000	75,240
Daily Vehicle Hours Traveled (VHT)	2,976	4,036	3,190	844	16,830	8,082	1,636
Volume-to-Capacity Ratio (V/C)	0.66	0.80	0.66	0.41	1.29	1.06	0.53

Notes:
MF = mixed-flow lane
TCL = truck-climbing lane
N/A = assumes all trucks on TCL
Source: California Department of Transportation. 2016. Email Correspondence from Caltrans District 8 Office of Traffic Forecasting.

Table3 – Freeway Mainline Level of Service (LOS)

	Eastbound (2 lanes)						**Westbound (2 lanes)**					
	AM Peak Hour			**PM Peak Hour**			**AM Peak Hour**			**PM Peak Hour**		
	2 Way PHV	Density *	LOS	2 Way PHV	Density *	LOS	PHV	Density *	LOS	PHV	Density *	LOS
Existing Year 2013	2,510	23.3	C	1,890	17.1	B	1,890	17.1	B	2,510	23.3	C
Year 2020 (No Build)	3,020	29.9	D	2,280	20.8	C	2,280	20.8	C	3,020	29.9	D
Year 2020 (Build)	2,780	23.1	C	2,100	17.0	B	2,100	17.0	B	2,780	23.1	C
Year 2040 (No Build)	4,880	**109.0**	**F**	3,680	**42.4**	**E**	3,680	**42.4**	**E**	4,880	**109.0**	**F**
Year 2040 (Build)	4,490	**52.4**	**F**	3,380	30.1	D	3,380	30.1	D	4,490	**52.4**	**F**

Notes: PHV = peak hour volume

*Density = passenger car/mile/lane (pc/mi/ln)

Source: California Department of Transportation. 2016. Email Correspondence from Caltrans District 8 Office of Traffic Forecasting.

Shaded entries exceed acceptable levels of service.

Collision Analysis

The Traffic Accident Surveillance and Analysis System-Transportation Systems Network (TASAS)-(TSN) data in Table 5 shows accident data for the segment of SR-60 in Riverside County between PM 22.10 and PM 26.61 within a three-year period from April 1, 2010 to March 31, 2013.

Table 4: TASAS-TSN Selective Collision Rate Calculation

	SR-60 PM 22.10-26.61 Actual (Per Million Vehicle Miles)			Statewide Average (Per Million Vehicle Miles)		
	Fatal	**Fatal +Injury**	**Total**	**Fatal**	**Fatal +Injury**	**Total**
WB	0.00	0.33	1.15	0.007	0.19	0.52
EB	0.000	0.23	0.70	0.007	0.19	0.52

Total eastbound (EB) accident rates are higher than the Statewide average accident rates. Total westbound (WB) accident rates are more than double the rate of total Statewide accident rates. Fatality plus injury accidents within the project area are nearly double the percentage of the statewide average.

Table 5 provides a summary of the types of collisions and Table 6 provides a summary of the primary collision factors that occurred for the segment of SR-60 between PM 22.10 and PM 26.61 within the same three-year period.

Table 5: Summary of Types of Collisions

	WB Mainline		EB Mainline	
Type of Collision	**Total**	**(%)**	**Total**	**(%)**
Head-On	0	0.0	0	0.0
Sideswipe	13	10.3	21	27.3
Rear End	46	36.5	24	31.2
Broadside	2	1.6	1	1.3
Hit Object	60	47.6	24	31.2
Overturn	2	1.6	7	9.1
Auto-Pedestrian	0	0.0	0	0.0
Other	3	2.4	0	0.0
Total	126	100	77	100

According to the data, there were 126 total collisions in the westbound direction, 38.1 percent of which involved pickups, trucks and tractors with one to two trailers. Rear-end collisions accounted for 36.5 percent of the total while speeding was the primary collision

factor for 47.6 percent of the total WB collisions. Improper turns accounted for 22.2 percent of the WB collisions. There were a total of 77 collisions in the eastbound direction, of which 49.4 percent involved trucks and tractors with one to two trailers, 31.2 percent were rear-end collisions, 33.8 percent were due to speeding and 24.7 percent were due to improper turns. The high volume of trucks, speeding and difficulty overtaking vehicles were the causes of the majority of the collisions. The large percentage of rear-end collisions, caused by slowing vehicles, supports the need for dedicated truck lanes. The large percentage of hit object collisions were due to vehicles striking either the median barrier to the left or the guardrail or embankment slope to the right. Limited horizontal stopping sight distance, contributes to this type of collisions. This existing condition will be improved by providing standard inside and outside shoulders

Table 6: Summary of Collisions Involving Trucks

	WB		**EB**	
Truck Type	**Total**	**Percentage of Collisions Involving Trucks**	**Total**	**Percentage of Accidents Involving Trucks**
Pick up/panel truck	26	20.6%	20	26.0%
Pick up/panel with trailer	2	1.6%	3	3.9%
Truck/truck tractor	2	1.6%	1	1.3%
Truck/truck tractor and one trailer	17	13.5%	14	18.2%
Truck/truck tractor and two trailers	1	0.8%	0	0.0%
Total of trucks	**48**	**38.1%**	**38**	**49.4%**
Total collisions	**126** [a]		**77** [b]	

[a] The remaining 78 vehicles involved in collisions in the WB direction were all vehicle types except trucks.

[b] The remaining 39 vehicles involved in collisions in the EB direction were all vehicle types except trucks.

Source: Caltrans Traffic Operations.

Table 7: Summary of Primary Collision Factors

Primary Factors	EB Mainline Percentage (%)	WB Mainline Percentage (%)
Influence of Alcohol	2.6	10.3
Following Too Closely	0.0	0.0
Improper Turn	24.7	22.2
Speeding	33.8	42.1
Other Violations	26.0	11.1
Other Than Driver	11.7	10.3

The vehicle mix within the project limits contains 16 percent trucks (see Table 2). Due to the steep grades, automobiles with trailers, trucks and buses have difficulty maintaining a reasonable speed throughout the entire segment of SR-60 through the project area, leading to operational deficiencies. Consequently, faster vehicles attempt to overtake the slower vehicles by changing lanes and speeding around them, resulting in the majority of collisions along this section of SR-60. In addition, the restricted horizontal alignment of the roadway, due to tight curves and narrow shoulders, contributes to restricted sight distances and results in a large percentage of hit object collisions where vehicles strike the median or guardrail/embankment slope.

5. ALTERNATIVES

A. Preferred Alternative

Alternative 2: Build Alternative

Proposed Engineering Features

- Construct an eastbound truck-climbing lane, a westbound truck-descending lane and construct 10-foot inside and 12-foot outside shoulders. The two existing eastbound lanes will begin the transition to the truck-climbing lane at the end of the eastbound entrance ramp from Gilman Springs Road and the three lanes will taper back to two lanes between Post Mile 26.30 and 26.61. The westbound existing two lanes will begin the transition to the truck-descending lane at post mile 26.5 and the three lanes will taper back to two lanes between Post Mile 22.5 and 22.1.
- Widen and grade the area adjacent to the truck lanes and shoulders to create a clear recovery zone in the embankment slopes and rock catchment area in cut slopes.

- Rehabilitate existing Nos. 1 and 2 AC lanes in each direction with Jointed Plane Concrete Pavement (JPCP). The rehabilitation effort was part of a separate contract and funded under (SHOPP) project under Expenditure Authorization (EA) 1C090, subsequently combined into this contract.
- Reconstruct the existing concrete median barrier along the entire project trajectory.
- At two locations (PM 23.5 and PM 25.8) Portable Concrete Barrier (Type 60K) pinned to the permanent Concrete Barrier (Type 60) will be considered. In case of an emergency, the Portable Concrete Barrier (Type 60K) can be removed by District 8 Maintenance Field Crew.
- Overall, the widening for this alternative would be to the outside of the existing roadbed. However, for the portion of the freeway between PM 24.3 and PM 25.7, the widening will occur within the median.
- The design scoping effort will include shifting the horizontal alignment within the project to improve driver stopping sight distances.
- The design effort will include modifying vertical profiles at locations to improve operating stopping sight distances.
- Existing drainage systems will be extended and rehabbed, onsite drainage systems will be installed to accommodate storm runoff.
- Six small to medium size wildlife crossings will be incorporated within the proposed project limits to mitigate for access impacts on small and medium size wildlife under the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). Existing culverts will be cleaned or restored to encourage wildlife usage. Two additional large wildlife crossings, each consisting of 20-foot by 20-foot Reinforced Concrete Box culverts, will also be constructed to mitigate for access impacts on large species under the MSHCP.

Several pavement strategies were analyzed and approved under a Life Cycle Cost Analysis (LCCA) for this project and the preferred strategy second alternative was adopted. Following are the highlights of this alternative: (see Attachment L)

- Replace both directions of the mainline lanes and inside shoulders with JPCP to a depth of 1.05 feet over 0.1 foot hot-mix asphalt bond breaker (HMA-BB) on top of 0.5 foot lean concrete base (LCB) resting over 0.7 foot Class 2 Aggregate sub-base (AS). The width of each mainline lane will measure 12 feet, while each inside shoulder will measure 10 feet.
- Construct 12-foot wide truck-climbing and descending lanes and adjacent 12-foot wide outside shoulders out of 1.25 feet JPCP, over a 0.1 foot of HMA-BB on top of 0.5 foot LCB resting over 0.7 foot Class 2 AS. (Per HDM Section 302.2, if shoulders are Portland cement concrete and the District plans to convert shoulders into through lanes within 20 years following construction, then shoulders are to be built in the same plane

of traveled way and to lane standards for width and structural section. (See HDM Index 603.4))

- The cost for implementing this pavement alternative is $27,846,100, of which $15 million will be funded out of the State SHOPP rehabilitation program under 201.121 designation and the remainder will be locally funded.

- Based on Geotechnical recommendations, all cut slopes are to be set back 1:1 (H:V) with mid-slope benches and terrace drains to control slope drainage and minimize surface erosion per the following criteria:

  a) Slopes greater than 60 feet in height should have an 11-foot wide bench for every 30 feet of slope height, with an 11-foot wide bench mid-slope. All benches must be self-cleaning and each should consist of a 4-foot wide concrete-paved "V"-ditch with a minimum of a 2 percent down slope gradient. These slopes must also have paved drainage "V' ditches at both the top and bottom of slopes.

  b) For slopes between 30 and 60 feet in height, it is recommended that an 11-foot wide bench incorporating a 4-foot wide concrete -paved "V" –ditch, with a minimum of a 2 percent down slope gradient, be placed at mid-slope. These slopes should also have paved drainage "V" ditches at both the top and bottom of slope.

  c) For all slopes that are less than 30 feet in height, paved drainage "V" ditches are required at both the top and bottom of the slopes.

- For all of the 2.4:1 (H:V) fill slopes, the mid-slope benches and terrace drain requirements are as described under the cut-slope condition to control surface drainage and to minimize surface erosion on the slope face. Subject to geotechnical slope stability analysis, geo-textile materials may be utilized to steepen the gradient of these fill-slopes.

- Retaining walls will be constructed at the toe and middle of slope to protect designated Blue Lines (Army Corps of Engineers - Waters of the US) and will, therefore, eliminate the need for extending three existing Arch Culverts (see Attachment B).

Nonstandard Mandatory and Advisory Design Features
The following exception to Mandatory Design Standards are on file for this project:

Non-Standard Feature 1
Non-Standard stopping sight distance in vertical curves within the limits of this project the alignment consists of 17 horizontal and 24 vertical curves. In 14 of the 24 existing vertical curves, the Stopping Sight Distances (SSD) at crest and sag vertical curve locations ranges from 283 to 543 feet. These findings correspond to design speeds between 38 and 56 miles per hour (MPH).

Standard for Which Exception Is Requested:
Index 201.1 of the Highway Design Manual (HDM) revised 6th Edition states:

Table 201.1 shows the minimum standards for stopping sight distance related to design speed for motorists.

Per Table 201.1 of the HDM revised 6th edition for 65 MPH SSD is 660 feet.

Non-Standard Feature 2
Non-Standard maximum grade of vertical alignment at 6 locations vary between 6.9% and 7.3%.

Standard for Which Exception Is Requested:
Index 204.3 of the HDM revised 6th Edition states:

Table 204.3 shows the maximum grades, which shall not be exceeded for the condition indicated.

Maximum grade for type of highway (Freeways and Expressways) and terrain condition (Mountainous) at this segment of SR-60, as indicated in Table 204.3 of the HDM shall be 6%.

The following exception to Advisory Design Standards are on file for this project:

Non-Standard Feature 1
Non-Standard Superelevation Transition Length at several locations.

Standard for Which Exception Is Requested:
Index 202.5 of the HDM Revised 6th Edition states:

(1) General: The superelevation transition generally consists of the crown runoff and superelevation runoff, as depicted in the revised 6th Edition of the HDM in Figures 202.5A and 202.5B.

A superelevation transition should be designed in accordance with the diagram and tabular data shown in Figure 202.5A to satisfy the requirements of safety, comfort and pleasing appearance.

(2) Runoff: Two-thirds of the superelevation runoff should be on the tangent and one-third within the curve.

Non-Standard Feature 2
2.4:1 (horizontal: vertical) and 2:1 embankment fill side slopes will be constructed in several locations within the project limit.

Standard for Which Exception Is Requested:
Index 304.1 of the HDM revised 6th Edition states:

For new construction, widening or where slopes are otherwise being modified, embankment (fill) slopes should be 4:1 or flatter.

Non-Standard Feature 3
Non-Standard vertical curve length

Standard for Which Exception Is Requested:
Section 204.4 of HDM, Properly designed vertical curves should provide adequate sight distance, safety, comfortable driving, good drainage and pleasing appearance.

For algebraic grade differences of 2 percent and greater and design speeds equal to or greater than 40 miles per hour, the minimum length of vertical curve in feet should be equal to 10V, where V = design speed.

The non-standard feature consists of the non-standard length of vertical curves, are depicted in three locations.

