

Interstate 215/Barton Road Interchange Improvement Project

CITIES OF GRAND TERRACE AND COLTON
SAN BERNARDINO COUNTY, CALIFORNIA

08-SBD-215 PM 0.58/1.66

EA 08-0J0700

(PN 0800000282)

Initial Study with Negative Declaration/Environmental Assessment with Finding of No Significant Impact



Prepared by the
State of California Department of Transportation

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 USC 327.



March 2014

This page intentionally left blank

General Information about This Document

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to the San Bernardino Associated Governments, Attn.: Jane Dreher, San Bernardino Associated Governments, 1170 W. 3rd Street, 2nd Floor, San Bernardino, CA 92410-1715; (909) 884-8276 (voice); or use the California Relay Service 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice), or 711.

This page intentionally left blank

SCH #2013111081
08-SBD-215 PM 0.58/1.66
EA 08-0J0700
(PN 0800000282)

Reconstruct and Improve the Interstate 215 (I-215)/Barton Road Interchange, from postmile 0.58 to postmile 1.66 on I-215, located within the Cities of Grand Terrace and Colton, San Bernardino County, California.

**Initial Study with Negative Declaration/
Environmental Assessment with Finding of No Significant Impact**

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 USC 4332(2)(c) and 49 USC 303

THE STATE OF CALIFORNIA
Department of Transportation

3/5/2014

Date of Approval



David Bricker
Deputy District Director
District 8 Division of Environmental Planning
California Department of Transportation
NEPA Lead Agency
CEQA Lead Agency

CALTRANS Contact:
James Shankel
464 W. Fourth Street, 6th Flr MS 827
San Bernardino, CA 92401-1400
(909) 383-6379

SANBAG Contact:
Mary Brown
1170 W. 3rd Street, 2nd Floor
San Bernardino, CA 92410-1715
(909) 884-8276

This page intentionally left blank

**CALIFORNIA DEPARTMENT OF TRANSPORTATION
FINDING OF NO SIGNIFICANT IMPACT**

FOR

Interstate 215 / Barton Road Interchange Improvement Project

SBd—215 PM 0.58 / 1.66

The California Department of Transportation (Caltrans) has determined that Modified Alternative 7 will have no significant impact on the human environment. Modified Alternative 7 includes replacing the existing Barton Road Overcrossing, reconstructing and widening a portion of Barton Road, realigning the existing on- and off-ramps to enhance turning maneuverability and storage capacity, and related improvements to local roadways.

This Finding of No Significant Impact (FONSI) is based on the attached Environmental Assessment (EA) and the associated Technical Studies and design documents, which have been independently evaluated by Caltrans and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project and appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an Environmental Impact Statement (EIS) is not required. Caltrans takes full responsibility for the accuracy, scope, and content of the attached EA and the associated Technical Studies and design documents.

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 USC 327.

3/5/2014
Date



David Bricker
Deputy District Director
District 8 Division of Environmental Planning
California Department of Transportation

This page intentionally left blank

NEGATIVE DECLARATION

Pursuant to: Division 13, Public Resources Code

Project Description

The San Bernardino Associated Governments (SANBAG), in cooperation with the California Department of Transportation (Caltrans), the City of Grand Terrace, and the City of Colton, proposes to improve the Interstate 215 (I-215)/Barton Road interchange.

Determination

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

The proposed Project would have no effect on:

- Coastal Zones
- Wild and Scenic Rivers
- Farmlands or Timberlands
- Floodplains

In addition, the proposed Project would have less than significant effects to:

- Land Use
- Growth
- Community Character and Cohesion
- Relocations
- Utilities and Emergency Services
- Traffic and Transportation/Pedestrian and Bicycle Facilities
- Visual/Aesthetics
- Cultural Resources
- Water Quality
- Geology and Soils

- Paleontological Resources
- Air Quality
- Noise
- Natural Communities
- Wetlands and Other Waters
- Animal Species
- Plant Species
- Threatened and Endangered Species



David Bricker
Deputy District Director
District 8 Division of Environmental Planning
California Department of Transportation

