

Table of Contents

	<u>Page</u>
I. SUMMARY	I-1
II. INTRODUCTION	II-1
III. PROJECT DESCRIPTION	III-1
IV. ENVIRONMENTAL IMPACT ANALYSIS	IV-1
A. Land Use.....	IV.A-1
B.1 Transportation.....	IV.B.1-1
B.2 Parking.....	IV.B.2-1
C. Aesthetics, Visual Character, and Views	IV.C-1
D. Light, Glare, and Shading	IV.D-1
E.1 Cultural Resources—Historic Resources	IV.E.1-1
E.2 Cultural Resources—Archaeological and Paleontological Resources	IV.E.2-1
F. Air Quality	IV.F-1
G. Greenhouse Gas Emissions	IV.G-1
H. Noise and Vibration.....	IV.H-1
I. Hydrology.....	IV.I-1
J. Hazards and Hazardous Materials.....	IV.J-1
K.1 Public Services—Police Protection	IV.K.1-1
K.2 Public Services—Fire Protection.....	IV.K.2-1
K.3 Public Services—Schools	IV.K.3-1
K.4 Public Services—Parks and Recreation	IV.K.4-1
K.5 Public Services—Libraries	IV.K.5-1
L.1 Utilities and Service Systems—Water Supply.....	IV.L.1-1
L.2 Utilities and Service Systems—Sewer	IV.L.2-1
L.3 Utilities and Service Systems—Solid Waste	IV.L.3-1
M. Energy Resources	IV.M-1
V. ALTERNATIVES.....	V-1
A. Alternative 1: No Project—Continuation of Existing On-Site Use.....	V-14
B. Alternative 2: Reduced Density—33 Percent Reduction.....	V-25
C. Alternative 3: Alternative Land Use—All Residential.....	V-52

	<u>Page</u>
D. Alternative 4: Alternative Design—Flip Residential/Commercial Land Uses on Fair Oaks Avenue	V-80
E. Alternative 5: Alternative Design—Vertical/Mixed-Use	V-95
F. Environmentally Superior Alternative	V-110
VI. OTHER CEQA CONSIDERATIONS	VI-1
VII. REFERENCES	VII-1
VIII. LIST OF PREPARERS	VIII-1

List of Appendices

Appendix

- A Initial Study and Notice of Preparation
 - A-1 Notice of Preparation
 - A-2 Initial Study
 - A-3 Comments on the NOP
- B Transportation
 - B-1 Transportation Report
 - B-2 Transportation Report Appendices
- C Historic Resources
- D Archaeological and Paleontological Resources
 - D-1 Archaeological Resources
 - D-2 Paleontological Resources
- E Air Quality & GHG
- F Noise and Vibration
- G Hydrology & Water Quality
- H Hazardous Materials
 - H-1 Phase 1 Environmental Site Assessment
 - H-2 Hazards Report
- I Correspondence with Public Service Providers
- J Water & Sewer
 - J-1 Water Supply Assessment
 - J-2 Engineering Analysis of Water & Sewer Systems
- K Energy

List of Figures

<u>Figure</u>	<u>Page</u>
III-1	Regional Location Map III-3
III-2	Project Vicinity Map..... III-4
III-3	Aerial Photograph of Project Site III-5
III-4	Existing Site Plan III-7
III-5	Proposed Development Areas III-12
III-6	Building Height Plan..... III-20
III-7	Project Circulation Plan..... III-31
III-8	Existing and Proposed Roadway Design for Holly Street and Leonard J. Pieroni Street III-32
III-9	Proposed Streetscape Design for Holly Street, Leonard J. Pieroni Street, and Proposed Paseo-Lined Streets III-34
III-10	Proposed Project Conceptual Plan III-39
IV-1	Location of Related Projects IV-10
IV.A-1	Existing General Plan Land Use Designation IV.A-3
IV.A-2	Central District Specific Plan Area Map IV.A-5
IV.A-3	Existing Zoning Designation..... IV.A-9
IV.B.1-1	Location of Analyzed Intersections..... IV.B.1-63
IV.B.1-2	Existing LOS Summary for Typical Weekday..... IV.B.1-64
IV.B.1-3	Existing LOS Summary for Saturday..... IV.B.1-65
IV.B.1-4	Future (2016) Without Project—LOS Summary for Typical Weekday IV.B.1-66
IV.B.1-5	Future (2016) Without Project—LOS Summary for Saturday..... IV.B.1-67
IV.B.1-6	Future (2020) Without Project—LOS Summary for Typical Weekday IV.B.1-68
IV.B.1-7	Future (2020) Without Project—LOS Summary for Saturday..... IV.B.1-69