Non-Standard Feature 4
The standard minimum median of 62 feet is not obtainable for the limit of the Project.

Standard for Which Exception Is Requested:
Section 305.1 of HDM (b) Rural Areas. The minimum median width for freeways and expressways in rural areas should be 62 feet.

The proposed median width in the limit of this project is 22 feet, except for a short distance where north roadbed is at a higher elevation compare to south roadbed median width varies between 4-feet to 30-feet.

Interim Features
No interim features are considered for this project.

High-Occupancy Vehicle (Bus and Carpool) Lanes
High-occupancy vehicle (Bus and Carpool) lanes are not included or planned for this project

Ramp Metering
Ramp metering is not considered for this project.

California Highway Patrol Enforcement Areas
A permanent opening (turnout) in the median concrete barrier (Type 60) at Post Mile 24.96 will assist enforcement and emergency response.

Park-and-Ride Facilities
Park-and-Ride facilities are not planned for this project.

Utility and Other Owners Involvement
The following existing utilities have been potholed/identified and will be protected in place:

- Kinder Morgan 20-inch Pipeline in 24 inch casing at Post Mile 25.17.
- Kinder Morgan 12-inch Line leased to Level 3 Communication for fiber optic at Post Mile 25.17.
- Southern California Gas 16-inch Natural Gas Transmission Pipeline at Post Mile 25.75
- Overhead Transmission line and poles on the North side of RTE 60 from Post Mile 26.30 to 26.5.

Railroad Involvement
No railroad facilities are located in the limit of this project.

Highway Planting

Cut/fill slopes will be re-vegetated using native plant materials to reduce erosion and facilitate vegetation growth. Trees removed as part of the project will be replaced, utilizing native species or species suitable to an arid environment, at a ratio of 3:1.

Erosion Control

Temporary and permanent erosion control systems will be implemented during and after construction of the project.

Nose Barriers

Nose barriers are not warranted for this project.

Non-Motorized and Pedestrian Features

Non-motorized and pedestrian features are not included in this project.

Needed Roadway Rehabilitation and Upgrading

As part of the improvement, the existing asphalt pavement will be converted to long life JPCP.

Needed Structures Rehabilitation and Upgrading

Rehabilitation of all the existing drainage facilities are included in the scope of work for this project.

Cost Estimates

Detail cost estimate of the project is included in attachment G.

Right of Way Data

It is anticipated that some partial permanent sliver acquisitions would be needed due to the design requirements for the cut and fill slopes. The project may require a total of approximately 8.486 acres of permanent right of way acquisition and approximately 0.276 acre of temporary construction easements. Land adjacent to the portion of SR-60 associated with the project is undeveloped. It is expected that any land that may need to be acquired temporarily or permanently would be undeveloped land. A total of three private and three county of Riverside parcels will be impacted by this project.

Effect of Projects Funded by Others on State Highway

Projects funded by others does not exist within the limit of this project.

B. Rejected Alternatives

Alternative 1: *No-Build Alternative*

The No-Build alternative would maintain the facility in its current condition. No improvements would be implemented at this time, therefore, no capital cost is associated with this alternative. As development continues and traffic demand increases, traffic operational characteristics will further deteriorate resulting in an increase in congestion, vehicle delay, safety issues and vehicle-operating costs. The No-Build alternative neither addresses nor alleviates the forecasted operational and safety issues along this segment of SR-60.

Alternative 2 from Project Study Report for Project EA 08-0N690K (July 12, 2011): *Construct a truck-climbing lane with standard inside and outside shoulders in the eastbound direction*

This alternative was preliminarily evaluated in the Project Study Report for the previously proposed RCTC-sponsored project 0N690 and consists of constructing a 12-foot truck-climbing lane plus standard (10 feet) inside and outside shoulders in the eastbound direction of SR-60 within the limits of scope of work. During the timeframe that this alternative was identified for potential consideration, it was identified as Alternative 2 and was developed to specifically address the eastbound operational and safety concerns on eastbound SR-60. No work would be done to address westbound SR-60. This alternative was withdrawn from further consideration in conjunction with the combining of the Caltrans safety project and the RCTC truck-climbing lane project in March 2013, as this alternative did not fully address the purpose and need of the project. The build alternative includes construction of eastbound truck-climbing lane and standard outside and inside shoulders.

Alternative 4 from Project Study Report for Project EA 08-0N690K (July 12, 2011): *Minimum Build—Construct Standard Inside/Outside Shoulders in Both Directions*

This proposed improvement consists of constructing 5-foot standard inside shoulder and 10-foot standard outside shoulder in both directions of SR-60 within the limits of this scope of work (PM 22.20/26.61). It also includes reconstructing the outside lane in both directions. This alternative was developed to address basic safety and operational needs by improving the road to current standards, but would not address the accidents resulting from the speed differential between fast and slow-moving vehicles; therefore, does not meet the purpose and need of the current or previously proposed projects. The build alternative includes construction of standard outside and inside shoulders in both directions.

Alternative 2 from Project Study Report for Project EA 08-0Q180K (May 11, 2012): ***Construct Standard Inside/Outside Shoulders in the Westbound Direction***

This alternative was evaluated during its preliminary stage in the Project Study Report for the previously proposed Caltrans safety project 0Q180 and consists of constructing a 5-foot standard inside shoulder and a 10-foot standard outside shoulder in the westbound direction of the SR-60 freeway within the limits of this scope of work. During the timeframe that this alternative was identified for potential consideration, it was identified as Alternative 2 and was developed to specifically address the westbound operational and safety concerns on SR-60. No work would be done on eastbound SR-60. This alternative was withdrawn from further consideration in conjunction with the combining of the Caltrans safety project and the RCTC truck-climbing lane project in March 2013, as this alternative did not fully address the purpose and need of the project.

The build alternative includes construction of standard outside and inside shoulders in westbound directions.

6. CONSIDERATIONS REQUIRING DISCUSSION

A. Hazardous Waste

Per the approved Initial Site Assessment Checklist, August 11, 2015, there are no recognized environmental concerns within the project limits, based on the field review and geo-tracker database inquiry, however, per Task Order No. 08-396400-LP, dated November 2000, non-hazardous concentration of lead was found in on-site soil, appropriate health and safety measures should be taken to minimize exposure to lead (see Attachment H). Include SSP7-1.02K (6) (J) (III) in the PS&E package for Lead Compliance Plan (LCP).

The project will include removal of yellow or white traffic stripe and will also include Treated Wood Waste. One or more of the following 2015 standard special provisions will be included in the PS&E package:

14-12	Remove Yellow Traffic Stripe and Pavement Markings with hazardous waste residue
14-11.14	Treated Wood Waste
36	Residue Containing Lead from Paint & Thermoplastic
84-9.03	Remove Traffic Stripes and Pavement Marking Containing Lead

B. Value Analysis

An independent Value Analysis (VA) was conducted in January 2014. The preliminary VA report was compiled and released on February 21, 2014. The VA team developed 10 recommendations for improving the project scope. These findings primarily focused on existing non-standard features concerned with driver sight distance and impacts on existing horizontal and vertical curves, earthwork quantity balance, removal and transportation of material during diverse construction stages, construction of wildlife crossings, as well as addressing pavement strategies to adopt should State Maintenance funds (SHOPP) not materialize.

C. Resource Conservation

Existing culverts will be cleaned or restored to encourage wildlife usage. Contractor will be encouraged to recycle existing pavement structural section wherever feasible.

D. Right of Way Issues

Right of Way Required
A total of three private and three county of Riverside parcels will be impacted by this project.

Relocation Impact Studies
No relocation is required for this project.

Airspace Lease Areas
This project does not qualify for airspace lease.

E. Environmental Issues

Caltrans has statutory obligation to maintain and operate the State Highway System (SHS), as the owner of the SHS and accordingly, is the California Environmental Quality Act (CEQA) Lead Agency for all improvement projects on the SHS.

Caltrans is the lead agency in conjunction with completion of all NEPA compliance requirements and associated documentation for this project. The environmental review, consultation and any other action required in accordance with applicable federal laws for this project is being or has been carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327.

In compliance with CEQA documentation requirements, Caltrans determined that preparation of an Initial Study (IS) to be the appropriate type of environmental document.

In compliance with NEPA, the class of action determination for the proposed project was made in consultation with the Caltrans headquarters Environmental Coordinator assigned to District 8. A Routine Environmental Assessment (EA) was identified as the appropriate type of environmental document. Consistent with Caltrans requirements, the Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment prepared for this project, was prepared as a combined Environmental Document, in accordance with Caltrans' environmental procedures, as well as State and federal environmental regulations.

After the public circulation of the Original *Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment* (Original IS/EA) from June 16 to August 11, 2014, in conjunction with the effort to address public and agency comments received during the circulation and public review of the Original IS/EA and at the public hearing held on July 31, 2014, the circulated Original IS/EA was substantially revised. Although most, if not all of the updates clarify or amplify the discussions in the circulated document, Caltrans decided, in consultation with RCTC, to recirculate an updated IS-Proposed MND/EA for public review and comment (Recirculated IS/EA). The Recirculated IS/EA was made available for public review and comment between October 30, 2015 and December 2, 2015, and an open forum public hearing was held on November 18, 2015.

Following public circulation of the Recirculated IS/EA and the public hearing held during public circulation and after review and consideration of the comments received, Caltrans made a final determination of the project's effect on the environment. Under CEQA, a Mitigated Negative Declaration (MND) determination has been prepared and approved. Also, Caltrans, as assigned by the Federal Highway Administration (FHWA), has determined that the action does not significantly impact the environment, and has prepared and approved a Finding of No Significant Impact (FONSI) in accordance with NEPA. The ND and FONSI were both signature approved by Caltrans on May 2, 2016. A copy of the cover, signed title sheet, signed MND and signed FONSI are included in Attachment J of this Project Report (PR). The entire Final Environmental Document (FED) is stipulated to be included, by reference as an attachment to this PR.

F. Air Quality Conformity

On December 3, 2013, Southern California Association of Governments (SCAG) Transportation Conformity Working Group (TCWG) determined that the proposed project was exempt from conformity analyses pending concurrence from Federal Highway Administration (FHWA). On December 9 2013, TCWG received via email the concurrence from FHWA. Subsequently, TCWG reaffirmed the project as an Exempt Project (from conformity analysis) at the February 25, 2014 meeting.

This project is exempt from air quality conformity analysis requirements because the project, overall, fits the "Truck-climbing lanes outside the urbanized area" exemption from conformity analysis requirements under 40 CFR 93.126. General rehabilitation, shoulder widening and median barrier reconstruction likewise fall under full conformity exemptions in 40 CFR 93.126.

The "truck-descending" lanes also fall under the conformity exemption because they are for the same purpose (isolation of very slow trucks from normal traffic on the steep grade) as the climbing lanes.

This proposed project is included in the current version of the 2015 Federal Transportation Improvement Program (FTIP), including Amendments 1, 11, 13 and 18, as Project ID RIV120201. The 2015 FTIP was adopted by the Southern California Association of Governments (SCAG) on September 11, 2014 and approved for air quality conformity by the Federal Highway Administration (FHWA) on December 15, 2014. It includes all federally funded and regionally significant projects.

G. Title VI Considerations

Implementation of the project will not result in any adverse impacts on minority or low-income neighborhoods, communities or groups and will not have adverse effects on public transit, pedestrian traffic or low mobility groups. This project will comply with Title VI of the Civil Rights Act of 1964. Caltrans' Title VI Policy Statement and related statutes, which ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability or age, be excluded from participation in, be denied the benefits of or be otherwise subjected to discrimination under any program or activity it administers.

7. OTHER CONSIDERATIONS, AS APPROPRIATE

- **Public Hearing Process**

Circulation of the Original Initial Study/Environmental Assessment (IS/EA) began on June 16, 2014 and was noticed in two newspapers: the *Press Enterprise* on Sunday, June 15, 2014 and *Unidos en el Sur de California* (a weekly publication) on June 20, 2014. Both of the published notices included a Notice of Availability of an Initial Study/Environmental Assessment, Notice of Intent to Adopt a Mitigated Negative Declaration, and Opportunity for Public Hearing.

The Original IS/EA and technical studies were made available for public review at the Caltrans District 8 Office, Moreno Valley Library and Beaumont Library and were also

available through the District 8 website. The identified period of circulation was June 16, 2014 through July 15, 2014. Additionally, a copy of the published notices (in both English and Spanish) was included with the distributed Original IS/EA.

Requests were received for a public hearing beginning the first day of circulation. In response to the requests, a determination was made by Caltrans to schedule a public hearing and to also extend the period of circulation. The public hearing was scheduled for July 31, 2014 and circulation was extended to August 11, 2014.

In addition to publishing updated notices, on July 14, 2014 Caltrans mailed a hard copy of the first updated notice (in English and Spanish) to all who had been sent the Original IS/EA in conjunction with the start of circulation on June 16, 2014 and also to everyone who submitted a mailing address after the June 15 and June 20, 2014 notices. A second notice was emailed out on July 23, 2014, with a revised public hearing notice indicating a change to the meeting venue.

A public hearing was held on July 31, 2014 from 6:00 p.m. to 8:00 p.m. at Sunnymead Elementary School, located at 24050 Dracaea Avenue in the City of Moreno Valley. Spanish language translators were available to provide assistance, as needed. Exhibits showing the build alternative, project development process and project schedule were displayed. Additionally, a single powerpoint presentation was made during the first part of the public hearing summarizing the project limits, background, milestone dates, existing conditions, traffic data, accident rates, purpose and need, the proposed schedule and the public comment process. Attendees asked questions, submitted written comments using comment cards and/or provided verbal comments to the court reporter. Most questions and comments from those in attendance concerned traffic information (in particular regarding trucks), project potential impacts on biological resources and warehouse projects under review in the City of Moreno Valley.

Comments received during circulation and public review of the Original IS/EA and at the public hearing held on July 31, 2014 resulted in refinements that were incorporated into a new document, which was identified as the Recirculated IS/EA.