3/5/2014
Date

TABLE OF CONTENTS

CHAPTER 1	PROPOSED PROJECT.....	1-1
1.1	Introduction.....	1-1
1.1.1	Existing Facility.....	1-7
1.1.2	Relationship to other Freeway Projects	1-8
1.2	Purpose and Need	1-10
1.2.1	Purpose	1-10
1.2.2	Need.....	1-10
1.2.3	Independent Utility and Logical Termini	1-20
1.3	Project Description	1-21
1.4	Project Alternatives.....	1-21
1.4.1	Build Alternatives.....	1-22
1.4.2	Common Design Features of the Build Alternatives	1-35
1.4.3	Construction Staging for the Build Alternatives.....	1-35
1.4.4	Unique Features of Build Alternatives	1-43
1.4.5	Nonstandard Mandatory and Advisory Design Features	1-45
1.4.6	Transportation Systems Management and Transportation Demand Management Alternatives	1-47
1.4.7	No Build Alternative.....	1-48
1.5	Comparison of Alternatives.....	1-48
1.5.1	Operational Comparison.....	1-48
1.6	Identification of the Preferred Alternative.....	1-54
1.7	Value Analysis.....	1-55
1.8	Alternatives Considered but Eliminated from Further Discussion	1-55
1.8.1	Alternative 2 (Spread Diamond Interchange).....	1-55
1.8.2	Alternative 4 (Spread Diamond/Partial Cloverleaf Interchange).....	1-56
1.8.3	Alternative 5 (Single-Point/Bowtie Interchange)	1-56
1.8.4	Alternative 7 (Modified Cloverleaf/Diamond Interchange)	1-57
1.9	Permits and Approvals Needed.....	1-59
CHAPTER 2	AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES	2-1
HUMAN ENVIRONMENT		2-1-1
2.1	Land Use.....	2-1-1
2.1.1	Existing and Future Land Use	2-1-1
2.1.2	Consistency with State, Regional, and Local Plans.....	2-1-15
2.1.3	Environmental Consequences.....	2-1-19
2.1.4	Avoidance, Minimization, and/or Mitigation Measures	2-1-33
2.1.5	Parks and Recreational Facilities.....	2-1-33
2.2	Growth.....	2-2-1
2.2.1	Regulatory Setting	2-2-1
2.2.2	First-Cut Screening.....	2-2-1
2.3	Community Impacts.....	2-3-1
2.3.1	Community Character and Cohesion.....	2-3-1
2.3.2	Relocations and Real Property Acquisition.....	2-3-25
2.3.3	Environmental Justice.....	2-3-66

2.4	Utilities and Emergency Services.....	2.4-1
2.4.1	Affected Environment.....	2.4-1
2.4.2	Environmental Consequences	2.4-2
2.4.3	Avoidance, Minimization, and/or Mitigation Measures.....	2.4-30
2.5	Traffic and Transportation/Pedestrian and Bicycle Facilities	2.5-1
2.5.1	Regulatory Setting.....	2.5-1
2.5.2	Affected Environment.....	2.5-1
2.5.3	Environmental Consequences	2.5-8
2.5.4	Avoidance, Minimization, and/or Mitigation Measures.....	2.5-31
2.6	Visual/Aesthetics.....	2.6-1
2.6.1	Regulatory Setting.....	2.6-1
2.6.2	Affected Environment.....	2.6-1
2.6.3	Environmental Consequences	2.6-12
2.6.4	Avoidance, Minimization, and/or Mitigation Measures.....	2.6-46
2.7	Cultural Resources	2.7-1
2.7.1	Regulatory Setting.....	2.7-1
2.7.2	Affected Environment.....	2.7-2
2.7.3	Environmental Consequences	2.7-6
2.7.4	Avoidance, Minimization, and/or Mitigation Measures.....	2.7-7
	PHYSICAL ENVIRONMENT	2.8-1
2.8	Water Quality and Storm Water Runoff.....	2.8-1
2.8.1	Regulatory Setting.....	2.8-1
2.8.2	Affected Environment.....	2.8-7
2.8.3	Environmental Consequences	2.8-8
2.8.4	Avoidance, Minimization, and/or Mitigation Measures.....	2.8-12
2.9	Geology/Soils/Seismic/Topography.....	2.9-1
2.9.1	Regulatory Setting.....	2.9-1
2.9.2	Affected Environment.....	2.9-1
2.9.3	Environmental Consequences	2.9-3
2.9.4	Avoidance, Minimization, and/or Mitigation Measures.....	2.9-10
2.10	Paleontology.....	2.10-1
2.10.1	Regulatory Setting.....	2.10-1
2.10.2	Affected Environment.....	2.10-1
2.10.3	Environmental Consequences	2.10-3
2.10.4	Avoidance, Minimization, and/or Mitigation Measures.....	2.10-4
2.11	Hazardous Waste/Materials.....	2.11-1
2.11.1	Regulatory Setting.....	2.11-1
2.11.2	Affected Environment.....	2.11-2
2.11.3	Environmental Consequences	2.11-6
2.11.4	Avoidance, Minimization, and/or Mitigation Measures.....	2.11-22
2.12	Air Quality.....	2.12-1
2.12.1	Regulatory Setting.....	2.12-1
2.12.2	Affected Environment.....	2.12-3
2.12.3	Environmental Consequences	2.12-10
2.12.4	Avoidance, Minimization, and/or Mitigation Measures.....	2.12-30
2.12.5	Climate Change.....	2.12-33
2.13	Noise.....	2.13-1
2.13.1	Regulatory Setting.....	2.13-1
2.13.2	Affected Environment.....	2.13-4
2.13.3	Environmental Consequences	2.13-15
2.13.4	Avoidance, Minimization, and/or Abatement Measures.....	2.13-45

