



Draft Subsequent Environmental Impact Report

EVENT CENTER AND MIXED-USE DEVELOPMENT AT MISSION BAY BLOCKS 29-32

Office of Community Investment and Infrastructure Case No. ER 2014-919-97
San Francisco Planning Department Case No. 2014.1441E
State Clearinghouse No. 2014112045

Draft SEIR Publication Date: June 5, 2015

Draft SEIR Public Hearing Date: June 30, 2015

Draft SEIR Public Comment Period: June 5, 2015 – July 20, 2015



office of
COMMUNITY INVESTMENT
and INFRASTRUCTURE

Volume 1

Draft Subsequent Environmental Impact Report

EVENT CENTER AND MIXED-USE DEVELOPMENT AT MISSION BAY BLOCKS 29-32

Office of Community Investment and Infrastructure Case No. ER 2014-919-97
San Francisco Planning Department Case No. 2014.1441E
State Clearinghouse No. 2014112045

Draft SEIR Publication Date: June 5, 2015

Draft SEIR Public Hearing Date: June 30, 2015

Draft SEIR Public Comment Period: June 5, 2015 – July 20, 2015



Volume 1

TABLE OF CONTENTS

Event Center and Mixed-Use Development at Mission Bay Blocks 29-32 Draft Subsequent EIR

	<u>Page</u>
Volume 1	
List of Abbreviations and Acronyms	xiii
1. Summary	1-1
1.1 Project Description	1-1
1.2 Environmental Impacts and Mitigation Measures	1-9
1.3 Alternatives	1-10
1.4 Areas of Controversy and Issues to Be Resolved	1-12
1.5 Third Street Plaza Variant	1-13
2. Introduction	2-1
2.1 Purpose of This SEIR	2-1
2.2 CEQA Environmental Review	2-2
2.3 Mission Bay Final Subsequent EIR	2-4
2.4 CEQA Process	2-8
2.4.1 Previous Project Proposal for an Event Center and Mixed-Use Development at Piers 30-32 and Seawall Lot 330	2-8
2.4.2 Notice of Preparation and Public Scoping	2-8
2.4.3 Draft SEIR Public Review	2-9
2.4.4 Responses to Comments Document and Final SEIR	2-10
2.5 Public Participation	2-10
2.6 Summary of Scoping Comments	2-10
2.7 Assembly Bill 900	2-21
2.8 Senate Bill 743	2-23
2.9 Contents and Organization of the EIR	2-24
3. Project Description	3-1
3.1 Project Overview	3-1
3.2 Project Objectives	3-4
3.3 Background	3-6
3.4 Project Site Location	3-9
3.5 Golden State Warriors Background	3-13
3.6 Project Characteristics	3-15
3.7 Graphic Exhibits of Proposed Project	3-51
3.8 Intended Uses of this SEIR and Approvals Required	3-51

	<u>Page</u>
Volume 1 (continued)	
4. Plans and Policies	4-1
4.1 Introduction and Overview	4-1
4.2 San Francisco Plans and Policies	4-1
4.3 Regional Plans and Policies	4-9
5. Environmental Setting, Impacts, and Mitigation Measures	
5.1 Impact Overview	5.1-1
5.1.1 Scope of Analysis, Issues Scoped Out in Initial Study	5.1-1
5.1.2 Overall Approach to Impact Analysis	5.1-2
5.1.3 Organization of the Impact Analyses	5.1-3
5.1.4 Significance Determinations	5.1-5
5.1.5 Approach to Cumulative Impact Analysis	5.1-6
5.1.6 Impacts of Mitigation Measures	5.1-11
5.2 Transportation and Circulation	5.2-1
5.2.1 Introduction	5.2-1
5.2.2 Summary of Mission Bay FSEIR Transportation Section	5.2-1
5.2.3 Setting	5.2-3
5.2.4 Regulatory Framework	5.2-43
5.2.5 Impacts and Mitigation Measures	5.2-44
5.2.6 Project Impacts on the UCSF Helipad Operations	5.2-251
Volume 2	
5. Environmental Setting, Impacts, and Mitigation Measures (continued)	
5.3 Noise and Vibration	5.3-1
5.3.1 Introduction	5.3-1
5.3.2 Summary of Mission Bay FSEIR Noise Section	5.3-1
5.3.3 Setting	5.3-2
5.3.4 Regulatory Framework	5.3-9
5.3.5 Impacts and Mitigation Measures	5.3-16
5.4 Air Quality	5.4-1
5.4.1 Introduction	5.4-1
5.4.2 Summary of Mission Bay FSEIR Air Quality Section	5.4-1
5.4.3 Setting	5.4-3
5.4.4 Regulatory Framework	5.4-18
5.4.5 Impacts and Mitigation Measures	5.4-23
5.5 Greenhouse Gas Emissions	5.5-1
5.5.1 Introduction	5.5-1
5.5.2 Summary of Mission Bay FSEIR Greenhouse Gas Emissions Section	5.5-1
5.5.3 Setting	5.5-1
5.5.4 Regulatory Framework	5.5-3
5.5.5 Impacts and Mitigation Measures	5.5-8
5.6 Wind and Shadow	5.6-1
5.6.1 Introduction	5.6-1
5.6.2 Summary of Wind and Shadow Impacts in Mission Bay FSEIR	5.6-1

	<u>Page</u>
Volume 2 (continued)	
5. Environmental Setting, Impacts, and Mitigation Measures (continued)	
5.6 Wind and Shadow (continued)	
5.6.2 Summary of Wind and Shadow Impacts in Mission Bay FSEIR (continued)	
5.6.2.1 Summary of Wind Impacts in Mission Bay FSEIR Initial Study Air Quality/Climate Section	5.6-1
5.6.2.2 Summary of Shadow Impacts in Mission Bay FSEIR Initial Study Air Quality/Air Climate Section	5.6-2
5.6.3 Setting	5.6-2
5.6.3.1 Wind	5.6-2
5.6.3.2 Shadow	5.6-4
5.6.4 Regulatory Framework	5.6-5
5.6.4.1 Wind	5.6-5
5.6.4.2 Shadow	5.6-6
5.6.5 Impacts and Mitigation Measures	5.6-6
5.6.5.1 Significance Thresholds	5.6-6
5.6.5.2 Approach to Analysis	5.6-7
5.6.5.3 Impact Evaluation	5.6-10
5.7 Utilities and Service Systems	5.7-1
5.7-1 Introduction	5.7-1
5.7.2 Summary of Mission Bay FSEIR Utilities Analysis	5.7-1
5.7.3 Setting	5.7-6
5.7.4 Regulatory Framework	5.7-8
5.7.5 Impacts and Mitigation Measures	5.7-9
5.8 Public Services	5.8-1
5.8.1 Introduction	5.8-1
5.8.2 Summary of Mission Bay FSEIR Public Services, and Community Services and Utilities Sections	5.8-1
5.8.3 Setting	5.8-2
5.8.4 Regulatory Framework	5.8-6
5.8.5 Impacts and Mitigation Measures	5.8-9
5.9 Hydrology and Water Quality	5.9-1
5.9.1 Introduction	5.9-1
5.9.2 Summary of Mission Bay FSEIR Hydrology and Water Quality Analysis	5.9-1
5.9.3 Setting	5.9-7
5.9.4 Regulatory Framework	5.9-19
5.9.5 Impacts and Mitigation Measures	5.9-28
6. Other CEQA Issues	6-1
6.1 Growth Inducing Impacts	6-1
6.2 Significant and Unavoidable Impacts	6-2
6.3 Effects Found Not to Be Significant	6-4
6.4 Irreversible and Irretrievable Commitments of Resources	6-7
6.5 Areas of Known Controversy and Issues to Be Resolved	6-7

	<u>Page</u>
Volume 2 (continued)	
7. Alternatives	7-1
7.1 Introduction	7-1
7.1.1 CEQA Requirements for Alternatives Analysis	7-1
7.1.2 Mission Bay FSEIR Alternatives Analysis	7-2
7.1.3 Organization of this Chapter	7-3
7.2 Alternatives Selection	7-3
7.2.1 Project Objectives	7-3
7.2.2 Summary of Significant Impacts	7-4
7.2.3 Alternatives Screening and Selection	7-8
7.3 Alternatives Analysis	7-20
7.3.1 Alternative A: No Project	7-20
7.3.2 Alternative B: Reduced Intensity Alternative	7-46
7.3.3 Alternative C: Off-site Alternative at Piers 30-32 / Seawall Lot 330	7-67
7.4 Comparison of Alternatives and Environmentally Superior Alternative	7-99
7.5 Alternatives Considered but Rejected	7-110
7.5.1 Alternatives Identified During Scoping	7-110
7.5.2 Alternatives Considered but Rejected	7-110
8. Third Street Plaza Variant	8-1
8.1 Overview	8-1
8.2 Third Street Plaza Variant Description	8-2
8.3 Impact Evaluation	8-4
8.4 Other CEQA Issues and Alternatives	8-14
9. Report Preparers	9-1
9.1 SEIR Authors	9-1
9.2 SEIR Consultants	9-2
9.3 Project Sponsors and Consultants	9-3
Volume 3 – Appendices	
NOP-IS Notice of Preparation and Initial Study	NOP-1
TMP Final Transportation Management Plan	TMP-1
TR Transportation Technical Appendix	TR-1
NO Noise Supporting Information	NO-1
AQ Air Quality Supporting Information	AQ-1
WS Wind and Shadow	WS-1
HYD Hydrology and Water Quality Supporting Information	HYD-1
MIT Summary of Mission Bay FSEIR Mitigation Measures and Applicability to the Proposed Project	MIT-1

	<u>Page</u>
List of Figures	
1-1 Aerial Photograph of Mission Bay	1-2
1-2 Land Uses in the Mission Bay Redevelopment Plan	1-4
1-3 Conceptual Project Site Plan	1-6
3-1 Aerial Photograph of Mission Bay	3-2
3-2 Existing Roadway Network in Mission Bay	3-3
3-3 Land Uses in the Mission Bay Redevelopment Plan	3-7
3-4 Aerial Photograph of Project Site Vicinity	3-11
3-5 Conceptual Project Site Plan	3-16
3-6 Floor Plan – Lower Parking Level 2	3-21
3-7 Floor Plan – Event Center Event Level / Lower Parking Level 1	3-22
3-8 Floor Plan – Ground Level / Upper Parking Level	3-23
3-9 Floor Plan – Event Center Mezzanine / Plaza Level	3-24
3-10 Floor Plan – Event Center Main Concourse / Office and Retail Building Level 1	3-25
3-11 Floor Plan – Event Center AHU Mezzanine / Office Tower Level (Shows Representative Floor Plate for the Office and Retail Building Towers)	3-26
3-12 Project East and North Elevations	3-29
3-13 Project South and West Elevations	3-30
3-14 Proposed Pedestrian Circulation	3-32
3-15 Proposed Bicycle Parking Facilities	3-34
3-16 Aerial Rendering of Proposed Project from the Northwest	3-53
3-17 Aerial Rendering of Proposed Project from the East	3-54
3-18 Street-level Rendering of Proposed Project from the Northwest (Third Street at South Street)	3-55
3-19 Street-level Rendering of Proposed Project from the Southwest (Third Street at 16th Street)	3-56
3-20 Street-level Rendering of Proposed Project from the North (South Street)	3-57
3-21 Street-level Rendering of Proposed Project from the South (16th Street)	3-58
3-22 Street-level Rendering of Proposed Project from the East (Bayfront Park)	3-59
3-23 Street-level Rendering of Proposed Project from the Southeast (on Planned Realigned Terry A. Francois Boulevard at 16th Street)	3-60
5.2-1 Existing Intersection LOS-Weekday PM Peak Hour	5.2-11
5.2-2 Existing Intersection LOS-Weekday Evening Peak Hour	5.2-12
5.2-3 Existing Intersection LOS-Weekday Late Evening Peak Hour	5.2-13
5.2-4 Existing Intersection LOS-Saturday Evening Peak Hour	5.2-14
5.2-5 Existing Transit Network	5.2-18
5.2-6 Existing Mission Bay TMA Shuttle Routes	5.2-22
5.2-7 Existing Bicycle Route Network	5.2-27
5.2-8 Existing Off-Street Public Parking Facilities	5.2-31
5.2-9 Proposed Roadway Configuration and Curb Management	5.2-48
5.2-10 Proposed Muni Special Event Shuttles	5.2-54
5.2-11 Proposed Locations of PCOs and VMSs	5.2-59
5.2-12 Pre-Event Controls for Large Events	5.2-61
5.2-13 Post-Event Controls for Large Events	5.2-62
5.2-14A Project Vehicle Trip Patterns to Major Parking Facilities-Inbound Weekday PM Peak Hour - No Event and Convention Event	5.2-95
5.2-14B Project Vehicle Trip Patterns to Major Parking Facilities-Outbound Weekday PM Peak Hour - No Event and Convention Event	5.2-96

	<u>Page</u>
List of Figures (continued)	
5.2-14C Project Vehicle Trip Patterns to Major Parking Facilities-Inbound Saturday Evening Peak Hour - No Event	5.2-97
5.2-14D Project Vehicle Trip Patterns to Major Parking Facilities-Outbound Saturday Evening Peak Hour - No Event	5.2-98
5.2-14E Project Vehicle Trip Patterns to Major Parking Facilities-Inbound Weekday and Saturday Peak Hours Basketball Game Without a SF Giants Evening Game	5.2-99
5.2-14F Project Vehicle Trip Patterns to Major Parking Facilities-Outbound Weekday Late Evening Peak Hour - Basketball Game Without a SF Giants Evening Game	5.2-100
5.2-15 Existing Plus Project Intersection LOS-Without a SF Giants Game - Weekday PM Peak Hour - No Event and Convention Event Scenarios	5.2-119
5.2-16 Existing Plus Project Intersection LOS-Without a SF Giants Game - Weekday PM Peak Hour - No Event and Basketball Game Scenarios	5.2-120
5.2-17 Existing Plus Project Intersection LOS-Without a SF Giants Game - Weekday Evening and Late Evening Peak Hour - Basketball Game Scenarios	5.2-122
5.2-18 Existing Plus Project Intersection LOS-Without a SF Giants Game - Saturday Evening Peak Hour - No Event and Basketball Game Scenarios	5.2-124
5.2-19 Existing Plus Project Intersection LOS-With a SF Giants Evening Game - Weekday PM and Saturday Evening Peak Hour - Basketball Game Scenarios	5.2-173
5.2-20 Existing Plus Project Intersection LOS-With a SF Giants Evening Game - Weekday Evening and Late Evening Peak Hour - Basketball Game Scenarios	5.2-175
5.2-21 2040 Cumulative Roadway Network in Mission Bay	5.2-209
5.2-22 2040 Cumulative Intersection LOS-Weekday PM Peak Hour - No Event and Convention Event Scenarios	5.2-215
5.2-23 2040 Cumulative Intersection LOS-Weekday PM Peak Hour - No Event and Basketball Game Scenarios	5.2-216
5.2-24 2040 Cumulative Intersection LOS-Saturday Evening Peak Hour - No Event and Basketball Game Scenarios	5.2-218
5.2-25 New Parking Facilities by 2040	5.2-247
5.2-26 UCSF Benioff Children's Hospital Helipad and Designated Flight Paths	5.2-254
5.2-27 UCSF Benioff Children's Hospital Helipad Airspace Surfaces	5.2-256
5.2-28 Project Construction Cranes and UCSF Benioff Children's Hospital Helipad Airspace Surfaces	5.2-264
5.2-29 Project Development and UCSF Benioff Children's Hospital Helipad Airspace Surfaces	5.2-268
5.3-1 Noise Monitoring Locations	5.3-7
5.3-2 San Francisco Land Use Compatibility Chart for Community Noise	5.3-11
5.6-1 Existing/Planned Public Open Space in Mission Bay South	5.6-9
5.6-2 Existing Plus Project Wind Hazard Conditions	5.6-12
5.6-3 Existing Plus Project Wind Comfort Conditions	5.6-16
5.7-1 Combined Sewer Drainage Basins in Mission Bay South as Reconfigured Under Mission Bay Plan	5.7-3
5.7-2 Separate Stormwater Drainage Basins in Mission Bay South Constructed as Part of Mission Bay Plan	5.7-5
5.9-1 Bayside Drainage Basin Urban Watersheds	5.9-8
5.9-2 2008 Adopted Interim Flood Map of 100-Year Flood Zones	5.9-11
5.9-3 Projected Inundation by 2050, with 12 Inches of Sea Level Rise Plus 100-Year Storm Surge	5.9-15

	<u>Page</u>	
List of Figures (continued)		
5.9-4	Projected Inundation by 2100, with 36 Inches of Sea Level Rise Plus 100-Year Storm Surge	5.9-16
7-1	No Project Alternative, Conceptual Site Plan	7-22
7-2	Reduced Intensity Alternative, Conceptual Site Plan	7-47
7-3	Off-Site Alternative at Piers 30-32 and Seawall Lot 330 Conceptual Site Plan	7-60
8-1	Third Street Plaza Variant Conceptual Site Plan	8-3
8-2	Third Street Plaza Variant West Elevation	8-5
8-3	Existing Plus Third Street Variant Wind Hazard Conditions	8-10

List of Tables

1-1	Summary of Proposed Project Facilities and Design Features	1-7
1-2	Summary of Impacts and Mitigation Measures	1-14
2-1	Summary of Scoping Comments Addressed in the SEIR	2-11
2-2	Summary of Scoping Comments Addressed in the Initial Study	2-20
3-1	Summary of Proposed Project Facilities and Design Features	3-17
3-2	On-Site Vehicle Parking, By Level	3-19
3-3	Event Characteristics at Proposed Event Center	3-39
3-4	Estimated Full-Time Equivalent Employees	3-43
3-5	Preliminary Project Construction Schedule	3-47
3-6	Project Construction Employment	3-50
5.2-1	Intersection Level of Service Existing Conditions – without a SF Giants Game Weekday PM, Evening, Late Evening, and Saturday Evening Peak Hours	5.2-10
5.2-2	Freeway Ramp Level of Service Existing Conditions – without a SF Giants Game Weekday PM, Evening, Late PM, and Saturday Evening Peak Hours	5.2-16
5.2-3	Existing Muni Routes in Project Vicinity	5.2-17
5.2-4	Transit Capacity Utilization – Existing Conditions – without a SF Giants Game – Weekday PM, Evening, and Late Evening and Saturday Evening Peak Hours	5.2-24
5.2-5	Muni Downtown Transit Screenlines – Existing Conditions Weekday P.M. Peak Hour	5.2-25
5.2-6	Pedestrian level of Service Existing conditions – Without a SF Giants Game Weekday P.M. and Evening, and Saturday Evening Peak Hours	5.2-26
5.2-7	Bicycle Volumes – Existing Conditions, Weekday PM and Evening, and Saturday Evening Peak Hours	5.2-29
5.2-8	Existing Off-street Public Parking Facilities within Parking Study Area	5.2-32
5.2-9	Off-street Parking Supply and Occupancy Existing Conditions – without a SF Giants Game Weekday and Saturday	5.2-33
5.2-10	Intersection Level of Service Existing Conditions – with a SF Giants Evening Game Weekday PM, Evening, Late Evening, and Saturday Evening Peak Hours	5.2-39
5.2-11	Freeway Ramp Level of Service Existing Conditions – with a SF Giants Evening Game Weekday PM, Evening, Late PM, and Saturday Evening Peak Hours	5.2-40
5.2-12	Pedestrian Level of Service Existing Conditions – with a SF Giants Evening Game Weekday P.M. and Evening, and Saturday Evening Peak Hours	5.2-41
5.2-13	Off-street Parking Supply and Occupancy Existing Conditions – With a SF Giants Evening Game Weekday and Saturday	5.2-42
5.2-14	Existing Mission Bay TMA Headways and Proposed Revisions to Existing Routes and New Routes	5.2-52
5.2-15	Preliminary Muni Special Event Transit Service Plan	5.2-55

	<u>Page</u>
List of Tables (continued)	
5.2-16 Summary of Transportation Management Strategies by Event Type	5.2-57
5.2-17 Analysis Hours for Proposed Project Scenarios	5.2-71
5.2-18 Level of Service Definitions for Signalized and Unsignalized Intersections	5.2-73
5.2-19 Level of Service Definitions for Freeway Ramp Junctions	5.2-75
5.2-20 Pedestrian Level of Service Criteria	5.2-78
5.2-21 Basketball Game Attendee Arrival and Departure Patterns for 7:30 P.M. Start Time and 9:40 P.M. End Time	5.2-83
5.2-22 Proposed Project Person Trip Generation by Land Use and Time Period	5.2-84
5.2-23 Proposed Project Trip Distribution Patterns by Land Use	5.2-86
5.2-24 Proposed Project Trip Generation by Mode, Land Use and Time Period	5.2-90
5.2-25 Proposed Project Vehicle Trips by Place of Origin and Time Period	5.2-91
5.2-26 Proposed Project Transit Trips by Place of Origin and Time Period	5.2-92
5.2-27 Proposed Project Delivery/Service Vehicle Trips and Loading Space Demand	5.2-102
5.2-28 Project Parking Demand by Land Use and Time Period	5.2-103
5.2-29 Proposed Project Trip Generation by Mode, Land Use and Time Period for Basketball Game Scenario without Implementation of the Muni Special Event Transit Service Plan	5.2-106
5.2-30 Proposed Project Vehicle Trips by Place of Origin and Time Period for Basketball Game Scenario without Implementation of the Muni Special Event Transit Service Plan	5.2-107
5.2-31 Proposed Project Transit Trips by Place of Origin and Time Period for Basketball Game Scenario without Implementation of the Muni Special Event Transit Service Plan	5.2-107
5.2-32 Comparison of Proposed Project Vehicle Trips, Transit Trips, and Parking Demand for Basketball Game Scenario with and without Implementation of the Muni Special Event Transit Service Plan	5.2-108
5.2-33 Summary of Construction Phases and Duration and Daily Construction Trucks and Workers by Phase	5.2-113
5.2-34 Intersection Level of Service - Existing plus Project Conditions – without a SF Giants Game – Weekday PM Peak Hour	5.2-118
5.2-35 Intersection Level of Service – Existing plus Project Conditions – without a SF Giants Game – Weekday Evening and Late Evening Peak Hours	5.2-121
5.2-36 Intersection Level of Service – Existing plus Project Conditions – without a SF Giants Game – Saturday Evening Peak Hour	5.2-123
5.2-37 Freeway Ramp Level of Service – Existing plus Project Conditions – without a SF Giants Game – Weekday PM Peak Hour	5.2-133
5.2-38 Freeway Ramp Level of Service – Existing plus Project Conditions – without a SF Giants Game – Weekday Evening and Late Evening Peak Hours	5.2-133
5.2-39 Freeway Ramp Level of Service – Existing plus Project Conditions – without a SF Giants Game – Saturday Evening Peak Hour	5.2-134
5.2-40 Transit Analysis – Existing plus Project Conditions – without a SF Giants Game – Weekday PM Peak Hour	5.2-136
5.2-41 Transit Analysis – Existing plus Project Conditions – without a SF Giants Game – Weekday Evening and Late Evening Peak Hours	5.2-137
5.2-42 Transit Analysis – Existing plus Project Conditions – without a SF Giants Game – Saturday Evening Peak Hours	5.2-138
5.2-43 Muni Downtown Transit Screenlines – Existing Plus Project - No Event and Convention Event Scenarios – Weekday P.M. Peak Hour	5.2-139

	<u>Page</u>
List of Tables (continued)	
5.2-44 Pedestrian Level of Service - Existing plus Project Conditions – without a SF Giants Game – Weekday PM Peak Hour	5.2-150
5.2-45 Pedestrian Level of Service - Existing plus Project Conditions – without a SF Giants Game – Weekday Evening and Late Evening Peak Hours	5.2-151
5.2-46 Pedestrian Level of Service – Existing plus Project Conditions – without a SF Giants Game – Saturday Evening Peak Hour	5.2-152
5.2-47 Intersection Level of Service – Existing plus Project Conditions – with a SF Giants Evening game – Weekday PM and Saturday evening Peak Hours	5.2-172
5.2-48 Intersection Level of Service – Existing plus Project Conditions – with a SF Giants Evening Game – Weekday Evening and Late Evening Peak Hours	5.2-174
5.2-49 Freeway Ramp Level of Service – Existing plus Project Conditions – with a SF Giants Evening Game – Weekday PM and Saturday Evening Peak Hours	5.2-181
5.2-50 Freeway Ramp Level of Service – Existing plus Project Conditions – with a SF Giants Evening Game – Weekday Evening and Late Evening Peak Hours	5.2-181
5.2-51 Pedestrian Level of Service – Existing plus Project Conditions – with a SF Giants Evening Game – Weekday PM and Saturday Evening Peak Hours	5.2-186
5.2-52 Pedestrian Level of Service – Existing plus Project Conditions – with a SF Giants Evening Game – Weekday Evening and Late Evening Peak Hours	5.2-187
5.2-53 Intersection Level of Service – Existing plus Project Conditions – without a SF Giants Game – without Implementation of the Muni Special Event Transit Service Plan – Weekday PM and Saturday Evening Peak Hours	5.2-192
5.2-54 Intersection Level of Service - Existing plus Project Conditions – without a SF Giants Game – without Implementation of the Muni Special Event Transit Service Plan – Weekday Evening and Late Evening Peak Hours	5.2-193
5.2-55 Freeway Ramp Level of Service – Existing plus Project Conditions – without a SF Giants Game - without Implementation of the Muni Special Event Transit Service Plan – Weekday PM and Saturday Evening Peak Hours	5.2-198
5.2-56 Freeway Ramp Level of Service - Existing plus Project Conditions – without a SF Giants Game - without Implementation of the Muni Special Event Transit Service Plan – Weekday Evening and Late Evening Peak Hours	5.2-198
5.2-57 Transit Analysis – Existing plus Project Conditions – without a SF Giants Game without Implementation of the Muni Special Event Transit Service Plan – Weekday PM and Saturday Evening Peak Hours	5.2-200
5.2-58 Transit Analysis – Existing plus Project Conditions – without a SF Giants Game without Implementation of the Muni Special Event Transit Service Plan – Weekday Evening and Late Evening Peak Hours	5.2-201
5.2-59 Intersection Level of Service – 2040 Cumulative Conditions – Weekday PM Peak Hour	5.2-214
5.2-60 Intersection Level of Service – 2040 Cumulative Conditions – Saturday Evening Peak Hour	5.2-217
5.2-61 Freeway Ramp Level of Service – 2040 Cumulative Conditions – Weekday PM Peak Hour	5.2-221
5.2-62 Freeway Ramp Level of Service – 2040 Cumulative Conditions – Saturday Evening Peak Hour	5.2-221
5.2-63A Muni Transit Analysis – Weekday PM Peak Hour – 2040 Cumulative Conditions	5.2-223
5.2-63B Muni Transit Analysis – Weekday Evening and Late Evening Peak Hours – Basketball Game Scenario – 2040 Cumulative Conditions	5.2-223
5.2-64 Muni Downtown and Regional Screenlines – Weekday PM Peak Hour – 2040 Cumulative Conditions	5.2-225

	<u>Page</u>
List of Tables (continued)	
5.2-65 Pedestrian Level of Service – 2040 Cumulative Conditions – Weekday PM Peak Hour	5.2-228
5.2-66 Pedestrian Level of Service – 2040 Cumulative Conditions – Saturday Evening Peak Hour	5.2-229
5.2-67 Project Parking Supply and Demand by Scenario	5.2-235
5.2-68 Existing plus Project Study Area Parking Supply by Scenario	5.2-237
5.2-69 Existing plus Project Study Area Parking Demand and Supply without a SF Giants Game at AT&T Park	5.2-239
5.2-70 Existing plus Project Study Area Parking Demand and Supply with a SF Giants Evening Game at AT&T Park	5.2-242
5.2-71 Additional Cumulative Non-Residential Development Planned in the Mission Bay South Area - from Existing conditions to Year 2040	5.2-246
5.2-72 2040 Cumulative with Project Study Area Parking Demand and Supply without a SF Giants Game at AT&T Park	5.2-248
5.2-73 2040 Cumulative with Project Study Area Parking Demand and Supply with a SF Giants Evening Game at AT&T Park	5.2-250
5.2-74 Part 77 Airspace Vertical Clearances – Proposed Principal Structures	5.2-269
5.3-1 Typical Sound Levels Measured in the Environment	5.3-3
5.3-2 Short-Term Ambient Noise Level Data in the Project Area	5.3-6
5.3-3 Long-Term Ambient Noise Level Data in the Project Area	5.3-6
5.3-4 Sensitive Noise Receptors in the Project Area	5.3-9
5.3-5 Typical Noise Levels from Construction Equipment	5.3-17
5.3-6 Caltrans Guideline Vibration Damage Potential Threshold Criteria	5.3-18
5.3-7 Noise Levels from Construction Activities at Sensitive Receptors in the Project Area	5.3-21
5.3-8 Cumulative Worst Case Noise Levels from Construction Activities at Sensitive Receptors in the Project Area	5.3-23
5.3-9 Modeled Traffic Noise Levels, Proposed Project with Muni Special Event Transit Service Plan	5.3-34
5.3-10 Modeled Traffic Noise Levels, Proposed Project without Muni Special Event Transit Service Plan	5.3-36
5.3-11 Modeled Cumulative Traffic Noise Levels	5.3-43
5.4-1 Summary of San Francisco Air Quality Monitoring Data (2010-2014)	5.4-5
5.4-2 State and Federal Ambient Air Quality Standards and Attainment Status	5.4-8
5.4-3 Air Quality Index Statistics for the San Francisco Bay Area Basin	5.4-10
5.4-4 2013 Annual Average Ambient Concentrations of Carcinogenic Toxic Air Contaminants Measured at BAAQMD Monitoring Station, 10 Arkansas Street, San Francisco	5.4-14
5.4-5 Sensitive Receptors in the Project Site Vicinity	5.4-17
5.4-6 Criteria Air Pollutant Thresholds	5.4-25
5.4-7 Average Daily Construction-Related Emissions	5.4-31
5.4-8 Mitigated Average Daily Construction-Related Emissions	5.4-33
5.4-9 Average Daily and Maximum Annual Operational Emissions	5.4-39
5.4-10 Annual Average PM _{2.5} Concentrations at Off-Site Receptors	5.4-48
5.4-11 Lifetime Excess Cancer Risk at Off-Site Receptors	5.4-49
5.5-1 GHG Reductions from the AB 32 Scoping Plan Sections	5.5-4
5.6-1 Existing Plus Project Wind Hazard Conditions	5.6-11
5.6-2 Existing Plus Project Wind Comfort Conditions	5.6-15

	<u>Page</u>
List of Tables (continued)	
5.8-1 Summary of Existing SFFD Staffing and Equipment in Project Area	5.8-2
5.8-2 Summary of SFFD Responses for Fire Stations in Project Area (December 2013 through November 2014)	5.8-3
5.8-3 Summary of Annual Crimes in Mission Bay Plan Area (Average 2012-2014)	5.8-5
5.9-1 Sea Level Rise Estimates for San Francisco Bay Relative to the Year 2000	5.9-12
7-1 Comparison of Proposed Project and Alternatives	7-16
7-2 Summary of Ability of Alternatives to Meet Project Objectives	7-19
7-3 Proposed Project and Project Alternatives Trip Generation by Mode, Land Use – Weekday PM and Saturday Evening Peak Hours	7-26
7-4 Intersection Level of Service – Existing plus Project Alternative Conditions – without A SF Giants game – Weekday PM Peak Hour	7-27
7-5 Intersection Level of Service – Existing plus Project Alternative Conditions – without a SF Giants Game – Saturday Evening Peak Hour	7-28
7-6 Freeway Ramp Level of Service – Existing plus Project Alternative Conditions – without a SF Giants Game – Weekday PM Peak Hour	7-30
7-7 Freeway Ramp Level of Service - Existing plus Project Alternative Conditions – without a SF Giants Game – Saturday Evening Peak Hour	7-31
7-8 Modeled Traffic Noise Levels, No Project Alternative	7-34
7-9 Average Daily Construction-related Emissions for the No Project Alternative	7-35
7-10 Average Daily and Maximum Annual Operational Emissions for the No Project Alternative	7-36
7-11 Annual Average PM _{2.5} Concentrations at off-site Receptors for the No Project Alternative	7-37
7-12 Lifetime Excess Cancer Risk at Off-site Receptors for the No Project Alternative	7-38
7-13 Modeled Traffic Noise Levels, Reduced Intensity Alternative	7-55
7-14 Average Daily Construction-related Emissions for the Reduced Intensity Alternative	7-56
7-15 Mitigated Average Daily Construction-related Emissions for the Reduced Intensity Alternative	7-57
7-16 Average Daily and Maximum Annual Operational Emissions for the Reduced Intensity Alternative	7-58
7-17 Annual Average PM _{2.5} Concentrations at off-site Receptors for the Reduced Intensity Alternative	7-59
7-18 Lifetime Excess Cancer Risk at Off-site Receptors for the Reduced Intensity Alternative	7-59
7-19 Off-site Alternative at Piers 30-32 and SWL 330 – Intersection Level of Service – Existing plus Project Conditions – without a SF Giants Game – Weekday PM Peak Hour	7-75
7-20 Off-site Alternative at Piers 30-32 and SWL 330 – Intersection Level of Service – Existing plus Project Conditions – without a SF Giants Game – Saturday Evening Peak Hour	7-76
7-21 Modeled Traffic Noise Levels, Off-site Alternative	7-81
7-22 Average Daily Construction-related Emissions for the Off-site Alternative	7-83
7-23 Mitigated Average Daily Construction-related Emissions for the Off-site Alternative	7-84
7-24 Average Daily and Maximum Annual Operational Emissions for the Off-site Alternative	7-85
7-25 Annual Average PM _{2.5} Concentrations at Off-site Receptors for the Off-site Alternative	7-86

	<u>Page</u>
List of Tables (continued)	
7-26 Lifetime Excess Cancer Risk at Off-site Receptors for the Off-site Alternative	7-87
7-27 Comparison of Significant Environmental Impacts of the Project to Impacts of the Alternatives	7-101
7-28 Alternative Locations Considered but Rejected	7-112
8-1 Existing plus Variant Wind Hazard Conditions	8-9

LIST OF ABBREVIATIONS AND ACRONYMS

3-D	three-dimensional
ABAG	Association of Bay Area Governments
AB 26	California Assembly Bill 26
AB 32	California Global Warming Solutions Act (California Assembly Bill 32)
AB 939	California Integrated Waste Management Act of 1989 (California Assembly Bill 939)
AB 900	California Assembly Bill 900
AB 1484	California Assembly Bill 1484
AC Transit	Alameda-Contra Costa Transit District
AEG	Anschutz Entertainment Group
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
agl	above ground level
AQI	Air Quality Index
ATCM	Airborne Toxic Control Measure
AVI	Automatic Vehicle Identification
AWSS	Auxiliary Water Supply System
BAA	Basketball Association of America
BART	San Francisco Bay Area Rapid Transit District
BAAQMD	Bay Area Air Quality Management District
BCDC	San Francisco Bay Conservation and Development Commission
BMPs	best management practices
BOMA	Building Owners and Managers Association International
Btu	British thermal units
CAA	Clean Air Act
CAPCOA	California Air Pollution Officers Association

CARB	California Air Resources Board
CCSF	City and County of San Francisco
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDSM	Cement Deep Soil Mixing
CEQA	California Environmental Quality Act
CFA	continuous flight auger piles
CFR	Code of Federal Regulations
CHP	California Highway Patrol
CH ₄	methane
CMP	Congestion Management Program
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CO ₂ E	carbon dioxide equivalent
CO-CAT	Coastal and Ocean Working Group of the California Climate Action Team
CPC	Capital Planning Committee
CRHR	California Register of Historical Resources
CSC	California Species of Concern
CSD	combined sewer discharges
CSO	combined sewer overflow
CWA	Federal Clean Water Act
cy	cubic yards
dB	decibel
DEM	digital elevation model
DPH	San Francisco Department of Public Health
DBI	San Francisco Department of Building Inspection
DNL	day-night noise level
DOA	Division of Aeronautics
DPM	diesel particulate matter
DPW	San Francisco Department of Public Works
EIR	Environmental Impact Report

EO	Executive Order
EV	electric vehicle
FAA	Federal Aviation Administration
FAR	floor area ratio
FARR	Final Archaeological Resources Report
FATO	final approach and takeoff area
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FICON	Federal Interagency Committee on Noise
FTA	Federal Transit Administration
FTE	full-time equivalent
GHGs	Greenhouse gases
gpm	gallons per minute
gsf	gross square feet
GSW	Golden State Warriors Arena, LLC
HCM 2000	Highway Capacity Manual 2000
HEPA	High Efficiency Particulate Air Filter
HMBP	hazardous materials business plan
HRA	health risk assessment
HUD	U.S. Department of Housing and Urban Development
I-280	Interstate 280
I-80	Interstate 80
IPCC	Intergovernmental Panel on Climate Change
kWh	kilowatt-hours
L_{eq}	equivalent continuous sound level
L_{max}	maximum noise level
LEED®	Leadership in Energy and Environmental Design
LID	Low Impact Development
LiDAR	Light Detection and Ranging
LRDP	Long Range Development Plan
mgd	million gallons per day
Mission Bay FEIR	Mission Bay Final Environmental Impact Report

Mission Bay FSEIR	Mission Bay Final Subsequent Environmental Impact Report
Mission Bay TMA	Mission Bay Transportation Management Association
MLD	Most Likely Descendant
MMcf	million cubic feet
MMRP	Mitigation Monitoring and Reporting Program
MPO	Metropolitan Planning Organization
MS4	Municipal Separate Storm Sewer System
msl	mean sea level
MTC	Metropolitan Transportation Commission
MTCO ₂ E	metric tons of carbon dioxide equivalent
MTS	Metropolitan Transportation System
Muni	San Francisco Municipal Railway
MW	megawatt
MWh	megawatt-hours
N ₂ O	nitrous oxide
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NAVD88	North American Vertical Datum of 1988
NBA	National Basketball Association
NBL	National Basketball League
ng/m ³	nanograms per cubic meter
NIH	National Institutes of Health
NO ₂	nitrogen dioxide
NOP	Notice of Preparation
North Design for Development	Design for Development for the Mission Bay North Project Area
North Plan	Mission Bay North Redevelopment Plan
North Plan Area	Mission Bay North Redevelopment Plan Area
NPDES	National Pollutant Discharge Elimination System
NWIC	Northwest Information Center
NPDES	National Pollutant Discharge Elimination System
NRC	National Research Council
NRHP	National Register of Historic Places

NSR	New Source Review
O.co Coliseum	Oakland–Alameda County Coliseum
OCII	Office of Community Investment and Infrastructure
OEHHA	California Office of Environmental Health Hazard Assessment
OPA	Owners Participation Agreement
OPR	Governor’s Office of Planning and Research
OSHA	Occupation Safety and Health Administration
PCBs	polychlorinated biphenyls
PCOs	Parking Control Officers
PDA	Priority Development Area
PDR	Production, Distribution, and Repair
perc	perchloroethylene
PG&E	Pacific Gas and Electric Company
PM	particulate matter
PM10	particulate matter of 10 microns in diameter or less
PM2.5	particulate matter of 2.5 microns in diameter or less
POM	polycyclic organic matter
Port	Port of San Francisco
ppb	parts per billion
ppm	parts per million
pphm	parts per hundred million
PPV	peak particle velocity
RMP	Risk Management Plan
ROG	reactive organic gases
RPP	Residential Permit Parking
RPS	Renewable Porfolio Standard
RRMP	Revised Risk Management Plan
ROSE	San Francisco General Plan Recreation and Open Space Element
RWQCB	Regional Water Quality Control Board
SB 107	California Senate Bill 107
SB 352	California Senate Bill 352
SB 375	California Senate Bill 375

SB 743	California Senate Bill 743
SB 1048	California Senate Bill 1048
SCS	Sustainable Communities Strategy
SAAQS	state ambient air quality standards
Secretary's Standards	Secretary of the Interior's Standards for the Treatment of Historic Properties
SEIR	Subsequent EIR
SEWPCP	Southeast Water Pollution Control Plant
sf	square feet
SFO	San Francisco International Airport
SFCTA	San Francisco County Transportation Authority
SFBAAB	San Francisco Bay Area Air Basin
SFD	San Francisco City Datum
SFGH	San Francisco General Hospital
SFFD	San Francisco Fire Department
SFMTA	San Francisco Municipal Transportation Agency
SFPD	San Francisco Police Department
SFPUC	San Francisco Public Utilities Commission
SFSD	San Francisco Sheriff's Department
SFUSD	San Francisco Unified School District
SHPO	State Historic Preservation Officer
SO ₂	sulfur dioxide
SoMa	South of Market
South Design for Development	Design for Development for the Mission Bay South Project Area
South Plan	Mission Bay South Redevelopment Plan
South Plan Area	Mission Bay South Redevelopment Plan Area
SSIP	Sewer System Improvement Program
SWMP	Storm Water Management Plan
SWRCB	State Water Resources Control Board
STC	sound transmission class
SVP	Society of Vertebrate Paleontology
SWL	Seawall Lot
SWPPP	Stormwater Pollution Prevention Plan

TACs	toxic air contaminants
TASC	Transportation Advisory Committee
TDM	Transportation Demand Management
TEP	Transit Effectiveness Project
TMA	Transportation Management Association
TMC	Transportation Management Center
TMDL	total maximum daily load
TMP	Transportation Management Plan
TNC	Transportation Network Company
TOG	total organic gases
TPY	tons per year
TSP	Transit Service Plan
TTRP	Travel Time Reduction Proposal
UCPD	University of California Police Department
UCMP	University of California Museum of Paleontology
UCSF	University of California at San Francisco
U.S. 101	U.S. Highway 101
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
UWMP	Urban Water Management Plan
$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
VdBs	vibration decibels
VDEC	Verified Diesel Emission Control Strategy
VMS	Variable Message Signs
VOC	volatile organic compounds
WAS	Water Availability Study
WETA	Water Emergency Transportation Authority
WHO	World Health Organization
WTA	Waterfront Transportation Assessment

CHAPTER 1

Summary

1.1 Project Description

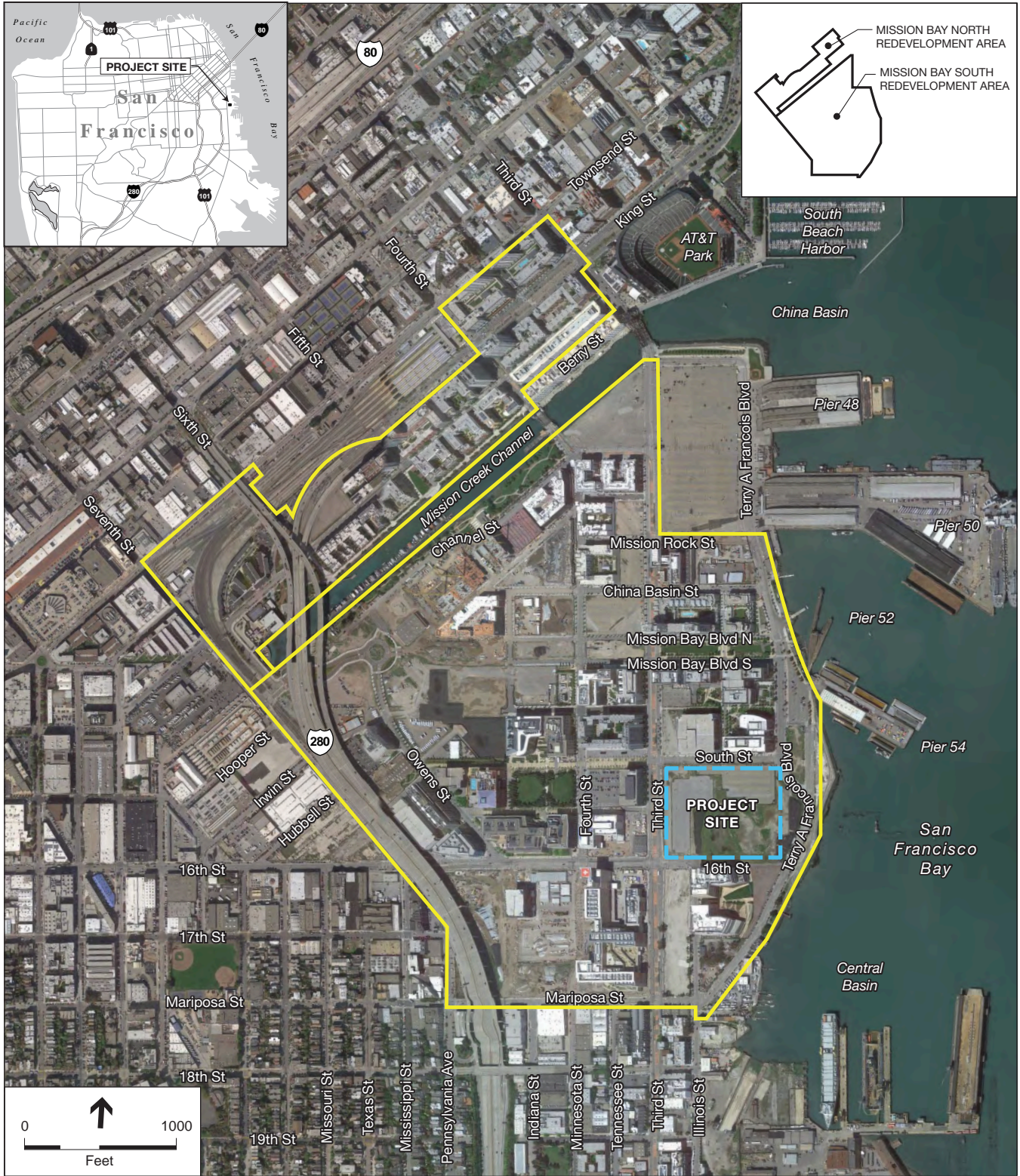
GSW Arena LLC (GSW), an affiliate of Golden State Warriors, LLC, which owns and operates the Golden State Warriors National Basketball Association (NBA) team, proposes to construct a multi-purpose event center and a variety of mixed uses, including office, retail, open space and structured parking on an approximately 11-acre site on Blocks 29-32 within the Mission Bay South Redevelopment Plan Area of San Francisco. See **Figure 1-1** for an aerial photograph of the project site within the Mission Bay South Redevelopment Plan Area. The project site is bounded by South Street on the north, Third Street on the west, 16th Street on the south, and by the future planned realigned Terry A. Francois Boulevard on the east. The proposed event center would host the Golden State Warriors basketball team during the NBA season, and provide a year-round venue for a variety of other uses, including concerts, family shows, other sporting events, cultural events, conferences, and conventions.

1.1.1 Background

The San Francisco Office of Community Investment and Infrastructure (OCII), successor to the San Francisco Redevelopment Agency, is the lead agency responsible for administering the environmental review for private projects in the Mission Bay North and South Redevelopment Plan Area of San Francisco, and has determined that an environmental impact report (EIR) is required for the proposed project in compliance with the requirements of the California Environmental Quality Act (CEQA). This EIR is a public information document for use by governmental agencies and the public to identify and evaluate potential environmental impacts of the proposed project, to recommend mitigation measures to lessen or eliminate significant adverse impacts, and to examine feasible alternatives to the project. The information contained in the EIR must be reviewed and considered by the OCII and by any responsible agencies (as defined in CEQA) prior to a decision to approve, disapprove, or modify the proposed project.

This document is a Subsequent EIR (SEIR), tiered from the certified *Mission Bay Final Subsequent Environmental Impact Report* (Mission Bay FSEIR),¹ which provided programmatic environmental review of the overall Mission Bay Redevelopment Plan (consisting of the Mission Bay North

¹ City and County of San Francisco and San Francisco Redevelopment Agency, 1998. *Final Mission Bay Subsequent Environmental Impact Report*. Planning Department File No. 96.771E, San Francisco Redevelopment Agency Case No. ER 919-97, State Clearinghouse No. 97092068. Certified September 17, 1998.



- Mission Bay Redevelopment Plan Area Boundary
- - - Project Site Boundary

Note: Please see also Figure 3-2, Existing Roadway Network in Mission Bay, for recent roadway improvements in Mission Bay.

SOURCE: Google Maps, ESA, 2014

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 1-1
Aerial Photograph of Mission Bay

Redevelopment Plan and Mission Bay South Redevelopment Plan). The Mission Bay FSEIR evaluated the potential environmental effects of the overall development of the approximately 300-acre Mission Bay plan area (see **Figure 1-2** for an illustration of land uses in the Mission Bay Redevelopment Plan). The proposed project at Blocks 29-32 is a subsequent activity allowed under and consistent with the Mission Bay South Redevelopment Plan. This SEIR provides detailed, project-level environmental review of the proposed Event Center and Mixed-Use Development at Blocks 29-32, within the context of the certified Mission Bay FSEIR.

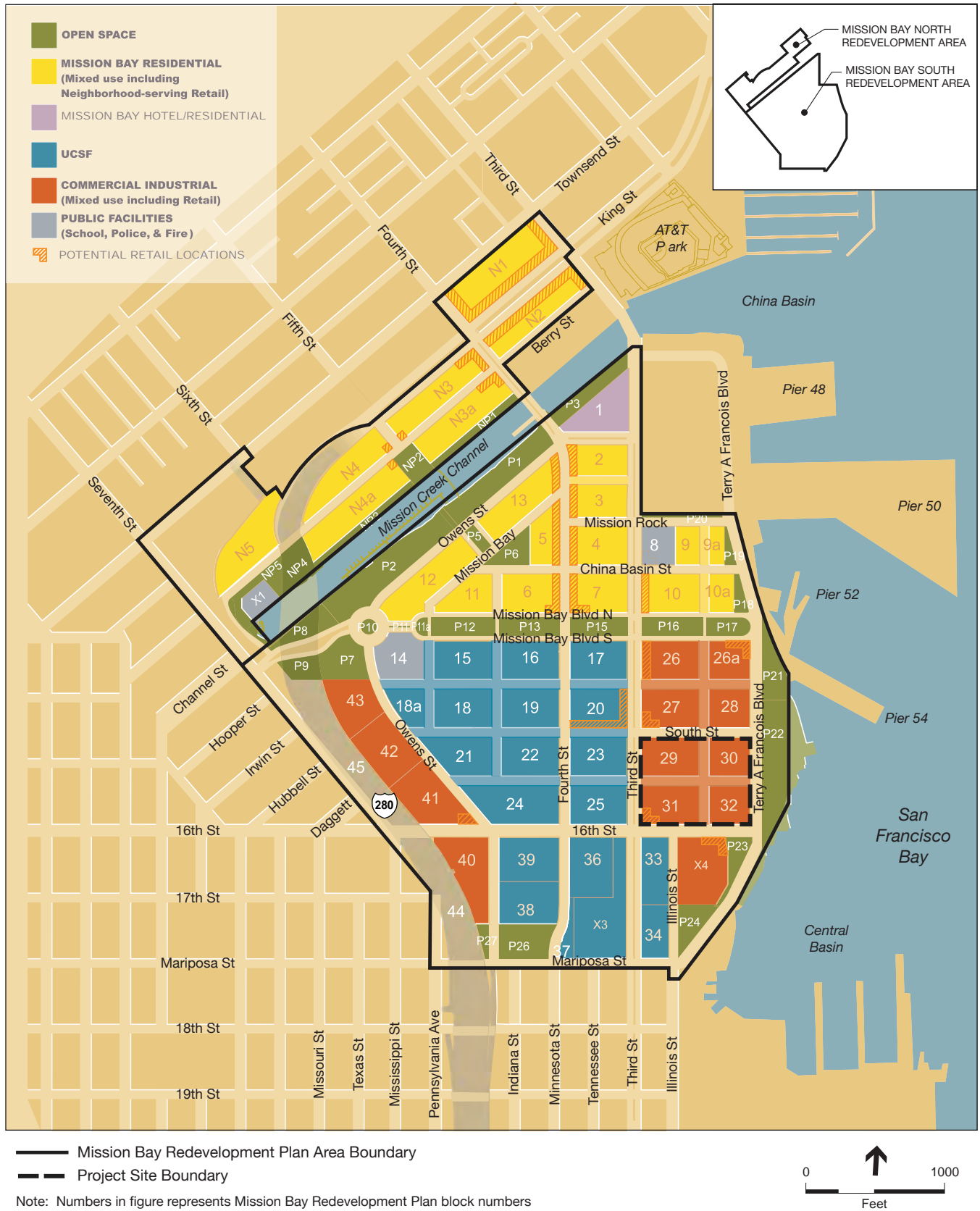
On November 19, 2014, OCII issued a Notice of Preparation (NOP) to notify and inform agencies and interested parties about the proposed project and to initiate the CEQA environmental review process for the project. The NOP included an Initial Study, which described and analyzed environmental resource areas that would not be significantly affected by the proposed project and included mitigation measures to reduce certain impacts to less than significant. This SEIR addresses the remaining environmental resources areas upon which the proposed project could result in significant, physical environmental impacts as well as identifies and analyzes alternatives to the proposed project. The NOP and Initial Study are included in Appendix NOP-IS of this SEIR.

1.1.2 Project Objectives

The Golden State Warriors currently play their home games at Oracle Arena, located at 7000 Coliseum Way in Oakland, California and lease their management offices and practice facility at the Oakland Convention Center at 1011 Broadway in downtown Oakland. The proposed project would consolidate these facilities in one location. Oracle Arena, built in 1966 and remodeled in 1996, is the oldest facility still in use by the NBA.

The project sponsor's objectives for the proposed Event Center and Mixed-Use Development at Blocks 29-32 are to:

- Construct a state-of-the-art multi-purpose event center in San Francisco that meets NBA requirements for sports facilities, can be used year-round for sporting events and entertainment and convention purposes with events ranging in capacity from approximately 3,000-18,500, and expands opportunities for the City's tourist, hotel and convention business.
- Provide sufficient complementary mixed-use development, including office and retail uses, to create a lively local and regional visitor-serving destination that is active year-round, promotes visitor activity and interest during times when the event center is not in use, provides amenities to visitors of the event center as well as the surrounding neighborhood, and allows for a financially feasible project.
- Develop a project that meets high-quality urban design and high-level sustainability standards.
- Optimize public transit, pedestrian and bicycle access to the site by locating the project within walking distance to local and regional transit hubs, and adjacent to routes that provide safe and convenient access for pedestrians and bicycles.



SOURCE: OCII, ESA, 2014

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
 Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 1-2
 Land Uses in the Mission Bay Redevelopment Plan

- Provide adequate parking and vehicular access that meets NBA and project sponsor's reasonable needs for the event center and serves the needs of project visitors and employees, while encouraging the use of transit, bicycle, and other alternative modes of transportation.
- Provide the City with a world class performing arts venue of sufficient size to attract those events which currently bypass San Francisco due to lack of a world class 3,000-4,000 seat facility.
- Develop a project that promotes environmental sustainability, transportation efficiency, greenhouse gas reduction, stormwater management using green technology, and job creation consistent with the objectives of the California Jobs and Economic Improvement Through Environmental Leadership Act (AB 900),² as amended.

1.1.3 Project Characteristics

The proposed project would develop the currently vacant Blocks 29-32 with a multi-purpose event center and a variety of mixed uses, including office, retail, open space and structured parking on the approximately 11-acre site. **Figure 1-3** presents the conceptual project site plan, illustrating primary project features and associated building heights. **Table 1-1** provides a summary overview of the key characteristics of the project facilities.

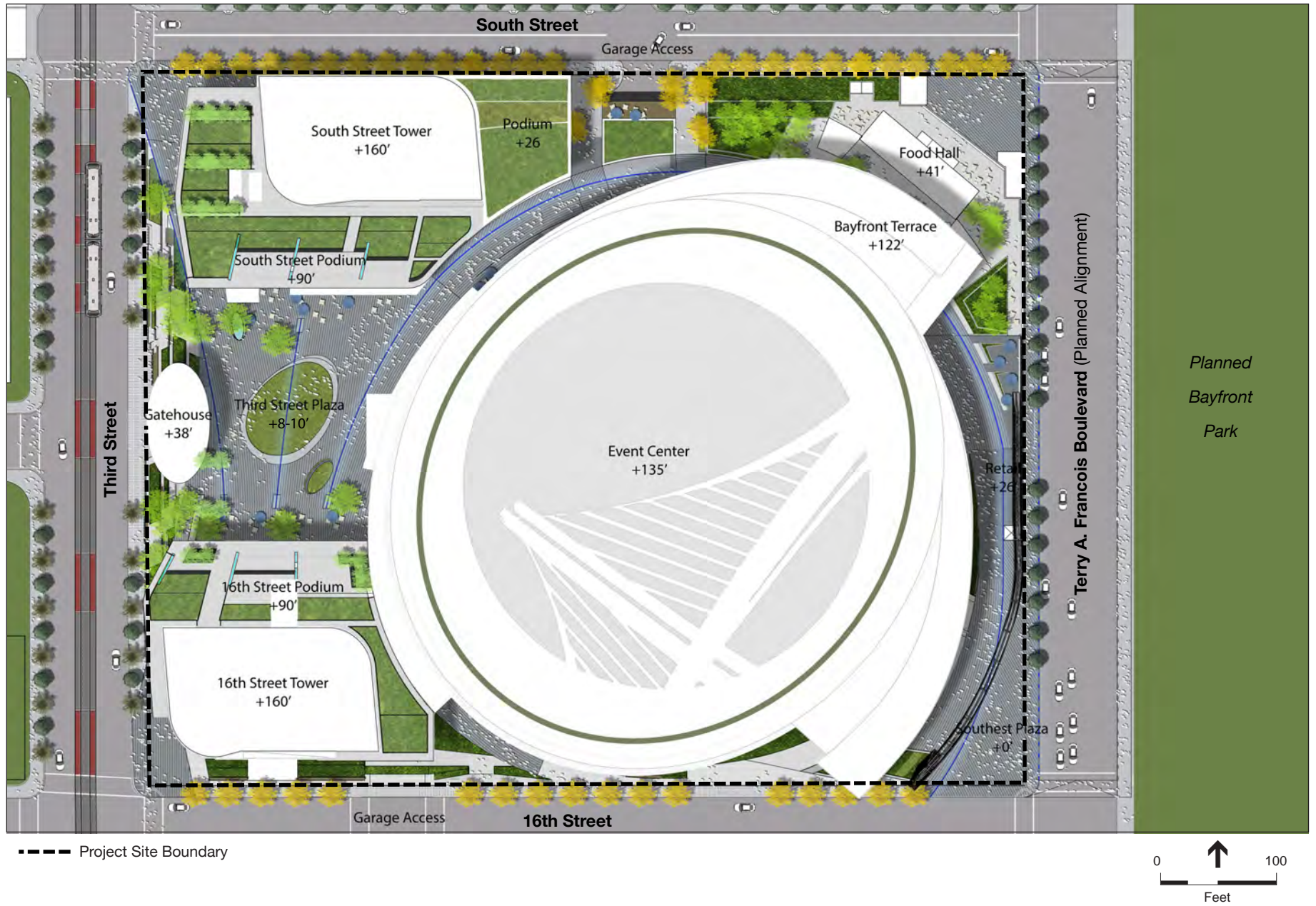
The proposed roughly circular-shaped event center building would be located in the central-east portion of the site. The event center building would be approximately 135 feet at its roof peak, and would include multiple levels of varying elevations. The event center would be programmed with a capacity of 18,064 seats for basketball games, but could be reconfigured for concerts for a maximum capacity of about 18,500. The performance and seating areas could also be re-configured in a cut-down theater configuration to create a smaller venue space.

Two office and retail buildings would be located on the west side of the project site. These buildings would each be 11 stories (160 feet tall at building rooftop); each office and retail building would consist of a podium ground level plus 5 podium levels (90 feet tall), with a 5-story (70-foot tall) tower (with smaller floorplate than the podium) above. These buildings could serve a variety of office and/or research and development uses, with retail uses on the lower floor(s).

Additional retail uses would front on South Street and Terry A. Francois Boulevard, and a 2-story, 38-foot high "gatehouse" building located mid-point along Third Street would provide retail uses and house elevators/escalators connecting to parking facilities on lower floors. A 3-story, 41-foot high "food hall" would be located at the corner of Terry A. Francois Boulevard and South Street.

Approximately 3.2 acres of open space would be designed within the site, including a proposed Third Street Plaza (elevated at approximately 8 to 12 feet above Third Street) on the west side of the project site between the event center and Third Street, and a proposed ground-level Southeast Plaza in the southeastern corner of the site.

² AB 900, effective January 1, 2012, provides streamlining benefits under CEQA for privately-financed projects located on an infill site that has been determined to generate thousands of jobs and include state-of-the-art pollution reductions.



SOURCE: Manica Architecture, 2015

Note: All building elevations were estimated per *Mission Bay South Design for Development* guidelines; please see text for additional description.

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 1-3
Conceptual Project Site Plan

**TABLE 1-1
SUMMARY OF PROPOSED PROJECT FACILITIES AND DESIGN FEATURES**

Project Component	Characteristic
Event Center Basketball Seating Capacity	18,064 seats ^a
Size	Total GSF
Event Center ^b	750,000
Golden State Warriors Office Space	25,000
Office Space	580,000
Retail Space ^c	125,000
Parking and Loading	<u>475,000</u>
Total Building Area	1,955,000 GSF^d
Height^{e,f}/Levels	
Event Center	135 feet
Office and Retail Buildings	160 feet (11 stories) total [90-foot (6-story) podiums with 70-foot (5-story) towers above]; retail uses within street level and plaza-level floors
Retail-only Buildings	41 feet in market hall building northeast corner of site; 38 feet in gatehouse building along Third Street
Parking/Loading Spaces	Blocks 29-32: 950 parking stalls below-grade or at-grade (concealed by Third Street Plaza) 13 truck docks below-grade Existing off-site at 450 South Street Parking Garage: 132 parking stalls
Vehicular Access	Access point for autos and all trucks on 16th Street at Illinois Street Access point for autos on South Street at Bridgeview Way
Open Space	3.2 acres

NOTES:

GSF = gross square feet.

- ^a Presented maximum seating capacity is for basketball games. However, as discussed in Chapter 3, Project Description, there would other types of events at the event center, including certain concerts and conventions, that would be able to accommodate a maximum attendance of up approximately 18,500 patrons with the addition of floor seats and/or standing room-only spaces (see Table 3-3 in Chapter 3 for more detail).
- ^b The event center would include a variety of supporting uses, including Golden State Warriors practice facility and management offices, bayfront terrace, retail, and other uses. For purposes of estimating areas, the Golden State Warriors management office space square footage is presented separately from square footage of the other event center uses.
- ^c Proposed retail uses are approximately 51,500 GSF sit-down restaurant, 11,000 quick-service restaurant, and 62,500 GSF soft goods retail including food retail.
- ^d The CEQA analyses are based on gross square footage. However, the Mission Bay South Redevelopment Plan permits development based on adjusted gross square footage and leasable square footage. Gross Square Footage and Leasable Square Footage as defined in the Mission Bay South Redevelopment Plan for this project would be less than the gross square footage presented in this environmental document.
- ^e All building heights in this SEIR, unless otherwise noted, are measured from finished grade to top of building, consistent with the South Design for Development guidelines. Please note the project site would continue to be slightly sloped, as under existing conditions. Per the South Design for Development guidelines, building height measurements are taken at the median grade height for each building face, and the total building height is calculated by averaging the height of the individual building faces.
- ^f Heights of proposed office and retail buildings exclude unoccupied top floor level with mechanical equipment. Mechanical equipment and associated enclosure may be up to 20 feet above the rooftop of building.

SOURCE: Manica Architecture, 2014, 2015

Three levels of enclosed on-site parking (two below grade and one at street level) would be located below the office and retail buildings and plaza areas, with a total of 950 vehicle parking spaces. Thirteen truck loading docks located on the lower parking level would serve the event center and office and retail uses. The project would also include 132 off-site parking spaces at the South Street garage, directly north of the project site, across South Street.

The project would be designed to Leadership in Energy and Environmental Design (LEED®) Gold standards and would incorporate a variety of design features to provide energy and water conservation and efficiency, encourage alternative transportation, promote a healthy indoor environment, minimize waste, and maximize recycling opportunities. The project would also implement a number of off-site roadway network and curb regulations, transit network, pedestrian and bicycle network improvements in the project site vicinity, including roadway restriping, intersection signalization, on-street parking, new perimeter sidewalks, bicycle lanes, signage and other improvements.

1.1.4 Proposed Operations

The event center would serve as the new venue for the Golden State Warriors home games, and provide a year-round venue for a variety of other uses, including concerts, family shows, other sporting events, cultural events, conferences and conventions. The event center would be used for up to approximately 225 events per year, with events ranging in capacity from approximately 3,000 patrons up to about 18,500 patrons. All existing Golden State Warriors operations, including management offices and practice facility, would relocate from their existing facilities in Oakland to the new event center. The proposed office and retail facilities on Blocks 29-32 would operate year-round, independent of the event center operations.

As part of the project, the project sponsor prepared and would implement a Transportation Management Plan (TMP). The TMP is a management and operating plan to facilitate multimodal access at the event center during project operation. The TMP includes various management strategies designed to reduce use of single-occupant vehicles and to increase the use of rideshare, transit, bicycle, and walk modes for trips to and from the project site.

1.1.5 Construction

Construction of the proposed project is anticipated to occur over an approximate 26-month period. Construction activities would include, but not be limited to: site demolition, clearing and excavation; temporary dewatering; pile installation and foundation construction; construction of all proposed development, including event center, podium structure, office towers and plazas; installation of associated utilities; interior finishing; and exterior hardscaping and landscaping improvements.

1.2 Environmental Impacts and Mitigation Measures

The Initial Study determined that the following topics were adequately analyzed in the Mission Bay FSEIR such that the proposed project would have no new significant impacts or no substantially more severe impacts previously found significant on these resources: Land Use; Population and Housing; Cultural and Paleontological Resources; Recreation; Air Quality (odors); Utilities and Services Systems (water supply and solid waste); Public Services (schools, parks, and other services); Biological Resources; Geology and Soils; Hydrology and Water Quality (groundwater, drainage, flooding, and inundation); Hazards and Hazardous Materials; Mineral and Energy Resources; and Agricultural and Forest Resources. Discussion and analysis of these impacts can be found in Appendix NOP-IS.

Impacts related to Aesthetics are not analyzed in the Initial Study or this SEIR because under CEQA (Public Resources Code Section 21099), aesthetics impacts of a mixed-use or employment center project on an infill site located within a transit priority area are not to be considered significant impacts.

Chapter 5 of the SEIR presents detailed discussion and analysis of the following resources: Transportation and Circulation; Noise and Vibration; Air Quality; Greenhouse Gas Emissions; Wind and Shadow; Utilities and Service Systems (wastewater and stormwater); Public Services (police and fire services); and Hydrology and Water Quality (wastewater, stormwater, and flood hazards).

Table 1-2 (at the end of this chapter) summarizes all of the impacts of the proposed project, identifies the significance determination of each impact, and presents the full text of the recommended mitigation measures and improvement measures. Mitigation measures are feasible measures that would avoid, lessen, or reduce significant impacts, and would be required to be implemented if the project is approved. Improvement measures would also lessen or reduce impacts, but unlike mitigation measures, implementation of improvement measures is not required under CEQA because they apply only to impacts determined to be less than significant. However, all improvement measures identified in this SEIR would be incorporated into conditions of approval and therefore would also be required to be implemented if the project is approved. The summary table includes all impacts and mitigation measures applicable to the proposed project, with the SEIR sections presented first, followed by the Initial Study sections.

As indicated on Table 1-2, the SEIR determined that the proposed project would result in significant and unavoidable impacts in the areas of transportation and circulation (traffic impacts at multiple intersections and freeway ramps, and transit demand on regional transit providers exceeding capacity); noise (substantial permanent increase in roadway noise and crowd noise affecting sensitive receptors); air quality (construction and operational emissions of ozone precursors exceeding thresholds), wind (substantial increase in wind hazard hours at off-site public areas); and utilities (construction of new or upgraded wastewater facilities, and determination by the San Francisco Public Utilities Commission that it currently has inadequate capacity to serve the project's wastewater demand).

1.3 Alternatives

An alternatives screening process was conducted to identify a reasonable range of alternatives that would avoid or lessen significant impacts of the proposed project, would meet most of the project objectives, and would be feasible. This process resulted in three alternatives selected for detailed analysis: the No Project Alternative, as required by CEQA; the Reduced Intensity Alternative based on its ability to attain the basic project objectives and its potential ability to avoid or substantially lessen transportation- and construction-related significant impacts; and the Off-site Alternative at Piers 30-32 and Seawall Lot 330 based on its ability to attain the basic project objective and its potential ability to avoid or substantially lessen wastewater capacity impacts, operational noise impacts, UCSF hospital helipad safety impacts, construction-related impacts, and water quality and hazardous materials impacts that were identified for the proposed project. In addition, analysis of a project variant requested by the project sponsor resulted in a fourth alternative, the Third Street Plaza Variant, which would lessen off-site wind hazard impacts of the proposed project. Numerous alternatives, including several off-site alternatives, were considered but eliminated from further consideration for one or more of the following reasons: the alternative would be infeasible, the alternative would result in the same or greater significant impacts than the proposed project, and/or the alternative would not meet most of the project objectives.

