

TABLE OF CONTENTS

Topic	Page
CHAPTER 1. EXECUTIVE SUMMARY	1-1
1.1 BACKGROUND.....	1-1
1.2 STUDY AREA REFINEMENTS.....	1-1
1.3 PROJECT OBJECTIVES.....	1-2
1.4 PROJECT ALTERNATIVES DISCUSSION.....	1-3
1.5 ENVIRONMENTAL PROCESS.....	1-3
1.6 SUMMARY OF IMPACTS AND MITIGATION BY REFINEMENT.....	1-4
1.7 ISSUES TO BE RESOLVED.....	1-14
1.8 AREAS OF CONTROVERSY.....	1-14
1.9 ENVIRONMENTALLY SUPERIOR ALTERNATIVE.....	1-14
1.9.1 M&O Facility.....	1-15
1.9.2 Other Project Refinements.....	1-15
1.10 PERMITS AND APPROVALS.....	1-16
CHAPTER 2. INTRODUCTION	2-1
2.1 PURPOSE OF THE SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT (EIR).....	2-1
2.1.1 Changes since the 2007 Final EIR.....	2-1
2.1.2 Statutory Requirements for a SEIR.....	2-2
2.1.3 Related Environmental Documents.....	2-3
2.2 THE CEQA ENVIRONMENTAL REVIEW PROCESS.....	2-3
2.3 SEIR ORGANIZATION.....	2-4
2.4 TECHNICAL STUDIES AND REPORTS USED IN THE SEIR.....	2-5
CHAPTER 3. PROJECT DESCRIPTION	3-1
3.1 INTRODUCTION.....	3-1
3.2 PROJECT OBJECTIVES.....	3-2
3.3 REGIONAL PROJECT LOCATION AND SETTING.....	3-2
3.4 PROJECT REFINEMENTS AND CONSTRUCTION ACTIVITY ANALYZED IN THE SEIR.....	3-5
3.4.1 Project Refinements.....	3-5
3.4.2 Construction Activity and Schedule.....	3-36
3.5 RESPONSIBLE AND TRUSTEE AGENCIES.....	3-39



TABLE OF CONTENTS

Topic		Page
CHAPTER 4. ENVIRONMENTAL EVALUATION		4.1
4.1	AESTHETICS.....	4.1
4.1.1	Methodology and Definitions.....	4.1-1
4.1.2	Regulatory Framework	4.1-4
4.1.3	Existing Conditions.....	4.1-4
4.1.4	Environmental Impacts	4.1-12
4.1.5	Mitigation Measures	4.1-17
4.1.6	Impact Results with Mitigation.....	4.1-18
4.2	LAND USE.....	4.2-1
4.2.1	Methodology and Definitions.....	4.2-1
4.2.2	Regulatory Framework	4.2-1
4.2.3	Existing Conditions.....	4.2-12
4.2.4	Environmental Impacts	4.2-14
4.2.5	Mitigation Measures	4.2-15
4.2.6	Impact Results with Mitigation.....	4.2-15
4.3	POPULATION AND HOUSING	4.3-1
4.3.1	Methodology and Definitions.....	4.3-1
4.3.2	Regulatory Framework	4.3-1
4.3.3	Existing Conditions.....	4.3-1
4.3.4	Environmental Impacts	4.3-3
4.3.5	Mitigation Measures	4.3-4
4.3.6	Impact Results with Mitigation.....	4.3-4
4.4	TRANSPORTATION AND TRAFFIC	4.4-1
4.4.1	Methodology and Definition	4.4-1
4.4.2	Regulatory Framework	4.4-5
4.4.3	Existing Condition	4.4-6
4.4.4	Environmental Impacts	4.4-7
4.4.5	Mitigation Measures	4.4-27
4.4.6	Impact Results with Mitigation.....	4.4-27
4.5	CULTURAL RESOURCES.....	4.5-1
4.5.1	Methodology and Definitions.....	4.5-1
4.5.2	Regulatory Framework	4.5-3
4.5.3	Existing Conditions.....	4.5-3
4.5.4	Environmental Impacts	4.5-7
4.5.5	Mitigation Measure.....	4.5-10
4.5.6	Impact Results with Mitigation.....	4.5-11
4.6	HAZARDS AND HAZARDOUS MATERIALS	4.6-1
4.6.1	Methodology and Definitions.....	4.6-1