<u>Figure</u>	<u>Page</u>
IV.B.1-8 Existing Transit Lines	IV.B.1-70
IV.B.1-9 Existing Bicycle Infrastructure	IV.B.1-71
IV.B.1-10 Existing (2013) With Project Phase 1—LOS Summary for Typical Weekday	IV.B.1-72
IV.B.1-11 Existing (2013) With Project Phase 1—LOS Summary for Saturday.....	IV.B.1-73
IV.B.1-12 Existing (2013) With Project Phase 2—LOS Summary for Typical Weekday	IV.B.1-74
IV.B.1-13 Existing (2013) With Project Phase 2—Significant Impacts	IV.B.1-75
IV.B.1-14 Existing (2013) With Project Phase 2—LOS Summary for Saturday.....	IV.B.1-76
IV.B.1-15 Future (2016) With Project Phase 1—LOS Summary for Typical Weekday	IV.B.1-77
IV.B.1-16 Future (2016) With Project Phase 1—LOS Summary for Saturday	IV.B.1-78
IV.B.1-17 Future (2020) With Project Phase 2—LOS Summary for Typical Weekday	IV.B.1-79
IV.B.1-18 Future (2020) With Project Phase 2—Significant Impacts—Typical Weekday	IV.B.1-80
IV.B.1-19 Future (2020) With Project Phase 2—LOS Summary for Saturday	IV.B.1-81
IV.B.1-20 Proposed Mitigation Program—Pedestrian and Bicycle Improvements	IV.B.1-82
IV.B.1-21 Proposed Mitigation Program—Signal System Upgrade.....	IV.B.1-83
IV.B.1-22 Existing (2013) With Project Phase 1 With Mitigation—LOS Summary for Typical Weekday	IV.B.1-84
IV.B.1-23 Existing (2013) With Project Phase 2 With Mitigation—LOS Summary for Typical Weekday	IV.B.1-85
IV.B.1-24 Future (2016) With Project Phase 1 With Mitigation—LOS Summary for Typical Weekday	IV.B.1-86
IV.B.1-25 Future (2020) With Project Phase 2 With Mitigation—LOS Summary for Typical Weekday	IV.B.1-87
IV.C-1 Central District Specific Plan Boundary.....	IV.C-3

<u>Figure</u>	<u>Page</u>
IV.C-2	Bennett Plan (1925) IV.C-5
IV.C-3	Location of Visual Simulations IV.C-44
IV.C-4	Existing Views Towards San Gabriel Mountains from Fair Oaks Avenue at Holly Street IV.C-45
IV.C-5	View A—Looking North on Fair Oaks Avenue at Holly Street IV.C-47
IV.C-6	View B—Looking North on Fair Oaks Avenue at Colorado Boulevard IV.C-48
IV.C-7	Existing Views Towards San Gabriel Mountains from Pasadena Avenue Near Future Holly Street IV.C-49
IV.C-8	View C—Looking North on Pasadena Avenue North of Union Street IV.C-51
IV.C-9	View D—Looking East on Future Holly Street towards City Hall IV.C-52
IV.C-10	Existing Views Towards Old Pasadena from Fair Oaks Avenue IV.C-54
IV.C-11	View E—Looking South on Fair Oaks Avenue Near Chestnut Street IV.C-55
IV.C-12	View F—Looking North up Leonard J. Pieroni Street at Union Street IV.C-56
IV.C-13	Existing Views Towards St. Andrew Church and Old Pasadena along Walnut Street IV.C-58
IV.C-14	View G—Looking East on Walnut Street toward St. Andrew Church Bell Tower IV.C-59
IV.C-15	View E—Looking South on Fair Oaks Avenue Near Chestnut Street with Proposed Residence Inn Project IV.C-62
IV.D-1	Surrounding Land Uses IV.D-8
IV.D-2	Proposed Winter Solstice Shadows—9:00 A.M.–12:00 P.M. IV.D-18
IV.D-3	Proposed Winter Solstice Shadows—1:00 P.M.–3:00 P.M. IV.D-19
IV.D-4	Proposed Spring Solstice Shadows—9:00 A.M.–12:00 P.M. IV.D-20
IV.D-5	Proposed Spring Solstice Shadows—1:00 P.M.–4:00 P.M. IV.D-21
IV.D-6	Proposed Spring Solstice Shadows—5:00 P.M. IV.D-22
IV.D-7	Proposed Summer Solstice Shadows—9:00 A.M.–12:00 P.M. IV.D-24

