VOLUME 1 DRAFT FINAL EIR: TABLE OF CONTENTS

Page No.

LIST OF ACRONYMS ACR-1

ORGANIZATION OF FINAL EIR O-1

PREFACE TO REIR I-1

EXECUTIVE SUMMARY S-1

1.0 PROJECT DESCRIPTION AND ENVIRONMENTAL SETTING 1-1

1.1 Project Description and Location 1-1
1.1.1 Precise Location/Boundary 1-1
1.1.2 Project's Component Parts 1-1
1.1.3 Technical, Economic, and Environmental Characteristics 1-19
1.2 Project Objectives 1-27
1.3 Intended Uses of the EIR 1-28
1.3.1 Matrix of Project Approvals/Permits 1-29
1.3.2 List of Related Environmental Review and Consultation Requirements 1-30
1.4 Environmental Setting 1-30
1.4.1 Regional Context 1-30
1.4.2 On-Site Environment 1-32
1.5 Inconsistency of Project with Applicable Regional and General Plans 1-34
1.6 List of Past, Present, and Reasonably Anticipated Future Projects in the Project Area 1-34
1.7 Growth-Inducing Effects 1-35

2.0 SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED 2.1-1

2.1 Air Quality 2.1-1
2.1.1 Discussion of Existing Conditions Related to Air Quality 2.1-1
2.1.2 Guidelines for the Determination of Significance 2.1-12
2.1.3 Analysis of Project Effects and Determination of Significance 2.1-13
2.1.4 Cumulative Impact Analysis 2.1-33
2.1.5 Growth Inducing Impact 2.1-38
2.1.6 Mitigation Measures 2.1-39
2.1.7 Conclusion 2.1-43

Chapters **Page No.**

2.2 Transportation/Traffic 2.2-1
2.2.1 Discussion of Existing Conditions Relating to Transportation and Traffic 2.2-1
2.2.2 Guidelines for the Determination of Significance 2.2-8
2.2.3 Analysis of Project Effects and Determination of Significance 2.2-10
2.2.4 Cumulative Impact Analysis 2.2-14
2.2.5 Year 2030 Analysis 2.2-18
2.2.6 Other Impacts 2.2-22
2.2.7 Growth Inducing Impact 2.2-28
2.2.8 Mitigation Measures 2.2-30
2.2.9 Conclusion 2.2-42
2.3 Mineral Resources 2.3-1
2.3.1 Discussion of Existing Conditions Relating to Mineral Resources 2.3-1
2.3.2 Guidelines for the Determination of Significance 2.3-3
2.3.3 Analysis of Project Effects and Determination of Significance 2.3-4
2.3.4 Cumulative Impact Analysis 2.3-7
2.3.5 Growth-Inducing Impact 2.3-8
2.3.6 Mitigation Measures 2.3-8
2.3.7 Conclusion 2.3-10
2.4 Noise 2.4-1
2.4.1 Discussion of Existing Conditions Relating to Noise 2.4-4
2.4.2 Guidelines for the Determination of Significance 2.4-7
2.4.3 Analysis of Project Effects and Determination of Significance 2.4-8
2.4.4 Cumulative Impact Analysis 2.4-25
2.4.5 Growth-Inducing Impact 2.4-28
2.4.6 Mitigation Measures 2.4-30
2.4.7 Conclusion 2.4-40
2.5 Cultural Resources 2.5-1
2.5.1 Discussion of Existing Conditions Relating to Cultural Resources 2.5-1
2.5.2 Guidelines for the Determination of Significance 2.5-3
2.5.3 Analysis of Project Effects and Determination of Significance 2.5-4
2.5.4 Cumulative Impact Analysis 2.5-8
2.5.5 Growth-Inducing Impact 2.5-10
2.5.6 Mitigation Measures 2.5-11
2.5.7 Conclusion 2.5-17
2.6 Significant Irreversible Environmental Changes Resultant From Project Implementation 2.6-1

Chapters **Page No.**

3.0 SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT WHICH CAN BE MITIGATED 3.1-1

3.1 Aesthetics 3.1-1
3.1.1 Discussion of Existing Conditions Relating to Aesthetics 3.1-1
3.1.2 Guidelines for the Determination of Significance 3.1-9
3.1.3 Analysis of Project Effects and Determination of Significance 3.1-10
3.1.4 Cumulative Impact Analysis 3.1-25
3.1.5 Growth-Inducing Impact 3.1-27
3.1.6 Mitigation Measures 3.1-27
3.1.7 Conclusion 3.1-31

3.2 Biological Resources 3.2-1
3.2.1 Discussion of Existing Conditions Relating to Biological Resources .. 3.2-1
3.2.2 Guidelines for the Determination of Significance 3.2-18
3.2.3 Analysis of Project Effects and Determination of Significance 3.2-23
3.2.4 Cumulative Impact Analysis 3.2-46
3.2.5 Growth-Inducing Impact 3.2-48
3.2.6 Mitigation Measures 3.2-51
3.2.7 Conclusion 3.2-63

3.3 Hazards and Hazardous Materials 3.3-1
3.3.1 Wildfire Hazards 3.3-1
3.3.2 Hazardous Materials and Hazardous Material Sites 3.3-16
3.3.3 Conclusion 3.3-30