TABLE OF CONTENTS

Topic	Page
4.6.2	Regulatory Framework 4.6-1
4.6.3	Existing Conditions..... 4.6-1
4.6.4	Environmental Impacts 4.6-7
4.6.5	Mitigation Measures 4.6-10
4.6.6	Impact Results with Mitigation..... 4.6-11
4.7	PUBLIC SERVICES AND FACILITIES 4.7-1
4.7.1	Methodology and Definitions..... 4.7-1
4.7.2	Regulatory Compliance..... 4.7-1
4.7.3	Existing Conditions..... 4.7-1
4.7.4	Environmental Impacts 4.7-5
4.7.5	Mitigation Measures 4.7-7
4.7.6	Impact Results with Mitigation..... 4.7-7
4.8	UTILITIES/SERVICE SYSTEMS 4.8-1
4.8.1	Methodology and Definitions..... 4.8-1
4.8.2	Regulatory Framework 4.8-1
4.8.3	Existing Conditions..... 4.8-1
4.8.4	Environmental Impact..... 4.8-3
4.8.5	Mitigation Measures 4.8-7
4.8.6	Impact Results with Mitigation..... 4.8-7
4.9	AIR QUALITY AND GREENHOUSE GAS EMISSIONS 4.9-1
4.9.1	Methodology and Definitions..... 4.9-1
4.9.2	Regulatory Framework 4.9-2
4.9.3	Existing Conditions..... 4.9-16
4.9.4	Environmental Impacts 4.9-17
4.9.5	Mitigation Measures 4.9-33
4.9.6	Impact Results with Mitigation..... 4.9-34
4.10	GEOLOGY AND SOILS..... 4.10-1
4.10.1	Methodology and Definitions..... 4.10-1
4.10.2	Regulatory Framework 4.10-3
4.10.3	Existing Conditions..... 4.10-3
4.10.4	Environmental Impacts 4.10-13
4.10.5	Mitigation Measures 4.10-15
4.10.6	Impact Results with Mitigation..... 4.10-16
4.11	HYDROLOGY AND WATER QUALITY 4.11-1
4.11.1	Methodology and Definitions..... 4.11-1
4.11.2	Regulatory Framework 4.11-1
4.11.3	Existing Conditions..... 4.11-4
4.11.4	Environmental Impact..... 4.11-11
4.11.5	Mitigation Measures 4.11-14
4.11.6	Impact Results with Mitigation..... 4.11-14



TABLE OF CONTENTS

Topic	Page
4.12	NOISE AND VIBRATION..... 4.12-1
4.12.1	Methodology and Definitions..... 4.12-1
4.12.2	Regulatory Framework 4.12-5
4.12.3	Existing Conditions..... 4.12-10
4.12.4	Environmental Impacts 4.12-17
4.12.5	Mitigation Measures 4.12-28
4.12.6	Impact Results with Mitigation..... 4.12-30
4.13	RECREATION FACILITIES AND PARKS 4.13-1
4.13.1	Methodology and Definitions..... 4.13-1
4.13.2	Regulatory Framework 4.13-1
4.13.3	Existing Conditions..... 4.13-1
4.13.4	Environmental Impacts 4.13-1
4.13.5	Mitigation Measures 4.13-4
4.13.6	Impact Results with Mitigation..... 4.13-4
4.14	BIOLOGY 4.14-1
4.14.1	Methodology and Definitions..... 4.14-1
4.14.2	Regulatory Framework 4.14-1
4.14.3	Existing Conditions..... 4.14-1
4.14.4	Environmental Impacts 4.14-6
4.14.5	Mitigation Measures 4.14-9
4.14.6	Impact Results with Mitigation..... 4.14-9
CHAPTER 5. ALTERNATIVES 5-1	
5.1	INTRODUCTION 5-1
5.1.1	Project Objectives 5-1
5.1.2	Impacts of the Proposed Project 5-2
5.2	ALTERNATIVES TO THE PROPOSED PROJECT 5-2
5.2.1	Alternatives Considered But Not Evaluated in Detail..... 5-2
5.2.2	Alternatives Considered in Detail 5-3
5.2.3	Environmental Impacts and Mitigation Measures..... 5-9
5.3	CONSTRUCTION SCENARIOS..... 5-17
5.3.1	No-Build Alternative..... 5-17
5.3.2	Build Alternatives 5-17
5.4	ENVIRONMENTALLY SUPERIOR ALTERNATIVE..... 5-18
CHAPTER 6. OTHER IMPACT CONSIDERATIONS 6-1	
6.1	DETERMINING SIGNIFICANCE UNDER THE CALIFORNIA ENVIRONMENTAL QUALITY ACT 6-1