Recirculation of the IS/EA began on October 30, 2015 and was noticed in two newspapers: the *Press Enterprise* on October 30, 2015 and *La Prensa* (a weekly publication) on October 30, 2015. Both of the published notices included an Announcement of Public Hearing, Notice of Intent to Adopt a Mitigated Negative Declaration and Notice of Availability of Recirculated Initial Study/Environmental Assessment. The Recirculated IS/EA and technical studies were available for public review at the Caltrans District 8 Office, Riverside County Transportation Commission Office, Moreno Valley Library and Beaumont Library. In addition, Caltrans posted information to its website to allow the public to view details of the proposed project online. The web pages included an overview

of the proposed project and alternatives; links to the IS/EA and alignment map; date, time, and location of the public hearing; how to submit comments; duration of comment period; locations of environmental documents for review and a project contact.

The identified period of circulation was October 30, 2015 through December 2, 2015.

In addition to publishing the notices, on October 29, 2015 Caltrans mailed a hard copy of the English and Spanish Public Notice to 2,685 contacts, including federal, State, local, transit and conservation agencies, emergency service providers, property owners, interested parties and utility service companies.

Another public hearing was held on November 18, 2015 from 6:00 p.m. to 8:00 p.m. in the multipurpose room at Sunnymead Elementary School, 24050 Dracaea Avenue in the City of Moreno Valley. Spanish language translators were available to provide assistance, as needed. Exhibits showing the build alternative, project development process and project schedule were displayed. Attendees asked questions, submitted written comments using comment cards and/or provided verbal comments to the court reporter. The public hearing was attended by approximately 22 community members. Some attendees chose not to sign in at the registration table. Questions and discussion at the public hearing included the following topics: increases in traffic, project design, safety impacts from lack of turn-outs and cell towers, lack of lighting, project funding, project schedule, increased truck traffic, impacts on biological resources and requests to be placed on the project mailing list.

- **Transportation Management Plan**

A Transportation Management Plan (TMP) has been developed to minimize traffic impacts during construction activities. Construction will be scheduled so that freeway mainline traffic flow will not be impeded. K-rail will be placed to permit grading and paving of the new lane and shoulders. The installation and removal of the K-rail will require freeway striping removal, re-striping and lane closures. Additional traffic management measures are contained in the attached Traffic Management Plan (see attachment K).

Stage Construction
(See Attachments E and F)

Stage 1
During this stage, temporary pavement will be placed at several locations along the inside and outside of eastbound and westbound lanes to accommodate the installation of Temporary Railing (Type K) and to provide two lanes for eastbound (EB) and westbound (WB) traffic during later stages of construction.

Stage 2
This will consist of slope-cutting operations adjacent to the WB lanes accompanied by grading and paving work for the construction of one new outside lane and outside shoulder in the WB direction of SR-60. This stage may call for intermittent 55-hour weekend closures of the WB lanes in order to permit setting up of equipment and K-rail placements. Advance notice of closures will be advertised and drivers will be informed to use WB I-10 or alternative routes.

This stage will permit work to proceed on cutting back the slopes and performing reconfiguring operations, grading and paving of new lane and shoulder to proceed in the WB direction. Two WB lanes will remain open to traffic during week days with shoulder restrictions on both sides. It is anticipated that the number of 55-hour closures in the WB direction will vary between 15 and 20 weekends for the life of the project. The EB direction will remain open to traffic with the exception of a few night time lane closures.

Stage 2 is anticipated to take between 200 and 250 working days.

Stage 3
Following striping operations, WB traffic will be shifted onto the newly completed two-lane plus temporary shoulder pavement from Stage 2. Work will proceed within the newly created space between the new WB lanes and the existing EB condition. Within the work area in question, those locations pertaining to raising or lowering the future WB lanes will be reconstructed to their new grades and will be brought to level with the new pavement under Stage 2. The EB direction will remain open to traffic with a few exceptions during night time lane closures.

Stage 3 is expected to be completed in 80 to 100 working days.

Stage 4
Upon completion of the reconstruction of the existing WB lanes to new grade and elevation, EB traffic will be detoured onto the newly reconstructed pavement. The inside WB and EB shoulders will be reconstructed, the existing median concrete barrier will be replaced by a new Type 60 Concrete Barrier.

Stage 4 is expected to be completed in 100 to 120 working days and during this stage contractor may also perform grading operations for Stage 5.

Stage 5
Upon completion of Stage 4, the WB pavement will be restriped to provide more separation between WB and EB traffic, which continue to use the newly constructed WB pavement footprint. This stage will permit the Contractor full access to construct the entire EB lanes, slope cuts, and reconfiguration operations.

Stage 5 is expected to take up to 120 working days.

Stage 6
This stage will permit grinding of the newly constructed westbound lanes to remove old markings left behind from prior stage striping. All temporary paving will be removed and EB traffic from Stage 5 will be re-directed onto the new roadbed.

Stage 6 is estimated to take 30 working days.

Stage construction activities in this manner will permit the contractor sufficient room to work on the steep slopes using whatever cost effective methods are available and with minimal interference from traffic. More space will also be available to construct the needed JPCP pavement and its corresponding graded area for the shoulder. The availability of a full roadbed for the contractor in the east direction will result in cost savings and better quality of work.

- **Biological Resources**

To achieve MSHCP consistency for wildlife movement, two large wildlife crossings consisting of 20'x20' Reinforced Concrete Box culverts (RCB) will be installed, one at PM 24.55 and another at PM 26.1. An additional three medium (60-inch diameter) and three small (36-inch diameter) wildlife crossing culverts will be placed at least every 300-meters (2,000 feet) two of which will be dry crossings, not designed to convey water. Additionally, Caltrans determined that several existing culverts will function as small and medium wildlife crossings. All placements of new wildlife crossings have been coordinated with U.S. Fish and Wildlife Service (USFWS), Regional Conservation Authority (RCA) and California Department of Fish and Wildlife (CDFW). The wildlife crossing design has accounted for animal behavior, traffic noise, lighting and site topography.

New welded wire fencing of minimum of 6 feet in height to prevent wildlife from jumping over or digging under and entering onto roadways, with three-strand wire at the top, will be constructed adjacent to the roadways and highway. The fencing will guide large wildlife to appropriate crossing locations and will be designed to reduce wildlife mortality. To conform with additional MSHCP criteria related to wildlife movement, a fencing plan will be provided to USFWS and CDFW for review and approval prior to ground disturbing activities.

The proposed project is anticipated to require permanent acquisition of sliver portions of land, approximately 5.87 acres, designated by the MSHCP as public/quasi-public (PQP) land. The impacted PQP land in this area is owned by the Riverside County Regional Park and Open Space District (also known as the Riverside County Parks Department). In

conjunction with coordination efforts with Riverside County Regional Park and Open Space District and (RCA), the proposed project is committed to purchasing replacement land at a minimum 1:1 ratio, which will feature the same characteristics as the land that is impacted.

To mitigate permanent impacts on riparian/riverine habitat and federal and State jurisdictional waters, credits, in the form of habitat creation/restoration, will be purchased from an approved mitigation bank in the MSHCP plan area at a ratio of 3:1. The total mitigation to purchase for impacts on 0.166 acre of riparian habitat and 0.258 acre of CDFW streambeds, which is inclusive of 0.258 acre of USACE non-wetland waters of the U.S) is 1.272 acres. Temporary impacts will be restored on site and a Habitat Mitigation and Monitoring Plan (HMMP) will be created to detail restoration practices, identify success criteria and provide for adaptive management techniques should on-site restoration fail. If credits in an approved mitigation bank in the MSHCP plan area are not available, Caltrans will develop an equivalent strategy for permittee-sponsored mitigation in coordination with USFWS, CDFW and RCA. The amount of impact on riparian/riverine habitat and federal and State jurisdictional waters will be confirmed with USFWS, CDFW, and RCA during the completion of Final Design for the proposed project to ensure that impacts on these resources are fully addressed.

Impacts to 0.258 acre of non-wetland WoUS/WoS/CDFW unvegetated streambed and 0.166 acre of riparian vegetation under CDFW jurisdiction may require mitigation under Sections 401 and 404 of the CWA and Section 1602 of the CFGC. Replacement of resources at a no less than 1:1 ratio is currently proposed to address the removal. Impacts will be addressed through purchase of credits through a local in-lieu fee program. Final measures under CWA Sections 401 and 404 and CFGC 1602 will be determined during the permit process. Any measures included in these permits shall be implemented.

- **Permits and Approvals Needed**

Table 10: Permits Needed

Agency	Permit	Status
United States Army Corps of Engineers	Section 404 Permit for filling or dredging waters of the United States	Caltrans will apply during the Project Specifications and Estimates (Final Design) phase of the project.
California Department of Fish and Wildlife	1602 Agreement for Streambed Alteration	Caltrans will apply during the Project Specifications and Estimates (Final Design) phase of the project.
California Regional Water Quality Control Board	401 Certification	Caltrans will apply during the Project Specifications and Estimates (Final Design) phase.

- **Cooperative Agreements**

A Cooperative Agreement No.1543A/3 between CALTRANS and RCTC was executed July 1, 2015. This agreement outlines each agency's PA/ED, PS&E and Right of Way responsibilities for the project. It documents the roles and responsibilities for each party and defines what work will be performed, by whom, how it will be paid, on what schedule it will be completed and any other roles and responsibilities. It also addresses liability and indemnification issues.

A separate cooperative agreement will also be needed for the construction phase of the contract.

8. FUNDING/PROGRAMMING

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

Table 11 - Capital Outlay Support and Project Estimates

Component	Current Estimate	Current Program
Preliminary Engineering	$ 13,538,000.00	$ 13,538,000.00
Right of Way Support	$ 750,000.00	$ 750,000.00
Construction Support	$ 9,500,000.00	$ 9,500,000.00
Right of Way	$ 1,879,000	$ 1,747,000.00
Construction	$ 107,211,284.00	$ 112,840,000,00
Total	$ 132,111,848,00	$ 138,375,000.00

Project is currently programmed by SHOPP funds and other funds including local Measure, STIP and Federal funds.

9. DELIVERY SCHEDULE

Table 12- Project Schedule

Project Milestones	**Scheduled delivery date (Month/Day/Year)**
Begin Environmental – M020	10/18/2012
Approval of Original DED and - M120	06/12/2014
Approval of Recirculating DED / Supplemental - M120	10/28/2015
PA & ED - M200	05/16/2016
Project PS&E – M380	05/02/2017
Right of Way Certification – M410	12/04/2017
Ready-To-List – M460	01/02/2018
Award – M495	07/24/2018
Approve Contract – M500	08/24/2018
Contract Acceptance – M600	12/03/2020
End Project – M800	12/01/2022

10. RISKS

Assessing risks and taking appropriate action is an on-going activity throughout the project development process. The current cost estimate and project schedule at this time are based on the assumptions namely, 55-hour closures during construction and Preliminary geotechnical parameters for retaining walls. It is also reasonably assumed that the 12% contingency is sufficient for material cost increases in the near future. These are identified as project risks in the risk register. Project risks are managed by preparing a risk register and implementing a risk management plan. Risk Register for project is included in Attachment M.

11. FHWA COORDINATION

This project was reviewed during the (PSR/PDS) stage by the Caltrans's Federal Highway Administration (FHWA) Liaison, Anthony Ng, and is eligible for federal-aid funding. Per the latest Stewardship and Oversight Agreement, assigned Project designations are not assigned to State Routes.

12. PROJECT REVIEWS

Scoping Team Field Review (PDT)	Date: 11-30-2013
District Maintenance (Namy Iyad)	Date: 03-02-2016
Design Liaison (Anthony Ng)	Date: 03-14-2016
Project Manager (Raghuram. Radhakrishnan)	Date: 04-15-2016
District Safety Review (Jason Collado)	Date: 03-15-2016
Constructability Review (Wil Ochoa)	Date: 03-15-2016

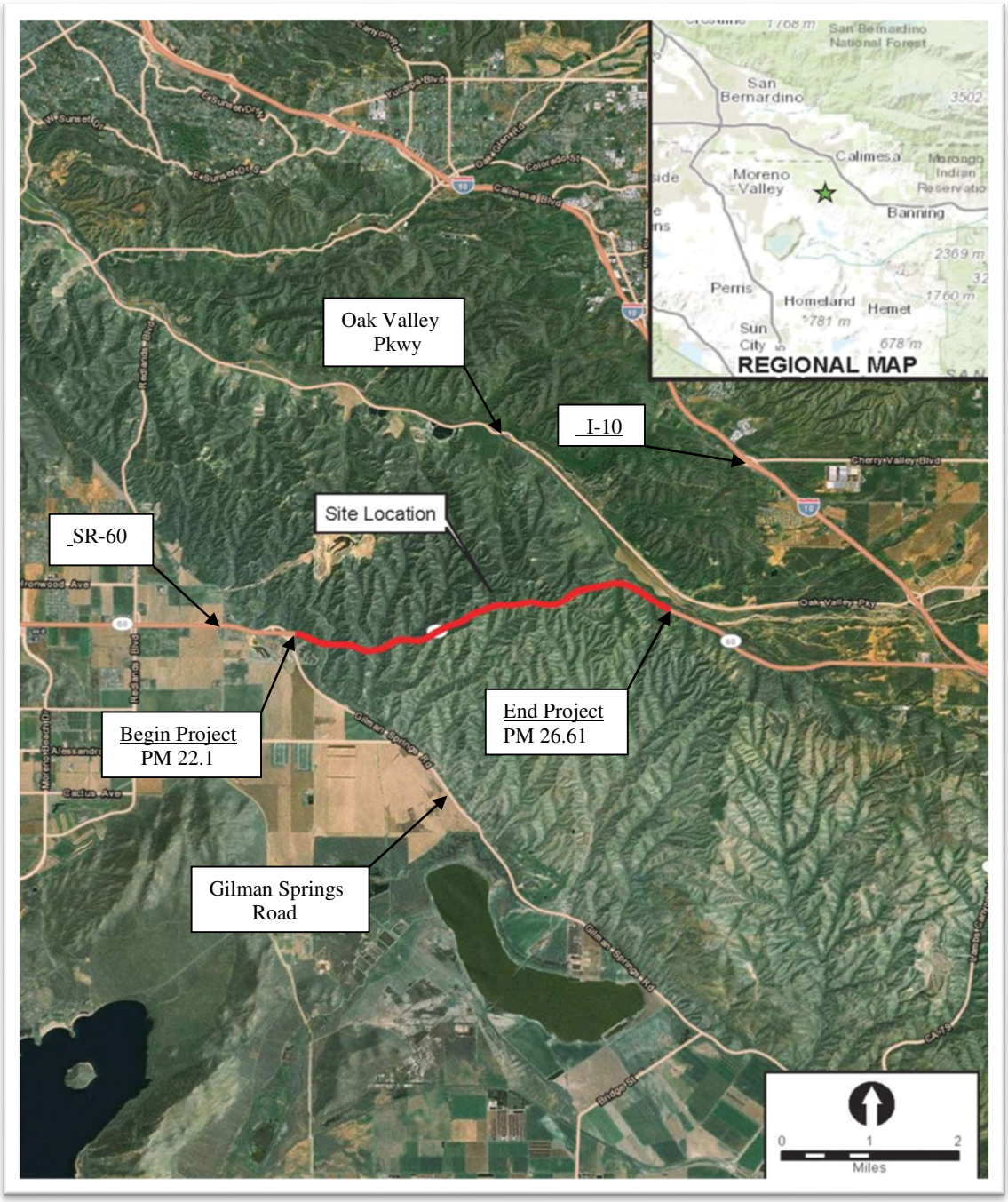
13. PROJECT PERSONNEL

Name	Title	Phone
Tran Hoang	Design Manager (Acting)	(909) 388-6090
Raghuram Radhakrishnan	Project Manager	(909) 383-6288
Ahmad Shah	Project Engineer	(909) 889-8606
James Shankel	Senior Environmental Planner	(909) 383-6379
Manuel Jabson	Ops (Region A)	(909) 383-4226