3.4 Hydrology and Water Quality 3.4-1
3.4.1 Discussion of Existing Conditions Relating to Hydrology and Water Quality 3.4-1
3.4.2 Guidelines for the Determination of Significance 3.4-4
3.4.3 Analysis of Project Effects and Determination of Significance 3.4-5
3.4.4 Cumulative Impact Analysis 3.4-10
3.4.5 Growth-Inducing Impact 3.4-12
3.4.6 Mitigation Measures 3.4-12
3.4.7 Conclusion 3.4-14

3.5 Land Use and Planning 3.5-1
3.5.1 Discussion of Existing Conditions Relating to Land Use and Planning 3.5-1
3.5.2 Guidelines for the Determination of Significance 3.5-3
3.5.3 Analysis of Project Effects and Determination of Significance 3.5-4
3.5.4 Cumulative Impact Analysis 3.5-17
3.5.5 Growth-Inducing Impact 3.5-18

Chapters **Page No.**

3.5.6 Mitigation Measures 3.5-19
3.5.7 Conclusion 3.5-21

3.6 Geology and Soils 3.6-1
3.6.1 Discussion of Existing Conditions Relating to Geology and Soils 3.6-1
3.6.2 Guidelines for the Determination of Significance 3.6-4
3.6.3 Analysis of Project Effects and Determination of Significance 3.6-6
3.6.4 Cumulative Impact Analysis 3.6-8
3.6.5 Growth-Inducing Impact 3.6-8
3.6.6 Mitigation Measures 3.6-9
3.6.7 Conclusion 3.6-10

4.0 ENVIRONMENTAL EFFECTS FOUND NOT TO BE SIGNIFICANT 4-1

4.1 Effects Found Not Significant as Part of the EIR Process 4-1
4.1.1 Agriculture Resources 4-1
4.1.2 Utilities and Public Services 4-12
4.1.3 Recreation 4-55

4.2 Effects Found Not Significant During Initial Study 4-60

5.0 ALTERNATIVES TO THE PROPOSED PROJECT 5-1

5.1 Rationale For Alternatives Selection 5-1

5.2 Analysis of Alternative A—No Project/No Development Alternative 5-7
5.2.1 Alternative A—No Project/No Development Alternative Description and Setting 5-7
5.2.2 Comparison of the Effects of Alternative A—No Project/No Development Alternative to the Proposed Project 5-7
5.2.3 Rationale for Selection of Proposed Project over Alternative A—No Project/No Development Alternative 5-9

5.3 Analysis of Alternative B—No Project/Existing General Plan Alternative 5-9
5.3.1 Alternative B—No Project/Existing General Plan Alternative Description and Setting 5-9
5.3.2 Comparison of the Effects of Alternative B—No Project/Existing General Plan Alternative to the Proposed Project 5-10
5.3.3 Rationale for Selection of Proposed Project over Alternative B—No Project/Existing General Plan Alternative 5-14

5.4 Analysis of Alternative C—785-Unit Reduced Footprint Alternative 5-15
5.4.1 Alternative C—785-Unit Reduced Footprint Alternative Description and Setting 5-15

Chapters **Page No.**

5.4.2 Comparison of the Effects of Alternative C—785-Unit Reduced Footprint Alternative to the Proposed Project 5-16
5.4.3 Rationale for Selection of Proposed Project over Alternative C—785-Unit Reduced Footprint..... 5-20
5.5 Analysis of Alternative D—1,300-Unit Reduced Footprint Alternative 5-20
5.5.1 Alternative D—1,300-Unit Reduced Footprint Alternative Description and Setting..... 5-20
5.5.2 Comparison of the Effect of Alternative D—1,300-Unit Reduced Footprint Alternative to the Proposed Project 5-21
5.5.3 Rationale for Selection of Proposed Project over Alternative D—1300-Unit Reduced Footprint Alternative 5-25
5.6 Analysis of Alternative E—GP 2020 Consistent Alternative..... 5-26
5.6.1 Alternative E—GP 2020 Consistent Alternative Description and Setting 5-26
5.6.2 Comparison of the Effects of Alternative E—GP 2020 Consistent Alternative to the Proposed Project 5-26
5.6.3 Rationale for Selection of Proposed Project over Alternative E—GP 2020 Consistent Alternative 5-29
5.7 Analysis of Alternative F—Off-Site Roadway Improvements along Deer Springs Road 5-30
5.7.1 Alternative F—Off-Site Roadway Improvements along Deer Springs Road 5-30
5.7.2 Comparison of the Effects of Alternative F—Off-Site Roadway Improvements for Deer Springs Road to the Proposed Project 5-31
5.7.3 Rationale for Selection of Proposed Project over Alternative F—Off-Site Roadway Improvements along Deer Springs Road 5-33
5.8 Analysis of Alternative G—Deer Springs Road Alignment to Avoid Residence at 1088 Deer Springs Road 5-34
5.8.1 Alternative G— Deer Springs Road Alignment to Avoid Residence at 1088 Deer Springs Road 5-34
5.8.2 Comparison of the Effects of Alternative G—Deer Springs Road Alignment to Avoid Residence at 1088 Deer Springs Road..... 5-35
5.8.3 Rationale for Selection of Alternative G over Proposed Project— Deer Springs Road Alignment to Avoid Residence at 1088 Deer Springs Road..... 5-40
5.9 Environmentally Superior Alternative 5-40