BIOLOGICAL ENVIRONMENT.....	2.14-1
2.14 Natural Communities.....	2.14-1
2.14.1 Regulatory Setting.....	2.14-1
2.14.2 Affected Environment.....	2.14-1
2.14.3 Environmental Consequences.....	2.14-10
2.14.4 Avoidance, Minimization, and/or Mitigation Measures.....	2.14-12
2.15 Wetlands and Other Waters.....	2.15-1
2.15.1 Regulatory Setting.....	2.15-1
2.15.2 Affected Environment.....	2.15-3
2.15.3 Environmental Consequences.....	2.15-14
2.15.4 Avoidance, Minimization, and/or Mitigation Measures.....	2.15-34
2.16 Plant Species.....	2.16-1
2.16.1 Regulatory Setting.....	2.16-1
2.16.2 Affected Environment.....	2.16-1
2.16.3 Environmental Consequences.....	2.16-3
2.16.4 Avoidance, Minimization, and/or Mitigation Measures.....	2.16-4
2.17 Animal Species.....	2.17-1
2.17.1 Regulatory Setting.....	2.17-1
2.17.2 Affected Environment.....	2.17-1
2.17.3 Environmental Consequences.....	2.17-3
2.17.4 Avoidance, Minimization, and/or Mitigation Measures.....	2.17-6
2.18 Threatened and Endangered Species.....	2.18-1
2.18.1 Regulatory Setting.....	2.18-1
2.18.2 Affected Environment.....	2.18-2
2.18.3 Environmental Consequences.....	2.18-3
2.18.4 Avoidance, Minimization, and/or Mitigation Measures.....	2.18-6
2.19 Invasive Species.....	2.19-1
2.19.1 Regulatory Setting.....	2.19-1
2.19.2 Affected Environment.....	2.19-1
2.19.3 Environmental Consequences.....	2.19-2
2.19.4 Avoidance, Minimization, and/or Mitigation Measures.....	2.19-3
2.20 Climate Change.....	2.20-1
2.20.1 Regulatory Setting.....	2.20-2
2.20.2 Project Analysis.....	2.20-5
2.20.3 Construction Emissions.....	2.20-8
2.20.4 Limitations and Uncertainties with Modeling.....	2.20-9
2.20.5 Limitations and Uncertainties with Impact Assessment.....	2.20-12
2.20.6 CEQA Conclusion.....	2.20-14
2.20.7 Greenhouse Gas Reduction Strategies.....	2.20-14
2.20.8 Adaptation Strategies.....	2.20-18
2.21 Cumulative Impacts.....	2.21-1
2.21.1 Regulatory Setting.....	2.21-1
2.21.2 Methodology.....	2.21-1
2.21.3 Resources Excluded from Cumulative Impacts Analysis.....	2.21-2
2.21.4 Resources Evaluated for Cumulative Impacts.....	2.21-2
2.21.5 Avoidance, Minimization, and/or Mitigation Measures.....	2.21-16
CHAPTER 3 COMMENTS AND COORDINATION.....	3-1
3.1 Interagency Coordination and Consultation.....	3-1
3.1.1 Native American Consultation.....	3-1
3.1.2 Historical Consultation.....	3-2
3.1.3 State Historic Preservation Officer.....	3-7