1.3.1 No Project Alternative

The No Project Alternative assumes that development at Blocks 29-32 could occur in the foreseeable future within the restrictions and controls established in the Mission Bay South Redevelopment Plan and the South Design for Development, as was envisioned in the Mission Bay FSEIR. While there is currently no such development proposal for Blocks 29-32, a hypothetical scenario was developed for the purposes of this SEIR. Under this scenario, the total mixed-use development would be 1,056,000 gross square feet (gsf) of commercial/ industrial uses, and 31,700 gsf of retail uses, with all buildings a maximum of 90 feet high except for a 160-foot high tower on Block 29, on-site above-grade structure parking with 1,050 stalls, and 132 spaces of off-site parking at the South Street garage. There would be no event center.

Impacts of the No Project alternative would be similar to those of the proposed project with respect to most resource areas. This is because most of these impacts would result from the conversion of a vacant parcel to a fully developed City block, regardless of the size of the development. However, unlike the proposed project which would result in significant and unavoidable air quality and noise impacts, the No Project Alternative would result in less-than-significant effects for the comparable impacts, due in large part to the removal of air pollutant emissions and noise from mobile sources associated with the event center. The No Project Alternative would avoid or substantially lessen a number of the project's significant and unavoidable impacts related to traffic, transit, crowd noise, roadway noise, and emissions of criteria air pollutants during construction and operation. However, the No Project Alternative would fail to meet the basic project objective of building an event center that can be used for NBA basketball games.

1.3.2 Reduced Intensity Alternative

The Reduced Intensity Alternative, developed as a hypothetical scenario for the purposes of this SEIR, would be the same as the proposed project with respect to the event center, but the office uses would be reduced from 580,000 to 373,000 gsf, retail uses would be reduced from 125,000 to 75,000 gsf, and on-site, subgrade parking reduced from 950 to 750 stalls. The total development would be reduced from 1,955,000 to 1,673,000 gsf, or a reduction of 282,000 gsf. In addition, the 16th Street tower would be reduced by seven floors, such that the height of the structure at Third and 16th Streets would be 55 feet instead of 160 feet.

Impacts of this alternative would be similar to those of the proposed project with respect to nearly all resource areas. This is because not only would the Reduced Intensity Alternative result in conversion of a vacant parcel to a fully developed City block, but with the inclusion of the event center, the Reduced Intensity Alternative would not avoid or substantially lessen any of the significant and unavoidable impacts identified for the proposed project. However, the reduced scale of the office and retail development would result in reducing the severity of a broad range of significant impacts. The Reduced Intensity Alternative would result in similar but slightly less severe impacts related to traffic, noise, air quality, and wastewater demand, and this alternative would meet all of the basic project objectives.

1.3.3 Off-site Alternative at Piers 30-32 and Seawall Lot 330

This alternative is based on a previous proposal by the same project sponsor, but was withdrawn and replaced by the currently proposed project. The Off-site Alternative at Piers 30-32 and Seawall Lot 330 would have an event center on Piers 30-32 with the same basketball seating capacity as the currently proposed project (18,064 seats), totaling 694,944 gsf (including the GSW offices), plus an event hall covering 25,946 gsf. Also located on Piers 30-32, this off-site alternative would include about 90,000 gsf of retail/restaurant uses, 13,172 gsf for services, about 252,554 gsf for parking and loading, and 1,820 gsf for Red's Java House, for a total building area of about 1,078,436 gsf. The height of the event center would be 128 feet high, with seven arena levels, height of the retail buildings 32 to 58 feet, with 1 to 3 levels, and the parking would be 31 feet high, with 3 levels. Red's Java House would be relocated from its current location in the northwest corner of Piers 30-32 to near the southwest corner. Other proposed facilities on Piers 30-32 would include a water taxi dock, a dolphin berthing structure, and over 7 acres of public open space on Piers 30-32. There would be 500 parking spaces at Piers 30-32. In addition to the development on Piers 30-32, the Off-site Alternative would include development on Seawall Lot 330, located directly across The Embarcadero from Piers 30-32, and consist of 208,844 gsf residential, 178,406 gsf hotel, 29,854 gsf retail, 106,339 gsf parking, and 11,447 gsf shared support areas. The development would include a four-story building with a 13-story residential tower above it (total height 175 feet) and a seven story hotel tower (total height 105 feet. Construction would require 32 months, compared to 26 months for the proposed project.

The Off-site Alternative would avoid or substantially lessen of the impacts of the proposed project related to roadway noise, criteria air pollutant emissions during project operations, wind hazards at off-site public areas, and wastewater utilities. However, this alternative would have

substantially more severe impacts than the proposed project related to construction noise and vibration and exposure of sensitive receptors to health risks. Furthermore, this alternative would result in different significant and unavoidable impacts that would not occur under the proposed project in the areas of transportation (traffic impacts at different intersections and a greater number of intersections) and construction noise (impacts on special-status fish and marine mammals). This alternative would meet most of the basic project objectives.

1.3.4 Third Street Plaza Variant as an Alternative

The Third Street Plaza Variant, described below under Section 1.5, is a minor variation on the proposed project in which the gatehouse and elevated plaza along Third Street would be replaced with a plaza. It would meet all of the project objectives and would have all the same impacts as the proposed project, except that it would avoid the significant and unavoidable wind hazard impact that was identified for the proposed project.

1.3.5 Environmentally Superior Alternative

The Reduced Intensity Alternative would be considered the environmentally superior alternative because it would reduce the severity of adverse environmental effects across a broad range of resources and would not result in any new significant impacts that would not occur under the proposed project.

1.4 Areas of Controversy and Issues to Be Resolved

On November 11, 2014, the OCII issued a NOP of a SEIR on the proposed project. Individuals, groups, and agencies that received these notices included owners of properties within 300 feet of the project site and other potentially interested parties, including various regional, state, and local agencies. A scoping meeting was held on December 9, 2014, to solicit comments on the scope of the SEIR. Based on the comments received during the scoping period for the project, controversial issues for the proposed project, as expressed by community members, include the following:

- Site should be reserved for potential future expansion of the UCSF campus;
- Effect of project construction and operations on UCSF helipad operations;
- Why the project is analyzed under a Subsequent Environmental Impact Report;
- Which City ordinances, regulations, and approval requirements are superseded or otherwise different in the Mission Bay area;
- Aesthetic effects of the proposed development, including views through the project site and view easements, light and glare effects from construction, building lighting, and outdoor events;
- The approach to the transportation impact analysis, reasons for the assumptions incorporated (specifically into mode share), times of day and week studied, and cumulative projects considered;

- Impacts on transportation and circulation (including highways, arterial streets, local streets, pinch points, transit stations and service, and emergency response), as well as mitigation measures—specifically a Transportation Management Plan—that would reduce such impacts;
- Provision of sufficient bicycle and pedestrian circulation facilities and impacts to bicyclists and pedestrians;
- Parking supply and demand under both existing conditions and with the project;
- Financing, monitoring, and responsibility for implementation of mitigation measures;
- Noise from construction, outdoor events, crowds, operational traffic and generators;
- Impact from exposure to air pollutants during construction and operation;
- Effects on nearby infrastructure and facilities, including the Mariposa pump station and Bayfront Park;
- Security and crowd management, provision of public restrooms, provision of trash receptacles, littering, vermin, graffiti, and public intoxication;
- Economic effects of the project on the surrounding neighborhood and City; and
- Cumulative impacts of development of the project combined with development of other projects, and development under other plans, in the vicinity.

1.5 Third Street Plaza Variant

The project sponsor has requested that this SEIR include environmental analysis of a variant to the proposed project. The project variant, the Third Street Plaza Variant, is a minor variation of the proposed project at the same project site at Mission Bay Blocks 29-32, with all of the same objectives, background, and development controls, and with one exception, same approvals as the proposed project. The Third Street Plaza Variant is analyzed in this SEIR at an equal level of detail as the proposed project, and therefore the variant analysis satisfies all CEQA requirements, should this variant be selected for approval.

Under the Third Street Plaza Variant, all aspects of the design, uses, construction, and operation proposed project would be identical to that of the proposed project with one exception: the area of the proposed Third Street Plaza would be modified to be consistent with the design standards of the UCSF view easement on the project site. Consequently, the "gatehouse" building, located mid-block along Third Street under the proposed project, would be relocated and the elevated main plaza would be replaced with an at-grade "event space" with no above-grade structural development. The variant would not require approval by UCSF for termination of their view easement that extends east from Third Street onto the project site.

The Third Street Plaza Variant would have all the same environmental impacts as those identified for the proposed project, with the exception of Wind effects. Unlike the proposed project which would have significant and unavoidable wind hazard impacts at off-site public locations, the Third Street Plaza Variant would have less-than-significant wind hazard impacts.

**TABLE 1-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2		
<i>Construction</i>		
<p>Impact TR-1: The proposed project would not result in construction-related ground transportation impacts because of their temporary and limited duration.</p>	<p>LS</p>	<p>No mitigation required.</p> <p>Improvement Measure I-TR-1: Construction Management Plan and Public Updates</p> <p><i>Construction Coordination</i> – To reduce potential conflicts between construction activities and pedestrians, bicyclists, transit and vehicles at the project site, the project sponsor shall require that the contractor prepare a Construction Management Plan for the project construction period. The preparation of a Construction Management Plan could be a requirement included in the construction bid package. Prior to finalizing the Plan, the project sponsor/construction contractor(s) shall meet with DPW, SFMTA, the Fire Department, Muni Operations and other City agencies to coordinate feasible measures to include in the Construction Management Plan to reduce traffic congestion, including temporary transit stop relocations and other measures to reduce potential traffic, bicycle, and transit disruption and pedestrian circulation effects during construction of the proposed project. This review should consider other ongoing construction in the project vicinity, such as construction of the nearby UCSF LRDP projects and construction on Blocks 26 and 27.</p> <p><i>Carpool, Bicycle, Walk and Transit Access for Construction Workers</i> – To minimize parking demand and vehicle trips associated with construction workers, the construction contractor could include as part of the Construction Management Plan methods to encourage carpooling, bicycle, walk and transit access to the project site by construction workers (such as providing transit subsidies to construction workers, providing secure bicycle parking spaces, participating in free-to-employee ride matching program from www.511.org, participating in emergency ride home program through the City of San Francisco (www.sferh.org), and providing transit information to construction workers.</p> <p><i>Construction Worker Parking Plan</i> – As part of the Construction Management Plan that would be developed by the construction contractor, the location of construction worker parking could be identified as well as the person(s) responsible for monitoring the implementation of the proposed parking plan. The use of on-street parking to accommodate construction worker parking could be discouraged. All construction bid documents could include a requirement for the construction contractor to identify the proposed location of construction worker parking. If on-site, the location, number of parking spaces, and area where vehicles would enter and exit the site could be required. If off-site parking is proposed to accommodate construction workers, the location of the off-site facility, number of parking spaces retained, and description of how workers would travel between off-site facility and project site could be required.</p> <p><i>Project Construction Updates for Adjacent Businesses and Residents</i> – To minimize construction impacts on access to nearby institutions and businesses, the project sponsor could provide nearby residences and adjacent businesses with regularly-updated information regarding project construction, including construction activities, peak construction vehicle activities (e.g., concrete pours), travel lane closures, and parking lane and sidewalk closures. A regular email notice could be distributed by the project sponsor that would provide current construction information of interest to neighbors, as well as contact information for specific construction inquiries or concerns.</p>

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
<i>Conditions Without a SF Giants Game at AT&T Park (Impacts TR-2 through TR-10)</i>		
<p>Impact TR-2: The proposed project would result in significant traffic impacts at multiple intersections that would operate at LOS E or LOS F under Existing plus Project conditions without a SF Giants game at AT&T Park.</p>	<p align="center">SUM</p>	<p>Mitigation Measure M-TR-2a: Additional PCOs during Events</p> <p>As a mitigation measure to manage traffic flows and minimize congestion associated with events at the project site, the proposed project’s TMP shall be modified to include four additional PCOs that shall be deployed to intersections where the proposed project would result in significant impacts, as conditions warrant during events. These could include the intersections of King/Fourth, Fifth/Harrison/I-80 westbound off-ramp, Fifth/Bryant/I-80 eastbound on-ramp, Seventh/Mission Bay Drive, and Seventh/Mississippi/16th. The PCO Supervisor shall make the determination where the additional PCOs would be located, based on field conditions during an event.</p> <p>Mitigation Measure M-TR-2b: Additional Strategies to Reduce Transportation Impacts</p> <p>The project sponsor shall work with the City to pursue and implement, if feasible, additional strategies to reduce transportation impacts. In addition, the City shall pursue and implement, if feasible, additional strategies that could be implemented by the City or other public agency (e.g., Caltrans). These strategies could include the following:</p> <p><i>Strategies to Reduce Traffic Congestion</i></p> <ul style="list-style-type: none"> • The City to work with Caltrans to install changeable message signs upstream of key entry points onto the street network, such as on I-280 northbound. • The City to provide coordinated outreach efforts to surrounding neighborhoods to explore the need/desire for new on-street parking management strategies, which could include implementation of time limits and Residential Parking Permit program areas. • The project sponsor to offer for pre-purchase substantially all available on-site parking spaces not otherwise committed to office tenants, retail customers or season ticket holders, and to cooperate with neighboring private garage operators to pre-sell parking spaces, as well as notify patrons in advance that nearby parking resources are limited and travel by non-auto modes is encouraged. • The project sponsor to create a smart phone application, or integrate into an existing smart phone application, transportation information that promotes transit first, allows for pre-purchase of parking and designates suggested paths of travel that best avoid congested areas or residential streets such as Bridgeview north of Mission Bay Boulevard and Fourth Street. • The City and the project sponsor to work to identify off-site parking lot(s) in the vicinity of the event center, if available, where livery and TNC vehicles could stage prior to the end of an event.

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
<i>Conditions Without a SF Giants Game at AT&T Park (Impacts TR-2 through TR-10) (cont.)</i>		
Impact TR-2 (cont.)		<ul style="list-style-type: none"> • The City to include on-street parking spaces within Mission Bay in the expansion and permanent implementation of <i>SFpark</i>, including installation of sensors, dynamic pricing, and smart phone application providing real-time parking availability and cost. • The City shall work to include the publicly accessible off-street facilities into the permanent implementation of <i>SFpark</i>, and incorporate data into a smart phone application and permanent dynamic message signs. • If necessary to support achievement of non-auto mode shares for the project, the project sponsor shall cooperate with future City efforts for active interventions to effectively manage and price the parking supply in the project vicinity to reduce travel by automobile, thus improving traffic conditions. • The project sponsor to seek partnerships with car-sharing services. <p><i>Strategy to Enhance Non-auto Modes</i></p> <ul style="list-style-type: none"> • The project sponsor to provide a promotional incentive (e.g., show Clipper card or bike valet ticket for concession savings, chance to win merchandise or experience, etc.) for public transit use and/or bicycle valet use at the event center. <p><i>Strategies to Enhance Transportation Conditions in Mission Bay and Nearby Neighborhoods</i></p> <ul style="list-style-type: none"> • The project sponsor to participate as a member of the Mission Bay Ballpark Transportation Coordination Committee (MBBTCC) and to notify at least one month prior to the start of any non-GSW event with at least 12,500 expected attendees. If commercially reasonable circumstances prevent such advance notification, the GSW shall notify the MBBTCC within 72 hours of booking. • The City and the project sponsor to meet to discuss transportation and scheduling logistics following signing any marquee events (national tournaments or championships, political conventions, or tenants interested in additional season runs: NHL, NCAA, etc.). <p><i>Strategies to Increase Transit Access</i></p> <ul style="list-style-type: none"> • The City to coordinate with regional providers to encourage increased special event service, particularly longer BART and Caltrain trains, and increased ferry and bus service. • The City to work in good faith with the Water Emergency Transportation Agency, the project sponsor, UCSF, and other interested parties to explore the possibility of construction of a ferry landing at the terminus of 16th Street, and provision of ferry service during events.

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
<i>Conditions Without a SF Giants Game at AT&T Park (Impacts TR-2 through TR-10) (cont.)</i>		
Impact TR-2 (cont.)		<p>Mission Bay FSEIR Mitigation Measure E.47: Transportation System Management Plan</p> <p>Prepare a TSM Plan, which could include the following:</p> <p><i>FSEIR Mitigation Measure E.47.a:</i> Shuttle Bus - Operate shuttle bus service between Mission Bay and regional transit stops in San Francisco (e.g., BART, Caltrain, Ferry Terminal, Transbay Transit Terminal), and specific gathering points in major San Francisco neighborhoods (e.g., Richmond and Mission Districts).</p> <p><i>FSEIR Mitigation Measure E.47.b:</i> Transit Pass Sales - Sell transit passes in neighborhood retail stores and commercial buildings in the Project Area.</p> <p><i>FSEIR Mitigation Measure E.47.c:</i> Employee Transit Subsidies - Provide a system of employee transportation subsidies for major employers.</p> <p><i>FSEIR Mitigation Measure E.47.e:</i> Secure Bicycle Parking - Provide secure bicycle parking area in parking garages of residential buildings, office buildings, and research and development facilities. Provide secure bicycle parking areas by 1) constructing secure bicycle parking at a ratio of 1 bicycle parking space for each 20 automobile parking spaces, and 2) carry out an annual survey program during project development to establish trends in bicycle use and to estimate actual demand for secure bicycle parking and for sidewalk bicycle racks, increasing the number of secure bicycle parking spaces or racks either in new buildings or in existing automobile parking facilities to meet the estimated demand. Provide secure bicycle racks throughout Mission Bay for the use of visitors.</p> <p><i>FSEIR Mitigation Measure E.47.f:</i> Appropriate Street Lighting - Ensure that streets and sidewalks in Mission Bay are sufficiently lit to provide pedestrians and bicyclists with a greater sense of safety, and thereby encourage Mission Bay employees, visitors and residents to walk and bicycle to and from Mission Bay.</p> <p><i>FSEIR Mitigation Measure E.47.g:</i> Transit and Pedestrian and Bicycle Route Information - Provide maps of the local and citywide pedestrian and bicycle routes with transit maps and information on kiosks throughout the Project Area to promote multi-modal travel.</p> <p><i>FSEIR Mitigation Measure E.47.h:</i> Parking Management Strategies - Establish parking management guidelines for the private operators of parking facilities in the Project Area.</p> <p><i>FSEIR Mitigation Measure E.47.i:</i> Flexible Work Hours/Telecommuting - Where feasible, offer employees in the Project Area the opportunity to work on flexible schedules and/or telecommute so they could avoid peak hour traffic conditions.</p>

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
<i>Conditions Without a SF Giants Game at AT&T Park (Impacts TR-2 through TR-10) (cont.)</i>		
Impact TR-2 (cont.)		<i>FSEIR Mitigation Measure E.49: Ferry Service - Make a good faith effort to assist the Port of San Francisco and others in ongoing studies of the feasibility of expanding regional ferry service. Make good faith efforts to assist in implementing feasible study recommendations.</i>
Impact TR-3: The proposed project would result in significant traffic impacts at freeway ramps that would operate at LOS E or LOS F under Existing plus Project conditions without a SF Giants game at AT&T Park.	SUM	Mitigation Measure M-TR-2b: Additional Strategies to Reduce Transportation Impacts (see Impact TR-2, above)
Impact TR-4: The proposed project would not result in a substantial increase in transit demand that could not be accommodated by adjacent Muni transit capacity such that significant adverse impacts to Muni transit service would occur under Existing plus Project conditions without a SF Giants game at AT&T Park.	LS	No mitigation required. Improvement Measure I-TR-4: Operational Study of the Southbound Platform at the T Third UCSF/Mission Bay Station As an improvement measure to enhance T Third operations at the UCSF/Mission Bay station for pre-event arrivals, the project sponsor shall fund a study of the effects of pedestrian flows on Muni’s safety and operations prior to an event as well as the feasibility and efficacy of enlarging the southbound platform by extending it south towards 16th Street. The study shall include an assessment of exiting pedestrian flows from a fully occupied two-car light rail train on the platform and ramp to the crosswalk at South Street across Third Street, also taking into consideration the presence of non-event transit riders waiting to board the train, service frequency, and current traffic signal operations. The study shall be performed by a qualified transportation professional approved by SFMTA.
Impact TR-5: The proposed project would result in a substantial increase in transit demand that could not be accommodated by regional transit capacity such that significant adverse impacts to regional transit service would occur under Existing plus Project conditions without a SF Giants game at AT&T Park.	SUM	Mitigation Measure M-TR-5a: Additional Caltrain Service As a mitigation measure to accommodate transit demand to and from the South Bay for weekday and weekend evening events, the project sponsor shall work with the Ballpark/Mission Bay Transportation Coordinating Committee to coordinate with Caltrain to provide additional Caltrain service to and from San Francisco on weekdays and weekends. The need for additional service shall be based on surveys of event center attendees conducted as part of the TMP.

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
<i>Conditions Without a SF Giants Game at AT&T Park (Impacts TR-2 through TR-10) (cont.)</i>		
Impact TR-5 (cont.)		<p>Mitigation Measure M-TR-5b: Additional North Bay Ferry and/or Bus Service</p> <p>As a mitigation measure to accommodate transit demand to the North Bay following weekday and weekend evening events, the project sponsor shall work with the Ballpark/Mission Bay Transportation Coordinating Committee to coordinate with Golden Gate Transit and WETA to provide additional ferry and/or bus service from San Francisco following weekday and weekend evening events. The need for additional service shall be based on surveys of event center attendees conducted as part of the TMP.</p>
<p>Impact TR-6: The proposed project could result in a substantial overcrowding on public sidewalks, or create potentially hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility on the site and adjoining areas under Existing plus Project conditions without a SF Giants game at AT&T Park.</p>	LSM	<p>Mitigation Measure M-TR-6: Active Management of Pedestrian Flows at the Intersection of Third/South</p> <p>As a mitigation measure to accommodate pedestrians traveling to and from the event center through the intersection of Third/South, PCOs stationed at this location shall implement strategies to allow pedestrians to cross the street safely. The strategies and level of active management shall be tailored to the event size, and could include extending the green time for pedestrians crossing the street, manually overriding the traffic signal and directing pedestrians to cross, erecting temporary pedestrian crossing barriers, allowing use of the closed Third Street as a pedestrian access route, providing a defined passenger waiting area within the closed Third Street, shielding passengers waiting to board light rail from adjacent pedestrian traffic, and deploying additional PCOs to this intersection.</p>
<p>Impact TR-7: The proposed project would not result in potentially hazardous conditions for bicyclists, or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas under Existing plus Project conditions without a SF Giants game at AT&T Park.</p>	LS	No mitigation required.
<p>Impact TR-8: The proposed project's loading demand would be accommodated within the proposed on-site loading facilities or proposed adjacent on-street commercial loading spaces, and would not create potentially hazardous conditions or significant delays for traffic, transit, bicyclists, or pedestrians under Existing plus Project conditions.</p>	LS	<p>No mitigation required.</p> <p>Improvement Measure I-TR-8: Truck and Service Vehicle Loading Operations Plan</p> <p>As an improvement measure to reduce potential conflicts between driveway operations, including loading activities, and pedestrians, bicycles and vehicles on South Street, Terry A. Francois Boulevard, and 16th Street, the project sponsor shall prepare a Loading Operations Plan, and submit the plan for review and approval by the OCII, or its designee, and the SFMTA. As appropriate, the Loading Operations Plan shall be periodically reviewed by the sponsor, the OCII or its designee, and SFMTA and revised if feasible to more appropriately respond to changes in street or circulation conditions.</p>

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
<i>Conditions Without a SF Giants Game at AT&T Park (Impacts TR-2 through TR-10) (cont.)</i>		
Impact TR-8 (cont.)		<p>The Loading Operations Plan shall include a set of guideline related to the operation of the on-site and on-street loading facilities, as well as large truck curbside access guidelines; it shall also specify driveway attendant responsibilities to minimize truck queuing and/or substantial conflicts between project-generated loading/unloading activities and pedestrians, bicyclists, transit and autos. Elements of the Loading Operations Plan shall include:</p> <ul style="list-style-type: none"> • Commercial loading activities within on-street commercial loading spaces on South Street, Terry A. Francois Boulevard, and 16th Street should comply with all posted time limits and all other posted restrictions. • Double parking or any form of illegal parking or truck loading/unloading should not be permitted on any streets adjacent to the project site, and particularly on 16th Street which would include a bicycle lane. Working with the SFMTA Parking Control Officers, building management should ensure that no truck loading/unloading activities occur within the bicycle lanes on 16th Street. • All move-in and move-out activities for commercial office uses should be coordinated by building management, and, in the event that moving trucks cannot be accommodated within the below-grade loading area, building management should obtain a reserved curbside permit from the SFMTA in advance of move-in or move-out activities.
Impact TR-9a: Construction of the proposed project could temporarily obstruct UCSF helipad airspace surfaces.	LSM	<p>Mitigation Measure M-TR-9a: Crane Safety Plan for Project Construction</p> <p>Prior to construction, the project construction contractor shall develop a crane safety plan for the project construction cranes that would be implemented during the construction period. The crane safety plan shall identify appropriate measures to reduce, and where possible, avoid, potential conflicts that may be associated with the operation of the construction cranes in the vicinity of the UCSF Benioff Children’s Hospital helipad airspace. These safety protocols shall be developed in consultation and coordination with OCII (or its designated representative) and UCSF, and the crane safety plan shall be subject to approval by OCII or its designated representative. The crane safety plan may include, but not limited to the following measures:</p> <ul style="list-style-type: none"> • Convey project crane activity schedule to UCSF and OCII • If other projects on adjacent properties are under construction concurrent with the proposed project and are using tower cranes, the project sponsor shall participate in joint coordination with those project sponsors and OCII or its designated representative to ensure any potential cumulative construction crane effects on the UCSF helipad would be minimized • use appropriate markings, flags, and/or obstruction lighting on all project construction cranes working in proximity to the helipad’s airspace surfaces • light all construction crane structures at night (e.g., towers, arms, and suspension rods) to enhance a pilot’s ability to discern the location and height of the cranes

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
<i>Conditions Without a SF Giants Game at AT&T Park (Impacts TR-2 through TR-10) (cont.)</i>		
Impact TR-9a (cont.)		<ul style="list-style-type: none"> • inform crane operators of the location and elevation of the hospital helipad’s Part 77 airspace surfaces and the need to minimize penetrations to the surfaces • use construction methods that minimize the duration of Part 77 airspace surface penetrations that may occur • to the extent possible, rotate crane arms away from the UCSF helipad’s Part 77 airspace surfaces at night and when not in use • Issue a Notice to Airmen (NOTAM) to advise pilots in the area of the presence of construction cranes at the project site.
Impact TR-9b: Project construction lighting would not adversely affect UCSF helipad flight operations.	LS	No mitigation required.
Impact TR-9c: Development of the proposed project would not obstruct UCSF helipad airspace surfaces.	LS	No mitigation required.
Impact TR-9d: Certain project specialized exterior lighting could adversely affect UCSF helipad flight operations.	LSM	<p>Mitigation Measure M-TR-9d: Event Center Exterior Lighting Plan</p> <p>The project sponsor shall develop an exterior lighting plan that incorporates measures to ensure specialized exterior lighting systems would not have an undue impact on helipad operations. Feasible measures shall be developed in consultation and coordination with SFO staff knowledgeable of the effects of lighting on pilots and safe air navigation, and OCII (or its designated representative), and the exterior lighting plan shall be subject to approval by OCII or its designated representative. Measures may include, but not be limited to the following:</p> <ul style="list-style-type: none"> • prohibit the use of high-intensity lights that are directed towards the UCSF helipad • prohibit the use of high-intensity outdoor flashing lights or strobe lights in proximity to the hospital helipad’s three approaches • prohibit the use of outdoor lasers directed upward, and laser light shows that have not been subject to prior review by OCII in consultation with SFO staff knowledgeable of the effects of lighting on pilots and safe air navigation and, if necessary the FAA • locate primary outdoor lighted displays and television/lighted screens away from the project property line at 16th Street, South Street, or Third Street, where feasible • advance notification and coordination of planned special event lighting with OCII and UCSF representatives • develop exterior specialized lighting guidelines and ensure event organizers are informed of the hospital helipad, its approaches, and safety concerns related to outdoor nuisance lighting

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
<i>Conditions Without a SF Giants Game at AT&T Park (Impacts TR-2 through TR-10) (cont.)</i>		
<p>Impact TR-10: The proposed project would not result in significant impacts on emergency vehicle access under Existing plus Project conditions without a SF Giants game at AT&T Park.</p>	LS	<p>No mitigation required.</p> <p>Improvement Measure I-TR-10a: UCSF Emergency Vehicle Access and Garage Signage Plan</p> <p>As an improvement measure to enhance access for emergency vehicles and other visitors to the UCSF Children’s Hospital emergency room and parking facilities at the UCSF Medical Center, the project sponsor shall work with UCSF to develop and implement a UCSF emergency vehicle access and garage signage plan for I-280 and Mariposa, Owens, and 16th Streets to reflect desirable access routes for UCSF and event center access.</p> <p>Improvement Measure I-TR-10b: Mariposa Street Restriping Study</p> <p>As an improvement measure to enhance access to the UCSF Medical Center Children’s Hospital, the project sponsor shall retain a qualified transportation professional approved by SMTA to conduct a traffic engineering study to evaluate potential changes to the travel lane configuration and related signage on Mariposa Street between the I-280 ramps and Fourth Street. The study, to be conducted in coordination with UCSF and SFMTA, would determine if the eastbound left turn lane into Fourth Street/UCSF passenger loading/unloading and emergency vehicle entrance to the UCSF Children’s Hospital could be extended west from its existing length of about 150 feet to provide for additional queuing area.</p>
<i>Conditions With a SF Giants Evening Game at AT&T Park (Impacts TR-11 to TR-17)</i>		
<p>Impact TR-11: The proposed project would result in significant traffic impacts at multiple intersections that would operate at LOS E or LOS F under Existing plus Project conditions with an overlapping SF Giants evening game at AT&T Park.</p>	SUM	<p>Mitigation Measure M-TR-2b: Additional Strategies to Reduce Transportation Impacts (see Impact TR-2, above)</p> <p>Mitigation Measure M-TR-11a: Additional PCOs during Overlapping Events</p> <p>As a mitigation measure to manage traffic flows and minimize congestion associated with overlapping events, the proposed project’s TMP shall be expanded to include additional PCOs that shall be deployed to the following intersections where the proposed project would result in significant traffic impacts, as conditions warrant during events: King/Fifth/I-280 ramps, Fifth/Harrison/I-80 westbound off-ramp, Fifth/Bryant/I-80 eastbound on-ramp, Seventh/Mission Bay Drive, Fourth/16th, and Seventh/Mississippi/16th. The PCO Supervisor shall make the determination where the additional PCOs would be located, based on field conditions during an event. This measure shall be implemented in coordination with Mitigation Measure M-TR-2a: Additional PCOs during Events.</p> <p>Mitigation Measure M-TR-11b: Participation in the Ballpark/Mission Bay Transportation Coordinating Committee</p> <p>As a mitigation measure to optimize effectiveness of the transportation management strategies for day-to-day operations and events in the Mission Bay area, at AT&T Park, UCSF Mission Bay campus, and the proposed project, the project sponsor shall actively participate as a member of the Ballpark/Mission Bay Transportation Coordinating Committee in order to evaluate and</p>

Significance Determinations:

NI = No Impact

LS = Less-Than-Significant Impact (no mitigation required)

LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)

SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)

SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
<i>Conditions With a SF Giants Evening Game at AT&T Park (Impacts TR-11 to TR-17) (cont.)</i>		
Impact TR-11 (cont.)		<p>plan for operations of all three facilities (i.e., AT&T Park, UCSF Mission Bay Campus, and the proposed event center). This committee would, among other roles, serve as a single point for coordination of transportation management strategies.</p> <p>The Transportation Coordinating Committee shall consult on changes to and expansion of transit services, and for developing and implementing strategies within their purview that address transportation issues and conflicts as they arise. In addition, the committee shall serve as a liaison for operation of the facilities, monitoring conditions, and addressing community issues related to events and the project sponsor shall make good faith efforts to notify the committee regarding events.</p> <p>Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts of Overlapping Events</p> <p>The project sponsor shall work with the City to pursue and implement, if feasible, additional strategies to reduce transportation impacts associated with overlapping events at AT&T Park and the proposed event center. These strategies could include the following:</p> <ul style="list-style-type: none"> • The project sponsor shall exercise commercially reasonable efforts to avoid scheduling non-Golden State Warriors events of 12,500 or more event center attendees that start within 60 minutes of the start (respectively) of events at AT&T Park. • When overlapping non-Golden State Warriors events of 12,500 or more event center attendees and evening SF Giants games cannot be avoided through commercially reasonable efforts, the project sponsor shall negotiate with the event promoter as feasible to stagger start times such that the event headliner starts no earlier than 8:30 p.m. • The City shall identify one or more off-site parking lot(s) on Port of San Francisco or other lands to the south of the event center to provide approximately 250 additional parking spaces for all events and up to approximately 750 additional parking spaces for use during dual events of 12,500 or more event center attendees (for a total of approximately 1,000 additional off-site parking spaces). The project sponsor shall: (1) acquire sufficient rights for the use of such parking lot(s) through lease, purchase, or other means as necessary; (2) pay its fare-share contribution towards any improvements required for the use of such parking lot(s), including but not limited to grading, paving, striping, fencing, lighting, drainage, stormwater pollution prevention measures, curb cuts, and ramps; and (3) provide free shuttles to the event center from such off-site parking lot(s) that are more than ¼-mile from the event center on a maximum 10-minute headway before and after events.
Impact TR-12: The proposed project would result in significant traffic impacts at freeway ramps that would operate at LOS E or LOS F under Existing plus Project conditions with an overlapping SF Giants evening game at AT&T Park.	SUM	<p>Mitigation Measure M-TR-2b: Additional Strategies to Reduce Transportation Impacts (see Impact TR-2, above)</p> <p>Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts of Overlapping Events (see Impact TR-11, above)</p>

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
<i>Conditions With a SF Giants Evening Game at AT&T Park (Impacts TR-11 to TR-17) (cont.)</i>		
<p>Impact TR-13: The proposed project could result in a substantial increase in transit demand that could not be accommodated by adjacent Muni transit capacity such that significant adverse impacts to Muni transit service would occur under Existing plus Project conditions with an overlapping SF Giants evening game at AT&T Park.</p>	LSM	<p>Mitigation Measure M-TR-13: Additional Muni Transit Service during Overlapping Events</p> <p>As a mitigation measure to accommodate Muni transit demand to and from the project site and AT&T Park on the T Third light rail line during overlapping evening events, the project sponsor shall work with the Ballpark/Mission Bay Transportation Coordinating Committee to coordinate with the SFMTA to provide additional Muni light rail service and/or shuttle buses between key Market Street locations and the project. Examples of the additional service include Muni bus shuttles between Union Square and/or Montgomery BART/Muni station and the project site. The need for additional Muni service shall be based on characteristics of the overlapping events (e.g., projected attendance levels, and anticipated start and end times).</p>
<p>Impact TR-14: The proposed project would result in a substantial increase in transit demand that could not be accommodated by regional transit such that significant adverse impacts to regional transit service would occur under Existing plus Project conditions with an overlapping SF Giants evening game at AT&T Park.</p>	SUM	<p>Mitigation Measure M-TR-5a: Additional Caltrain Service during Events (see Impact TR-5, above)</p> <p>Mitigation Measure M-TR-5b: Additional North Bay Bus and Ferry Service during Events (see Impact TR-5, above)</p> <p>Mitigation Measure M-TR-14: Additional BART Service to the East Bay during Overlapping Events</p> <p>As a mitigation measure to accommodate transit demand to the East Bay following weekday and weekend evening events, the project sponsor shall work with the Ballpark/Mission Bay Transportation Coordinating Committee to coordinate with BART to provide additional service from San Francisco following weekday and weekend evening events. The additional East Bay BART service could be provided by operating longer trains. The need for additional BART service shall be based on characteristics of the overlapping events (e.g., event type, projected attendance levels, and anticipated start and end times).</p>
<p>Impact TR-15: The proposed project could result in a substantial overcrowding on public sidewalks, or create potentially hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility on the site and adjoining areas under Existing plus Project conditions with an overlapping SF Giants evening game at AT&T Park.</p>	LSM	<p>Mitigation Measure M-TR-6: Active Management of Pedestrian Flows at the Intersection of Third/South (See Impact TR-6, above)</p>

Significance Determinations:

NI = No Impact

LS = Less-Than-Significant Impact (no mitigation required)

LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)

SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)

SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
<i>Conditions With a SF Giants Evening Game at AT&T Park (Impacts TR-11 to TR-17) (cont.)</i>		
Impact TR-16: The proposed project would not result in potentially hazardous conditions for bicyclists, or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas under Existing plus Project conditions with an overlapping SF Giants evening game at AT&T Park.	LS	No mitigation required.
Impact TR-17: The proposed project would not result in significant impacts on emergency vehicle access under Existing plus Project conditions with an overlapping SF Giants evening game at AT&T Park.	LS	No mitigation required. Improvement Measure I-TR-10a: UCSF Emergency Vehicle Access and Garage Signage Plan (see Impact TR-10, above) Improvement Measure I-TR-10b: Mariposa Street Restriping (see Impact TR-10, above)
<i>Conditions Without Implementation of the Muni Special Events Transit Service Plan</i>		
Impact TR-18: Without implementation of the Muni Special Event Transit Service Plan, the proposed project would result in additional significant traffic impacts at intersections that would operate at LOS E or LOS F under Existing plus Project conditions.	SUM	Mitigation Measure M-TR-2a: Additional PCOs during Events (see Impact TR-2, above) Mitigation Measure M-TR-2b: Additional Measures to Reduce Transportation Impacts (see Impact TR-2, above) Mitigation Measure M-TR-18: Auto Mode Share Performance Standard and Monitoring <i>Performance Standards and Strategies for Achieving Them</i> The project sponsor shall be responsible for implementing TDM measures intended to reach an auto mode share performance standard for different types of events. Specifically, the project sponsor shall work to achieve the following performance standards: 1. For weekday events that have 12,500 or more attendees, the project shall not exceed an arrival auto mode share of 53 percent. 2. For weekend events that have 12,500 or more attendees, the project shall not exceed an arrival auto mode share of 59 percent.

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
<i>Conditions without Implementation of the Muni Special Event Transit Service Plan (cont.)</i>		
Impact TR-18 (cont.)		<p>The performance standards shall be achieved by the middle of the Golden State Warriors' third season at the event center, and for every Golden State Warriors season thereafter.</p> <p>The project sponsor may implement any combination of TDM strategies, including those identified in the proposed project's TMP, to achieve the above performance standards. Potential strategies include, but are not limited to:</p> <ul style="list-style-type: none"> • Providing shuttle bus service between major transportation hubs such as Transbay Transit Terminal, BART stations, Caltrain stations and the event center. • Providing bus shuttles between park & ride lots, remote parking facilities, or other facilities or locations within San Francisco, and the event center. • Facilitating charter bus packages through the event sales department to encourage large groups to travel to and from the event center on charter buses. • Reducing the project parking demand through a variety of mechanisms, including pricing. • Offering high occupancy vehicle parking at more convenient locations than parking for the general public and/or at reduced rates. • Undertaking media campaigns, including in social media, that promote walking and/or bicycling to the event center. • Conducting cross-marketing strategies with event center businesses (e.g., 10 percent off merchandise/food if patrons arrive by transit and/or bike or on foot). • Carrying out public education campaigns. • Offering special event ferry service to the closest ferry station to the project site (similar to the existing service provided between AT&T Park and Alameda and Marin Counties by Golden Gate Transit, Alameda/Oakland and Vallejo ferry service). • Providing incentive for arrivals by bike. • Providing transit fare incentives to event ticket holders.

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
<i>Conditions without Implementation of the Muni Special Event Transit Service Plan (cont.)</i>		
Impact TR-18 (cont.)		<p>Monitoring and Reporting</p> <p>The project sponsor shall retain a qualified transportation professional¹ to conduct travel surveys, as outlined below, and to document the results in a <i>Transportation Demand Management Report</i>. Prior to beginning the travel survey, the transportation professional shall develop the data collection methodology in consultation with and approved by OCII (or its designated representative such as the Environmental Review Officer (ERO)) and in consultation with SFMTA. It is anticipated that data collection would occur at least during four days for two different types of events, for a total of eight days. Specifically, data collection shall be conducted during at least two weekday and two weekend NBA basketball games with 12,500 or more attendees, and two weekday and two weekend non-basketball events with attendance of 12,500 or more attendees.</p> <p>The schedule of the travel surveys shall be as follows:</p> <ul style="list-style-type: none"> • Comprehensive travel surveys of basketball game attendees shall be conducted between December and April of every season. • Comprehensive travel surveys of non-basketball event attendees (conventions events, concerts, family shows, etc.) could be collected any time during the year. <p>The following data of event attendees shall be collected as part of the travel surveys:</p> <ul style="list-style-type: none"> • Origin/destination of the trip (city, zip code, home/work/other) • Mode of travel to/from event center <ul style="list-style-type: none"> – If by transit, list mode and name of transit operator (AC Transit, BART, Caltrain, Muni, etc.) – If by rail, name of station trip started and ended – If by auto, number of people in the vehicle – If by auto, parking location and approximate walking time to event center – If by auto, ask if following trips would continue as auto, or if anticipate a mode shift. – If by bicycle or walking, name the origin of the trip. If a transfer from regional transit, name the origin and operator. – If by bike share, name the origin (i.e., the pick up location) of the trip. Note if trip is a “last mile” connection from regional transit, and include the origin and operator.

¹ The Transportation Demand Management Report shall be performed by a qualified transportation professional from the Planning Department’s *Transportation Consultant Pool*.

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
<i>Conditions without Implementation of the Muni Special Event Transit Service Plan (cont.)</i>		
Impact TR-18 (cont.)		<ul style="list-style-type: none"> • Arrival and departure times at the event center <p>The travel survey shall employ whatever methodology necessary, as approved by the OCII (or the ERO) in consultation with SFMTA, to collect the above described data including but not limited to: manual or automatic (e.g., video or tubes) traffic volume counts, intercept surveys, smart phone application-based surveys, and on-line surveys.</p> <p>The <i>Transportation Demand Management Report(s)</i> shall be submitted to OCII, or its designee, for review within 30 days of completion of the data collection. If the City finds that the project exceeds the stated mode share performance standard, the project sponsor shall revise the proposed project's Transportation Management Plan (TMP) to incorporate a set of measures that would lower the auto mode share. For basketball events, the TMP shall be revised by no later than August 15th of the calendar year to ensure adequate lead time to implement TDM measures prior to the start of the following basketball season. For non-basketball events, the proposed project's TMP shall be revised within 90 days of submittal of the <i>Transportation Demand Management Report</i> to incorporate a set of measure that would lower the auto mode share.</p> <p>If the project does not meet the stated performance standard, the project sponsor shall implement TDM measures and collect data on a semi-annual basis (i.e., twice during a calendar year) to assess their effectiveness for basketball games and other events. The implementation of TDM measures shall be intensified until the auto mode split performance standard is achieved. Upon achievement of the performance standard, the project sponsor may resume travel survey data collection for basketball and non-basketball events on an annual basis. If the sponsor demonstrates three consecutive years of meeting the auto mode share performance standard, the comprehensive data collection effort may occur every two years.</p> <p>The data collection plan described above may be modified by OCII (or the ERO) in coordination with SFMTA if field observations and/or other circumstances require data collection at different times and/or for different events than specified above. The modification of the data collection plan, however, shall not change the performance standards set forth in this mitigation measure.</p>
Impact TR-19: Without implementation of the Muni Special Event Transit Service Plan, the proposed project would result in additional significant traffic impacts at freeway ramps that would operate at LOS E or LOS F under Existing plus Project conditions.	SUM	<p>Mitigation Measure M-TR-2b: Additional Measures to Reduce Transportation Impacts (see Impact TR-2, above)</p> <p>Mitigation Measure M-TR-18: Auto Mode Share Performance Standard and Monitoring (see Impact TR-18, above)</p>

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
<i>Conditions without Implementation of the Muni Special Event Transit Service Plan (cont.)</i>		
<p>Impact TR-20: Without implementation of the Muni Special Event Transit Service Plan, the proposed project would result in a substantial increase in transit demand that could not be accommodated by adjacent Muni transit capacity such that significant adverse impacts to Muni transit service would occur under Existing plus Project conditions.</p>	SUM	<p>Mitigation Measure M-TR-18: Auto Mode Share Performance Standard and Monitoring (see Impact TR-18, above)</p>
<p>Impact TR-21: Without implementation of the Muni Special Event Transit Service Plan, the proposed project would result in a substantial increase in transit demand that could not be accommodated by regional transit capacity such that significant adverse impacts to regional transit service would occur under Existing plus Project conditions.</p>	SUM	<p>Mitigation Measure M-TR-5a: Additional Caltrain Service (see Impact TR-5, above) Mitigation Measure M-TR-5b: Additional North Bay Ferry and Bus Service (see Impact TR-5, above)</p>
<p>Impact TR-22: Without implementation of the Muni Special Event Transit Service Plan, the proposed project could result in a substantial overcrowding on public sidewalks, nor create potentially hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility on the site and adjoining areas under Existing plus Project conditions.</p>	LSM	<p>Mitigation Measure M-TR-22: Provide Safe Pedestrian Access to Adjacent Transit and Parking Facilities and Monitoring</p> <p>During events with 3,000 or more attendees, the project sponsor shall be responsible for providing trained personnel (e.g., off-duty SFPD staff) to control pedestrian, bicycle and vehicular flows to and from the event center at the intersections immediately adjacent to the project site and to ensure that Muni platforms serving the site are not over capacity. The trained personnel shall be provided during pre- and post-event periods. The project sponsor shall ensure that conflicts between various modes are reduced to the maximum extent possible through adequate staffing of trained personnel as well as other measures, as appropriate.</p> <p>Other pedestrian management measures that could be implemented include but are not limited to: installation of barricades, proper signage and announcements to disperse patrons to other streets around the project site, such as to Terry A. Francois Boulevard, and cross-marketing incentives such as 20 percent discount at the restaurant and retail establishments to extend the peak departure period. Through the implementation of various strategies, the project sponsor shall ensure that pedestrian conflicts with other modes are minimized by separating vehicles, bicycles, transit and pedestrian flows to the greatest extent possible, including ensuring that various modes are adequately instructed about when it is their turn to proceed. The project sponsor shall also ensure that Muni platforms are not overcrowded by staging event attendees on the adjacent sidewalks until there is sufficient space on the Muni platforms, which are proposed to be expanded as part of the project.</p>

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
<i>Conditions without Implementation of the Muni Special Event Transit Service Plan (cont.)</i>		
Impact TR-22 (cont.)		<p>At the intersection of Third/South, the trained personnel shall implement strategies to allow pedestrians to cross the street safely. The strategies could include manually overriding the traffic signal and directing pedestrians to cross, erecting temporary pedestrian crossing barriers, allowing use of the closed Third Street as a pedestrian access route, providing a defined passenger waiting area within the closed Third Street, and shielding passengers waiting to board light rail from adjacent pedestrian traffic.</p> <p>Monitoring and Reporting</p> <p>The project sponsor shall retain a qualified transportation professional² to conduct field observations of pedestrian hazards and safety conditions along Third Street adjacent to the project site, as outlined below, and to document the results in a <i>Pedestrian Access Report</i>. City staff shall verify the field data collection results. Prior to beginning field observations, the transportation professional shall develop the data collection methodology in consultation with and approved by OCII (or its designated representative such as the ERO) in coordination with SFMTA. The data collection methodology shall be reviewed and revised annually, if appropriate. Field observations shall be conducted during the following event types and attendance levels:</p> <ul style="list-style-type: none"> • at least two weekday NBA basketball games with 12,500 or more attendees; • at least two weekend NBA basketball games with 12,500 or more attendees; • at least two weekday non-basketball game events with 12,500 or more attendees; • at least two weekend non-basketball game events with 12,500 or more attendees; • at least two weekday non-basketball game events with 3,000 to 9,000 attendees; and • at least two weekend non-basketball game events with 3,000 to 9,000 attendees; and • at least two weekday convention events of 9,000 or more attendees. <p>The pedestrian hazard and safety conditions field observations shall occur on an annual basis. The <i>Pedestrian Access Report</i> shall be submitted to SFMTA, OCII and Planning Department for review within 30 days of completion of the data collection. If the City finds that the project does not meet the performance standard outlined below, the Transportation Management Plan (TMP) shall be revised to incorporate techniques to minimize conflicts between pedestrians and other modes. The TMP shall be revised within 90 days of submittal of the <i>Pedestrian Access Report</i>. When the project is not meeting the stated performance standard, the project sponsor shall collect data on a semi-annual basis (i.e., twice during a calendar year) to assess the effectiveness of various measures incorporated into the revised TMP. The implementation of various measures shall be intensified until pedestrian access to and from the site occurs in a safe manner, as determined by OCII (or the ERO).</p>

² The Transportation Demand Management Report shall be performed by a qualified transportation professional from the San Francisco Planning Department’s *Transportation Consultant Pool*. Available online at <http://www.sf-planning.org/index.aspx?page=1886>. Accessed May 28, 2015.

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
<i>Conditions without Implementation of the Muni Special Event Transit Service Plan (cont.)</i>		
Impact TR-22 (cont.)		<p>The performance standard for safe pedestrian operations consists of the following: substantial numbers of pedestrians are not spilling onto the Muni right-of-way area, are not illegally crossing Third Street midblock, are not overcrowding the Muni platforms, and are not crossing intersections against the signal. Upon achievement of the performance standard, the project sponsor may resume field observations for basketball, non-basketball and convention events on an annual basis. If the sponsor demonstrates three consecutive years of meeting the performance standard, the comprehensive data collection effort may occur every two years.</p> <p>Further, in reviewing the <i>Pedestrian Access Report</i>, OCII (or the ERO) may adjust the size of the events for which this measure is applicable. For example, if small scale events (e.g., those with 5,000 attendees) do not result in crosswalk and/or Muni platform overcrowding or other similar pedestrian safety conditions, OCII (or the ERO) may revise this mitigation measure to apply to events of 5,001 or more attendees.</p>
Impact TR-23: Without implementation of the Muni Special Event Transit Service Plan, the proposed project would not result in potentially hazardous conditions for bicyclists, or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas under Existing plus Project conditions.	LS	No mitigation required.
Impact TR-24: Without implementation of the Muni Special Event Transit Service Plan, the proposed project would not result in significant impacts on loading under Existing plus Project conditions.	LS	<p>No mitigation required.</p> <p>Improvement Measure I-TR-8: Truck and Service Vehicle Loading Operations Plan (see Impact TR-8, above)</p>
Impact TR-25: Without implementation of the Muni Special Event Transit Service Plan, the proposed project would not result in significant impacts on emergency vehicle access under Existing plus Project conditions.	LS	<p>No mitigation required.</p> <p>Improvement Measure I-TR-10a: UCSF Emergency Vehicle Access and Garage Signage Plan (see Impact TR-10, above)</p> <p>Improvement Measure I-TR-10b: Mariposa Street Restriping (see Impact TR-10, above)</p>

Significance Determinations:

NI = No Impact

LS = Less-Than-Significant Impact (no mitigation required)

LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)

SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)

SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
<i>Cumulative Impacts</i>		
Impact C-TR-1: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative construction-related ground transportation impacts.	LS	No mitigation required.
Impact C-TR-2: The project, in combination with other past, present, and reasonably foreseeable future projects, would result in significant cumulative traffic impacts at multiple intersections in the project vicinity under 2040 Cumulative conditions.	SUM	Mitigation Measure M-TR-2a: Additional PCOs during Events (see Impact TR-2, above) Mitigation Measure M-TR-2b: Additional Strategies to Reduce Transportation Impacts (see Impact TR-2, above) Mitigation Measure M-TR-11a: Additional PCOs During Overlapping Events (see Impact TR-11, above) Mitigation Measure M-TR-11b: Participation in Ballpark/Mission Bay Transportation Coordinating Committee (see Impact TR-11, above) Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts of Overlapping Events (see Impact TR-11, above)
Impact C-TR-3: The project, in combination with other past, present, and reasonably foreseeable future projects, would result in significant cumulative traffic impacts at multiple freeway ramps in the project vicinity under 2040 Cumulative conditions.	SUM	Mitigation Measure M-TR-2b: Additional Strategies to Reduce Transportation Impacts (see Impact TR-2, above) Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts of Overlapping Events (see Impact TR-11, above)
Impact C-TR-4: The project, in combination with other past, present, and reasonably foreseeable future projects, could have significant transit impacts on Muni service under 2040 Cumulative conditions, and could contribute to significant cumulative transit impacts at Muni screenlines.	LSM	Mitigation Measure M-TR-13: Additional Muni Transit Service During Overlapping Events (see Impact TR-13, above)

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
<i>Cumulative Impacts (cont.)</i>		
Impact C-TR-5: The project, in combination with other past, present, and reasonably foreseeable future projects, would have significant transit impacts on regional transit under 2040 Cumulative conditions.	SUM	Mitigation Measure M-TR-5a: Additional Caltrain Service (see Impact TR-5, above) Mitigation Measure M-TR-5b: Additional North Bay Ferry and Bus Service (see Impact TR-5, above) Mitigation Measure M-TR-14: Additional BART Service to the East Bay During Overlapping Events (see Impact TR-14, above)
Impact C-TR-6: The project, in combination with other past, present, and reasonably foreseeable future projects, could result in significant adverse cumulative pedestrian impacts.	LSM	Mitigation Measure M-TR-6: Active Management of Pedestrian Flows at the Intersection of Third/South (see Impact TR-6, above)
Impact C-TR-7: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative bicycle impacts.	LS	No mitigation required.
Impact C-TR-8: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative loading impacts.	LS	No mitigation required. Improvement Measure I-TR-8: Truck and Service Vehicle Operations Plan (see Impact TR-8, above)
Impact C-TR-9: The project, in combination with other past, present, and reasonably foreseeable future projects, could result in significant adverse cumulative impacts to the UCSF helipad.	LSM	Mitigation Measure M-TR-9a: Crane Safety Plan for Project Construction (see Impact TR-9)
Impact C-TR-10: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative emergency vehicle access impacts.	LS	No mitigation required. Improvement Measure I-TR-10a: UCSF Emergency Vehicle Access and Garage Signage Plan (see Impact TR-10, above) Improvement Measure I-TR-10b: Mariposa Street Restriping (see Impact TR-10, above)

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Noise, SEIR Section 5.3		
Impact NO-1: Construction of the proposed project would not cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project	LS	No mitigation required. Improvement Measure I-NO-1: Mission Bay Good Neighbor Construction Noise Policy The project sponsor shall comply with the Mission Bay Good Neighbor Policy and limit all extreme noise-generating construction activities to 8:00 a.m. to 5:00 p.m., Monday through Friday. No pile driving or other extreme noise generating activity is permitted on Saturdays, Sundays, and holidays.
Impact NO-2: Construction of the proposed project would not expose people to or generate noise levels in excess of standards established in the local general plan, noise ordinance, or applicable standards of other agencies.	LS	No mitigation required.
Impact NO-3: Construction of the proposed project would not expose people and structures to or generate excessive groundborne vibration levels.	LS	No mitigation required. Improvement Measure I-NO-3: Neighbor Notification of Vibration-Inducing Construction Activities At least one week prior to the start of rapid impact compaction activities, the project sponsor shall notify owners and occupants within 500 feet of the project site of the dates, hours, and expected duration of such activities.
Impact NO-4: Operation of the proposed project could result in exposure of persons to or generation of noise levels in excess of standards established in the <i>San Francisco General Plan</i> or San Francisco Noise Ordinance.	LSM	Mitigation Measure M-NO-4a: Noise Control Plan for Outdoor Amplified Sound The project sponsor shall develop and implement a Noise Control Plan for operations at the proposed entertainment venues to reduce the potential for noise impacts from public address and/or amplified music. This Noise Control Plan shall contain the following elements: <ul style="list-style-type: none"> • The project sponsor shall comply with noise controls and restrictions in applicable entertainment permit requirements for outdoor concerts. • Speaker systems shall be directed away from the nearest sensitive receptors to the degree feasible. • Outdoor speaker systems shall be operated consistent with the restrictions of Section 2909 of the San Francisco Police Code, and conform to a performance standard of 8 dBA and dBC over existing ambient L90 noise levels at the nearest residential use.

Significance Determinations:

NI = No Impact

LS = Less-Than-Significant Impact (no mitigation required)

LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)

SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)

SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Noise, SEIR Section 5.3 (cont.)		
Impact NO-4 (cont.)		<p>Mitigation Measure M-NO-4b: Noise Control Plan for Place of Entertainment Permit</p> <p>As part of the Place of Entertainment Permit process, the project sponsor shall develop and implement a Noise Control Plan for operations at the proposed entertainment venue to reduce the potential for noise impacts from interior event noise. This Noise Control Plan shall, at a minimum, contain the following elements:</p> <ul style="list-style-type: none"> • The project sponsor shall comply with noise controls and restrictions in applicable entertainment permit requirements. • The establishment shall provide adequate ventilation within the structures such that doors and/or windows are not left open for such purposes resulting in noise emission from the premises. • There shall be no noise audible outside the establishment during the daytime or nighttime hours that violates the San Francisco Municipal Code Section 49 or 2900 et. seq. Further, absolutely no sound from the establishment shall be audible inside any surrounding residences or businesses that violates San Francisco Police Code section 2900. • Permit holder shall take all reasonable measures to insure the sidewalks adjacent to the premises are not blocked or unnecessarily affected by patrons or employees due to the operations of the premises and shall provide security whenever patrons gather outdoors. • Permit holder shall provide a cell phone number to all interested neighbors that will be answered at all times by a manager or other responsible person who has the authority to adjust volume and respond to other complaints whenever entertainment is provided.
Impact NO-5: Operation of the proposed project would cause a substantial permanent increase in ambient noise levels in the project vicinity.	SUM	<p>Mitigation Measure M-TR-2c: Additional Strategies to Reduce Transportation Impacts (see Section 5.2, Transportation and Circulation, Impact TR-2)</p> <p>Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts of Overlapping Events (see Section 5.2, Transportation and Circulation, Impact TR-2)</p>
Impact C-NO-1: Construction activities of the proposed project combined with cumulative construction noise in the project area could cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity during construction.	LSM	<p>Mitigation Measure M-C-NO-1: Construction Noise Control Measures</p> <p>Contractors shall employ site-specific noise attenuation measures during construction to reduce the generation of construction noise. These measures shall be included in a Noise Control Plan that shall be submitted for review and approval by the OCII or its designated representative to ensure that construction noise is reduced to the degree feasible. Measures specified in the Noise Control Plan and implemented during project construction shall include, at a minimum, the following noise control strategies:</p> <ul style="list-style-type: none"> • Equipment and trucks used for construction shall use the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds).

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Noise, SEIR Section 5.3 (cont.)		
Impact C-NO-1 (cont.)		<ul style="list-style-type: none"> • Construction equipment with lower noise emission ratings shall be used whenever possible, particularly for air compressors. • Sound-control devices no less effective than those provided by the manufacturer shall be provided on all construction equipment. • Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible; this could achieve a reduction of 5 dBA. Quieter procedures, such as use of drills rather than impact tools, shall be used where feasible. • Stationary noise sources such as material stockpiles and vehicle staging areas shall be located as far from adjacent receptors as possible. • Enclosures and mufflers for stationary equipment shall be provided, impact tools shall be shrouded or shielded, and barriers shall be installed around particularly noisy activities at the construction sites so that the line of sight between the construction activities and nearby sensitive receptor locations is blocked to the extent feasible. • Unnecessary idling of internal combustion engines shall be prohibited. • Construction-related vehicles and equipment shall be required to use designated truck routes to travel to and from the project sites as determined with consultation with the SFMTA as part of the permit process prior to construction (see Improvement Measure I-TR-1: Construction Management Plan and Public Updates). • The project sponsor shall designate a point of contact to respond to noise complaints. The point of contact must have the authority to modify construction noise-generating activities to ensure compliance with the measures above and with the San Francisco Noise Ordinance.
Impact C-NO-2: Operation of the proposed project when considered with other cumulative development would cause a substantial permanent increase in ambient noise levels in the project vicinity.	SUM	<p>Mitigation Measure M-TR-2c: Additional Strategies to Reduce Transportation Impacts (see Section 5.2, Transportation and Circulation, Impact TR-2)</p> <p>Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts of Overlapping Events (see Section 5.2, Transportation and Circulation, Impact TR-2)</p>
Impact C-NO-3: Occupants of the proposed project would not be substantially affected by noise from future operations of the helipad at the adjacent UCSF Hospital.	LS	No mitigation required.

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure												
Air Quality, SEIR Section 5.4														
<p>Impact AQ-1: Construction of the proposed project would generate fugitive dust and criteria air pollutants, which would violate an air quality standard, contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants.</p>	<p align="center">SUM</p>	<p>Mitigation Measure M-AQ-1: Construction Emissions Minimization</p> <p>A. <i>Construction Emissions Minimization Plan.</i> Prior to issuance of a construction permit, the project sponsor shall submit a Construction Emissions Minimization Plan (Plan) to the OCII or its designated representative for review and approval by an Air Quality Specialist. The Plan shall detail project compliance with the following requirements:</p> <ol style="list-style-type: none"> 1. All off-road equipment greater than 25 horsepower (hp) and operating for more than 20 total hours over the entire duration of construction activities shall meet the following requirements: <ol style="list-style-type: none"> a) Where access to alternative sources of power are available, portable diesel engines shall be prohibited. Where portable diesel engines are required because alternative sources of power are not available, the diesel engine shall meet the equipment compliance step-down schedule in Table M-AQ-1-1. <div style="text-align: center;"> <p>TABLE M-AQ-1-1 OFF-ROAD EQUIPMENT COMPLIANCE STEP-DOWN SCHEDULE</p> <table border="1"> <thead> <tr> <th>Compliance Alternative</th> <th>Engine Emission Standard</th> <th>Emissions Control</th> </tr> </thead> <tbody> <tr> <td align="center">1</td> <td align="center">Tier 4 Interim</td> <td align="center">ARB NOx VDECS (40%)³</td> </tr> <tr> <td align="center">2</td> <td align="center">Tier 3</td> <td align="center">ARB NOx VDECS (40%)</td> </tr> <tr> <td align="center">3</td> <td align="center">Tier 2</td> <td align="center">ARB NOx VDECS (40%)</td> </tr> </tbody> </table> <p>How to use the table: If the requirements of (A)(1)(b) cannot be met, then the project sponsor would need to meet Compliance Alternative 1. Should the project sponsor not be able to supply off-road equipment meeting Compliance Alternative 1, then Compliance Alternative 2 would need to be met. Should the project sponsor not be able to supply off-road equipment meeting Compliance Alternative 2, then Compliance Alternative 3 would need to be met.</p> </div> <ol style="list-style-type: none"> b) All off-road equipment shall have engines that meet either U.S. Environmental Protection Agency (USEPA) or California Air Resources Board (CARB) Tier 4 off-road emission standards. If engines that comply with Tier 4 off-road emission standards are not commercially available, then the project sponsor shall provide the next cleanest piece of off-road equipment as provided by the step down schedules in Table M-AQ-1-1. 	Compliance Alternative	Engine Emission Standard	Emissions Control	1	Tier 4 Interim	ARB NOx VDECS (40%) ³	2	Tier 3	ARB NOx VDECS (40%)	3	Tier 2	ARB NOx VDECS (40%)
Compliance Alternative	Engine Emission Standard	Emissions Control												
1	Tier 4 Interim	ARB NOx VDECS (40%) ³												
2	Tier 3	ARB NOx VDECS (40%)												
3	Tier 2	ARB NOx VDECS (40%)												

³ <http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Air Quality, SEIR Section 5.4 (cont.)		
Impact AQ-1 (cont.)		<ul style="list-style-type: none"> i. For purposes of this mitigation measure, “commercially available” shall mean the availability of Tier 4 equipment taking into consideration factors such as: (i) critical path timing of construction; (ii) geographic proximity to the Project site of equipment; and (iii) geographic proximity of access to off haul deposit sites. ii. The project sponsor shall maintain records concerning its efforts to comply with this requirement. <ol style="list-style-type: none"> 2. The project sponsor shall require the idling time for off-road and on-road equipment be limited to no more than two minutes, except as provided in exceptions to the applicable state regulations regarding idling for off-road and on-road equipment. Legible and visible signs shall be posted in multiple languages (English, Spanish, and Chinese) in designated queuing areas and at the construction site to remind operators of the two minute idling limit. 3. The project sponsor shall require that construction operators properly maintain and tune equipment in accordance with manufacturer specifications. 4. The Plan shall include estimates of the construction timeline by phase with a description of each piece of off-road equipment required for every construction phase. Off-road equipment descriptions and information may include, but are not limited to: equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (Tier rating), horsepower, engine serial number, and expected fuel usage and hours of operation. For VDECS installed: technology type, serial number, make, model, manufacturer, ARB verification number level, and installation date and hour meter reading on installation date. For off-road equipment using alternative fuels, reporting shall indicate the type of alternative fuel being used. The plan shall also include estimates of ROG and NOx emissions. 5. The project sponsor shall keep the Plan available for public review on site during working hours. The project sponsor shall post at the perimeter of the project site a legible and visible sign summarizing the requirements of the Plan. The sign shall also state that the public may ask to inspect the Plan at any time during working hours, and shall explain how to request inspection of the Plan. Signs shall be posted on all sides of the construction site that face a public right of way. The project sponsor shall provide copies of Plan to members of the public as requested. <p>B. Reporting. Quarterly reports shall be submitted to the OCII or its designated representative indicating the construction phase and off-road equipment information used during each phase including the information required in A(4). In addition, for off-road equipment using alternative fuels, reporting shall include the actual amount of alternative fuel used.</p> <p>Within six months of the completion of construction activities, the project sponsor shall submit to the OCII or its designated representative a final report summarizing construction activities. The final report shall indicate the start and end dates and duration of each construction phase. For each phase, the report shall include detailed information required in A(4). In addition, for off-road equipment using alternative fuels, reporting shall include the actual amount of alternative fuel used.</p>

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Air Quality, SEIR Section 5.4 (cont.)		
Impact AQ-1 (cont.)		C. <i>Certification Statement and On-site Requirements.</i> Prior to the commencement of construction activities, the project sponsor must certify (1) compliance with the Plan, and (2) all applicable requirements of the Plan have been incorporated into contract specifications.
<p>Impact AQ-2: During project operations, the proposed project would result in emissions of criteria air pollutants at levels that would violate an air quality standard, contribute to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants.</p>	SUM	<p>Mitigation Measure M-AQ-2a: Reduce Operational Emissions</p> <p>The project sponsor shall implement the following measures as feasible:</p> <ul style="list-style-type: none"> • Provision of outlets for electrically powered landscape equipment • Mitigation Measure M-TR-2c: Additional Strategies to Reduce Transportation Impacts (see Section 5.2, Transportation and Circulation, Impact TR-2) • Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts of Overlapping Events (see Section 5.2, Transportation and Circulation, Impact TR-11) <p>Mitigation Measure M-AQ-2b: Emission Offsets</p> <p>Upon completion of construction, and prior to issuance of certificate of occupancy, the project sponsor shall pay a mitigation offset fee to the Bay Area Air Quality Management District’s (BAAQMD) Strategic Incentives Division in an amount not to exceed \$18,030 per weighted ton of ozone precursors plus a 5 percent administrative fee to fund one or more emissions reduction projects within the San Francisco Bay Area Air Basin (SFBAAB). This fee is intended to fund emissions reduction projects to achieve reductions of 17.0 tons per year of ozone precursors. Documentation of payment shall be provided to OCII or its designated representative.</p> <p>The project sponsor shall calculate the amount of emissions offset required from construction based on the reporting requirements of Mitigation Measure M-AQ-1 and the degree of compliance with off-road equipment types that were determined to be commercially available. If the calculated construction emissions of ozone precursors requires offsets in excess of 17.0 tons per year, then the applicant shall provide the additional offset amount commensurate with the calculated ozone precursor emissions exceeding 17.0 tons per year.</p> <p>Acceptance of this fee by the BAAQMD shall serve as an acknowledgment and commitment by the BAAQMD to: (1) implement an emissions reduction project(s) within one year of receipt of the mitigation fee to achieve the emission reduction objectives specified above; and (2) provide documentation to OCII or its designated representative and to the project sponsor describing the project(s) funded by the mitigation fee, including the amount of emissions of ROG and NOx</p>

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Air Quality, SEIR Section 5.4 (cont.)		
Impact AQ-2 (cont.)		reduced (tons per year) within the SFBAAB from the emissions reduction project(s). If there is any remaining unspent portion of the mitigation offset fee following implementation of the emission reduction project(s), the project sponsor shall be entitled to a refund in that amount from the BAAQMD. To qualify under this mitigation measure, the specific emissions retrofit project must result in emission reductions within the SFBAAB that would not otherwise be achieved through compliance with existing regulatory requirements.
Impact AQ-3: Construction and operation of the proposed project would generate toxic air contaminants, including diesel particulate matter, and could expose sensitive receptors to substantial air pollutant concentrations.	LSM	Mitigation Measure M-AQ-1: Construction Emissions Minimization (see Impact AQ-1, above)
Impact AQ-4: The proposed project could conflict with, or obstruct implementation of, the <i>2010 Clean Air Plan</i> .	LSM	Mitigation Measure M-AQ-1: Construction Emissions Minimization (see Impact AQ-1, above) Mitigation Measure M-AQ-2a: Reduce Operational Emissions (see Impact AQ-2, above) Mitigation Measure M-AQ-2b: Emissions Offsets (see Impact AQ-2, above)
Cumulative Impacts		
Impact C-AQ-1: The project, in combination with other past, present, and reasonably foreseeable future projects, would contribute to cumulative regional air quality impacts.	SUM	Mitigation Measure M-AQ-1: Construction Emissions Minimization (see Impact AQ-1) Mitigation Measure M-AQ-2a: Reduce Operational Emissions (see Impact AQ-2) Mitigation Measure M-AQ-2b: Emission Offsets (see Impacts AQ-1 and AQ-2)
Impact C-AQ-2: The project, in combination with other past, present, and reasonably foreseeable future projects, could generate toxic air contaminants, including diesel particulate matter, and could expose sensitive receptors to substantial air pollutant concentrations.	LSM	Mitigation Measure M-AQ-1: Construction Emissions Minimization (see Impact AQ-1)

Significance Determinations:

NI = No Impact

LS = Less-Than-Significant Impact (no mitigation required)

LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)

SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)

SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Greenhouse Gas Emissions, SEIR Section 5.5		
<p>Impact C-GG-1: The proposed project would generate greenhouse gas emissions, but not at levels that would result in a significant impact on the environment or conflict with any policy, plan, or regulation adopted for the purpose of reducing greenhouse gas emissions.</p>	<p align="center">LS</p>	<p>No mitigation required.</p> <p>Improvement Measure I-C-GG-1: Purchase Voluntary Carbon Credits</p> <p><i>Construction Emissions:</i> No later than six (6) months after the issuance of a Temporary Certificate of Occupancy for the project, the project sponsor shall provide to the Office of Community Investment and Infrastructure (OCII), a calculation of the net additional emissions resulting from the construction of the project, to be calculated in accordance with the methodology agreed upon by the California Air Resources Board (CARB) in connection with the AB 900 certification of the project. The project sponsor shall provide courtesy copies of the calculations to CARB and the Governor's office promptly following transmittal of the calculations to OCII. The project sponsor shall enter into one or more contracts to purchase voluntary carbon credits from a qualified greenhouse gas emissions broker in an amount sufficient to offset the construction emissions. The project sponsor shall provide courtesy copies of any such contracts to the ARB and the Governor's office promptly following the execution of such contracts.</p> <p><i>Operational Emissions:</i> No later than six (6) months after project stabilization, to be defined as the date following project completion when the project is 90 percent leased and occupied (and with respect to the arena component, 90 percent of the available booking dates are utilized), the project sponsor shall submit to OCII a projection of operational emissions arising from the project, based on data accumulated to that date and reasonable projections of operational emissions for the useful life of the project (30 years), to be calculated in accordance with the methodology agreed upon by CARB in connection with the AB 900 certification of the project. The project sponsor shall provide courtesy copies of the calculations to CARB and the Governor's office promptly following transmittal of the calculations to OCII. The project sponsor shall enter into one or more contracts to purchase voluntary carbon credits from a qualified greenhouse gas emissions broker in an amount sufficient to offset the operational emissions, on a net present value basis in light of the fact that the project sponsor is proposing to acquire such credits in advance of any creation of the emissions subject to the offset. The project sponsor shall provide courtesy copies of any such contracts to CARB and the Governor's office promptly following the execution of such contracts.</p>

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Wind and Shadow, SEIR Section 5.6		
<i>Wind</i>		
Impact WS-1: The project would alter wind in a manner that would substantially affect off-site public areas.	SUM	Mitigation Measure M-WS-1: Develop and Implement Design Measures to Reduce Project Off-site Wind Hazards The project sponsor shall develop and implement design measures to reduce the identified project off-site wind hazards to the extent feasible. This may include on-site project design modifications or additions, additional on-site landscaping; and the implementation of potential additional off-site streetscape landscaping or other off-site wind-reducing features. Potential on- and/or off-site project site wind-reduction design measures developed by the sponsor would be coordinated with, and subject to review and approval, by OCII.
Impact C-WS-1: The project, in combination with cumulative development, would not alter wind in a manner that would substantially affect off-site public areas.	LS	No mitigation required.
<i>Shadow</i>		
Impact C-WS-2: The project, in combination with cumulative development, would create new shadow but not in a manner that would substantially affect the use of publicly accessible open space or outdoor recreational facilities or other public areas within the Mission Bay South plan area.	LS	No mitigation required.
Impact C-WS-3: The project, in combination with cumulative development, would create new shadow but not in a manner that would substantially affect the use of publicly accessible open space or outdoor recreational facilities or other public areas outside the Mission Bay South plan area.	LS	No mitigation required.