Chapters **Page No.**

6.0 LIST OF REFERENCES 6-1

7.0 LIST OF EIR PREPARERS AND PERSONS AND ORGANIZATIONS CONTACTED 7-1

8.0 LIST OF MITIGATION MEASURES AND ENVIRONMENTAL DESIGN CONSIDERATIONS 8-1

9.0 DEER SPRINGS ROAD RECLASSIFICATION GENERAL PLAN AMENDMENT – CIRCULATION ELEMENT 9-1

9.1 Deer Springs Road General Plan Amendment/Circulation Element Purpose 9-1
9.1.1 General Plan Amendment/Circulation Element Description and Location 9-2
9.1.2 Growth Inducement 9-5

9.2 Significant Environmental Effects That Cannot Be Avoided If The Circulation Element Amendment Is Implemented 9-17
9.2.1 Air Quality 9-17
9.2.2 Noise 9-29
9.2.3 Cultural Resources 9-37
9.2.4 Transportation/Circulation 9-44

9.3 Significant Environmental Effects That Can Be Mitigated 9-61
9.3.1 Biological Resources 9-61
9.3.2 Hydrology and Water Quality 9-81
9.3.3 Aesthetics 9-90

9.4 Environmental Effects Found Not To Be Significant 9-105
9.4.1 Mineral Resources 9-105
9.4.2 Hazards and Hazardous Materials 9-106
9.4.3 Land Use and Planning 9107
9.4.4 Geology and Soils 9-110
9.4.5 Agricultural Resources 9-111
9.4.6 Utilities and Public Services 9-113
9.4.7 Recreation 9-114

9.5 Other CEQA Requirements 9-119
9.5.1 Significant Irreversible Environmental Changes Which Would be Caused by the Circulation Element amendment Should it be Implemented. 9-119
9.5.2 Alternatives. 9-119

TECHNICAL APPENDICES

Appendix A	Notice of Preparation of an Environmental Impact Report
Appendix B	Notice of Preparation Comments
Appendix C	Specific Plan/General Plan Amendment Report
Appendix D	Air Quality Technical Report
Appendix E	Visual Impact Analysis
Appendix F	Resource Protection Ordinance Study
Appendix G1	Biological Technical Report
Appendix G2	Biological Resources Technical Memorandum
Appendix H1	Cultural Resources Report
Appendix H2	Cultural Resource Letter Report for the Revised Deer Springs Road Alignment
Appendix I	Phase I Environmental Site Assessment Report
Appendix J1	Geotechnical Report
Appendix J2	Addendum Geotechnical Evaluation of Rockfall Potential Memorandum
Appendix K	Fire Protection Plan for Deer Springs and San Marcos Fire Protection Districts
Appendix L	Noise Impact Analysis
Appendix M	Traffic Impact Analysis
Appendix N	Water Supply Assessment
Appendix O1	Stormwater Management Plan
Appendix O2	Stormwater Management Plan: Deer Springs Road Widening Between Interstate 15 and Twin Oaks Valley Road
Appendix P1	Hydrology/Hydraulic Study
Appendix P2	Preliminary Drainage Study: Deer Springs Road Widening
Appendix Q	Mineral Resources Report
Appendix R	Cumulative Technical Report
Appendix S	Growth Inducement Technical Report
Appendix T	Resource Protection Plan
Appendix U	Will Serve Letters
Appendix V	Hardline Points of Agreement Letter
Appendix W	Land Evaluation Site Assessment
Appendix X	Uplands and Wetlands Revegetation Plan
Appendix Y	Greenhouse Gas Inventory

Appendix Title	DEIR Component (2007)	REIR Component (2009)	Other	Rationale
A. Notice of Preparation – September 30, 2004	**X**			This appendix was circulated with the August 2007 DEIR.
B. Notice of Preparation Comments	**X**			This appendix was circulated with the August 2007 DEIR.
C. Specific Plan/General Plan Amendment Report	X	X	**X**	Note: This report was revised and recirculated in March 2009 and supersedes Appendix C to the August 2007 DEIR. The report was updated for the FEIR.
D. Air Quality Technical Report	X	**X**		Note: This report was revised and recirculated in March 2009 and supersedes Appendix D to the August 2007 DEIR.
E. Visual Impact Analysis	X	**X**		Note: This report was revised and recirculated in March 2009 and supersedes Appendix E to the August 2007 DEIR.
F. Resource Protection Ordinance Study	X	**X**		Note: This report was revised and recirculated in March 2009 and supersedes Appendix F to the August 2007 Draft EIR.
G1. Biological Technical Report	**X**			Note: This report was circulated with the August 2007 DEIR. Updated information regarding some of the topics addressed in this report is included in the FEIR and Appendix G2.
G2. Biological Resources Technical Memorandum		**X**		Note: This memorandum supplements Appendix G to the August 2007 DEIR and was circulated with the REIR in March 2009.
H1. Cultural Resources Report	**X**			Note: This report was circulated with the August 2007 DEIR. Updated information regarding some of the topics addressed in this report is included in the FEIR.
H2. Cultural Resource Letter Report for the Revised Deer Springs Road Alignment		**X**		Note: This letter report supplements Appendix H to the August 2007 DEIR and was circulated with the REIR in March 2009.
I. Phase I Environmental Site Assessment Report	**X**			Note: This report was circulated with the August 2007 DEIR.
J1. Geotechnical report	**X**			Note: This report was circulated with the August 2007 DEIR.
J2. Addendum Geotechnical Evaluation of Rockfall Potential Memorandum		**X**		Note: This memorandum supplements Appendix J to the August 2007 DEIR and was circulated with the REIR in March 2009.