14. ATTACHMENTS

Attachment A - Location Map
Attachment B - Typical Cross-Section
Attachment C - Layouts
Attachment D - Profile and Superelevation
Attachment E - Stage Construction Cross-Section
Attachment F - Stage Construction Layout
Attachment G - Preliminary Cost Estimate
Attachment H - Initial Site Assessment
Attachment I - Right of Way Data Sheet
Attachment J - Cover Page, Signed Title Sheet from *Initial Study with Mitigated Negative Declaration (MND) / Environmental Assessment with Finding of No Significant Impact (FONSI), Signed MND, Signed FONSI*
Attachment K - Traffic Management Plan
Attachment L - Life- Cycle Cost Analysis
Attachment M - Risk Management Plan
Attachment N - Category Assignment
Attachment O - Storm Water Data Report

ATTACHMENT A



Location Map

ATTACHMENT D

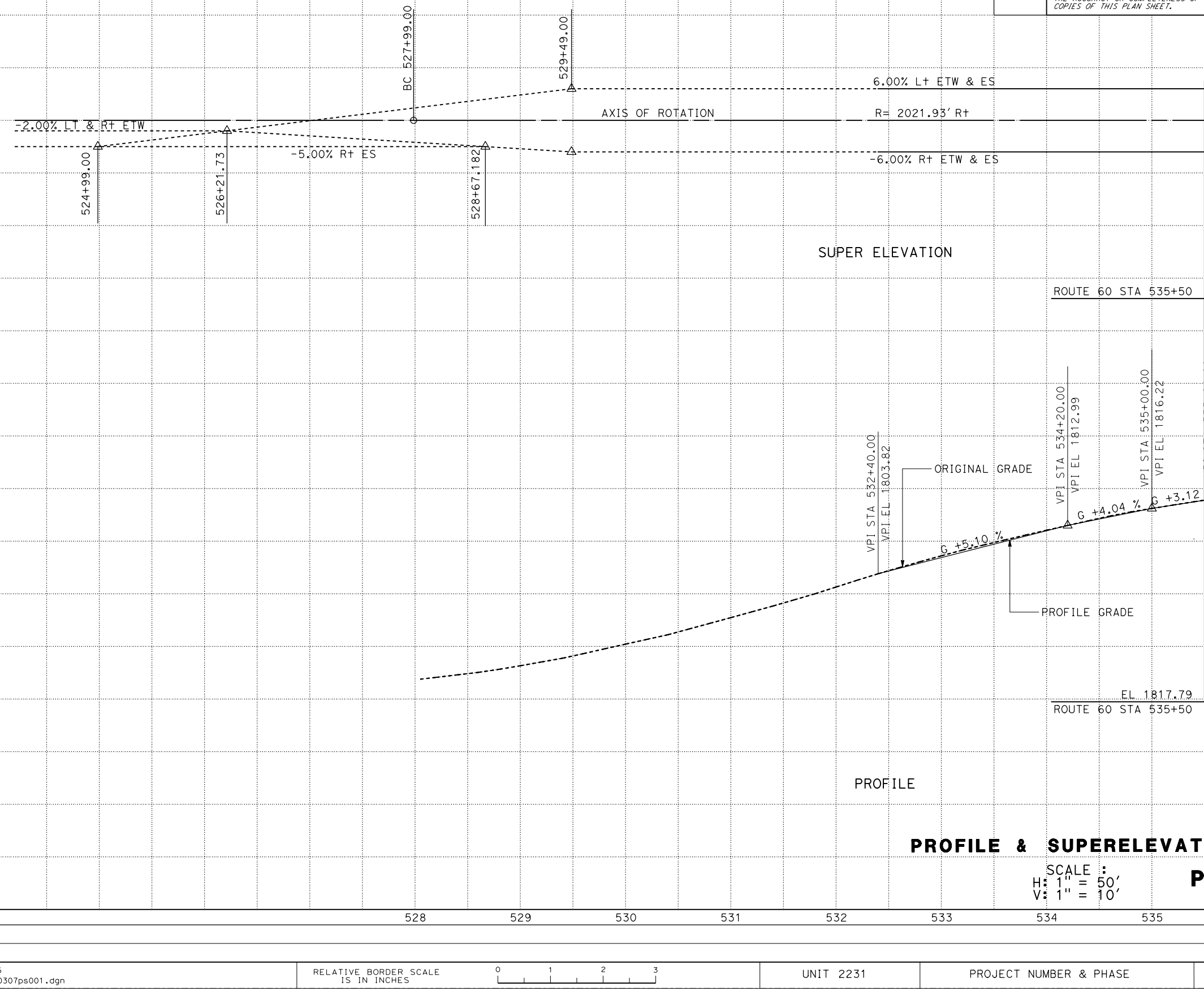
Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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

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



PROFILE & SUPERELEVATION

SCALE :
H: 1" = 50'
V: 1" = 10'

PS-001

STATION		528	529	530	531	532	533	534	535	536	TOTAL
CY	Exc										
	Emb										

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 27-APR-2016 | TIME PLOTTED => 11:40

BORDER LAST REVISED 4/7/2014 | USERNAME => s135686 | DGN FILE => 0812000307ps001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2231 | PROJECT NUMBER & PHASE | 00000000001

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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

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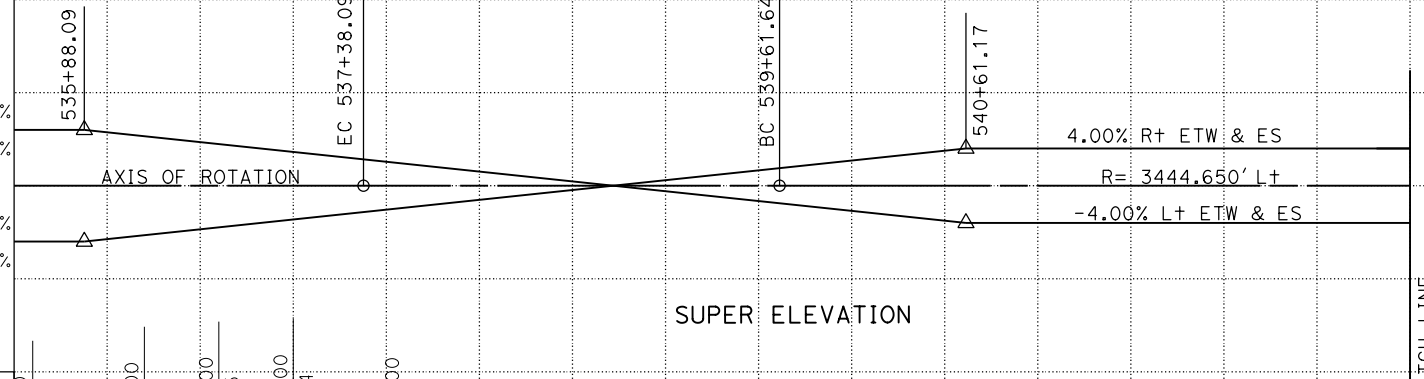
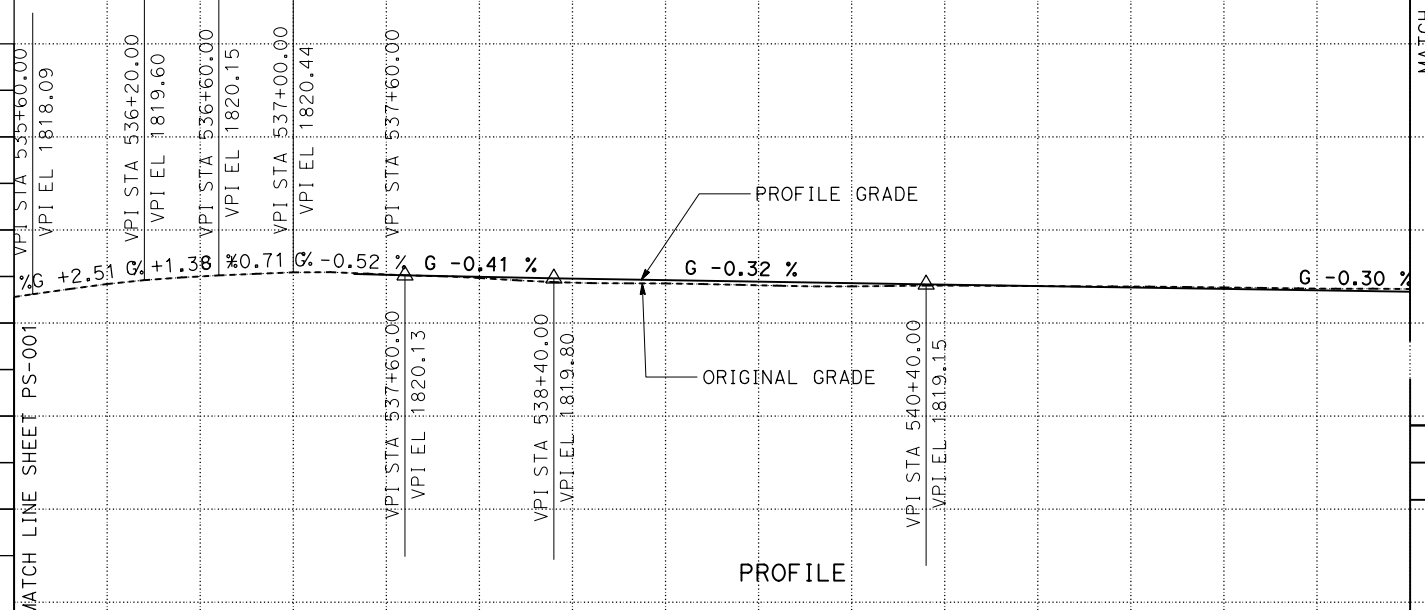
Caltrans

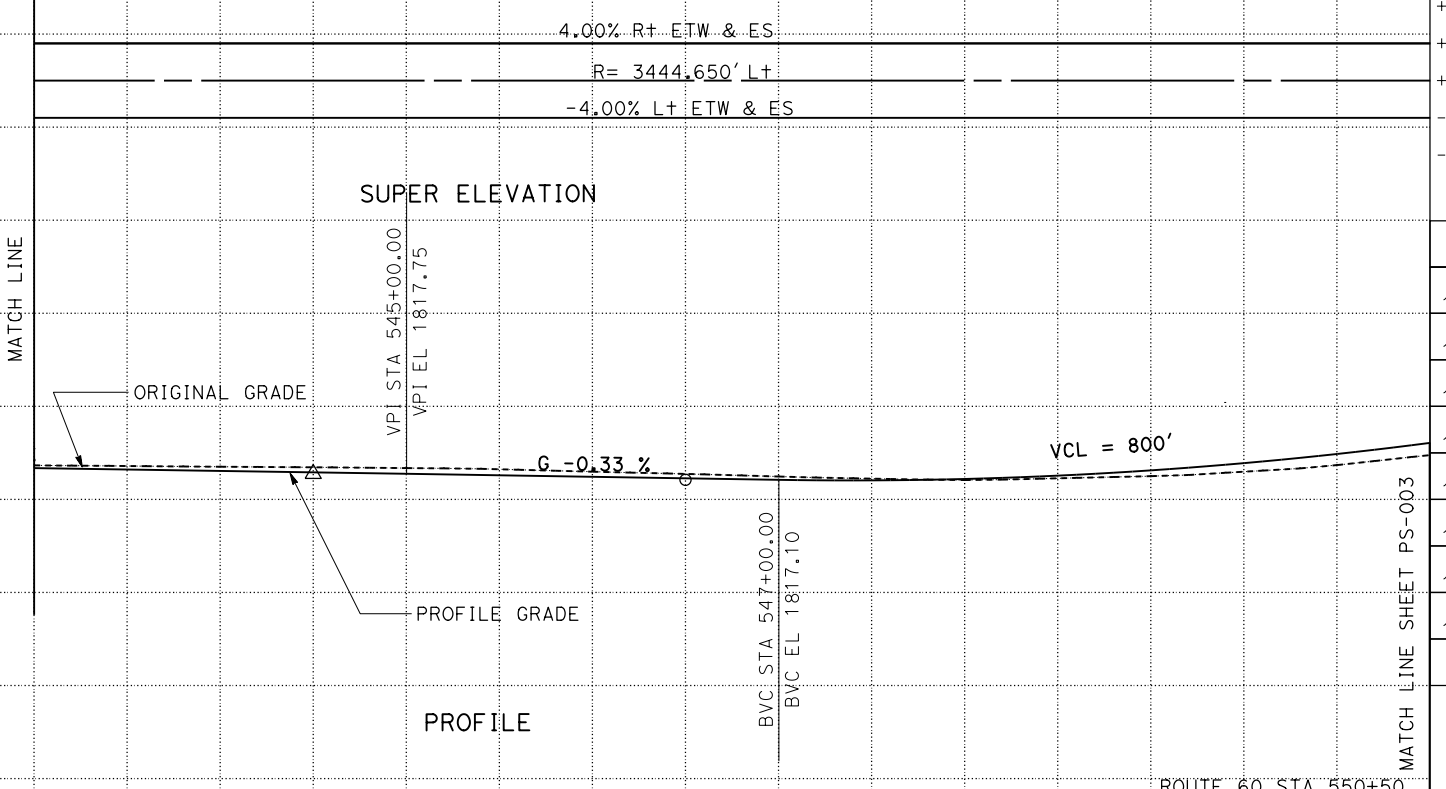


SUPER ELEVATION



PROFILE

MATCH LINE



SUPER ELEVATION

PROFILE

PROFILE & SUPERELEVATION

SCALE :
H: 1" = 50'
V: 1" = 10'