	3.1.4	SCAG Transportation Conformity Working Group.....	3-7
	3.1.5	United States Fish and Wildlife Service.....	3-7
	3.1.6	United States Army Corps of Engineers	3-7
	3.1.7	Colton Joint Unified School District	3-8
3.2		Community Outreach and Public Involvement	3-8
	3.2.1	City of Grand Terrace	3-9
	3.2.2	Chamber of Commerce Presentations	3-10
	3.2.3	Public Coordination.....	3-11
3.3		Agency Coordination Documentation.....	3-11
3.4		Public Review	3-25
3.5		Comments and Responses to Comments.....	3-33
	3.5.1	Comments Received.....	3-33
	3.5.2	Format of Responses to Comments.....	3-34
CHAPTER 4		LIST OF PREPARERS	4-1
CHAPTER 5		DISTRIBUTION LIST	5-1
APPENDIX A		CEQA CHECKLIST.....	A-1
APPENDIX B		RESOURCES EVALUATED RELATIVE TO THE REQUIREMENTS OF SECTION 4(F).....	B-1
APPENDIX C		TITLE VI POLICY STATEMENT	C-1
APPENDIX D		SUMMARY OF RELOCATION BENEFITS.....	D-1
APPENDIX E		ENVIRONMENTAL COMMITMENTS RECORD (ECR)	E-1
APPENDIX F		LIST OF ACRONYMS	F-1
APPENDIX G		LIST OF TECHNICAL STUDIES.....	G-1
APPENDIX H		FHWA CONFORMITY DETERMINATION	H-1

LIST OF FIGURES

Figure 1.1 Project Location.....	1-3
Figure 1.2 Project Vicinity.....	1-5
Figure 1.3 Levels of Service for Freeways	1-11
Figure 1.4 Levels of Service for Intersections with Traffic Signals	1-12
Figure 1.5 Alternative 3	1-23
Figure 1.6 Alternative 6	1-29
Figure 1.7 Modified Alternative 7 (Preferred Alternative).....	1-37
Figure 2.1.1 Land Use Study Area - Existing Land Use.....	2.1-3
Figure 2.1.2 Land Use Study Area - General Plan.....	2.1-7
Figure 2.1.3 Planned Projects	2.1-13
Figure 2.3.1 Census Tracts.....	2.3-5
Figure 2.3.2 Potential Property Acquisitions – Alternative 3	2.3-27
Figure 2.3.3 Potential Property Acquisitions – Alternative 6	2.3-35
Figure 2.3.4 Potential Property Acquisitions – Modified Alternative 7 (Preferred Alternative)	2.3-41
Figure 2.4.1 Alternative 3 Utility Relocations	2.4-5
Figure 2.4.2 Alternative 6 Utility Relocations	2.4-13
Figure 2.4.3 Modified Alternative 7 (Preferred Alternative) Utility Relocations.....	2.4-21
Figure 2.5.1 City of Grand Terrace Existing and Planned Bikeway Plan.....	2.5-3
Figure 2.6.1 Key View Index Map	2.6-7
Figure 2.6.2 Key View 1 (Alternative 3)	2.6-15
Figure 2.6.3 Key View 2	2.6-19
Figure 2.6.4 Key View 3	2.6-23
Figure 2.6.5 Key View 1 (Modified Alternative 7) (Preferred Alternative).....	2.6-27
Figure 2.6.6 Key View 4.....	2.6-31
Figure 2.6.7 Key View 4 Close-up	2.6-33
Figure 2.6.8 Key View 5.....	2.6-35
Figure 2.6.9 Key View 5 Close-up	2.6-39
Figure 2.6.10 Key View 6.....	2.6-43
Figure 2.9.1 Fault Zones and Peak Bedrock Acceleration.....	2.9-5
Figure 2.11.1 Sites of Concern for Alternative 3	2.11-9
Figure 2.11.2 Sites of Concern for Alternative 6.....	2.11-11
Figure 2.11.3 Sites of Concern for Modified Alternative 7 (Preferred Alternative).....	2.11-13
Figure 2.12.1 National MSAT Emission Trends	2.12-23
Figure 2.13.1 Monitoring and Receiver Locations	2.13-5
Figure 2.13.2 Alternative 3 Modeled Sound Barriers and Receiver Locations	2.13-49
Figure 2.13.3 Alternative 6 Modeled Sound Barriers and Receiver Locations	2.13-57
Figure 2.13.4 Modified Alternative 7 (Preferred Alternative) Modeled Sound Barriers and Receiver Locations	2.13-65
Figure 2.14.1 Vegetation.....	2.14-3
Figure 2.15.1 Potential USACE/CDFW Jurisdictional Areas	2.15-5
Figure 2.15.2 Potential Jurisdictional Impacts- Alternative 3.....	2.15-19
Figure 2.15.3 Potential Jurisdictional Impacts- Modified Alternative 7 (Preferred Alternative)	2.15-27
Figure 2.20.1 California Greenhouse Gas Forecast	2.20-6
Figure 2.20.2 Possible Effect of Traffic Operation Strategies in Reducing On- Road CO ₂ Emission	2.20-7
Figure 2.20.3 Cascade of Uncertainties	2.20-12