Appendix Title	DEIR Component (2007)	REIR Component (2009)	Other	Rationale
K. Fire Protection Plan for Deer Springs and San Marcos Fire Protection Districts	**X**			Note: This appendix was circulated with the August 2007 DEIR. Updated information regarding some of the topics addressed in this report is included in the FEIR.
L. Noise Impact Analysis	X	**X**		Note: This report was revised and recirculated in March 2009 and supersedes Appendix L to the August 2007 DEIR. Updated information regarding some of the topics addressed in this report is included in the FEIR.
M. Traffic Impact Analysis	X	**X**		Note: This report was revised and recirculated in March 2009 and supersedes Appendix M to the August 2007 DEIR.
N. Water Supply Assessment	**X**			Note: This report was circulated with the August 2007 DEIR.
O1. Stormwater Management Plan	**X**			Note: This report was circulated with the August 2007 DEIR.
O2. Stormwater Management Plan: Deer Springs Road Widening Between Interstate 15 and Twin Oaks Valley Road		**X**		Note: This report supplements Appendix O to the August 2007 DEIR and was circulated with the REIR in March 2009.
P1. Hydrology/Hydraulic Report	**X**			Note: This report was circulated with the August 2007 DEIR.
P2. Preliminary Drainage Study: Deer Springs Road Widening		**X**		Note: This report supplements Appendix P to the August 2007 DEIR and was circulated with the REIR in March 2009.
Q. Mineral Resource Report	X		**X**	Note: This report was circulated with the August 2007 DEIR and updated in November 2008. Updated information regarding some of the topics addressed in this report is included in the FEIR and SMARA process.
R. Cumulative Technical Report	X		**X**	Note: A Cumulative Technical Report was circulated with the August 2007 DEIR. Pertinent information from this report has been included in the FEIR. Appendix A to Appendix R has been provided, which includes a summary of cumulative projects (1 through 69) from the August 2007 DEIR. Appendix B to Appendix R provides a summary of cumulative projects (70 through 132).

Appendix Title	DEIR Component (2007)	REIR Component (2009)	Other	Rationale
S. Growth Inducement Technical Report	X		**X**	Note: This report was circulated with the August 2007 DEIR and updated in November 2008 to address comments received on the DEIR in relation to water and wastewater improvements. Updated information regarding some of the topics addressed in this report is included in the FEIR.
T. Resource Protection Plan	X		**X**	Note: This report was circulated as the Resource Management Plan with the August 2007 DEIR. After circulation of the DEIR, the title of this report was changed to "Resource Protection Plan" and appropriate changes were made to the text of the March 2009 REIR, although Appendix T was not recirculated.
U. Will Serve Letters	**X**			Note: This appendix was circulated with the August 2007 DEIR.
V. Hardline Points of Agreement	**X**			Note: This appendix was circulated with the August 2007 DEIR.
W. Land Evaluation Site Assessment	**X**			Note: This appendix was circulated with the August 2007 DEIR.
X. Wetlands and Uplands Conceptual Revegetation Plans	X		**X**	Note: This appendix was circulated with the August 2007 DEIR and updated in May 2007 to reflect changes to acreages per off-site improvements. This report was not recirculated. Impact acreages have been updated for the FEIR.
Y. Greenhouse Gas Inventory	**X**			Note: This report was circulated with the August 2007 DEIR.

Note: **Bold** indicates the version that has been included as part of the FEIR.

List of Tables **Page No.**

1.1-1 Generalized Land Use Summary 1-39
1.1-2 Land Use Summary 1-40
1.1-3 Landscape Plant Palette 1-41
1.1-4 Cumulative Project List 1-48
1.1-5 Cumulative Projects Since Public Review 1-55