PS-002

STATION	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	TOTAL
CY Exc																
CY Emb																

LAST REVISION 00-00-00

DATE PLOTTED => 27-APR-2016
TIME PLOTTED => 11:40

BORDER LAST REVISED 4/7/2014

USERNAME => s135686
DGN FILE => 0812000307ps002.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2231

PROJECT NUMBER & PHASE

00000000001

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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

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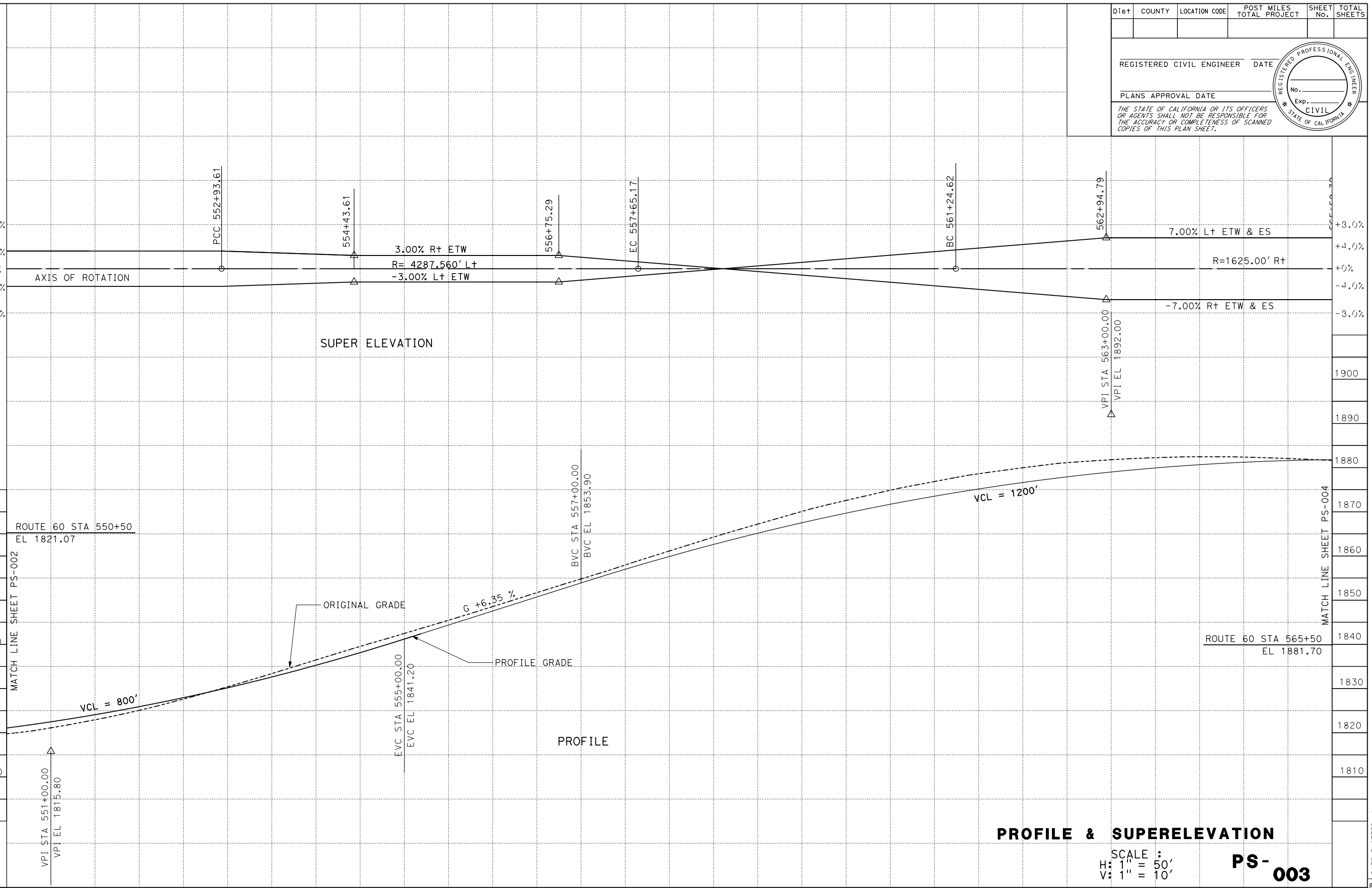
Caltrans



PROFILE & SUPERELEVATION

SCALE :
H: 1" = 50'
V: 1" = 10'

PS-003

LAST REVISION 00-00-00
DATE PLOTTED => 27-APR-2016
TIME PLOTTED => 11:40

BORDER LAST REVISED 4/7/2014	USERNAME => s135686 DGN FILE => 0812000307ps003.dgn	RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3	UNIT 2231	PROJECT NUMBER & PHASE	00000000001

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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

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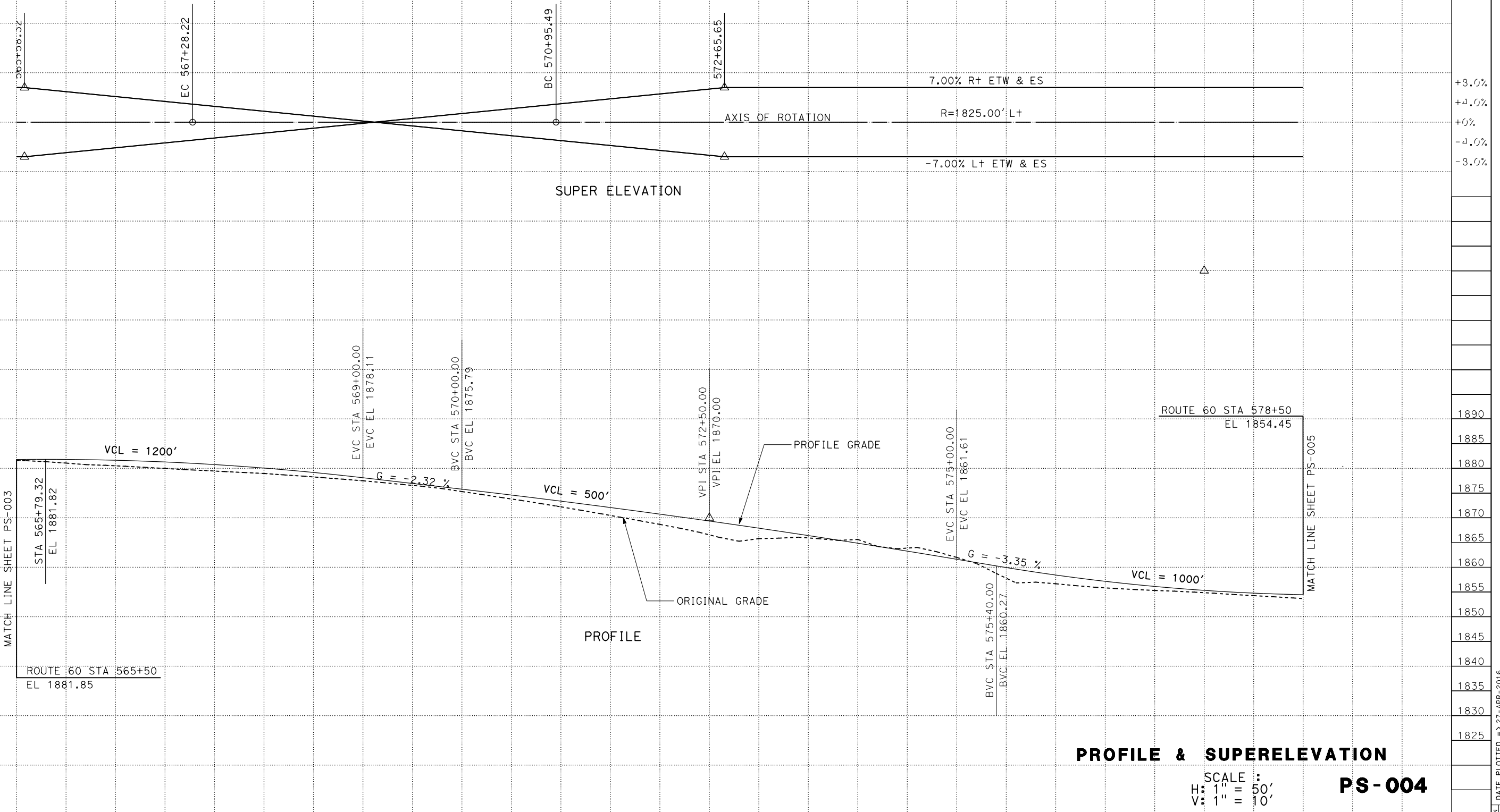
Caltrans



PROFILE & SUPERELEVATION

SCALE :
H: 1" = 50'
V: 1" = 10'

PS-004

LAST REVISION 00-00-00

DATE PLOTTED => 27-APR-2016
TIME PLOTTED => 11:40

BORDER LAST REVISED 4/7/2014

USERNAME => s135686
DGN FILE => 0812000307ps004.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2231

PROJECT NUMBER & PHASE

00000000001

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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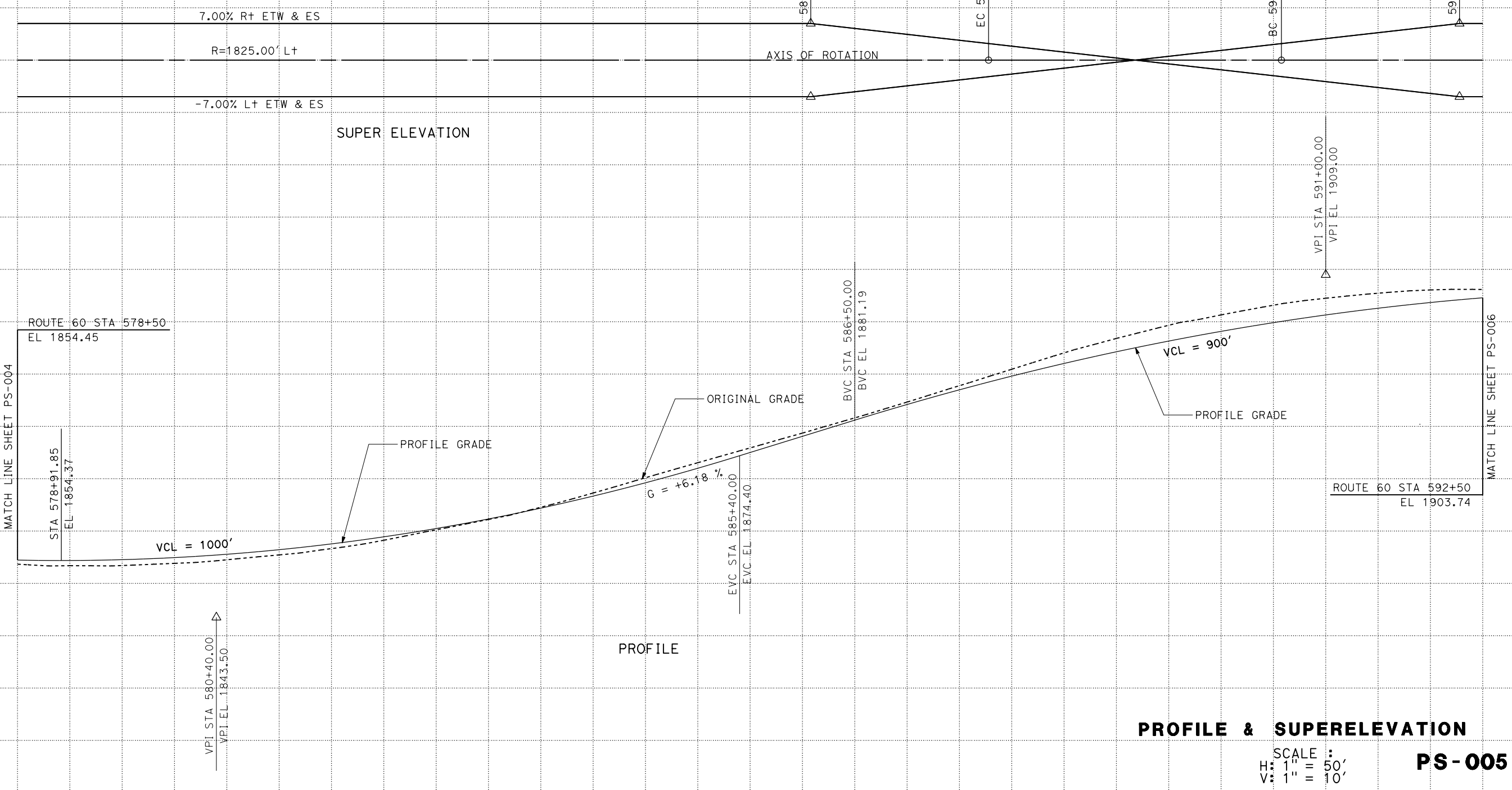