List of Figures

Figure 2.20.4 Mobility Pyramid	2.20-15
Figure 2.21.1 Resource Study Areas	2.21-3
Figure 2.21.2 Surface Water Quality Resource Study Area.....	2.21-13

LIST OF TABLES

Table 1.A Funding Sources and Project Cost	1-7
Table 1.B Existing (2009) and Future (2016 and 2040) Freeway Mainline Volumes	1-13
Table 1.C Existing (2009) and Future (2016 and 2040) Freeway Ramp Volumes.....	1-14
Table 1.D Existing (2009) and Future No Build (2016 and 2040) Intersection Levels of Service	1-14
Table 1.E Existing (2009) and Future No Build (2016 and 2040) Mainline Levels of Service	1-15
Table 1.F Existing (2009) and Future No Build (2016 and 2040) Freeway Ramp LOS.....	1-15
Table 1.G TASAS Accident Rate from 10/01/08 to 09/30/11	1-16
Table 1.H Existing (2009) and Future No Build (2016 and 2040) Intersection Queue Lengths	1-18
Table 1.I Mandatory Design Exceptions.....	1-46
Table 1.J Advisory Design Exceptions	1-46
Table 1.K Project Alternatives Comparison	1-49
Table 1.L 2016 Intersection Levels of Service	1-50
Table 1.M 2040 Intersection Levels of Service	1-50
Table 1.N Future (2016 and 2040) Freeway Mainline Levels of Service.....	1-51
Table 1.O Future (2016 and 2040) Ramp Levels of Service	1-52
Table 1.P Future (2016 and 2040) Intersection Queue Lengths	1-53
Table 1.Q Permits and/or Approvals Needed	1-60
Table 2.1.A Planned Projects.....	2.1-10
Table 2.3.A Racial and Ethnic Demographics.....	2.3-3
Table 2.3.B Housing Tenure.....	2.3-8
Table 2.3.C Housing Occupancy	2.3-9
Table 2.3.D Age Distribution.....	2.3-10
Table 2.3.E Employment Percentages	2.3-12
Table 2.3.F Local, County, Regional, and State Demographic Summaries.....	2.3-13
Table 2.3.G Commuter Travel	2.3-15
Table 2.3.H Alternative 3 Business Displacements.....	2.3-18
Table 2.3.I Alternative 6 Business Displacements	2.3-22
Table 2.3.J Modified Alternative 7 (Preferred Alternative) Business Displacements.....	2.3-24
Table 2.3.K Potential Full Acquisitions Anticipated Under Alternative 3	2.3-48
Table 2.3.L Potential Partial Acquisitions Anticipated Under Alternative 3.....	2.3-49
Table 2.3.M Business Service Area.....	2.3-50
Table 2.3.N Estimated Annual Property Tax Loss Under Alternative 3	2.3-52
Table 2.3.O Estimated Annual Sales Tax Revenue Loss to the City of Grand Terrace Under Alternative 3	2.3-53
Table 2.3.P Potential Annual Sales Tax Revenue Losses Related to Business Displacements in the City of Colton Under Alternative 3	2.3-54
Table 2.3.Q Potential Full Acquisitions Anticipated Under Alternative 6	2.3-55
Table 2.3.R Potential Partial Acquisitions Anticipated Under Alternative 6.....	2.3-56
Table 2.3.S Estimated Annual Property Tax Loss Under Alternative 6	2.3-57
Table 2.3.T Estimated Annual Sales Tax Revenue Loss to the City of Grand Terrace Under Alternative 6	2.3-58