TABLE OF CONTENTS

Topic	Page
6.2 CUMULATIVE IMPACTS	6-1
6.2.1 Cumulative Impacts	6-2
6.3 DISCUSSION OF SIGNIFICANT IMPACTS	6-5
6.3.1 Less than Significant Effects of the Proposed Project	6-5
6.3.2 Significant Environmental Effects of the Proposed Project.....	6-5
6.3.3 Unavoidable Significant Environmental Effects	6-6
CHAPTER 7. LIST OF PREPARERS.....	7-1
7.1 LIST OF PREPARERS	7-1
7.1.1 Los Angeles to Pasadena Metro Blue Line Construction Authority/Metro Gold Line Foothill Extension Construction Authority	7-1
7.1.2 Jacobs	7-1
7.1.3 KOA.....	7-2
7.1.4 CRM TECH	7-2
7.1.5 Earth Systems.....	7-2
7.1.6 Mestre Greve Associates, Division of Landrum & Brown	7-2
CHAPTER 8. BIBLIOGRAPHY AND OTHER REFERENCES	8-1
VOLUME 2. APPENDIX	
2.A SCOPING MEETING SUMMARY REPORT	
2.B TERMINOLOGY FOR FHWA VISUAL ASSESSMENT METHODS	
2.C HISTORICAL/ARCHAEOLOGICAL RESOURCES SURVEY REPORT	
2.D MITIGATIVE RECORDATION OF HISTORICAL RESOURCE	
2.E AIR QUALITY ASSESSMENT	
2.F METRO GOLD LINE FOOTHILL EXTENSION CONSTRUCTION AUTHORITY TREE REMOVAL STATEMENT OF POLICY AND REPLACEMENT GUIDELINES	
2.G TRAFFIC	
VOLUME 3. RESPONSES AND COMMENTS	
3.1 INTRODUCTION	i
3.2 COMMENTS AND RESPONSES TO COMMENTS.....	i
PUBLIC CIRCULATION COMMENTS AND RESPONSES	1
PUBLIC HEARING COMMENTS AND RESPONSES	116



LIST OF FIGURES

Topic	Page
Figure 3-1: Project Location.....	3-4
Figure 3-2: M&O Facility in Monrovia (Option A).....	3-6
Figure 3-3: M&O Facility in Monrovia (Option B).....	3-8
Figure 3-4: Mountain Avenue Realignment.....	3-18
Figure 3-5: Monrovia LRT Station Parking Structure.....	3-21
Figure 3-6: Irwindale LRT Station Parking Lot.....	3-25
Figure 3-7: Irwindale LRT Station Parking Structure.....	3-27
Figure 3-8: North Colorado Boulevard Bridge Replacement.....	3-31
Figure 3-9: San Gabriel River Bridge Replacement.....	3-34
Figure 4.1-1: M&O Facility in Monrovia Site - View 1.....	4.1-6
Figure 4.1-2: M&O Facility in Monrovia Site - View 2.....	4.1-6
Figure 4.1-3: Mountain Avenue Realignment Site.....	4.1-7
Figure 4.1-4: Monrovia LRT Station Parking Structure Site.....	4.1-8
Figure 4.1-5: Irwindale LRT Station Parking - View 1.....	4.1-9
Figure 4.1-6: Irwindale LRT Station Parking - View 2.....	4.1-9
Figure 4.1-7: N. Colorado Boulevard Bridge Replacement View 1.....	4.1-10
Figure 4.1-8: N. Colorado Boulevard Bridge Replacement View 2.....	4.1-10
Figure 4.1-9: San Gabriel River Bridge Replacement Site View.....	4.1-11
Figure 4.2-1: Arcadia Draft General Plan Land Use Map (2010).....	4.2-2
Figure 4.2-2: City of Monrovia General Plan Land Use Map (2008).....	4.2-5
Figure 4.2-3: City of Duarte General Plan Land Use Map (2007).....	4.2-7
Figure 4.2-4: City of Irwindale General Plan Land Use Map (2008).....	4.2-9
Figure 4.2-5: SCAG Regional Transportation Plan Land Use (2008).....	4.2-11
Figure 4.4-1: Study Intersection Approach Lane and Control Configurations.....	4.4-9
Figure 4.4-2: Future (2012) No-Project AM Peak-Hour Turn Volumes.....	4.4-10
Figure 4.4-3: Future (2012) No-Project PM Peak-Hour Turn Volumes.....	4.4-11
Figure 4.4-4: Future (2012) No-Project Average Daily Traffic Volumes.....	4.4-12
Figure 4.4-5: Future (2012) with-Project AM Peak-Hour Turn Volumes.....	4.4-13
Figure 4.4-6: Future (2012) with-Project PM Peak-Hour Turn Volumes.....	4.4-14
Figure 4.4-7: Future (2012) with-Project Average Daily Traffic Volumes.....	4.4-15
Figure 4.4-8: Future (2014) Mountain Avenue & Duarte Road AM Peak-Hour Turn Volumes.....	4.4-20
Figure 4.4-9: Future (2014) Mountain Avenue & Duarte Road PM Peak-Hour Turn Volumes.....	4.4-21
Figure 4.4-10: Future (2025) Mountain Avenue & Duarte Road AM Peak-Hour Turn Volumes.....	4.4-22
Figure 4.4-11: Future (2025) Mountain Avenue & Duarte Road PM Peak-Hour Turn Volumes.....	4.4-23
Figure 4.4-12: Mountain Avenue & Duarte Geometry.....	4.4-24
Figure 4.10-1: Regional Geologic Map.....	4.10-4
Figure 4.10-2: Site Location Map.....	4.10-5