<u>Figure</u>	<u>Page</u>
IV.D-8	Proposed Summer Solstice Shadows—1:00 P.M.–4:00 P.M. IV.D-25
IV.D-9	Proposed Summer Solstice Shadows—5:00 P.M. IV.D-26
IV.D-10	Proposed Fall Solstice Shadows—9:00 A.M.–12:00 P.M. IV.D-27
IV.D-11	Proposed Fall Solstice Shadows—1:00 P.M.–4:00 P.M. IV.D-28
IV.D-12	Proposed Fall Solstice Shadows—5:00 P.M. IV.D-29
IV.E.1-1	Historic Resources in the Vicinity of the Project Site IV.E.1-22
IV.F-1	SCAQMD SRAs IV.F-18
IV.F-2	MATES III Total Cancer Risk for Project Area IV.F-21
IV.F-3	Air Quality Sensitive Receptors Locations IV.F-22
IV.H-1	Nearest Location to Project Site of Buildings in Various Categories of Vibration Impact Criteria IV.H-11
IV.H-2	Noise Measurement Locations IV.H-12
IV.I-1	Alhambra Wash and Raymond Groundwater Basin IV.I-14
IV.K.1-1	Crime Statistics in the Project Vicinity IV.K.1-4
IV.K.2-1	Pasadena Fire Stations That Serve the Project Site IV.K.2-4
IV.L.2-1	Existing and Proposed Sewer Infrastructure IV.L.2-4
IV.L.2-2	Existing Sewer Infrastructure Downstream from Project Site IV.L.2-5

List of Tables

<u>Table</u>	<u>Page</u>
I-1	Summary of Project Impacts, Mitigation Measures, and Residual Impacts I-11
III-1	Development Area Acreages III-13
III-2	100 West Walnut Project Proposed Development Program III-15
III-3	Proposed Permitted Uses III-16
III-4	Project Site FAR Calculations III-18
III-5	Proposed Building Setbacks III-21
III-6	Proposed Building Length and Building Articulation Standards III-23
III-7	Proposed Signage Regulations III-29
III-8	Existing and Proposed North Development Area Parking Facilities III-37
IV-1	List of Related Projects IV-6
IV-2	Cumulative Land Use Growth In Addition to Related Project Growth IV-12
IV.A-1	Project Permitted Land Uses IV.A-28
IV.A-2	Project Consistency with Applicable Goals in SCAG’s Regional Transportation Plan/Sustainable Communities Strategy (2012–2035 RTP/SCS) IV.A-35
IV.B.1-1	List of Study Area Intersections IV.B.1-88
IV.B.1-2	List of Study Area Street Segments IV.B.1-91
IV.B.1-3	Summary of Freeway Level of Service Analysis—Existing with Project Phase 1 Conditions IV.B.1-94
IV.B.1-4	Summary of Freeway Level of Service Analysis—Future (2016) with Project Phase 1 Conditions IV.B.1-97
IV.B.1-5	Summary of Freeway Level of Service Analysis—Future (2020) with Project Phase 2 Conditions IV.B.1-100

<u>Table</u>	<u>Page</u>
IV.B.1-6 On-Ramps Evaluation—Phase 1 Conditions	IV.B.1-103
IV.B.1-7 On-Ramps Evaluation—Phase 2 Conditions	IV.B.1-104
IV.B.1-8 Off-Ramps Evaluation—Phase 1 Conditions	IV.B.1-105
IV.B.1-9 Off-Ramps Evaluation—Phase 2 Conditions	IV.B.1-107
IV.B.1-10 Weekday Intersection Level of Service Analysis—Existing (2013) With Phase 1 Development	IV.B.1-109
IV.B.1-11 Weekday Intersection Level of Service Analysis—Future (2016) With Phase 1 Development	IV.B.1-118
IV.B.1-12 Weekday Intersection Level of Service Analysis—Future (2020) With Phase 2 Development	IV.B.1-128
IV.B.1-13 Weekday Street Segment Analysis—Existing (2013) and Existing (2013) With Phase 1 Development	IV.B.1-138
IV.B.1-14 Saturday Street Segment Analysis—Existing (2013) and Existing (2013) With Phase 1 Development	IV.B.1-144
IV.B.1-15 Pedestrian Environmental Quality Index (PEQI)—Indicators by Domain	IV.B.1-146
IV.B.1-16 Summary of PEQI Intersection Analysis	IV.B.1-147
IV.B.1-17 Summary of PEQI Street Segment Analysis.....	IV.B.1-148
IV.B.1-18 Bicycle Environmental Quality Index (BEQI) Indicators by Domain	IV.B.1-149
IV.B.1-19 Summary of BEQI Intersection Analysis	IV.B.1-150
IV.B.1-20 Summary of BEQI Street Segment Analysis.....	IV.B.1-151
IV.B.1-21 Multimodal Level of Service Summary—Intersections—Phase 1 Conditions.....	IV.B.1-152
IV.B.1-22 Multimodal Level of Service Summary—Intersections—Phase 2 Conditions.....	IV.B.1-156
IV.B.1-23 Multimodal Level of Service Summary—Street Segments— Phase 1 Conditions—A.M. Peak Hour	IV.B.1-160
IV.B.1-24 Multimodal Level of Service Summary—Street Segments— Phase 1 Conditions—P.M. Peak Hour	IV.B.1-165