Table 2.3.U Potential Full Acquisitions Anticipated Under Modified Alternative 7 (Preferred Alternative)	2.3-59
Table 2.3.V Potential Partial Acquisitions Anticipated Under Modified Alternative 7 (Preferred Alternative).....	2.3-60
Table 2.3.W Estimated Annual Property Tax Loss Under Modified Alternative 7 (Preferred Alternative)	2.3-61
Table 2.3.X Estimated Annual Sales Tax Revenue Loss to the City of Grand Terrace Under Modified Alternative 7 (Preferred Alternative)	2.3-62
Table 2.3.Y Residential Units Available for Rent and Sale in the Study Area Cities.....	2.3-63
Table 2.3.Z Availability of Businesses for Rent and Sale in the Replacement Area	2.3-64
Table 2.3.AA Minority and Low-Income Demographics	2.3-67
Table 2.4.A Utility Service Providers	2.4-1
Table 2.4.B Anticipated Utility Relocations During Project Construction	2.4-3
Table 2.5.A Existing (2009) Mainline LOS	2.5-7
Table 2.5.B Existing (2009) Intersection LOS	2.5-7
Table 2.5.C Existing (2009) Intersection Queue Lengths	2.5-7
Table 2.5.D Existing (2009) Freeway Ramp LOS	2.5-8
Table 2.5.E Alternative 1 2016 Freeway Mainline LOS.....	2.5-11
Table 2.5.F Alternative 1 2016 Intersection LOS	2.5-11
Table 2.5.G Alternative 1 2016 Intersection Queue Lengths	2.5-12
Table 2.5.H Alternative 1 2016 Freeway Ramp LOS	2.5-12
Table 2.5.I Alternative 1 2040 Freeway Mainline LOS.....	2.5-13
Table 2.5.J Alternative 1 2040 Intersection LOS	2.5-13
Table 2.5.K Alternative 1 2040 Intersection Queue Lengths	2.5-14
Table 2.5.L Alternative 1 2040 Freeway Ramp LOS.....	2.5-14
Table 2.5.M Alternative 3 2016 Intersection LOS	2.5-15
Table 2.5.N Alternative 3 2016 Intersection Queue Lengths	2.5-16
Table 2.5.O Alternative 3 2040 Intersection LOS.....	2.5-17
Table 2.5.P Alternative 3 2040 Intersection Queue Lengths.....	2.5-17
Table 2.5.Q Alternative 6 2016 Intersection LOS.....	2.5-18
Table 2.5.R Alternative 6 2016 Intersection Queue Lengths	2.5-19
Table 2.5.S Alternative 6 2040 Intersection LOS	2.5-20
Table 2.5.T Alternative 6 2040 Intersection Queue Lengths	2.5-20
Table 2.5.U Modified Alternative 7 (Preferred Alternative) 2016 Intersection LOS.....	2.5-21
Table 2.5.V Modified Alternative 7 (Preferred Alternative) 2016 Intersection Queue Lengths.....	2.5-22
Table 2.5.W Modified Alternative 7 (Preferred Alternative) 2040 Intersection LOS	2.5-23
Table 2.5.X Modified Alternative 7 (Preferred Alternative) 2040 Intersection Queue Lengths.....	2.5-23
Table 2.5.Y 2016 LOS Comparison by Alternative	2.5-25
Table 2.5.Z 2040 LOS Comparison by Alternative.....	2.5-28
Table 2.6.A Key Views Existing Visual Quality.....	2.6-9
Table 2.6.B Key View 1, Existing and Proposed Visual Quality.....	2.6-17
Table 2.6.C Key View 2, Existing and Proposed Visual Quality.....	2.6-21
Table 2.6.D Key View 3, Existing and Proposed Visual Quality.....	2.6-25
Table 2.6.E Key View 1, Existing and Proposed Visual Quality.....	2.6-29
Table 2.6.F Key View 4, Existing and Proposed Visual Quality	2.6-37
Table 2.6.G Key View 5, Existing and Proposed Visual Quality.....	2.6-41
Table 2.6.H Key View 6, Existing and Proposed Visual Quality.....	2.6-45