2.1-1a Ambient Air Quality Standards 2.1-45
2.1-1b Summary of Health Effects of the Major Criteria Pollutants 2.1-46
2.1-1c Attainment Status of San Diego Air Basin 2.1-46
2.1-2 Screening-Level Criteria for Air Quality Impacts 2.1-47
2.1-3 Global Warming Potentials and Atmospheric Lifetimes 2.1-47
2.1-4 Total Incremental Operational Emissions, lbs/day - 2015 ..... 2.1-47
2.1-5a Maximum Daily Estimated Construction Emissions Grading Operations – All Phases 2.1-48
2.1-5b Maximum Daily Estimated Construction Emissions Underground Utilities and Street Improvements – All Phases 2.1-49
2.1-5c Maximum Daily Estimated Construction Emissions House Construction – All Phases 2.1-49
2.1-5d Maximum Daily Estimated Construction Emissions Commercial Building Construction 2.1-50
2.1-5e Maximum Daily Estimated Construction Emissions Recreational Facilities Construction 2.1-50
2.1-5f Maximum Construction Emissions 2.1-50
2.1-6 Total Operational Emissions 2015 ..... 2.1-51
2.1-7 Total Operational Emissions 2040 ..... 2.1-52
2.1-8 Current State Requirements for GHG Emissions Associated with Transportation 2.1-52
2.1-9 GHG Emissions – Construction Heavy Equipment 2.1-52
2.1-10 GHG Emissions – Construction Worker Estimates and Emission Calculations 2.1-53
2.1-11 Summary of Greenhouse Gas Emissions Inventory 2.1-54
2.1-12 Merriam Mountain Proposed Project Design Features to Reduce GHG Emissions 2.1-55
2.1-13 Greenhouse Gas Emissions at the End of Each Construction Phase (metric tons CO2e per year) 2.1-56

2.2-1 Existing Conditions Diagram 2.2-48
2.2-2 Study Area Intersections 2.2-50

Page No.

2.2-3 Existing Traffic AM/PM Peak Hour Intersection Volumes & ADT 2.2-51
2.2-4 Existing Conditions on Twin Oaks Valley Rd. & Deer Springs Rd. 2.2-52
2.2-5 Regional Distribution Residential Land Uses 2.2-53
2.2-6 Regional Distribution Commercial Land Uses 2.2-54
2.2-7 Project Traffic (Residential) AM/PM Peak Hours & ADT 2.2-55
2.2-8 Project Traffic (Commercial) AM/PM Peak Hours & ADT 2.2-56
2.2-9 Total Project Traffic Volumes AM/PM Peak Hours & ADT 2.2-59
2.2-10 Existing + Project Traffic Volumes AM/PM Peak Hours & ADT 2.2-60
2.2-11 Cumulative Projects Traffic Volumes AM/PM Peak Hours ADT 2.2-62
2.2-12 Existing + Project + Cumulative Projects Traffic Volumes AM/PM Peak Hours & ADT 2.2-64
2.2-13 Year 2030 with Existing General Plan Project Land Uses 2.2-67
2.2-14 Year 2030 with Proposed Project 2.2-69
2.2-15 Proposed Street Section of Merriam Mountains Parkway and Meadow Park Lane at Deer Springs Road 2.2-70

2.3-1 Project Consistency with Conservation Element General Plan Policies 2.3-11

2.4-1 Guidelines of Significance for Ground-Borne Vibration and Noise Effects[1]. 2.4-45
2.4-2 Sound Level Limits 2.4-46
2.4-3 Maximum Sound Level (Impulsive) Measured at Occupied Property 2.4-46
2.4-4 Maximum Sound Level (Impulsive) Measured at Occupied Property for Public Road Projects 2.4-47
2.4-5A Measured Hourly Average Sound Levels (dB) (Site 1A) 2.4-48
2.4-5B Measured Hourly Average Sound Levels (dB) (Site 1B) 2.4-49
2.4-6A Measured Noise Levels and Traffic Volumes 2.4-50
2.4-6B Measured Hourly Average Sound Levels (dB) (Site 8) 2.4-51
2.4-7 Future CNEL Noise Contours and Traffic Data 2.4-52
2.4-8A Off-Site Traffic Noise Level Increase 2.4-53
2.4-8B Existing and Future CNEL at Various Noise Receptor Locations Along Deer Springs Road and Twin Oaks Valley Road 2.4-54
2.4-9 Summary of On-Site Construction Phasing and Occupancy 2.4-56
2.4-10 Noise Barrier Mitigation Summary for Proposed Single-Family Homes 2.4-57
2.4-11 Existing and Future and Mitigated CNEL at Various Noise Receptor Locations Along Deer Springs Road 2.4-61
2.4-12 A Temporary Barrier Noise Attenuation at Deer Springs Mobile Home Park ... 2.4-62
2.4-12B Temporary Barrier Noise Attenuation at Sites 14, 15, 16, 19 and "Golden Door" 2.4-62
2.4-13 Summary of Impacts 2.4-63

Page No.

3.2-1 Vegetation Communities 3.2-67
3.2-2 RPO Wetlands and Other Jurisdictional Wetlands 3.2-67
3.2-3 Potentially Occurring Sensitive Animal Species 3.2-68
3.2-4 Potentially Occurring Sensitive Plant Species 3.2-69
3.2-5 Deer Springs Road 3.2-75
3.2-6 Merriam Existing Vegetation, Development Areas, Fuel Management Areas/ Other Open Space, Secondary Access Roads, and Biological Open Space ... 3.2-79
3.2-7 On-Site Encroachment into RPO Wetlands and Other Jurisdictional Waters 3.2-80
3.2-8 Comparison of Cumulative Vegetation Impacts from Assessment Area with Impacts from the Merriam Project 3.2-81
3.2-9 Impacted Vegetation and Mitigation Required 3.2-82
3.2-10 Merriam Biological Open Space Preserve Conveyance Plan (acres) 3.2-83

3.4-1 Major Watershed Pre-Development and Post-Development Areas and Runoff Rates 3.4-15