Significance Determinations:

NI = No Impact

LS = Less-Than-Significant Impact (no mitigation required)

LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)

SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)

SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Utilities and Service Systems, Initial Study Section E11 and SEIR Section 5.7		
Impact UT-1: The City's water service provider would have sufficient water supply available to serve the project from existing entitlements and resources, and would not require new or expanded water supply resources or entitlements.	LS	No mitigation required.
Impact UT-2: The proposed project would not require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	LS	No mitigation required.
Impact UT-3: The proposed project would be served by landfills with sufficient permitted capacity to accommodate the project's solid waste disposal needs.	LS	No mitigation required.
Impact UT-4: The proposed project would comply with federal, state, and local statutes and regulations related to solid waste.	LS	No mitigation required.
Impact UT-5: The proposed project in itself would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	LS	No mitigation required.
Impact C-UT-1: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative utilities and service systems impacts (water supply and solid waste).	LS	No mitigation required.

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Utilities and Service Systems, Initial Study Section E11 and SEIR Section 5.7 (cont.)		
Impact C-UT-2: The proposed project, in combination with past, present, and foreseeable future development in the Mission Bay South area, would require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	SU	No feasible mitigation available that could be implemented by the project sponsor.
Impact C-UT-3: The proposed project, in combination with past, present, and foreseeable future development in the Mission Bay South area, would not require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	LS	No mitigation required.
Impact C-UT-4: The project, in combination with past, present, and foreseeable future development in the Mission Bay South area, would result in a determination by the SFPUC that it has inadequate capacity to serve the project's projected wastewater demand in addition to its existing commitments.	SUM	<p>Mitigation Measure M-C-UT-4: Fair Share Contribution for Mariposa Pump Station Upgrades</p> <p>The project sponsor shall pay its fair share for improvements to the Mariposa Pump Station and associated wastewater facilities required to provide adequate sewer capacity within the project area and serve the project as determined by the SFPUC. The contribution shall be in proportion to the wastewater flows from the proposed project relative to the total design capacity of the upgraded pump station(s). The project sponsor shall not be responsible for any share of costs to address pre-existing pump station deficiencies.</p>

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Public Services, Initial Study Section E12 and SEIR Section 5.8		
Impact PS-1: The proposed project would not result in substantial adverse physical impacts associated with the provision of or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools or other services.	LS	No mitigation required.
Impact PS-2: Construction of the proposed project would not result in substantial adverse physical impacts associated with the provision of or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection, emergency medical services, or law enforcement.	LS	No mitigation required.
Impact PS-3: Operation of the proposed project would not result in substantial adverse physical impacts associated with the provision of or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection or emergency medical services.	LS	No mitigation required.

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Public Services, Initial Study Section E12 and SEIR Section 5.8 (cont.)		
Impact PS-4: Operation of the proposed project would not result in substantial adverse physical impacts associated with the provision of or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for law enforcement services.	LS	No mitigation required.
Impact C-PS-1: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative impacts on schools or other services.	LS	No mitigation required.
Impact C-PS-2: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative impacts on fire protection, emergency medical, and law enforcement services.	LS	No mitigation required.
Hydrology and Water Quality, Initial Study Section E15 and SEIR Section 5.9		
Impacts HY-1: The project would not violate water quality standards or otherwise substantially degrade water quality with respect to construction activities, including construction dewatering.	LS	No mitigation required.
Impact HY-1a: The project would not violate water quality standards or otherwise substantially degrade water quality with respect to construction-related dewatering.	LS	No mitigation required.

Significance Determinations:

NI = No Impact

LS = Less-Than-Significant Impact (no mitigation required)

LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)

SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)

SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Hydrology and Water Quality, Initial Study Section E15 and SEIR Section 5.9		
Impact HY-2: The project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.	LS	No mitigation required.
Impact HY-3: The project would not alter the existing drainage pattern of the area in a manner that would result in substantial erosion, siltation, or flooding on- or off-site, and the project would not substantially increase the rate or amount of surface runoff that would result in flooding on- or off-site.	LS	No mitigation required.
Impact HY-4: The project would not expose people, housing, or structures, to substantial risk of loss due to existing flooding risks and would not redirect or impede flood flows.	LS	No mitigation required.
Impact HY-5: The project would not expose people or structures to a significant risk of loss, injury or death involving inundation by seiche or tsunami.	LS	No mitigation required.
Impact HY-6: Operation of the proposed project could exceed the wastewater treatment requirements of the NPDES permit for the SEWPCP, violate water quality standards or waste discharge requirements, otherwise substantially degrade water quality as a result of changes in wastewater and stormwater discharges to	LSM	Mitigation Measure M-HY-6. Wastewater Sampling Ports <i>Mission Bay FSEIR Mitigation Measures K.2.</i> Participate in the City's existing Water Pollution Prevention Program. Facilitate implementation of the City's Water Pollution Prevention Program by providing and installing wastewater sampling ports in any building anticipated to have a potentially significant discharge of pollutants to the sanitary sewer, as determined by the Water Pollution Prevention Program of the San Francisco Public Utilities Commission's Bureau of Environmental Regulation and Management, and in locations as determined by the Water Pollution Prevention Program.

Significance Determinations:

NI = No Impact

LS = Less-Than-Significant Impact (no mitigation required)

LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)

SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)

SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Hydrology and Water Quality, Initial Study Section E15 and SEIR Section 5.9 (cont.)		
the Bay, or exceed the capacity of the separate stormwater system constructed in Mission Bay, or provide a substantial source of polluted runoff. Operation of the proposed project would not contribute to a substantial increase in combined sewer discharges.		
Impact HY-7: Operation of the proposed project would not expose people or structures to a significant risk of loss, injury, or death involving flooding.	LS	No mitigation required.
Impact C-HY-1: The project, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would not result in a considerable contribution to cumulative impacts on hydrology and water quality with respect to construction activities, dewatering, groundwater supplies, drainage pattern, flooding, seiche or tsunami.	LS	No mitigation required.
Impact C-HY-2: The proposed project, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would not exceed the wastewater treatment requirements of the NPDES permit for the SEWPCP; violate water quality standards or waste discharge requirements, or otherwise substantially degrade water quality as a result of changes in wastewater and stormwater discharges to the Bay; or exceed the capacity of the separate stormwater system constructed in	LS	No mitigation required.

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Hydrology and Water Quality, Initial Study Section E15 and SEIR Section 5.9 (cont.)		
Mission Bay, or provide a substantial source of polluted runoff. Cumulative wet weather flows would not contribute to an increase in combined sewer discharges.		
Impact C-HY-3: The proposed project, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would not result in a significant impact related to exposing people or structures to a significant risk of loss, injury, or death involving flooding.	LS	No mitigation required.
Land Use, Initial Study Section E1		
Impact LU-1: The proposed project would not physically divide an established community.	LS	No mitigation required.
Impact LU-2: The proposed project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project, adopted for the purpose of avoiding or mitigating an environmental effect.	LS	No mitigation required.
Impact LU-3: The proposed project would not have a substantial impact upon the existing character of the vicinity.	LS	No mitigation required.
Impact C-LU-1: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative land use impacts.	LS	No mitigation required.

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Aesthetics, Initial Study Section E2		
Aesthetic impact analysis not applicable to the proposed project based on CEQA Public Resources Code Section 21099.		
Population and Housing, Initial Study Section E3		
Impact PH-1: Construction of the proposed project would not induce substantial growth in the area, either directly (for example, by constructing new homes or businesses) or indirectly (for example, through extension of roads or other infrastructure).	LS	No mitigation required.
Impact PH-2: Construction of the proposed project not displace existing housing units or create substantial demand for additional housing.	LS	No mitigation required.
Impact PH-3: Construction of the proposed project would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.	LS	No mitigation required.
Impact PH-4: Operation of the proposed project would not induce substantial population growth in the area, either directly (for example, by constructing new homes or businesses) or indirectly (for example, through extension of roads or other infrastructure).	LS	No mitigation required.
Impact PH-5: Operation of the proposed project would not displace existing housing units or create demand for additional housing.	LS	No mitigation required.

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Population and Housing, Initial Study Section E3 (cont.)		
Impact PH-6: Operation of the proposed project would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.	NI	No mitigation required.
Impact C-PH-1: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative impacts on population and housing.	LS	No mitigation required.
Cultural and Paleontological Resources, Initial Study Section E4		
Impact CP-1: The project would not cause a substantial adverse change in the significance of a historical resource as defined in §15064.5, including those resources listed in Article 10 or Article 11 of the San Francisco Planning Code.	LS	No mitigation required.
Impact CP-2: The project could cause a substantial adverse change in the significance of an archeological resource pursuant to §15064.5.	LSM	<p>Mitigation Measure M-CP-2a: Archaeological Testing, Monitoring and/or Data Recovery Program</p> <p>Based on a reasonable presumption that archaeological resources may be present within the project site, the following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried or submerged historical resources. The project sponsor shall retain the services of an archaeological consultant approved by OCII or its designated representative such as those from the rotational Department Qualified Archaeological Consultants List (QACL) maintained by the Planning Department archaeologist. The project sponsor shall contact the Department archaeologist to obtain the names and contact information for the next three archaeological consultants on the QACL. The archaeological consultant shall undertake an archaeological testing program as specified herein. In addition, the consultant shall be available to conduct an archaeological monitoring and/or data recovery program if required pursuant to this measure. The archaeological consultant's work shall be conducted in accordance with this measure at the direction of OCII or its designated representative. All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to OCII or its designated representative for review and comment, and shall be considered draft reports subject to revision until final approval by OCII or its designated representative. Archaeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for</p>

Significance Determinations:

NI = No Impact

LS = Less-Than-Significant Impact (no mitigation required)

LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)

SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)

SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Cultural and Paleontological Resources, Initial Study Section E4 (cont.)		
Impact CP-2 (cont.)		<p>up to a maximum of four weeks. At the direction of the OCII or its designated representative, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less than significant level potential effects on a significant archaeological resource as defined in CEQA Guidelines Sect. 15064.5 (a)(c).</p> <p><i>Consultation with Descendant Communities:</i> On discovery of an archaeological site⁴ associated with descendant Native Americans, the Overseas Chinese, or other descendant group an appropriate representative⁵ of the descendant group and OCII or its designated representative shall be contacted. The representative of the descendant group shall be given the opportunity to monitor archaeological field investigations of the site and to consult with OCII or its designated representative regarding appropriate archaeological treatment of the site, of recovered data from the site, and, if applicable, any interpretative treatment of the associated archeological site. A copy of the Final Archaeological Resources Report shall be provided to the representative of the descendant group.</p> <p><i>Archaeological Testing Program.</i> The archaeological consultant shall prepare and submit to OCII or its designated representative for review and approval an archaeological testing plan (ATP). The archaeological testing program shall be conducted in accordance with the approved ATP. The ATP shall identify the property types of the expected archaeological resource(s) that potentially could be adversely affected by the proposed project, the testing method to be used, and the locations recommended for testing. The purpose of the archaeological testing program will be to determine to the extent possible the presence or absence of archaeological resources and to identify and to evaluate whether any archaeological resource encountered on the site constitutes an historical resource under CEQA.</p> <p>At the completion of the archaeological testing program, the archaeological consultant shall submit a written report of the findings to OCII or its designated representative. If based on the archaeological testing program the archaeological consultant finds that significant archaeological resources may be present, OCII or its designated representative in consultation with the archaeological consultant shall determine if additional measures are warranted. Additional measures that may be undertaken include additional archaeological testing, archaeological monitoring, and/or an archaeological data recovery program. No archaeological data recovery shall be undertaken without the prior approval of OCII or its designated representative. If OCII or its designated representative determines that a significant archaeological resource is present and that the resource could be adversely affected by the proposed project, at the discretion of the project sponsor either:</p> <p>A. The proposed project shall be re-designed so as to avoid any adverse effect on the significant archaeological resource; or</p>

⁴ By the term “archaeological site” is intended here to minimally include any archaeological deposit, feature, burial, or evidence of burial.

⁵ An “appropriate representative” of the descendant group is here defined to mean, in the case of Native Americans, any individual listed in the current Native American Contact List for the City and County of San Francisco maintained by the California Native American Heritage Commission and in the case of the Overseas Chinese, the Chinese Historical Society of America. An appropriate representative of other descendant groups should be determined in consultation with the Department archaeologist.

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Cultural and Paleontological Resources, Initial Study Section E4 (cont.)		
Impact CP-2 (cont.)		<p>B. A data recovery program shall be implemented, unless OCII or its designated representative determines that the archaeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.</p> <p><i>Archaeological Monitoring Program.</i> If OCII or its designated representative in consultation with the archaeological consultant determines that an archaeological monitoring program shall be implemented the archaeological monitoring program shall minimally include the following provisions:</p> <ul style="list-style-type: none"> • The archaeological consultant, project sponsor, and OCII or its designated representative shall meet and consult on the scope of the AMP reasonably prior to any project-related soils disturbing activities commencing. OCII or its designated representative in consultation with the archaeological consultant shall determine what project activities shall be archaeologically monitored. In most cases, any soils- disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archaeological monitoring because of the risk these activities pose to potential archaeological resources and to their depositional context; • The archeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archaeological resource; • The archaeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archaeological consultant and OCII or its designated representative until OCII or its designated representative has, in consultation with project archaeological consultant, determined that project construction activities could have no effects on significant archaeological deposits; • The archaeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis; • If an intact archaeological deposit is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The archaeological monitor shall be empowered to temporarily redirect demolition/excavation/pile driving/ construction activities and equipment until the deposit is evaluated. If in the case of pile driving activity (foundation, shoring, etc.), the archaeological monitor has cause to believe that the pile driving activity may affect an archaeological resource, the pile driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with OCII or its designated representative. The archaeological consultant shall immediately notify the OCII or its designated representative of the encountered archaeological deposit. The archaeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archaeological deposit, and present the findings of this assessment to OCII or its designated representative.

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Cultural and Paleontological Resources, Initial Study Section E4 (cont.)		
Impact CP-2 (cont.)		<p>Whether or not significant archaeological resources are encountered, the archaeological consultant shall submit a written report of the findings of the monitoring program to the OCII or its designated representative.</p> <p>Archaeological Data Recovery Program. The archaeological data recovery program shall be conducted in accord with an archaeological data recovery plan (ADRP). The archaeological consultant, project sponsor, and OCII or its designated representative shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archaeological consultant shall submit a draft ADRP to OCII or its designated representative. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archaeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practical.</p> <p>The scope of the ADRP shall include the following elements:</p> <ul style="list-style-type: none"> • <i>Field Methods and Procedures.</i> Descriptions of proposed field strategies, procedures, and operations. • <i>Cataloguing and Laboratory Analysis.</i> Description of selected cataloguing system and artifact analysis procedures. • <i>Discard and Deaccession Policy.</i> Description of and rationale for field and post-field discard and deaccession policies. • <i>Interpretive Program.</i> Consideration of an on-site/off-site public interpretive program during the course of the archaeological data recovery program. • <i>Security Measures.</i> Recommended security measures to protect the archaeological resource from vandalism, looting, and non-intentionally damaging activities. • <i>Final Report.</i> Description of proposed report format and distribution of results. • <i>Curation.</i> Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities. <p>Human Remains and Associated or Unassociated Funerary Objects. The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity shall comply with applicable State and Federal laws. This shall include immediate notification of the Coroner of the City and County of San Francisco and in the event of the Coroner’s determination that the human remains are Native American remains, notification of the California State Native</p>

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Cultural and Paleontological Resources, Initial Study Section E4 (cont.)		
Impact CP-2 (cont.)		<p>American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec. 5097.98). The archaeological consultant, project sponsor, OCII or its designated representative, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines. Sec. 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects.</p> <p><i>Final Archaeological Resources Report.</i> The archeological consultant shall submit a Draft Final Archaeological Resources Report (FARR) to OCII or its designated representative that evaluates the historical significance of any discovered archaeological resource and describes the archaeological and historical research methods employed in the archaeological testing/monitoring/data recovery program(s) undertaken. Information that may put at risk any archaeological resource shall be provided in a separate removable insert within the final report.</p> <p>Once approved by OCII or its designated representative, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and OCII or its designated representative shall receive a copy of the transmittal of the FARR to the NWIC. As requested by OCII, the Environmental Planning division of the Planning Department shall receive one bound, one unbound and one unlocked, searchable PDF copy on CD of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest in or the high interpretive value of the resource, OCII or its designated representative may require a different final report content, format, and distribution than that presented above.</p> <p>Mitigation Measure M-CP-2b: Accidental Discovery of Archaeological Resources</p> <p>The following mitigation measure is required to avoid any potential adverse effect from the proposed project on accidentally discovered buried or submerged historical resources as defined in <i>CEQA Guidelines</i> Section 15064.5(a)(c). The project sponsor shall distribute the Planning Department archaeological resource "ALERT" sheet to the project prime contractor; to any project subcontractor (including demolition, excavation, grading, foundation, pile driving, etc. firms); or utilities firm involved in soils disturbing activities within the project site. Prior to any soils disturbing activities being undertaken each contractor is responsible for ensuring that the "ALERT" sheet is circulated to all field personnel, including machine operators, field crew, pile drivers, supervisory personnel, etc. The project sponsor shall provide OCII officer or its designated representative with a signed affidavit from the responsible parties (prime contractor, subcontractor(s), and utilities firm) confirming that all field personnel have received copies of the Alert Sheet.</p>

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Cultural and Paleontological Resources, Initial Study Section E4 (cont.)		
Impact CP-2 (cont.)		<p>Should any indication of an archaeological resource be encountered during any soils disturbing activity of the project, the project Head Foreman and/or project sponsor shall immediately notify OCII officer or its designated representative and shall immediately suspend any soils disturbing activities in the vicinity of the discovery until OCII officer or its designated representative has determined what additional measures should be undertaken.</p> <p>If OCII officer or its designated representative determines that an archaeological resource may be present within the project site, the project sponsor shall retain the services of an archaeological consultant from the pool of qualified archaeological consultants maintained by the Planning Department archaeologist. The archaeological consultant shall advise OCII officer or its designated representative as to whether the discovery is an archaeological resource, retains sufficient integrity, and is of potential scientific/historical/cultural significance. If an archaeological resource is present, the archaeological consultant shall identify and evaluate the archaeological resource. The archaeological consultant shall make a recommendation as to what action, if any, is warranted. Based on this information, OCII officer or its designated representative may require, if warranted, specific additional measures to be implemented by the project sponsor.</p> <p>Measures might include: preservation in situ of the archaeological resource; an archaeological monitoring program; or an archaeological testing program. If an archaeological monitoring program or archaeological testing program is required, it shall be consistent with the Environmental Planning (EP) division guidelines for such programs. OCII officer or its designated representative may also require that the project sponsor immediately implement a site security program if the archaeological resource is at risk from vandalism, looting, or other damaging actions.</p> <p>The project archaeological consultant shall submit a Final Archaeological Resources Report (FARR) to OCII officer or its designated representative that evaluates the historical significance of any discovered archaeological resource and describing the archaeological and historical research methods employed in the archaeological monitoring/data recovery program(s) undertaken. Information that may put at risk any archaeological resource shall be provided in a separate removable insert within the final report.</p> <p>Copies of the Draft FARR shall be sent to OCII officer or its designated representative for review and approval. Once approved by OCII officer or its designated representative, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and OCII officer or its designated representative shall receive a copy of the transmittal of the FARR to the NWIC. OCII and the Environmental Planning division of the Planning Department shall each receive one bound copy, one unbound copy and one unlocked, searchable PDF copy on CD three copies of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest or interpretive value, OCII officer or its designated representative may require a different final report content, format, and distribution than that presented above.</p>

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Cultural and Paleontological Resources, Initial Study Section E4 (cont.)		
Impact CP-3: The project would not directly or indirectly destroy a unique paleontological resource or site or unique geological feature.	LS	No mitigation required.
Impact CP-4: The proposed project would not disturb any human remains, including those interred outside of formal cemeteries.	LS	No mitigation required.
Impact C-CP-1: The proposed project, in combination with other past, present and foreseeable future projects, could result in significant impacts to cultural resources.	LSM	Mitigation Measure M-CP-2a: Archaeological Testing, Monitoring and/or Data Recovery Program (see Impact CP-2 above) Mitigation Measure M-CP-2b: Accidental Discovery of Archaeological Resources (see Impact CP-2 above)
Recreation, Initial Study Section E10		
Impact RE-1: The proposed project would not increase the use of parks and recreational facilities such that substantial physical deterioration of the facilities could occur or otherwise result in physical degradation of existing recreational resources.	LS	No mitigation required.
Impact RE-2: The proposed project would not require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.	LS	No mitigation required.
Impact C-RE-1: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative recreation impacts.	LS	No mitigation required.

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Biological Resources, Initial Study Section E13		
Impact BI-1: The proposed project would not have a substantial adverse effect, either directly or through habitat modification, on any special status species.	LS	No mitigation required.
Impact BI-2: The proposed project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations.	NI	No mitigation required.
Impact BI-3: The proposed project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act or navigable waters as defined in Section 10 of the Rivers and Harbors Act through direct removal, filling, hydrological interruption, or other means.	LS	No mitigation required.
Impact BI-4: The proposed project could interfere substantially with the movement of native resident or migratory wildlife species resident or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	LSM	<p>Mitigation Measure M-BI-4a: Preconstruction Surveys for Nesting Birds</p> <p>To the extent practicable, vegetation removal and grading of the site in advance of new site construction shall be performed between September 1 and January 31 in order to avoid breeding and nesting season for birds. If these activities cannot be performed during this period, a preconstruction survey of onsite vegetation for nesting birds shall be conducted by a qualified biologist.</p> <p>In coordination with the OCII or its designated representative, pre-construction surveys of onsite vegetation shall be performed during bird breeding season (February 1 – August 31) no more than 14 days prior to vegetation removal, grading, or initiation of construction in order to locate any active passerine nests within 250 feet of the project site and any active raptor nests within 500 feet of the project site. Surveys shall be performed in accessible areas within 500 feet of the project site and include suitable habitat within line of sight as access is available. If active nests are found on either the project site or within the 500-foot survey buffer surrounding the project site, no-work buffer zones shall be established around the nests. Buffer distances will consider physical and visual barriers between the active nest and project activities, existing noise sources and disturbance, as well as sensitivity of the bird species to disturbance. Modification of standard buffer distances, 250 feet for active passerine nests and 500 feet for active raptor nests, will</p>

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Biological Resources, Initial Study Section E13		
Impact BI-4 (cont.)		<p>be determined by a qualified biologist in consultation with the California Department of Fish and Wildlife (CDFW). No vegetation removal or ground-disturbing activities including grading or new construction shall occur within a buffer zone until young have fledged or the nest is otherwise abandoned as determined by the qualified biologist.</p> <p>If construction work during the nesting season stops for 14 days or more and then resumes, then nesting bird surveys shall be repeated, to ensure that no new birds have begun nesting in the area</p> <p>Mitigation Measure M-BI-4b: Bird Safe Building Practices</p> <p>The project sponsor shall design and implement the project consistent with the San Francisco <i>Standards for Bird-Safe Buildings</i> and Planning Code Section 139, as approved by OCII. OCII shall consult with the Planning Department and the Zoning Administrator concerning project consistency with Planning Code Section 139.</p>
Impact C-BI-1: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative impacts on biological resources.	LS	No mitigation required.
Geology and Soils, Initial Study Section E14		
Impact GE-1: The proposed project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, seismic groundshaking, seismically-induced ground failure, or landslides.	LS	No mitigation required.
Impact GE-2: The project would not result in substantial erosion or loss of top soil.	LS	No mitigation required.
Impact GE-3: The project would not be located on a geologic unit or soil that is unstable, or that could become unstable as a result of the project.	LS	No mitigation required.

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Geology and Soils, Initial Study Section E14 (cont.)		
Impact GE-4: The project would not create substantial risks to life or property as a result of location on expansive soils or other problematic soils.	LS	No mitigation required.
Impact GE-5: The project would not substantially change the topography or any unique geologic or physical feature of the project site.	LS	No mitigation required.
Impact C-GE-1: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative impacts related to geologic hazards.	LS	No mitigation required.
Hazards and Hazardous Materials, Initial Study Section E16		
Impact HZ-1: The project could create a significant hazard through routine transport, use, or disposal of hazardous materials or result in a substantial risk of upset involving the release of hazardous materials.	LSM	<p>Mitigation Measure M-HZ-1a: Guidelines for Handling Biohazardous Materials</p> <p><i>Mission Bay FSEIR Mitigation Measure I.1.</i> Require businesses that handle biohazardous materials and do not receive federal funding to certify that they follow the guidelines published by the National Research Council and the United States Department of Health and Human Services Public Health Service, National Institutes of Health, and Centers for Disease Control, as set forth in Biosafety in Microbiological and Biomedical Laboratories, Guidelines for Research Involving Recombinant DNA Molecules (NIH Guidelines), and Guide for the Care and Use of Laboratory Animals, or their successors, as applicable.</p> <p><i>Mission Bay FSEIR Mitigation Measure I.2.</i> Require businesses handling biohazardous materials to certify that they use high efficiency particulate air (HEPA) filters or substantially equivalent devices on all exhaust from Biosafety Level 3 laboratories unless they demonstrate that exhaust from their Biosafety Level 3 laboratories would not pose substantial health or safety hazards to the public or the environment. Require such businesses to certify that they inspect or monitor the filters regularly to ensure proper functioning.</p> <p><i>Mission Bay FSEIR Mitigation Measure I.3.</i> Require businesses handling biohazardous materials to certify that they do not handle or use biohazardous materials requiring Biosafety Level 4 containment (i.e., dangerous or exotic materials that pose high risks of life-threatening diseases or aerosol-transmitted infections, or unknown risks of transmission) in the Project Area.</p>

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Hazards and Hazardous Materials, Initial Study Section E16 (cont.)		
Impact HZ-1 (cont.)		<p>Mitigation Measure M-HZ-1b: Geologic Investigation and Dust Mitigation Plan for Naturally Occurring Asbestos</p> <p>The project sponsor shall conduct a geologic investigation in accordance with the guidelines of the California Geologic Survey to determine the naturally occurring asbestos content of fill materials to be excavated at the project site. If the investigation determines that the naturally occurring asbestos content of the fill materials is 0.25 percent or greater, the project sponsor or its construction contractor shall submit the appropriate notification forms and prepare an asbestos dust mitigation plan in accordance with the Asbestos ATCM. The plan shall specify measures that will be taken to ensure that no visible dust crosses the property boundary during construction. The plan must specify the following measures:</p> <ul style="list-style-type: none"> • Prevent and control visible track-out from the property • Ensure adequate wetting or covering of active storage piles • Control disturbed surface areas and storage piles that would remain inactive for 7 days Control traffic on on-site unpaved roads, parking lots, and staging areas, including a maximum vehicle speed of 15 miles per hour • Control earthmoving activities • Control offsite transport of dust emissions that contain naturally-occurring asbestos-containing materials • Stabilize disturbed areas following construction <p>The asbestos dust mitigation plan shall be submitted to and approved by the Bay Area Air Quality Management District (BAAQMD) prior to the beginning of construction, and the site operator must ensure the implementation of all specified dust mitigation measures throughout the construction project. In addition, if required by the BAAQMD, the project sponsor or a qualified third party consultant shall conduct air monitoring for offsite migration of asbestos dust during construction activities and shall modify the dust mitigation plan on the basis of the air monitoring results if necessary.</p>
Impact HZ-2: The project would be located on a site identified on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Excavation could also require the handling of potentially contaminated soil and groundwater, potentially exposing workers and the public to hazardous materials, or resulting in a release into the environment during construction.	LSM	<p>Mitigation Measure M-HZ-2: RMP Provisions for Child Care Facilities</p> <p><i>Mission Bay FSEIR Mitigation Measure J.2.</i> Carry out a site-specific risk evaluation for each site in a non-residential area proposed to be used for a public school or child care facility; submit to RWQCB for review and approval. If cancer risks exceed 1 x 10⁻⁵ and/or noncancer risk exceeds a Hazard Index of 1, carry out remediation designed to reduce risks to meet these standards or select another site that is shown to meet these standards.</p>

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Hazards and Hazardous Materials, Initial Study Section E16 (cont.)		
Impact HZ-3: The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan or expose people or structures to a significant risk of loss, injury or death involving fires.	LS	No mitigation required.
Impact C-HZ-1: The project, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would not result in a considerable contribution to cumulative impacts related to hazardous materials.	LS	No mitigation required.
Minerals and Energy Resources, Initial Study Section E17		
Impact ME-1: The project would not result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner.	LS	No mitigation required.
Impact C-ME-1: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative impacts on energy resources.	LS	No mitigation required.
Agriculture and Forest Resources, Initial Study Section E18		
Agricultural and forest resources are not applicable to the proposed project.	NI	No mitigation required.

Significance Determinations:

NI = No Impact

LS = Less-Than-Significant Impact (no mitigation required)

LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)

SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)

SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

**TABLE 1-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Third Street Plaza Variant, SEIR Chapter 8		
<i>Wind</i>		
All impacts, significance determinations, mitigation measures, and improvement measures the same as listed above for the proposed project, except for Impact WS-1 and Impact C-WS-1, which are replaced with the impacts shown below.		
Impact V-WS-1: The variant would not alter wind in a manner that would substantially affect off-site public areas.	LS	No mitigation required.
Impact V-C-WS-1: The variant, in combination with cumulative development, would not alter wind in a manner that would substantially affect off-site public areas.	LS	No mitigation required.

Significance Determinations:

- NI = No Impact
- LS = Less-Than-Significant Impact (no mitigation required)
- LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
- SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
- SU = Significant and Unavoidable Impact (Significant or potentially significant unavoidable impact, and no feasible mitigation available)

CHAPTER 2

Introduction

2.1 Purpose of This SEIR

This Subsequent Environmental Impact Report (SEIR) provides environmental review and analysis of the proposed multi-purpose event center and mixed-use development on Blocks 29-32 in the Mission Bay South Redevelopment Plan Area of San Francisco (proposed project). This chapter provides background information and an explanation of how this SEIR satisfies the requirements of the California Environmental Quality Act (CEQA), the governing legislation for this report. Details of the proposed project, including the project's location, objectives, and characteristics that form the basis of the SEIR environmental analysis, are presented in Chapter 3, Project Description.

The San Francisco Office of Community Investment and Infrastructure (OCII), as lead agency responsible for administering the environmental review for private projects in the Mission Bay North and South Redevelopment Plan Area of San Francisco, has determined that under CEQA, an environmental impact report (EIR) is required for the proposed project. CEQA requires the preparation of an EIR when a proposed project could result in significant, adverse effects on the physical environment. This SEIR has been prepared in compliance with CEQA (California Public Resources Code, Sections 21000 *et seq.*) and the *CEQA Guidelines*. It is an informational document for use by governmental agencies and the public to aid in the planning and decision-making process by disclosing the physical environmental effects of the project and identifying possible ways of reducing or avoiding its potentially significant impacts.

CEQA requires that before a decision can be made to approve a project that would pose potential adverse physical effects, an EIR must be prepared that fully describes the environmental effects of the project. The EIR is a public information document which identifies and evaluates potential environmental impacts of a project, recommends mitigation measures to lessen or eliminate significant adverse impacts, and examines feasible alternatives to the project. The information contained in the EIR must be reviewed and considered by the OCII and by any responsible agencies (as defined in CEQA) prior to a decision to approve, disapprove, or modify the proposed project.

The state *CEQA Guidelines* (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000 *et seq.*) help define the role and content of an EIR as follows:

- **Informational Document.** An EIR is an informational document that will inform public agency decision-makers and the public of the significant environmental effect(s) of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information that may be presented to the agency (Section 15121[a]).
- **Standards for Adequacy of an EIR.** An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information that enables them to make an informed decision that takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure (Section 15151).

The *CEQA Guidelines*, Section 15382, define a significant effect on the environment as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project....” Therefore, in identifying the significant impacts of the project, this SEIR describes the potential for the project to result in substantial physical effects within the area affected by the project and identifies mitigation measures that would avoid, reduce, or otherwise alleviate those effects. See Chapter 5, Section 5.1, Impact Overview, for further description of the approach to analyzing environmental impacts and identifying mitigation measures presented in this SEIR.

OCII, as the CEQA lead agency, has entered into an agreement with the San Francisco Planning Department’s Environmental Planning Division to assist in the preparation of the SEIR for this project.

2.2 CEQA Environmental Review

The CEQA Guidelines Section 15160 provides for variations in EIRs so that environmental documentation can be tailored to different situations and intended uses, and these variations are not exclusive. As described below, this SEIR relies on several variations of EIRs, including a *project* EIR, a *program* EIR, a *redevelopment plan* EIR, a *subsequent* EIR, and a *focused* EIR.

This SEIR is a *project* EIR that examines the environmental impacts of a specific development project, consistent with CEQA Guidelines Section 15161. This project EIR is tiered from a previously certified *program* EIR in accordance with the CEQA Guidelines Section 15168(c), which provides for environmental review of subsequent activities under the same program. The proposed project — the event center and mixed use development at Mission Bay Blocks 29-32 — is a subsequent activity under the Mission Bay South Redevelopment Plan. Environmental review of the Mission Bay South Redevelopment Plan was completed in the program EIR, *Mission Bay Final Subsequent Environmental Impact Report* (Mission Bay FSEIR),¹ certified in

¹ City and County of San Francisco and San Francisco Redevelopment Agency, 1998. *Final Mission Bay Subsequent Environmental Impact Report*. Planning Department File No. 96.771E, San Francisco Redevelopment Agency Case No. ER 919-97, State Clearinghouse No. 97092068. Certified September 17, 1998.

September 1998. The Mission Bay FSEIR is a *program* EIR under CEQA Guidelines Section 15168 and a *redevelopment plan* EIR under CEQA Guidelines Section 15180. The Mission Bay FSEIR analyzed the environmental impacts associated with the development program proposed for the entire Mission Bay Redevelopment Plan Area, including the program under the Mission Bay South Redevelopment Plan, which includes development in Blocks 29-32. Thus, under CEQA, the proposed project at Blocks 29-32 is considered a subsequent activity under the Mission Bay South Redevelopment program, and this SEIR evaluates the environmental effects of the proposed project relative to the program-level impact analysis in the certified Mission Bay FSEIR.

This SEIR is a *subsequent* EIR to the Mission Bay FSEIR pursuant to CEQA Guidelines Section 15162, which states that a subsequent EIR is required if the lead agency determines that the proposed project could result in any of the following conditions:

- Substantial changes are proposed in the project that will require major revisions of the previous EIR,
- Substantial changes have occurred with respect to the circumstances under which the project is undertaken, or
- New information of substantial importance, which was not known and could not have been known at the time of certification of the previous EIR, shows that the project could have one or more significant effects not discussed in the previous EIR, significant effects previously examined will be substantially more severe than shown in the previous EIR, mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects, or mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects.

OCII has determined that one or more of these conditions have been met for the proposed project, and that a *subsequent* EIR is therefore warranted, including the fact that the proposed project would result in new significant impacts and substantially more severe significant impacts than previously identified in the Mission Bay FSEIR.

Furthermore, this SEIR is a *focused* EIR, in accordance with CEQA Guidelines Sections 15063(b)(1)(C) and 15168(d)(1). An Initial Study on the proposed project was published on November 19, 2014 (see Appendix NOP of this SEIR), and it identifies which of the project's effects were adequately examined in the Mission Bay FSEIR and which topics warrant more detailed environmental analysis. Thus, this SEIR concentrates the environmental analysis on those topics identified in the Initial Study with the potential to have either new significant effects or substantially more severe significant impacts than were previously identified in the Mission Bay FSEIR under the currently proposed project at Blocks 29-32. The remaining environmental topics, as documented in the Initial Study, were determined to have no new or more severe significant environmental effects than what was previously identified in the Mission Bay FSEIR, and these topics are not analyzed in this SEIR.

2.3 Mission Bay Final Subsequent EIR

2.3.1 Mission Bay Redevelopment Plan Environmental Review

On August 23, 1990, the San Francisco Board of Supervisors certified the *Mission Bay Final Environmental Impact Report* (the “1990 FEIR”).² The 1990 FEIR assessed the development program that was ultimately adopted as the *Mission Bay Plan, an Area Plan of the San Francisco General Plan*. This development program was never implemented. In 1996–1997, the former San Francisco Redevelopment Agency, with Catellus Development Corporation as project sponsor, proposed a new project for the Mission Bay area, consisting of two separate redevelopment plans (*Mission Bay North Redevelopment Plan* and *Mission Bay South Redevelopment Plan*, “North Plan” and “South Plan” or, collectively, the “Plans”) in two redevelopment project areas separated by the China Basin Channel (also known as Mission Creek).

On September 17, 1998, the San Francisco Planning Commission and the Redevelopment Agency Commission certified the *Mission Bay Final Subsequent Environmental Impact Report* (Mission Bay FSEIR). The Mission Bay FSEIR analyzed reasonably foreseeable development under the Plans. It incorporated by reference information from the original 1990 FEIR that continued to be accurate and relevant for analysis of the Plans. Thus, the 1990 FEIR and the Mission Bay FSEIR together constitute the environmental documentation for the Plans. The 1990 FEIR and Mission Bay FSEIR are program EIRs under CEQA Guidelines 15168 and redevelopment plan EIRs under CEQA Guidelines Section 15180.

The former Redevelopment Agency Commission adopted the North and South Plans on September 17, 1998, along with the Mission Bay North Owner Participation Agreement (as subsequently amended, the “North OPA”) and Mission Bay South Owner Participation Agreement (as subsequently amended, the “South OPA”), which are agreements between the former Redevelopment Agency, now OCII as successor to the Redevelopment Agency, and the Mission Bay Master Developer (originally Catellus Development Corporation and now FOCIL-MB, LLC, the successor to Catellus Development Corporation).³

The North and South OPAs incorporated into the Plan the mitigation measures identified in the Mission Bay FSEIR and adopted by the former Redevelopment Agency Commission at the time of Plan approval.⁴ As authorized by the Plans, the former Redevelopment Agency Commission simultaneously adopted design guidelines and standards governing development, contained in companion documents, the Design for Development for the Mission Bay North Project Area (the “North Design for Development”) and the Design for Development for the Mission Bay South Project Area (the “South Design for Development”), respectively.⁵ The San Francisco Board of Supervisors adopted the North Plan on October 26, 1998, and the South Plan on November 2, 1998.⁶

² Planning Department Case No. 86.505E.

³ Resolution No. 191-98, and No. 188-98, respectively.

⁴ North and South OPAs, Attachment L.

⁵ Resolution No. 191-98 and Resolution No. 186-98, respectively.

⁶ Ordinance No. 327098 North and South OPAs, Attachment L and Ordinance No. 335-98, respectively.

The South OPA has been amended four times, the first amendment dated February 17, 2004, the second dated November 1, 2005, the third dated May 21, 2013, and the fourth dated June 4, 2013.

The Redevelopment Agency has prepared nine addenda to the Mission Bay FSEIR (completed between 2000 and 2013) for specific developments within Mission Bay that required additional environmental review of specific issues beyond those that were covered in the Mission Bay FSEIR. These addenda are as follows:

- The first addendum, dated March 21, 2000, analyzed the ballpark parking lots.
- The second addendum, dated June 20, 2001, addressed Infrastructure Plan revisions related to the 7th Street bike lanes and relocation of a storm drain outfall.
- The third addendum, dated February 10, 2004, addressed revisions to the South Design for Development with respect to the maximum allowable number of towers, tower separation, and required setbacks.
- The fourth addendum, dated March 9, 2004, addressed revisions to the South Design for Development with respect to the permitted maximum number of parking spaces for biotechnical and similar research facilities, and specified certain changes to the North OPA to reflect a reduction in permitted commercial development and associated parking.
- The fifth addendum, dated October 4, 2005, addressed revisions to the University of California San Francisco (UCSF) Long Range Development Plan and the Final Environmental Impact Report for the Long Range Development Plan.
- The sixth addendum, dated September 10, 2008, addressed revisions of the UCSF Medical Center at Mission Bay.
- The seventh addendum, dated January 7, 2010, analyzed the development of a Public Safety Building on Mission Bay Block 8 to accommodate the headquarters of the San Francisco Police Department, a local Police Station, and new San Francisco Fire Department station, and adaptive reuse of historic Fire Station 30, along with parking for these uses.
- The eighth addendum, dated May 15, 2013, analyzed amendments to the South Plan and South OPA to allow a mix of hotel, residential, and retail use on Block 1.
- The ninth addendum, dated May 30, 2013, addressed development on Block 7E for a facility housing extended stay bedrooms and associated facilities to support families of patients receiving medical treatment primarily at UCSF's medical facilities.

In all of these cases, an addendum was sufficient to satisfy CEQA environmental review requirements. The proposed event center and mixed use development at Blocks 29-32 is the first development project under the adopted Plans in which conditions triggering a Subsequent or Supplemental EIR are met. This SEIR is the first project-level environmental impact report tiering from the Mission Bay FSEIR.

2.3.2 Successor Agency/Oversight Board Jurisdiction

The former San Francisco Redevelopment Agency, along with all 400 redevelopment agencies in California, was dissolved on February 1, 2012, by order of the California Supreme Court in a decision issued on December 29, 2011 (*California Redevelopment Association et al. v. Ana Matosantos*). On June 27, 2012, the California Legislature passed and the Governor signed Assembly Bill (AB) 1484, a bill making technical and substantive changes to AB 26, which was the original bill that resulted in the dissolution of all redevelopment agencies. (Together, AB 26 and AB 1484 are referred to as “Dissolution Law,” which is codified at California Health and Safety Code Sections 34161 – 34191.5). In response to the Dissolution Law, the San Francisco Office of Community Investment and Infrastructure (OCII) became the Successor Agency to the Redevelopment Agency of the City and County of San Francisco. Pursuant to state and local legislation, OCII is governed by two bodies, the Oversight Board of the Successor Agency and the Commission on Community Investment and Infrastructure.

On January 24, 2012, the Board of Supervisors of the City and County of San Francisco adopted Resolution No. 11-12 in response to the Supreme Court’s December 29, 2011 decision upholding AB 26. On September 25, 2012, the Board of Supervisors adopted Ordinance No. 215-12 in response to the Governor’s approval of AB 1484. Together, these two local laws (“Successor Agency Legislation”) create the governing structure of the OCII. Pursuant to the Successor Agency Legislation, the Commission on Community Investment and Infrastructure exercises certain land use, development and design approval authority for the Mission Bay North and Mission Bay South Plan areas (and other major approved development projects), and the Oversight Board exercises certain fiscal oversight and other duties required under the Dissolution Law (see Chapter 3 for a discussion on project approvals). As the public agency responsible for carrying out or approving a project under the Successor Agency Legislation, OCII is the designated lead agency under CEQA for this SEIR.

2.3.3 Summary of the Mission Bay FSEIR

As described above, this SEIR is a *subsequent* EIR to the Mission Bay FSEIR certified in 1998, as supplemented by the nine addenda issued from 2000 to 2013. The Mission Bay FSEIR evaluated the potential environmental effects of the development of the Mission Bay plan area, approximately 303 acres in size and located near the eastern shoreline of San Francisco, generally south of Townsend Street, east of Seventh Street and Interstate 280, and north of Mariposa Street and straddling China Basin Channel. As discussed above, the Mission Bay FSEIR analyzed the combined North and South Plans (the Plans).

In general, the combined Plans defined as the project description and analyzed in the Mission Bay FSEIR consisted of the following: 1.5 million gross square feet of retail space; 43-acre new site for the University of California San Francisco (UCSF) containing 2.65 million gross square feet of instruction, research and support space, and a space to be donated for a public school; a mix of 5.56 million gross square feet of research and development, light manufacturing, and office space surrounding the UCSF site to the west, south, and east; a 500-room hotel between Third and

Fourth Streets south of China Basin Channel; police and fire stations; off-street parking accessory to most uses; about 47 acres of open space, including 8 acres within the UCSF site; and approximately 6,090 residential units (located on the north and south sides of China Basin Channel). The project site at Blocks 29-32 was identified as proposed commercial industrial/retail uses under the South Plan. The Plans included expansion and/or improvement of infrastructure in the Plan area, including a revised transportation network, new east-west streets, extension of Owens Street north and east to connect to Third Street, realignment and extension of Fourth Street south to Mariposa; expansion of the high- and low-pressure water systems; expansion of the combined sewer system and creation of a separate stormwater-only system for the central part of Mission Bay South; realignment of railroad tracks accessing Pier 80; improvement of rail crossings; and a pedestrian bridge across China Basin Channel. As described below, the Mission Bay North Plan and Mission Bay South Plan ultimately adopted reflected a mix of land uses covered by a combination of variants analyzed in the Mission Bay FSEIR. As a result, the adopted Plans vary from the original project description described in this paragraph.

The Mission Bay FSEIR analyzed the environmental impacts associated with implementation of the Plans and identified a suite of mitigation measures for avoiding or reducing significant environmental impacts. A topic-by-topic summary of impacts and mitigation measures presented in the Mission Bay FSEIR is included under each respective environmental topic in this SEIR and associated Initial Study. (Appendix MIT of this SEIR lists all of the mitigation measures from the FSEIR and indicates those applicable to the proposed project.)

In addition to analyzing the impacts of the proposed Plans, the Mission Bay FSEIR analyzed six variants and one combination of various components of the variants and the Plans. The variants were slight modifications to the Plans that were under consideration by the project sponsor and typically modified one limited area or aspect of the Plans. The variants analyzed in the FSEIR consisted of the following: Terry A. Francois Boulevard Variant; Esprit Commercial Industrial/Retail Variant; No Berry Street Crossing Variant; Modified No Berry Street Crossing Variant; Mission Bay North Retail Variant; and Castle Metals Block Commercial Industrial/Retail Variant. It also covered a combination of variants to the Plans (described below).

As required under CEQA, the Mission Bay FSEIR identified and analyzed alternatives that would reduce or avoid identified significant impacts of the Plans and meet most of the Plans objectives. The three alternatives analyzed included: No Project Alternative; Redevelopment North of Channel/Expected Growth South of Channel Alternative; and Residential/Open Space Alternative. The FSEIR determined that all of the alternatives would result in the same significant unavoidable adverse impacts identified for the Plans (i.e., traffic, vehicular air pollution emissions, potential combined toxic air contaminants, cumulative hazardous waste generation and disposal, and cumulative water quality), but the severity of the impacts would be somewhat lessened although not to a less-than-significant level. The Residential/Open Space Alternative was identified as the environmentally superior alternative in the Mission Bay FSEIR.

Following certification of the Mission Bay FSEIR and as part of the approval process for the Mission Bay Plans, CEQA Findings were adopted by the City and County of San Francisco.⁷ The CEQA Findings describes the land use program that was ultimately adopted by the former Redevelopment Agency Commission. The adopted Mission Bay Plan was developed from a combination of the proposed Plans as described in the Mission Bay FSEIR plus a combination of plan variants. Specifically, the adopted Mission Bay Redevelopment Plan was based on the plan description in the Mission Bay FSEIR, plus Variant 1 (Terry A. Francois Boulevard Variant/Expanded Bayshore Open Space Proposal), Variant 2 (Esprit Commercial Industrial/Retail Variant), Variant 3A (Modified No Berry Street Crossing Variant), and Variant 5 (Castle Metals Block Commercial Industrial/Retail Variant). The adopted plan was described in the Mission Bay FSEIR Chapter III, Project Description, and Section VII.G, Combination of Variants Currently under Consideration by the Project Sponsors. The Mission Bay FSEIR concluded that the environmental effects of the combination of plan variants would be similar to those of the proposed plan, and consequently, would not result in any new or substantially more severe significant effects identified in the Mission Bay FSEIR for the proposed plan.

2.4 CEQA Process

Consistent with CEQA Guidelines Sections 15080 to 15097, the CEQA process has multiple phases, many of which require notification to and comments from the public. The main steps in this process are described below.

2.4.1 Previous Project Proposal for an Event Center and Mixed-Use Development at Piers 30-32 and Seawall Lot 330

On December 5, 2012, the San Francisco Planning Department issued a Notice of Preparation (NOP) of an EIR on an event center and mixed-use development on Piers 30-32 and Seawall Lot 330 (Case No. 2012.0178E) as proposed by GSW Arena LLC, the same project sponsor as for the currently proposed project in Mission Bay. The San Francisco Planning Department held a public scoping meeting on Tuesday, January 15, 2013 at the Delancy Street Foundation at 600 The Embarcadero, San Francisco on this project, and numerous comments were received. However, a Draft EIR was never issued on this project, and the project sponsor has withdrawn its application for the project on Piers 30-32 and Seawall Lot 330. The currently proposed project at Mission Bay Block 29-32 replaces this previous proposal. See Chapter 7, Alternatives, for further description of this previous proposal.

2.4.2 Notice of Preparation and Public Scoping

On November 19, 2014, the OCII sent a NOP to governmental agencies, organizations, and persons interested in the proposed project to initiate the 30-day public scoping period for this SEIR, which ended on December 19, 2014 (see Appendix NOP-IS). The NOP notified and

⁷ City and County of San Francisco, Board of Supervisors Resolution No. 854-98, October 30, 1998.

informed agencies and interested parties about the proposed project and the OCII's decision to prepare an SEIR; it included a request for agencies and the public to comment on environmental issues that should be addressed in the SEIR. The NOP is included as Appendix NOP-IS of this SEIR. The OCII held a public scoping meeting on Tuesday, December 9, 2014 at the Mission Creek Senior Community, 225 Berry Street, San Francisco to receive oral comments on the scope of the SEIR. The comments received in response to the NOP during the public scoping period, both written and oral, are available for review at the San Francisco Planning Department as part of Case File No. 2014.1441E. The OCII has considered all comments made by the public and agencies in preparing the Draft SEIR for the proposed project. See Section 2.5 below for a summary of the scoping comments received since publication of the NOP.

2.4.3 Draft SEIR Public Review

This Draft SEIR is being circulated to governmental agencies and to interested organizations and individuals that may wish to review and comment on the document. *CEQA Guidelines* Sections 15086(c) and 15096(d) call for responsible agencies or other public agencies to provide comment on those project activities within an agency's area of expertise or project activities that are required to be carried out or approved by the agency, and the agency should support those comments with either oral or written documentation. Publication of the Draft SEIR marks the beginning of a 45-day public review period, during which time the OCII and San Francisco Planning Department will accept comments on the Draft SEIR. The public review period for the Draft SEIR on the Event Center and Mixed-use Development at Mission Bay Blocks 29-32 is from June 5, 2015 through July 20, 2015.

Copies of the Draft SEIR are available for public review at the following locations: (1) Office of Community Investment and Infrastructure, One South Van Ness Avenue, San Francisco, California; (2) San Francisco Planning Department, 1660 Mission Street, 1st Floor, Planning Information Counter, San Francisco, California; (3) San Francisco Main Library, 100 Larkin Street, San Francisco, California and (4) Mission Bay Library, 960 Fourth Street, San Francisco, California. The Draft SEIR is also available on the OCII's website at <http://www.sfocii.org/index.aspx?page=61> or the Planning Department's website at <http://www.sf-planning.org/sfceaodocs>.

All documents referenced in this Draft SEIR are available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA 94103 as part of case file number 2014.1441E; the documents can also be accessed at the following website: <http://gsweventcenter.com/>. The distribution list for the Draft SEIR is also available for review at this location.

Written comments on the Draft SEIR should be sent by mail to: Tiffany Bohee, OCII Executive Director, c/o Brett Bollinger, San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA 94103; or by email to: warriors@sfgov.org.

During the 45-day public review period for the Draft SEIR, the OCII will conduct a public hearing to receive oral comments on the Draft SEIR. The public hearing is scheduled to be held

before the OCII Commission on June 30, 2015 at City Hall, Room 416, 1 Dr. Carlton B. Goodlett Place, San Francisco, California beginning at 1 p.m. or later.

2.4.4 Responses to Comments Document and Final SEIR

Following the close of the public review period on the Draft SEIR, the OCII will prepare a Responses to Comments document. Written and oral comments received on the Draft SEIR will be addressed in the Responses to Comments document, which will be released for public review and circulated to all persons, organizations, and agencies submitting comments on the Draft SEIR. The Responses to Comments document together with the Draft SEIR constitute the Final SEIR. The OCII Commission will hold a public hearing to consider the adequacy of the Final SEIR in complying with the requirements of CEQA. If the OCII Commission finds that the Final SEIR complies with CEQA requirements, it will certify the Final SEIR.

The OCII must consider the certified Final SEIR before making a decision to approve, disapprove, or modify the project. CEQA requires the adoption of findings prior to approval of a project for which a certified EIR identifies significant environmental effects (*CEQA Guidelines*, Sections 15091 and 15092). If the SEIR identifies significant adverse impacts that cannot be mitigated to less-than-significant levels, the findings must include a statement of overriding considerations for those impacts (*CEQA Guidelines*, Section 15093[b]). See Chapter 5, Section 5.1 for a description of impact significance determinations.

2.5 Public Participation

The *CEQA Guidelines* encourage public participation in the planning and environmental review processes. As part of the CEQA process, OCII provides formal opportunities for the public to present comments and concerns regarding the planning and environmental review process as follows: (1) during the public scoping period after publication of the NOP and before publication of the Draft SEIR, (2) during the Draft SEIR public review period after publication of the Draft SEIR, and (3) at a public hearing before the OCII Commission after publication of the Final SEIR when the Commission is considering certification of the Final SEIR. Written public comments may be submitted to the OCII directly, or on their behalf through the San Francisco Planning Department during the specified public review and comment periods, and both written and oral comments may be presented at public hearings held specifically for the proposed project. This CEQA public participation process is separate from any public participation or citizen advisory meetings conducted by the project sponsor or other Mission Bay activities.

2.6 Summary of Scoping Comments

Summaries of relevant comments received during the public scoping period are presented in **Tables 2-1** and **2-2**. Table 2-1 includes comments that are addressed within each chapter or section of the SEIR, as indicated in the first column of the table. Table 2-2 includes comments that are addressed in the Initial Study (see Appendix NOP-IS).

**TABLE 2-1
SUMMARY OF SCOPING COMMENTS ADDRESSED IN THE SEIR**

SEIR Section	Comment
Chapter 3, Project Description	<p>The Project Description should include explanation and/or descriptions of:</p> <ul style="list-style-type: none"> • Retail Gatehouse: Present additional design and programmatic information about the Gatehouse site element including the location of doors, vertical circulation elements, public restrooms (if any), solid vs. void elements, lighting and signage, as it will be located within the UCSF view easement. • Parking: Describe parking in sufficient detail including comprehensive discussion regarding parking operations during events. Identify how many on-site parking spaces would be available to event patrons vs. to the users of the office and retail space. • Outdoor Events: Include information on daily/annual event dates and time schedule for outdoor events; decibel limits and monitoring; exterior lighting locations and light levels, audio/visual design including any exterior monitors/LED panels, and other environmental elements with potential to impact occupants of the UCSF campus, including sensitive receptors in nearby campus housing, medical facilities or operations. • Exterior Lighting Plan: Discuss the project's exterior site and building lighting plan, including illuminated exterior signage (i.e., LED) billboards, event panels and other light producing elements. • Project Approvals: More explanation concerning the approvals sought should be provided in the SEIR. Clarify what specific amendments would be sought to the Mission Bay South Design for Development, and what modifications to Mission Bay South Signage Master Plan and Mission Bay South Streetscape Plan would be needed. Regarding modifications to the Mission Bay South Design for Development, the proposed project would seek: (1) a height increase for the event center to be located on Blocks 30 and 32, (2) a second 160-foot-tall tower on the site where only one 160-foot tower is allowed; (3) exceptions to the bulk limits and tower separation for many of the structures on the site; (4) exceptions to the required view corridor in the center of the project site, east of Campus Way; and (5) exceptions to parking and loading requirements. • Project Approvals: The SEIR should state that approval is needed from the University of California to release the Warriors from a view easement located along the Campus Way axis, extending 100 feet into the site from Third Street, to enable the Warriors to develop within this view easement. • Project Approvals: Explain the "Governor's approval of project sponsor's Assembly Bill 900 (AB 900) application," its purpose, practical application, its benefit to the project, and any consequences for member of the public, including UCSF.
Chapter 4, Plans and Policies	<ul style="list-style-type: none"> • Identify City Ordinances that are superseded. SEIR should identify all planning ordinances since 1998 with which the project will not comply and explain the consequences of non-compliance so that the deficiencies in the project are clear.
Section 5.1, Impact Overview	<p>The SEIR should include an analysis of:</p> <ul style="list-style-type: none"> • Approach: Explain in detail the basis for this proposed approach, and to ensure the project SEIR fully discloses and analyzes all new or more severe significant environmental effects than those analyzed in the previous environmental documentation. • Cumulative: In Initial Study, the following plans were not discussed: Western SOMA Community Plan, Central Corridor Plan, Hunters Point Redevelopment Plan. Need to be incorporated in order to make sure the plan works not just for the people who will be coming into and out of the arena, but the people that surround the arena. • Cumulative: Consider all residential and commercial projects in Environmental Planning's pipeline and planned to be in construction during time of the Warriors project. Daggett Place will have over 400 units, and proposed residential housing at the Corovan site and at 1601 Mariposa; in total over a 1,000 residential units.

TABLE 2-1 (Continued)
SUMMARY OF SCOPING COMMENTS ADDRESSED IN THE SEIR

SEIR Section	Comment
Section 5.2, Transportation and Circulation	<p>The SEIR/ Traffic Impact Study should include:</p> <ul style="list-style-type: none"> • Vicinity, regional, and site plan and site circulation maps. • Project related trip generation, distribution, and assignment, with assumptions supported with appropriate documentation. • Average daily traffic, a.m. and p.m. peak hour volumes, and LOS on all roadway where impacts may occur for existing, existing plus project, cumulative, and cumulative plus project. • Cumulative analysis should consider all existing plus future traffic generating developments. • Identify project contribution to area traffic and degradation to existing/cumulative LOS. • Include turning traffic per study intersection for all scenarios both during game and commute traffic periods. • Event center should assume year round operation at full seat capacity during both game and commute traffic periods. • Schematic illustration of traffic conditions including project site and area roadways, trip distribution percentages and volumes as well as intersection geometrics for all scenarios. • Evaluation of project consistency with the General Plans Circulation Element and Congestion Management Agency's Congestion Management Plan (CMP). <p>The Transportation Management Plan (TMP) component of the Project Description should address the following:</p> <ul style="list-style-type: none"> • TMP should be required as a condition of approval. • TMP should include discussion about traffic management, traffic routing, use of PCOs, location of parking facilities, and parking operations management. • Parking, traffic and transit assumptions used to develop TMP analyses. • Specific measures to reduce traffic, planned traffic management of pre- and post-events, traffic routing, lane closures, use of Parking Control Officers (PCOs) and other measures to ensure project traffic and transit impacts will not affect operations at critical facilities, including UCSF. • Identify when operational measures are triggered. • Include locations and quantities of parking spaces needed to serve GSW project. • Don't assume use of UCSF's parking facilities by the GSW project since there is no agreement. UCSF facilities should not be listed in TMP unless an agreement with UCSF is reached. • TMP does not presently consider traffic flow of event patrons parked at locations other than the event center. The TMP should consider how traffic will be managed at other parking locations. • TMP/SEIR should consider how traffic will be managed to facilitate traffic, transit, pedestrian and bicycle flow for adjacent and nearby uses that are not destined for the event center, including UCSF patients, visitors, employees and residents and other nearby residents and visitors to nearby uses. • UCSF encourages smart parking management (e.g., patrons likely to arrive from north receive parking spaces to north of project site; patrons likely to arrive from south receive parking spaces to south of project site). • TMP should identify mechanisms for monitoring traffic impacts to surrounding streets and impacts to UCSF campus, including impacts to private vehicles, transit, emergency vehicles, UCSF shuttles, pedestrians and bicyclists.

TABLE 2-1 (Continued)
SUMMARY OF SCOPING COMMENTS ADDRESSED IN THE SEIR

SEIR Section	Comment
Section 5.2, Transportation and Circulation (cont.)	<ul style="list-style-type: none"> • Any modifications to the TMP should require a public process for stakeholders, including UCSF, to comment. • Measures contained in the TMP that are relied upon as mitigation for the project's impacts must be binding and enforceable. • Any road closures to vehicle or pedestrian traffic must have provisions to allow residents of the Madrone and Radiance communities (on Mission Bay Boulevard North) to get in and out of the general area. • The easement area between the Madrone building and Radiance building, into which Bridgeview [Way] runs must have traffic management control in place to close off vehicle and pedestrian traffic except to residents of these two communities. • Bridgeview [Way] north of the arena must be closed off to all foot traffic and enforced to avoid late night noise problems. • PCOs supporting the Giants games are ineffective on Third Street currently, so hearing that PCO are a big part of the solution to the traffic issues on Third Street is not encouraging. PCOs need to be qualified and aggressively control vehicle and foot traffic with ability to change lights when necessary. • Need more details on new shuttles from Van Ness, Ferry Building and 16th Street (how big and will they be of a sufficient number/size to make a difference?). Who is paying for the shuttles, MUNI, tax payers, Warriors fans, or Warriors? • Mission Bay Master Plan has no provision for resident parking stickers. Residents living on Mission Bay Boulevard North need an exception on resident parking stickers. • Warriors plan does not address the needs of the people living in the area to get in and out; people living in the area will be trapped, as they are when the Giants have a ball game. <p>The SEIR should use the Transportation Management Plan (TMP) and analyze:</p> <ul style="list-style-type: none"> • SEIR should include parking, traffic and transit assumptions used to develop TMP and SEIR analyses. • SEIR should include the traffic, parking and transit assumptions used to develop the TMP and SEIR analyses, and include specifics about measures to reduce traffic, planned traffic management of pre- and post-events, traffic routing, lane closures, use of Parking Control Officers (PCOs) and other measures to ensure project traffic and transit impacts will not affect operations at critical facilities, including UCSF. • TMP and SEIR should identify when operational measures are triggered. • SEIR should analyze whether measures in the TMP would be effective in reducing vehicle trips, managing traffic and circulation impacts, whether modifications to the TMP should be made, or whether the project should be modified to eliminate or minimize significant impacts. • SEIR should analyze the effect of any TMP-proposed lane closures on vehicle, transit, pedestrian, and bicycle circulation. • SEIR should evaluate effectiveness of the TMP; identify what significance standard applies in evaluating the effectiveness of the TMP and in determining whether mitigation measures are needed. <p>The SEIR analysis should include:</p> <ul style="list-style-type: none"> • Construction Impacts on State Highway System: Include impacts from construction traffic on state highway system. • Construction Effects on Transportation: Removal of 350,000 cubic yards of soil from the site will add approximately 10,000 – 20,000 heavy truck trips to the neighboring streets, depending on the capacity of the dump trucks used for hauling. The traffic and safety impacts of these trips should be analyzed in SEIR.