LIST OF FIGURES

Topic	Page
Figure 4.10-3: Special Studies Zone Map	4.10-10
Figure 4.10-4 Seismic Hazard Zone Map.....	4.10-12
Figure 4.11-1: Monrovia Project Areas.....	4.11-5
Figure 4.11-2: Irwindale Project Areas	4.11-6
Figure 4.11-3: Arcadia Project Area	4.11-7
Figure 4.12-1: Examples of Typical Outdoor Noise Exposure	4.12-3
Figure 4.12-2: Typical Ground-Borne Vibration Levels and Criteria	4.12-3
Figure 4.12-3: Response to Transit-Induced Residential Vibration	4.12-4
Figure 4.12-4: Noise Measurement Locations at the M&O Facility in Monrovia	4.12-13
Figure 4.12-5: Noise Measurement Locations at Mountain Avenue.....	4.12-15
Figure 4.12-6: M&O Facility in Monrovia Noise Sensitive Receivers	4.12-22
Figure 4.12-7: Mountain Avenue Realignment Noise Sensitive Receivers.....	4.12-25
Figure 5-1: M&O Facility in Irwindale (Alternative 2).....	5-5



LIST OF TABLES

Topic	Page
Table 1-1: Summary of Impacts and Mitigation by Refinement.....	1-5
Table 1-2: Permitting Requirements	1-16
Table 3-1: Permitting Requirements	3-39
Table 4.3-1: Local and Regional Population Change.....	4.3-1
Table 4.3-2: Change in Employment	4.3-2
Table 4.3-3: Local and Regional Housing Occupancy, Tenure, and Size.....	4.3-2
Table 4.4-1: Planned Area Projects	4.4-3
Table 4.4-2: Project Trip Generation.....	4.4-3
Table 4.4-3: City of Monrovia Traffic Impact Standards.....	4.4-5
Table 4.4-4: Year 2012 Conditions with Project LOS Summary.....	4.4-8
Table 4.4-5: Year 2012 Conditions with Project LOS Summary using Circular 212 Method for Intersections on City of Duarte Border	4.4-16
Table 4.4-6: Year 2012 Conditions with Project LOS Summary at Intersection #4 with Completion of Freeway Construction.....	4.4-16
Table 4.4-7: Year 2012 Conditions with Project LOS Summary for Study Roadway Segments: Average Daily Volumes	4.4-17
Table 4.4-8: Year 2012 Conditions with Project LOS Summary for Study Roadway Segments: AM Peak Hour Volumes.....	4.4-17
Table 4.4-9: Year 2012 Conditions with Project LOS Summary for Study Roadway Segments: PM Peak Hour Volumes.....	4.4-17
Table 4.4-10: Mountain Avenue Realignment Loss Time	4.4-18
Table 4.4-11: Mountain Avenue Realignment Level of Service Analysis Summary: Year 2014 Conditions	4.4-19
Table 4.4-12: Mountain Avenue/Duarte Road Intersection Level of Service Analysis Summary: Year 2025 Conditions.....	4.4-19
Table 4.5-1: Previously Recorded Sites within the Scope of the Records Search	4.5-2
Table 4.5-2: Relative Locations of Previously Recorded Sites to the Project Area.....	4.5-3
Table 4.6-1: Environmental Record Search Results	4.6-4
Table 4.9-1: Ambient Air Quality Standards.....	4.9-4
Table 4.9-2: Designations of Criteria Pollutants for the SCAB	4.9-5
Table 4.9-3: Air Quality Levels Measured at the Azusa Monitoring Station	4.9-7
Table 4.9-4: Global Warming Potentials (GWP)	4.9-10
Table 4.9-5: Top Ten CO ₂ Producing Nations Between 1990-2004 (Emissions in Million Metric Tons CO ₂ EQ).....	4.9-11
Table 4.9-6: SCAQMD Regional Pollutant Emission Thresholds of Significance	4.9-17
Table 4.9-7: Localized Significance Thresholds at the Nearest Receptors.....	4.9-19
Table 4.9-8: M&O Facility Construction Emissions	4.9-21
Table 4.9-9: Mountain Avenue Realignment Construction Emissions.....	4.9-22
Table 4.9-10: Monrovia Parking Structure Construction Emissions	4.9-22