4.1-1 California LESA Model Scoring Thresholds 63
4.1-2 State Farmland Mapping and Monitoring Program Farmlands 63
4.1-3 Projected Student Generation 64
4.1-4 PLDO Park Land Requirements 67
4.1-5 Merriam Park Land Requirements 67

5.1-1 Comparison of Significant Unavoidable Impacts to Air Quality, Traffic, Mineral Resources, Noise, and Cultural Resources under the Proposed Project with Impacts of Alternatives for Those Environmental Categories 5-42

9.2.2-1 Guidelines of Significance for Ground-Borne Vibration and Noise Effects1 .. 9-36
9.2.4–1 Existing Segment Operations 9-49
9.2.4-2 Year 2030 ADT Comparison General Plan Amendment/Circulation Element . 9-51
9.3.1-1 Deer Springs Road – Vegetation Communities 9-80
9.4.5-1 Deer Springs Road – Agricultural Designations 9-113
9.4.5-2 Deer Springs Road – Potential Agricultural Impacts to Existing Uses 9-113

INTENTIONALLY LEFT BLANK

List of Figures **Page No.**

1.1-1 Regional Map 1-61
1.1-2 Vicinity Map 1-62
1.1-3 Proposed Generalized Land Use 1-63
1.1-4 Proposed Neighborhood Land Use Plan Index 1-64
1.1-5 Proposed Neighborhood Land Use Plan—Neighborhood 1 (N1) 1-65
1.1-6 Proposed Neighborhood Land Use Plan—Neighborhood 2 (N2) 1-66
1.1-7 Proposed Neighborhood Land Use Plan—Neighborhood 3 (N3) 1-67
1.1-8 Proposed Neighborhood Land Use Plan—Neighborhood 4 (N4) 1-68
1.1-9 Proposed Neighborhood Land Use Plan—Neighborhood 5 (N5) 1-69
1.1-10 Proposed Neighborhood Land Use Plan - Estate Lots 1-70
1.1-11 Proposed Specific Plan Land Use Plan 1-71
1.1-12A Conceptual Park Plan 1-72
1.1-12B Community Fields and Recreation Area 1-73
1.1-12C Meadow Park Field 1-74
1.1-12D One Acre Park (Typical) 1-75
1.1-12E Half Acre Park (Typical) 1-76
1.1-12F Pocket Park (Typical) 1-77
1.1-12G-1 Conceptual Trail Plan 1-78
1.1-12G-2 Regional Trails & On-Site Proposed Trails 1-79
1.1-12H Overlook Plan and Section 1-80
1.1-12I Trailhead Plan and Section 1-81
1.1-12J Trail Section A-A and B-B 1-82
1.1-12K Trail Section C-C 1-83
1.1-12L Equestrian Staging Area 1-84
1.1-13 Circulation Plan 1-85
1.1-14 Merriam Mountains Off-Site Intersection & Roadway Segment Improvements 1-86
1.1-15A Off-Site Deer Springs Road and Profile: Station 13+40 to Station 60+00 1-87
1.1-15B Off-Site Deer Springs Road Plan View: Station 60+00 to Station 137+00 1-88
1.1-15C Deer Springs Road Proposed Street Cross Sections 1-89
1.1-16A Aerial Views of Off-Site Intersection Improvements: Intersections 1–5 1-90
1.1-16B Aerial Views of Off-Site Intersection Improvements: Intersections 6–9 1-91
1.1-16C Aerial Views of Off-Site Intersection and Roadway Segment Improvements: Intersections 10–11 & Camino Mayor Roadway Segment 2 1-92
1.1-16D Deer Springs Road Interchange 1-93
1.1-16E Off-Site Twin Oaks Valley Road Widening: Station 139+00 to Station 168+33.36 1-94
1.1-17 Offsite Water & Sewer 1-95

Page No.

1.1-18 Vicinity Map for Captain's Associates 1-96
1.1-19 Project Development Phasing 1-97
1.1-20 Grading, Drilling and Blasting Phasing 1-98
1.1-21A Proposed Slope Exhibit 1-99
1.1-21B Proposed Slope Exhibit 1-101
1.1-22A Conceptual Landscape Plan 1-102
1.1-22B Fence and Wall Plan 1-103
1.1-23A Fuel Treatment Location Map 1-104
1.1-23B Fuel Treatment Typical Sections 1-105
1.1-24 Regional Categories 1-106
1.1-25 Sphere of Influence 1-107
1.1-26 Existing & Proposed Land Use Designation 1-108
1.1-27 Zoning Designations 1-109
1.1-28 Generalized Land Use Map 1-110
1.1-29 Existing & Proposed B Designator 1-111
1.1-30 Existing & Proposed D Designator 1-112
1.1-31 September 20, 2005 Wildlife Agencies Hardline Agreement 1-113
1.6-1 Cumulative Projects 1-114
1.6-2 Cumulative Projects with MSCP Vegetation 1-115