TABLE 2-1 (Continued)
SUMMARY OF SCOPING COMMENTS ADDRESSED IN THE SEIR

SEIR Section	Comment
Section 5.2 Transportation and Circulation (cont.)	<p>The SEIR analysis should include:</p> <ul style="list-style-type: none"> • Construction Assumptions: Construction-related assumptions should be based on conservative assumptions that disclose impacts, including for road closures, staging, construction employee parking, etc. on surrounding streets. • Cumulative Construction: Construction associated with electrification of Caltrain and construction of new commercial space will impact traffic well past the targeted Warriors opening date. • Identify what Transportation Demand Management (TDM) measures are proposed to reduce vehicular travel in the area. • TDM measures should be required as mitigation measures and as conditions of approval. • Secondary impacts to pedestrian and bicyclists from any traffic impact mitigation measures should be analyzed. • Parking, Traffic and Transit Assumptions: Include parking, traffic and transit assumptions used to develop traffic analyses. • Project Traffic at Off-site Parking Locations: TMP does not consider traffic flow of event patrons parked at locations other than at the event center. SEIR should consider how traffic will be managed at other parking locations. • Non-Project Traffic/Transit/Pedestrian/Bicycle Flow: Consider how traffic will be managed to facilitate traffic, transit, pedestrian and bicycle flow for adjacent and nearby uses that are not destined for the event center, including UCSF patients, visitors, employees and residents and other nearby residents and visitors to nearby uses. • Transportation/Circulation Impacts to FibroGen [409 and 499 Illinois Street]: Disclose transportation and circulation impacts to FibroGen, given the primary GSW access for cars and trucks is via 16th Street, as is FibroGen's main artery for access to its own parking garage. • Project Impacts to Public Transit: Disclose impacts to public transit, given currently constrained nature, and consider any existing and future system constraints. • Avoid 16th Street. UCSF encourages east/westbound event traffic to be routed to the south of the UCSF Mission Bay campus site to the extent possible – i.e., onto Mariposa Street, rather than onto 16th Street which bisects the UCSF Mission Bay campus site and which will have a reduced vehicular capacity given the planned public transit-only lanes on 16th Street in the future. Avoid 16th Street during the 5 p.m. to 7 p.m. peak period when UCSF employees are leaving the site and an employee shift change occurs at the hospitals. • Off-Peak Period Traffic: Given the atypical characteristics of the proposed project, whereby a large number of vehicles is expected to arrive/leave the area in a relatively short amount of time, and the greatest amount of traffic generated by the Event Center is likely to occur outside of the 4 p.m. to 6 p.m. period, clearly identify the peak periods and what significance standard is appropriate to apply in this situation to determine the significance of traffic impacts. • Cumulative Impacts at MB South Intersections UCSF's recently certified 2014 LRDP FEIR identified potentially significant and unavoidable cumulative traffic impacts at several key intersections in the Mission Bay South Area that could result from events at the Warriors' Event Center. These impacts should be further analyzed in the SEIR. <p>The SEIR cumulative analysis of UCSF/Mission Rock Project/AT&T events/Warriors project should include:</p> <ul style="list-style-type: none"> • Identify the basis for assumptions regarding the frequency and times of day of dual events (i.e., events at Warriors' Event Center concurrent with events at AT&T Park). • Disclose cumulative impacts of use of UCSF hospital or other facilities when either or both Giants/Warriors games or other events occur at the same time.

TABLE 2-1 (Continued)
SUMMARY OF SCOPING COMMENTS ADDRESSED IN THE SEIR

SEIR Section	Comment
Section 5.2, Transportation and Circulation (cont.)	<ul style="list-style-type: none"> • Consider traffic volume increases associated with the Mission Rock project and future closure of Terry François Boulevard (when it is reconfigured when Mission Rock project is completed). • There will be increase in GSW project traffic on Mission Bay Blvd North with future closure of Terry François Boulevard when it is reconfigured when the Mission Rock project is completed. <p>The SEIR analysis should include:</p> <ul style="list-style-type: none"> • Taxi/Valet Exiting Plan. Provide comprehensive pedestrian exiting plan illustrating how taxi and valet parking along Terry François Blvd. will be accessed and announced. The elevator cores near the corners of South St. and Terry François Blvd. are not easily visible from the sidewalk. Unclear access to and from taxi and valet parking areas may result in patrons finding other locations to find taxis which may cause pedestrian flows through UCSF campus. • Quantitative Pedestrian Flow/Circulation Modeling: Conduct quantitative pedestrian flow/circulation modeling to validate the required size and location of pedestrian routes approaching and within the site to ensure that pedestrians will not spill over sidewalks into roadways and/or the UCSF campus, impacting campus operations, vehicular access or otherwise. • Pedestrian Barrier on 3rd Street. Request a pedestrian barrier along 3rd street within the central median be studied to mitigate pedestrian jay-walking across 3rd street onto the UCSF Mission Bay campus site. • Bicycle Facilities: Evaluate whether the event center will provide adequate bicycle facilities to promote access by bike, including wayfinding signage, valet service, bikeshare, and promotion of the Bay Trail for arena access. • Bicycle Parking Requirements: Current Planning Code for arena calls for bicycle parking spaces for 5% of venue capacity, of which 75% must be attended. If bicycle mode share assumptions are changed to 5-6%, which is plausible, there will be insufficient parking available under the terms of the 1998 FSEIR. The GSW design at Mission Bay should comply with current code by providing parking comparable to the earlier Piers 30-32 design. • Bicycle Parking and Pedestrian Improvements: Project should be encouraged to mitigate any transportation impacts through bicycle and pedestrian improvements and infrastructure, including new crosswalks, wider sidewalks, special signals, bike lanes or paths with color treatment or protection, signal synchronization and priority for users other than motorists, and on-site bicycle parking commensurate with expected bicycle mode share. SEIR should study project variants that consider a robust bicycle transportation plan in line with the City's own mode share goals. • Central Subway and Caltrain Electrification: SEIR will assume completion of the Central Subway and Caltrain electrification by the time the Warriors' proposed project is completed in 2018. This may be a faulty assumption, as the Central Subway is not scheduled for completion until 2019, and Caltrain Electrification is not scheduled to be completed until late 2020 at the earliest. Therefore, the potential impacts of the proposed project before these improvements are in place needs to be analyzed. • Travel Demand Assumptions: For the estimates of travel demand of Warriors games, data from Oracle Arena should not be used exclusively. Oracle Arena is located a distance from major employment centers, is accessed via a congested freeway, and has limited on-site pre-game dining options. Conversely, the proposed project is located adjacent to downtown San Francisco and will be providing thousands of square feet of new restaurant space. As such, it is likely that game patrons traveling to the project will arrive several hours prior to events and thus will overlap with the evening peak commute hours. Additional data from similar urban arenas (such as Staples Center in Los Angeles) should be reviewed.

TABLE 2-1 (Continued)
SUMMARY OF SCOPING COMMENTS ADDRESSED IN THE SEIR

SEIR Section	Comment
Section 5.2, Transportation and Circulation (cont.)	<p>The SEIR analysis should include:</p> <ul style="list-style-type: none"> • Travel Demand Assumptions: Given the proliferation of Uber and other so-called “ride-sharing” services, these modes of travel need to be accounted for in the trip generation and the site planning. • Mode Share: GSW indicate mode share will be 35% transit, 55% auto, 2% bike, 4% walk and 4% taxi/shuttle/etc., derived from Giants and Kings, however, Kings arena is located well outside downtown, and Giants ballpark seats more than twice and operates at different times in different seasons. Provide evidence for assumptions. Consider split data from SFMTA 2011 mode share survey for Zone 1 (5% bike mode share). • Mode Share: When Giants came, they said it was going to be a commuter-only park, with no parking - we all know what happened. So, recommend setting a lower goal on parking load (e.g., reduce from 55% to 25%) because you are going to go over it no matter what you do. • Bicycle Mode Share: The TMP assumes a 2% bicycle mode share for the GSW 2018 opening, despite Mission Bay’s 5% bicycle mode share and City goals for 8% bicycle mode share by 2018 and 20% by 2020. SEIR should resolve the TDM mode share assumptions with existing data for the City and neighborhood and the City’s goals for growing bicycle mode share by 2020. • Bicycle Mode Share: To account for more accurate mode share, rely on the Waterfront Transportation Assessment (WTA). WTA Phase 2 (SOMA/Mission Bay/Central Waterfront Transportation Needs and Solutions Analysis) should be used to determine real transportation impacts across all modes to achieve more realistic bicycle mode share. WTA estimates a 30% increase in total trips in Mission Bay, 20% of which are predicted to be by bike. • Caltrain Station: Recognize importance of Caltrain Station at 22nd Street. Trip from this station to the arena is roughly as long as trip from Montgomery BART to Giants ballpark. • Traffic Analysis to Account for UCSF Peak Evening Shifts. The analysis should consider the number of UCSF employees leaving/arriving from the UCSF campus, especially the employee shift change at the UCSF hospitals which would be coincident with Event Center patron arrivals for peak (evening) events. • Traffic Pinch Points in Mission Bay: Mission Bay has limited street capacity, with certain pinch points at the I-280 on/off ramps, the 16th Street / 7th Street intersection at the Caltrain crossing, and the Fourth Street and Third Street bridges. Interventions at these pinch points are critical to facilitating traffic flow in and out of Mission Bay. • Traffic Pinch Points: I-280/Mariposa interchange already challenging; addition of traffic from UCSF, and an additional traffic light between I-280 and 3rd Street will make this additionally difficult. • Impacts on I-80/I-280: Concerned about impacts on I-80 and I-280 on-ramp and off-ramp locations; suggest updated counts at on- and off-ramp locations, including special event data counts. • Project Impact on Emergency Vehicle Access/Response: Evaluate the extent to which patients in private vehicles and public transit to the UCSF Mission Bay campus site may be delayed or otherwise encounter difficulties reaching the hospital or emergency room due to Event Center traffic congestion on roadways, or queues on the I-280 off-ramp to Mariposa Street. Evaluate the extent to which emergency vehicles may be delayed reaching the hospital emergency room. Mitigation measures and/or improvement measures should be identified. • Project Impact on Emergency Vehicle Access/Response: The SEIR should evaluate the potential impacts on emergency response in the area, particularly given the project’s proposal to close a portion of Third Street to through traffic after events, and given vehicular queues and traffic congestion that are likely to occur both before and after events. Even with parking control officers to direct traffic, UCSF is concerned that traffic

TABLE 2-1 (Continued)
SUMMARY OF SCOPING COMMENTS ADDRESSED IN THE SEIR

SEIR Section	Comment
Section 5.2, Transportation and Circulation (cont.)	<p>The SEIR analysis should include:</p> <p>congestion may inhibit the movement of emergency vehicles needing to access the UCSF Children’s Hospital emergency room, due to vehicular queues on streets as well as queues on the I-280 off-ramp to Mariposa Street. In addition, patients who need to reach the hospital or emergency room may be in private vehicles, which would not have the benefit of sirens/lights to facilitate their movement through congested traffic. For these reasons, the potential for delay to hospital/emergency room access needs to be considered, as access must be unimpeded 24/7.</p> <ul style="list-style-type: none"> • Event Center Light Impact on Operation of UCSF Helipad: Outdoor animated lighting, strobe lighting, or Hollywood-style search lights during special events, should be discussed and impacts on adjacent land uses analyzed, including potential impacts on operations of the new helipad located atop the Medical Center at Mission Bay. • Construction Effects on UCSF Helicopter Use. Analyze the potential for construction cranes to interfere with air medical access to the UCSF hospital helipad. Construction cranes for the proposed Warriors’ project would be in or in close proximity to the UCSF helicopter flight paths as the UCSF hospital and helipad will be operational in February 2015. • Ferry Terminal: Addition of a new ferry terminal to support the event center worth considering; would relieve vehicular traffic and crowded MUNI system. • UCSF Parking Facilities: Do not assume use of UCSF’s parking facilities by the GSW project since there is no agreement. • Parking Demand: Identify the parking demand resulting from the proposed project, particularly during events, and whether parking demand would be met by on- and off-site parking facilities. • On-Site Parking Supply: Lack of on-site parking will create the circulation of several thousand private vehicles with no place to park. • On-Site Parking Management/Use: Use smart parking management (patrons likely to arrive from north receive parking spaces to north of project site; patrons likely to arrive from south receive parking spaces to south of project site). • On-Site Parking Management/Use: Identify how many on-site parking spaces would be available to event patrons vs. to the users of the office and retail space. • Parking Supply/Demand Assessment: CEQA does not foreclose a detailed parking supply/demand study for planning and informational purposes, as well as analysis of queuing for parking spaces. EIR should include a parking supply/demand assessment and disclose any parking shortfalls, review area-wide parking conditions, the effects of vehicles circling looking for parking, and queues at all designed event parking facilities. <p>The SEIR mitigation measures should include:</p> <ul style="list-style-type: none"> • Project’s fair share contribution, financing, scheduling, implementation responsibilities and lead agency monitoring should be fully disclosed for all proposed mitigation measures. • Required roadway improvements should be completed prior to issuance of Certificate of Occupancy. • Consider mitigation measures to reduce project impacts on I-80 and I-280. • Describe any pedestrian and bicycle mitigation measures and safety countermeasures needed to maintain and improve access to transit facilities and reducing vehicle trips and traffic impacts on State Highways. • Contraflow Lane Mitigation: Should traffic congestion warrant, the analysis should consider contraflow lanes as mitigation or improvement measures. One possibility is the coning of westbound Mariposa Street to temporarily enable three lanes westbound, rather than two lanes, to facilitate traffic flow onto I-280. This should be considered along with possible interventions on the I-280 onramp to facilitate traffic flow.

TABLE 2-1 (Continued)
SUMMARY OF SCOPING COMMENTS ADDRESSED IN THE SEIR

SEIR Section	Comment
Section 5.3, Noise	<p>The SEIR should include an analysis of:</p> <ul style="list-style-type: none"> • General: The SEIR should identify noise mitigation measures to reduce potentially significant noise impacts, including impacts on sensitive receptors at UCSF's residential and medical facilities. • Outdoor Event Noise: Analyze impacts from amplified sound equipment to be used for outdoor events in the main plaza nearby facilities. The SEIR should include information on outdoor events, including decibel limits and monitoring, audio/visual design with potential to impact occupants of the UCSF campus, including sensitive receptors in nearby campus housing, medical facilities or operations. Include mitigation measures designed to prevent any potentially significant noise impacts. • Event Center Noise: Analyze the potential for noise leakage from the Event Center structure, particularly during concerts, and associated impacts on adjoining land uses. • Operational Traffic and Emergency Generator Noise Effects on FibroGen: FibroGen should be treated as sensitive noise receptor; SEIR should disclose noise impacts from traffic and circulation from GSW patrons, employees and deliveries; and diesel generators (in event of power outage). • Construction Noise and Vibration Effects on FibroGen: FibroGen operations, sensitive instrumentation, laboratories, and chemicals are highly sensitive to noise and vibration. Project should be conditioned so that pile driving is prohibited and driller augers are instead required; and SEIR should analyze noise and vibration impacts of drilled augers. • Cumulative Construction Noise: UCSF's recently certified 2014 LRDP FEIR identified a potentially significant and unavoidable cumulative noise impact from concurrent UCSF/Warriors' construction projects. This should be further analyzed in the Draft EIR.
Section 5.4, Air Quality	<p>The SEIR should include an analysis of:</p> <ul style="list-style-type: none"> • Air Pollutant Exposure: Neighborhoods adjacent to freeways (as indicated in BAAQMD and SFDPH maps), through which project traffic will travel, will experience exacerbated levels of particulate matter and other pollutants, worsening an already dangerous health situation. City will be reducing capacity further on many streets; lines of congestion will stretch further; dispersing particulates through residential and work areas. This must be studied, quantified, and an abatement plan discussed. • Construction Air Quality Effects on FibroGen: FibroGen has had to significantly increase the frequency with which it changes its air filters, and has experienced significant amounts of dust and dirt on its windows and walls throughout the UCSF hospital construction. GSW project to be even more impactful to FibroGen. SEIR should conservatively analyze construction air quality impacts. • Operational Air Quality Effects on FibroGen: Analyze traffic-related air quality effects on FibroGen. • Cumulative Construction Air Quality Effects: UCSF's recently certified 2014 LRDP FEIR identified potentially significant and unavoidable cumulative air quality impacts from concurrent construction projects and concurrent operations of the UCSF Mission Bay campus site and the Warriors' Event Center. These impacts should be further analyzed in the Draft EIR.
Section 5.6, Wind and Shadow	<p>The SEIR should include an analysis of:</p> <ul style="list-style-type: none"> • Wind and shadow impacts on UCSF facilities should be analyzed, particularly in areas heavily used by pedestrians, such as Gene Friend Way near Third, and the 16th/4th Streets campus gateway. • Proposed height increase exceptions, if granted, would have impacts on wind and shadows.

TABLE 2-1 (Continued)
SUMMARY OF SCOPING COMMENTS ADDRESSED IN THE SEIR

SEIR Section	Comment
Section 5.7, Utilities and Service Systems	<p>The SEIR should include an analysis of:</p> <ul style="list-style-type: none"> • Impact on Mariposa Pump Station: The UCSF 2014 LRDP FEIR identified an issue with the Mariposa Pump Station that has yet to be resolved with the San Francisco Public Utilities Commission staff (see UCSF 2015 LRDP EIR, pp. 7-98 through 7-100 and pg. 10-15). The proposed Warriors' project may contribute to a cumulative impact and this should be analyzed in the SEIR. • Operational Impacts to Other Utilities: Analyze operational impacts to public infrastructure within streets right-of-way. • Construction Impacts to Other Utilities: Analyze construction impacts to public infrastructure within streets right-of-way.
Section 5.8, Public Services	<p>The EIR should include an analysis of:</p> <ul style="list-style-type: none"> • Security/Crowd Management/Quality of Life Issues: The SEIR should discuss the project's plan for crowd management, nighttime hours of operation, and provisions for sufficient on-site and off-site security and maintenance personnel, public restrooms and trash receptacles. • Security/Crowd Management/Quality of Life Issues: The SEIR should discuss project impacts to law enforcement service ratios/response times; assess fan violence, proliferation of alcohol-related uses, riots; and solid waste management. • Public Intoxication: Consideration must be given to control unorderly behavior, such as intoxication and public urination (e.g., Giants fans using China Basin Channel (also known as Mission Creek) for restroom). • Litter: Consideration must be given to the handling of event related materials that can be littered around the area (not just adjacent streets) • Graffiti: Project may result in increases in graffiti/damage in area buildings. • Evacuation Plan for Emergency Response. SEIR should discuss evacuation plan for emergency response, including law enforcement, and make that plan an enforceable mitigation measure. • Construction Effects on Public Services. Evaluate construction effects on law enforcement, fire, emergency services and solid waste (displacement of vermin, handling of construction materials).
Section 5.9, Hydrology and Water Quality	<p>The SEIR should include an analysis of:</p> <ul style="list-style-type: none"> • Project Trash Impact to Stormwater Quality: The SEIR should identify mitigation, such as additional trash receptacles and post-event trash pick-up radius exterior to the Warriors property line sufficient to avoid impacts on the water quality of the storm drain system.
Chapter 7, Alternatives	<p>The SEIR should include an analysis of:</p> <ul style="list-style-type: none"> • Modified Site Plan: Evaluate alternatives that incorporate potential design changes that may be necessary to address significant traffic and circulation impacts (e.g., a reconfigured site plan that provides additional vehicular access s on Third Street and Terry A. François Blvd; additional modifications to freeway access; and modifications to existing public transportation to alleviate traffic concerns).

**TABLE 2-2
SUMMARY OF SCOPING COMMENTS ADDRESSED IN THE INITIAL STUDY**

Initial Study Section	Comment
Section E.1, Land Use	<p>The EIR should include an analysis of:</p> <ul style="list-style-type: none"> • Potential land use impacts should be included in the Draft SEIR, as the proposed Event Center would require a secondary use finding, multiple amendments to the applicable Design for Development and other variances. • Given GSW project's significant scope and sensitivity of FibroGen use and operations, combined with other uses in the vicinity that have been constructed, disclose any potential land use incompatibilities with surrounding land uses.
Section E.2, Aesthetics	<p>The EIR should include an analysis of:</p> <ul style="list-style-type: none"> • Increased Height/Massing Visual Impact: The numerous modifications proposed to the Mission Bay South Design for Development standards which would increase the height limit, the number of allowed towers on the site, increase building bulk beyond current limits, and eliminate a view corridor, warrants the analysis of aesthetic and view corridor impacts resulting from the proposed project, at least for the purpose of providing information to the public and decision makers. • Exterior Lighting Impacts: Given the proximity of the proposed entertainment venue to sensitive receptors (i.e., UCSF hospital and residents), information about nighttime lighting at the Event Center, including the potential for outdoor animated lighting, strobe lighting, or Hollywood-style search lights during special events, should be discussed and impacts on adjacent land uses analyzed, including potential impacts on operations of the new helipad located atop the Medical Center at Mission Bay. • Plaza and Retail Visual Impact: Visual impact of the Third Street Plaza and associated retail space being elevated above Third Street, 16th Street and South Street, rather than at street level where activation of the street is encouraged, and the expanse of blank parking garage walls fronting those streets. • Retail Gatehouse Visual Impact: Retail Gatehouse is located in UCSF view easement and will have a visual impact. • Construction Nighttime Lighting Effects: Construction-period nighttime lighting and impacts on adjacent land uses should be analyzed, and mitigation measures imposed as appropriate.
Section E.3, Population and Housing	<p>The EIR should include an analysis of:</p> <ul style="list-style-type: none"> • Construction Employment Data: Construction job data presented in Initial Study probably dates back from the end of 2013; construction has gone up greatly over the last year; need to make sure outdated data is not used.
Section E.4, Cultural and Paleontological Resources	<p>The EIR should include an analysis of:</p> <ul style="list-style-type: none"> • Mitigation for Cultural Resources: Contact appropriate regional archaeological Information Center. If archaeological inventory survey is required, prepare report detailing the findings and recommendations of the records search and field survey. Contact NAHC for a Sacred Lands File Check, and a list of appropriate Native American contacts for consultation concerning the project site and to assist in mitigation measures. Include in mitigation plan provisions for identification and evaluation of accidentally discovered archaeological resources, per CEQA Section 16064.5(f). Include in mitigation plan provisions for disposition of recovered cultural items that are not burial associated, which are addressed in PRC 5097.98, in consultation with culturally affiliated Native Americans. Include provisions for discovery of Native American human remains in mitigation plan (see Health and Safety Code 7050.5, PRC 5097.98, and CEQA Guidelines 15064.5(e)).
Section E.10, Recreation	<p>The EIR should include an analysis of:</p> <ul style="list-style-type: none"> • Project Increase in Use of Bayfront Park. Initial Study indicated there would not be any substantial increase in the use of existing parks and recreational facilities and would not lead to physical deterioration of existing recreational resources. However, plan for Bayfront Park never contemplated having 20,000 additional people coming into the neighborhood to use these parks.

TABLE 2-2 (Continued)
SUMMARY OF SCOPING COMMENTS ADDRESSED IN THE INITIAL STUDY

Initial Study Section	Comment
Section E.11, Utilities and Service Systems (Solid Waste only)	The EIR should include an analysis of: <ul style="list-style-type: none"> • Solid Waste. There is a significant increase in solid waste handling as a result of the Giants; the burden of cleanup ends up on Mission Bay and not the City's general fund. Analysis of Warriors project should reflect the increase burden on Mission Bay community from increased solid waste.
Section E.15, Hydrology and Water Quality	The EIR should include an analysis of: <ul style="list-style-type: none"> • Groundwater: Site is too wet; will not be able to successfully build underground parking.
Section E.16, Hazards and Hazardous Materials	The EIR should include an analysis of: <ul style="list-style-type: none"> • Cumulative Construction-Related Hazardous Materials Impacts: Concerned about hazardous waste releases from all the cumulative construction that will be going on in the project area (within a 3 to 4 block radius) at the same time as the Warriors project.

2.7 Assembly Bill 900

The Jobs and Economic Improvement through Environmental Leadership Act (Assembly Bill 900 or AB 900)⁸, signed by the Governor in September 2011 and effective on January 1, 2012, provides streamlining benefits under CEQA for “environmental leadership development projects (leadership projects).” One of the categories that meets the definition of a leadership project is a project that is residential, retail, commercial, sports, cultural, entertainment, or recreational in nature; upon completion, will qualify for LEED silver certification; will achieve at least 10 percent greater transportation efficiency than comparable projects; and for projects within a metropolitan planning organization’s jurisdiction for which a sustainable communities strategy or alternative planning strategy is in effect, the project is consistent with the general use designation, density, building intensity and applicable policies specified for the project area in either the sustainable communities strategy or an alternative planning strategy.⁹

The Governor may certify a leadership project for streamlining if all the following conditions are met: (1) the project would result in a minimum investment of \$100 million dollars in California upon completion of construction; (2) the project would create high-wage, highly skilled jobs that pay prevailing wages and living wages and provide construction jobs and permanent jobs for Californians, and help reduce unemployment; (3) the project would not result in any net additional emission of greenhouse gases, including greenhouse gas emissions (GHGs) from employee transportation, as determined by the State Air Resources Board; (4) the project applicant has entered into a binding and enforceable agreement that all mitigation measures required pursuant to the law to certify the project under this chapter shall be conditions of

⁸ California Public Resources Code 21178 et. seq.

⁹ The Governor’s Office of Planning and Research, California Jobs, *Governor’s Guidelines for Streamlining Judicial Review Under the California Environmental Quality Act*, available online at http://opr.ca.gov/s_californiajobs.php, accessed January 6, 2015 and California Public Resources Code Section 21180(b).

approval of the project, and those conditions will be fully enforceable by the lead agency or another agency designated by the lead agency, and in the case of environmental mitigation measures, the applicant agrees, as an ongoing obligation, that those measures will be monitored and enforced by the lead agency for the life of the obligation; (5) the project applicant agrees to pay the costs of the Court of Appeal in hearing and deciding any case, including payment of the costs for the appointment of a special master if deemed appropriate by the court, in a form and manner specified by the Judicial Council; and (6) the project applicant agrees to pay the costs of preparing the administrative record for the project concurrent with review and consideration of the project pursuant to this division, in a form and manner specified by the lead agency for the project.

The project sponsor (GSW Arena LLC, an affiliate of the Golden State Warriors LLC) applied to the governor of California for certification of the proposed project as a leadership project under AB 900, and the application was subject to public review from March 2, 2015 through April 1, 2015. On March 21, the California Air Resources Board issued Executive Order G-15-022 determining that the proposed project would not result in any net additional GHGs for purposes of certification under AB 900. On April 30, 2015, Governor Jerry Brown certified the proposed project as an eligible project under AB 900, and the Governor's Office of Planning and Research forwarded the Governor's determination to the Joint Legislative Budget Committee. On May 22, 2015, the State Legislative Analyst's Office indicated that the project aligns with the intent of AB 900, and recommended to the Joint Legislative Budget Committee that they concur with the Governor's determination. On May 27, 2015, the Joint Legislative Budget Committee concurred with the Governor's determination that the project is an eligible project under AB 900.

Pursuant to Public Resources Code Section 21187, within 10 days of the Governor certifying the proposed project as an environmental leadership development project, the OCII issued a public notice on May 7, 2015 stating that the applicant has elected to proceed under Chapter 6.5 (commencing with Section 21178) of the Public Resources Code, which provides, among other things, that any judicial action challenging the certification of the EIR or the approval of the project described in the EIR is subject to the procedures set forth in Sections 21185 to 21186, inclusive, of the Public Resources Code. The OCII issued a second public notice on June 3, 2015 stating the aforementioned information as well.

The OCII has prepared an administrative record for the proposed project and associated CEQA review process in accordance with the requirements of AB 900. All documents and other materials placed in the administrative record have been posted on, and are downloadable from, the following website <http://gsweventcenter.com/>, commencing with the date of the release of the Draft SEIR. The administrative record includes the Draft SEIR and all other documents submitted to, or relied on by, the lead agency in the preparation of the Draft SEIR. In addition, a document prepared by the lead agency or submitted by the applicant after the date of the release of the Draft SEIR that is a part of the record of the proceedings will be made available to the public in a readily accessible electronic format within the timeframes specified by this act.

Section 21185 of the Public Resources Code requires that the Judicial Council adopt a rule of court to establish procedures applicable to actions or proceedings brought to attack, review, set aside, void or annul the certification of the environmental impact report for an environmental leadership development project certified by the Governor or the granting of any project approvals that require the actions or proceedings, including any potential appeals therefrom, be resolved within 270 days of certification of the record of proceedings pursuant to Public Resources Code 21186. This creates an accelerated timeframe for CEQA litigation. It applies to projects that have a certified EIR and are certified by the Governor as “environmental leadership development projects” by January 1, 2016. AB 900 remains effective until January 1, 2017, and as of that date, is repealed unless a later enacted statute extends or repeals that date.

2.8 Senate Bill 743

On September 27, 2013, Governor Jerry Brown signed SB 743 (Chapter 386 of the 2013 California Legislation Session), which became effective on January 1, 2014.¹⁰ Among other provisions, SB 743 amends the California Environmental Quality Act (CEQA) by adding Public Resources Code Section 21099 regarding analysis of aesthetics and parking impacts for urban infill projects and modifies AB 900 as discussed above.

Public Resources Code Section 21099(d), effective January 1, 2014, provides that, “aesthetics and parking impacts of a residential, mixed- use residential, or employment center project on an infill site located within a transit priority area shall not be considered significant impacts on the environment.”¹¹ Accordingly, aesthetics and parking are no longer to be considered in determining if a project has the potential to result in significant environmental effects for projects that meet all of the following three criteria:¹²

- a) The project is in a transit priority area; and
- b) The project is on an infill site; and
- c) The project is residential, mixed-use residential, or an employment center.

The proposed project meets each of the above three criteria: the project is located in proximity to several transit routes, including SFMTA Muni Metro stops; the project is located on an infill site that has previously been developed with industrial and commercial uses, is surrounded by areas of either recently completed or planned urban development, and is zoned for commercial uses with a floor area ratio (FAR) greater than 0.75; and the project would be an employment center

¹⁰ SB 743 can be found on-line at: http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140SB743.

¹¹ A “transit priority area” is defined in as an area within one-half mile of an existing or planned major transit stop. A “major transit stop” is defined in Section 21064.3 of the California Public Resources Code as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

¹² See Public Resources Code Section 21099(d).

supporting a range of commercial uses.¹³ Thus, this SEIR does not consider either aesthetics or the adequacy of parking in determining the significance of project impacts under CEQA.

Public Resources Code Section 21099(d) states that a Lead Agency maintains the authority to consider aesthetic impacts pursuant to local design review ordinances or other discretionary powers and that aesthetics impacts do not include impacts on historical or cultural resources. As such, there will be no change in the standard protocol used by OCII related to design and historic review for this project. The applicable urban design standards and guidelines governing the project site and proposed project — which are contained in the Mission Bay South Plan, Mission Bay South Design for Development and Mission Bay South Signage Master Plan — would apply to the proposed project. Furthermore, the project would be subject to all applicable design review approvals under the South OPA, including Major Phase approval for Blocks 29-32 and Schematic Designs for each building and private open spaces. The design review process would consider relevant design and aesthetic issues. Project impacts on historical and cultural resources are addressed in the Initial Study (see Appendix NOP-IS).

The OCII recognizes that the public and decision makers nonetheless may be interested in information pertaining to the aesthetic and parking effects of a proposed project and may desire that such information be provided as part of the environmental review process. Therefore, Chapter 3, Project Description, includes graphic depictions of the project. However, this information is provided solely for informational purposes and is not used to determine the significance of the environmental impacts of the project, pursuant to SB 743. Similarly, Chapter 5, Section 5.2, Transportation and Circulation, of this SEIR presents a parking demand analysis for informational purposes and considers any secondary physical impacts associated with constrained supply (e.g., queuing by drivers waiting for scarce onsite parking spaces that affects the public right-of-way) as applicable in the transportation analysis.

2.9 Contents and Organization of the EIR

This SEIR describes the proposed project and required approvals, analyzes potential environmental impacts of the proposed project and a project variant, identifies mitigation measures where those impacts are significant, identifies cumulative adverse impacts to which the proposed project could make a substantial contribution, and evaluates alternatives to the project that could avoid or reduce significant impacts while still meeting most of the project's objectives.

This SEIR is organized as follows:

- **Chapter 1, Summary.** This chapter summarizes the contents of the entire SEIR by presenting a concise overview of the project description and providing in a tabular format a summary of the environmental impacts that would result from the project, mitigation

¹³ San Francisco Planning Department, Transit-Oriented Infill Project Criteria Checklist: Event Center and Mixed-Use Development at Mission Bay Blocks 29-32, November 10, 2014. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014.1441E.

measures identified to reduce or avoid significant impacts. It also briefly describes the project variant and its impacts, and the alternatives to the proposed project.

- **Chapter 2, Introduction.** This chapter describes the environmental review process, the previous environmental review of the Mission Bay Redevelopment Plans, the public and agency comments received on the scope of the SEIR, and the organization of the SEIR.
- **Chapter 3, Project Description.** This chapter discusses the project's background, objectives, and location; describes the physical characteristics of the project, including both the construction and operational phases; and identifies required project approvals.
- **Chapter 4, Plans and Policies.** This chapter provides a summary of the applicable plans, policies, and regulations of the local, regional, state, and federal agencies that have policy and regulatory control over the project site, and discusses the proposed project's consistency with those plans, policies, and regulations.
- **Chapter 5, Environmental Setting, Impacts and Mitigation Measures.** This chapter describes the project's existing setting and environmental impacts with respect to transportation and circulation, noise and vibration, air quality, greenhouse gas emissions, wind and shadow, utilities and service systems, public services, and hydrology and water quality. Each environmental topic is discussed in a separate section within this chapter, and each section identifies the thresholds of significance used to assess the severity of the impacts. Within each section, there is a summary of the relevant sections of the Mission Bay FSEIR, descriptions of the setting and regulatory framework, and impact analyses of both project-specific and cumulative impacts of the proposed project and a determination of the significance of each impact. For impacts determined to be significant, mitigation measures that would reduce or avoid those impacts are presented.
- **Chapter 6, Other CEQA Issues.** This chapter addresses any growth-inducing impacts that would result from the proposed project, the significant environmental effects of the project that cannot be mitigated to a less-than-significant level, and areas of known controversy.
- **Chapter 7, Alternatives.** This chapter presents and evaluates alternatives to the proposed project that could feasibly attain most of the project's objectives as well as reduce identified significant adverse impacts of the project. It also identifies the environmentally superior alternative and describes other alternatives that were considered but rejected.
- **Chapter 8, Third Street Plaza Variant.** This chapter describes and analyzes a variant to the proposed project at an equal level of detail as the proposed project.
- **Chapter 9, Report Preparers.** This chapter identifies the SEIR authors and consultants; project sponsor and consultants; and agencies and persons consulted.
- **Appendices.** The appendices include the Notice of Preparation, the complete Initial Study, and supporting technical information for the SEIR.

CHAPTER 3

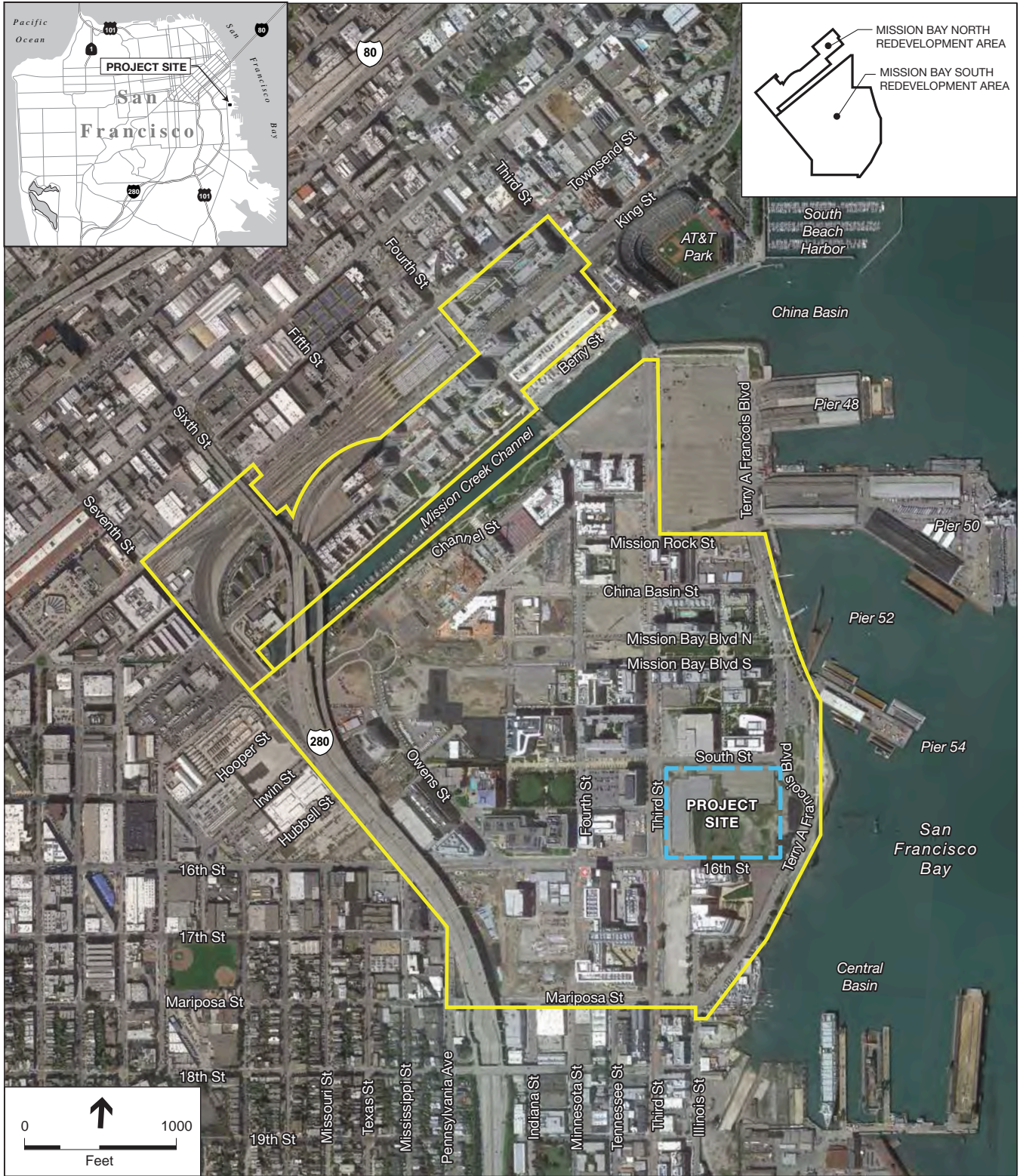
Project Description

3.1 Project Overview

GSW Arena LLC (GSW), an affiliate of Golden State Warriors, LLC, which owns and operates the Golden State Warriors National Basketball Association (NBA) team, proposes to construct a multi-purpose event center and a variety of mixed uses, including office, retail, open space and structured parking on an approximately 11-acre site (Blocks 29-32) within the Mission Bay South Redevelopment Plan Area of San Francisco (see **Figure 3-1** for aerial photograph and **Figure 3-2** for existing roadway network in Mission Bay). The project site is bounded by South Street on the north, Third Street on the west, 16th Street on the south, and by the future planned realigned Terry A. Francois Boulevard on the east. The proposed event center would host the Golden State Warriors basketball team during the NBA season, and provide a year-round venue for a variety of other uses, including concerts, family shows, other sporting events, cultural events, conferences and conventions. GSW has entered into an agreement to purchase the project site from the current site owner, an affiliate of salesforce.com.

Development is allowed within the Mission Bay South Redevelopment Plan Area, including Blocks 29-32, consistent with the land use program and subject to the development controls of the *Mission Bay South Redevelopment Plan*, *Mission Bay South Design for Development*, and other related documents (see *Background*, below). No amendment to the *Mission Bay South Redevelopment Plan* would be required, although the proposed project at Blocks 29-32 would require certain amendments and/or variations to other documents (see *Intended Uses of this EIR and Approvals Required*, below).

This Project Description is organized as follows: Section 3.2 presents the project objectives; Section 3.3 provides background information, including the development context for Mission Bay; Section 3.4 describes characteristics of the existing project site and vicinity; Section 3.5 provides a brief history of the Golden State Warriors and describes their existing operations and facilities; Section 3.6 present project characteristics, including a description of the proposed development plans at the project site, discussion of the proposed project operations and employment, and description of project construction details; Section 3.7 presents a number of graphic exhibits that have been prepared for the proposed development, and Section 3.8 describes the intended uses of this Subsequent EIR (SEIR) and lists the required approvals for the project.



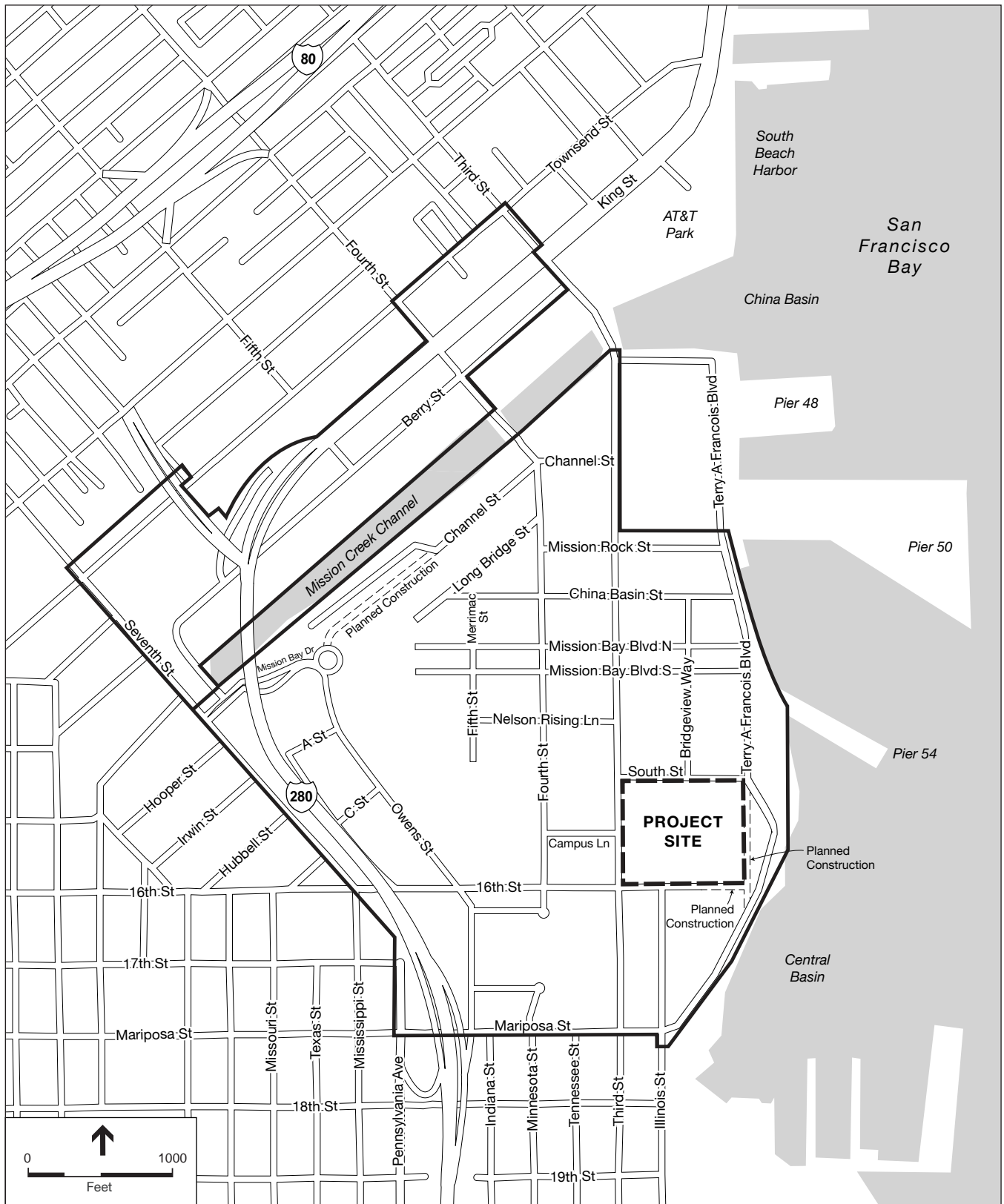
- Mission Bay Redevelopment Plan Area Boundary
- Project Site Boundary

Note: Please see also Figure 3-2, Existing Roadway Network in Mission Bay, for recent roadway improvements in Mission Bay.

SOURCE: Google Maps, ESA, 2014

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 3-1
Aerial Photograph of Mission Bay



- Mission Bay Redevelopment Plan Area Boundary
- - - Project Site Boundary

SOURCE: ESA, 2014

OClI Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 3-2
Existing Roadway Network in Mission Bay

3.2 Project Objectives

The Office of Community Investment and Infrastructure (OCII, formerly the San Francisco Redevelopment Agency) and FOCIL-MB, LLC (formerly Catellus Development Corporation) are the co-sponsors of the Mission Bay Redevelopment Plan. The primary objectives of the Mission Bay Redevelopment Plan project sponsors as presented in the *Mission Bay Final Subsequent Environmental Impact Report* (Mission Bay FSEIR), certified in September 1998, were:¹

- Eliminating blighting influences and the correction of environmental deficiencies in the Project Area, including, but not limited to, abnormally high vacancies, abandoned buildings, incompatible land uses, depreciated or stagnant property values, and inadequate or deteriorated public improvements, facilities, and utilities.
- Retaining and promoting, within the City and County of San Francisco, academic and research activities associated with the University of California San Francisco, which seeks to provide space for existing and new programs and consolidate academic and support units from many dispersed sites at a single major new site which can accommodate the 2,650,000-gross sq. ft. program analyzed in the UCSF 1996 LRDP.
- Assembling of land into parcels suitable for modern, integrated development with improved pedestrian and vehicular circulation in the Project Area.
- Replanning, redesigning, and developing of undeveloped and underdeveloped areas which are improperly utilized.
- Providing flexibility in the development of the Project Area to respond readily and appropriately to market conditions.
- Providing opportunities for participation by owners in the redevelopment of their properties.
- Strengthening the community's supply of housing by facilitating economically feasible, affordable housing through the installation of needed site improvements and expansion and improvement of the housing supply by the construction of approximately 6,090 market-rate units, including 1,700 units of very low-, low- and moderate-income housing.

¹ The land use program in the adopted Mission Bay plan was developed from the proposed plan plus a combination of plan variants described and analyzed in the Mission Bay FSEIR. The Mission Bay FSEIR concluded that the environmental effects of the combination of plan variants would be similar to those of the proposed plan, and consequently, would not result in any new or substantially more severe significant effects identified in the Mission Bay FSEIR for the proposed plan. In addition, subsequent to plan adoption, the Mission Bay plan was subject to a number of minor revisions to the land use program. Addendums to the Mission Bay FSEIR similarly found that these revisions would not result in any new or substantially more severe significant effects identified in the Mission Bay FSEIR for the proposed plan. Also, subsequent to plan adoption, UCSF is increasing planned development on the UCSF campus, which has been the subject of separate CEQA review. Consequently, the specific estimates of land use development in the adopted Mission Bay plan are slightly different from that in the Mission Bay FSEIR Project Objectives presented here. However, the overall project objectives originally presented in the Mission Bay FSEIR are still substantively representative of the proposed Mission Bay plan. Please see Chapter 2, Introduction for additional detail.

- Strengthening the economic base of the Project Area and the community by strengthening retail and other commercial functions in the Project Area through the addition of approximately 1.5 million gross sq. ft. of retail space, a major hotel, and about 5,557,000 gross sq. ft. of mixed office, research and development, and light manufacturing uses.
- Facilitating emerging commercial-industrial sectors, including those expected to emerge or expand due to their proximity to the UCSF new site, such as research and development, biotechnical research, telecommunications, business service, multi-media services, and related light industrial through improvement of transportation access to commercial and industrial areas, improvement of safety within the Project Area, and the installation of needed site improvements to stimulate new commercial and industrial expansion, employment, and economic growth.
- Facilitating public transit opportunities to and within the Project Area to the extent feasible.
- Providing land in an amount of approximately 47 acres for a variety of open spaces.
- Achieving the objectives described above in the most expeditious manner feasible.

Consistent with the overall objectives of the Mission Bay Redevelopment Plan, GSW's objectives for the proposed Event Center and Mixed-Use Development at Blocks 29-32 are to:

- Construct a state-of-the-art multi-purpose event center in San Francisco that meets NBA requirements for sports facilities, can be used year-round for sporting events and entertainment and convention purposes with events ranging in capacity from approximately 3,000-18,500, and expands opportunities for the City's tourist, hotel and convention business.
- Provide sufficient complementary mixed-use development, including office and retail uses, to create a lively local and regional visitor-serving destination that is active year-round, promotes visitor activity and interest during times when the event center is not in use, provides amenities to visitors of the event center as well as the surrounding neighborhood, and allows for a financially feasible project.
- Develop a project that meets high-quality urban design and high-level sustainability standards.
- Optimize public transit, pedestrian and bicycle access to the site by locating the project within walking distance to local and regional transit hubs, and adjacent to routes that provide safe and convenient access for pedestrians and bicycles.
- Provide adequate parking and vehicular access that meets NBA and project sponsor's reasonable needs for the event center and serves the needs of project visitors and employees, while encouraging the use of transit, bicycle, and other alternative modes of transportation.
- Provide the City with a world class performing arts venue of sufficient size to attract those events which currently bypass San Francisco due to lack of a world class 3,000-4,000 seat facility.

- Develop a project that promotes environmental sustainability, transportation efficiency, greenhouse gas reduction, stormwater management using green technology, and job creation consistent with the objectives of the California Jobs and Economic Improvement Through Environmental Leadership Act (AB 900),² as amended.

3.3 Background

A detailed discussion of the Mission Bay Redevelopment Plan approval process (including OCII and OCII Commission), prior environmental review of the Mission Bay Redevelopment Plan (including the Mission Bay FSEIR), and the relationship of this SEIR to the Mission Bay FSEIR is presented in Chapter 2, Introduction. The following provides a description of applicable development controls in the Mission Bay South Redevelopment Plan, including those for the project site.

3.3.1 South Plan Area Development Controls

The land uses in the adopted Mission Bay Redevelopment Plan are generally illustrated in **Figure 3-3**. The primary development controls for the Mission Bay South Redevelopment Plan Area (“South Plan Area”) are the South Plan and the South Design for Development, which together specify development standards for the project site at Blocks 29-32, including standards and guidelines for height, setbacks, and coverage. In accordance with the California Community Redevelopment Law, when the Board of Supervisors approved the South Plan in 1998, land use and zoning approvals within Mission Bay came under the jurisdiction of the former Redevelopment Agency, now OCII³; see Chapter 2, Introduction for additional detail. Together, the South Plan and South Design for Development constitute the regulatory land use framework for the project site, and they supersede the City’s *Planning Code*, except as otherwise specifically provided in those documents and associated documents for implementing the Plans.

The master developer, FOCIL-MB, LLC, is responsible for the infrastructure serving the South Plan area, consistent with the South Owner’s Participation Agreement (South OPA), including implementation of the Mission Bay South Infrastructure Plan (Attachment D to the South OPA). The South OPA includes triggers for the phasing of required infrastructure improvements based on adjacency, ratios, and performance standards to ensure that the master developer phases the required infrastructure to match the phasing of private development occurring on adjacent blocks. In addition to the South Plan and South Design for Development, the other major development controls that apply to the project site include:

- Mitigation measures included in the Mission Bay FSEIR and which OCII has identified as required to be implemented by the developer of the project site;

² AB 900, effective January 1, 2012, provides streamlining benefits under CEQA for privately-financed projects located on an infill site that has been determined to generate thousands of jobs and include state-of-the-art pollution reductions.

³ This was reaffirmed by the San Francisco Board of Supervisors in 2012 (as part of the Successor Agency Legislation - Resolution No. 11-12 and Ordinance No. 214-12).

- All other associated adopted plans and documents that apply in the South Plan area under the South Plan and South OPA, such as the 1999 Mission Bay Risk Management Plan, with amendments (including Article 22A of the San Francisco Health Code for analyzing soils for hazardous waste), Mission Bay South Streetscape Master Plan, and Mission Bay South Signage Master Plan; and
- Other adopted City plans and regulations that apply in the South Plan area, such as the San Francisco Building Code; Chapter 7 of the San Francisco Environment Code, “Resource Efficiency Requirements,” and any engineering requirements applicable under City Code to the development.

The mitigation measures in the Mission Bays FSEIR are provided in Appendix MIT of this SEIR, which also indicates the specific measures applicable to the proposed project. Relevant portions of the South Plan and South Design for Development as they pertain to Blocks 29-32 are described below.

South Plan Development Controls for Blocks 29-32

In addition to providing overall planning objectives for the plan area, the South Plan designates land uses for specific parcels. Proposed land uses to be permitted for Blocks 29-32 are designated as Commercial Industrial/Retail (Attachment 3 of the South Plan), and the plan provides for either principal or secondary uses at this site. Primary uses are permitted in accordance with the plan’s provisions, and secondary uses are permitted provided that such use generally conforms with redevelopment objectives and planning and design controls established pursuant to this plan. The OCII Executive Director must make a determination that secondary uses make a positive contribution to the character of the plan area, and that the secondary use “will provide a development that is necessary or desirable for, and compatible with, the neighborhood or the community.”

The South Plan identifies the following principal uses under the Commercial Industrial/Retail land use designation applicable to Blocks 29-32: manufacturing; institutions; retail sales and services; arts activities and spaces; office use; home and business services; animal care; wholesaling; automotive; and other uses (e.g., greenhouse, nursery, open recreation and activity areas, parking and certain telecommunications-related facilities). The following secondary uses are identified: institutions, assembly and entertainment, and other uses (public structure or use of a nonindustrial character).

The South Plan also describes general controls and limitations for development, and sets limits on leasable square footages of various uses within defined zones within the plan area, including the project site. The plan sets a maximum floor area ratio of 2.9 to 1 for the commercial industrial and commercial industrial/retail uses averaged over the entire area of these two land use districts, and the maximum building height within the entire plan area is 160 feet. The plan further indicates that within the limits, restrictions and controls established in the plan, OCII is authorized to establish heights of buildings, land coverage, density, setback requirements, design and signage criteria, traffic circulation and access standards, and other development and design controls in the South Design for Development.

South Design for Development Controls for Blocks 29-32

The Mission Bay South Design for Development, a companion document to the South Plan, contains the design standards and design guidelines applicable to Blocks 29-32. The project site is within Height Zone 5, which specifies that 7 percent of the developable area (within the entire height zone) may be occupied by a maximum of three towers up to 160 feet in height, and the remaining 93 percent of the development could be at a maximum of 90 feet. However, buildings along Terry A. Francois Boulevard, including Blocks 30 and 32, may not exceed 90 feet in height, and no towers are permitted on Blocks 30 and 32.

Within this Height Zone 5, the South Design for Development also establishes bulk limits for development at a height greater than 90 feet (i.e., towers). The maximum tower length above 90 feet is 200 feet, and the maximum floor plate is 20,000 square feet. Further, the South Design for Development identifies setback requirements applicable to Blocks 29-32, with a minimum of 5 feet along Third Street and 20 feet along 16th Street; these setbacks are in addition to specified sidewalk widths on these streets and may be used for paved pathways and landscaping as appropriate. The minimum streetwall height is 15 feet.

Design guidelines for Commercial/Industrial buildings along the Bayfront Park (adjacent to the project site) indicate that homogeneous and unrelieved façades should be avoided. Design guidelines for city-serving retail uses at Blocks 29-32 include guidance that: street level frontage should provide visually interesting features; the block façade line should be consistent with block development throughout Mission Bay; and curb cuts are strongly discouraged along Third Street.

3.4 Project Site Location

3.4.1 Mission Bay

The approximate 300-acre Mission Bay Redevelopment Plan area is located along San Francisco's central Bay waterfront, straddling Mission Creek Channel. In general, the plan area is bounded by Townsend Street to the north, Interstate 280 and Seventh Street to the west, Mariposa Street to the south, and San Francisco Bay to the east.

Before 1998, Mission Bay was characterized by low-intensity industrial development and vacant land. Since adoption of the North and South Plans in 1998, Mission Bay has undergone redevelopment into a mixture of residential, commercial (light industrial, research and development, labs and offices), retail, and educational/institutional uses and open space. As of 2014, 4,067 housing units (including 822 affordable units) of the planned 6,400 housing units within Mission Bay (roughly 64 percent) were complete, with another 900 (including 150 affordable units) under construction. Regarding office and laboratory space, approximately 1.7 million square feet of the 4.4 million square feet in the Mission Bay plan area (approximately 39 percent) was complete. Approximately 82 percent of the previously-approved 2.65 million-square-foot UCSF North Campus has been developed, including six research buildings, an academic/office building, a campus community center, and a university housing development. The first phase of the UCSF Mission Bay Medical Center opened in early 2015. In addition, in November 2014, UCSF approved

the Final UCSF 2014 Long Range Development Plan, which provides for additional planned development on the UCSF campus at Mission Bay through 2035. The City's new Public Safety Building at Third and Mission Rock Streets also became operational in April 2015. More than 15 acres of new non-UCSF parks and open space within Mission Bay have also been completed.

3.4.2 Project Site and Existing Uses

Figure 3-4 presents an aerial map of the project site vicinity. The approximate 11-acre project site encompasses Blocks 29, 30, 31, and 32 within the Mission Bay South Redevelopment Plan area. The project site consists of the majority of Assessor's Block 8722, Lot 001, and all of Assessor's Block 8722, Lot 008. The project site is bounded by South Street on the north, Third Street on the west, 16th Street on the south, and by the future planned realigned Terry A. Francois Boulevard on the east. The City has designated the Mission Bay South Redevelopment Plan Area as a Priority Development Area (PDA). The project site is also located in the southeast corner of the City's South of Market neighborhood, and just north of the City's Potrero Hill and Dogpatch neighborhoods.

The ground surface elevations at the project site range between approximately -1 foot to +3 feet San Francisco City Datum (SFD),⁴ roughly equivalent to 6½ to 10½ feet above mean sea level. The existing site slopes gently down from west to east towards the Bay.⁵ Paved surface metered parking facilities currently operate in the west and north portions of the site. Parking Lot E, accessed from 16th Street, contains 289 parking spaces; and Parking Lot B, accessed from South Street, contains 316 parking spaces, for a total of 605 parking spaces. These parking facilities contain night lighting. Immediately east of, and adjacent to, Parking Lot B is a depressed area (measuring approximately 320 feet by 280 feet) created by an excavation and backfill associated with a prior environmental cleanup of that portion of the site. A surface swale extends west within this portion of the site to allow for drainage of surface water into the depression.⁶ Chain link fencing is installed on the perimeter of the project site and around Parking Lots B and E within the site.

3.4.3 Surrounding Uses

The University of California at San Francisco (UCSF) Mission Bay campus is located west, northwest, southwest, and partially south of the project site. Fronting on Third Street directly west of the project site is an eight-story UCSF parking structure (Third Street Garage), and the UCSF Global Health and Clinical Sciences Building (Mission Hall). To the northwest of the

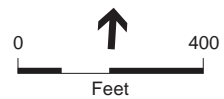
⁴ For purposes of this SEIR, existing ground elevations are as measured relative to San Francisco City Datum (SFD). SFD establishes the City's zero point for surveying purposes at approximately 8.6 feet above the mean sea level established by 1929 U.S. Geological Survey datum, and approximately 11.3 feet above the current 1988 North American Vertical Datum.

⁵ Along the north site border, the site slopes down approximately 2 feet between Third Street and Terry A. Francois Boulevard. Along the site south border, the site slopes down approximately 3.5 feet between Third Street and Terry A. Francois Boulevard.

⁶ Langan Treadwall Rollo, *Updated Phase I Environmental Site Assessment, Mission Bay Blocks 29-32, San Francisco, California*, April 11, 2014.



- Mission Bay Redevelopment Plan Area Boundary
- Project Site Boundary
- MUNI UCSF/Mission Bay Station
- MUNI Third and Mariposa Street Station



SOURCE: Google Maps, ESA, 2014

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 3-4
Aerial Photograph of Project Site Vicinity

project site fronting along Third Street is UCSF Hearst Tower, a 14-story building containing student housing; and to the north of that, the UCSF Helen Diller Family Cancer Research building. To the southwest of the project site fronting along Third Street is the UCSF Energy Center, Betty Irene Moore Women's Hospital, Bakar Cancer Hospital, and Benioff Children's Hospital, which opened in February 2015. The UCSF Benioff Children's Hospital helipad, located atop the roof of the UCSF Ron Conway Gateway Medical Building at 1825 4th Street, also began operating in February 2015. Directly south of the project site across 16th Street, between Third Street and Illinois Street, is a vacant lot recently acquired by UCSF (Blocks 33 and 34), which is planned for office space development starting in 2016.

Directly south of the project site across 16th Street, between Illinois Street and Terry A. Francois Boulevard, is a recently-constructed six-story office building (409 Illinois Street) housing FibroGen Life Science and other biotech/high tech companies, and south of that another recently-constructed six-story office building (499 Illinois Street) with biotech and UCSF clinical uses. Directly north of the project site across and fronting on South Street are (from west to east) a vacant lot (recently acquired by Uber Technologies and Alexandria Real Estate Equities) and planned for development of office space in 2015, a six-story parking garage (450 South Street), and a six-story office building housing the Old Navy corporate headquarters. Immediately east of the project site and west of Terry A. Francois Boulevard are City-owned parcels containing covered stockpiled materials.

The planned Bayfront Park is located on Mission Bay Plan parcels P21 through P24, located northeast, east and partially south of the project site. The north portion of the park (P21, located east of Terry A. Francois Boulevard, between Mission Bay Boulevard South and just south of Pierpoint Lane) is complete, and includes a landscaped parking lot and boat launch. The currently undeveloped central portion of the Bayfront park is located east of the project site across Terry A. Francois Boulevard (on P22, from just south of Pierpoint Lane to just south of 16th Street). This portion of the park presently includes a paved trail (which constitutes a segment of the Bay Trail), surface parking lot, and unimproved open space. Construction of the south portion of Bayfront Park (on P23 and P24), located west of Terry A. Francois Boulevard between 16th Street and Mariposa Street, is currently underway in 2015 and scheduled for completion in 2016.

Third Street, a north-south major arterial roadway defined as a Transit Important Street in the San Francisco General Plan, extends along the west project site boundary providing access to and from downtown San Francisco to the north and the Bayview neighborhood to the south. Third Street contains two vehicular travel lanes in each direction, separated by a paved median and Muni light rail tracks. Muni light rail lines K-Ingleside and T-Third Street operate along Third Street, with the Muni UCSF/Mission Bay Station located at South Street and the Muni Third & Mariposa Street Station located one block south of the project site. Muni bus routes 91 and T-Owl operate along Third Street, with a Muni bus stop located north of the project site on Third Street. Campus Lane, a two-lane east-west local street, terminates at the intersection with Third Street, directly across from and west of the project site.

Sixteenth (16th) Street extends east of Third Street along a portion of the south project site boundary, terminating just east of Illinois Street. There are two vehicular travel lanes on 16th Street adjacent to the project site, increasing to four lanes west of Third Street. Bollards installed on

16th Street east of Illinois Street prevent through vehicular travel between Third Street and Terry A. Francois Boulevard. 16th Street is defined as a secondary arterial west of Third Street in the San Francisco General Plan. 16th Street contains a Class III bicycle route between Illinois Street and Third Street, and two Class II bike lanes west of Third Street. Illinois Street, a two-lane north-south local street, terminates at the intersection with 16th Street, directly across from and south of the project site. Illinois Street contains a Class II bicycle lanes between 16th Street and Mariposa Street.

Terry A. Francois Boulevard roughly follows the Bay shoreline east of the project site. There are currently two vehicular travel lanes and a Class II bicycle lane in each direction. Terry A. Francois Boulevard is signed as a Tsunami Evacuation Route.

South Street extends along the north boundary of the project site between Third Street and Terry A. Francois Boulevard. South Street contains two vehicular travel lanes in each direction.

Bridgeview Way, a two-lane north-south local street, terminates at the intersection with South Street, directly across from and north of the project site.

Vehicle parking is currently provided along 16th Street and Terry A. Francois Boulevard adjacent to the project site.

See description of South Plan improvements planned in the vicinity of the project site, including the realignment of Terry A. Francois Boulevard and public access improvements at Bayfront Park, below.

3.5 Golden State Warriors Background

3.5.1 History and Relationship to San Francisco Bay Area

The Warriors were founded in 1946 as the Philadelphia Warriors, one of the 11 original teams of the Basketball Association of America (BAA). The Warriors are one of only three charter members of the BAA still in existence, along with the Boston Celtics and the New York Knickerbockers (Knicks). The Warriors hold the distinction of winning the BAA's first ever championship, claiming the title in the inaugural 1946–47 season by defeating the Chicago Stags. The BAA merged with the National Basketball League (NBL) in 1949, forming the National Basketball Association (NBA). The Warriors won their first NBA championship in Philadelphia in the 1955–56 season, beating the Fort Wayne Pistons.

In 1962, the Warriors franchise was relocated to San Francisco and renamed the San Francisco Warriors. The Warriors played most of their home games at the Cow Palace in Daly City (just south of the San Francisco city limit) from 1962–64 and at the San Francisco Civic Auditorium⁷ from 1964–66, as well as several home games in 1966 at the University of San Francisco War Memorial Gymnasium. The Warriors also played home games at several other Bay Area locations in the 1960s, including Richmond, San Jose, Stockton and Sacramento. When the Oakland-

⁷ The San Francisco Civic Auditorium is now named the Bill Graham Civic Auditorium.

Alameda County Coliseum Arena (Coliseum Arena) opened in 1966, the Warriors began scheduling an increasing number of home games at that facility. The Warriors reached the NBA playoffs in 1964, 1967 through 1969, and 1971 (their final season as the San Francisco Warriors).

The San Francisco Warriors changed their name to the Golden State Warriors for the 1971–72 season, in part to acknowledge the team’s fan base that had extended throughout Northern California, and played the majority of their home games that season at the Coliseum Arena. The Warriors made the NBA playoffs every season from 1972 to 1977 (excluding 1974), and won their first NBA championship on the West Coast in the 1974–75 season. The Warriors have since reached the playoffs nine additional times (1987, 1989, 1991, 1992, 1994, 2007, and 2013 through 2015). The Warriors have played home games exclusively in the Coliseum Arena since 1972, with the exception of a one-year hiatus (1996–97 season) in which they played at the San Jose Arena⁸ while the Coliseum Arena was remodeled.⁹ In 2014-15, the Warriors celebrated their 54th season in the Bay Area.

3.5.2 Existing Golden State Warriors Basketball Operations and Facilities

The Golden State Warriors are one of 30 franchised basketball teams in the NBA. The current league organization divides the teams into two conferences of three divisions with five teams each. The Golden State Warriors play within the Western Conference, Pacific Division.

Typically, the NBA preseason runs approximately two weeks in mid-October, the NBA regular season between late October and mid-April, and NBA playoff season runs from mid-April through mid-June. The Golden State Warriors currently play approximately 8 preseason games per season, 2 to 3 of which are home games. The Warriors play 82 regular season games per season, consisting of 41 home games and 41 away games. In the event of reaching the playoffs, the Golden State Warriors would play in up to four best-of-seven series playoff rounds (i.e., First Round, Semi-Conference Finals, Conference Finals, and NBA Finals), with approximately half of the playoff games in their home court.

As indicated above, the Golden State Warriors currently play their home games at Oracle Arena, located at 7000 Coliseum Way in Oakland. Oracle Arena is owned by the Oakland-Alameda County Coliseum Authority (City of Oakland and Alameda County) and operated by Anschutz Entertainment Group (AEG). The Golden State Warriors currently maintain a lease agreement to play their basketball games at Oracle Arena through the NBA 2016–17 season. Oracle Arena’s maximum seating occupancy is 19,596 for basketball games, including 72 luxury suites. Oracle Arena also includes 3 exclusive clubs, 5 concourses, a box office, and team stores. Oracle Arena is located adjacent to the Oakland–Alameda County Coliseum (O.co Coliseum), and collectively, this complex offers parking for 10,000 vehicles.

⁸ The San Jose Arena is now named the SAP Center.

⁹ The Coliseum Arena was renamed The Arena in Oakland in 1997, the Oakland Arena in 2004, and Oracle Arena (present name) in 2006.

The Golden State Warriors organization maintains approximately 150 full-time employees, consisting of the team's basketball players, basketball operations staff (including General Manager, coaching and training staff, and scouts); medical team; an executive board and executive management; media and broadcasting staff; and numerous operations and support services, including but not limited to, marketing, finance, ticket sales/operations/services, public and community relations, hospitality services, and administration.

The Golden State Warriors currently lease their management offices and practice facility at the Oakland Convention Center at 1011 Broadway in downtown Oakland (these facilities are built atop the Convention Center's parking garage). These facilities provide approximately 16,000 square feet of office space, 2½ full length basketball courts, and supporting facilities (e.g., weight room, locker rooms, and lounge).

3.6 Project Characteristics

This section describes the characteristics of the proposed project, including detailed descriptions of the proposed facilities and operations, as well as project construction.