PROFILE & SUPERELEVATION

SCALE :
H: 1" = 50'
V: 1" = 10'

PS-005

STATION	579	580	581	582	583	584	585	586	587	588	589	590	591	592	TOTAL
CY Exc															
CY Emb															

LAST REVISION 00-00-00
DATE PLOTTED => 27-APR-2016
TIME PLOTTED => 11:40

BORDER LAST REVISED 4/7/2014

USERNAME => s135686
DGN FILE => 0812000307ps005.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2231

PROJECT NUMBER & PHASE

00000000001

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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

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Caltrans®

592+28.19 | 599+68.57 | EC 601+38.48 | BC 603+81.33 | 605+51.49

+8.0% | +4.0% | +0% | -4.0% | -3.0%

7.00% Lt ETW & ES

R=1625.00' Rt

AXIS OF ROTATION

R=1625.00' Lt

7.00% Rt ETW & ES

-7.00% Rt ETW & ES

-7.00% Lt ETW & ES

SUPER ELEVATION

1965 | 1960 | 1955 | 1950 | 1945 | 1940 | 1935 | 1930 | 1925 | 1920 | 1915 | 1910 | 1905 | 1900 | 1895 | 1890 | 1885

ROUTE 60 STA 592+50
EL 1903.74

MATCH LINE SHEET PS-005

MATCH LINE SHEET PS-007

VCL = 900'

VCL = 600'

VCL = 600'

G = +6.15 %

PROFILE GRADE

ORIGINAL GRADE

STA 594+62.36
EL 1906.29

EVC STA 595+50.00
EVC EL 1906.00

BVC STA 595+50.00
BVC EL 1906.00

STA 596+08.65
EL 1905.80

VPI STA 598+50.00
VPI EL 1904.00

EVC STA 601+50.00
EVC EL 1922.46

BVC STA 602+00.00
BVC EL 1925.54

VPI STA 605+00.00
VPI EL 1944.00

ROUTE 60 STA 607+50
EL 1956.54

PROFILE

PROFILE & SUPERELEVATION

SCALE :
H: 1" = 50'
V: 1" = 10'

PS-006

STATION	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	TOTAL
CY Exc																
CY Emb																

LAST REVISION 00-00-00 | DATE PLOTTED => 27-APR-2016 | TIME PLOTTED => 11:40

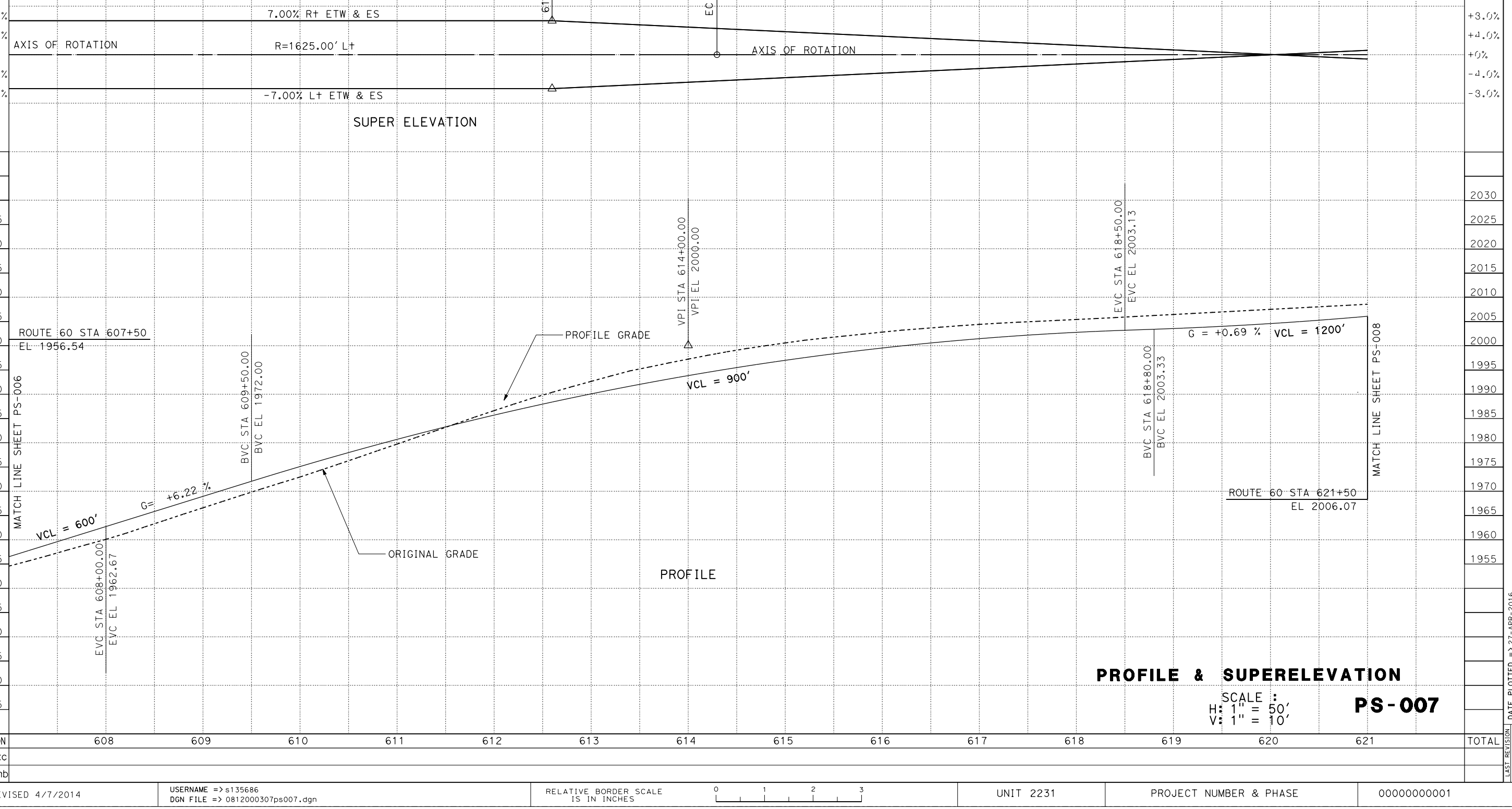
BORDER LAST REVISED 4/7/2014 | USERNAME => s135686 | DGN FILE => 0812000307ps006.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2231 | PROJECT NUMBER & PHASE | 00000000001

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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



PROFILE & SUPERELEVATION

SCALE :
H: 1" = 50'
V: 1" = 10'

PS-007

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BORDER LAST REVISED 4/7/2014

USERNAME => s135686
DGN FILE => 0812000307ps007.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2231

PROJECT NUMBER & PHASE

00000000001

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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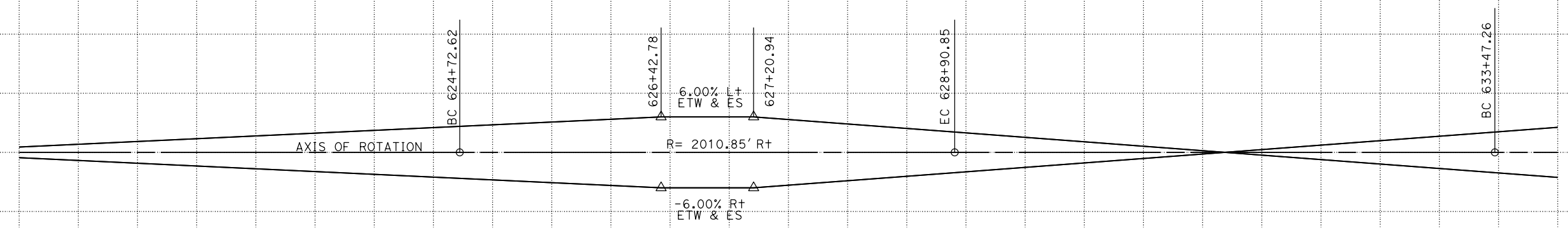
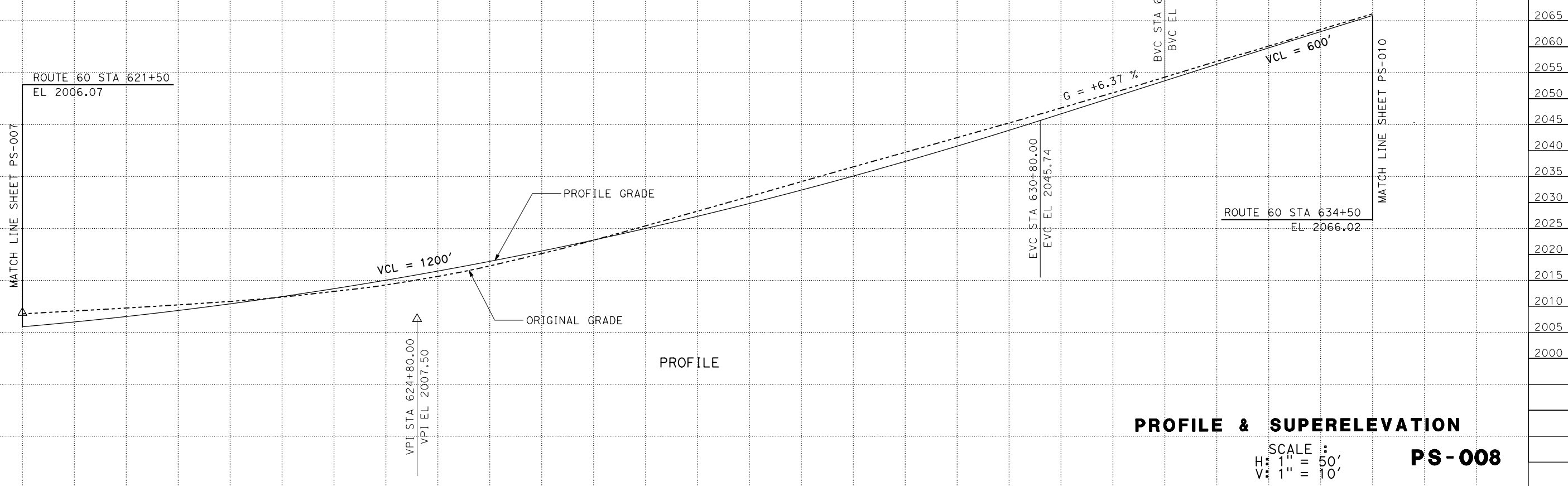


SUPER ELEVATION



PROFILE

PROFILE & SUPERELEVATION

SCALE :
H: 1" = 50'
V: 1" = 10'

PS-008

STATION	622	623	624	625	626	627	628	629	630	631	632	633	634	635	TOTAL
CY Exc															
CY Emb															

LAST REVISION 00-00-00
DATE PLOTTED => 27-APR-2016
TIME PLOTTED => 11:40

BORDER LAST REVISED 4/7/2014

USERNAME => s135686
DGN FILE => 0812000307ps008.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2231

PROJECT NUMBER & PHASE

00000000001

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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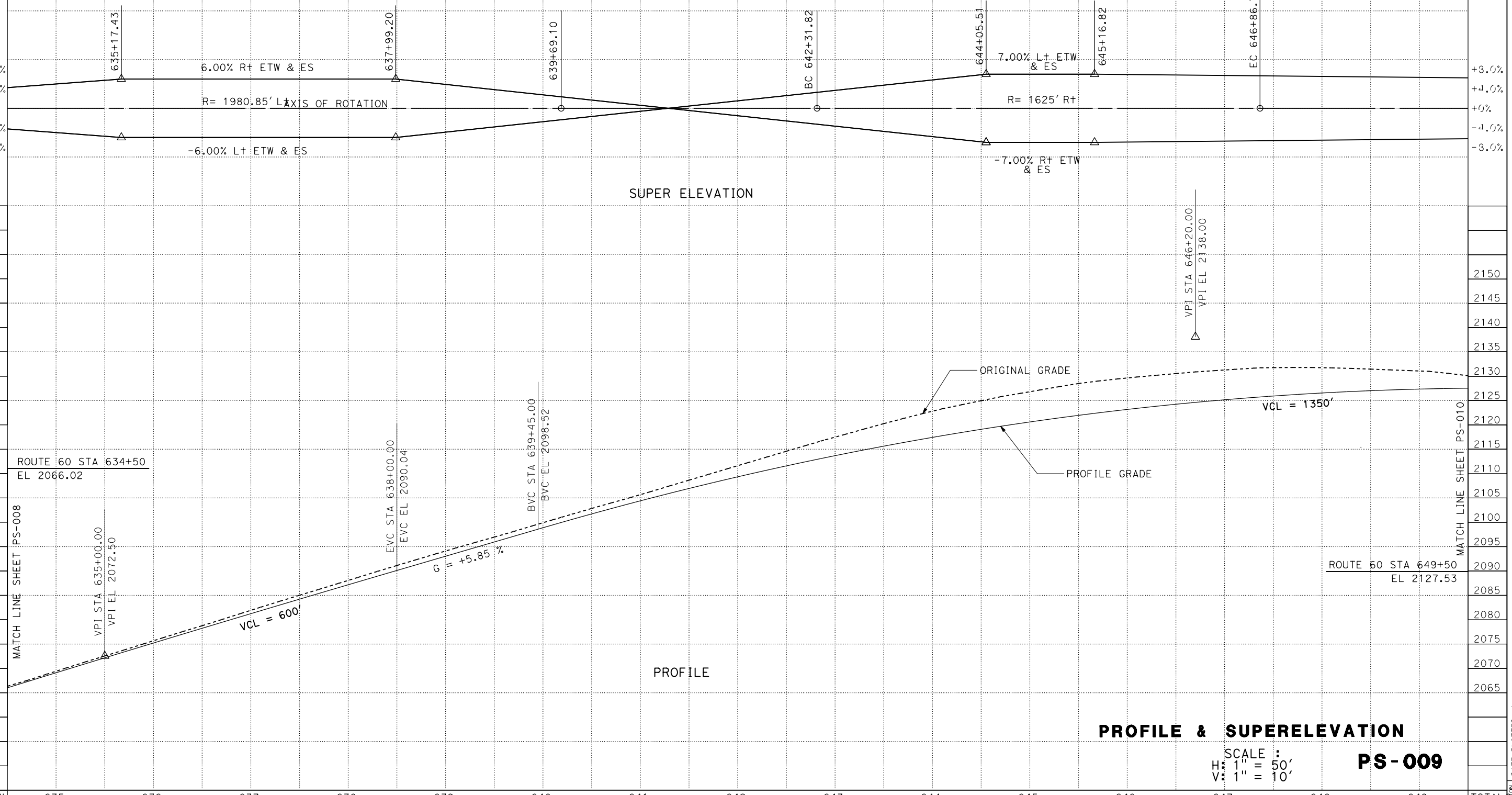