LIST OF TABLES

Topic	Page
Table 4.9-11: Irwindale LRT Station Parking Lot/Structure Construction Emissions.....	4.9-23
Table 4.9-12: North Colorado Bridge Boulevard Construction Emissions	4.9-24
Table 4.9-13: San Gabriel River Bridge Replacement Construction Emissions.....	4.9-24
Table 4.9-14: On-site Emissions by Grading Activity.....	4.9-25
Table 4.9-15: Project Air Quality Emissions (Pounds per Day)	4.9-27
Table 4.9-16: Comparison of Project Air Quality Emissions with SCAB Emissions	4.9-27
Table 4.9-17: Project GHG Emissions (metric tons per year of CO ₂).....	4.9-31
Table 4.9-18: Project Trend GHG Emissions (metric tons per year of CO ₂)	4.9-32
Table 4.9-19: Comparison of Project Emissions and Global Emissions	4.9-32
Table 4.11-1: Beneficial Uses of Study Area Channels.....	4.11-8
Table 4.11-2: 303(d) Water Quality Limited Segments	4.11-9
Table 4.12-1: City of Monrovia Noise Standards.....	4.12-6
Table 4.12-2: City of Monrovia Acceptable Noise Increases	4.12-6
Table 4.12-3: City of Irwindale Ambient Base Noise Levels.....	4.12-7
Table 4.12-4: Interior/Exterior Noise Standards.....	4.12-8
Table 4.12-5: City of Arcadia Ambient Baseline Noise Levels	4.12-9
Table 4.12-6: City of Duarte Ambient Baseline Noise Levels.....	4.12-9
Table 4.12-7: Ground Borne and Noise Impact Criteria.....	4.12-10
Table 4.12-8: M&O Facility in Monrovia 24-hour Noise Measurements	4.12-14
Table 4.12-9: M&O Facility in Monrovia 24-hour Noise Measurements	4.12-16
Table 4.12-10: FTA Predicted Noise Levels for Receivers Adjacent to California Avenue.....	4.12-21
Table 4.12-11: TNM Predicted Noise Levels for Receivers along Duarte Road	4.12-21
Table 4.12-12: FTA Predicted Noise Levels for Receivers along Mountain Avenue.....	4.12-24
Table 4.12-13: TNM Predicted Noise Levels for Receivers along Mountain Avenue	4.12-26
Table 4.12-14: Construction Equipment Noise Emission Levels	4.12-27
Table 4.13-1: Public Parks within 0.25 mile of the Proposed Project.....	4.13-1
Table 4.14-1: Sensitive Biological Resources Found at Project Refinement Sites	4.14-1
Table 4.14-2: Sensitive Plant Species with Potential to Occur within the Study Area	4.14-3
Table 4.14-3: Sensitive Wildlife Species with Potential to Occur within the Study Area.....	4.14-5
Table 4.14-4: Potential Impacts to Sensitive Biological Resources	4.14-6