3.6.1 Proposed Facilities

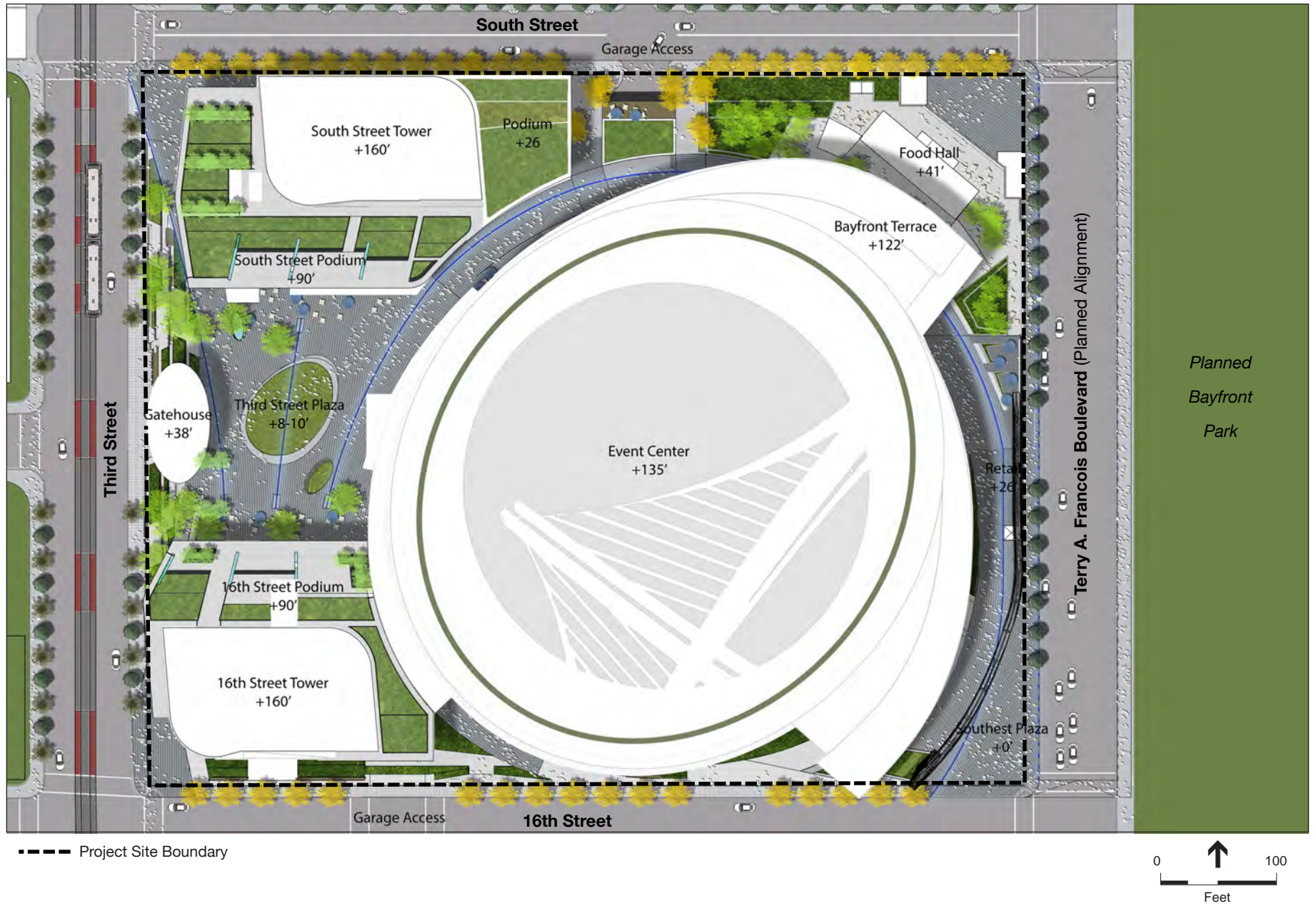
Development Plan Overview

Under the project, Blocks 29-32 would be developed with a multi-purpose event center and a variety of mixed uses, including office, retail, open space and structured parking on the approximately 11-acre site. **Figure 3-5** presents the conceptual project site plan, illustrating primary project features and associated building heights. **Table 3-1** provides a summary overview of the key characteristics of the project facilities.

Event Center

The proposed roughly circular-shaped event center building would be located in the central-east portion of the site. The event center building would be approximately 135 feet¹⁰ tall at its roof peak, and would include multiple levels of varying heights. The event center building would consist of nine levels (Event, Ground, Mezzanine, Main Concourse, Suite, Theater/Loge, Upper Concourse, Bayfront Terrace and Mechanical). The event center would include a wide variety of facilities, including spectator seating and suites, restaurants/bars and clubs, meeting rooms; spectator support facilities such as food service/kitchens, concessions, merchandising and restrooms; Golden State Warriors management offices, practice facility and locker rooms; command center and operations space for police/security, fire protection services and traffic control; media support facilities; and event center operations such as loading, staging and marshaling areas, mechanical/electrical/plumbing space and storage and maintenance facilities.

¹⁰ All building heights in this SEIR measured from finished grade to top of building. Please see footnote "e" in Table 3-1 for additional detail.



SOURCE: Manica Architecture, 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Note: All building elevations were estimated per *Mission Bay South Design for Development* guidelines; please see text for additional description.

Figure 3-5
Conceptual Project Site Plan

**TABLE 3-1
SUMMARY OF PROPOSED PROJECT FACILITIES AND DESIGN FEATURES**

Project Component	Characteristic
Event Center Basketball Seating Capacity	18,064 seats ^a
Size	Total GSF
Event Center ^b	750,000
Golden State Warriors Office Space	25,000
Office Space	580,000
Retail Space ^c	125,000
Parking and Loading	<u>475,000</u>
Total Building Area	1,955,000 GSF^d
Height^{e,f}/Levels	
Event Center	135 feet
Office and Retail Buildings	160 feet (11 stories) total [90-foot (6-story) podiums with 70-foot (5-story) towers above]; retail uses within street level and plaza-level floors
Retail-only Buildings	41 feet in market hall building northeast corner of site; 38 feet in gatehouse building along Third Street
Parking/Loading Spaces	Blocks 29-32: 950 parking stalls below-grade or at-grade (concealed by Third Street Plaza) 13 truck docks below-grade Existing off-site at 450 South Street Parking Garage: 132 parking stalls
Vehicular Access	Access point for autos and all trucks on 16th Street at Illinois Street Access point for autos on South Street at Bridgeview Way
Open Space	3.2 acres

NOTES:

GSF = gross square feet.

- ^a Presented maximum seating capacity is for basketball games. However, as discussed under *Proposed Operations and Employment*, below, there would other types of events at the event center, including certain concerts and conventions, that would be able to accommodate a maximum attendance of up approximately 18,500 patrons with the addition of floor seats and/or standing room-only spaces (see Table 3-3 for more detail).
- ^b The event center would include a variety of supporting uses, including Golden State Warriors practice facility and management offices, bayfront terrace, retail, and other uses. For purposes of estimating areas, the Golden State Warriors management office space square footage is presented separately from square footage of the other event center uses.
- ^c Proposed retail uses are approximately 51,500 GSF sit-down restaurant, 11,000 quick-service restaurant, and 62,500 GSF soft goods retail including food retail.
- ^d The CEQA analyses are based on gross square footage. However, the Mission Bay South Redevelopment Plan permits development based on adjusted gross square footage and leasable square footage. Gross Square Footage and Leasable Square Footage as defined in the Mission Bay South Redevelopment Plan for this project would be less than the gross square footage presented in this environmental document.
- ^e All building heights in this SEIR, unless otherwise noted, are measured from finished grade to top of building, consistent with the South Design for Development guidelines. Please note the project site would continue to be slightly sloped, as under existing conditions. Per the South Design for Development guidelines, building height measurements are taken at the median grade height for each building face, and the total building height is calculated by averaging the height of the individual building faces.
- ^f Heights of proposed office and retail buildings exclude unoccupied top floor level with mechanical equipment. Mechanical equipment and associated enclosure may be up to 20 feet above the rooftop of building.

SOURCE: Manica Architecture, 2014, 2015

The event center would be programmed with a capacity of 18,064 seats for basketball games, approximately 70 percent of which would be general assigned seating. The remaining seating would consist of loge, club and suite seating, courtside seating, and seating for media and officials. A portion of the event center lower bowl would contain retractable seating to accommodate certain non-Golden State Warriors events requiring a larger floor area. In addition, for non-Golden State Warriors events with small attendance, the event center performance and seating areas could be re-configured in a cut-down theater configuration, and event patron access managed to create the impression of a smaller venue space and more intimate experience for the performances. The event center would also include an ice slab to accommodate a range of ice-related events such as hockey games and Disney on Ice.¹¹

The event center would also include a “bayfront terrace,” an extension of the event center (pedestrian deck would be 97 feet in height, and terrace roof would be 122 feet in height), that would provide views of the San Francisco skyline, Bay Bridge, Bay waters and East Bay shoreline. Portions of the bayfront terrace would connect to the interior of event center, and other portions of the terrace would connect to the main pedestrian path at the base of the event center, and to a lobby located on Terry Francois Boulevard, via elevators.

(See Section 3.5.2, *Proposed Operations*, below, for a detailed description of proposed Golden State Warriors games and non-Golden State Warriors events at the event center).

Office and Retail Buildings

Two office and retail buildings would be located on the west side of the project site, at the corner of Third and South Streets (northwest corner of site) and at the corner of Third and 16th Streets (southwest corner of the site). These buildings would each be 11 stories (160 feet tall at building rooftop¹²); each office and retail building would consist of a podium ground level plus 5 podium levels (90 feet tall), with a 5-story (70-foot tall) tower (with smaller floorplate than the podium) above. The South Street office and retail building would be approximately 345,000 gsf, and the 16th Street office and retail building would be approximately 300,000 gsf. These buildings could serve a variety of office and/or research and development uses. Retail uses would occupy the lower floor(s) of the office and retail buildings.

Gatehouse, Food Hall and Other Retail Amenities

Additional retail uses would front on South Street and Terry A. Francois Boulevard, located within or adjacent to certain plaza-facing areas of the event center, and along the main pedestrian path. A 2-story, 38-foot high¹³, 11,550 gsf “gatehouse” building located mid-point along Third Street would provide retail uses and house elevators/escalators connecting to parking facilities on lower floors. A 41-foot high, approximately 32,000 gsf “food hall” would be located at the corner of Terry A.

¹¹ The ice slab would consist of an ice floor, ice pits and trenches, and refrigeration equipment. For non-ice related events at the arena, insulated fiberglass panels would first be installed above the ice layer, after which wood parquet panels (to create the basketball court) or other appropriate flooring would be installed depending on type of event.

¹² Please see footnotes “e” and “f” in Table 3-1 for additional detail on building heights.

¹³ Height at the gatehouse building’s sloping roof peak.

Francois Boulevard and South Street. The food hall would house stalls for local vendors of food and beverage offerings or artisanal goods.

Plazas/Open Space

Approximately 3.2 acres of open space would be designed within the site, including a proposed Third Street Plaza (elevated at approximately 8 to 10 feet above Third Street) on the west side of the project site between the event center and Third Street, and a proposed ground-level Southeast Plaza in the southeastern corner of the site. These plazas would be connected by a pedestrian ramp wrapping around the exterior of the north and eastern sides of the event center. On the east side of the event center, the pedestrian path would offer a “bayfront overlook” to provide eastward views across the Bay. Another pedestrian path would wrap around the southwest portion of the event center.

Vehicle Parking Facilities

Table 3-2 summarizes proposed on-site vehicular parking facilities. Three levels of enclosed on-site parking (two below grade: Lower Parking Levels 1 and 2, and one at street level: Upper Parking Level) would be located below the office and retail buildings and plaza areas. A total of 950 vehicle parking spaces are proposed on-site. Of the 950 vehicle parking spaces, the sponsor would provide 21 Fuel Efficient Vehicle (FEV) spaces, 30 Vehicle Charging System (VCS) parking spaces, and 51 spaces for carpool vehicles. In the event that 30 VCS parking spaces are not feasible the sponsor would provide 51 FEV and 51 carpool spaces.

Parking is proposed to be provided for specialized groups including office parkers, patrons of the event center, retail and restaurant valet and self-parkers. Under the project, the South Design for Development, as amended, would specify the minimum and maximum number of parking spaces that would be provided for the event center and office uses, by building. The number of parking spaces provided for the event center would be reserved for event patrons at all times. The number of parking spaces provided for the office buildings may be made available for use by event patrons on a shared-parking basis (i.e., as available). The truck loading dock area (described under *Loading Facilities*, below) may also be used for a small number of parkers during events.

**TABLE 3-2
ON-SITE VEHICLE PARKING, BY LEVEL**

Parking Level	Vehicular Parking		
	Parking Spaces	ADA ^a Spaces	Total Spaces
Upper Parking Level (street level)	113	4	117
Lower Parking Level 1 (below grade)	370	13	383
Lower Parking Level 2 (below grade)	442	8	450
Total	925	25	950

^a ADA = American’s with Disabilities Act accessible spaces

SOURCE: Manica Architecture, 2014

For Golden State Warriors games, prepaid parking is proposed for patrons to access the parking garage, where the parking attendant would scan a prepaid barcode hang tag on vehicles (prepaid credentials would be sold through the Golden State Warriors ticketing process). An Automatic Vehicle Identification System (AVI) system may also be used for a limited number of vehicles to access the garage. During non-event periods, a more traditional system using ticket-issuing machines paired with a pay-on-foot ticket kiosks would be utilized for self-parkers, while an AVI system would be available for on-site employees. Valet parking would also be available during event and non-event periods. Additional information on proposed parking areas, by level, and vehicular access to proposed on-site parking facilities is described under *Building Floor Plans*, and *Vehicular Access and Circulation*, below.

As part of the project, the sponsor has also acquired the use of 132 existing off-site parking spaces in the 450 South Street parking garage, primarily accessed from South Street directly north of the project site, to provide additional parking to serve the project employees.

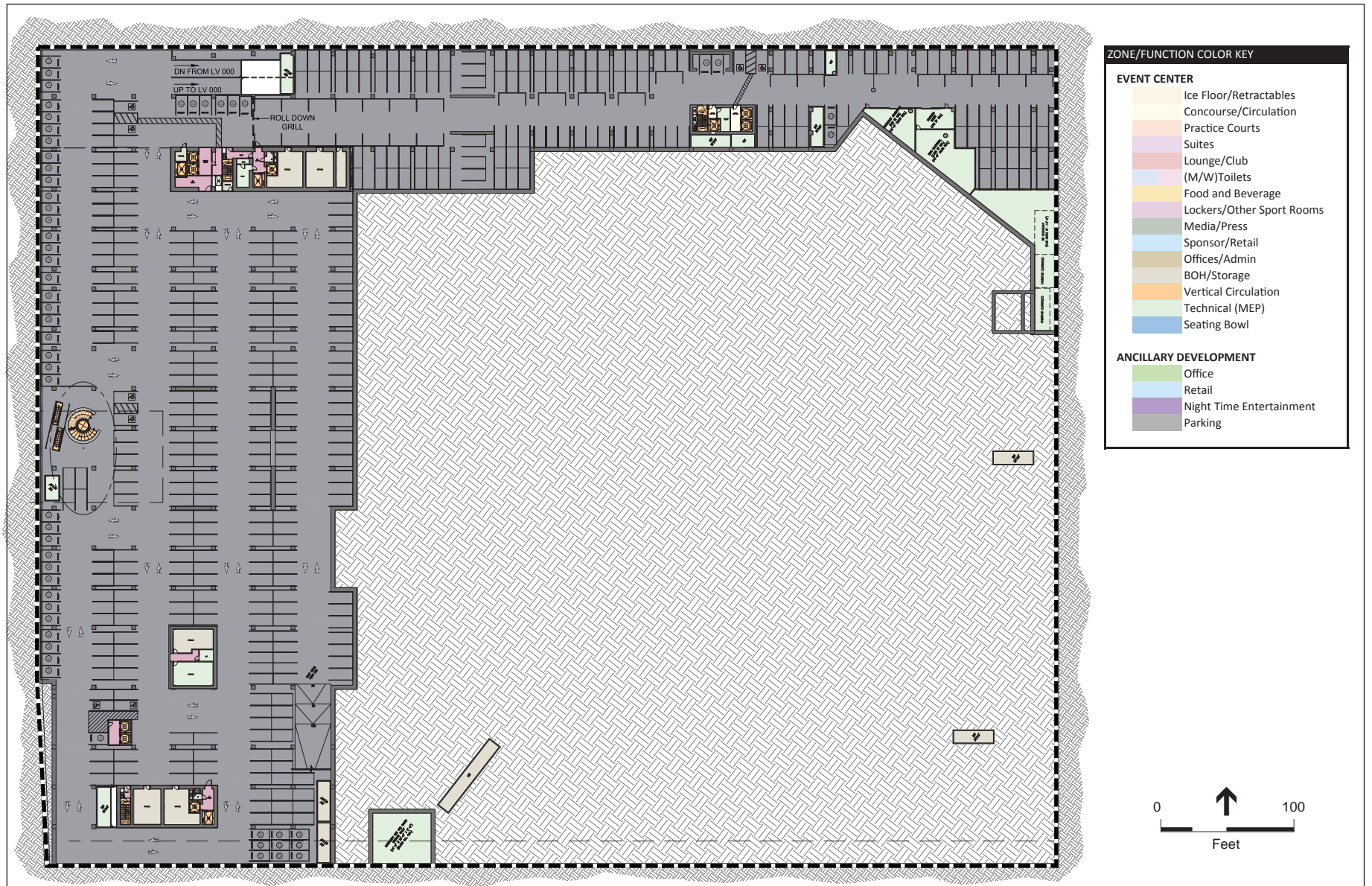
Loading Facilities

Thirteen on-site truck loading docks are proposed to serve the event center and office and retail uses. The loading and service areas, including 13 truck loading docks, would be located on the Lower Parking Level 1. The dimensions of each loading space would be at least 10-feet wide and 35-feet long, with 14 feet of vertical clearance. Additional information on vehicular access to proposed loading areas is described under *Building Floor Plans*, and *Vehicular Access and Circulation*, below. In addition to the 13 on-site below grade loading area, 17 on-street commercial loading spaces would be provided on South Street (8 spaces), Terry A. Francois Boulevard south of South Street (8 spaces), and 16th Street (1 space) to serve the office uses, and the restaurant and retail uses at Market Hall. Overall, the proposed project would have 30 commercial loading spaces serving the project uses.

Building Floor Plans

Figures 3-6 through 3-11 present project building floor plans for several representative floors for the site's buildings, from low to high in height.¹⁴ Figure 3-6 presents the floor plan for the subgrade Lower Parking Level 2. This level would be situated within the north and west sides of the project site and would provide 450 vehicle parking spaces. Auto vehicular ramps located on the north and south sides of the parking garage would provide access between this level and the Lower Parking Level 1 above. This level would also contain stairs and elevators for pedestrian access to/from upper floors.

¹⁴ Certain levels discussed here contain a range of heights, depending on location and use. However, they are grouped, as feasible.



--- Project Site Boundary

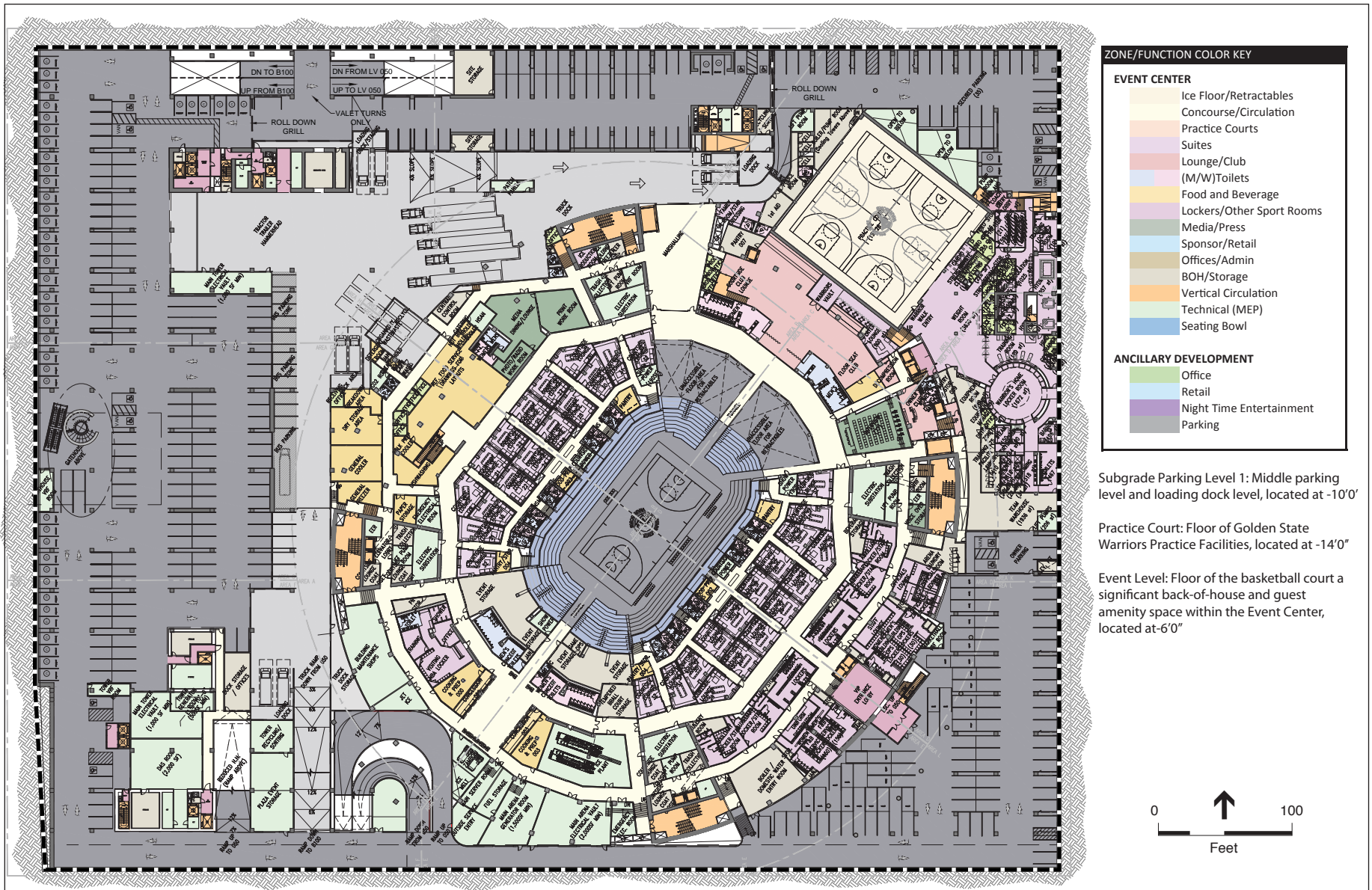
SOURCE: Manica Architecture, 2015

Note: All floor elevations were estimated per *Mission Bay South Design for Development* guidelines; please see text for additional description.

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 3-6

Floor Plan – Lower Parking Level 2

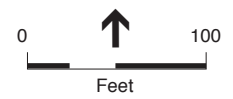


ZONE/FUNCTION COLOR KEY	
EVENT CENTER	
[Yellow]	Ice Floor/Retractable
[Light Orange]	Concourse/Circulation
[Orange]	Practice Courts
[Pink]	Suites
[Light Red]	Lounge/Club
[Light Blue]	(M/W)Toilets
[Yellow-Orange]	Food and Beverage
[Light Purple]	Lockers/Other Sport Rooms
[Light Green]	Media/Press
[Light Blue-Gray]	Sponsor/Retail
[Light Brown]	Offices/Admin
[Orange-Red]	BOH/Storage
[Light Orange-Red]	Vertical Circulation
[Light Green-Gray]	Technical (MEP)
[Blue-Gray]	Seating Bowl
ANCILLARY DEVELOPMENT	
[Light Green]	Office
[Light Blue]	Retail
[Purple]	Night Time Entertainment
[Gray]	Parking

Subgrade Parking Level 1: Middle parking level and loading dock level, located at -10'0"

Practice Court: Floor of Golden State Warriors Practice Facilities, located at -14'0"

Event Level: Floor of the basketball court a significant back-of-house and guest amenity space within the Event Center, located at -6'0"



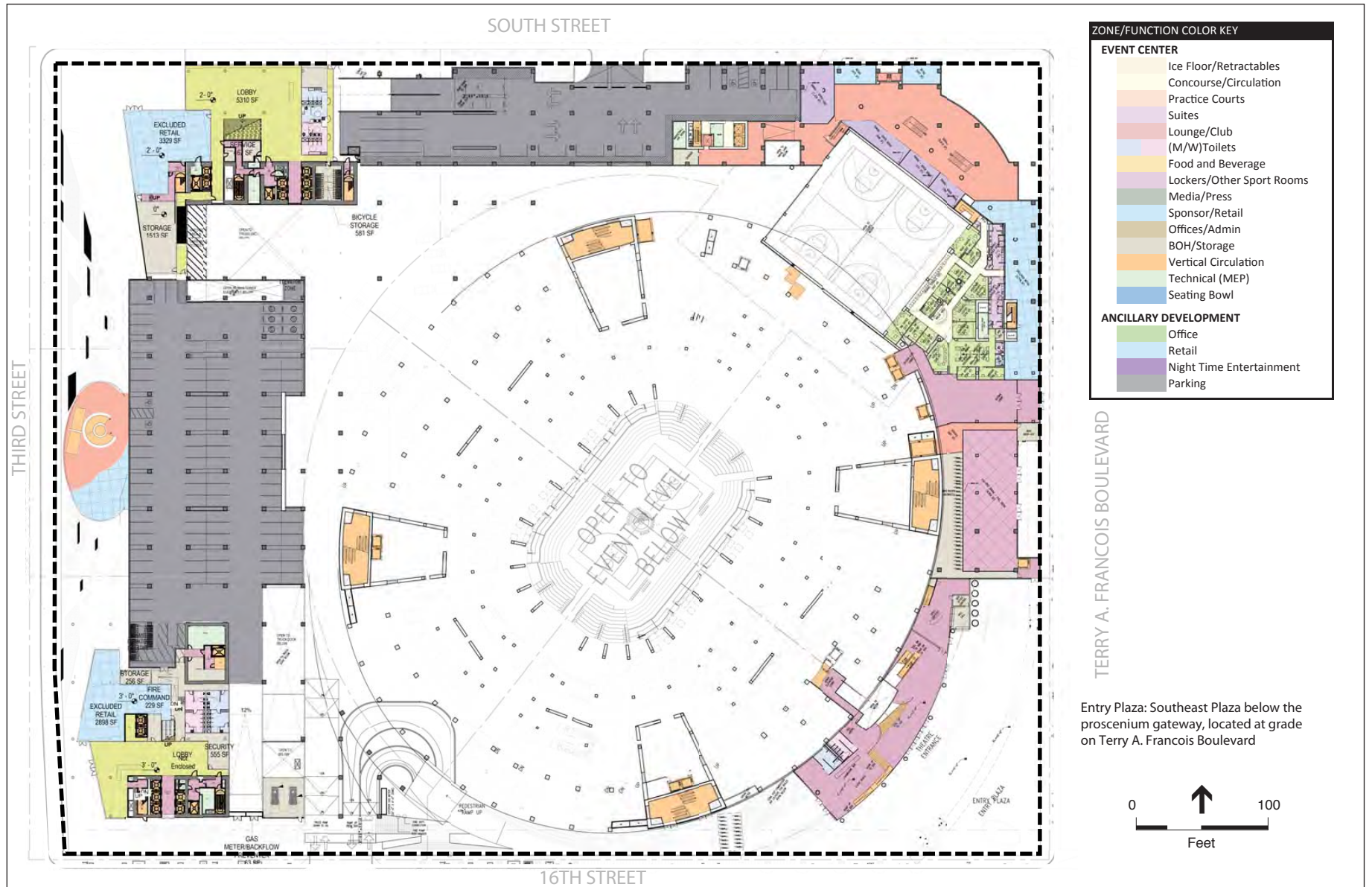
--- Project Site Boundary

SOURCE: Manica Architecture, 2015

Note: All floor elevations were estimated per *Mission Bay South Design for Development* guidelines; please see text for additional description.

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E: Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 3-7
Floor Plan - Event Center Event Level / Lower Parking Level 1



--- Project Site Boundary

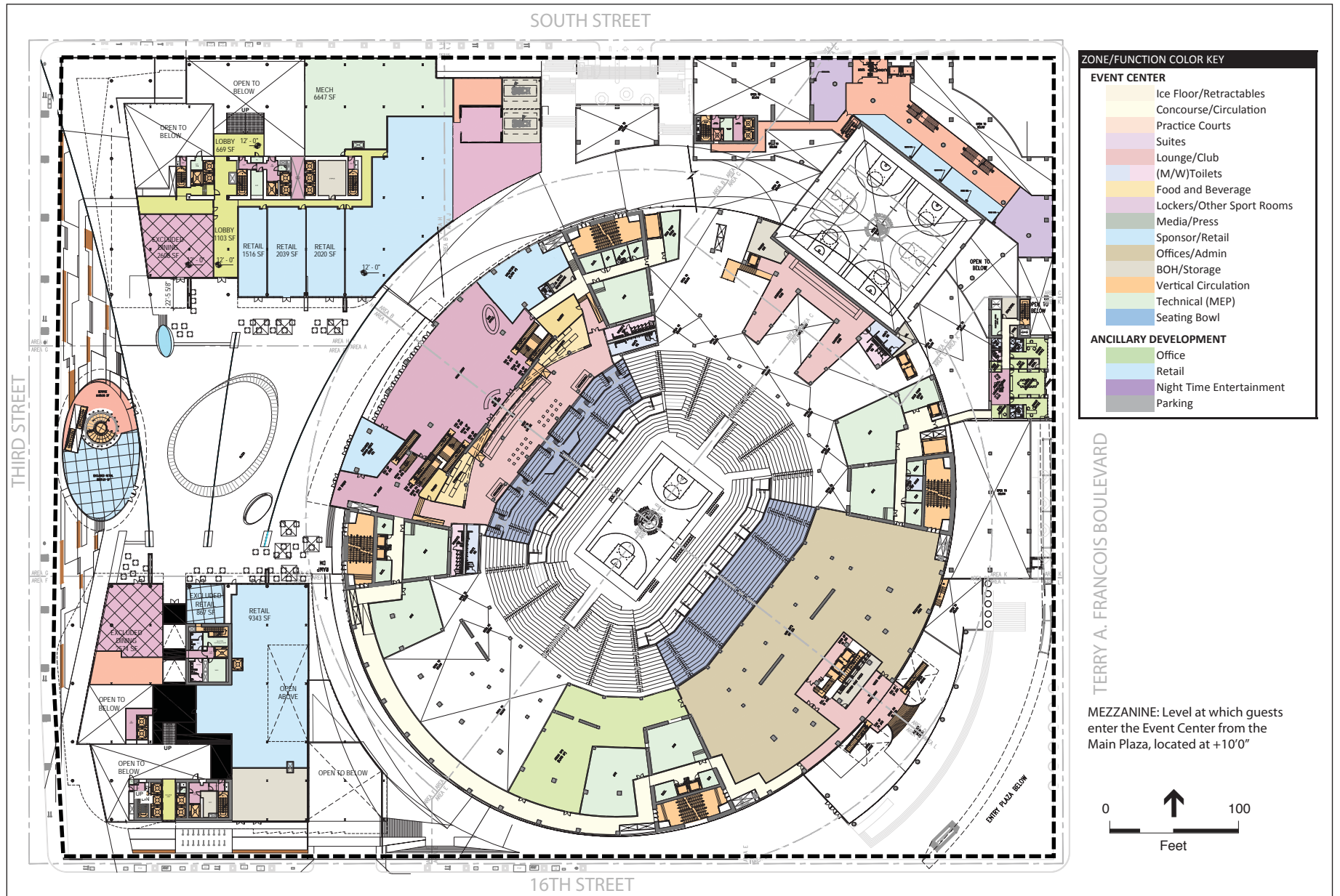
SOURCE: Manica Architecture, 2015

Note: All floor elevations were estimated per *Mission Bay South Design for Development* guidelines; please see text for additional description.

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E: Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 3-8

Floor Plan - Ground Level / Upper Parking Level



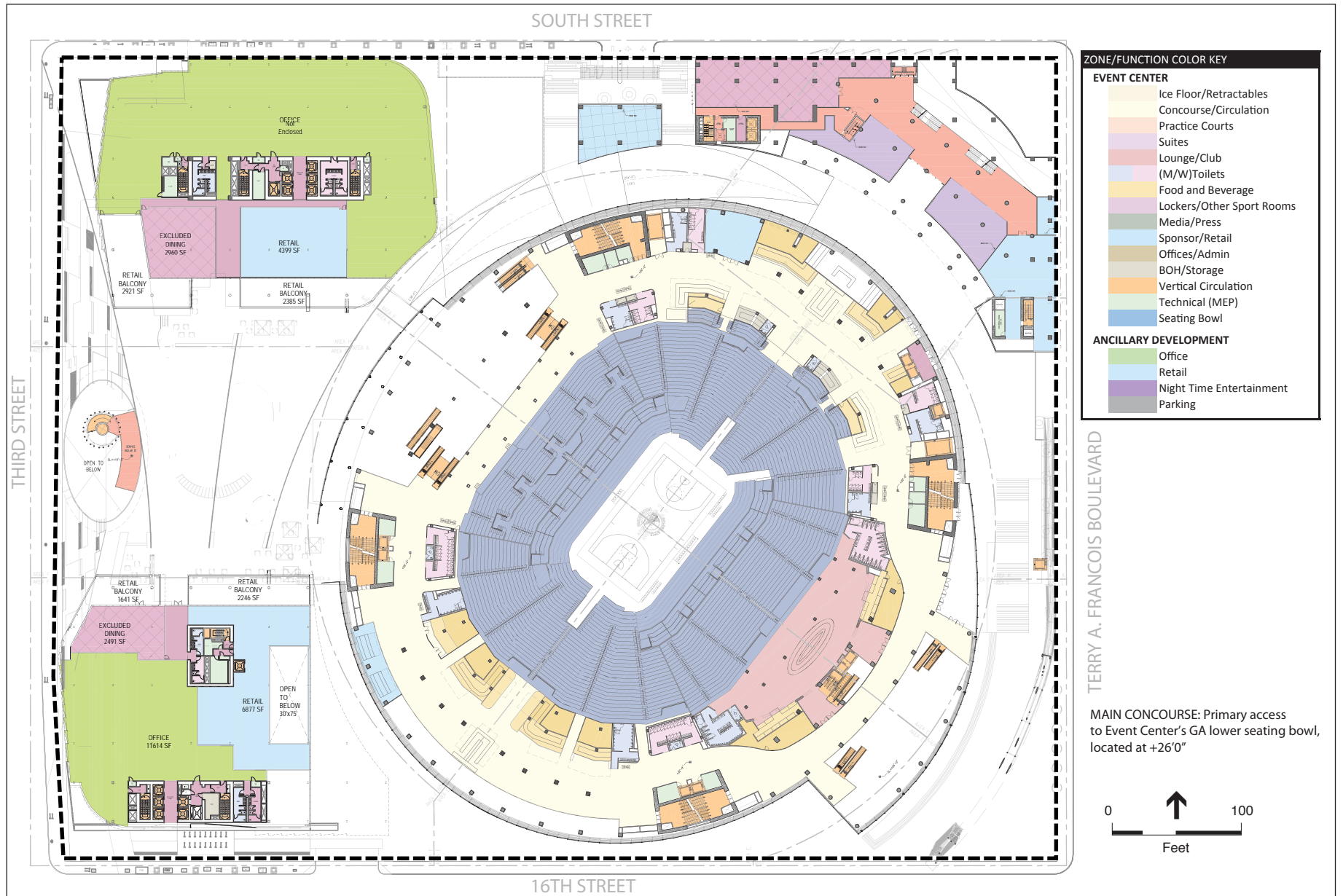
SOURCE: Manica Architecture, 2015

Note: All floor elevations were estimated per *Mission Bay South Design for Development* guidelines; please see text for additional description.

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 3-9

Floor Plan - Event Center Mezzanine / Plaza Level



--- Project Site Boundary

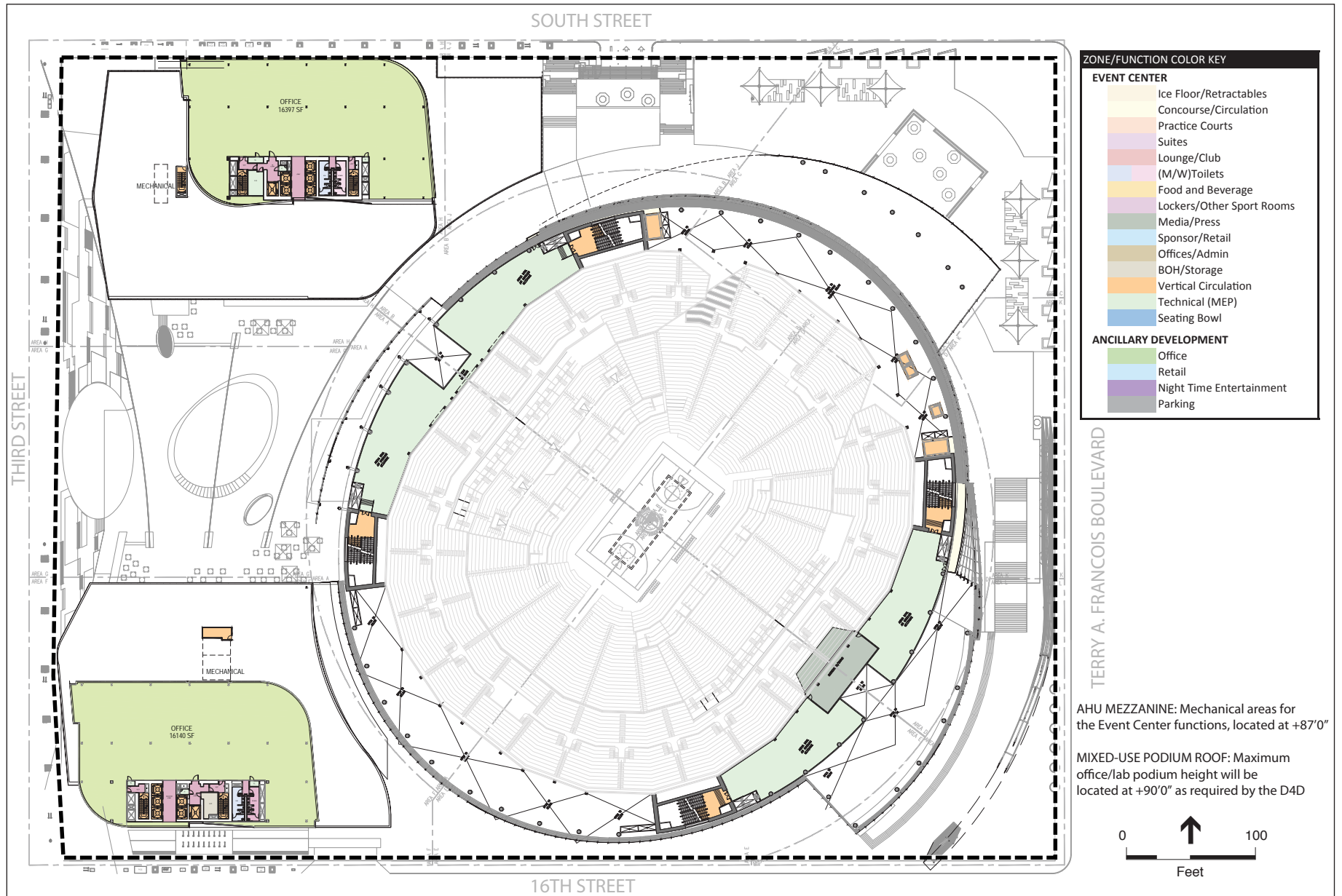
SOURCE: Manica Architecture, 2015

Note: All floor elevations were estimated per *Mission Bay South Design for Development* guidelines; please see text for additional description.

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 3-10

Floor Plan - Event Center Main Concourse /
Office and Retail Building Level 1



SOURCE: Manica Architecture, 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Note: All floor elevations were estimated per *Mission Bay South Design for Development* guidelines; please see text for additional description.

Figure 3-11
Floor Plan - Event Center AHU Mezzanine / Office Tower Level
(Shows Representative Floor Plate for the Office and Retail Building Towers)

Figure 3-7 presents the floor plan for the subgrade Event Center Event Level/Lower Parking Level 1. The Event Level would contain the event center's main exhibition floor, courtside and VIP seating, suites, lounge/club space, team practice facilities, and a variety of spectator and operations support facilities. The team practice facilities would also be located primarily on this level in the northeast corner of the event center, and include two full-size basketball courts and supporting facilities. Separate truck loading and vehicle parking facilities would be provided on Lower Parking Level 1, with access to/from the Upper Parking Level by separate auto and truck ramps located on the south side of the site. Lower Parking Level 1 would provide 383 vehicle parking spaces distributed in the north, west, and southeast area portions of the site. A second truck ramp would provide direct access between the main loading area and the event floor for loading/unloading at this location. Additional auto ramps (for use primarily by valet) would be located on the north side of the parking garage to provide access for autos between this level and the parking levels above and below.

Figure 3-8 presents the floor plan for the Ground Level / Upper Parking Level. Several street-level pedestrian entrances would be located on the Ground Level to access project buildings, including the "theater" entrance to the event center (as described above, this entrance would provide exclusive access to smaller capacity events, as well as tertiary access to full-arena events), and entrances to the bayfront terrace lobby and elevator, office and retail building lobbies, retail gatehouse building, and food hall. Additional team practice facilities and offices would also be located on this level. The Upper Parking Level would provide 117 vehicle parking spaces situated in the north and west portions of the site. The project driveway entrance on 16th Street at Illinois Street would provide separate auto and truck vehicle ramps (two lanes for autos, and two lanes for trucks) to provide access to/from the parking and loading areas on the Lower Parking Level 1 below. The project driveway entrance on South Street at Bridgeview Lane would provide access to parking spaces located on the north side of this Upper Parking Level; access to the parking spaces on the west side of this level would be accessed by a separate auto vehicular ramp from the Lower Parking Level 1 below. In addition, auto ramps (for use primarily by valet) would be located on the north side of the parking garage to provide vehicular access between this level and the Lower Parking Level 1 below.

Figure 3-9 presents the floor plan for the Event Center Mezzanine / Plaza Level. The primary event patron ingress/egress for large attendance events at the event center would occur at the northwest entrance on this level. A separate VIP entrance to the event center would also be located on this level. Event center facilities on the Mezzanine level would include team management office space, additional practice team facilities, clubs, spectator and operations support uses, and fixed seating. Lobbies and various retail uses would be located within the office and retail podiums on this level, and additional retail uses would be within the gatehouse and food hall.

Figure 3-10 presents the floor plan for the Event Center Main Concourse / Office and Retail Building Level 1. The secondary event patron ingress/egress for large attendance events would occur at the southeast entrance to the event center on this level. Event center facilities on this level would include the main concourse, retail space, spectator support uses, and fixed seating. Office

and retail space would be provided within the office and retail podiums on this level, with additional retail uses in the food hall.

The Event Center Suite Level would primarily contain suites, spectator support facilities, and a concourse. The Event Center Loge Level would contain primarily loge boxes, spectator support facilities, and a concourse. The Event Center Upper Concourse Level would contain fixed seating, spectator support facilities, and concourse.

Figure 3-11 presents the floor plan for the Event Center AHU (Air Handling Unit) / Office Tower Level. This figure presents a representative floor plan for the towers of the proposed office and retail buildings, showing the smaller floorplate of the towers in comparison to the podium structures, below. The Event Center Mechanical Level would provide private access to event center mechanical equipment located on this floor, including accommodation for heating, ventilation, and air conditioning.

Building Elevations

Figure 3-12 and **3-13** present elevation massing drawings of the proposed development for the east and north, and south and west perspectives, respectively.

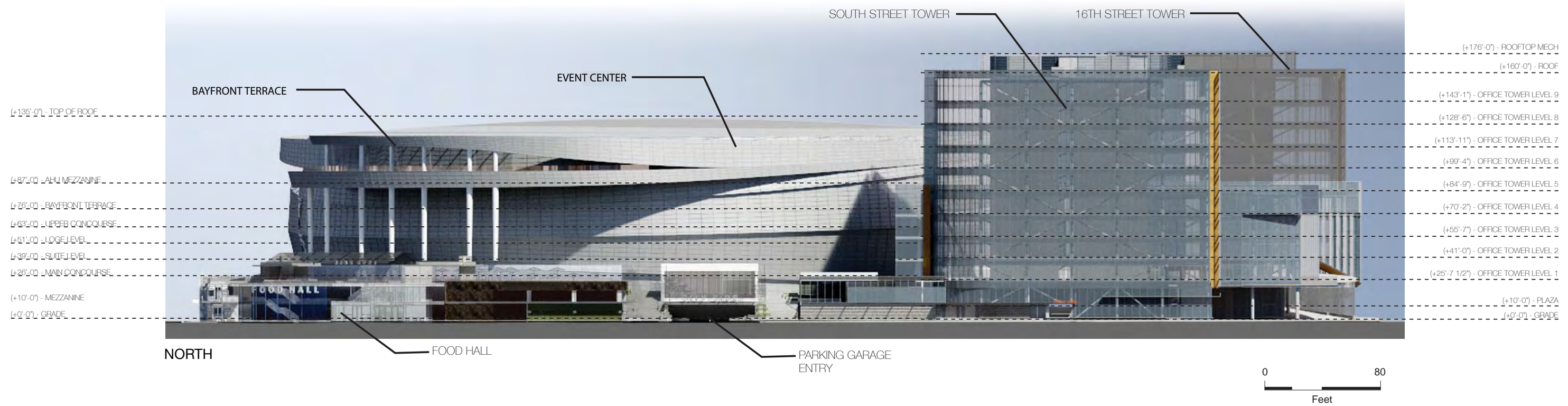
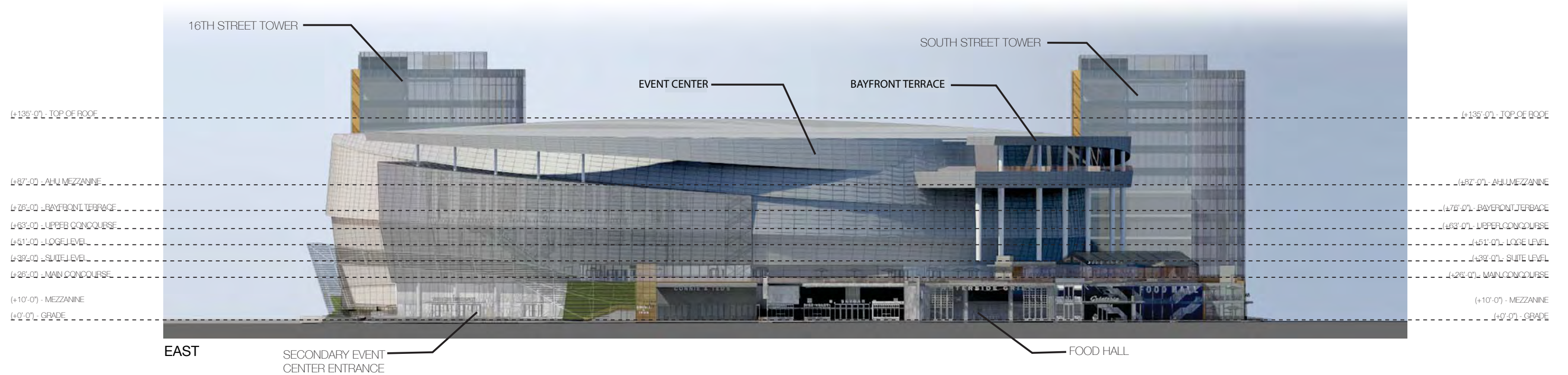
Figure 3-12, top illustration, presents the east elevation (looking west towards Blocks 29-32 from Terry A. Francois Boulevard). The proposed event center, including its elevated bayfront terrace that would extend off the northeast side of the building, and the food hall fronting on Terry A. Francois Boulevard, are prominent in the foreground, behind which the proposed office and retail buildings would rise. The ground-level “theater” entrance to the event center is also visible in this illustration. Figure 3-12, bottom illustration, presents the north elevation (looking south towards Blocks 29-32 from South Street). In this illustration, the event center including its bayfront terrace, and the food hall (fronting on South Street) are visible, as well as the north parking garage entrance on South Street, and on the right-hand side are the two office and retail buildings.

Figure 3-13, top illustration, presents the south elevation (looking north towards Blocks 29-32 from 16th Street). The proposed event center, and the office and retail building at the corner of 16th and Third Streets dominate the foreground, and both the main garage/service entry and the event center theater entrance are visible from this perspective.

Figure 3-13, bottom illustration, presents the west elevation (looking east towards Blocks 29-32 from Third Street). In this illustration, the event center is visible behind the two office and retail buildings, gatehouse building, and the elevated Third Street Plaza.

Bird-Safe Design

The project sponsor proposes to incorporate bird-safe design measures that would reduce the potential effects of the proposed buildings, signage and lighting on birds.

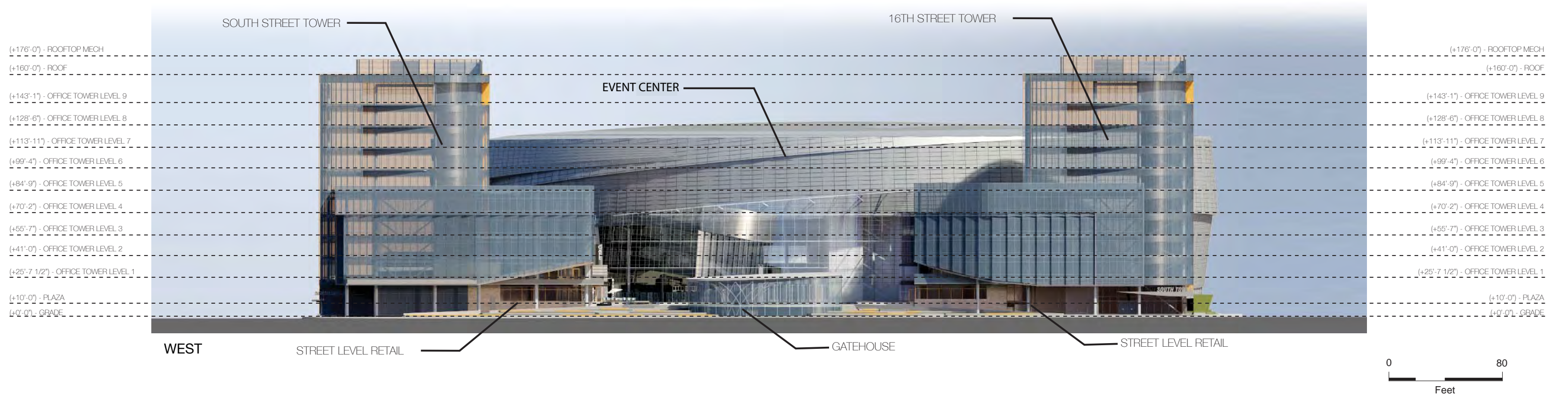
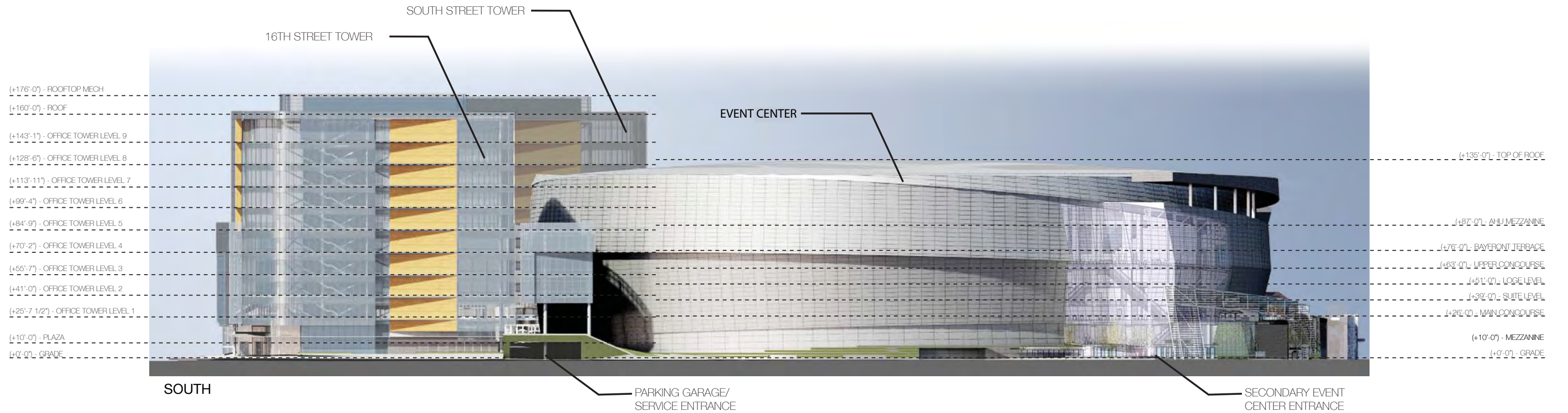


SOURCE: Manica Architecture, 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

- Note:
- All building elevations were estimated per *Mission Bay South Design for Development* guidelines; please see text for additional description.
 - These drawings show massing for the proposed development, but are not intended to show ideas for building facades, skin or materials

Figure 3-12
Project East and North Elevations



SOURCE: Manica Architecture, 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

- Note:
- All building elevations were estimated per *Mission Bay South Design for Development* guidelines; please see text for additional description.
 - These drawings show massing for the proposed development, but are not intended to show ideas for building facades, skin or materials

Figure 3-13
Project South and West Elevations

Vehicular Access and Circulation

As shown in the project site plan in Figure 3-5, all vehicular ingress/egress for the garage would occur at 16th Street (at Illinois Street) or South Street (at Bridgeview Way). The 16th Street driveway would serve as the primary vehicular access point for autos to the parking garage, and the sole access point for trucks to the below-grade loading docks. The 16th Street driveway would be 48 feet wide and accommodate four 12-foot wide lanes (2 lanes dedicated for autos and 2 lanes dedicated for trucks). The South Street driveway would provide a secondary access for autos to the garage. The South Street driveway would be 30 feet wide and accommodate three 10-foot wide lanes.

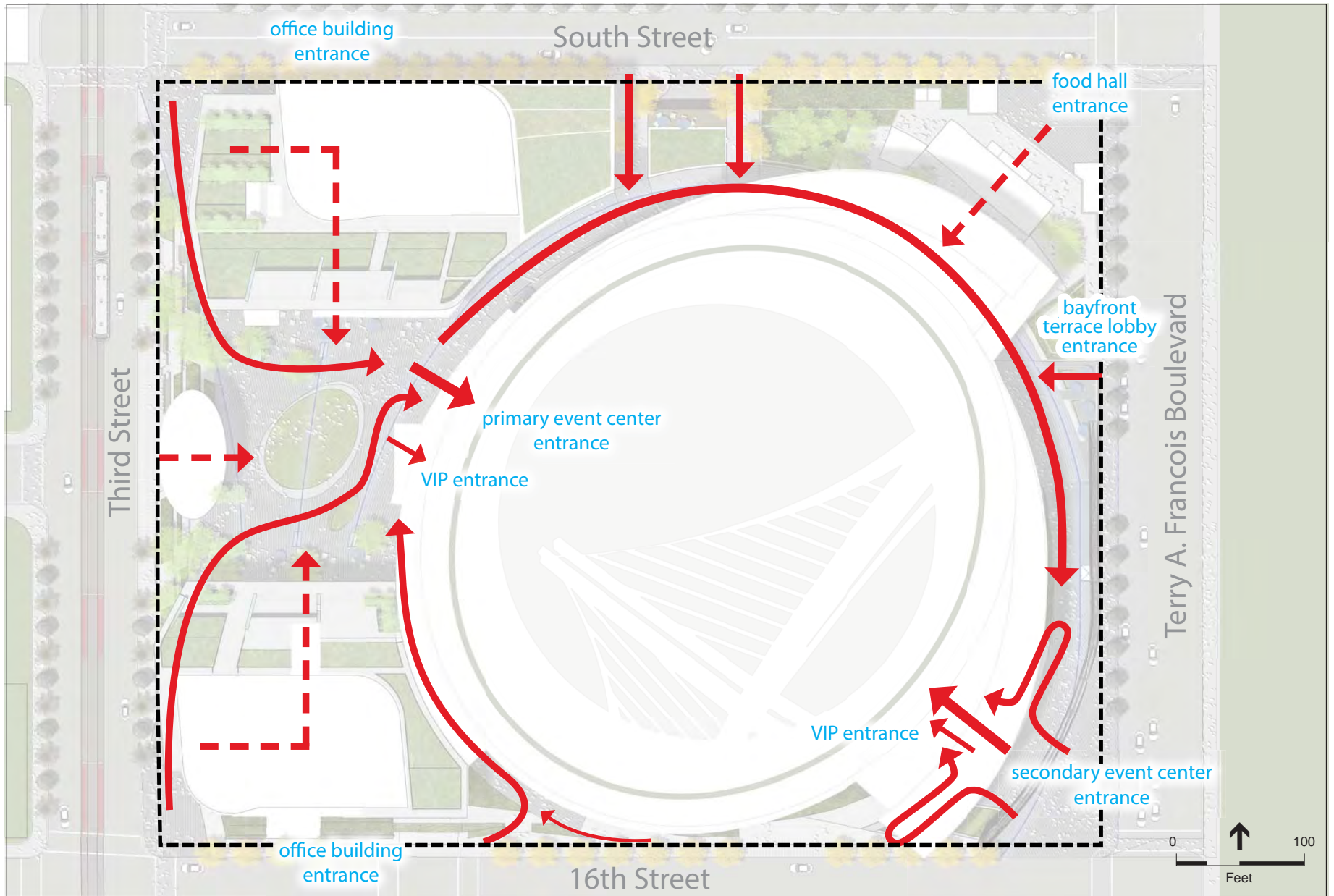
Event ingress would be only from the 16th Street driveway, while event egress would be through both the 16th and South Streets driveways. Office ingress/egress would be via the 16th Street driveway. Retail and restaurant ingress/egress would be via the South Street driveway. (See *Parking Facilities and Loading Facilities*, above for additional detail on vehicular access to and within those facilities; see also *Proposed Operations and Employment*, below, for a description of the proposed *Transportation Management Plan* that the sponsor would implement as part of the project.)

Pedestrian and Bicycle Access

Figure 3-14 presents the proposed pedestrian circulation at the project site. Pedestrian access to the project site uses, including buildings and plazas, would be available from multiple locations along all four perimeter streets. Within the project site, a 40-foot wide curving pedestrian path would lead from the elevated Third Street Plaza (ranging between 8 and 10 feet above Third Street) around the north and east sides of the event center, past retail uses and a proposed bayfront overlook, and terminate on the southeast side of the event center at 26 feet above ground level. Another pedestrian path would extend from ground level on 16th Street curving around the southwest side of the event center to the Third Street Plaza.

The primary pedestrian access to the event center for large attendance events would be on the northwest side of the event center via the elevated Third Street Plaza. A secondary access point to the event center for large-attendance events would be on the southeast side of the event center via the elevated pedestrian path. The primary pedestrian access to the event center for smaller-attendance events, and tertiary access point to the event center for large-attendance events, would be at the ground-level “theater” entrance on the southeast side of the event center, via the Southeast Plaza.

Pedestrian access to the two office and retail building lobbies would be available on South and 16th Streets and from the Third Street Plaza, with additional access to ground-floor retail uses within those buildings available via South and Third Streets and from the Third Street Plaza. The food hall in the northeast corner of the site would be accessed directly via Terry A. Francois Boulevard and South Street, and also from the elevated pedestrian path within the project site. The gatehouse would provide direct access for pedestrians between the Third Street Plaza and the on-site garage.



--- Project Site Boundary

SOURCE: Manica Architecture, 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 3-14
Proposed Pedestrian Circulation

New sidewalks would be constructed along the perimeter of the project site (see description of proposed off-site pedestrian network improvements, below). The estimated sidewalk widths for the perimeter sidewalks are 15 feet on Third Street, 12½ feet on South Street and Terry A. Francois Boulevard, and 15 feet on 16th Street. The proposed project would provide on-site bicycle storage rooms accommodating 111 Class 1 bicycle parking spaces within the proposed office and retail/restaurant buildings. In addition, an enclosed bicycle parking center would be provided on 16th Street that could accommodate 300 Class 2 bicycle parking spaces on days without an event. On event days, the bicycle parking center would be valet staffed, which would then convert the 300 spaces to Class 1; an additional 100 Class 1 bicycle parking spaces would be provided as needed in temporary bicycle corrals within the Third Street Plaza, Southeast Plaza, for a total of up to 400 bicycle parking spaces on an event day. The bicycle valet is proposed to be staffed by a partner such as the San Francisco Bicycle Coalition for evening uses during peak events such as NBA games and concerts. The valet parking would be attended from two hours prior to the start of the game/event, to approximately an hour after the event ends. The proposed project would also provide 75 Class 2 bicycle parking space via bicycle racks on the adjacent sidewalks (per the Mission Bay Infrastructure Plan) and on-site at key locations (see **Figure 3-15**).

Infrastructure Improvements

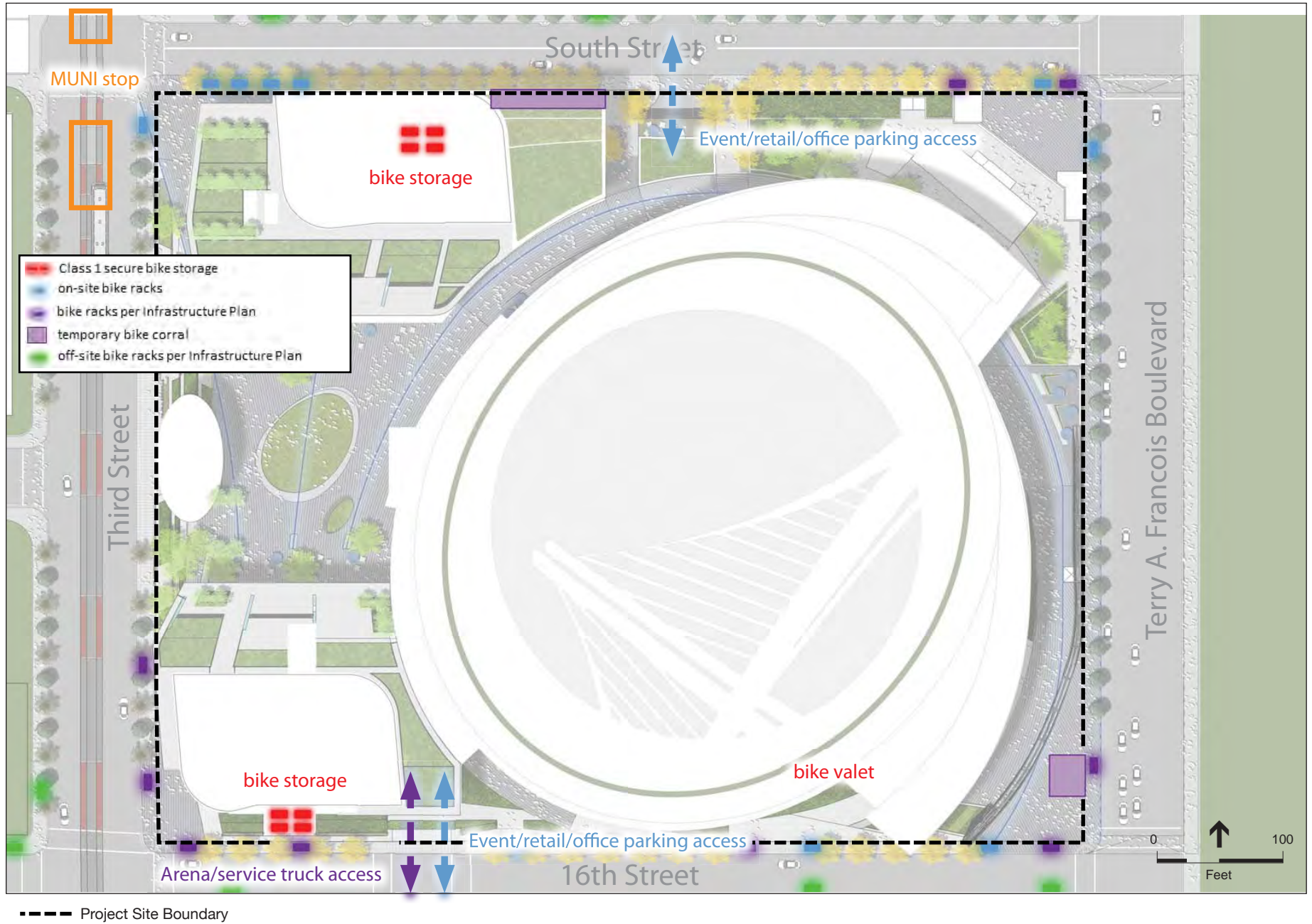
The project proposes to construct all new utility infrastructure facilities on-site, including water supply (low- and high-pressure water lines and recycled water lines); wastewater collection; storm drainage; electrical/gas, and communications. Infrastructure and utilities within adjacent streets that serve the project site are or will be provided by the master developer, FOCIL-MB, LLC, as part of the Mission Bay South Infrastructure Plan.

Stormwater Improvements

Stormwater flows from the project site would drain to a new separate stormwater collection system being constructed as part of the Mission Bay Plan. The project would be subject to the San Francisco Stormwater Guidelines developed by the San Francisco Public Utilities Commission (SFPUC), including a requirement that the project implement best management practices (BMPs) to reduce the flow rate and volume of stormwater and improve the quality of stormwater going into the stormwater drainage system. The stormwater management approach for the proposed project would be required to capture and treat rainfall from the design storm of 0.75 inches. The project would utilize Low Impact Development (LID) strategies to achieve the requirements for capture and treatment of stormwater: green roofs on several proposed buildings (including the office and retail podiums, and food hall), rainwater harvesting, and flow-through biotreatment planters. Treated water from these facilities would be directed to proposed on-site storm drains, which would connect to the separate stormwater collection system beneath the adjacent streets.

Domestic Water and Fire Protection Water

New domestic water and emergency suppression fire water infrastructure would be installed on Blocks 29-32 to serve the proposed uses. All buildings would be equipped with internal fire sprinkler systems as required. Emergency fire water lines and/or fire hydrants would be installed



SOURCE: Manica Architecture, 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 3-15
Proposed Bicycle Parking Facilities

on-site where required. Proposed domestic and fire water lines would connect to existing City water infrastructure located beneath adjacent streets.

Wastewater Collection

New wastewater collection infrastructure would be installed on Blocks 29-32 to serve the proposed uses. Proposed wastewater lines would connect to existing City sanitary sewer lines located beneath adjacent streets.

Electrical and Gas Service

New electrical and gas infrastructure would be installed on Blocks 29-32 to serve the proposed uses. Proposed electrical and gas lines on the project site would connect to existing PG&E infrastructure located beneath adjacent streets.

The project also anticipates installing on-site generators capable of providing up to three megawatts (MW) of emergency, standby and optional power to the event center in the case of temporary loss of normal utility power.¹⁵ In addition, each office and retail building would have an on-site generator capable of approximately 0.75 MW, and the proposed food hall would have a generator capable of approximately 0.5 MW, to provide fire and life safety emergency power in the case of temporary loss of normal utility power in those uses. All emergency generators would be located within the parking structure on Lower Parking Level 1.

Sustainability

The proposed development would be subject to a number of sustainability requirements, including the California CalGreen Code, City of San Francisco Green Building Code, South Design for Development for the Mission Bay South Area, and the 2012 NBA Arena Design Standards – Sustainability Requirements. The project would be designed to Leadership in Energy and Environmental Design (LEED®) Gold standards using a campus approach, whereby each individual proposed structure as well as the overall site would qualify for individual Gold ratings.¹⁶ This would be achieved through incorporation of a variety of design features and implementation of practices during construction and operation to provide energy and water conservation and efficiency, encourage alternative transportation, promote a healthy indoor environment, minimize waste, and maximize recycling opportunities.

¹⁵ Under such circumstance, the generators would provide power for fire alarms, fire command room, emergency lighting, elevators, smoke control and pressurization, fire pumps, audio system, and certain scoreboard equipment.

¹⁶ The Leadership in Energy and Environmental Design (LEED®) is a program developed and administered by the U.S. Green Building Council that provides third-party verification of green building projects. LEED® uses a green building rating system designed to reduce the negative environmental impacts of buildings and improve occupant health and well-being. Building projects satisfy prerequisites and earn points to achieve different levels of certification.

Proposed Off-Site Roadway Network, Transit Network, Pedestrian Network, and Bicycle Network Improvements

The City and sponsor would implement a number of off-site roadway network and curb regulations, transit network, pedestrian and bicycle network improvements in the project site vicinity, including, but not limited to, roadway restriping, intersection signalization, on-street parking, new perimeter sidewalks, bicycle lanes, signage and other improvements, as discussed below.