Table 2.8.A Water Quality Impacts Comparison for Build Alternatives.....	2.8-12
Table 2.12.A Local Air Quality Levels.....	2.12-5
Table 2.12.B State and Federal Criteria Air Pollutant Standards, Effects, and Sources.....	2.12-7
Table 2.12.C Maximum Project Construction Emissions.....	2.12-12
Table 2.12.D 2040 Average Daily Traffic Volumes (Total AADT/Truck AADT).....	2.12-17
Table 2.12.E 2040 without Project (No Build Alternative) Intersection LOS.....	2.12-17
Table 2.12.F 2040 Alternative 3 Intersection LOS.....	2.12-17
Table 2.12.G 2040 Alternative 6 Intersection LOS.....	2.12-18
Table 2.12.H 2040 Modified Alternative 7 (Preferred Alternative) Intersection LOS.....	2.12-18
Table 2.12.I Traffic Volume Comparison.....	2.12-20
Table 2.12.J 2040 Regional Traffic Data.....	2.12-28
Table 2.12.K 2040 Regional Vehicle Emissions (lbs/day).....	2.12-28
Table 2.13.A Noise Abatement Criteria.....	2.13-2
Table 2.13.B Noise Levels of Common Activities.....	2.13-3
Table 2.13.C Existing Noise Levels.....	2.13-13
Table 2.13.D Exterior/Interior Noise Monitoring Results.....	2.13-16
Table 2.13.E Typical Construction Equipment Noise Levels.....	2.13-17
Table 2.13.F Alternative 1 Predicted Noise Levels (2040) (dBA L _{eq}).....	2.13-19
Table 2.13.G Alternative 3 Predicted Noise Levels (2040) (dBA L _{eq}).....	2.13-23
Table 2.13.H Predicted Future Interior Noise Levels (dBA).....	2.13-29
Table 2.13.I Alternative 6 Predicted Traffic Noise Levels (2040) (dBA L _{eq}).....	2.13-31
Table 2.13.J Modified Alternative 7 (Preferred Alternative) Predicted Traffic Noise Levels (2040) (dBA L _{eq}).....	2.13-38
Table 2.13.K Feasible and Reasonable Sound Barriers.....	2.13-73
Table 2.15.A Potential USACE Jurisdictional Area.....	2.15-12
Table 2.15.B Potential CDFW Jurisdictional Area.....	2.15-12
Table 2.15.C Temporary Impacts to Potential USACE Jurisdictional Areas.....	2.15-15
Table 2.15.D Temporary Impacts to Potential CDFW Jurisdictional Areas.....	2.15-15
Table 2.15.E Permanent Impacts to Potential USACE Jurisdictional Areas.....	2.15-17
Table 2.15.F Permanent Impacts to Potential CDFW Jurisdictional Areas.....	2.15-18
Table 2.18.A Plant and Animal Species Observed.....	2.18-4
Table 2.19.A Invasive Plant Species in the Biological Study Area.....	2.19-2
Table 2.20.A Change in Regional CO ₂ Emissions (MT/year).....	2.20-8
Table 2.20.B Maximum Project Construction Greenhouse Gas Emissions.....	2.20-8
Table 2.20.C Model Year 2015 Required Miles Per Gallon (mpg) by Alternative.....	2.20-10
Table 2.20.D Climate Change Strategies.....	2.20-17
Table 2.21.A Planned Projects.....	2.21-5
Table 3.1 Native American Consultation.....	3-3
Table 3.2 Comment Letters Received During Public Comment Period.....	3-34
Table 3.3 Response to Public Review Comments on the Draft IS/EA.....	3-35

This page intentionally left blank