<u>Table</u>	<u>Page</u>
IV.B.1-25 Multimodal Level of Service Summary—Street Segments— Phase 2 Conditions—A.M. Peak Hour	IV.B.1-170
IV.B.1-26 Multimodal Level of Service Summary—Street Segments— Phase 2 Conditions—P.M. Peak Hour	IV.B.1-175
IV.B.1-27 Level of Service Definitions for Signalized Intersections.....	IV.B.1-180
IV.B.1-28 Freeway Segment Level of Service Definitions.....	IV.B.1-181
IV.B.1-29 Street Segment Analysis Thresholds.....	IV.B.1-182
IV.B.1-30 Estimated Weekday Project Trip Generation—Phase 1 and Phase 2	IV.B.1-183
IV.B.1-31 Estimated Saturday Project Trip Generation—Phase 1 and Phase 2	IV.B.1-185
IV.B.1-32 Summary of Freeway Level of Service Analysis—Existing With Project Phase 2 Conditions	IV.B.1-186
IV.B.1-33 Weekday Intersection Level of Service Analysis—Existing (2013) With Phase 2 Development	IV.B.1-189
IV.B.1-34 Weekday Street Segment Analysis—Existing (2013) and Existing (2013) With Phase 2 Development.....	IV.B.1-198
IV.B.1-35 Saturday Street Segment Analysis—Existing (2013) and Existing (2013) With Phase 2 Development.....	IV.B.1-205
IV.B.1-36 Congestion Management Program Transit Impact Analysis	IV.B.1-207
IV.B.2-1 Existing Project Site Parking Supply	IV.B.2-5
IV.B.2-2 Proposed North Development Area Parking Supply	IV.B.2-7
IV.B.2-3 Project Code-Required Parking	IV.B.2-9
IV.B.2-4 Comparative Analysis of Zoning Code Parking Requirements and On-Site Parking Supply.....	IV.B.2-11
IV.F-1 Ambient Air Quality Standards.....	IV.F-3
IV.F-2 Summary of Ambient Air Quality in the Project Vicinity.....	IV.F-19
IV.F-3 Project Estimate of Regional Construction Emissions— Unmitigated (pounds per day).....	IV.F-34
IV.F-4 Project Estimate of Localized Construction Emissions (pounds per day)	IV.F-36

<u>Table</u>	<u>Page</u>
IV.F-5	Regional Operational Emissions—Unmitigated (pounds per day) IV.F-39
IV.F-6	Regional Operational Emissions—Project Unmitigated (2013) (pounds per day)..... IV.F-40
IV.F-7	Localized Operational Emissions—Unmitigated (pounds per day) IV.F-42
IV.F-8	Localized Operational Emissions—Project (2013) (pounds per day) IV.F-43
IV.F-9	Local Area Carbon Monoxide Dispersion Analysis IV.F-45
IV.F-10	Local Area Carbon Monoxide Dispersion Analysis (2013)..... IV.F-47
IV.F-11	Project with Mitigation—Estimate of Regional Construction Emissions (pounds per day) IV.F-60
IV.F-12	Project with Mitigation—Estimate of Localized Construction Emissions (pounds per day) IV.F-61
IV.G-1	Description of Identified Greenhouse GasesIV.G-4
IV.G-2	Atmospheric Lifetimes and Global Warming PotentialsIV.G-5
IV.G-3	California GHG Inventory (million metric tonnes CO ₂ e)IV.G-7
IV.G-4	Construction-Related Emissions (metric tonnes of CO ₂ e)IV.G-36
IV.G-5	Annual GHG Emissions Summary (metric tonnes of CO ₂ e)IV.G-37
IV.H-1	Typical Noise Levels IV.H-2
IV.H-2	City of Pasadena Guidelines for Noise Compatible Land Use IV.H-7
IV.H-3	Federal Transit Administration Construction Vibration Impact Criteria for Building Damage..... IV.H-10
IV.H-4	Description of Noise Measurement Locations..... IV.H-13
IV.H-5	Existing Ambient Noise Levels..... IV.H-14
IV.H-6	Vehicle Mix for Traffic Noise Model IV.H-16
IV.H-7	Existing Roadway Traffic Noise Levels..... IV.H-17
IV.H-8	Construction Equipment Noise Levels IV.H-25
IV.H-9	Construction Noise Impacts—Phase 1 IV.H-26
IV.H-10	Construction Noise Impacts—Phase 2 IV.H-28
IV.H-11	Construction Noise Impacts—Overlapping of Construction IV.H-29