Roadway Network Improvements and Curb Regulations

- South Street currently has two travel lanes in each direction, with no on-street parking. Under the proposed project, South Street would have one lane in each direction, turn lane improvements, and on-street parking on portions of both sides of the street.
- 16th Street is currently only built out between Third and Illinois Streets. Under the proposed project, 16th Street would be rebuilt and extended to the planned realigned Terry A. Francois Boulevard, and a number of restriping and turn lane improvements would be installed on the intersection approaches and the proposed garage driveway.
- The intersection of Terry A. Francois Boulevard/South Street would be converted from a stop sign controlled intersection to a signalized intersection; the existing uncontrolled intersection of Bridgeview Way/South Street would be converted to a side-street stop sign controlled intersection; the new intersection of Terry A. Francois Boulevard/16th Street would be a signalized intersection; and the existing uncontrolled intersection of Illinois Street/16th Street would be converted to an all-way stop-controlled intersection.
- Adjacent to the site, a Mission Bay Transportation Management Association (TMA) shuttle stop, taxi zone, commercial loading spaces and metered parking spaces would be provided on South Street; commercial loading spaces, a paratransit stop, and metered parking spaces would be located on Terry A. Francois Boulevard; a commercial loading space and metered parking spaces would be provided on 16th Street.

Transit Network Improvements

- The elevated northbound passenger platform at the Muni UCSF/Mission Bay light rail stop on Third Street would be extended from 160 feet in length to 320 feet in length to allow for two two-car light rail trains to simultaneously board or alight passengers along the platform. In addition, crossover tracks would be constructed on Third Street near South Street within the light rail median to enable light rail vehicles to move from one set of tracks to another to reverse travel direction.
- The existing painted median area adjacent to the northbound track between South and 16th Streets would be raised 6 inches. This improvement would allow for staging of two two-car northbound light rail trains.
- As part of the light rail station improvements, fencing would be placed adjacent to the light rail tracks in such a manner as to discourage pedestrian crossings midblock between the intersection of Campus Way with southbound Third Street and the event center on the east side of the street, directly across from Campus Way.

Pedestrian Network Improvements

- New sidewalks would be constructed along the perimeter of the project site on South Street (12.5-foot wide), on Terry A. Francois Boulevard (12.5-foot wide), on 16th Street (15 feet wide), and widening of the existing sidewalk on Third Street from 12 to 16 feet.
- Pedestrian crosswalks (continental design) would be installed at the following intersections: South Street/Bridge View Way, South Street/Terry A. Francois Boulevard (currently there is a crosswalk on the north and west legs of the intersection, not the south), 16th Street/Illinois Street/Project garage driveway, 16th Street/Terry A. Francois Boulevard, and Illinois/Mariposa.

Bicycle Network Improvements

- Class II bicycle lanes would be installed on 16th Street between Third Street and Terry A. Francois Boulevard. Bicycle signals would be installed at the intersections of Terry A. Francois/16th and Illinois/Mariposa, and bicycle turn queue boxes would be installed at the intersection of Terry A. Francois/16th.

A complete description of proposed off-site roadway network and curb regulation, transit network, and pedestrian network improvements is presented in Section 5.2, Transportation and Circulation. See description of the planned realignment of Terry A. Francois Boulevard that would occur pursuant to the Mission Bay South Plan, below. See also proposed Mission Bay TMA Shuttle Program improvements, Special Event Transit Service Plan, and Transportation Management Plan, under Section 3.6.2, *Proposed Operations*, below.

South Plan Improvements Planned in the Vicinity of the Project Site: Terry A. Francois Boulevard Realignment and Public Access Improvements at Bayfront Park

Pursuant to the Mission Bay South Plan and the Mission Bay BCDC Permit No. 5-00, as amended, and independent of the proposed project, development of Blocks 29-32 would trigger the realignment of Terry A. Francois Boulevard to extend adjacent to the east side of Blocks 29-32, and the construction of public access improvements at Bayfront Park east of this realigned roadway. The realigned Terry A. Francois Boulevard would contain four travel lanes (two northbound and two southbound) plus two parking lanes; and - on the east side of the roadway - a two-way cycletrack (bike path) separated from the roadway by a raised buffer.

As discussed above, Bayfront Park is a planned linear park comprising Mission Bay plan parcels P21 through P24, and when completed, will extend from Mission Bay Boulevard south to Mariposa Street. The north portion of the park (P21, located east of Terry A. Francois Boulevard, between Mission Bay Boulevard South and just south of Pierpoint Lane) is complete, and includes a landscaped parking lot and boat launch. Construction is underway in 2015 for the south portion of Bayfront Park (P23 and P24, located west of Terry A. Francois Boulevard, between 16th Street and Mariposa Street), including stormwater infrastructure improvements, and construction of this portion of the park will be complete by the end of 2016. Following realignment of Terry A. Francois Boulevard, the central portion (P22) of Bayfront Park located

east of the project site and consisting of approximately 5.5 acres will be developed. Potential park uses for this portion of Bayfront Park being considered at this time include, but are not limited to, pathways, outdoor performance area, kiosks, outdoor dining areas, and informal playing field(s). Both the realignment of Terry A. Francois Boulevard and Bayfront Park public access improvements on P22 are triggered by development on Block 29-32 and would be implemented by the master developer, FOCIL-MB, LLC, prior to occupancy of buildings at the project site.

3.6.2 Proposed Operations

Under the project, the event center at Blocks 29-32 would serve as the new venue for the Golden State Warriors home games, and provide a year-round venue for a variety of other uses, including concerts, family shows, other sporting events, cultural events, conferences and conventions. The event center would be used for up to approximately 225 events per year, with events ranging in capacity from approximately 3,000 patrons up to about 18,500 patrons. All existing Golden State Warriors operations, including management offices and practice facility, would relocate from their existing facilities in Oakland to the new event center. The proposed office and retail facilities on Blocks 29-32 would operate year-round, independent of the event center operations. The following provides additional information for each of the proposed new operational components at Blocks 29-32.

Event Center Programming

Table 3-3 presents a summary of characteristics of proposed events at the event center, including anticipated types and number of Golden State Warriors games and non-Golden State Warriors events, average/maximum game/event attendance, estimated event center day-of-game/event employment, and temporal description of games/events.

Golden State Warriors Games at Event Center

Under the project, all Warriors home basketball games that presently occur at Oracle Arena in Oakland would be played at the proposed event center. The Golden State Warriors would host two to three preseason basketball games (in mid- to late October) and 41 regular season basketball games (from late October to mid-April) at the event center. If the Golden State Warriors reach the postseason, they would host anywhere from 2 to 16 playoff games (from mid-April to mid-June). The large majority of Golden State Warriors home basketball games would start at 7:30 p.m. and conclude between 10:00 p.m. and 10:30 p.m. The home game schedule at the proposed event center would be similar to the Warriors schedule at Oracle Arena, the team's existing home venue in Oakland.

As shown in **Table 3-3**, the maximum basketball seating capacity at the event center would be 18,064, less than the maximum basketball seating capacity of approximately 19,600 at Oracle Arena. Based on historical data for ticket sales and "no-show" rates, the average basketball attendance level at the proposed event center is estimated to be approximately 17,000 during the regular season, with regular season and post-season attendance reaching the maximum capacity of 18,064.

**TABLE 3-3
EVENT CHARACTERISTICS AT PROPOSED EVENT CENTER**

Event Type	Annual Number of Games/Events at Event Center	Attendance		Event Center Day-of-Game/Event Employment Characteristics	Season	Game/Event Temporal Characteristics
		Average	Maximum			
Golden State Warriors Basketball Home Games	2 to 3 preseason home games	11,000	18,064	1,100 ^a	2 weeks mid-October	Regular Season game time: 7:30 p.m. to ~ 9:40 p.m. ^c Preseason/Postseason game time: start time variable
	41 regular season home games	17,000	18,064	1,100 ^a	late October to mid-April	Monthly Distribution: ~7 home games per month
	0 to 16 post season home games	18,000	18,064	1,100 ^a	mid-April to mid-June	Weekly Distribution: 50%/50% weekdays/weekends Monday-Thursday: 2 to 6 home games/month Friday: 1 to 3 home games/month Saturday: 1 to 3 home games/month Sunday: 0 to 1 home games/month
Concerts	Approximately 30	12,500	14,000 to 18,500 ^d	775 ^b	major concert season is Fall, Winter and early Spring; Summer is the slow season	Concert time: typically 7:30 p.m. to 10:30 p.m. Weekly Distribution: primarily Friday and Saturday evenings
	Approximately 15	3,000	4,000	675 ^b		
Family Shows ^e	Approximately 55	5,000	8,200	675 ^b	distributed throughout the year	Family Show characteristics: typically 10 shows over 5 days (Wednesday to Sunday): Wednesday: 1 show, 7:30 p.m. to 9:00 p.m. Thursday: 1 show, 7:30 p.m. to 9:00 p.m. Friday: 2 shows, 10:30 a.m. to 12:00 p.m.; and 7:30 p.m. to 9:00 p.m. Saturday: 3 shows, 11:00 a.m. to 12:30 p.m.; 3:00 p.m. to 4:30 p.m.; and 7:00 p.m. to 8:30 p.m. Sunday: 3 shows, 11:00 a.m. to 12:30 p.m.; 3:00 p.m. to 4:30 p.m.; and 7:00 p.m. to 8:30 p.m.
Other Sporting Events ^f	Approximately 30	7,000	18,064	675 ^b	distributed throughout the year; times variable	
Conventions/Corporate Events ^g	Approximately 31	9,000	18,500 ^h	675 ^b	distributed throughout the year; times variable	

NOTES:

^a This estimate includes approximately 1,000 event center day-of-game non-Warriors employees, and approximately 100 Warriors employees that would work at the Warriors games. This estimate does not include, however, Warriors employees that would work in the Warriors management offices in the event center during the day (described under *Golden State Warriors Operations*, below), non-Warriors employees of the proposed office and retail uses within the office and retail buildings (described under *Office and Retail Uses*, below), or the visiting team and their support staff at the event center.

^b This estimate includes event center day-of-event non-Warriors employees. This estimate does not include, however, Warriors employees that would work in the Warriors management offices in the event center during the day (described under *Golden State Warriors Operations*, below), non-Warriors employees of the proposed office and retail uses, and cinema within the mixed-use buildings (described under *Office and Retail Uses*, below), or the visiting event performers and their support staff at the event center.

TABLE 3-3 (Continued)
EVENT CHARACTERISTICS AT PROPOSED EVENT CENTER

NOTES (cont.)

- ^c The large majority of Golden State Warriors regular season home games would start at 7:30 p.m. For example, over the course of the most recent full three NBA regular seasons (2010-11, 2012-13, and 2013-14; the 2011-12 NBA season was shortened due to delays in signing of a collective bargaining agreement between NBA owners and players, and consequently is not included), 90 percent of Golden State Warriors home games started at 7:30 p.m., 6 percent of homes games started at 6:00 p.m., and the balance (accounting for one home game or less per season) started at either 1:00 p.m. (on Martin Luther King Jr. holiday), 5:00 p.m., or 7:00 p.m.
- ^d Nearly 90 percent of annual concerts at the event center would be in the end-stage concert configuration (14,000 maximum capacity), and the remaining 10 percent (no more than four annually) would be with a 360-degree configuration (18,500 maximum attendance).
- ^e Examples of family shows include Disney on Ice, Disney Live, Harlem Globetrotters, and Sesame Street Live.
- ^f Examples of Other (non-Warriors) Sporting Events examples include college basketball, hockey, boxing, figure skating, arena football, gymnastics, lacrosse, tennis, and mixed martial arts. These could be professional, collegiate, or amateur competitions.
- ^g Examples of Conventions/Corporate Events examples include conventions, conferences, cultural events, civic events and corporate events. It is anticipated that the event center would act as a satellite venue for conventions/conferences held primarily at the Moscone Center when an event or speaker requires more space than can be accommodated at that location.
- ^h The maximum number of conference attendees that could be accommodated at the event center is 18,500. This requires a configuration similar to a center stage concert (see footnote d). It is anticipated, however, that average attendance for Convention/Corporate Events would be 9,000 people.

SOURCE: Golden State Warriors, based on data from Oracle Arena (Oakland), SAP Center (San Jose), Toyota Center (Houston), and Barclays Center (Brooklyn, New York City), 2014

It is estimated that approximately 1,000 day-of-game non-Warriors employees¹⁷ would be required on game days at the event center to work in various operations and jobs, including security guards, ushers, ticket takers, team store staff, food service staff, cleaning crew, scoreboard/video operators and staff for other event-related operations. In addition, up to 100 Golden State Warriors' employees (e.g., representatives from Warriors sales, services, marketing and game operations) would work at the games at the event center (please see additional detail of Golden State Warriors employment under *Golden State Warriors Operations*, below).

Non-Golden State Warriors Events at Event Center

The event center would serve as a venue for a variety of non-Golden State Warriors events throughout the year, including concerts, family shows, other sporting events, and conventions/corporate events. Approximately 160 non-Golden State Warriors game events would occur annually at the event center, which could typically include the following:

- **Family Shows:** It is estimated that the event center would host 55 family shows per year. Examples of family shows include Disney on Ice, Disney Live, Harlem Globetrotters, and Sesame Street Live. Family show series would typically occur over a five-day block of time (Wednesday through Sunday) during which time as many as 10 total performances would occur in the daytime and evening periods. Estimated average attendance would be approximately 5,000 patrons, and estimated maximum attendance would be approximately 8,200 patrons.
- **Full Arena Concerts:** It is estimated that the event center would host 30 full arena concerts per year. These concerts would typically occur on Friday and Saturday evenings within a 7:30 p.m. to 10:30 p.m. window. Attendance would vary depending on the artist and stage configuration. Estimated average attendance for full arena concerts would be approximately 12,500 patrons with a maximum capacity of about 18,500.¹⁸
- **Arena Theater Concerts:** It is estimated that the event center would host 15 arena "theater" (cut-down arena) concerts per year. These concerts typically occur on Friday and Saturday evenings within a 7:30 p.m. to 10:30 p.m. window. Attendance would vary depending on the artist and cut-down configuration. Estimated average attendance for arena theater concerts would be approximately 3,000 patrons with a maximum capacity of approximately 4,000 attendees.
- **Other Sporting Events:** It is estimated that the event center would host 30 non-Warriors sporting events per year. Examples of non-Warriors sporting events include college basketball, hockey, boxing, figure skating, arena football, gymnastics, lacrosse, tennis, and

¹⁷ This event center day-of-game employee estimate does not include Warriors employees that would occupy the management offices in the event center and employees of the proposed office and retail uses on the project site, both of which are described separately, below.

¹⁸ The event center design would allow for an end-stage concert configuration that would accommodate up to 14,000 patrons. It is estimated that nearly 90 percent of concerts would use the end stage configuration. Occasionally, concerts would occur in a 360-degree center-stage configuration which would accommodate a maximum attendance of approximately 18,500 patrons. However, no more than four center-stage concerts are expected per year.

mixed martial arts. These events could be professional, collegiate, or amateur competitions. Estimated average attendance for other sporting events would be 7,000 patrons per event, and estimated maximum attendance of 18,064 (consistent with maximum seating capacity for Warriors games). These events would be distributed throughout the year and have variable start times.

- **Conventions, Conferences and Other Events:** It is estimated that the event center would host 31 events annually related to conventions, conferences, cultural events, civic events, corporate events, and other gatherings, with an estimated average attendance level of 9,000 patrons and maximum attendance of 18,500 patrons. For smaller events, the event center would be configured to reduce the perceived bowl volume to create a more intimate experience. These events would be distributed throughout the year and have variable start times; however, the majority of events are expected to occur during day time hours, consistent with typical events at the Moscone Convention Center.

It is estimated that day-of-event employees for non-Golden State Warriors events at the event center would range from 675 to 775, depending on the specific event and anticipated attendance levels.

(Please see also *Golden State Warriors Operations* and *Office and Retail Uses*, below, for a description of operations and additional employment associated with the Golden State Warriors, and for office and retail uses.)

Potential Outdoor Events at the Project Site

The proposed Third Street Plaza would provide opportunities for public gatherings and events, such as spring festivals, a summer film series, fall festivals/pumpkin patch, and a winter tree lighting ceremony/ice skating rink.

Golden State Warriors Operations

As discussed under Section 3.5.2, *Existing Golden State Warriors Operations*, the Golden State Warriors organization currently includes approximately 150 full-time equivalent (FTE) employees, and associated operations are based in Oakland. Under the project, all existing Golden State Warriors employees and operations, including management offices and practice facility, would relocate to the project site at Mission Bay. Furthermore, the Golden State Warriors estimate that up to 105 additional FTE employees would be required for year-round event center and site management, for a total estimated Golden State Warriors employment of 255 FTE employees.

Office and Retail Uses

The proposed office uses on the site would be expected to operate similar to other existing office developments within Mission Bay, and it is estimated to generate approximately 2,100 FTE employees.¹⁹ The proposed retail uses, including restaurants and other food and beverage

¹⁹ Based on San Francisco Planning Department's Transportation Impact Analysis Guidelines rate of 350/240/350 (Sit-down/QSR/In-line) gross square feet per FTE employee.

service, would operate seven days a week, year-round, independently of the event center operations. It is estimated that the uses within the retail areas would require approximately 370 FTE employees.²⁰

Table 3-4, below summarizes all estimated full-time employment under the project.

TABLE 3-4
ESTIMATED FULL-TIME EQUIVALENT EMPLOYEES^a

Project Component	Full-Time Equivalent (FTE) Employees
Golden State Warriors (Team Operations and Event Center Management)	255
Office Uses ^b	2,101
Retail Uses ^c	372
Total	2,728

^a See also *Golden State Warriors Operations* discussion, above, for how this estimate was developed. In addition, please also see *Golden State Warriors Games at Event Center* and *Non-Golden State Warriors Events at Event Center* discussion for separate estimates of event center day-of-game/event staff.

^b Based on San Francisco Planning Department's *Transportation Impact Analysis Guidelines* office rate of 276 square feet per FTE employee.

^c Based on San Francisco Planning Department's *Transportation Impact Analysis Guidelines* restaurant rate of 350/240/350 (Sit-down/Quick Service Restaurant/In-line) gross square feet per FTE employee.

SOURCE: Golden State Warriors, 2014

Transportation Management Plan

As part of the project, the project sponsor prepared and would implement a Transportation Management Plan (TMP). The TMP is a management and operating plan to facilitate multimodal access at the event center during project operation. The TMP includes various management strategies designed to reduce use of single-occupant vehicles, minimize conflicts between modes in the project vicinity, and to increase the use of rideshare, transit, bicycle, and walk modes for trips to and from the project site. The TMP program was developed by the project sponsor in consultation with the SFMTA, OCII and the Planning Department. The TMP is a working document that would be expanded and refined over time by the project sponsor and City agencies involved in implementing the plan. As described below, a monitoring and refinement process is included as part of the TMP. The TMP includes the appointment of an Event Center Transportation Coordinator whose responsibilities would include, but not be limited to, distributing information related to temporary travel lane and/or street closures to event center attendees, emergency service providers, UCSF, and other neighbors prior to events.

²⁰ Based on San Francisco Planning Department's *Transportation Impact Analysis Guidelines* rate of 276 gross square feet per FTE employee.

The following elements of the TMP are summarized below:

- Muni Special Event Transit Service Plan
- Mission Bay TMA Shuttle Event Express Routes
- Event Transportation Management Strategies
- Travel Demand Management Strategies
- Communication
- Monitoring, Refinement, and Performance Standards

Muni Special Event Transit Service Plan

In addition to the existing scheduled transit service in the project vicinity, the SFMTA would provide additional service to accommodate incremental event-driven transit demand. Under the Muni Special Event Transit Service Plan, light rail service on the T Third line would be increased, and three special event shuttles would be implemented by Muni, including a 16th Street BART Shuttle, Van Ness Avenue Shuttle, and Transbay Terminal/Ferry Building Shuttle.

Expansion of Mission Bay TMA Shuttle Program

The existing Transportation Management Association (TMA) shuttle service program would be expanded during evenings and weekends, and a new TMA shuttle stop would be located on South Street east of Third Street adjacent to the project site. The expanded service would include the following:

- Existing TMA shuttle routes would be revised to provide more frequent service, plus extended service to late evenings and on Saturdays. In addition to the expanded service hours on the East route, the route would be modified to travel on South Street and stop at the new TMA shuttle stop. The Mission Bay Loop service would be expanded from 6:00 to 7:00 a.m. to 6:00 to 10:00 a.m., and from 4:00 to 6:00 p.m.
- Three new regular routes (a Fourth/King Caltrain loop route, a 16th Street BART route, and a Transbay Terminal route) would operate throughout the day, similar to the existing shuttle service, but would have extended hours and operate on weekends.
- One Event Express route (the Fourth/King Caltrain route) with limited stops, would be provided prior to and following a peak event (i.e., events with more than 14,000 attendees).

Event Transportation Management Strategies

The TMP identifies event transportation management strategies that would be implemented to accommodate travel to and from the event center during games/events by all modes to enhance safety through reduction of conflicts between modes, facilitate ingress and egress to the project site and vicinity, and minimize traffic congestion and delays to vehicles, including transit.

Transportation management strategies include, but are not limited to the following: providing for Muni ticket or Clipper Card sales at the event center box office; designating taxi zones on Terry A. Francois Boulevard and South Street; designating commercial loading zones; dedicating TMA, charter bus, and paratransit stops; assigning a parking control officer supervisor and using of PCOs at key locations throughout the surrounding transportation network; planning for post-

peak event temporary lane closures; and coordination with BART, Caltrain, Muni and Giants staff as well as emergency services providers and neighbors.

Three permanent Variable Message Signs (VMS) would be installed to provide traffic alerts, messages, and alternate driving routes for drivers traveling to the event center, to destinations in the vicinity, or through the area. The VMSs would be used during large events. The proposed locations for the new VMSs include westbound 16th Street east of I-280, southbound Third Street south of the Lefty O'Doul Bridge, and eastbound Mariposa Street east of the I-280 ramps.

In circumstance when events at the proposed event center partially or completely overlap with baseball games or other events at AT&T Park, adjustments to the transportation management plan for the proposed event center would be made, including adjusting PCO staffing to eliminate duplication of effort, and directing event center attendees to travel southbound on Terry A. Francois Boulevard, and then westbound on 16th Street to access locations to the north and west.

Travel Demand Management (TDM) Strategies

The TMP includes TDM strategies for both on-site employees and event center visitors. TDM strategies for office, retail, restaurant, or event center employees include, but are not limited to: participation in the federal pre-tax commuter benefits; promoting use of Mission Bay TMA shuttles and the proposed on-site and bicycle parking facilities; providing employee shower locker facilities in each building; allowing work flexible schedules and telecommuting; supporting an employee ride-matching program; and encouraging carpooling, vanpooling and use of electric vehicles (EVs) by reserving certain on-site garage spaces/charging equipment for vehicles using those modes. TDM strategies for visitors include: rewarding or incentivizing patrons arrival via transit; promoting transit access through trip planning tools and transit maps; displaying transit information at the event center; promoting the use of the on-site bicycle valet facility; and designating priority curb areas on-site for taxis and rideshare vehicles.

Communication

The TMP includes strategies related to distributing information on transportation management for various modes for pre-event and post-event conditions as part of the ticket purchase process, and installing wayfinding signage for multi-modal access and egress. The communication strategies would discourage use of private autos and encourage use of transit and other modes.

Monitoring, Refinement, and Performance Standards

The TMP outlines the process to monitor and refine the strategies within the TMP in conjunction with the City throughout the life of the project. Monitoring methods including field monitoring of operations during the first four years and an annual surveying and reporting program thereafter. Surveys of event attendees and event center employees would be conducted annually, and surveys of Mission Bay neighbors and UCSF staff and emergency providers would be conducted in the initial years of operation. The TMP also identifies performance standards that the project sponsor has committed to maintaining, including but not limited to auto mode share targets for event attendees, and maximum vehicle queuing limits on adjacent streets. Please see

additional details on the proposed TMP in Section 5.2, Transportation and Circulation, and the full TMP in Appendix TR of this SEIR.

Proposed Event Center Site Management Practices

As part of the project, the sponsor would comply with all applicable City policies and regulations to minimize effects from the event center and associated event patrons on surrounding land uses, including those contained in the City noise regulations. The project would also be subject to the requirements of the San Francisco Entertainment Commission's Place of Entertainment permits, which includes a Good Neighbor Policy (see Chapter 5, Section 5.3, Noise, for further description). Moreover, as part of the project, the sponsor would develop and implement additional Event Center Site Management practices as needed to further minimize potential disruption associated with event center operations to the quality of life for the surrounding neighborhood. This would include contracting with Mission Bay Parks and the Mission Bay Management Corporation, or other provider, to provide certain off-site parks maintenance, garbage disposal, street sweeping, power washing and other services. The sponsor would implement procedures for addressing potential loitering, pedestrian queuing, illegal vendors, outdoor event patron noise, and other disruptions. The sponsor would also establish a central point of contact with real-time connection to the event center's Transportation Management Center, and would promote pre- and post-game pedestrian routes that would avoid residential streets such as Bridgeview Way north of Mission Bay Boulevard and Fourth Street.

3.6.3 Proposed Construction

Overview

Table 3-5 summarizes major construction tasks, and presents a preliminary construction schedule. Construction of the proposed project is anticipated to begin in late 2015 and occur over an approximate 26-month period. Construction activities would include, but not be limited to: site demolition, clearing and excavation; temporary dewatering; pile installation and foundation construction; construction of all proposed development, including event center, podium structure, office towers and plazas; installation of associated utilities; interior finishing; and exterior hardscaping and landscaping improvements.

The sponsor estimates that the maximum depth of excavation on-site (excluding perimeter cut-off wall, described below) would be approximately 30 feet below grade; this would require approximately 350,000 cubic yards of on-site soils to be excavated and removed from the site. Soil on the site would be compacted using rapid soil compaction over approximately 30 work days. The sponsor proposes to install augercast piles²¹ using drilling, as opposed to impact pile driving, for

²¹ Augercast piles, also known as continuous flight auger piles (CFA), are cast-in-place, and formed by drilling into the ground with a hollow stemmed continuous flight auger to the required depth or degree of resistance. A cement grout mix is then pumped down the stem of the auger. While the cement grout is pumped, the auger is slowly withdrawn, conveying the soil upward along the flights. A shaft of fluid cement grout is formed to ground level. Reinforcing steel is then lowered in to the wet cement grout.

**TABLE 3-5
PRELIMINARY PROJECT CONSTRUCTION SCHEDULE**

Location	Construction Period	Duration (weeks)
<i>Demolition/Excavation</i>		12 weeks
Demolition / Clear and Grub	Month 1	4
Cut-off Wall / Earth Retention / Excavation	Months 1 - 3	12
<i>Event Center</i>		94 weeks
Foundations	Months 3 - 19.5	70
Structure	Months 3.5 - 20	70
Roofing Systems	Months 12 - 19	32
Enclosure	Months 12 - 21	40
Interior Rough-in	Months 8 - 22	60
Event Level Service Loop	Months 9.5 - 14.5	20
Mechanical Equipment	Months 9.5 - 20	42
Elevators / Escalators	Months 12 - 23	48
Drywall and Interior Finishes	Months 16 - 24.5	38
Food Service Equipment	Months 17 - 23.5	30
Bowl Rough-in / Finishes	Months 19 - 23.5	22
Sports Equipment and Systems	Months 20.5 - 25.5	20
Commissioning / Project Closeout	Months 25.5 - 26.5	4
<i>Parking Garage and Podium</i>		44 weeks
Foundations	Months 3.5 - 9	22
Structure	Months 6 - 14.5	38
<i>Southwest Tower</i>		72 weeks
Structure	Months 9 - 18	40
Roofing Systems	Months 17.5 - 19.5	8
Enclosure	Months 16 - 20	20
Interior Rough-in	Months 15 - 22	32
Elevators / Escalators	Months 19.5 - 24	18
Drywall and Interior Finishes	Months 18 - 25	32
Commissioning / Project Closeout	Months 21.5 - 26	18
<i>Northwest Tower</i>		74 weeks
Structure	Months 6.5 - 16	38
Roofing Systems	Months 15.5 - 17.5	8
Enclosure	Months 14 - 18	20
Interior Rough-in	Months 12.5 - 20	30
Elevators / Escalators	Months 17.5 - 23	18
Drywall and Interior Finishes	Months 17 - 24	32
Commissioning / Project Closeout	Months 12 - 25	16
<i>Gatehouse Retail Building</i>		20 weeks
Structure	Month 21	4
Enclosure	Month 22 - 22.5	6
Service Loop	Months 22.5 - 23.5	4
Drywall and Interior Finishes	Months 23.5 - 24.5	4
Commissioning / Project Closeout	Month 25	4

TABLE 3-5 (Continued)
PRELIMINARY PROJECT CONSTRUCTION SCHEDULE

Location	Construction Period	Duration (weeks)
<i>Northeast Retail Building</i>		20 weeks
Structure	Month 18	16
Enclosure	Month 19 – 19.5	6
Service Loop	Months 19.5 – 20.5	4
Drywall and Interior Finishes	Months 20.5 – 21.5	4
Commissioning / Project Closeout	Month 22	4
<i>Site Improvements</i>		20 weeks
Site Improvements	Months 21 - 25	20
Total	26 months	104 weeks

SOURCE: Golden State Warriors, 2014

the deep foundation. It is estimated that approximately 1,400 2-foot diameter piles, at a depth of 110 feet, would be installed at the project site. Augercast pile installation would occur over approximately 60 work days.

Construction dewatering is expected to last approximately nine months. The three potential construction dewatering discharge options are: (1) directly discharging to the City's combined sewer system; (2) installing an on-site dewatering treatment system and discharging the treated water to the Bay if the capacity of the Mariposa Pump Station would be exceeded with the discharge; and (3) a combination of the first two options. (Please see Section 5.9, Hydrology and Water Quality, for additional detail.)

The sponsor is also considering multiple approaches to address potential groundwater infiltration to proposed below-grade facilities and potential localized flooding, including a permanent waterproofing design and implementation of adaptive management strategies (see Section 5.9, Hydrology and Water Quality for additional detail). The project design includes a soil-cement cut-off walls as part of the perimeter shoring and dewatering system for the site, which would support the excavation during construction and allow for excavation to occur.²² The walls would be about 30 to 36 inches thick. Estimated average depths of the walls around the perimeter of the project site would be 35, 37, 54, and 37 feet along South Street, Terry A. Francois Boulevard, 16th Street, and Third Street, respectively. The sponsor indicates the proposed design would preclude the need to conduct any long-term dewatering of the project site during project operation.

²² A Cement Deep Soil Mixing (CDSM) wall would serve as the soil-cement cut off wall, and would be created by using drilled shallow-stem shafts with a cutting tool and mixing paddles to mix cementitious materials into the soil. H-Beams would be installed at an off-set designed by the engineer. After beams are installed and the wall is cured, the soil-cement wall creates a barrier to the surrounding horizontal groundwater flow. The wall would extend vertically into the underlying bay mud or bedrock depending on the thickness of bay mud where the wall is installed. The bay mud soil layer would act as secondary groundwater control.

The majority of the construction is proposed to occur Monday through Friday, although some construction activities would occur on nights and weekends. A typical work day shift would be between 7:00 a.m. and 6:00 p.m., and a typical second shift (i.e., for below-grade and interior work within buildings) would be between 4:00 p.m. and 12:30 a.m. There would also be the potential for overnight deliveries of materials and/or equipment.

All construction activities are proposed to be conducted within allowable construction requirements permitted by City code. The project would also be subject to the Mission Bay Good Neighbor Construction Noise Policy, which limits extreme noise-generating activities in Mission Bay to Monday to Friday from 8:00 a.m. to 5:00 p.m.²³

Construction Staging

The proposed construction staging area for the majority of the project construction would take place between the existing alignment of Terry A. Francois Boulevard and the west face of the proposed event center. This staging area would be used until such time the planned realignment of Terry A. Francois Boulevard occurs. Any potential deliveries of materials that could not be accommodated within the above-described staging area would be staged on Terry A. Francois Boulevard between Piers 48 and 50. All construction equipment is proposed to be staged on-site. Tower cranes would be sized and used as appropriate in consideration of UCSF emergency helicopter flight paths. The construction contractor would be responsible for complying with all federal code, rules, and regulations, including those related to operation of the tower cranes in the vicinity of helicopter flight paths (please see Section 5.2, Transportation and Circulation, for additional information).

During construction, the southern-most eastbound lane on South Street adjacent to the project site; and the westbound curb lane on 16th Street between Third and Illinois Street adjacent to the project site would be temporarily closed. It is also anticipated that the sidewalk on Third Street adjacent to the project site would be temporarily closed during the building steel erection phase of work.

Terry A. Francois Boulevard would be the primary point of vehicular ingress/egress to/from the project site during construction. Third Street, Illinois Street, and Terry A. Francois Boulevard are the primary streets in the immediate project vicinity that are proposed to be used to connect to routes leading to/from Interstate 280, Interstate 80 and U.S. Highway 101 during construction. Truck access driveways at the project site would be from multiple locations on South Street (three driveways), Terry A. Francois Boulevard (two driveways), and 16th Street (two driveways). The location of the midblock driveway on South Street between Third Street and Bridgeview Way would shift as construction proceeds (i.e., the driveway would be closer to Third Street for the first three months of construction, and closer to Bridgeview Way for the remainder of the

²³ The Mission Bay Good Neighbor Policy specifies that pile driving or other noise generating activity (80 dBA at a distance of 100 feet) shall be limited to 8:00 am to 5:00 pm, Monday through Friday. No pile driving or other extreme noise generating activity is permitted on Saturday, Sundays and holidays.

construction period). The number of driveways that would be in use at any one time would depend on the construction phase.

Construction workers not utilizing available public transit options are expected to either carpool and/or use public parking in the project site vicinity.

Construction Employment

Table 3-6 summarizes the estimated project construction jobs. The number of construction workers present on-site daily would vary, depending on the specific construction activities being performed and overlap between construction phases. During peak overlapping construction periods, there would be between approximately 330 and 700 construction workers at the project site.

**TABLE 3-6
PROJECT CONSTRUCTION EMPLOYMENT**

Construction Work	Average / Peak Number of Workers
<i>Entire Site</i>	
Demolition	10 / 12
Excavation and Shoring	25 / 30
<i>Event Center</i>	
Foundation and Below-Grade Construction	100 / 125
Base Building	200 / 250
Exterior Finishing	50 / 75
Interior Finishing	150 / 300
<i>Garage / Podium</i>	
Foundation and Below-Grade Construction	50 / 75
Base Building	50 / 75
<i>Northwest Tower</i>	
Base Building	40 / 60
Exterior Finishing	10 / 15
Interior Finishing	100 / 150
<i>Southwest Tower</i>	
Base Building	40 / 60
Exterior Finishing	10 / 15
Interior Finishing	100 / 150
<i>Entire Site</i>	
Street Improvements	40 / 50

SOURCE: Mortenson Clark Joint Venture, 2014

Construction Equipment

It is expected that track-mounted cranes and track-mounted drill rigs would be used at the project site for drilling the soil-cement cut off wall, and for augercast pile installation for the deep foundations. Tower cranes, track-mounted cranes and tire-mounted mobile cranes would be used for building construction, including but not limited to, steel erection, precast erection, and building façades. Other mobile equipment such as backhoes, front-end loaders, dump trucks, and forklifts would be used at the project site for a range of other construction tasks on the project site, including excavation, site clearing and grading, building construction, and/or hardscape and landscape materials installation. Project construction would generate off-site truck trips for deliveries of concrete and other building materials, transportation of construction equipment to and from the site, hauling soils and debris from the site, and street sweepers. A variety of other smaller mechanical equipment would also be used at the project site during the construction period, such as saw cutters, chopping saws, tile saws, stud impact guns, impact drills, torque wrenches, welding machines, and concrete boom pumps.

3.7 Graphic Exhibits of Proposed Project

A number of graphic exhibits depicting the proposed project development are presented in Figures 3-16 to 3-23 for informational purposes.

3.8 Intended Uses of this SEIR and Approvals Required

This is a project-specific SEIR, intended to provide information about the environmental consequences of the proposed project in accordance with the requirements of CEQA. In addition to describing the proposed project and required approvals, this SEIR analyzes potential environmental impacts of the proposed project, identifies feasible mitigation measures where those impacts are significant, addresses cumulative adverse impacts to which the proposed project could make a substantial contribution, and evaluates alternatives to the project that could avoid or substantially reduce significant impacts while still meeting most of the project's basic objectives. See Chapter 2, Introduction, for a more detailed description of CEQA requirements.

Approvals or permits from the following agencies for project construction and/or long-term operation are anticipated at this time:

- Certification of the Final SEIR by the OCII Commission
- Action by the Board of Supervisors on any appeals of the OCII Commission's certification of the FSEIR
- Approval by the OCII Executive Director of secondary use findings of consistency for the proposed event center
- Approval by the OCII Commission of a new Major Phase for Blocks 29-32, and related conditions of approval

- Approval by the OCII Commission of Combined Basic Concept and Schematic Designs (Schematic Designs) for the project
- Approval by the OCII Commission (and any other City departments as required under the Mission Bay South Plan, OPA, Interagency Corporation Agreement, and associated documents) of: amendments to the Mission Bay South Design for Development, and modifications to the Mission Bay South Signage Master Plan and Mission Bay South Streetscape Plan, and conditions of approval.
- Approval by Mayor, Department of Public Works Executive Director and OCII Executive Director of any non-material changes to Mission Bay South Infrastructure Plan
- Entertainment Commission approval of applicable entertainment permits, including, but not limited to, a Place of Entertainment permit
- Planning Commission approval of office building Schematic Designs related to Proposition M allocation
- Port of San Francisco staff approval of changes to waterfront infrastructure, including roadway striping
- San Francisco MTA/Department of Public Works approval for reconfiguration of adjacent streets
- San Francisco Department of Public Works and Board of Supervisors approval of subdivision maps, including street vacations, acceptance of public improvements and right-of-way dedications, and encroachment permits to the extent required
- Termination or relocation of existing City-reserved easements by applicable City departments, including the San Francisco Public Utilities Commission, to the extent required
- San Francisco Department of Building Inspection approval of a building/site permit, and related approvals from other City departments including the SFPUC for utility connections
- Approval from the University of California to terminate a view easement extending 100 feet within the project site along the Campus Way axis (Please see Chapter 8, Third Street Plaza Project Variant for a description and analysis of a project variant where no structural development would be proposed within this view easement.)



SOURCE: Pfau Long Architecture, 2015

Note: Rendering also conceptually shows certain planned off-site cumulative development in project vicinity, including an illustrative design for Bayfront Park (placeholder only)

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 3-16

Aerial Rendering of Proposed Project from the Northwest



SOURCE: Pfau Long Architecture, 2015

Note: Rendering also conceptually shows certain planned off-site cumulative development in project vicinity, including an illustrative design for Bayfront Park (placeholder only)

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 3-17

Aerial Rendering of Proposed Project from the East



SOURCE: Pfau Long Architecture, 2015

Note: Rendering also conceptually shows certain planned off-site cumulative development in project vicinity.

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 3-18

Street-level Rendering of Proposed Project
from the Northwest (Third Street at South Street)



SOURCE: Pfau Long Architecture, 2015

Note: Rendering also conceptually shows certain planned off-site cumulative development in project vicinity.

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 3-19

Street-level Rendering of Proposed Project
from the Southwest (Third Street at 16th Street)

For informational purposes/reference only



SOURCE: Pfau Long Architecture, 2015

Note: Rendering also conceptually shows certain planned off-site cumulative development in project vicinity.

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 3-20

Street-level Rendering of Proposed
Project from the North (South Street)



SOURCE: Pfau Long Architecture, 2015

Note: Rendering also conceptually shows certain planned off-site cumulative development in project vicinity.

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 3-21

Street-level Rendering of Proposed Project
from the South (16th Street)

For informational purposes/reference only



SOURCE: Manica Architecture, 2015

Note: Rendering also conceptually shows certain planned off-site cumulative development in project vicinity, including an illustrative design for Bayfront Park (placeholder only)

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 3-22

Street-level Rendering of Proposed Project
from the East (Bayfront Park)

For informational purposes/reference only



SOURCE: Manica Architecture, 2015

Note: Rendering also conceptually shows certain planned off-site cumulative development in project vicinity.

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 3-23

Street-level Rendering of Proposed Project from the Southeast
(on planned realigned Terry A. Francois Boulevard at 16th Street)

CHAPTER 4

Plans and Policies

4.1 Introduction and Overview

In accordance with CEQA Guidelines Section 15125(d), this chapter provides a summary of the plans and policies of the City and County of San Francisco Office of Community Investment and Infrastructure (OCII), City and County of San Francisco (CCSF), and regional, state, and federal agencies that have policy and regulatory control over the project site. Although some of the plans and policies relate to regulations under the jurisdiction of these agencies, the primary discussion of regulations pertinent to the proposed project and its environmental effects is included in Chapter 5, Environmental Setting, Impacts, and Mitigation Measures, under the regulatory framework subsection of each environmental topic.

Development of the project is subject to approvals by the primary agency with jurisdiction over the project site, which is OCII. Other agencies with plans and policies applicable to the project site include the Metropolitan Transportation Commission (MTC), San Francisco Bay Regional Water Quality Control Board (RWQCB), Bay Area Air Quality Management District (BAAQMD), and Association of Bay Area Governments (ABAG).

Policy conflicts do not, in and of themselves, indicate a significant environmental effect within the context of CEQA environmental review, in that the intent of CEQA is to determine physical environmental effects associated with a project. Many of the plans of OCII, CCSF, and the other relevant jurisdictions contain policies that address multiple goals pertaining to different resource areas. To the extent that physical environmental impacts of a proposed project may conflict with one of the goals related to a specific resource topic, such impacts are analyzed in this SEIR in that respective topical section in Chapter 5, such as Section 5.2 (Transportation and Circulation), Section 5.4 (Air Quality), Section 5.4 (Greenhouse Gas Emissions), and Section 5.9 (Hydrology and Water Quality).

4.2 San Francisco Plans and Policies

4.2.1 San Francisco General Plan

The *San Francisco General Plan (General Plan)* provides general policies and objectives to guide land use decisions. The General Plan contains 10 elements (Commerce and Industry, Recreation and Open Space, Housing, Community Facilities, Urban Design, Environmental Protection, Transportation, Air Quality, Community Safety, and Arts) that set forth goals, policies, and objectives for the physical development of the City.

On September 17, 1998, by Resolution No. 14702, the Planning Commission determined that the Mission Bay South Redevelopment Plan provides for a type, intensity, and location of development that is consistent with the overall goals, objectives, and policies of the *General Plan*. Therefore, the project's consistency with the Mission Bay South Redevelopment Plan (discussed below) would ensure that the project would not obviously or substantially conflict with *General Plan* goals, policies, or objectives. The *General Plan* elements that relate to the unique characteristics and considerations of the proposed project are discussed below.

Commerce and Industry Element. According to the *General Plan*, "the *Commerce and Industry Element* sets forth objectives and policies that address the broad range of economic activities, facilities and support systems that constitute San Francisco's employment and service base." The element calls for managing economic growth to ensure enhancement of the total city environment, maintaining a diverse economic base, and providing employment opportunities for city residents. Objective 8 specifically states that the City shall enhance its position as a national center for visitor trade because visitor trade employs, directly, and indirectly, more residents than any other economic sector. The proposed project would not obviously conflict with the Commerce and Industry Element.

Transportation Element. The Transportation Element comprises sections relating to General Transportation, Regional Transportation, Congestion Management, Vehicle Circulation, Transit, Pedestrians, Bicycles, Citywide Parking and Goods Movement. Each section consists of objectives and policies regarding a particular segment of the master transportation system and related maps which describe key physical aspects. The element specifically calls for the City to provide for a balanced, multi-modal transportation system that is consistent with planned land use. It states that the City shall encourage development that efficiently coordinates land use with transit service, establish frequent and convenient transit service for large sporting facilities and event centers, and provide bicycle parking for such centers. The proposed project would not obviously conflict with the Transportation Element.

Recreation and Open Space Element. The Recreation and Open Space Element (ROSE) indicates that the area surrounding the project site and vicinity has a "lesser need" for open space acquisition and renovation. This is due to the inclusion of proposed open spaces in the Mission Bay area, as well as the relatively low residential population compared to other areas of the City. The element specifically delineates Bayfront Park, east of the project site, as a "proposed open space," and it designates Terry A. François Boulevard as a "green connection." The proposed project would not obviously conflict with the ROSE.

Urban Design Element. As described in the *General Plan*, the Urban Design Element relates to the physical character and order of the city, and the relationship between people and their environment. The element specifically calls for centers of activity and major destination points to be made more prominent through design of street features and other means (Policies 1.6 and 1.8), and for local centers for shopping or congregations of people to stand out in their areas (Policy 4.6). The element also states that the City shall recognize the special urban design issues posed in development of larger properties (Policy 3.6).

The Urban Design Element also specifically addresses protection of major views in the City (Policy 1.1), and moderation of new development to complement the city pattern (Objective 3) by avoiding extreme contrasts in color, shape, and other characteristics (Policy 3.2). Under this objective, the element states that low buildings along the waterfront contribute to the gradual tapering of height from the hills to the water that is characteristic of the City. Larger building with civic importance, providing places of assembly and recreation, may be appropriate along the waterfront at important locations. The element states that building height should relate to the important attributes of the city pattern and to the height and character of existing development (Policy 3.5), and the bulk of buildings should not overwhelm or dominate in appearance (Policy 3.6). The proposed project heights would be within the maximum heights called for in the Mission Bay South Redevelopment Plan and Design for Development documents (discussed below). However, the project's event center would exceed the 90-foot height limit on Blocks 30 and 32 set forth in the Design for Development, which would be addressed through an amendment to the Design for Development. The proposed project would not obviously conflict with the Urban Design Element.

4.2.2 San Francisco Planning Code

As stated in Chapter 3, Project Description, the Mission Bay South Redevelopment Plan and Design for Development for Mission Bay South Project Area, together, constitute the regulatory land use framework for the project site, and they supersede the City's *Planning Code*, except as otherwise specifically provided for in those documents and associated documents for implementing the Mission Bay South Redevelopment Plan. The project would not require variances from or changes to the Planning Code or Zoning Map.

Planning Code Section 321

Section 321 implements the City's annual limit on office construction, which is set at 950,000 square feet per calendar year, with a subset of 75,000 square feet reserved for buildings smaller than 50,000 square feet. The limit applies to all office space of a certain size citywide, not just downtown. Buildings smaller than 25,000 square feet are excepted; however, OCII projects are included, as are projects within San Francisco that are under the jurisdiction of the State of California and federal agencies, including the Presidio Trust and National Park Service. Square footage not allocated during any given year is added to the overall allocation for succeeding years. The Mission Bay South Redevelopment Plan, described below, states that no office development shall be approved that would cause the applicable annual limitation to be exceeded. As of November 14, 2014, the Planning Department's inventory of office space showed 3.02 million square feet of space available for large projects (those 50,000 square feet and larger), with an additional 1.27 million square feet available for smaller projects (25,000 to 49,999 square feet).¹

¹ San Francisco Planning Department, "Office Development Annual Limitation (Annual Limit) Program Update November 14, 2014. Allocations in square feet of gross floor area, as defined in *Planning Code* Sec. 102.9 Available at: <http://www.sf-planning.org/Modules/ShowDocument.aspx?documentID=9276>; reviewed December 15, 2014.

As described further below under “Mission Bay South Redevelopment Plan,” the Planning Commission adopted findings that the office development contemplated by the plan promotes public welfare, convenience and necessity. No office development contemplated under the plan may be disapproved for inconsistency with Planning Code Sections 320 – 325, provided that the annual office space limitation contained in Planning Code Section 321 is not exceeded.

In 2008, the Planning Commission established the Alexandria Mission Bay Life Sciences and Technology Development District (Alexandria District), with a pooled allocation of 1.12 million gross square feet (later modified to 1.35 million square feet) of office space to be used both by previously allocated office projects and future allocations at designated parcels in the district, in accordance with Planning Code Section 321. The Alexandria District generally includes properties along the east side of Third Street between Mission Bay Boulevard and Mariposa Street (Blocks 26, 27, 29–32, 33, and 34) as well as properties west of Owens Street (Blocks 41–43). Blocks 29–32 currently have an allocation of 677,020 square feet of office space, none of which has been built.^{2,3} The proposed project’s approximately 605,000 square feet of office space would be accommodated within this total.

The Accountable Planning Initiative

In November 1986, the voters of San Francisco approved Proposition M, the *Accountable Planning Initiative*, which added Section 101.1 to the *Planning Code* to establish the following eight priority policies:

- Preservation and enhancement of neighborhood-serving retail uses;
- Protection of neighborhood character (discussed in Appendix NOP-IS, Section E.1, Land Use and Land Use Planning, Question 1c);
- Preservation and enhancement of affordable housing (discussed in Appendix NOP-IS, Section E.3, Population and Housing, Question 3b, with regard to housing supply and displacement issues);
- Discouragement of commuter automobiles (discussed in Chapter 5, Section 5.2, Transportation and Circulation);
- Protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership (discussed in Appendix NOP-IS, Section E.1, Land Use and Land Use Planning, Question 1c);
- Maximization of earthquake preparedness (discussed in Appendix NOP-IS, Section E.14, Geology and Soils, Questions 14a through 14d);
- Landmark and historic building preservation (discussed in Appendix NOP-IS, Section E.4, Cultural and Paleontological Resources, Question 4a); and

² *Ibid.*

³ San Francisco Planning Department, “Letter RE: Property Transfers within the Alexandria Life Sciences & Technology District,” March 21, 2011.

- Protection of open space (discussed in Chapter 5, Section 5.6, Wind and Shadow;; and in Appendix NOP-IS, Section E.10, Recreation, Questions 10a and 10c).

Through adoption of Resolution No 14702 in 1998, the Planning Commission determined that the Mission Bay South Redevelopment Plan provides for a type, intensity, and location of development that is consistent with these priority policies. Therefore, the proposed project's consistency with the Mission Bay South Redevelopment Plan (below) would ensure that the proposed project would not obviously conflict with the Accountable Planning Initiative.

4.2.3 Mission Bay South Redevelopment Plan

The Mission Bay South Redevelopment Plan (South Plan) establishes the basic land use controls for the Mission Bay South Plan Area. The major objectives of the South Plan are to eliminate blighting influences and correct environmental deficiencies; retain and promote academic and research activities associated with the University of California San Francisco (UCSF), Mission Bay campus; assemble land into parcels suitable for modern, integrated development; re-plan, redesign, and develop undeveloped and underdeveloped areas; provide flexibility to respond to market conditions; provide opportunities for participation by owners in redevelopment of their properties; strengthen the community's supply of housing; strengthen the economic base of the Plan Area; facilitate emerging commercial-industrial sectors; facilitate public transit opportunities; provide land for publicly accessible uses; and achieve the objectives expeditiously.

The South Plan includes the Redevelopment Land Use Map, which illustrates the location of Plan Area boundaries and proposed land uses to be permitted, generally consistent with the land uses presented in the 1990 Mission Bay Plan. See Figure 3-3, Land Uses in the Mission Bay Redevelopment Plan, in Chapter 3, Project Description. Pursuant to South Plan Section 302.4, the Commercial Industrial/Retail land use district that encompasses Blocks 29-32 principally permits office and retail uses, among other uses. Secondary assembly and entertainment uses are also permitted if the use generally conforms with redevelopment objectives and planning and design controls, as well as if the use is determined to make a positive contribution to the character of the Plan Area, based on a finding by the Executive Director of OCII that the use will provide a development that is necessary or desirable for, and compatible with, the neighborhood or community.

Regarding commercial industrial floor area controls, the South Plan limits floor area ratio (FAR) for commercial industrial and commercial industrial/retail to a maximum of 2.9 to 1, averaged over the entire area of those land use districts combined. The South Plan permits a maximum of 5 million square feet of leasable⁴ mixed use office, research and development, and light industrial use space is permitted in "Zone A," which comprises Blocks 26-34, 36, and 38-43, (see Chapter 3, Figure 3-3). There are approximately 1,050,000 leasable square feet remaining after accounting for the approved and anticipated projects in Zone A. Using the calculation of leasable square feet

⁴ The South Plan defines "leasable floor area" as the floor rentable area, as defined and calculated in the 1996 Building Owners and Managers Association International (BOMA) publication "Standard Method of Measuring Floor Area in Office Buildings."

required in the South Plan, the proposed project would entail construction of 1,010,400 leasable square feet, which would be accommodated within Zone A's remaining total permitted leasable square footage.

The South Plan also limits the total neighborhood-serving and city-serving retail space⁵ to be developed in Zone A and sites designated Commercial or Mission Bay South Residential. Up to 180,000 leasable square feet of neighborhood-serving retail and city-serving retail is permitted in Zone A, of which 50,464 square feet remains. The project's proposed 29,732 leasable square feet of neighborhood-serving retail would be accommodated within this remaining total square footage. Zone A is permitted 20,700 leasable square feet of city-serving retail, none of which has been built or allocated. The project's 20,700 leasable square feet of city-serving retail would be accommodated within this remaining total square footage.

As stated above under "San Francisco Planning Code," the South Plan indicates that no office development in the South Plan shall be approved if it would cause the annual limitation on office space contained in Planning Code Section 321 to be exceeded. Blocks 29–32 currently have an allocation of 677,020 square feet of office space, none of which has been built.^{6,7} The proposed project's approximately 605,000 square feet of office space would be accommodated within this total. Further, Mission Bay South Redevelopment Plan Section 304.11 states that no project may be disapproved for inconsistency with Planning Code Sections 320–325, provided that the annual office space limitation is not exceeded and that the Planning Commission considers the design of the particular office development project to confirm that it is consistent with the Commission's findings contained in Resolution 14702.

The South Plan indicates that the maximum height within the Plan Area is 160 feet. Within that height limit, OCII is authorized to establish height limits of buildings, land coverage, density, setbacks, design and sign standards, and other criteria, as set forth in the Design for Development document (discussed below).

⁵ The South Plan defines "local-serving business" as a "business provides goods and/or services which are needed by residents and workers in the immediately surrounding neighborhood to satisfy basic personal and household needs on a frequent and recurring basis, and which if not available would require trips outside of the neighborhood. Also referred to as 'neighborhood-serving' business." The South Plan does not specifically define "City-serving retail," but it is generally understood to include retail spaces patronized by customers from both inside and outside the neighborhood.

⁶ San Francisco Planning Department, "Office Development Annual Limitation (Annual Limit) Program Update, November 14, 2014. Allocations in square feet of gross floor area, as defined in *Planning Code* Sec. 102.9 Available at: <http://www.sf-planning.org/Modules/ShowDocument.aspx?documentID=9276>; reviewed December 15 2014.

⁷ San Francisco Planning Department, "Letter RE: Property Transfers within the Alexandria Life Sciences & Technology District," March 21, 2011.

4.2.4 Design for Development for the Mission Bay South Project Area

The Design for Development for Mission Bay South Project Area (South Design for Development) is the companion document to the South Plan. It contains design standards and design guidelines through establishment of height zones. Blocks 29-32 fall within Height Zone 5, which encompasses the area bounded by Mission Bay Boulevard to the north, Third Street to the west, Mariposa Street to the south, and the San Francisco Bay to the east. The proposed project would be generally consistent with the major development standards for Height Zone 5, including maximum tower height and developable area.

As described in Chapter 3, Project Description, due to the unique nature of the event center component of the project, amendments to the Design for Development are required to bring the proposed project into compliance. To the extent that such amendments would lead to physical environmental impacts related to a specific resource topic, such impacts are analyzed in this SEIR in that respective topical section in Chapter 5, such as Section 5.2, Transportation and Circulation, Section 5.4, Air Quality, Section 5.5, Greenhouse Gas Emissions, and Section 5.9, Hydrology and Water Quality. As noted in the Introduction (Section 2.8), the proposed project meets the criteria of Senate Bill 743 for which aesthetics and parking are no longer to be considered in determining if a project has the potential to result in significant environmental effects.

The proposed project would include amendments to the Design for Development that would define Arena, Arena Building, Arena Project, and the Blocks 29–32 Arena Overlay Zone (Overlay Zone), with associated design standards and guidelines. The discussion below describes the primary existing Design for Development standards and guidelines, and where applicable, proposed amendment to the standards to create the Blocks 29–32 Arena Overlay Zone that would be required to bring the proposed project into compliance with the Design for Development.

Height

Height Zone 5 has a maximum base height of 90 feet and a maximum tower height of 160 feet, and commercial/industrial uses must be one of those two heights. Further, towers (buildings taller than 90 feet) are not permitted on Blocks 30 and 32. The proposed event center would exceed 90 feet in height, and therefore would not meet this requirement. The proposed amendment would allow an Arena Building not to exceed 135 feet in height within the Overlay Zone. The existing limitations on base height, midrise height, and tower height would not apply to the Arena Building.

Towers

A maximum of three towers are permitted with a maximum height and bulk within Height Zone 5; towers must be separated by at least 100 feet when located on the same block, and tower widths on Third Street cannot exceed 160 feet. In addition, no intersection can have more than two towers within 50 feet of the corner.

To accommodate the proposed project, the Design for Development would be amended to allow an Arena Building in the Overlay Zone. The proposed amendment would allow an additional tower (for a maximum of four towers plus the Arena Building within Height Zone 5). The amendment would also clarify the tower separation requirements to accommodate the proposed distances between the towers and the Arena Building. The amendment would increase to three the number of towers allowed within 50 feet of the intersection of South Street and Third Street.

Bulk

Commercial/industrial buildings have a permitted maximum floor plate of 20,000 square feet, and a maximum length of 200 feet, for all floors above 90 feet. The proposed amendment would create a bulk allowance for the Arena Building.

Streetwalls and Setbacks

In Height Zone 5, a minimum of 70 percent of the block length frontage is required along Third and 16th Streets. A 5-foot setback is required along Third Street, and a 20-foot setback is required on 16th Street. Streetwalls must be at least 15 feet tall, and no more than 90 feet tall. The amendment would indicate that the minimum length, minimum height and maximum height streetwall standards shall not apply to the Arena Project, subject to findings by the OCII Commission that the Arena Project is, on balance, consistent with Overlay Zone Design Guidelines. The amendments would further state that the 5-foot setback requirement on the east side of Third Street would not be applied to the office tower at the northwest corner of Block 29, and the Arena Building, including minor landscape features, would be permitted to occupy a portion of the 20-foot required setback on the north side of 16th Street.

Other Amendment Provisions

Other proposed amendments to the South Design for Development may be required to accommodate final project design. Such amendments may include the following:

- i. Allowing parking within 600 feet of the Arena Project entrance to qualify as off-site parking for an Arena Project;
- ii. Allowing shared parking among Arena Project uses (for example, parking spaces provided for daytime office use may be used by the Arena Building on nights and weekends);
- iii. Basing parking calculations within the Overlay Zone upon the total aggregate square footage by applicable structure (and in the case of the Arena, total number of seats) rather than applied to any single tenant;⁸
- iv. The minimum and maximum number of parking spaces for the Arena Building will be established based on number of seats; and
- v. Modifying the required loading requirements to accommodate the number and configuration of off-street loading spaces proposed by the project.

⁸ Note that this is consistent with the existing Design for Development, but the amendment includes the reference to the calculation of Arena Building requirements based on number of Arena seats.

See Chapter 5, Section 5.2, Transportation and Circulation, for a discussion of the traffic and parking provisions.

4.3 Regional Plans and Policies

The *Plan Bay Area*, which includes the region's Sustainable Communities Strategy (SCS), is a collaboration led by the ABAG and the MTC, in partnership with the BAAQMD and the San Francisco Bay Conservation and Development Commission (BCDC). *Plan Bay Area*, adopted by ABAG and MTC in July 2013, is the region's first integrated land use and transportation plan, combining elements of ABAG's former *Projections* series of housing and employment growth forecasts and MTC's former stand-alone *Regional Transportation Plan*. The Plan calls for concentrating housing and job growth around transit corridors, particularly within areas identified by local jurisdictions as Priority Development Areas (PDAs). *Plan Bay Area* also specifies strategies and investments to maintain, manage, and improve the region's multi-modal transportation network and proposes transportation projects and programs to be implemented with reasonably anticipated revenue. The Plan will be updated every four years. The project site, like much of eastern San Francisco, is within a PDA, where growth is anticipated and planned for in proximity to transit (see also the discussion on Population and Housing, in Appendix NOP-IS, Initial Study, Section E.3). The proposed project would not conflict with any projects in the regional transportation plan. Therefore, the proposed project would be consistent with *Plan Bay Area*.

Other regional plans pertinent to the proposed project include:

- BAAQMD's *2010 Clean Air Plan* (2010 CAP) demonstrates how the San Francisco Bay Area will reduce emissions and decrease ambient concentrations of harmful pollutants, achieve compliance with the state ozone standards, and reduce the transport of ozone and ozone precursors to neighboring air basins. The proposed project would include appropriate transportation, energy, and sustainability measures to reduce automobile trips, energy usage, and associated emissions and would not disrupt or hinder implementation of control measures identified in the 2010 CAP. Furthermore, the project sponsor has agreed to implement mitigation measures that would reduce pollutant emissions, including offsetting emissions generated by construction and operations of the project. Therefore, as described in detail in Section 5.4, Air Quality, the project would not conflict with the 2010 CAP.
- The San Francisco RWQCB's *Water Quality Control Plan for the San Francisco Bay Basin* (commonly referred to as the *Basin Plan*) guides water quality control planning in the San Francisco Bay Basin. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes implementation programs to achieve water quality objectives. As described further in Chapter 5, Section 5.9, Hydrology and Water Quality, as well as Section E.14 of the Initial Study, the proposed project would not result in substantial water quality effects; thus the project would not conflict with the Basin Plan.

The project would not obviously or substantially conflict with any environmental plan or policy adopted for the purpose of avoiding an environmental effect.

CHAPTER 5

Environmental Setting, Impacts, and Mitigation Measures

5.1 Impact Overview

This chapter describes the environmental setting, assesses impacts, and identifies measures that would avoid or lessen the severity of impacts of the proposed multi-purpose event center and mixed-use development at Blocks 29-32 in the Mission Bay South Redevelopment Plan Area of San Francisco. The chapter focuses on those topics that were identified in the Initial Study (see Appendix NOP-IS) with the potential to have either new significant effects or substantially more severe significant impacts than were previously identified in the *Mission Bay Final Subsequent Environmental Impact Report* (Mission Bay FSEIR) due to implementation of the currently proposed project. Topics for which no new or more significant impacts were identified in the Initial Study are not analyzed in this chapter.

This Impact Overview section outlines the issues analyzed in this chapter, describes the overall approach to the impact analysis, explains the significance determinations and terminology used in the impact analysis, and provides the basis for the cumulative impact analysis.

5.1.1 Scope of Analysis, Issues Scoped Out in the Initial Study

The Initial Study (see Appendix NOP-IS) for the proposed project at Blocks 29–32 was prepared in accordance with the CEQA Guidelines Section 15063, which provides for preparation of an initial study to determine if a project may have a significant effect on the environment. The Initial Study determined that the following topics were adequately analyzed in the Mission Bay FSEIR such that the proposed project would have no new significant impacts or no substantially more severe significant impacts than those previously found significant on these resources: Land Use; Population and Housing; Cultural and Paleontological Resources; Recreation; Air Quality (odors); Utilities and Services Systems (water supply and solid waste); Public Services (schools, parks, and other services); Biological Resources; Geology and Soils; Hydrology and Water Quality (construction water quality, groundwater, drainage, flooding, and inundation); Hazards and Hazardous Materials; Mineral and Energy Resources; and Agricultural and Forest Resources.¹ In

¹ As described in Chapter 2, Introduction, and in the Initial Study, impacts related to Aesthetics are not analyzed in the Initial Study or this SEIR because under CEQA (Public Resources Code Section 21099), aesthetics impacts of a mixed-use or employment center project on an infill site located within a transit priority area are not to be considered significant impacts, and therefore, no impact analysis is required.

some cases, the Initial Study identified mitigation measures in these topic areas that would reduce potentially significant impacts to a less-than-significant level to support the determination that under these resource areas, the proposed project would have no new significant impacts or no substantially more severe significant impacts than those previously identified in the Mission Bay FSEIR. Therefore, none of the topics addressed in the Initial Study are analyzed in this chapter of the SEIR.

Chapter 5 is organized as follows and focuses on the environmental resource topics listed below:

- Section 5.1, Impact Overview
- Section 5.2, Transportation and Circulation
- Section 5.3, Noise and Vibration
- Section 5.4, Air Quality (air quality planning, criteria pollutant emissions, and health risk)
- Section 5.5, Greenhouse Gas Emissions
- Section 5.6, Wind and Shadow
- Section 5.7, Utilities and Service Systems (wastewater and stormwater systems)
- Section 5.8, Public Services (police and fire services)
- Section 5.9, Hydrology and Water Quality (wastewater, stormwater, and sea level rise).

5.1.2 Overall Approach to Impact Analysis

The impact analysis for all resource topics is based on the detailed, project-specific information presented in Chapter 3, Project Description. In general, the impact analysis is divided into two main groups: construction-related impacts and operational impacts. The first group covers impacts attributable to construction-related activities, all of which would be confined within the duration of the construction period; the second group, operational impacts, covers the long-term effects associated with the full use of the project structures and features following completion of construction. Further breakdown under these main groups varies for each resource topic, with the intent of focusing the impact analysis on those aspects of the project that would result in adverse physical effects on the environment.

As described in Chapter 2, Introduction, this SEIR is a project-level EIR that is tiered from a previously certified program-level EIR, namely the Mission Bay FSEIR. As a project-level EIR and consistent with CEQA Guidelines Section 15125(a), the impact analysis is generally based on potential physical effects of the project compared to existing or baseline conditions of the physical environment at the project site at the time of publication of the Notice of Preparation (NOP), which was in November 2014. In a few instances, the baseline conditions are extended to acknowledge projects or activities that were in progress at the time of publication of the NOP but expected to be completed prior to the scheduled start date of the proposed project. For example, the baseline conditions for the project setting assumes the operation of Phase 1 of the UCSF Medical Center at Mission Bay, which opened on February 1, 2015.

As required for a project-level EIR, the impact analysis addresses construction and operation of the proposed development at Mission Bay Blocks 29–32, and none of the other aspects of the Mission

Bay South Redevelopment program. For example, although development of the project site would trigger realignment of Terry A. Francois Boulevard as well as construction of Bayfront Park east of the project site, this chapter does not analyze the construction- or operational-related environmental effects of the street realignment or the park development (other than with respect to cumulative construction impacts) because the environmental impacts of these activities were analyzed in the Mission Bay FSEIR.

As a Subsequent EIR (SEIR) to the Mission Bay FSEIR certified in 1998, this SEIR identifies and considers all mitigation measures that were identified in the 1998 Mission Bay FSEIR and determines their applicability to the currently proposed project. In some cases, mitigation measures have already been implemented, either in their entirety or in part, in which case those measures are considered part of the existing conditions. Otherwise, the impact analysis in this SEIR does not assume that mitigation measures from the Mission Bay FSEIR would be implemented as part of the proposed project. Instead, the SEIR impact analysis determines if the mitigation measures from the Mission Bay FSEIR would apply to the proposed project and would still be considered appropriate, in which case those Mission Bay FSEIR mitigation measures are re-iterated as project-level mitigation measures for the proposed project. Appendix MIT of this SEIR lists all of the mitigation measures from the Mission Bay FSEIR and indicates which measures are applicable to the proposed project.

In addition, because this SEIR is also a subsequent EIR to the Mission Bay FSEIR, the impact analysis also considers: whether the proposed project includes substantial changes from what was analyzed in the Mission Bay FSEIR; whether substantial changes have occurred with respect to the circumstances under which the project is undertaken compared to what was assumed in the Mission Bay FSEIR; or whether new information of substantial importance, which was not known and could not have been known at the time of certification of the Mission Bay FSEIR, would affect the impact analysis. Thus, the project impacts are also analyzed with regard to the potential for the proposed project to contribute to *new* significant impacts or substantially *more severe* significant impacts than those identified as significant in the Mission Bay FSEIR.

5.1.3 Organization of the Impact Analyses

Each topical section of this chapter is organized with the following elements:

- **Introduction.** This subsection summarizes the applicable topic analysis and its relevance to the proposed project.
- **Summary of Mission Bay FSEIR Section.** This section summarizes how the topic was addressed in the Mission Bay FSEIR as it related to Blocks 29-32, including identifying any applicable mitigation measures from the Mission Bay FSEIR and conclusions reached regarding significance of effects.
- **Setting.** This subsection describes the existing physical environmental conditions or the baseline condition in the project area with respect to each resource topic at an appropriate level of detail to allow the reader to understand the impact analysis.