PROFILE & SUPERELEVATION

SCALE :
H: 1" = 50'
V: 1" = 10'

PS-009

STATION	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	TOTAL
CY Exc																
CY Emb																

LAST REVISION 00-00-0000
DATE PLOTTED => 27-APR-2016
TIME PLOTTED => 11:40

BORDER LAST REVISED 4/7/2014

USERNAME => s135686
DGN FILE => 0812000307ps009.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2231

PROJECT NUMBER & PHASE

00000000001

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

650+26.86

BC 657+14.17

662+56.73

+8.0% / +4.0% / +0% / -4.0% / -3.0%

6.00% L↑ ETW & ES

AXIS OF ROTATION

AXIS OF ROTATION

6.00% L↑ ETW & ES

R= 1984.85' R↑

-6.00% R↑ ETW & ES

-6.00% R↑ ETW & ES

+3.0% / +4.0% / +0% / -4.0% / -3.0%

SUPER ELEVATION

2150 2145 2140 2135 2130 2125 2120 2115 2110 2105 2100 2095 2090 2085 2080 2075 2070 2065 2060 2055

EVC STA 652+95.00
EVC EL 2123.70

STA 655+86.33
EL 2119.50

PROFILE GRADE

VCL = 1350'

G = -2.12 %

VCL = 800'

G = +6.98 %

EVC STA 662+00.00
EVC EL 2140.91

MATCH LINE SHEET PS-011

MATCH LINE SHEET PS-009

STA 649+35.99
EL 2127.50

BVC STA 654+00.00
BVC EL 2121.47

ORIGINAL GRADE

VPI STA 658+00.00
VPI EL 2113.00

ROUTE 60 STA 649+50
EL 2127.53

ROUTE 60 STA 663+50
EL 2147.95

PROFILE

PROFILE & SUPERELEVATION

SCALE :
H: 1" = 50'
V: 1" = 10'

PS-010

STATION	650	651	652	653	654	655	656	657	658	659	660	661	662	663	TOTAL
CY Exc															
CY Emb															

LAST REVISION 00-00-00
DATE PLOTTED => 27-APR-2016
TIME PLOTTED => 11:40

BORDER LAST REVISED 4/7/2014

USERNAME => s135686
DGN FILE => 0812000307ps010.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2231

PROJECT NUMBER & PHASE

00000000001

BORDER LAST REVISED 4/7/2014

USERNAME => s135686
DGN FILE => 08120003070ps011.dgn

RELATIVE BORDER SCALE
IS IN INCHES
0 1 2 3

UNIT 2231

PROJECT NUMBER & PHASE

0000000001

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

FUNCTIONAL SUPERVISOR

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LAST REVISION 00-00-00

DATE PLOTTED => 27-APR-2016
TIME PLOTTED => 11:40

PROFILE & SUPERELEVATION

PS-011

SCALE :
H: 1" = 50'
V: 1" = 10'

STATION: 664 665 666 667 668 669 670 671 672 673 674 675 676 677 TOTAL

Cy Exc Emb

2135 2140 2145 2150 2155 2160 2165 2170 2175 2180 2185 2190 2195 2200 2205 2210 2215 2220 2225 2230 2235 2240 2245

PROFILE

ROUTE 60 STA 663+50
EL 2147.95

MATCH LINE SHEET PS-010

BVC STA 664+00.00
BVC EL 2154.87

G = +6.98 %

VCL = 600'

PROFILE GRADE

VPI STA 667+00.00
VPI EL 2175.80

G = +6.03 %

EVC STA 670+00.00
EVC EL 2193.89

ORIGINAL GRADE

BVC STA 672+00.00
BVC EL 2205.94

VPI STA 674+00.00
VPI EL 2218.00

VCL = 400'

G = +3.23 %

EVC STA 676+00.00
EVC EL 2224.46

ROUTE 60 STA 676+50
EL 2225.85

MATCH LINE SHEET PS-012

SUPER ELEVATION

+8.0% +4.0% +0% -4.0% -3.0%

AXIS OF ROTATION

BC 668+49.16

EC 664+26.64

R= 2207.04', Lt

5.00% Rt ETW & ES

671+87.01

670+19.32

-5.00% Lt ETW & ES

BC 676+55.01

EC 673+57.91

+3.0% +4.0% +0% -4.0% -3.0%

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
No.
Exp.
CIVIL
STATE OF CALIFORNIA

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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

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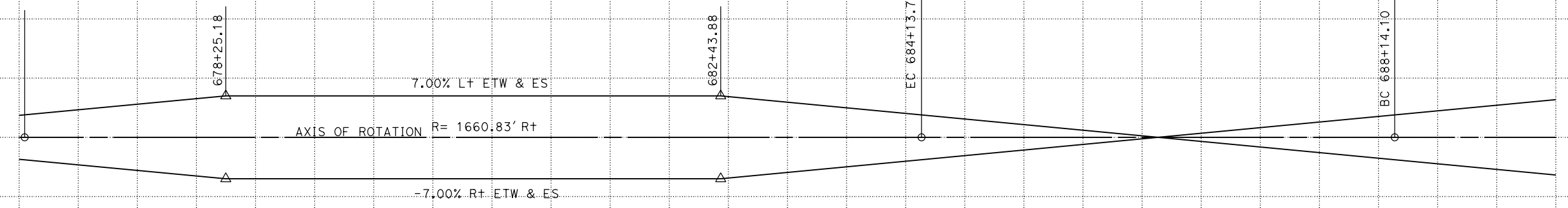
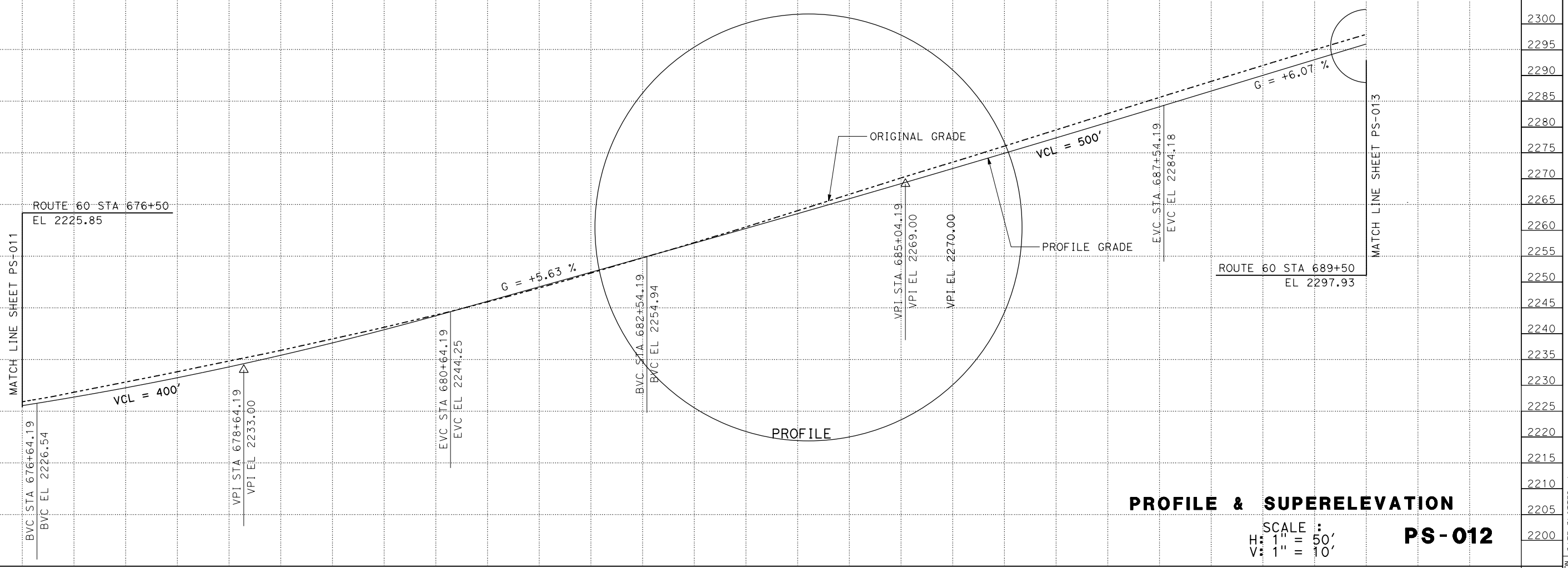


SUPER ELEVATION



PROFILE & SUPERELEVATION

SCALE :
H: 1" = 50'
V: 1" = 10'

PS-012

STATION	677	678	679	680	681	682	683	684	685	686	687	688	689	TOTAL
CY Exc														
CY Emb														

LAST REVISION 00-00-00
DATE PLOTTED => 27-APR-2016
TIME PLOTTED => 11:40

BORDER LAST REVISED 4/7/2014

USERNAME => s135686
DGN FILE => 0812000307ps012.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2231 | PROJECT NUMBER & PHASE | 00000000001

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

689+83.91

701+64.51

+8.0%
+4.0%
+0%
-4.0%
-3.0%

7.00% Rt ETW & ES

AXIS OF ROTATION

R= 1644.60' Lt

-7.00% Lt ETW & ES

SUPER ELEVATION

+3.0%
+4.0%
+0%
-4.0%
-3.0%

2375
2370
2365
2360
2355
2350
2345
2340
2335
2330
2325
2320
2315
2310
2305
2300
2295
2290
2285
2280
2275
2270
2265

ROUTE 60 STA 689+50
EL 2297.93

MATCH LINE SHEET PS-012

BVC STA 691+44.19
BVC EL 2307.86

VPI STA 693+44.19
VPI EL 2320.00

EVC STA 695+44.19
EVC EL 2331.09

BVC STA 696+00.00
BVC EL 2334.18

VCL = 400'

G = +6.07 %

G = +5.55 %

VCL = 1400'

PROFILE GRADE

ORIGINAL GRADE

PROFILE GRADE

MATCH LINE SHEET PS-014

ROUTE 60 STA 702+50
EL 2354.25

PROFILE

PROFILE & SUPERELEVATION

SCALE :
H: 1" = 50'
V: 1" = 10'

PS-013

STATION	690	691	692	693	694	695	696	697	698	699	700	701	702	TOTAL
CY Exc														
CY Emb														

LAST REVISION 00-00-00
DATE PLOTTED => 27-APR-2016
TIME PLOTTED => 11:40

BORDER LAST REVISED 4/7/2014

USERNAME => s135686
DGN FILE => 0812000307ps013.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2231

PROJECT NUMBER & PHASE

00000000001

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

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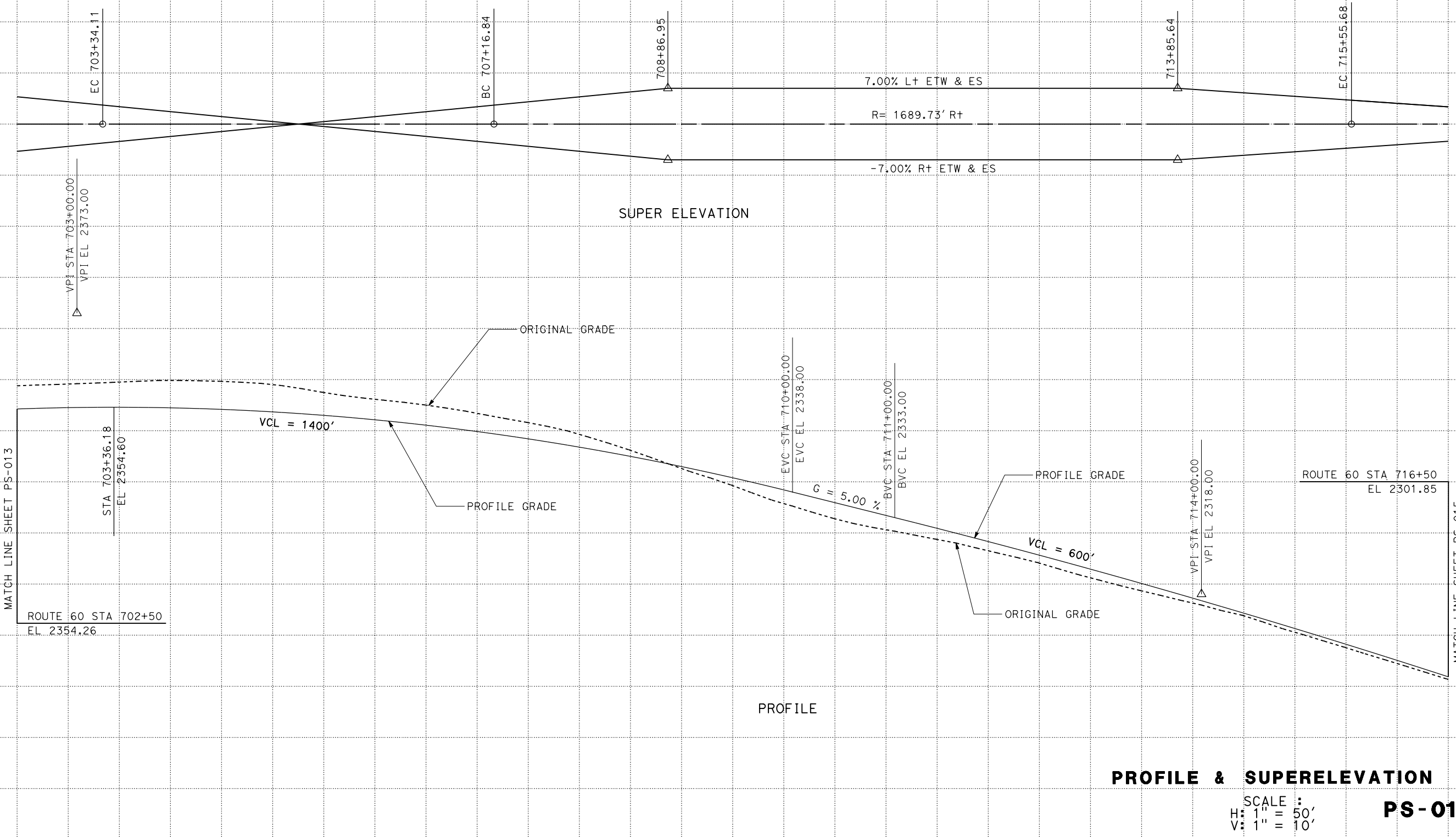