2.2-1 Existing Conditions Diagram 2.2-85
2.2-2 Study Area Intersections 2.2-86
2.2-3 Existing Traffic AM/PM Peak Hour Intersection Volumes & ADT 2.2-87
2.2-4 Existing Conditions on Twin Oaks Valley Rd. & Deer Springs Rd. 2.2-88
2.2-5 Regional Distribution Residential Land Uses 2.2-89
2.2-6 Regional Distribution Commercial Land Uses 2.2-90
2.2-7 Project Traffic (Residential) AM/PM Peak Hours & ADT 2.2-91
2.2-8 Project Traffic (Commercial) AM/PM Peak Hours & ADT 2.2-92
2.2-9 Total Project Traffic Volumes AM/PM Peak Hours & ADT 2.2-93
2.2-10 Existing + Project Traffic Volumes AM/PM Peak Hours & ADT 2.2-94
2.2-11 Cumulative Project Traffic Volumes AM/PM Peak Hours & ADT 2.2-95
2.2-12 Existing + Project + Cumulative Projects Traffic Volumes AM/PM Peak Hours & ADT 2.2-96
2.2-13 Year 2030 with Existing General Plan Project Land Uses 2.2-97
2.2-14 Year 2030 with Proposed Project 2.2-98
2.2-15 Proposed Street Section of Merriam Mountains Parkway and Meadow Park Lane at Deer Springs Road 2.2-99

Page No.

2.3-1 Highlighted Mineral Resources Zones 2.3-13
2.3-2 Regional Geologic Map 2.3-14
2.3-3 Property Overview Map 2.3-15
2.3-4 Mineral Resources & Proposed Land Uses 2.3-16

2.4-1 Noise Measurement Locations 2.4-65
2.4-2 Future 1st Floor 60 & 75 dB Noise Contours – Neighborhood 1 (N1) 2.4-66
2.4-3 Future 2nd & 3rd Floor 75 dB CNEL Noise Contours – Neighborhood 1 (N1) 2.4-67
2.4-4A Future 60 and 75 dB CNEL Noise Contours: From Merriam Mountains Parkway and Deer Springs Road – Neighborhood 1 (N1) 2.4-68
2.4-4B Future 60 dB CNEL Noise Contours: From Merriam Mountains Parkway and Deer Springs Road – Neighborhood 1 (N1) 2.4-69
2.4-5A Future 60 & 75 dB CNEL Noise Contours - Neighborhood 2 (N2) 2.4-70
2.4-5B Future 60 dB CNEL Noise Contours - Neighborhood 2 (N2) 2.4-71
2.4-6A Future 60 dB CNEL Noise Contours - Neighborhoods 3 & 4 (N3)(N4) 2.4-72
2.4-6B Future 60 dB CNEL Noise Contours - Neighborhoods 4 & 5 (N4)(N5) 2.4-73
2.4-7 Worse-Case 60 & 75 dB CNEL Noise Contours 2.4-74
2.4-8 Future 1st Floor75 dB CNEL Noise Contour at Estate Lots 2.4-75
2.4-9A Typical Construction-Equipment Noise Levels 2.4-76
2.4-9B R18507 Alternative Blasting Level Criteria 2.4-77
2.4-9C Blast Vibration Prediction Curves 2.4-78
2.4-9D Blast Air Overpressure Prediction Curves 2.4-79
2.4-10 Locations of Rock-Crushing Operations 2.4-80
2.4-11 Off-Site Residences Near Blasting Area 2.4-81
2.4-12A Off-Site Residences adjacent to Off-Site Water Line 2.4-82
2.4-12B Off-Site Water & Sewer Lines 2.4-83
2.4-13A Blast Vibration Prediction Curves 2.4-84
2.4-13B Blast Air Overpressure Prediction Curves 2.4-85
2.4-14A Noise Receptors, Preliminary Noise Barrier Heights & Locations 2.4-86
2.4-14B Noise Receptors, Preliminary Noise Barrier Heights & Locations 2.4-87
2.4-14C Noise Receptors, Preliminary Noise Barrier Heights & Locations 2.4-88
2.4-14D Noise Receptors, Preliminary Noise Barrier Heights & Locations 2.4-89
2.4-14E Noise Receptors, Preliminary Noise Barrier Heights & Locations 2.4-90
2.4-15A Existing Residences adjacent to Deer Springs Road Improvements 2.4-91
2.4-15B Future (Existing + Project + Cumulative Projects) 75 dB CNEL Noise Contours 2.4-92
2.4-15C Future (Existing + Project + Cumulative Projects) 75 dB CNEL Noise Contours 2.4-93

Page No.

2.4-16 Second- and Third-Floor Building Setback Distances – Neighborhood 1, Planning Area 2 ..... 2.4-94
2.4-17 Noise Barrier Heights & Locations – Neighborhood 2 (N2) 2.4-95
2.4-18A Noise Barrier Heights & Locations – Neighborhoods 3 & 4 (N3)(N4) 2.4-96
2.4-18B Noise Barrier Heights & Locations – Neighborhoods 4 & 5 (N4)(N5) 2.4-97
2.4-19 Noise Barrier Heights & Locations – Estate Lots 2.4-98
2.4-20A Preliminary Temporary Noise Barrier Height & Location 2.4-99
2.4-20B Preliminary Temporary Noise Barrier Heights & Locations 2.4-100
2.4-20C Preliminary Temporary Noise Barrier Heights & Locations 2.4-101
2.4-20D Preliminary Temporary Noise Barrier Heights & Locations 2.4-101