- **Regulatory Framework.** This subsection, where applicable, describes the relevant laws and regulations that apply to protecting the environmental resources within the project area and the governmental agencies responsible for enforcing those laws and regulations.
- **Impacts and Mitigation Measures.** This subsection evaluates the potential for the proposed project to result in adverse effects on the physical environment described in the setting. It identifies the significance of each impact (see definitions below) based on topic-specific significance criteria and thresholds. For impacts determined to be significant, the impact analysis identifies feasible mitigation measures that would avoid or reduce the severity of the identified impact. The analysis describes all mitigation measures applicable to the proposed project, whether they are the same as those specified in the Mission Bay FSEIR, are updated measures, or new mitigation measures. The project sponsor— GSW Arena LLC (GSW)—has reviewed the identified mitigation measures and has agreed to implement them if the project is approved.

In some cases, when an impact is determined to be less than significant, the analysis identifies *improvement* measures. Similar to mitigation measures, improvement measures would reduce the severity of identified impacts. Unlike mitigation measures, however, improvement measures are not required under CEQA, but this SEIR identifies improvement measures as feasible ways to ameliorate less-than-significant impacts. All improvement measures identified in this SEIR would be incorporated into conditions of project approval by OCII (see Chapter 3, Project Description, Approvals Required), and the project sponsor has agreed to implement them if the project is approved.

The Impacts and Mitigation Measures subsection is further subdivided into the following:

- ***Significance Thresholds*** for evaluating the environmental impacts are defined at the beginning of each impact analysis section and are specific to each environmental resource topic. The impact significance criteria used in this SEIR are based on San Francisco Planning Department protocol and CEQA Guidelines Appendix G. Significance criteria used in the Initial Study to focus out certain issues are not included; but the reader is referred to the Initial Study in Appendix NOP-IS for those criteria and associated impact analyses.
- ***Approach to Analysis*** describes the general approach and methodology used to apply the significance thresholds in evaluating the impacts of the project. The methodology for applying significance thresholds provides the basis for the impact analysis, which could be either qualitative or quantitative, depending on the specific impact. The methodology identifies use of applicable regulatory guidelines, thresholds, standards, or accepted professional practices or protocols used to assess the nature and severity of environmental impacts. This section also explains the approach to the analysis of cumulative impacts under this impact section.
- ***Impact Evaluation*** presents the project-specific analyses of impacts of the proposed project, with specific impact areas discussed under individually numbered impact statements. Each of the numbered impact statements is followed by a discussion and analysis of the various components of the proposed project with potential for physical environmental effects. The conclusion of each impact analysis is expressed in terms of the impact significance, which is discussed below. For significant or potentially significant impacts, the impact discussion identifies feasible mitigation measures, numbered corresponding to the impact number. In some cases, for impacts determined

to be less than significant, *improvement* measures are recommended to reduce or avoid impacts. Unlike mitigation measures, implementation of improvement measures is not required under CEQA because they only apply to impacts determined to be less than significant. However, as stated above, all improvement measures identified in this SEIR would be incorporated into conditions of approval if the project is approved. The numbering of the mitigation and improvement measures corresponds with the number of the impact statement to which the measure applies, with a prefix of "M" or "I" for mitigation and improvement measures, respectively.

Following the impact evaluation, there is a qualitative comparison of the impact conclusions in this SEIR with the comparable impact conclusion from the Mission Bay FSEIR.

- ***Cumulative Impacts*** considers the effects of the proposed project together with potential effects of other past, present, or reasonably foreseeable future projects within the same geographic scope as the project's impacts. The analysis of cumulative impacts under each resource topic is based on the same setting, regulatory framework, and significance thresholds as the direct impacts. Additional mitigation measures are identified if the analysis determines that the project's contribution to a cumulative, adverse impact would be considerable (i.e., significant). The overall assumptions to the cumulative impact analysis for all topics are described in Section 5.1.5, below.

5.1.4 Significance Determinations

One of the main purposes of an EIR is to identify the *significant* effects on the environment of a project and to indicate the manner in which those significant effects can be mitigated or avoided.² Mitigation measures are not required for effects that are not found to be significant.³ As defined by CEQA Guidelines section 15382, "significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including the land, air, water, or ambient noise at or near the project site. The significance criteria and thresholds identified under each resource topic, based on San Francisco Planning Department protocol and CEQA Guidelines Appendix G, are used to determine whether or not an effect would be substantial or potentially substantial. In accordance with CEQA, an economic or social change by itself is not considered a significant effect on the environment, although a social or economic change related to a physical change may be considered in determining whether the physical change is significant.

The conclusion of each impact analysis provides a significance determination to indicate if mitigation measures are warranted. The categories used to designate impact significance are as follows:

- **No Impact (NI).** An impact is considered not applicable (no impact) if there is no potential for impacts, or if the environmental resource does not occur within the project area or the

² Public Resources Code section 21002.1(a)

³ California Code of Regulations section 15126.4(3)

area of potential effect. For example, there would be no impacts related to residential uses if there are no residential uses at or near the proposed project site.

- **Less-than-Significant Impact (LS).** This determination applies if there is a potential for some limited adverse impact, but not a substantial adverse effect that qualifies under the significance thresholds as significant. No mitigation is required for impacts determined to be LS.
- **Less-than-Significant Impact with Mitigation (LSM).** This determination applies if the project would or could result in a significant or potentially significant adverse effect when evaluated with respect to one or more significance thresholds, but feasible mitigation is available that would effectively reduce the impact to a less-than-significant level.
- **Significant Unavoidable Impact with Mitigation (SUM).** This determination applies if the project would result in a significant adverse effect when evaluated with respect to one or more significance thresholds, and there is feasible mitigation that could reduce the severity of the impact. However, for any of a number of reasons, the mitigation would not reduce the impact to a less-than-significant level, so the impact is considered significant and unavoidable even with mitigation. For example, there might be a feasible mitigation measure that would lessen the severity of an impact, but the residual effect after implementation of the measure would remain above the significance threshold. Another example would be a feasible mitigation measure with an unknown level of effectiveness.
- **Significant Unavoidable Impact (SU).** This determination applies if the project would result in a significant adverse effect when evaluated with respect to one or more significance thresholds, but no feasible mitigation is available, or implementation of the mitigation measure is not within the control of the project sponsor. Therefore, the impact is considered significant and unavoidable.

5.1.5 Approach to Cumulative Impact Analysis

5.1.5.1 CEQA Requirements for Cumulative Impact Analysis

Cumulative impacts, as defined in Section 15355 of the CEQA Guidelines, refer to two or more individual effects that, when taken together, are “considerable” or that compound or increase other environmental impacts. A cumulative impact from several projects is the change in the environment that would result from the incremental impact of the project added to the impacts of other closely related past, present, or reasonably foreseeable future projects. Pertinent guidance for cumulative impact analysis is provided in Section 15130 of the CEQA Guidelines:

- An EIR shall discuss cumulative impacts of a project when the project’s incremental effect is “cumulatively considerable” (e.g., the incremental effects of an individual project are considerable when viewed in connection with the effects of past, current, and probable future projects, including those outside the control of the lead agency, if necessary).
- An EIR should not discuss impacts that do not result in part from the project evaluated in the EIR.

- A project's contribution is less than cumulatively considerable, and thus not significant, if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact.
- The discussion of impact severity and likelihood of occurrence need not be as detailed as for effects attributable to the project alone.
- The focus of analysis should be on the cumulative impact to which the identified other projects contribute, rather than on attributes of the other projects that do not contribute to the cumulative impact.

The cumulative impact analysis for each individual resource topic is described in each subsection of this chapter, immediately following the description of the direct project impacts and identified mitigation measures. Cumulative impacts are numbered sequentially, starting with the number '1' and preceded by "C-" (such as "Impact C-TR-1" for the first cumulative transportation impact).

Similar to the project impacts, cumulative impacts are also analyzed with regard to the potential for the proposed project to contribute to *new* significant cumulative impacts or substantially *more severe* cumulative impacts than those identified as significant in the Mission Bay FSEIR. The Mission Bay FSEIR used the year 2015 for the analysis of the full buildout of the Mission Bay Redevelopment Plan as well as for the cumulative impacts analysis, and cumulative impacts were assessed on the basis of regional population and employment projections for the year 2015 as determined by the Association of Bay Area Governments.

Two approaches to a cumulative impact analysis are provided in CEQA Guidelines Section 15130(b)(1): (a) the analysis can be based on a list of past, present, and probable future projects producing related or cumulative impacts; or (b) a summary of projections contained in a general plan or related planning document can be used to determine cumulative impacts. The projections model includes individual projects and applies a quantitative growth factor to account for other growth that may occur in the area.

The analyses in this SEIR employ both the list-based approach and a projections-based approach, depending on which approach best suits the individual resource topic being analyzed. For instance, the Wind analysis considers individual projects that are anticipated in the project site vicinity that may alter wind conditions in public spaces. By comparison, the Transportation and Circulation analysis relies on a citywide growth projection model that also encompasses many individual projects anticipated in and surrounding the project site vicinity, which is the typical methodology the San Francisco Planning Department applies to analysis of transportation impacts.

For the list-based approach, projects or plans that are relevant to the cumulative analysis include those that could contribute incremental effects on the same environmental resources and would have similar environmental impacts as those discussed in this SEIR. The following factors were used to determine an appropriate list of projects to be considered in the near-term cumulative impact analysis:

- **Similar Environmental Impacts.** A relevant project contributes to effects on resources that are also affected by the proposed project. A relevant future project or plan is defined as one that is “reasonably foreseeable,” such as a proposed project for which an application has been filed with the approving agency or has approved funding, or an approved plan that amended the land use controls applicable to an adjacent neighborhood.
- **Geographic Scope and Location.** A relevant project is located within the defined geographic scope for the cumulative effect.
- **Timing and Duration of Implementation.** Effects associated with activities for a relevant project (e.g., short-term construction or demolition, or long-term operations) would likely coincide in timing with the effects of the proposed project.

5.1.5.2 Cumulative Projects for Operational Impacts

For topics using the list approach, in addition to those projects considered in the Mission Bay FSEIR cumulative analysis, the projects/programs listed below were not anticipated in the Mission Bay FSEIR and are considered in the cumulative analysis for operational impacts in this SEIR.

- **University of California at San Francisco (UCSF), 2014 Long Range Development Plan (LRDP), Mission Bay Campus.** UCSF recently updated its LRDP to guide future campus growth and development over the next 20 years. The 2014 LRDP updates information that was assumed in the Mission Bay FSEIR. The existing 60.2-acre UCSF Mission Bay campus site is located adjacent to Blocks 29-32, generally bounded by Mission Bay Boulevard South to the north, Owens Street to the west, Mariposa Street to the south, and Illinois and Third Streets to the east. Under the 2014 LRDP, the development capacity for the North Campus (see Figure 3-3, UCSF areas north of 16th Street) increases from 2,650,000 to 3,641,800 gsf. The 2014 LRDP would increase the square footage of the North Campus by 1,450,300 gsf, which includes 458,500 gsf of existing remaining entitlement from the 1996 LRDP, plus 991,800 gsf of new entitlement. On the South Campus (see Figure 3-3, UCSF areas south of 16th Street and west of Third Street), construction of a 170,000-gsf cancer outpatient building is anticipated by 2019, which will complete Phase 1 of the UCSF Medical Center at Mission Bay. This will bring the total space for Phase 1 to 993,500 gsf. Phase 2 facilities will be located on the west side of the South Campus, across the Fourth Street Public Plaza. Phase 2 of the Medical Center at Mission Bay is planned for after 2035 as a 261-bed hospital with additional outpatient space, totaling 793,500 gsf. Development of the East Campus (see Figure 3-3, UCSF areas east of Third Street) would accommodate 500,000 gsf. As a result, the total anticipated development through 2035 with the proposed expansion of the Mission Bay campus site (North, South, and East campuses) would be 5,928,800 gsf. The Board of Regents of the University of California certified the Final EIR on the UCSF LRDP in November 2014.
- **Eastern Neighborhoods Program.** The Eastern Neighborhoods Program included changes in zoning controls and General Plan amendments for an approximately 2,200-acre area on the eastern side of the City. It is intended to encourage new housing while preserving sufficient land for light industrial and service industry (referred to collectively as “Production, Distribution, and Repair,” or “PDR,” uses) in four neighborhoods: the Mission, Showplace Square/Potrero Hill, the Central Waterfront, and the eastern portion of the South of Market (“East SoMa”). In conjunction with the rezoning, the General Plan was amended to include Area Plans for the neighborhoods (including revisions to the existing Central Waterfront and

South of Market Area Plans). A key goal of the rezoning process was to encourage the creation of cohesive neighborhoods, particularly where new housing is being encouraged. The plans also propose public benefits and other implementation programs, particularly the creation of affordable housing. The program introduced new zoning districts, including districts that permit at least some PDR uses in combination with commercial uses, districts mixing residential and commercial uses, and areas where only PDR uses would be permitted, with residential use prohibited to alleviate development pressure on PDR uses. The Showplace Square/Potrero Hill Area Plan is located immediately to the west of the Mission Bay Plan (across Interstate 280), the Central Waterfront Area Plan is located immediately to the south of the Mission Bay plan area (south of Mariposa Street), and the East SoMa Area Plan is located immediately to the north (across China Basin and east of Fourth Street). The Final EIR on the Eastern Neighborhoods Program was certified in August 2008. Projects pursuant to the Eastern Neighborhoods Program are currently under construction, including several residential and mixed-used developments south of Mariposa Street.

- **Seawall Lot 337 and Pier 48 Mixed-Use Project (Mission Rock).** This possible future project is located about one-third of a mile north of Blocks 29-32 adjacent to the northeast side of the Mission Bay South Plan area. The project would include a mixed-use, multi-phase waterfront development on Seawall Lot 337, rehabilitation and reuse of Pier 48, and construction of approximately 5.4 acres of net new open space, for a total of 8 acres of open space on the site. Overall, the project would involve construction of up to approximately 3.7 million gsf of residential, commercial, and retail uses, and a public parking garage on the project site. Both Seawall Lot 337 and Pier 48 are owned by the Port of San Francisco. This project is currently in the environmental review phase.
- **Pier 70 Mixed-Use Development:** This possible future project is located less than a half mile south of Blocks 29-32, on 35 acres located south of 20th Street and east of Illinois Street. This project includes up to approximately 3,040,000 gsf (excluding parking) of above-grade construction in new buildings, and improvements to historic buildings. The project allows for a flexible land use program, including a maximum residential-use and maximum commercial-use scenarios for the Pier 70 Special Use District. Option 1 - maximum residential scenario, would consist of approximately 2,000 dwelling units within 1,605,000 gsf, including up to 904,000 gsf of commercial and office space, plus up to 365,700 gsf of manufacturing, local retail, creative uses and arts that is designated as an "Innovative Industries Zone." Option 2 - maximum office scenario, would consist of approximately 1,052 dwelling units within approximately 903,616 gsf, including up to approximately 1,810,000 gsf of commercial and office space, plus up to 327,700 gsf of manufacturing, local retail, creative uses and arts that is designated as an "Innovative Industries Zone." This project is currently in the environmental review phase.
- **400-600 20th Street, Pier 70 (20th Street Historic Core):** This project is located along the northern and southern portions of 20th Street between Illinois and Louisiana Streets, about a half mile south of Blocks 29-32, within the greater Pier 70 area. The project site includes four parcels containing ten buildings, referred to as the "20th Street Historic Core." The 20th Street Historic Core currently contains approximately 270,000 gsf of largely vacant industrial and office space. The project would include: 1) historic renovations to satisfy current seismic, structural, and code requirements; 2) remediation of hazardous materials; 3) reuse of the buildings as primarily light industrial and commercial uses; 4) the addition of approximately 69,000 gsf of new building space, primarily in interior mezzanines; 5) removal of approximately 5,000 gsf of previous additions to two of the buildings;

6) creation of an outdoor publically accessible plaza, and 7) roadway, sidewalk, and parking lot improvements. In total, the project would include approximately 334,000 gsf of existing and new building space. The Community Plan Exemption was published in May 2014, and the project has a 24-month construction schedule.

It should be noted that the reasonably foreseeable future projects are subject to independent environmental review and consideration by approving agencies. Consequently, it is possible that some of the projects will not be approved or will be modified prior to approval (e.g., as a result of the CEQA alternatives process). For the purposes of assessing worst-case cumulative impacts, however, the cumulative impact analysis assumes approval and construction of the identified projects.

5.1.5.3 Cumulative Construction Projects

The cumulative impact analysis also considers the combined effects of multiple construction projects occurring within the project vicinity during the same timeframe as the proposed construction schedule. Even though all of these projects were considered in the overall impact analysis in the Mission Bay FSEIR, the specific timing and location of construction of individual developments were unknown at that time. They are included in this SEIR only as part of the project-level impact analysis of the proposed project with respect to the potential to contribute to cumulative construction-related impacts. Construction projects in the vicinity of Blocks 29-32 anticipated to occur between 2015 and 2017 include the following (see Chapter 3, Figure 3-3 for location of Mission Bay block numbers):

- **Uber/ARE Project, Mission Bay Blocks 26/27.** Located directly north of the project site across South Street, this project consists of 423,000 gsf of office space. Construction is estimated to start by the end of 2015, and continue for 18 to 24 months.
- **UCSF Research Building, Block 23A.** Located directly west of the project site across Third Street, this project consists of about 307,000 gsf and is expected to be under construction before 2017.
- **Cancer Outpatient Building on Medical Center site.** Located at the southwest corner of Third and 16th Street, directly kitty corner from the project site, this project consists of about 170,000 gsf and is expected to be under construction before 2017.
- **UCSF East Campus, Blocks 33/34.** Located directly south of the project site across 16th Street, the project consists of 500,000 gsf of office space. The project will be built in two phases, with the first phase on Block 33, about 340,000 gsf, to begin construction in 2016 and continue for about 18 to 24 months. Block 34 construction would occur in the 2020 to 2025 timeframe.
- **Realignment of Terry A Francois Boulevard and Mission Bay Park P22.** P22 is located directly east of the project site, across from the realigned Terry A. Francois Boulevard, and construction of both is estimated to be completed by 2018. It is likely that Terry A. Francois Boulevard will need to be constructed first, requiring about 12 months, followed by 12 months for construction of Bayfront Park at P22.

- **Mission Bay Parks, Blocks P23, and P24.** P23, directly south of the project site across 16th Street, and P24, about 750 feet south of the project site, are planned to begin construction in 2015 with preliminary work underway for some of the stormwater infrastructure within the park. Construction should be completed by the end of 2016.
- **The Exchange, Mission Bay Block 40.** Located approximately 1,200 feet southwest of the project site, the project consists of 664,000 gsf of office and 15,000 gsf of retail. Construction is estimated to start by late summer/fall 2015 and continue for 18 to 24 months.
- **Family House, Block 7 East.** Located approximately 1,300 feet northwest of the project site, the project consists of 80 guest suites for families receiving treatment at UCSF and other San Francisco medical facilities. Construction is currently underway and is expected to continue after November 2015.
- **Affordable Housing, Blocks 3, 6 and 7.** Located approximately 1,700, 1,300, and 1,000 feet, respectively, northwest of the project site, the Blocks 3, 6 and 7 project consists of 958 affordable housing units. Block 7 West is expected to start construction in summer 2015, Block 6 east to start construction in 2016, and Block 3 East starting late 2016/early 2017.
- **Block 1, Residential and Hotel Sites.** Located approximately 2,400 feet northwest of the project site, the project consists of 350 market rate units, 25,000 leasable square feet of retail, and a 250-room hotel. Construction is anticipated to start in 2015 and continue for about 18 to 24 months.
- **Block N4P3, 360 Berry Street.** About 3,000 feet north west of the project site, construction of 129 residential units at this site is expected to start in 2015 and continue for about 18 to 24 months.

5.1.6 Impacts of Mitigation Measures

CEQA Guidelines Section 15126.4 states that “if a mitigation measure would cause one or more significant effect in addition to those that would be caused by the project as proposed, the effects of the mitigation measure shall be discussed but in less detail than the significant effects of the project as proposed.”

Chapter 5 identifies mitigation measures for all potentially significant and significant impacts where feasible. In most cases, implementation of the mitigation measure would reduce or avoid the magnitude, duration, and/or overall severity of the identified impact with no additional secondary effects. However, in a few cases, implementation of a mitigation measure could result in other environmental impacts in addition to those that would be caused by the project, and further explanation is provided to explain how the additional significant effects caused by the mitigation measure would or would not change the overall impact conclusion(s). In most cases, implementation of the full suite of project mitigation measures would reduce or avoid impacts of mitigation measures.

This page intentionally left blank

5.2 Transportation and Circulation

5.2.1 Introduction

This section analyzes the potential project-level and cumulative impacts on transportation and circulation during construction and operation of the proposed project. Transportation-related issues of study include transit, vehicle traffic on local and regional roadways, bicycles, pedestrians, loading, emergency vehicle access, parking, and construction-related transportation activities. This section provides a summary of the Mission Bay FSEIR transportation section, an overview of existing transportation conditions, a description of the applicable transportation regulations and policies, methodologies and assumptions used in the impact analysis, and impact assessment and mitigation measures. Information and analysis related to project impacts on UCSF helipad operations is presented in its entirety in Section 5.2.6, Project Impacts on UCSF Helipad Operations. Supporting detailed technical information is included in **Appendix TR**.

5.2.2 Summary of Mission Bay FSEIR Transportation Section

5.2.2.1 Mission Bay FSEIR Setting

The transportation and circulation setting section of the Mission Bay FSEIR provided information on the transportation facilities and system serving the Mission Bay North and South Redevelopment Plan areas at that time, using data collected in 1995 and 1996, and reflecting 1997 conditions. The transportation network included the system of local streets, ramps and freeways, local and regional bus and rail lines, ferry service, bicycle and pedestrian facilities, parking areas, and truck loading areas, and described the freeway and local circulation patterns in 1997, as they had changed substantially in the SoMa/Mission Bay area following the 1989 Loma Prieta earthquake.

5.2.2.2 Mission Bay FSEIR Impacts and Mitigation Measures

Transportation and circulation impacts assessed in the Mission Bay FSEIR included Mission Bay Blocks 29-32 as part of numerous other blocks analyzed in the Mission Bay South Redevelopment Plan. The Mission Bay FSEIR identified 28 transportation mitigation measures that were also included in the Plan's project description and assumed in the impact analysis (FSEIR Mitigation Measures E.1 through E.28). These measures included transportation infrastructure improvements, including new or upgraded traffic signals and/or lane reconfigurations at 20 study intersections, construction of six new street segments, and rerouting of the 22 Fillmore and 30 Stockton or 45 Union-Stockton Muni bus routes into the Mission Bay South Plan area.

The transportation impact analysis identified significant traffic impacts at 11 of the 41 study intersections for the overall Plan area. Traffic impacts were identified as less than significant with mitigation at four intersections (Brannan/Seventh, Townsend/Seventh, Townsend/Eight, 16th/Vermont), and as significant and unavoidable traffic impacts at seven intersections adjacent to I-80 freeway ramps (Brannan/Sixth/I-280 ramps, Bryant/Second, Bryant/Fifth/I-80 eastbound on-ramp, Harrison/First, Harrison/Second, Harrison/Fremont/I-80 westbound off-ramp, and

Harrison/Essex). The Mission Bay FSEIR found the impacts related to regional and local transit capacity utilization, pedestrians and bicycle circulation, loading conditions, rail, and transportation-related construction impacts to be less than significant.

The cumulative impact analysis addressed future year 2015 plus project conditions (2015 being assumed as the project build-out year), and indicated that 17 of the 41 study intersections would operate at LOS E or LOS F conditions. In addition, cumulative development would result in a lengthening of the p.m. peak commute period, and the Mission Bay project would contribute considerably to this cumulative impact. The additional project-related transit trips were found to result in a significant contribution to cumulative impacts on Alameda-Contra Costa Transit District (AC Transit), on the Northeast screenline of the Muni downtown screenlines¹, and on light rail service on King Street and on The Embarcadero. The Mission Bay FSEIR found cumulative impacts related to pedestrian and bicycle circulation, loading conditions, rail, and transportation-related construction impacts to be less than significant.

The Mission Bay FSEIR identified 22 additional mitigation measures beyond those incorporated into the project description (i.e., FSEIR Mitigation Measures E.29 through E.50). These measures included ten additional intersection improvements and improvements on four street segments (FSEIR Mitigation Measure E.29 through E.42), encouraging increasing Bay Bridge tolls for single-occupant vehicles during commute hours (FSEIR Mitigation Measure E.43), encouraging AC Transit to expand service to downtown San Francisco (FSEIR Mitigation Measure E.44), and providing additional light rail capacity to serve the Mariposa Street stop from downtown (FSEIR Mitigation Measure E.45). In addition, five Transportation System Management measures were identified, including establishing a Transportation Management Organization (FSEIR Mitigation Measure E.46)², developing and implementing a Transportation System Management Plan (FSEIR Mitigation Measure E.47), constraining parking within the University of California San Francisco (UCSF) campus (FSEIR Mitigation Measure E.48), encouraging ferry service (FSEIR Mitigation Measure E.49), and providing flexible work hours/telecommuting (FSEIR Mitigation Measure E.50). FSEIR Mitigation Measures E.20, E.37, E.39, E.40 related to intersection improvements, and FSEIR Mitigation Measure E.48 related to constraining parking within the UCSF campus, were rejected by the Board of Supervisors and are not part of the 1998 Mission Bay Mitigation Monitoring and Reporting Program. The measures, their current status, and their applicability to the proposed project are described in **Appendix TR** and **Appendix MIT**.

At 10 of the 17 study intersections that would operate at LOS E or LOS F conditions, Mission Bay FSEIR Mitigation Measures E. 29 through E.42 were found to reduce the Plan-level cumulative impacts to less than significant levels. However, even with implementation of the transportation mitigation measures, the project traffic was found to contribute to significant cumulative impacts

¹ The concept of screenlines is used to describe the magnitude of travel to or from the greater downtown area, and to compare estimated transit ridership to available capacities. Screenlines are hypothetical lines that would be crossed by persons traveling between downtown and its vicinity (i.e. the Northeast, Northwest, Southeast, and Southwest screenlines) and other parts of San Francisco and the region (i.e., the East Bay, North Bay, and South Bay screenlines).

² The Mission Bay Transportation Management Association (Mission Bay TMA) is the non-profit organization that was formed to meet the requirements of the Mission Bay FSEIR Mitigation Measure E.46: Transportation Management Organization.

at seven intersections at or near freeway ramps (Brannan/Sixth/I-280 ramps, Bryant/Second, Bryant/Fifth/I-80 eastbound on-ramp, Harrison/First, Harrison/Second, Harrison/Fremont/I-80 Westbound Off-ramp, and Harrison/Essex), and on the Bay Bridge and its approaches during the p.m. peak hour. Mission Bay FSEIR Mitigation Measure E.44 to encourage AC Transit to expand service and Mission Bay FSEIR Mitigation Measure E.45 to provide additional T Third light rail to the Mariposa Street stop were found to reduce Plan-level cumulative transit impacts to less than significant levels.

5.2.3 Setting

5.2.3.1 Regional and Local Roadways

Regional Access

Interstate 280 (I-280) provides the primary regional access to the Mission Bay area from southwestern San Francisco, the Peninsula and the South Bay. I-280 has an interchange with U.S. 101 south of the Mission Bay. Nearby northbound and southbound on- and off-ramps are located at Mariposa Street (northbound off-ramp and southbound on-ramp) and at 18th Street (southbound off-ramp and northbound on-ramp). The northern terminus of I-280 is on King Street at Fifth Street.

Interstate 80 (I-80) and **U.S. Highway 101 (U.S. 101)** provide regional access to the Mission Bay area. U.S. 101 serves San Francisco and the Peninsula/South Bay, and extends north via the Golden Gate Bridge to the North Bay. Van Ness Avenue serves as U.S. 101 between Market Street and Lombard Street. I-80 connects San Francisco to the East Bay and points east via the San Francisco-Oakland Bay Bridge. U.S. 101 and I-80 merge west of the project site. Northbound access is provided via an off-ramp at Mariposa Street (at Vermont Street), on-ramps at Cesar Chavez Street, and on-ramps and off-ramps at Bryant and Harrison Streets.

Local Access

Terry A. Francois Boulevard is a two-way, north-south roadway to the east of Third Street, extending between Third Street and Mariposa Street (at Illinois Street). The roadway generally has two travel lanes each way, with on-street parking on both sides of the street. As part of the Mission Bay Plan, Terry A. Francois Boulevard will be realigned to the west to be adjacent to the east side of Blocks 30 and 32, and a buffered two-way cycle track (Class II)³ will be provided as part of the San Francisco Bay Trail on the east side of the street. A bicycle lane (Class II facility) currently runs on each side of Terry A. Francois Boulevard between Illinois Street and Third Street.

³ Class I bikeways are bike paths with exclusive right-of-way for use by bicyclists. Class II bikeways are bike lanes striped within the paved areas of roadways and established for the preferential use of bicycles. Class III bikeways are signed bike routes that allow bicycles to share the travel lane with vehicles. A cycle track is a Class II bikeway, and is an exclusive bicycle facility that is separated from vehicle traffic and parked cars by a buffer zone. Cycle tracks offer safer and calmer cycling conditions for a much wider range of cyclists and cycling purposes, especially on street with greater traffic volumes traveling at relatively high speeds.

Bridgeview Way is a two-way, north-south public street, privately maintained, that extends between Mission Bay Boulevard South and South Street. The roadway has one travel lane each way with on-street parking on both sides of the street.

Illinois Street is a two-way, north-south roadway to the east of Third Street that extends between 16th Street and Cargo Way. The roadway primarily has one lane each way with on-street parking on both sides of the street. Bicycle Route 5 runs both ways along Illinois Street, with bicycle lanes between Cesar Chavez and 16th Streets (Class II).

Third Street is the principal north-south arterial in the southeast part of San Francisco, extending from its interchange with U.S. 101 and Bayshore Boulevard, to its intersection with Market Street. In the Mission Bay area, Third Street has two travel lanes each way. In the *San Francisco General Plan*, Third Street is designated as a Major Arterial in the Congestion Management Program (CMP) network, a Metropolitan Transportation System (MTS) Street, a Primary Transit Preferential Street (Transit Important Street between Market and Townsend Streets, and between Mission Rock Street and Bayshore Boulevard), a Citywide Pedestrian Network Street and Trail (between 24th Street and Yosemite Avenue), and a Neighborhood Commercial Pedestrian Street. South of China Basin, the T Third light rail operates in a semi-exclusive center median right-of-way, with the exception of the segment between Kirkwood Avenue and Thomas Avenue, where the light rail runs within a mixed-flow lane. Third Street between China Basin and Townsend Street is also part of Bicycle Route 536 (Class III).

Fourth Street is a principal north-south arterial between Market and Mariposa Streets. Between Market and King Streets, Fourth Street runs southbound and has four southbound travel lanes. From King Street to Berry Street, Fourth Street has two lanes each way. Between Berry and 16th Streets, Fourth Street is two-way and has one travel lanes each way. South of 16th Street, Fourth Street provides local access to the UCSF Medical Center; there is no through motor-vehicle access between 16th and Mariposa Streets. Fourth Street is classified as a Congestion Management Network Major Arterial and a part of the Metropolitan Transportation System. Fourth Street is designated as a Primary Transit Important Preferential Street; is a part of the Citywide Pedestrian Network from Market Street to Folsom Street; is part of the Bay Trail between King and Mission Streets; and is designated as a Neighborhood Commercial Pedestrian Street. The T Third Street light rail line runs northbound on Fourth Street within mixed-flow lanes between Channel and Berry Streets, and in a semi-exclusive center median right-of-way between Berry and King Streets. Fourth Street has bicycle lanes (Class II) both ways between Channel and 16th Streets.

Owens Street is currently a two-way north-south Local Street with one lane each way that extends between 16th Street and the Mission Bay Circle on the western edge of Mission Bay. On-street parking is prohibited on both sides of the street. Owens Street will be extended between 16th and Mariposa Streets and restriped to two lanes each way as part of the Mission Bay Plan.

Seventh Street is a north-south roadway that extends between Market and 16th Streets. In the vicinity of the Mission Bay area, Seventh Street has one lane each way; on-street parking is

provided on both sides of the street between Irwin and 16th Streets. Seventh Street has Class II bike lanes (Route 23) between Brannan and 16th Streets.

Mississippi Street is a north-south roadway that runs discontinuously between 16th/Seventh and Cesar Chavez Streets. In the vicinity of the Mission Bay area, Mississippi Street has one travel lane each way and on-street parking is provided on both sides of the street. Bicycle Route 23 runs on Mississippi Street (Class II) between 16th and Mariposa Streets.

King Street is a four-lane east-west roadway with a semi-exclusive center median for light rail operations. King Street connects the I-280 northern terminus on- and off-ramps at Fifth Street with The Embarcadero. Bicycle Route 5 (Class II and Class III) runs on King Street east of Third Street with a bicycle lane (Class II) on the north side of the street between The Embarcadero and Fourth Street, and on the south side of the street between Fourth and Fifth Streets. King Street is designated in the Transportation Element of the *San Francisco General Plan* as a Major Arterial in the CMP Network (between Second Street and Fourth Street), a MTS Street (between Second Street and Fourth Street), a Primary Transit Preferential Street (Transit Important Street), and a Neighborhood Pedestrian Network Connection Street. Muni lines N Judah and T Third operate along the median along King Street east of Fourth Street. Bicycle Route 5 (Class II and Class III) runs on King Street east of Third Street.

Channel Street is an east-west roadway that currently starts at Third Street and dead-ends west of Fourth Street. Channel Street has two travel lanes each way, and on-street parking is prohibited on both sides of the street between Third and Fourth Streets. West of Fourth Street, Channel Street has one lane each way and parking is permitted on both sides. The T Third Street light rail line operates in a semi-exclusive center median right-of-way on Channel Street between Third and Fourth Streets. Channel Street is planned to be extended to the Mission Bay Circle in the future as a two-lane roadway with on-street parking permitted on the north side, as part of the Mission Bay Plan.

Mission Rock Street is a two-lane east-west roadway that extends between Terry A. Francois Boulevard and Fourth Street. It has one travel lane each way; on-street parking is provided on both sides of the street.

Mission Bay Drive is a east-west roadway that runs between Mission Bay Circle and Seventh Street (under I-280 and across the Caltrain railroad tracks). Two travel lanes and a bicycle lane (Class II) are provided each way, separated by a landscaped median. On-street parking is prohibited on both sides of the street.

South Street is an east-west roadway that runs for two blocks between Third Street and Terry A. Francois Boulevard. Two travel lanes are currently provided each way, and on-street parking is prohibited on both sides of the street. A sidewalk is not currently provided on the south side of the street (i.e., adjacent to the undeveloped project site blocks).

Sixteenth (16th) Street is an east-west arterial that runs between Illinois and Castro Streets. In the Mission Bay area, 16th Street has two travel lanes each way, and on-street parking is prohibited on both sides of the street; dedicated left turn lanes are provided at all intersections. Sixteenth

Street is classified as a Primary Transit Oriented Preferential Street between De Haro and Church Streets and a Neighborhood Commercial Pedestrian Street between Bryant and Church Streets. As part of the Mission Bay Plan, 16th Street will be extended east of Illinois Street to connect with Terry A. Francois Boulevard. Bicycle Route 40 runs between Illinois and Kansas Streets with bicycle lanes (Class II) on both sides of the street.

Part of the 22 Fillmore Transit Priority Project⁴ extends along 16th Street between Third and Church Street. In the segment between Third and Seventh Streets, side-running transit-only lanes will be implemented on 16th Street by converting a mixed-flow lane to a transit-only lane. West of Seventh Street, two options are still under consideration – either side-running or center-running transit-only lanes will be provided by converting a mixed-flow lane to a transit-only lane. The 22 Fillmore Transit Priority Project will also include corridor-wide transit network improvements such as transit bulbs, new traffic signals, pedestrian signals, sidewalk widening, and upgrading of the bicycle infrastructure on 17th Street between Church and Seventh Streets to provide a parallel, contiguous, and safe bicycle route for traveling in the east-west direction. The implementation of the side-running transit-only lanes is assumed in the intersection analysis of 2015 conditions.

Mariposa Street is an east-west roadway that runs between Illinois and Harrison Streets. The I-280 northbound off-ramp and southbound on-ramp are located immediately east of the intersection of Mariposa/Pennsylvania. In the Mission Bay area, Mariposa Street currently has one to two lanes each way and on-street parking is provided on Mariposa Street west of Tennessee Street. Bicycle Routes 23 and 7 run both ways on Mariposa Street with sharrows (Class III) between Illinois and Mississippi Streets. Mariposa Street is planned to be widened in the future to a five-lane roadway (two-lanes each way with exclusive center left-turn lanes at major intersections) as part of the Mission Bay Plan.

The following roadway infrastructure improvements are being implemented by the Mission Bay Development Group (i.e., MBDG, the infrastructure master developer) as part of the opening of Phase One of the UCSF Medical Center at Mission Bay, consistent with the 1998 Mission Bay South Area Plan, and are assumed in the intersection analyses of 2015 conditions:

- Owens Street is being extended between 16th and Mariposa Streets, to connect with the I-280 on- and off-ramps and to create a new intersection at Mariposa Street. The existing

⁴ The 22 Fillmore Transit Priority Project is part of the TEP – Transit Effectiveness Project. The TEP included two alternatives for a Travel Time Reduction Proposal (TTRP) along 16th Street (of which one or a combination of the two could be implemented), to make the 22 Fillmore more frequent, reliable, and effective along 16th Street. The TTRP treatments are referred to as the Moderate and Expanded Alternatives. The Moderate Alternative includes a number of physical changes to the portion of the rerouted 22 Fillmore in the vicinity of Mission Bay, including, but not limited to, new transit stops, relocated transit stops, and transit bulbs, as well as new traffic signals. The Expanded Alternative includes most of the same features as the Moderate Alternative, as well as the conversion of a mixed-flow lane to a transit-only lane on both sides of 16th Street between Church and Third Streets, as well as the prohibition of left turns at Bryant, Potrero, Utah, San Bruno, Kansas, Rhode Island, De Haro, Carolina, Wisconsin, Arkansas, Connecticut, and Missouri Streets. The 22 Fillmore Transit Priority Project reflects a combination of the two proposals. (Available online at <http://www.sfmta.com/projects-planning/projects/tep-transit-effectiveness-project>. Accessed April 7, 2015.)

signal at the intersection of Mariposa Street and the I-280 northbound off-ramp is being upgraded to accommodate the new Owens Street approach.

- Mariposa Street is being widened on the north side by approximately 15 feet, and left turn lanes striped at major intersections. The Mariposa Street Bridge over the Caltrain tracks is being restriped to provide two exclusive westbound left turn lanes for a total of three lanes, and create a new signalized intersection with Owens Street.
- The northbound I-280 off-ramp is being widened to the east to provide an additional lane and better align with Owens Street. Mariposa Street between the I-280 southbound on-ramp and Pennsylvania Avenue is being re-striped to accommodate the lane configurations described above.
- The existing stop-controlled intersection of Mariposa Street and the I-280 southbound on-ramp (with the eastbound approach stop-controlled) is being signalized.
- The existing side-street stop-controlled intersection of Mariposa Street and Minnesota Street/Fourth Street is being signalized.

Intersection Operations

Existing conditions at 21 study intersections were analyzed for the following analysis hours:

- Weekday p.m. peak hour - generally 5:00 to 6:00 p.m. which coincides with the existing evening commute,
- Weekday evening peak hour - generally 6:00 to 7:00 p.m. which coincides with arrivals for weekday evening events,
- Weekday late p.m. peak hour - generally 10:00 to 11:00 p.m. which coincides with departures for weekday evening events, and
- Saturday evening peak hour – generally 7:00 to 8:00 p.m. which coincides with arrivals for Saturday evening events.

The 21 study intersections were selected either because they represent access points to the regional highway system (e.g., King Street, Cesar Chavez Street, freeway ramp touchdown locations), are located along major street corridors serving the Mission Bay Area (e.g., Third Street, Fourth Street, Seventh Street, 16th Street, Owens Street, Mariposa Street), or are located in the immediate vicinity of the project site (e.g., South Street, Terry A. Francois Boulevard, Illinois Street), and because they are the intersections most likely to be potentially impacted by traffic generated by the proposed project. In general, many of the same intersections were also evaluated as part of previous environmental studies that include the Mission Bay Area such as the Mission Bay SEIR (1998), UCSF Medical Center at Mission Bay EIR (2008), SFMTA Transit Effectiveness Project EIR (2014), and UCSF 2014 LRDP EIR (2014).⁵

⁵ Mission Bay SEIR A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 96.771E. The Final EIR for UCSF Medical Center at Mission Bay is available online at <http://campusplanning.ucsf.edu/physical/RFEIRHospital.php>. Final EIR for the 2014 UCSF Long Range Development Plan is available online at <http://www.ucsf.edu/content/lrdp-environmental-impact-report-downloads>.

Intersection traffic volume counts were conducted for conditions without and with a SF Giants evening game at AT&T Park. Transportation conditions with a SF Giants evening game at AT&T Park are presented in Section 5.2.3.8.

Intersection turning movement counts were collected at the study intersections on multiple midweek days (Tuesday, Wednesday, or Thursday) and on Saturdays in October, November, December 2013, June and July 2013, and May and June 2014, both with and without a San Francisco Giants (SF Giants) game at AT&T Park (on King Street, between Second and Third Streets). Existing turning movement volume summaries tables and figures are included in **Appendix TR**. Traffic volumes are highest during the weekday p.m. peak hour, and the weekday evening peak hour volumes are approximately 10 percent lower than the p.m. peak hour. The weekday late evening peak hour is about 40 percent of the weekday p.m. peak hour. Traffic volumes at the study intersections are about half as much on Saturdays as on weekdays.

During 2013 and 2014, when the intersection counts were being conducted, the UCSF Medical Center Phase 1 and Public Safety Building were under construction. Both facilities opened in early 2015. The vehicular travel demand associated with these uses was added to the counts conducted in 2013 and 2014 to reflect full occupancy and operation of these facilities. The travel demand associated with these uses was based on the travel demand for the weekday p.m. peak hour identified in the UCSF 2014 LRDP EIR, as well as information on existing weekday and Saturday parking occupancy (a proxy for level of activity at UCSF facilities) at other UCSF parking facilities in order to estimate the vehicle trips for the weekday evening, weekday late evening, and Saturday evening peak hours.⁶ Vehicle trips associated with the Public Safety Building were based on travel demand estimates conducted as part of that project.⁷ Thus, the travel demand for UCSF includes the UCSF facilities and the Public Safety Building in Mission Bay open by spring of 2015.

In addition, a portion of the UCSF Mission Bay campus traffic as well as existing traffic accessing the Mission Bay campus was rerouted as appropriate to use the new Owens Street extension between 16th and Mariposa streets. Furthermore, minor adjustments were made to the traffic counts to balance intersection inbound and outbound traffic flows between intersections, where necessary.

Weekday peak hour traffic volume counts were conducted during the p.m., evening and late evening peak hours at the intersections of Third/16th, Fourth/16th, and Fourth/Mariposa in April 2015, and compared to the corresponding 2013/2014 traffic volumes adjusted to reflect the UCSF Medical Center Phase 1 and Public Safety Building used in the intersection analysis. These spot-check counts were performed in order to confirm that the results of traffic analyses accurately predicted traffic volumes and patterns associated with these newly opened facilities. The April 2015 data indicated that the actual counts were similar to the adjusted 2013/2014 volumes, and no additional adjustments were made. In general, the adjusted volumes used in the analysis are

⁶ UCSF 2014 LRDP EIR Source; UCSF 2014 parking occupancy data for Parnassus and Mt Zion campus sites.

⁷ Mission Bay Public Safety Building Transportation Assessment-Final Report, prepared for the City and County of San Francisco Department of Public Works by Adavant Consulting January 6, 2010.

higher than those collected in the field in April 2015. Some counts collected in the field along Mariposa Street, as well as the turns in and out of the UCSF Medical Center via Fourth Street, were higher than those estimated for the analysis, but this is attributed to the fact that the main vehicular entrance to the UCSF Medical Center via the new extension of Owens Street between Mariposa Street and 16th Street has not yet been built (it is expected to open in the fall 2015), and current access to the facility is only via Fourth Street. Once the Owens Street extension is opened, most of the traffic accessing the Medical Center garage and parking lot will shift from Fourth Street to Owens Street, as it is a more direct and convenient route.

The roadway segments and intersection configurations for the study intersections reflect the build out of the roadway network within Mission Bay as development proceeds, such as the extension of Channel Street and Mission Bay Boulevard from the Mission Bay Circle to Fourth Street, and implementation of Mission Bay FSEIR mitigation measures that were adopted by the City as part of the Mission Bay Plan. These include Mission Bay FSEIR Mitigation Measures E.1 through E.18, E.21 through E.24, and partial implementation of Mission Bay FSEIR Mitigation Measure E.25 (Channel Street) and Mission Bay FSEIR Mitigation Measure E.26 (North and South Mission Bay Boulevard and Mission Bay Drive). In addition, Mission Bay FSEIR Mitigation Measures E.29 to E.34 and Mission Bay FSEIR Mitigation Measures E.36 to E.41 related to intersections and roadways have been implemented.

Traffic conditions at the study intersections were evaluated using level of service (LOS), and were evaluated using the *Highway Capacity Manual 2000 (HCM 2000)* methodology for signalized and unsignalized intersection conditions.⁸ Level of service is a qualitative description of operating conditions ranging from LOS A (i.e., free-flow conditions with little or no delay) to LOS F (i.e., jammed conditions with excessive delays). Section 5.2.5.3, under “Approach to Impact Analysis Methodology,” presents the analysis methodology and the LOS definitions for signalized and unsignalized intersections; it defines each of the levels of service and shows the correlation between average control delay and LOS.

Existing levels of service at the study intersections are presented in **Table 5.2-1** for the weekday p.m., weekday evening, weekday late evening, and the Saturday evening peak hours. **Figure 5.2-1** presents the existing LOS conditions at the study intersections for the weekday p.m. peak hour, **Figure 5.2-2** presents the intersection LOS conditions for the weekday evening peak hour, **Figure 5.2-3** presents the intersection LOS conditions for the weekday late evening peak hour, and **Figure 5.2-4** presents the intersection LOS conditions for the Saturday evening peak hour. The figures present the intersection LOS for a day without a SF Giants game at AT&T Park, and for a day with a SF Giants evening game at AT&T Park. A description of transportation conditions on days with a SF Giants evening game at AT&T Park is presented in Section 5.2.3.8.

⁸ Transportation Research Board, National Research Council, *Highway Capacity Manual*, Washington D.C., 2000.

**TABLE 5.2-1
 INTERSECTION LEVEL OF SERVICE
 EXISTING CONDITIONS – WITHOUT A SF GIANTS GAME
 WEEKDAY PM, EVENING, LATE EVENING, AND SATURDAY EVENING PEAK HOURS**

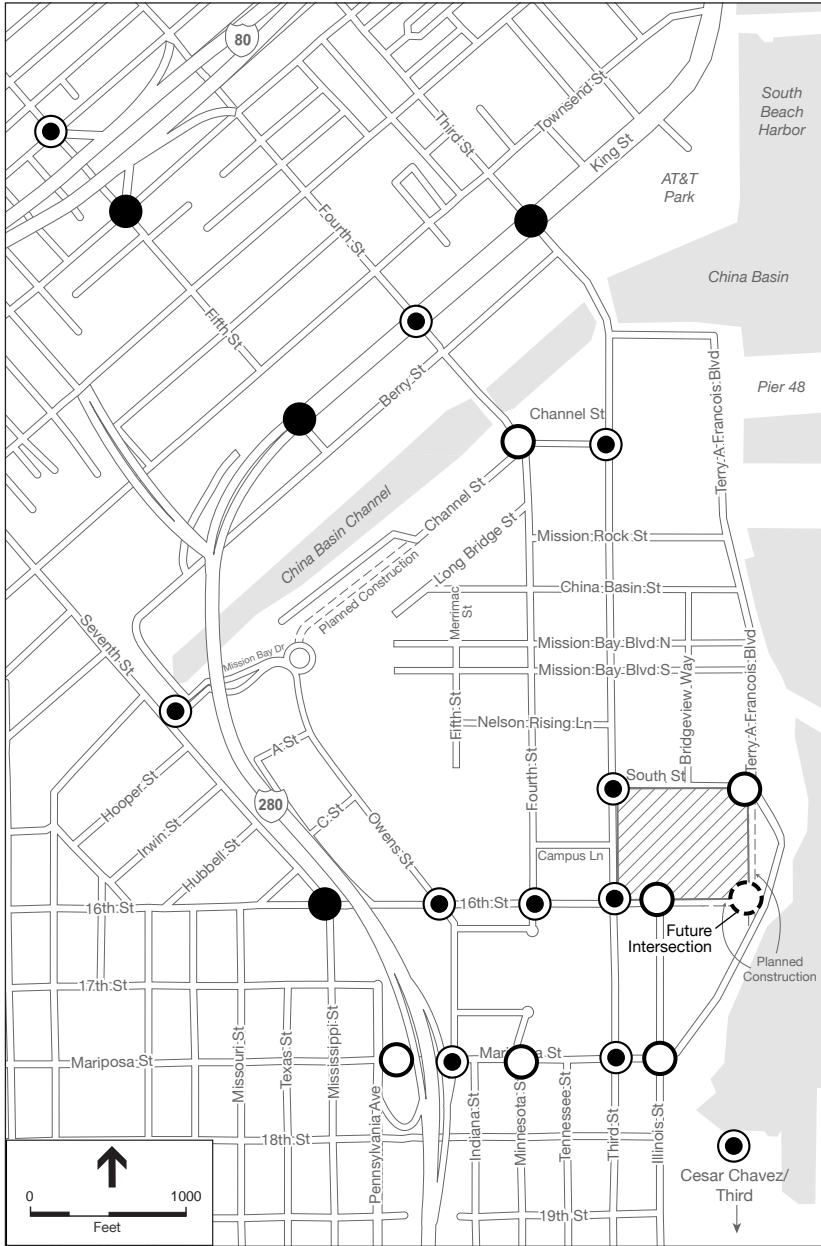
#	Intersection Location		Weekday Conditions						Saturday Evening ^d	
			PM ^a		Evening ^b		Late Evening ^c		Delay	LOS
			Delay ^e	LOS ^f	Delay	LOS	Delay	LOS		
1	King Street	Third Street	72.7	E	58.3	E	19.0	B	26.6	C
2	King Street	Fourth Street	51.9	D	47.9	D	24.1	C	22.6	C
3	King St/Fifth St	I-280 ramps	59.2	E	57.2	E	10.8	B	< 10	A
4	Fifth St/Harrison St	I-80 WB off-ramp	48.4	D	49.8	D	22.1	C	29.2	C
5	Fifth St/Bryant St	I-80 EB on-ramp	>80	F	>80	F	24.2	C	27.0	C
6	Third Street	Channel Street	38.0	D	33.1	C	< 10	A	< 10	A
7	Fourth Street	Channel Street	< 10	A	< 10	A	10.6	B	13.6	B
8	Seventh Street	Mission Bay Drive	23.1	C	19.5	B	12.0	B	12.4	B
9	Terry Francois Blvd	South Street ^g	10.8 (eb)	B	10.3 (eb)	B	< 10 (eb)	A	< 10 (eb)	A
10	Third Street	South Street	24.9	C	24.7	C	< 10	A	< 10	A
11	Terry Francois Blvd	16th Street ^h	--	--	--	--	--	--	--	--
12	Illinois Street	16th Street ^g	12.6 (nb)	B	< 10 (nb)	A	< 10 (nb)	A	< 10 (nb)	A
13	Third Street	16th Street ^j	29.3	C	27.8	C	10.6	B	10.7	B
14	Fourth Street	16th Street ^j	21.5	C	20.6	C	15.3	B	14.3	B
15	Owens Street	16th Street ^j	35.5	D	21.0	C	12.2	B	< 10	A
16	Seventh/Mississippi	16th Street ^j	68.6	E	60.1	E	15.9	B	18.4	B
17	Illinois Street	Mariposa Street ^g	10.6 (eb)	B	< 10 (eb)	A	< 10 (eb)	A	< 10 (eb)	A
18	Third Street	Mariposa Street	36.2	D	34.8	C	16.2	B	16.6	B
19	Fourth Street	Mariposa Street	13.2	B	10.8	B	< 10	A	< 10	A
20	Mariposa Street	I-280 NB off-ramp	25.8	C	20.0	B	15.9	B	16.1	B
21	Mariposa Street	I-280 SB on-ramp ⁱ	11.9	B	< 10	A	< 10	A	< 10	A
22	Third Street	Cesar Chavez St	43.0	D	32.9	C	21.1	C	18.4	B

NOTES:

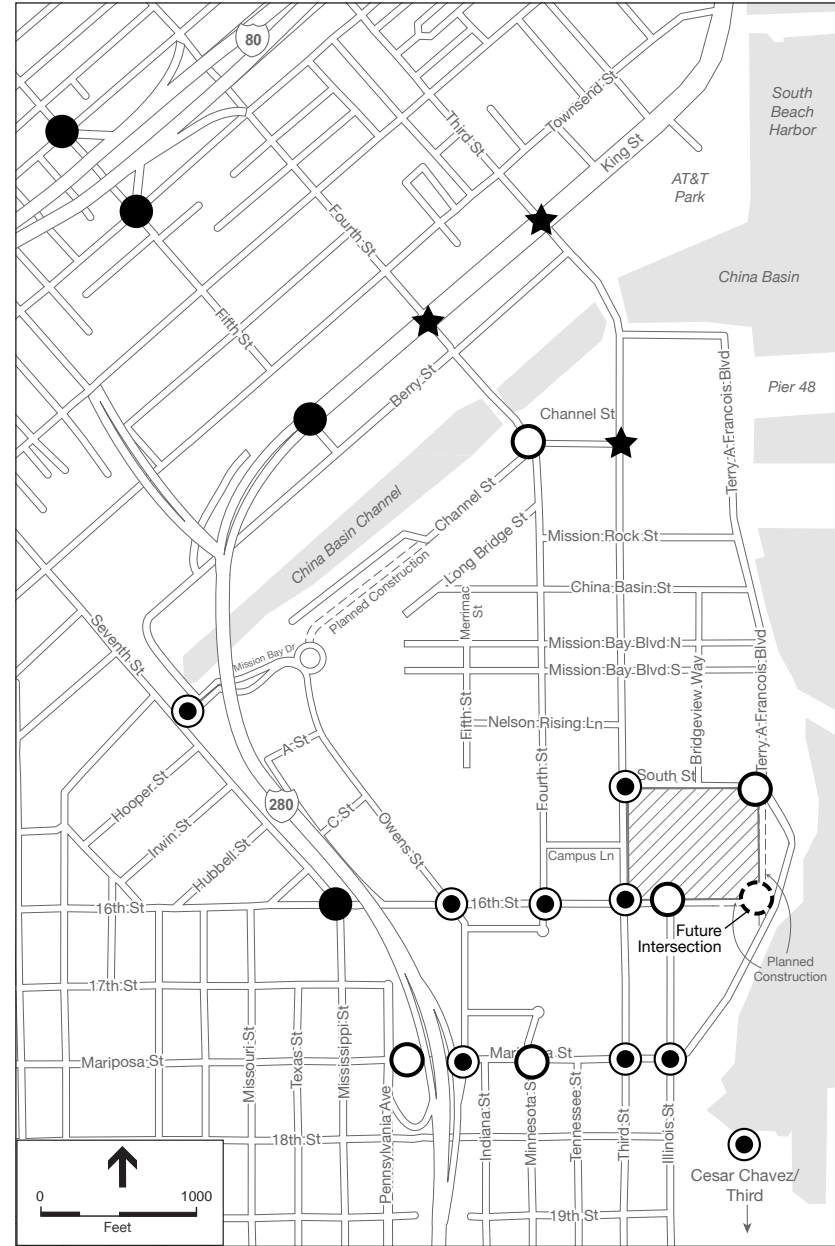
- a Weekday p.m. peak hour of 4 to 6 p.m. peak period.
- b Weekday evening peak hour of 6 to 8 p.m. peak period.
- c Weekday late evening peak hour of 9 to 11 p.m. peak period.
- d Saturday evening peak hour of 6 to 9 p.m. peak period.
- e Delay presented in seconds per vehicle. For unsignalized intersections, delay and LOS presented for worst approach. Worst approach indicated in ().
- f Intersections operating at LOS E or LOS F conditions highlighted in **bold**.
- g All-way stop-controlled or side-street stop-controlled intersection.
- h Future analysis location. 16th Street not currently a through street between Illinois Street and Terry A. Francois Boulevard.
- i The traffic signal at the intersection of Mariposa/I-280 southbound on-ramp is part of the roadway improvements on Mariposa Street between the I-280 northbound off-ramp and I-280 southbound on-ramp and the extension of Owens Street between 16th and Mariposa Streets, and is currently planned to be operational by fall 2015.
- j Assumes implementation of the 22 Fillmore Transit Priority Project, which includes converting one mixed-flow lane in each direction to a side-running transit-only lane.

SOURCE: Advant Consulting/LCW Consulting, 2015.

WITHOUT A SF GIANTS GAME



WITH A SF GIANTS EVENING GAME



Project Site Boundary
 LOS A-B
 LOS C-D
 LOS E-F
 ★ PCO Controlled

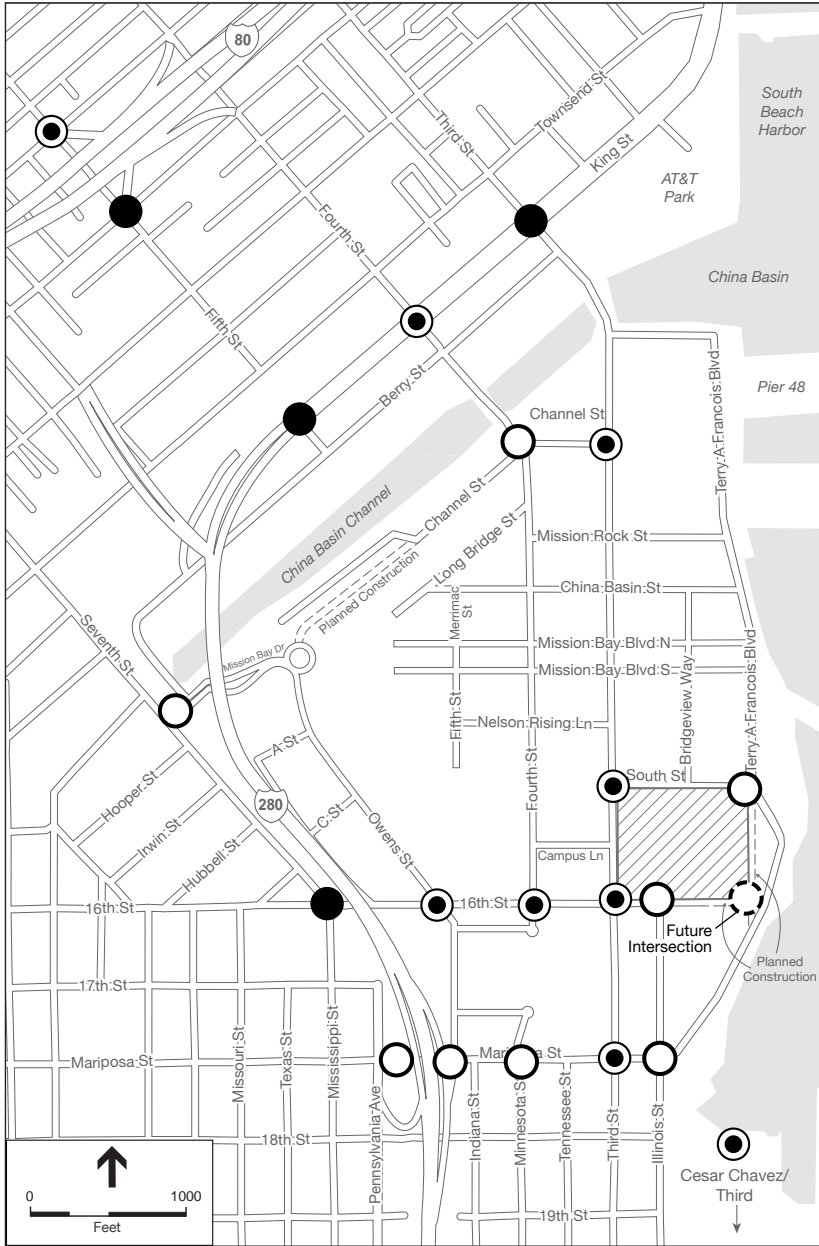
SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E: Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

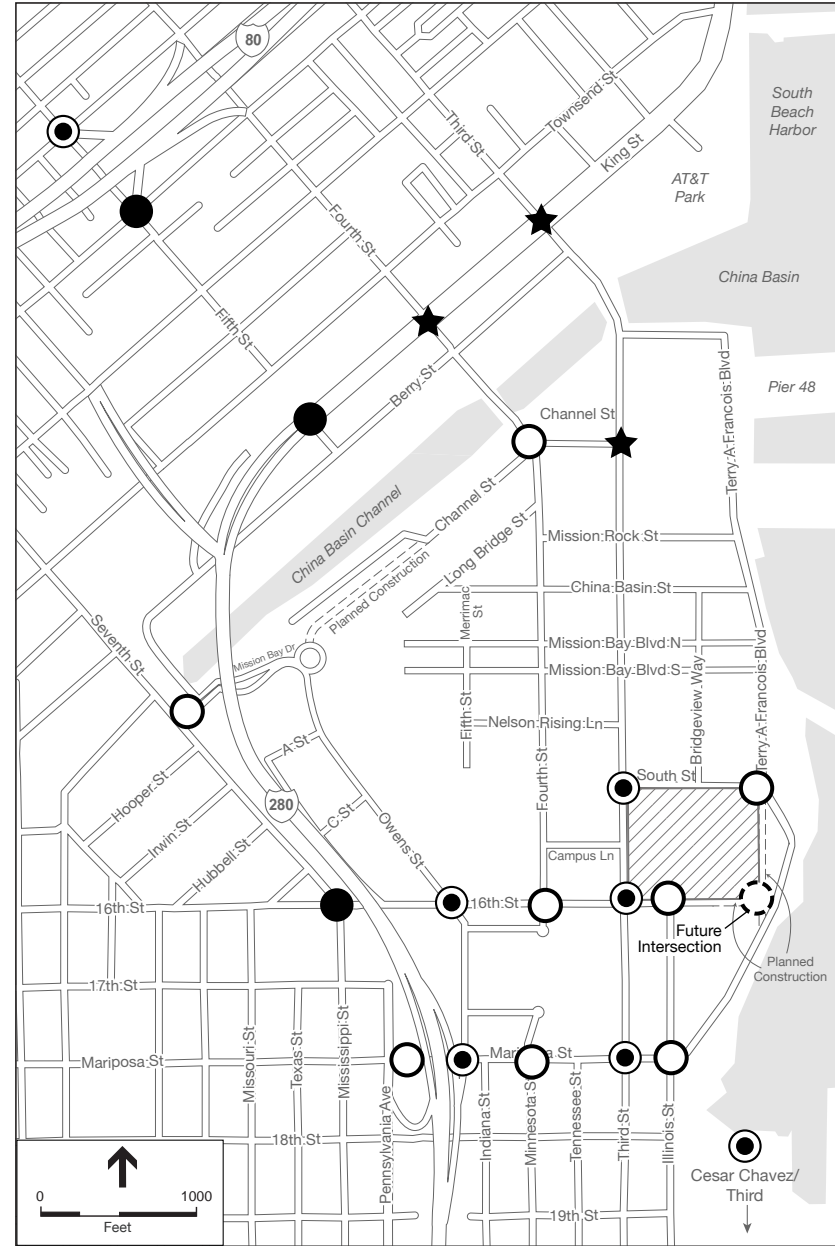
Figure 5.2-1

Existing Intersection LOS-Weekday PM Peak Hour

WITHOUT A SF GIANTS GAME



WITH A SF GIANTS EVENING GAME



- Project Site Boundary
- LOS A-B
- LOS C-D
- LOS E-F
- PCO Controlled

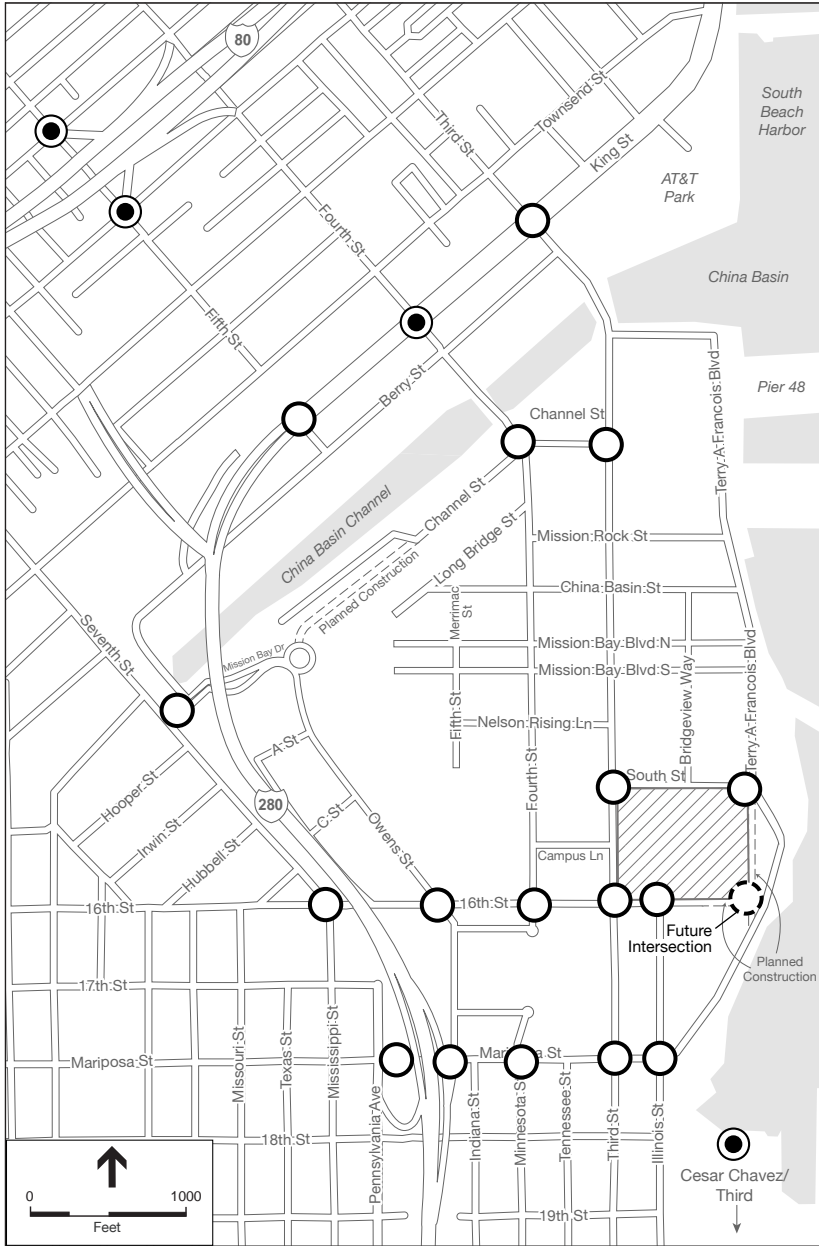
SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

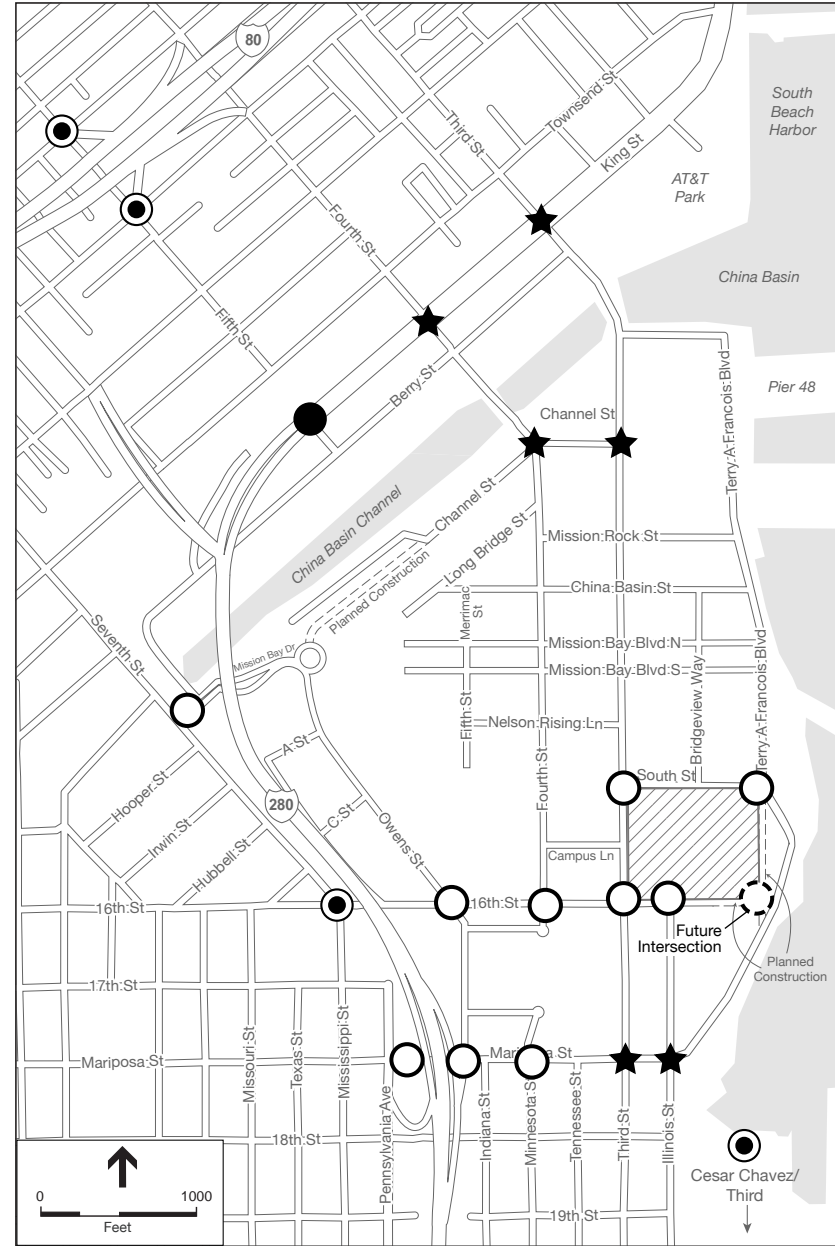
Figure 5.2-2

Existing Intersection LOS-Weekday Evening Peak Hour

WITHOUT A SF GIANTS GAME



WITH A SF GIANTS EVENING GAME



- Project Site Boundary
- LOS A-B
- LOS C-D
- LOS E-F
- ★ PCO Controlled

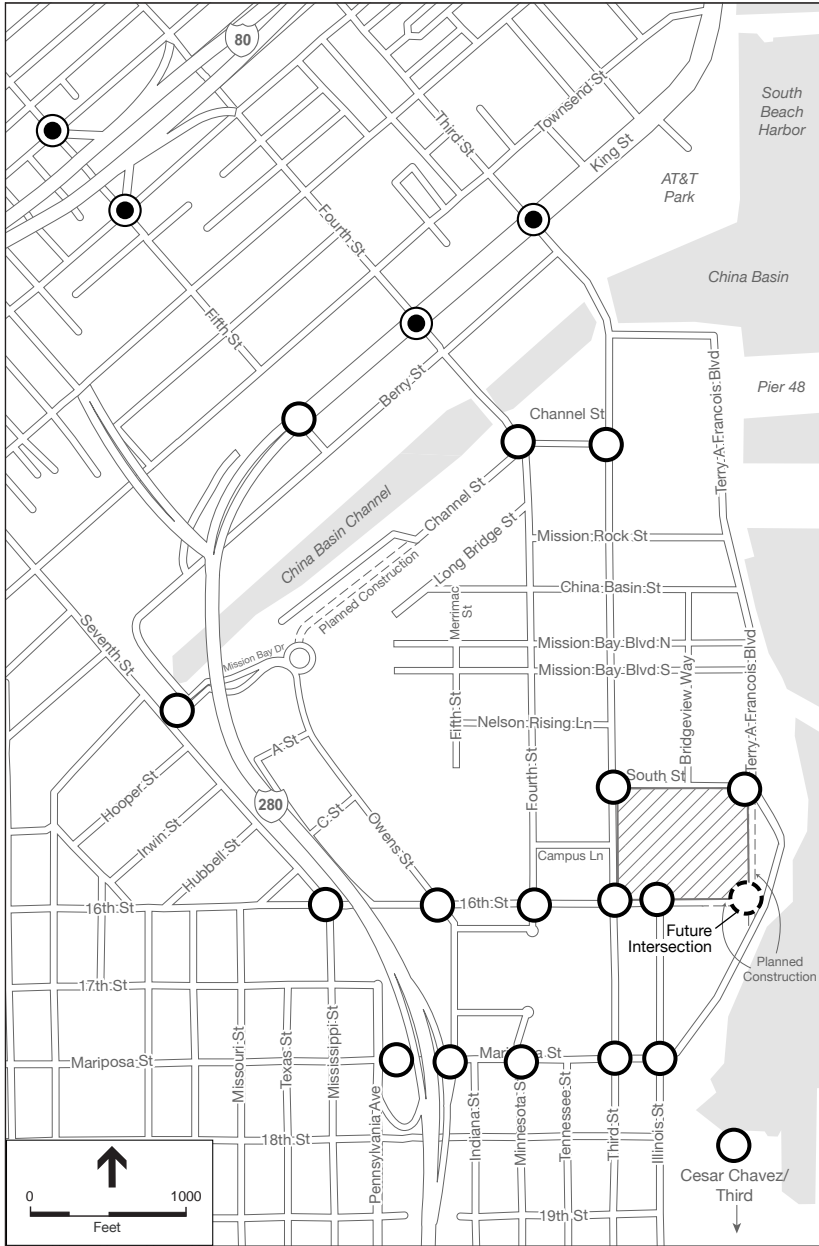
SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

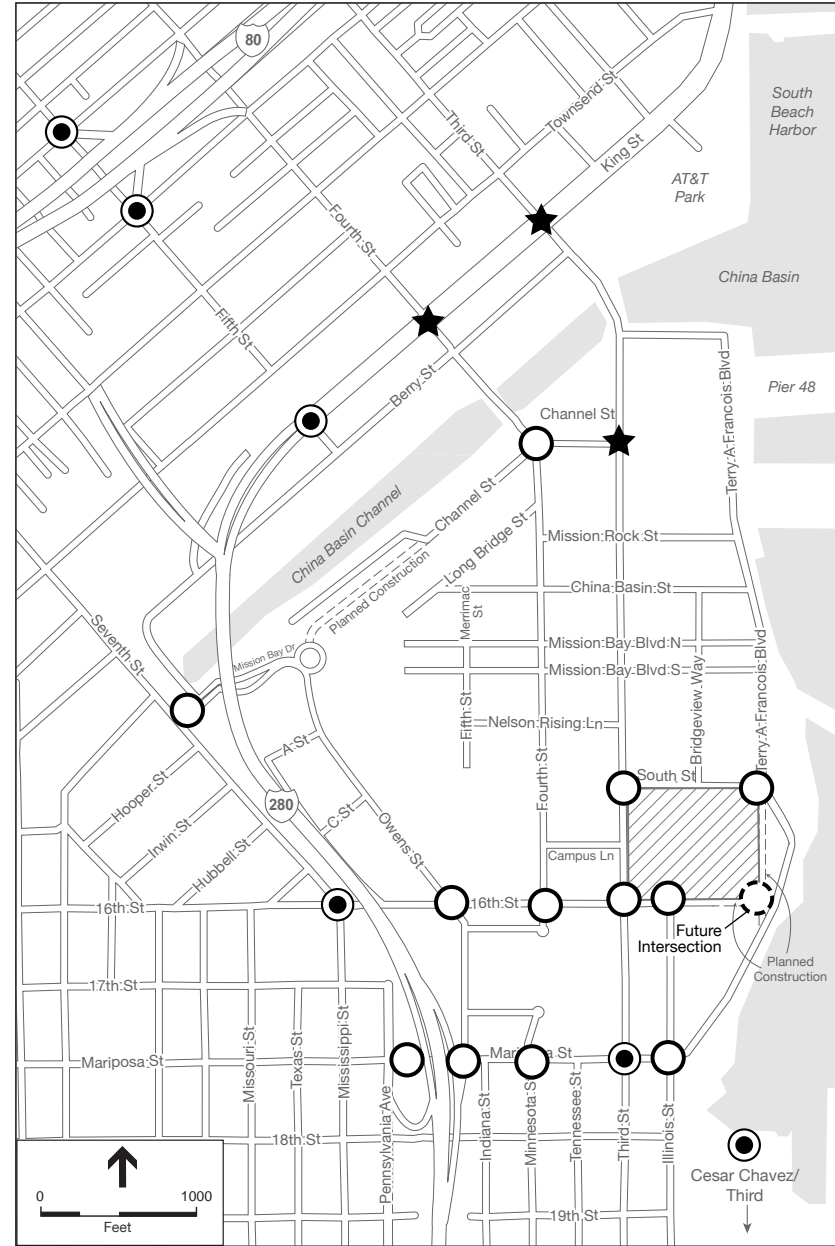
Figure 5.2-3

Existing Intersection LOS-Weekday Late Evening Peak Hour

WITHOUT A SF GIANTS GAME



WITH A SF GIANTS EVENING GAME



- Project Site Boundary
- LOS A-B
- LOS C-D
- LOS E-F
- ★ PCO Controlled

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 5.2-4
Existing Intersection LOS-Saturday Evening Peak Hour

As indicated in **Table 5.2-1**, during the analysis hours, most study intersections currently operate at LOS D or better. The exceptions are the intersections of King/Third and King/Fifth/I-280 ramp that operate at LOS E during the weekday p.m. and weekday evening peak hours, and the intersection of Fifth/Bryant/I-80 eastbound on-ramp that operates at LOS F during the weekday p.m. and weekday evening peak hours. The poor operating conditions at these intersections are a result of high volumes destined to I-80 and I-280. In addition, with implementation of the transit-only lane on 16th Street (i.e., as part of the 22 Fillmore Transit Priority Project), the intersection of Seventh/Mississippi/16th operates at LOS E during the weekday p.m. and weekday evening peak hours.