PROFILE & SUPERELEVATION

SCALE :
H: 1" = 50'
V: 1" = 10'

PS-014

LAST REVISION 00-00-00
DATE PLOTTED => 27-APR-2016
TIME PLOTTED => 11:40

BORDER LAST REVISED 4/7/2014

USERNAME => s135686
DGN FILE => 0812000307ps014.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2231

PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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Caltrans

+8.0% +4.0% +0% -4.0% -8.0%

AXIS OF ROTATION

-2.00% Lt & Rt ETW & ES

717+49.91

720+41.35

727+02.29

SUPER ELEVATION

+3.0% +1.5% +0% -1.5% -3.0%

2340 2335 2330 2325 2320 2315 2310 2305 2300 2295 2290 2285 2280 2275 2270 2265 2260 2255 2250 2245 2240 2235 2230

PROFILE GRADE

VCL = 600'

EVC STA 717+00.00
EVC EL 2298.00

BVC STA 717+00.00
BVC EL 2298.00

ORIGINAL GRADE

VCL = 600'

MATCH LINE SHEET PS-015

ROUTE 60 STA 716+50
EL 2301.85

VPI STA 720+00.00
VPI EL 2278.00

EVC STA 723+00.00
EVC EL 2269.12

G = -2.96%

PROFILE GRADE

ROUTE 60 STA 729+50
EL 2250.12

MATCH LINE SHEET PS-016

PROFILE

PROFILE & SUPERELEVATION

SCALE :
H: 1" = 50'
V: 1" = 10'

PS-015

STATION	717	718	719	720	721	722	723	724	725	726	727	728	729	TOTAL
CY Exc														
CY Emb														

LAST REVISION 00-00-00
DATE PLOTTED => 27-APR-2016
TIME PLOTTED => 11:40

BORDER LAST REVISED 4/7/2014

USERNAME => s135686
DGN FILE => 0812000307ps015.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2231

PROJECT NUMBER & PHASE

00000000001

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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

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

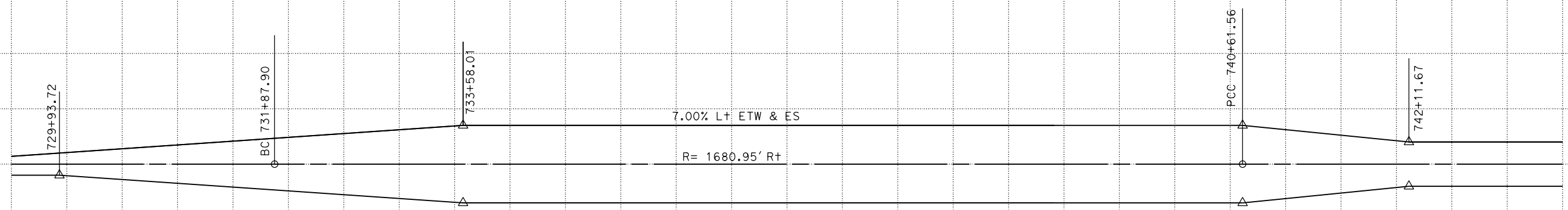
REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

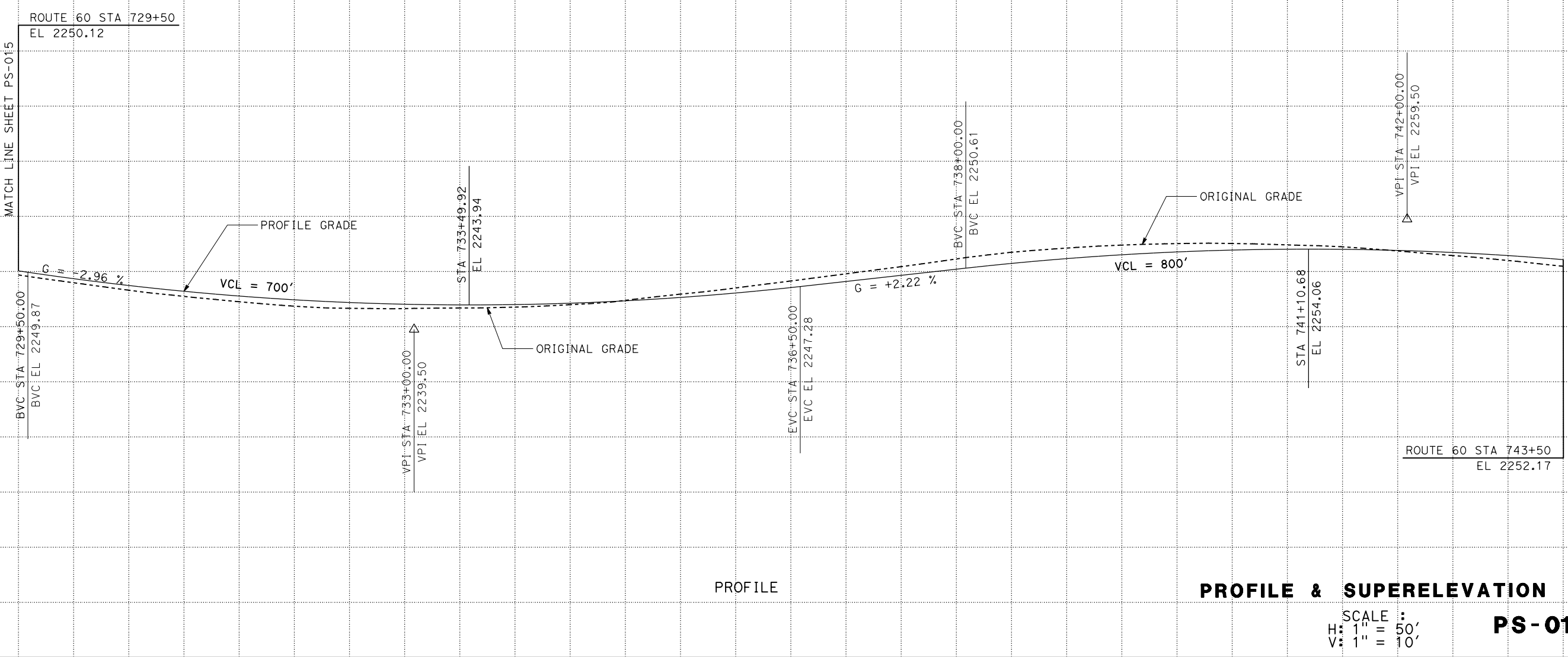
FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans



SUPER ELEVATION



PROFILE

PROFILE & SUPERELEVATION

SCALE :
H: 1" = 50'
V: 1" = 10'

PS-016

STATION	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	TOTAL
CY Exc																
CY Emb																

LAST REVISION 00-00-00
DATE PLOTTED => 27-APR-2016
TIME PLOTTED => 11:40

BORDER LAST REVISED 4/7/2014

USERNAME => s135686
DGN FILE => 0812000307ps016.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2231

PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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

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DATE REVISED	REVISED BY

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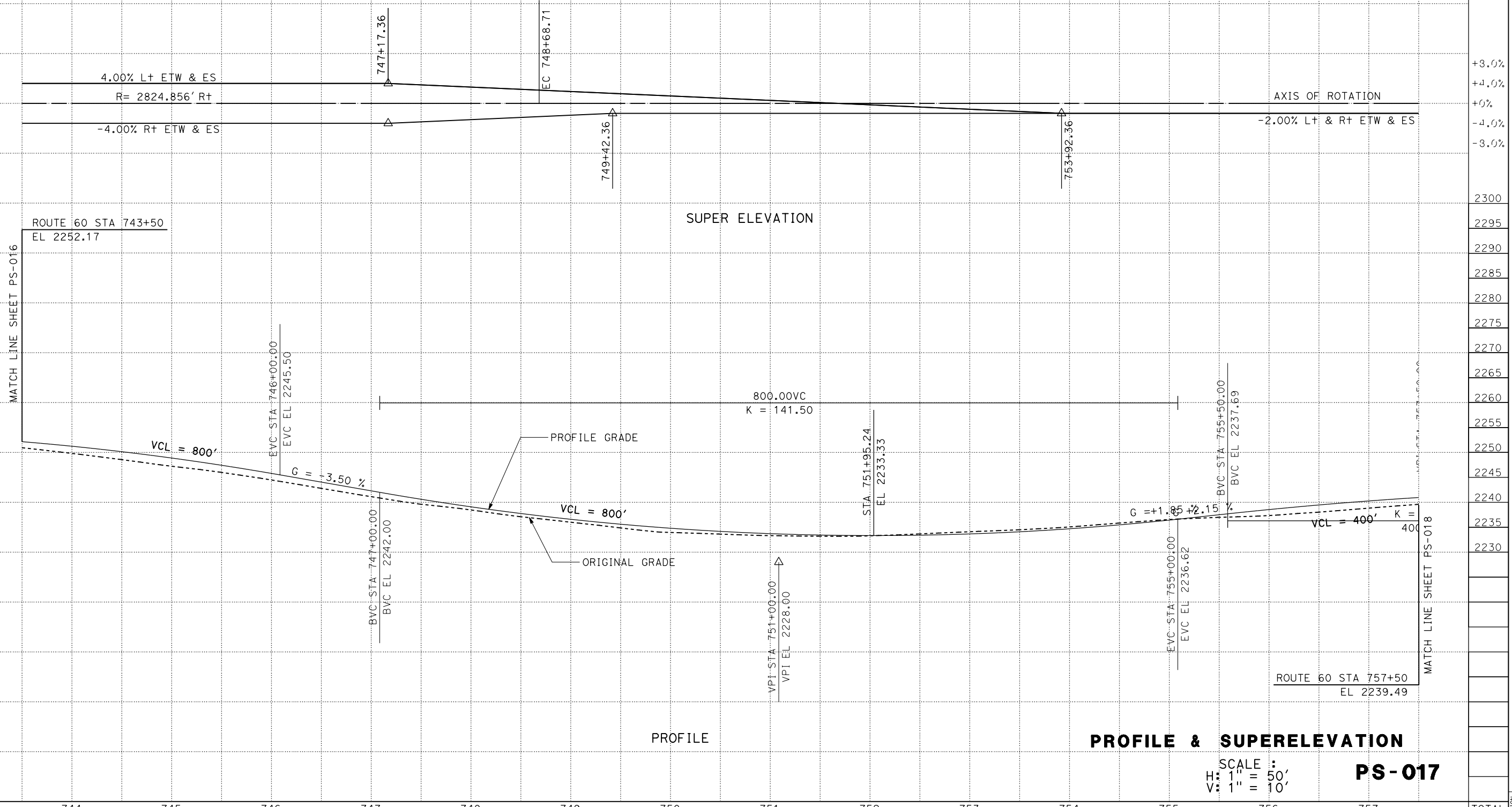
FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans



PROFILE

PROFILE & SUPERELEVATION

SCALE :
H: 1" = 50'
V: 1" = 10'

PS-017

LAST REVISION 00-00-00

DATE PLOTTED => 27-APR-2016
TIME PLOTTED => 11:40

BORDER LAST REVISED 4/7/2014

USERNAME => s135686
DGN FILE => 0812000307ps017.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2231

PROJECT NUMBER & PHASE

00000000001

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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

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REVISED BY | DATE REVISED

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

+8.0%
+4.0%
+0%
-4.0%
-3.0%

AXIS OF ROTATION

-2.00% Lt & Rt ETW & ES

SUPER ELEVATION

2300
2295
2290
2285
2280
2275
2270
2265
2260
2255
2250
2245
2240
2235
2230

VPI STA 757+50.00
VPI EL 2242.00

EVC STA 759+50.00
EVC EL 2242.58

PROFILE GRADE

G = +1.09 %

G +0.29 %

214.38 VCL = 400'

.00VC

VPOT STA 760+00.00
VPOT EL 2242.72

MATCH LINE SHEET PS-017

ROUTE 60 STA 757+50
EL 2239.49

PROFILE

PROFILE & SUPERELEVATION

SCALE :
H: 1" = 50'
V: 1" = 10'

PS-018

STATION	758	759	760	761	762	763	764	765	TOTAL
CY Exc									
CY Emb									

LAST REVISION 00-00-00

DATE PLOTTED => 27-APR-2016
TIME PLOTTED => 11:41

BORDER LAST REVISED 4/7/2014

USERNAME => s135686
DGN FILE => 0812000307ps018.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2231

PROJECT NUMBER & PHASE

00000000001