3.1-1 Visual Overview Looking North 3.1-33
3.1-2 Visual Overview Looking West 3.1-34
3.1-3 Visual Overview Looking South 3.1-35
3.1-4 Viewshed Index Map for Public Viewpoints 3.1-36
3.1-5 Viewshed Maps for Public Viewpoints 3.1-37
3.1-6 Viewshed Index Map for Private Viewpoints 3.1-38
3.1-7 Viewshed Maps for Private Viewpoints 3.1-39
3.1-8 Visual Overview of Proposed Project Looking North 3.1-40
3.1-9 Visual Overview of Proposed Project Looking West 3.1-41
3.1-10 Visual Overview of Proposed Project Looking South 3.1-42
3.1-11 Viewshed Maps of Proposed Project for Public Viewpoints 3.1-43
3.1-12 Viewshed Maps of Proposed Project for Private Viewpoints 3.1-44
3.1-13 Visual Simulation Index Map 3.1-45
3.1-14 Visual Simulation A 3.1-46
3.1-15 Visual Simulation B 3.1-47
3.1-16 Visual Simulation C 3.1-48
3.1-17 Visual Simulation D 3.1-49
3.1-18 Visual Simulation E 3.1-50
3.1-19 Visual Simulation F 3.1-51
3.1-20 Visual Simulation G 3.1-52
3.1-21 Visual Simulation H 3.1-53
3.1-22A Visual Simulation Ia 3.1-54
3.1-22B Visual Simulation Ib 3.1-55
3.1-23 Visual Simulation J 3.1-56
3.1-24 Visual Simulation K 3.1-57
3.1-25 Visual Simulation L 3.1-58
3.1-26A Existing Views along Deer Springs Road 3.1-59
3.1-26B Visual Simulation M 3.1-60

Page No.

3.2-1 Biological Resources Map – On Site 3.2-85
3.2-2A Biological Resources Map – Off-Site Deer Springs Road Impact Area 3.2-86
3.2-2B Biological Resources Map – Off-Site Deer Springs Road Impact Area 3.2-87
3.2-2C Biological Resources Map – Off-Site Deer Springs Road Impact Area 3.2-88
3.2-3A Wetlands and Uplands On-Site Mitigation Conceptual Revegetation Plan Index 3.2-89
3.2-3B Willow Scrub Wetlands and Coastal Sage Scrub Uplands Revegetation at Abandoned Airstrip and Quarry 3.2-90
3.2-3C Coast Live Oak Woodland Mitigation Potentials at Main On-Site Open Space Drainage 3.2-91

3.3-1 CDF Fire Hazard Severity Zones 3.3-31
3.3-2 CDF Fire History 3.3-32
3.3-3 Fire Behavior Analysis – On-Shore Wind Pattern 3.3-33
3.3-4 Fire Behavior Analysis – Santa Ana Wind Pattern 3.3-34

3.4-1 Existing Major Watersheds 3.4-17
3.4-2 Treatment Control BMPs 3.4-18
3.4-3 FEMA Floodplains 3.4-19

3.5-1 Surrounding Land Uses 3.5-23
3.5-2 Neighborhood 2 – Planning Area 3 Surrounding Land Uses 3.5-24

4.1-1 Important Farmlands Areas 4-69
4.1-2 Existing Public Services 4-70
4.1-3 Water & Sewer District Boundaries 4-71
4.1-4 Travel Time Analysis–Neighborhood 1 through 5 (excluding the Estate Lots and Neighborhood 2, Planning Area 3) 4-72
4.1-5 Travel Time Analysis–Estate Lots 4-73
4.1-6 Travel Time Analysis–Neighborhood 2, Planning Area 3 4-74

5.1-1 Alternative A – No Project/No Development Alternative 5-4
5.1-2 Alternative B – No Project/Existing General Plan Alternative 5-46
5.1-3 Alternative C – 785 Unit Reduced Footprint Alternative 5-47
5-1-4 Alternative D – 1300 Unit Reduced Footprint Alternative 5-48
5.1-5 Alternative E – GP 2020 Consistent 5-49
5.1-6A Alternative F – Off-Site Roadway Improvements along Deer Springs Road (Station 15+00 to Station 60+00) 5-50

Page No.

5.1-6B Alternative F – Off-Site Roadway Improvements along Deer Springs Road (Station 60+00 to Station 136+09.02) 5-51

9.1.1-A Existing Circulation Element 9-9
9.1.1-B Circulation Element Existing and Proposed 9-11
9.1.1-C Proposed and Existing Limits 9-13
9.1.1-D Proposed and Existing Limits 9-15
9.2.2-A Existing and Future 60 dB CNEL Noise Contours – Plan to Ground 9-53
9.2.2-B Future 60 dB CNEL Noise Contours – Plan to Plan 9-55
9.2.2-C Existing Circulation Element 60 dB CNEL Noise Contours – Buena Creek Road Extension 9-57
9.2.2-D Alternative I & II Conceptual Striping Plan 9-59
9.3.1-A Biological Resources Map – Plan to Ground 9-99
9.3.1-B Biological Resources Map – Plan to Ground 9-101
9.3.1-C Biological Resources Map – Plan to Ground 9-103
9.4.5 Important Farmland Areas 9-117