<u>Table</u>	<u>Page</u>
IV.H-12	Off-Site Construction Haul Truck Noise Impacts—Phase 1 and Phase 2 IV.H-31
IV.H-13	Construction Vibration Impacts—Building Damage IV.H-33
IV.H-14	Construction Vibration Impacts—Human Annoyance, Phase 1 IV.H-34
IV.H-15	Construction Vibration Impacts—Human Annoyance, Phase 2 IV.H-35
IV.H-16	Roadway Traffic Noise Impacts—Future plus Project at Phase 1 Buildout (2016) IV.H-38
IV.H-17	Roadway Traffic Noise Impacts—Future plus Project at Project Buildout (2020) IV.H-40
IV.H-18	Roadway Traffic Noise Impacts—Existing plus Project Phase 1 IV.H-42
IV.H-19	Roadway Traffic Noise Impacts—Existing plus Project at Project Buildout..... IV.H-44
IV.H-20	Composite Noise Impacts—with Phase 1 Development..... IV.H-46
IV.H-21	Composite Noise Impacts—at Project Buildout (Phase 1 and Phase 2) IV.H-47
IV.H-22	Cumulative Roadway Traffic Noise Impacts IV.H-52
IV.K.2-1	Pasadena Fire Department Fire Stations Located in the Project Vicinity IV.K.2-5
IV.K.2-2	Average Response Times for Fire and Paramedic Incidents (Minutes:Seconds)..... IV.K.2-6
IV.K.3-1	Enrollment and Capacity of PUSD Schools that Serve the Project Site IV.K.3-5
IV.K.3-2	Projected Enrollment and Capacity of PUSD Schools that Serve the Project Site IV.K.3-6
IV.K.3-3	Estimated Number of Students Generated by the Project IV.K.3-11
IV.K.4-1	Neighborhood Parks Within One-Half Mile of the Project Site and Community and Citywide Parks and Recreational Facilities Within Approximately One Mile of the Project Site..... IV.K.4-4
IV.L.1-1	City of Pasadena Water and Power’s Historical Water Supplies in Average Water Year (AFY)..... IV.L.1-11
IV.L.1-2	City of Pasadena Water and Power’s Projected Water Demands (AFY) IV.L.1-16

<u>Table</u>	<u>Page</u>
IV.L.1-3	Estimated Project Water Consumption ForecastIV.L.1-23
IV.L.1-4	Estimated Phased Project Water Demands.....IV.L.1-24
IV.L.1-5	Project Flow Levels to Water Lines Adjacent to the Project Site.....IV.L.1-26
IV.L.2-1	Estimated Project Sewage FlowsIV.L.2-10
IV.L.2-2	Estimated Project Sewer Flow Levels to Sewer Lines Adjacent to the Project SiteIV.L.2-12
IV.L.3-1	Solid Waste Disposal and Estimated Remaining Capacity for Los Angeles County Landfills.....IV.L.3-8
IV.L.3-2	Estimated Project Solid Waste GenerationIV.L.3-16
IV.M-1	Summary of Energy Use During ConstructionIV.M-13
IV.M-2	Summary of Annual Energy Use During OperationIV.M-15
V-1	Summary Comparison of the Project and Alternatives V-7
V-2	Project and Alternatives Impact Comparison Summary..... V-10
V-3	Estimated Alternative 3 Water Consumption Forecast V-75
V-4	Estimated Alternative 3 Solid Waste Generation V-78