Level of service conditions at the study intersections are generally less congested during the weekday evening peak hour than during the weekday p.m. peak hour, although intersection LOS designations are similar at the intersections at the approaches to the I-80 and I-280 ramps. During the weekday late evening and Saturday evening peak hours, traffic volumes decrease substantially from weekday p.m. peak hour conditions and all intersections operate at LOS C or better. Intersection conditions in Mission Bay are affected by traffic associated with special events and during baseball season when the SF Giants have home games at AT&T Park. Transportation impacts associated with game day conditions are most severe prior to games and after the conclusion of games. The greatest impact occurs after weekday afternoon sellout events, during the 3:30 to 4:40 p.m. period when traffic, transit, and pedestrian flows exiting the ballpark (and game-day street closures near the park) coincide with the evening commute traffic already on the transportation network. As a result, on days when the SF Giants play home games at AT&T Park, existing service levels at the study intersections would generally be worse than those presented in **Table 5.2-1**. Intersection LOS at the study intersections for conditions with a SF Giants evening game at AT&T Park are presented in Section 5.2.3.8.

Ramp Operations

Ramp operations were analyzed for three ramps serving I-80 and three ramps serving I-280 for the same analysis hours presented above for intersection conditions (four on-ramps and two off-ramps in total). These freeway ramps were selected for analysis as they represent the regional highway facility most likely to be impacted by traffic generated by the proposed project. Traffic volumes used for the ramps analyses were obtained from turning movement counts where the ramps touch down to the local street network (conducted in 2013 and 2014, as described above), and freeway mainline volumes were obtained from Caltrans PeMS data.

Similar to intersections, the operating characteristics of freeway ramps are evaluated using the concept of LOS, and were evaluated using the *HCM 2000* methodology for ramp merge and diverge conditions. Freeway ramp LOS is based on vehicle density (passenger cars per lane-mile), and in San Francisco, LOS A through D is considered acceptable; LOS E and LOS F are considered unsatisfactory service levels. Section 5.2.5.3, under "Approach to Impact Analysis Methodology," presents the analysis methodology and the LOS definitions for the freeway ramp junctions (i.e., ramp merges and diverges). The results of the ramp analysis for the four analysis hours are presented in **Table 5.2-2**.

**TABLE 5.2-2
 FREEWAY RAMP LEVEL OF SERVICE
 EXISTING CONDITIONS – WITHOUT A SF GIANTS GAME
 WEEKDAY PM, EVENING, LATE PM, AND SATURDAY EVENING PEAK HOURS**

#	Ramp Location	Weekday Conditions						Saturday Evening ^d	
		PM ^a		Evening ^b		Late Evening ^c		Density	LOS
		Density ^f	LOS	Density	LOS	Density	LOS		
1	I-80 Eastbound On-ramp at Sterling	35	E	38	C	20	B	22	C
2	I-80 Eastbound On-ramp at Fifth/Bryant	--	F	--	F	30	D	35	E
3	I-80 Westbound Off-ramp at Fifth/Harrison	30	D	28	D	27	C	25	C
4	I-280 Southbound On-ramp at Pennsylvania	35	E	27	C	15	B	13	B
5	I-280 Northbound Off-ramp at Mariposa	26	C	25	C	13	B	16	B
6	I-280 Southbound On-ramp at Mariposa	31	D	25	C	13	B	12	B

NOTES:

- ^a Weekday p.m. peak hour.
- ^b Weekday evening peak hour of 6 to 8 p.m. peak period.
- ^c Weekday late p.m. peak hour of 9 to 11 p.m. peak period.
- ^d Saturday evening peak hour of 6 to 9 p.m. peak hour.
- ^e Density of vehicles per segment. Measured in passenger cars per mile per lane. Density value is not presented for segments where the demand volume exceeds the capacity, per *2000 Highway Capacity Manual*.
- ^f Segments operating at LOS E or LOS F conditions highlighted in **bold**.

SOURCE: Adavant Consulting/LCW Consulting, 2015

During the analysis hours, all of the ramp merge and diverge sections currently operate at LOS D or better, except for the I-80 eastbound Sterling Street on-ramp which operates at LOS E during the weekday p.m. peak hour, and the I-80 eastbound Fifth/Bryant on-ramp which operates at LOS F during the weekday p.m. and evening peak hours, and LOS E during the Saturday evening peak hour. The LOS E and LOS F conditions at the I-80 ramps reflect the congestion associated with traffic attempting to leave downtown San Francisco that is constrained by the limited capacity of the Bay Bridge ramps onto the bridge, causing queues to form on surface streets leading to the bridge. The I-280 southbound on-ramp merge at Pennsylvania Street also experiences LOS E conditions due to the high volume of southbound vehicles on I-280 during the weekday p.m. peak hour.

5.2.3.2 Transit Service

Local service in San Francisco is provided by the San Francisco Municipal Railway (Muni), the transit division of the San Francisco Municipal Transportation Agency (SFMTA). Muni bus, cable car and light rail lines can be used to access regional transit operators. Service to and from the East Bay is provided by Bay Area Rapid Transit District (BART), AC Transit, and Water Emergency Transportation Authority (WETA) ferries; service to and from the North Bay is provided by Golden Gate Transit buses and ferries, as well as Blue & Gold, and WETA ferries;

and service to and from the Peninsula and the South Bay is provided by Caltrain, SamTrans, BART, and WETA ferries. **Figure 5.2-5** presents the existing transit route network in the project vicinity.

The project site is located approximately 2.0 miles southeast of the Ferry Building and the Embarcadero Muni Metro and BART station, about 1.6 miles southeast of the temporary Transbay Terminal, about 0.8 miles south of the Caltrain terminal at Fourth/King and 0.9 miles northeast of the Caltrain station at 22nd Street, and adjacent to the T Third UCSF/Mission Bay stop at South Street. The project site is about 1.7 miles east of the 16th Street BART station, and about 1.7 miles southeast of the Powell BART/Muni Metro station.

Local Muni Service

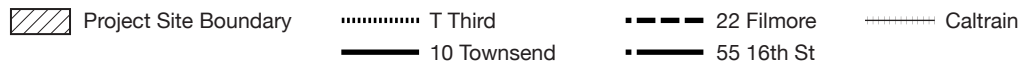
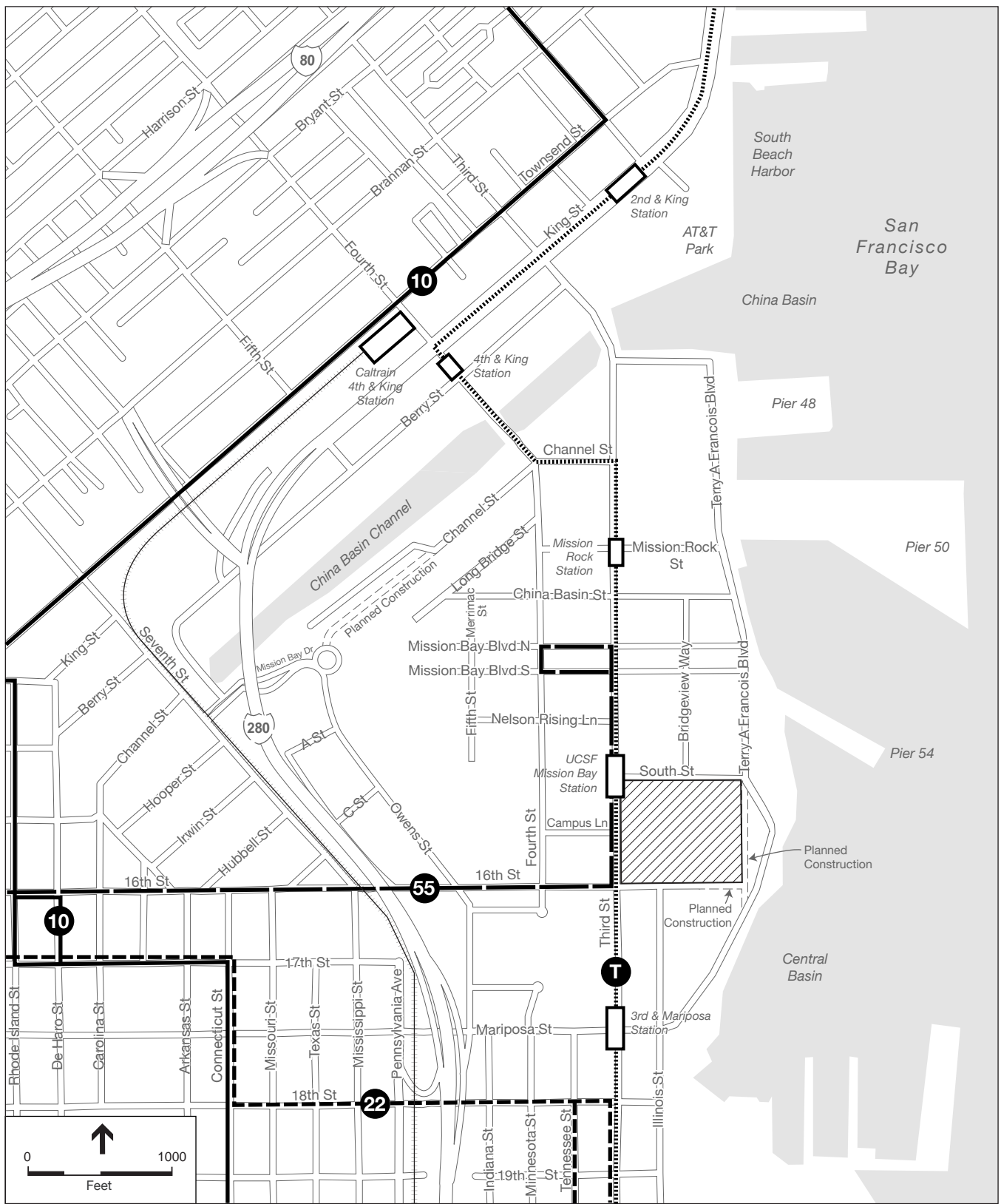
Muni service in the project vicinity includes the T Third light rail line that runs along Third Street with the closest stop at South Street (i.e., the UCSF/Mission Bay stop), as well as the 22 Fillmore route that runs east/west along 16th Street. **Table 5.2-3** presents the existing service frequency for the two routes.

**TABLE 5.2-3
 EXISTING MUNI ROUTES IN PROJECT VICINITY**

Line/Route	Headways					General Hours of Operation	Neighborhoods Served
	Weekday			Weekend			
	PM (4 to 6 p.m.)	Evening (6 to 10 p.m.)	Late Evening (After 10 p.m.)	Evening (6 to 8 p.m.)	Late Evening (After 10 p.m.)		
T Third	9	15	20	20	20	4:00 to 1:00 a.m.	Downtown, Visitacion Valley
22 Fillmore	8	15	15	15	15	24 hours	Marina, Dogpatch

SOURCE: SFMTA, Adavant Consulting/Fehr & Peers/LCW Consulting, 2015.

In January 2015, the SFMTA implemented a temporary “55 16th Street” motor coach service to coincide with the opening of the Phase One Medical Center at Mission Bay between the campus site and the 16th Street BART Station until the 22 Fillmore trolley buses are extended into Mission Bay. The temporary 55 16th Street route and the extension of the 22 Fillmore (see description of the 22 Fillmore Transit Priority Project below) into Mission Bay will be implemented as part of Mission Bay FSEIR Mitigation Measure E.27. The 55 16th Street route runs on 16th Street between Valencia and Third Streets, and Third Street between 16th Street and Mission Bay Boulevard North, and a turnaround loop is provided via Mission Bay Boulevard North, Fourth Street, and Mission Bay Boulevard South. The new bus stops for this service in the vicinity of the project site are on 16th Street at Fourth Street (near side stop both ways), on Third Street northbound at South Street (near side stop), on Mission Bay Boulevard South eastbound between Fourth Third Streets (line terminal), and on Third Street southbound at Gene Friend Way.



SOURCE: SFMTA, 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
 Event Center and Mixed-Use Development at Mission Bay Blocks 29-32
Figure 5-25
 Existing Transit Network

Planned changes to transit service in the project vicinity include the Central Subway project, which is currently under construction, and the Transit Effectiveness Project (renamed Muni Forward).

Central Subway Project. The Central Subway Project is the second phase of the Third Street light rail line (i.e., T Third), which opened in 2007. Construction is currently underway, and the Central Subway will extend the T Third light rail line northward from its current terminus at 4th and King Streets to a surface station south of Bryant Street and go underground at a portal under U.S. 101. From there it will continue north to stations at Moscone Center, Union Square—where it will provide passenger connections to other Muni light rail lines and BART at the Powell station—and in Chinatown, where the line will terminate at Stockton and Clay Streets. Construction of the Central Subway is scheduled to be completed in 2017, and revenue service is scheduled for 2019.

Muni Forward. The following changes are proposed by Muni Forward for routes in the proposed project vicinity.

- **T Third** – The number of light rail vehicles per train will increase from one to two, and headways between trains will be reduced from 9 to 8 minutes.
- **10 Townsend** – The 10 Townsend motor coach line will be renamed the 10 Sansome, with a new alignment within Mission Bay. Service would be rerouted off of Townsend down Fourth Street. From Fourth Street the route will extend through Mission Bay to new proposed street segments on Seventh Street between Mission Bay Boulevard and Irwin Street, on Irwin Street between Seventh and 16th Streets, on 16th Street between Irwin and Connecticut Streets, and on Connecticut Street between 16th and 17th Streets. Peak period headways will be reduced from 20 to 6 minutes. Midday headways will be reduced from 20 to 12 minutes. The 10 Townsend improvements represent an alternate improvement to extend transit service into Mission Bay, as required by Mission Bay FSEIR Mitigation Measure E.28.
- **22 Fillmore** – As part of the 22 Fillmore Transit Priority Project⁹, the 22 Fillmore trolley bus line will be rerouted to continue along 16th Street east of Kansas Street, creating new connections to Mission Bay from the Mission neighborhood. The route change will add transit to 16th Street between Kansas and Third Streets, and to Third Street between 16th Street and Mission Bay Boulevard North. Muni Forward will change the a.m. peak period headway on the 22 Fillmore from 9 minutes to 6 minutes between buses. The service improvements will require upgrading and extending the overhead wire system on 16th Street between Potrero Avenue and Third Street. In addition to the service improvements, side-running transit-only lanes will be implemented on 16th Street between Seventh and Third Streets, and either side-running or center-running transit-only lanes will be implemented between Church and Seventh Streets by converting a mixed-flow lane to a transit-only lane. The 22 Fillmore Transit Priority Project will also include corridor-wide transit network improvements such as transit bulbs, new traffic signals, pedestrian signals,

⁹ The TEP included two alternatives for a Travel Time Reduction Proposal (TTRP) along 16th Street (of which one or a combination of the two could be implemented), to make the 22 Fillmore more frequent, reliable, and effective along 16th Street. The TTRP treatments are referred to as the Moderate and Expanded Alternatives. The Moderate Alternative includes a number of physical changes to the portion of the rerouted 22 Fillmore in the vicinity of Mission Bay, including, but not limited to, new transit stops, relocated transit stops, and transit bulbs, as well as new traffic signals. The Expanded Alternative includes most of the same features as the Moderate Alternative, as well as the conversion of a mixed-flow lane to a transit-only lane on both sides of 16th Street between Church and Third Streets, as well as the prohibition of left turns at Bryant, Potrero, Utah, San Bruno, Kansas, Rhode Island, De Haro, Carolina, Wisconsin, Arkansas, Connecticut, and Missouri Streets.

sidewalk widening, and upgrading of the bicycle infrastructure on 17th Street between Church and Seventh Streets to provide a parallel, contiguous, and safe bicycle route for traveling in the east-west direction.

- **33 Stanyan** – When the 22 Fillmore trolley bus service is extended into Mission Bay, the 33 Stanyan will be rerouted to follow the current alignment of the 22 Fillmore from Kansas Street to the route terminal on 20th Street at Third Street.
- **58 24th Street** – The 58 24th Street service will replace the alignment of the current 48 Quintara that terminates on 20th Street at Third Street when its service is realigned to serve Candlestick Point.

Regional Service Providers

East Bay: Transit service to and from the East Bay is provided by BART, AC Transit, and WETA. BART operates regional rail transit service between the East Bay (from Pittsburg/Bay Point, Richmond, Dublin/Pleasanton and Fremont) and San Francisco, and between San Mateo County (Millbrae and San Francisco Airport) and San Francisco. The nearest BART stations to the project site are the 16th Street and Powell stations, both about 1.7 miles east and northwest of the project site, respectively. AC Transit is the primary bus operator for the East Bay, including Alameda and western Contra Costa Counties. AC Transit operates 37 routes between the East Bay and San Francisco, all of which terminate at the (temporary) Transbay Terminal. WETA ferries provide service to between San Francisco and Alameda and between San Francisco and Oakland from the Ferry Building.

South Bay: Transit service to and from the South Bay is provided by BART, SamTrans, Caltrain, and WETA. SamTrans provides bus service between San Mateo County and San Francisco, including 14 bus lines that serve San Francisco (12 routes serve the downtown area). In general, SamTrans service to downtown San Francisco operates along South Van Ness Avenue, Potrero Avenue, and Mission Street to the Transbay Terminal. SamTrans cannot pick up northbound passengers at San Francisco stops. Similarly, passengers boarding in San Francisco (and destined to San Mateo) may not disembark in San Francisco. SamTrans routes stop at the eastbound and westbound bus stops on Mission Street at Fifth Street. WETA ferries provide service between South San Francisco and the San Francisco Ferry Building.

Caltrain provides commuter heavy-rail passenger service between Santa Clara County and San Francisco. Caltrain currently operates 38 trains each weekday, with a combination of express and local service. Two Caltrain stations are located approximately one mile from the project site, the 22nd Street station and the terminus at Fourth and King Streets; approximately 30 percent of all the weekday trains stop at the 22nd Street station.

North Bay: Transit service to and from the North Bay is provided by Golden Gate Transit buses and ferries, and WETA ferries. Between the North Bay (Marin and Sonoma Counties) and San Francisco, Golden Gate Transit operates 22 commute bus routes, nine basic bus routes and 16 ferry feeder bus routes, most of which serve the Van Ness Avenue corridor or the Financial District. In the vicinity of the project site, Golden Gate Transit bus service to downtown San Francisco operates along Mission, Howard and Folsom Streets. Golden Gate Transit routes

stop at the westbound bus stop on Mission Street at Fifth Street. Golden Gate Transit also operates ferry service between the North Bay and San Francisco. During the morning and evening peak periods, ferries run between Larkspur and San Francisco and between Sausalito and San Francisco. WETA ferries provide service between Vallejo and San Francisco.

Mission Bay TMA Shuttle Service

The Mission Bay Transportation Management Association (Mission Bay TMA) provides two shuttle bus routes between Mission Bay and the Powell Muni/BART station, one shuttle bus route to Caltrain and the temporary Transbay Terminal, and a Mission Bay loop route. The shuttle service is free of charge and available for use by all employees, residents, and visitors to the Mission Bay area and the China Basin building at 185 Berry Street. The Powell Muni/BART shuttle routes operate every 15 minutes between 7:00 and 10:00 a.m. and 3:45 and 8:15 p.m. The Caltrain Transbay route operates between 6:50 and 9:00 a.m., and 3:45 and 6:40 p.m., and runs every 20 to 30 minutes. The Mission Bay loop route runs once between 6:23 and 7:05 a.m.

Figure 5.2-6 presents the existing routes serving Mission Bay. The Mission Bay TMA and shuttle service were implemented as part of Mission Bay FSEIR Mitigation Measures E.46 and E.47.

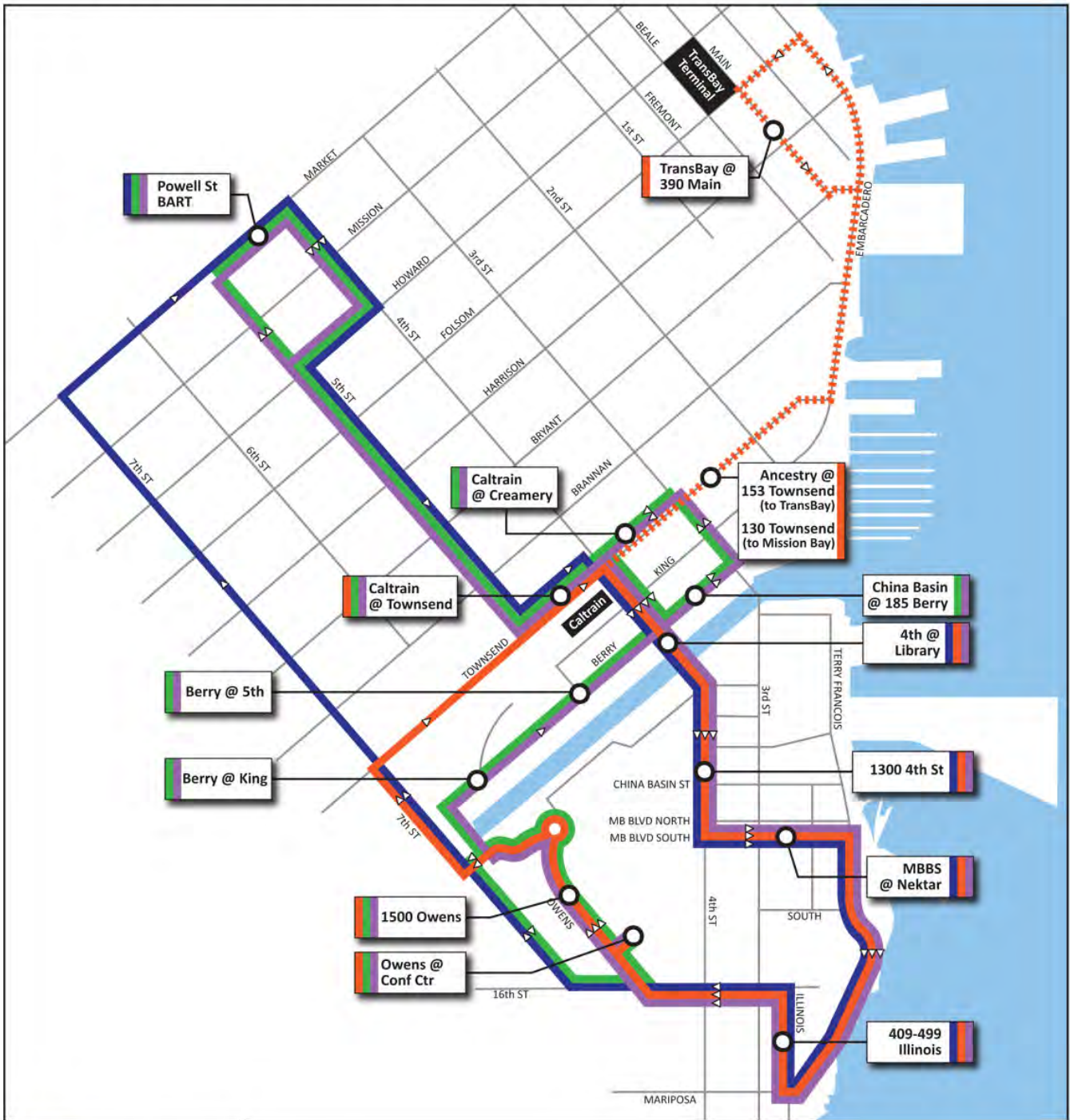
Local and Regional Transit Analysis

The assessments of existing and future transit conditions for proposed projects in San Francisco is typically performed through the analysis of local transit (Muni) and regional transit (BART, AC Transit, Golden Gate Transit, SamTrans, Caltrain, and ferry service) screenlines.¹⁰ Each screenline is further subdivided into major transit corridors (Muni) or service provider (regional transit). Screenline values represent service capacity, ridership and utilization at the maximum load point according to the direction of travel for each of the lines that comprises the transit corridor.

Four screenlines have been established in San Francisco to analyze potential impacts of projects on Muni service: Northeast, Northwest, Southwest, and Southeast, with subcorridors within each screenline. Three regional screenlines have been established around San Francisco to analyze potential impacts on the regional transit agencies: East Bay (BART, AC Transit, ferries), North Bay (Golden Gate Transit buses and ferries), and the South Bay (BART, Caltrain, SamTrans).

Downtown screenlines examine the overall utilization of Muni transit capacity into and out of downtown San Francisco from the Northeast, Northwest, Southeast, and Southwest of San Francisco because transit travel into downtown San Francisco in the a.m. and out of downtown in the p.m., travel across the screenlines tends to be the most congested transit flow in the City. The Muni screenline analysis for the weekday p.m. peak hour focuses on transit trips in the outbound direction, i.e., trips from downtown San Francisco to other parts of the City and the region; this is because, as a major employment center, travel in downtown San Francisco during the weekday p.m. peak hour is heaviest in the outbound direction, as is the amount of transit service and capacity provided by Muni.

¹⁰ The concept of screenlines is used to describe the magnitude of travel to or from the greater downtown area, and to compare estimated transit ridership to available capacities. Screenlines are hypothetical lines that would be crossed by persons traveling between downtown and its vicinity and other parts of San Francisco and the region.



LEGEND

- East Route
- West Route
- Caltrain Route
- ⋯ TransBay Extension
- MB Loop Route



SOURCE: Mission Bay TMA Effective March 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
 Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 5.2-6
 Existing Mission Bay TMA Shuttle Routes

In addition, a capacity utilization analysis was also conducted for the two Muni routes that serve the project site: the T Third light rail line and the 22 Fillmore bus route. Because the Central Subway and 22 Fillmore Transit Priority Projects are approved, funded, and planned to be in place by 2020, the transportation impact analysis is based on the ridership projections for 2020, as well as the planned capacity assuming implementation of these projects.¹¹ The transit analysis is conducted by calculating the existing capacity utilization (riders as a percentage of capacity) at the maximum load point (the point of greatest demand). Muni has established a capacity utilization standard of 85 percent for weekday peak hour analyses. Section 5.2.5.3, under “Approach to Impact Analysis Methodology,” presents the analysis methodology for the transit capacity utilization and screenline analysis.

For the purpose of this analysis, the ridership and capacity at the three regional screenlines represent the peak direction of travel and patronage loads, which correspond with the evening commute in the outbound direction from downtown San Francisco to the region. As a means to determine the amount of available space for each regional transit provider, capacity utilization is also used. For all regional transit operators, the capacity is based on the number of seated passengers per vehicle. All of the regional transit operators have a one-hour load factor standard of 100 percent, which would indicate that all seats are full.

Table 5.2-4 presents the ridership and capacity utilization at the maximum load point (MLP) for the T Third and 22 Fillmore routes serving the project site for the four analysis time periods. As indicated in **Table 5.2-4**, capacity utilization during the four analysis periods is less than Muni’s established 85 percent capacity utilization standard.

Table 5.2-5 presents the Muni downtown and regional transit screenlines for weekday p.m. peak hour (outbound) conditions. Overall, all screenlines and corridors are currently operating below the 85 percent capacity utilization standard, and could accommodate additional passengers.

5.2.3.3 Pedestrian Network

The project site is currently undeveloped, except for two surface parking lots. There currently are no sidewalks on South Street, Terry A. Francois Boulevard, or 16th Street adjacent to the project. On Third Street between 16th and South Streets, a 12-foot wide sidewalk is provided. Pedestrian crosswalks and pedestrian countdown signals are provided at the intersections of Third/South and Third/16th. Pedestrian crosswalks are provided at the west and north legs of the unsignalized intersection of Terry A. Francois/South.

¹¹ Focusing on the year 2020 is appropriate because it corresponds to the time frame within which the proposed project would become operational; it is therefore appropriate to consider improvements to the transit system that will be in place and operational as of that year. The Central Subway and 22 Fillmore Transit Priority Project are approved and funded, and will be in operation by the time the proposed project becomes operational.

**TABLE 5.2-4
TRANSIT CAPACITY UTILIZATION - EXISTING CONDITIONS – WITHOUT A SF GIANTS GAME –
WEEKDAY PM, EVENING, AND LATE EVENING AND SATURDAY EVENING PEAK HOURS**

Route/Service Provider	WEEKDAY PM OUTBOUND			WEEKDAY EVENING INBOUND			WEEKDAY LATE EVENING OUTBOUND			SATURDAY EVENING INBOUND		
	Ridership	Capacity	Capacity Utilization ^a	Ridership	Capacity	Capacity Utilization	Ridership	Capacity	Capacity Utilization	Ridership	Capacity	Capacity Utilization
<i>San Francisco^b</i>												
T Third	1,945	3,808	51.1%	1,880	2,285	82.3%	415	1,714	24.2%	336	1,714	19.6%
22 Fillmore	545	942	57.9%	249	628	39.6%	181	252	71.7%	230	378	60.9%
<i>Total</i>	2,490	4,750	52.4%	2,128	2,913	73.1%	595	1,966	71.7%	566	2,092	27.1%
<i>East Bay</i>												
BART	19,972	21,220	94.1%	4,184	15,870	26.4%	4,035	6,095	66.2%	2,364	8,740	27.0%
AC Transit	2,275	3,926	57.9%	149	520	28.7%	104	200	52.2%	51	200	25.4%
Ferries	805	1,615	49.8%	45	576	7.8%	0	0	0.0%	0	0	0.0%
<i>Total</i>	23,052	26,761	86.1%	4,378	16,966	25.8%	4,140	6,295	65.8%	2,415	8,940	27.0%
<i>North Bay</i>												
Buses	1,389	2,817	49.3%	81	120	67.2%	27	80	33.8%	80	137	58.4%
Ferries	968	1,959	49.4%	209	1,357	15.4%	463	637	75.8%	826	1,594	51.8%
<i>Total</i>	2,357	4,776	49.4%	290	1,477	19.6%	510	717	71.1%	906	1,731	52.3%
<i>South Bay</i>												
BART	8,698	16,693	52.1%	3,776	18,400	20.5%	1,951	5,290	36.9%	2,134	10,925	19.5%
Caltrain	2,405	3,100	77.6%	2,031	2,600	78.1%	185	650	28.4%	690	1,300	53.1%
SamTrans	146	320	45.9%	35	160	21.8%	21	40	53.2%	20	80	25.3%
<i>Total</i>	11,249	20,113	55.9%	5,842	21,160	27.6%	2,157	5,980	36.1%	2,844	12,305	23.1%

NOTES:

^a For weekday p.m. peak hour conditions, capacity utilization exceeding 85 percent for Muni and 100 percent for regional transit highlighted in **bold**. Significant project impacts shaded.

^b Ridership and capacity for the T Third and 22 Fillmore reflect implementation of the Central Subway and 22 Fillmore Transit Priority Project.

^c Ridership and capacity for BART reflect average of all days in April 2015, including without and with SF Giants games.

SOURCE: Advant Consulting/Fehr & Peers/LCW Consulting, 2015

**TABLE 5.2-5
MUNI DOWNTOWN TRANSIT SCREENLINES – EXISTING CONDITIONS
WEEKDAY P.M. PEAK HOUR**

Screenline / Corridor / Transit Provider	Ridership	Capacity	Capacity Utilization
Muni Downtown Screenlines (Outbound from Downtown)			
<i>Northeast</i> Kearny/Stockton	2,172	3,291	66.0%
All Other Lines	<u>570</u>	<u>1,078</u>	52.9%
<i>Subtotal</i>	2,742	4,369	62.8%
<i>Northwest</i> Geary	1,821	2,528	72.0%
California	1,371	1,686	81.3%
Sutter/Clement	472	630	74.9%
Fulton/Hayes	969	1,176	82.4%
Balboa	<u>640</u>	<u>925</u>	68.8%
<i>Subtotal</i>	5,273	6,949	75.9%
<i>Southeast</i> Third Street	553	714	77.5%
Mission Street	1,539	2,789	55.2%
San Bruno/Bayshore	1,328	2,134	62.2%
All Other Lines	<u>1,040</u>	<u>1,712</u>	60.8%
<i>Subtotal</i>	4,461	7,349	60.7%
<i>Southwest</i> Subway Lines	4,766	6,249	75.7%
Haight/Noriega	1,109	1,651	67.2%
All Other Lines	<u>277</u>	<u>700</u>	39.6%
<i>Subtotal</i>	6,152	8,645	71.2%
Total All Muni Screenlines	18,628	27,312	68.2%

SOURCE: San Francisco Planning Department Memorandum, Transit Data for Transportation Impact Studies, June 2013.

In the vicinity of the project site, existing pedestrian volumes are low throughout the day. Pedestrian conditions were quantitatively assessed for the crosswalks at the adjacent intersections of Third/South and Third/16th, and on the sidewalk on both sides of the street on Third Street between South and 16th Streets. Pedestrian counts were conducted in May and June 2014 (prior to the opening of the UCSF Medical Center Phase 1) for the weekday p.m., weekday evening, and Saturday evening peak hours. Due to the low pedestrian volumes in the area, weekday late evening pedestrian counts were not conducted, as they would be less than the weekday evening peak hour counts. The pedestrian volumes collected in the field were adjusted upwards to reflect the projected increase in pedestrians associated with the UCSF Medical Center Phase 1 and the Public Safety Building, similar to that described above for traffic volumes (weekday p.m. peak hour pedestrian volume counts at the crosswalks at Third/16th and on the sidewalk on Third Street between South and 16th Streets conducted in April 2015 indicated similar pedestrian volumes to the adjusted May/June 2014 volumes to reflect the UCSF Medical Center Phase 1 and Public Safety Building). For all analysis hours, pedestrian volumes are greater at the intersection of Third/South than Third/16th due to the T Third UCSF/Mission Bay light rail stop at South Street.

Existing pedestrian conditions were evaluated using LOS. Section 5.2.5.3, under “Approach to Impact Analysis Methodology,” which presents the analysis methodology and the LOS definitions for crosswalks and sidewalks. **Table 5.2-6** presents the pedestrian volumes and LOS for the crosswalk and sidewalk locations for the analysis hours. Due to the low pedestrian volumes in the project vicinity, all study locations operate satisfactorily at LOS A conditions during all analysis hours.

**TABLE 5.2-6
 PEDESTRIAN LEVEL OF SERVICE
 EXISTING CONDITIONS – WITHOUT A SF GIANTS GAME
 WEEKDAY P.M. AND EVENING, AND SATURDAY EVENING PEAK HOURS**

Analysis Location	Weekday Conditions						Saturday Evening		
	PM			Evening					
	Peds/ Hour	MOE ^a	LOS	Peds/ Hour	MOE	LOS	Peds/ Hour	MOE	LOS
Crosswalks									
<i>Third St/South St</i>									
North	42	472	A	25	793	A	17	1,285	A
South	91	216	A	63	313	A	25	875	A
East	66	1,093	A	31	2,333	A	10	1,909	A
<i>Third St/16th Street</i>									
North	30	868	A	23	1,131	A	11	2,024	A
South	60	432	A	42	618	A	25	896	A
East	31	1,338	A	19	2,180	A	8	3,078	A
West	89	424	A	67	564	A	17	1,424	A
Sidewalks									
<i>Third St between South & 16th Streets</i>									
East	56	0.2	A	41	0.1	A	19	0.1	A
West	70	0.2	A	52	0.2	A	17	0.1	A

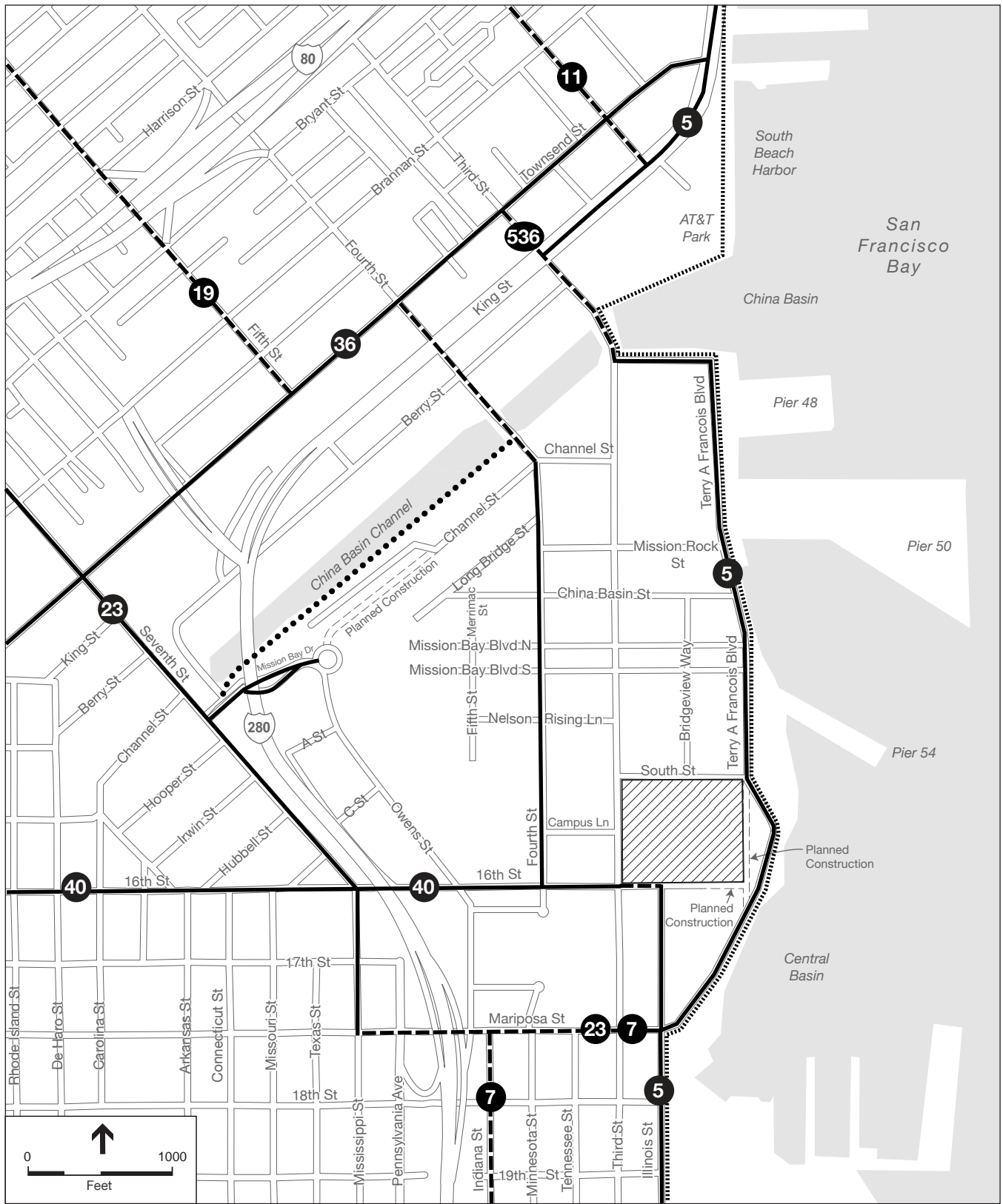
NOTES:

^a The measure of effectiveness for crosswalks is density – pedestrians per square foot. The measure of effectiveness for sidewalks and crosswalks is the flow rate – pedestrians per minute per foot.

SOURCE: Advant Consulting/Fehr & Peers/LCW Consulting, 2015.

5.2.3.4 Bicycle Network

The majority of the Mission Bay area is flat, with minimal changes in grades, facilitating bicycling within and through the area. A number of existing bicycle routes are located in the project vicinity. These include City routes that are part of the San Francisco Bicycle Network, routes developed as part of the Mission Bay Plan, and regional routes that are part of the San Francisco Bay Trail system. **Figure 5.2-7** presents the bicycle routes and facilities within the study area, as identified in the *San Francisco Bike Map and Walking Guide*.



- Project Site Boundary
- San Francisco Bay Trail
- Class III Signed Route
- Class I Bicycle Path
- Class II Bicycle Lane
- Bicycle Plan Route Number

SOURCE: Advant Consulting/Fehr & Peers/LCW Consulting, 2015

OClI Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 5.2-7
Existing Bicycle Route Network

Bikeways are typically classified as Class I, Class II, or Class III facilities.¹² Class I bikeways are bike paths with exclusive right-of-way for use by bicyclists or pedestrians. Class II bikeways are bike lanes striped with the paved areas of roadways and established for the preferential use of bicycles, and include separate bicycle lanes. Separate bicycle lanes provide a striped, marked and signed bicycle lane buffered from vehicle traffic. These facilities are located on roadways and reserve four to five feet of space for exclusive bicycle traffic. Class III bikeways are signed bike routes that allow bicycles to share travel lanes with vehicles. Designated bicycle routes in the project vicinity include:

Bicycle Route 5 connects to the study area from the north at King/Third and runs north and south along Third Street, Terry A. Francois Boulevard, and Illinois Street as a Class II bicycle facility.

Bicycle Route 7 runs on Indiana Street between Cesar Chavez and Mariposa Streets as a route with a Class II facility. Bicycle Route 7 also runs along Mariposa Street between Mississippi and Third Streets as a Class III bicycle facility.

Bicycle Route 23 runs north along Seventh Street between Townsend and 16th Streets, and along Mississippi Street between 16th and Mariposa Streets as a Class II facility. Bicycle Route 23 also runs along Mariposa Street between Mississippi and Illinois Streets as a Class III bicycle facility.

Bicycle Route 40 runs east-west on 16th Street between Kansas and Third Streets as a Class II bicycle facility. As part of the Mission Bay South Infrastructure Plan, Class II bicycle lanes will be implemented on 16th Street between Third Street and Terry A. Francois Boulevard at the time when Terry A. Francois Boulevard is realigned to the west and 16th Street is extended from Illinois Street to Terry A. Francois Boulevard.

Figure 5.2-7 also presents the San Francisco Bay Trail. The San Francisco Bay Trail is designed to create recreational pathway links to the various commercial, industrial and residential neighborhoods that surround the San Francisco Bay. In addition, the trail connects points of historic, natural and cultural interest; recreational areas such as beaches, marinas, fishing piers, boat launches, and numerous parks and wildlife preserves. At various locations, the Bay Trail consists of paved multi-use paths, dirt trails, bike lanes, sidewalks or city streets signed as bicycle routes. In the project vicinity, an improved Bay Trail path follows the shoreline of San Francisco Bay, east of Terry A. Francois Boulevard within the area that will be developed as part of the Mission Bay Plan as the Bayfront Park.

Bicycle volume counts were conducted during the weekday p.m., weekday evening, and Saturday evening peak periods in May and June 2014 on Third Street and on 16th Street, and counts on Terry A. Francois Boulevard were conducted in October 2014 (weekday p.m. peak hour bicycle volume counts conducted on Third Street between South and 16th Streets in April 2015 indicated similar bicycle volumes to those conducted in October 2014). **Table 5.2-7** presents the existing hourly bicycle volumes. The highest bicycle volumes were observed on Terry A. Francois Boulevard during the weekday p.m. and evening peak hours, although a number of bicyclists

¹² Bicycle facilities are defined by the State of California in the California Streets and Highway Code Section, 890.4. Available online at http://ca.regstoday.com/law/shc/ca.regstoday.com/laws/shc/calaw-shc_DIVISION1_CHAPTER8.aspx. Accessed May 28, 2015.

were observed traveling within the mixed-flow lanes on Third Street. Bicycle volumes during the Saturday evening peak hour are substantially lower than during the weekday p.m. or weekday evening peak hours. Overall, on weekdays and weekends bicycle conditions were observed to be operating acceptably, with no conflicts between bicyclists, pedestrians and vehicles.

**TABLE 5.2-7
BICYCLE VOLUMES – EXISTING CONDITIONS,
WEEKDAY PM AND EVENING, AND SATURDAY EVENING PEAK HOURS**

Segment	Weekday Conditions		Saturday Evening Conditions
	PM	Evening	
Without a SF Giants Game			
<i>Third St between South and 16th Streets^b</i>			
Northbound	11	9	5
Southbound	39	24	2
<i>16th Street between Third and Fourth Streets</i>			
Westbound	17	15	1
Eastbound	18	21	6
<i>Terry A. Francois Blvd between South and 16th Streets</i>			
Northbound	27	26	12
Southbound	51	49	13
With a SF Giants Evening Game			
<i>Third St between South and 16th Streets^b</i>			
Northbound	15	27	7
Southbound	20	32	2
<i>16th Street between Third and Fourth Streets</i>			
Westbound	27	28	6
Eastbound	19	32	6
<i>Terry A. Francois Blvd between South and 16th Streets</i>			
Northbound	23	18	8
Southbound	21	27	10

NOTES:

^a Bicycle counts on Third and 16th Streets conducted in May and June 2014, and bicycle counts on Terry A. Francois Boulevard conducted in September and October 2014.

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015.

There are no on-street bicycle racks on Third Street adjacent to the project site, however, there are bicycle racks on the sidewalk on the north side of South Street and on the east sidewalk of Terry A. Francois Boulevard north of South Street, and west of the project site within the UCSF research campus; additional bicycle racks are provided at the recently opened UCSF Medical Center campus site. The closest Bay Area Bike Share stations in the project vicinity are on Townsend Street between Seventh and Eighth Streets (accommodating eight bicycles), and at the Caltrain station at King and Fourth Streets (accommodating 42 bicycles).

As part of the 22 Fillmore Transit Priority Project described above, the existing bicycle lanes on 16th Street (Bicycle Route 40) between Seventh and Kansas Streets, will be relocated to 17th Street

between Seventh and Kansas Streets. On 17th Street at Kansas Street, the relocated bicycle lane will connect with the existing bicycle lane on the same street to the west, while at the east end, the bicycle lane will connect with the existing bicycle lane on Mississippi Street that runs between Mariposa and 16th Streets.

5.2.3.5 Loading Conditions

There are no on-street commercial loading spaces or passenger loading/unloading zones adjacent to, or in the vicinity of the project site. Some loading operations were observed to occur within the curb lane of South Street adjacent to the office building at 550 Terry A. Francois Boulevard (i.e., in the vicinity of its off-street loading facility).

5.2.3.6 Emergency Vehicle Access

The project site has frontages on four streets – South Street, Terry A. Francois Boulevard, 16th Street, and Third Street. Emergency vehicle access to the project site is primarily from Third Street, which has two travel lanes each way. The nearest fire stations to the project site are Station 8 at 36 Bluxome Street between Fourth and Fifth Streets (about one mile to the northwest of the project site), and Station 29 at 299 Vermont Street between 15th and 16th Streets (about 0.85 miles west of the project site). A new Public Safety Building located on Third Street at Mission Rock Street was completed in 2014, and became operational in early 2015. This new facility accommodates the headquarters of the San Francisco Police Department, the new Southern District police station, and a new fire station (i.e., Station 4). The fire station has access on Mission Rock Street between Third Street and Terry A. Francois Boulevard (less than half a mile north of the project site).

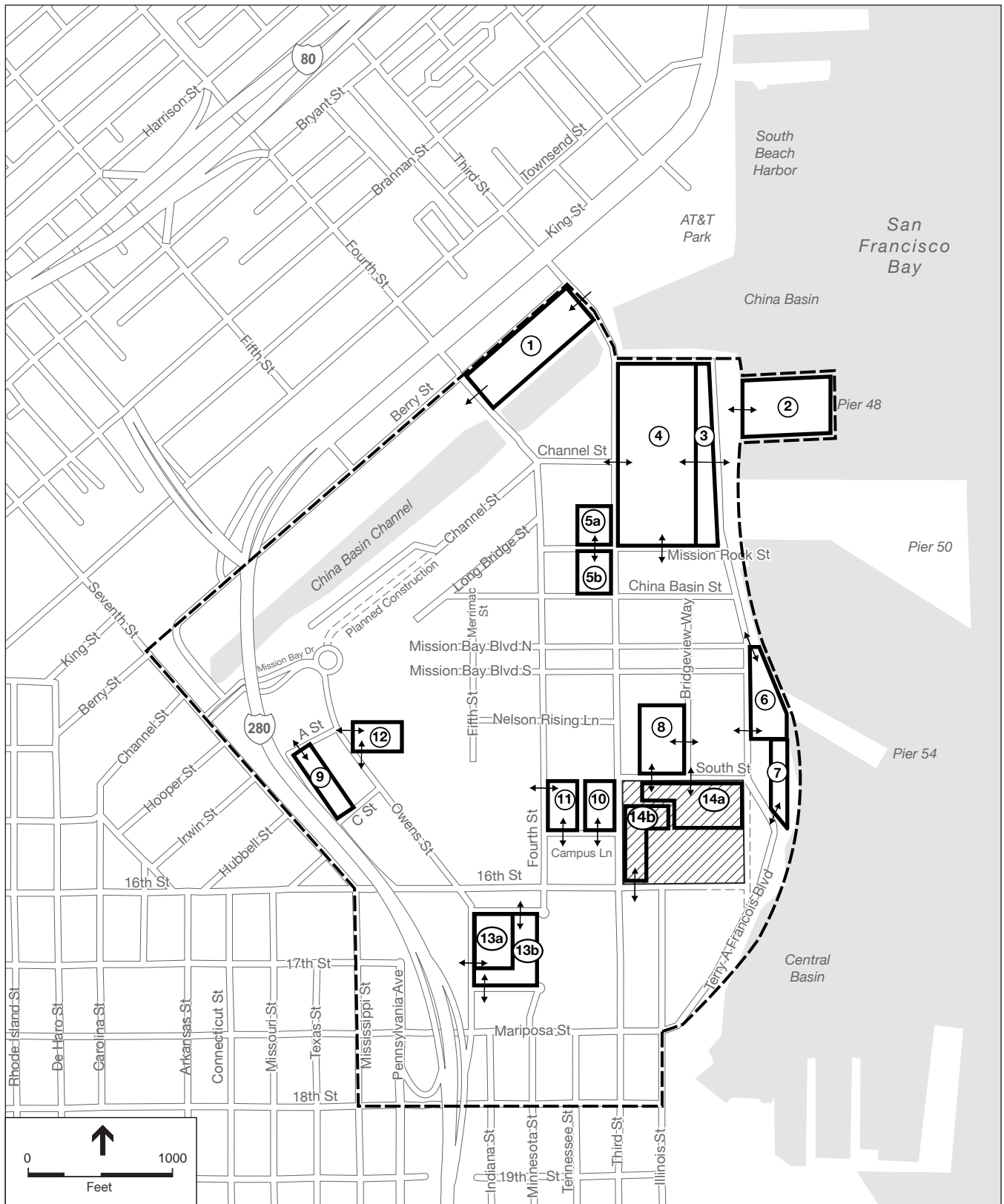
The UCSF Medical Center Phase 1 hospitals opened in February 2015. The Children’s Hospital Emergency room and urgent care facility is located on Fourth Street at Mariposa Street. Emergency vehicle access to this facility is via Mariposa Street and via Owens Street and the South Connector Road. The San Francisco General Hospital (SFGH), located approximately 1.75 miles southeast of the project site (via 16th Street and Potrero Avenue), is the only designated trauma center in San Francisco.¹³

5.2.3.7 Parking Conditions

Off-street Parking

The existing parking conditions were examined within the parking study area, which is bounded by Townsend to the north, Seventh and Mississippi Streets to the west, 18th Street to the south, and San Francisco Bay to the east (see **Figure 5.2-8**). The parking study area was defined to include those off-street parking facilities located within a reasonable walking distance from the project site for an event, up to 0.5 miles, with easy access from the major street corridors that provide access to the Mission Bay Area.

¹³ A trauma center is a hospital equipped and staffed to provide comprehensive emergency medical services to patients suffering traumatic injuries.



Project Site Boundary
 Parking Study Area
 ← Driveway
 # Keyed to Table 5.2-8

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

OClI Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E: Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 5.2-8
Existing Off-Street Public Parking Facilities

Existing off-street parking supply and utilization data were obtained from available studies conducted in Mission Bay for the UCSF LRDP EIR (with surveys conducted in March and September 2013), and supplemented with additional field surveys in March 2013 and September and October 2014. **Table 5.2-8** lists the public parking facilities within the study area, indicates whether the facility is a garage or a surface parking lot, and notates the days and hours of operation. **Figure 5.2-8** presents the location of each facility. As noted in **Table 5.2-8**, two surface parking lots currently operate in the west and north portions of the project site. Parking Lot E, accessed from 16th Street, contains 289 parking spaces; and Parking Lot B, accessed from South Street, contains 316 parking spaces, for a total of 605 parking spaces.

**TABLE 5.2-8
 EXISTING OFF-STREET PUBLIC PARKING FACILITIES WITHIN PARKING STUDY AREA**

Parking Facility ^a (Keyed to Figure 5.2-8)	Facility	Spaces	Days/Hours/Terms of Operation
1. 185 Berry Street	Garage	270	M-F 6:30 a.m. to 7 p.m./extended during events
2. Pier 48 Sheds A and B	Shed	500	SF Giants game day only
3. West side of TF Blvd along Lot A	Lot	130	24 hours
4. 74 Mission Rock (Lot A) ^b	Lot	2,400	24 hours
5. Blocks 3E & 4E (Lot C) ^c	Lot	320	SF Giants game day only
6. 601 TFB/Pier 52 Boat Launch	Lot	57	24-hours (90 minute limit during special events)
7. East side of TF Blvd at South St.	Lot	78	24-hours
8. 450 South Street	Garage	1,400	M-F 7 a.m. to 7 p.m. (no event parking)
9. 1670 Owens Street	Garage	780	M-F 7 a.m. to 7 p.m.
10. UCSF 1650 Third Street	Garage	730	24 hours (permit parking only 6 p.m. to 7 a.m.)
11. UCSF Block 23	Lot	220	24 hours
12. UCSF 1625 Owens Street	Garage	590	24 hours
13. UCSF Medical Center Phase 1 ^d	Garage/Lot	1,050	24 hours
14. 455 South & 1725 Third (project site)	Lot	610	M-F 6 a.m. to 9 p.m./extended during events
Total spaces^e		9,135	

NOTES:

- ^a Existing parking supply. See **Appendix TR** for additional details related to owner/operator.
- ^b Reflects reduction in parking supply due to development associated with The Yard.
- ^c Reflects closure of 1000 Third Street (Lot D) with 320 spaces, and Lot C – Block 7 with 300 spaces, and increase in capacity at Lot C Blocks 3E and 4E (increase of 160 spaces).
- ^d New parking facilities associated with UCSF Medical Center Phase 1 operations.
- ^e Assuming all facilities open at the same time.

SOURCE: Adavant Consulting/LCW Consulting, 2015

The parking supply and demand survey data from 2013 and 2014 were adjusted to reflect changes in the parking conditions since the surveys were conducted. Specifically, the parking supply includes the new garage and surface lot associated with the recently-opened UCSF Medical Center Phase 1 (a total of 1,050 parking spaces), and the elimination of 320 spaces in the surface parking lot at 1000 Third Street (referred to as Lot D on Block 1 through Block 4), elimination of 300 spaces in the surface parking lot at Lot C South (Block 7), and reduction of 100 spaces in Lot A where development projects are pending in early 2015, and an increase in parking supply on Lot C (physically two lots located at Blocks 3E and 4E) from 160 to 320 spaces. The weekday parking occupancy for the analysis hours for the new UCSF Medical Center Phase 1 garage and lot was

based on the parking demand at full occupancy identified in the UCSF LRDP EIR as well as information on parking utilization at other UCSF parking facilities; this assumption was later confirmed by parking occupancy surveys conducted in April 2015. Because the UCSF LRDP EIR did not include an analysis of Saturday conditions, the Saturday parking occupancy for the analysis hours for the new UCSF Medical Center Phase 1 garage and lot was based on surveys of UCSF facilities conducted in April 2015. The parking demand associated with the eliminated parking spaces was redistributed to other nearby facilities. Detailed parking supply and occupancy information for the unadjusted and adjusted conditions are included in **Appendix TR**.

There are 15 off-street parking facilities that were observed for parking occupancies in the parking study area, containing a total of approximately 9,135 parking spaces, with the greatest number of spaces at Lot A (i.e., 2,400 spaces or 26 percent of the total supply). **Table 5.2-9** presents the parking occupancy for weekdays and Saturdays, for midday and evening conditions. Midday represents the period between 11:30 a.m. and 1:30 p.m., and the evening represents the period between 7:00 and 8:30 p.m.

**TABLE 5.2-9
OFF-STREET PARKING SUPPLY AND OCCUPANCY
EXISTING CONDITIONS – WITHOUT A SF GIANTS GAME
WEEKDAY AND SATURDAY**

Parking Facility ^a	Occupancy ^b			
	Weekday		Saturday	
	Midday	Evening	Midday	Evening
1. 185 Berry Street	100%	--	--	--
2. Pier 48 Sheds A and B	--	--	--	--
3. West side of TF Blvd along Lot A	0%	8%	8%	8%
4. 74 Mission Rock (Lot A) ^b	41%	27%	5%	5%
5. Blocks 3E & 4E (Lot C) ^c	--	--	--	--
6. 601 TFB/Pier 52 Boat Launch	88%	88%	35%	18%
7. East side of TF Blvd at South St.	38%	13%	0%	0%
8. 450 South Street	77%	--	--	--
9. 1670 Owens Street	41%	--	--	--
10. UCSF 1650 Third Street	97%	48%	21%	19%
11. UCSF Block 23	95%	68%	95%	68%
12. UCSF 1625 Owens Street	93%	30%	41%	14%
13. UCSF Medical Center Phase 1 ^d	90%	54%	30%	35%
14. 455 South & 1725 Third (project site)	39%	3%	--	--
Total Supply	8,345	5,865	5,255	5,255
Average Utilization	65%	36%	22%	38%

NOTES:

^a Existing parking supply. See **Appendix TR** for additional details related to owner/operator.

^b Reflects reduction in parking supply due to development associated with The Yard (a temporary pop-up venue).

^c Reflects closure of 1000 Third Street (Lot D) with 320 spaces, and Lot C – Block 7 with 300 spaces, and increase in capacity at Lot C Blocks 3E and 4E (increase of 160 spaces).

^d New parking facilities associated with UCSF Medical Center Phase 1 operations.

SOURCE: Adavant Consulting/LCW Consulting, 2015

On weekdays without a SF Giants game at AT&T Park, off-street parking facilities during the weekday midday period range in occupancy between 40 percent and fully occupied, with an average of 52 percent occupancy. Parking demand in the study area is lower during the weekend midday peak period, with an average of 22 percent occupancy. Since many parking facilities in the study area serve the medical and office uses in the area, the occupancy of the off-street facilities is substantially lower during weekday evenings (about 36 percent occupied) and Saturday evenings (about 18 percent occupied). Parking occupancies on days with a SF Giants evening game at AT&T Park are presented in Section 5.2.3.8 below.

On-street Parking

Existing on-street parking conditions were qualitatively assessed during field observations, and from previously-collected data for streets within and in the vicinity of the UCSF Mission Bay campus from field surveys conducted as part of the UCSF LRDP EIR.

Adjacent to the project site, parking is prohibited on Third Street, as the northbound travel lane runs adjacent to the curb. Adjacent to the project site, on-street parking is currently not permitted on South and 16th Streets, while on Terry A. Francois Boulevard on-street parking is permitted, and is currently unrestricted.

Elsewhere in the project vicinity, on-street parking is primarily metered one-hour, four-hour and unlimited time restricted parking spaces. Exceptions include portions of Terry A. Francois Boulevard, Mission Bay Boulevard North, Mission Bay Boulevard South, 16th Street, and Mariposa Street. Parking is prohibited on 16th Street west of Third Street. Metered parking regulations are in effect Monday through Saturday between 9:00 a.m. and 10:00 p.m., and between 9:00 a.m. and 6:00 p.m. on Sundays. The SFMTA and the Port of San Francisco have established Mission Bay as a metered district, and installation of meters is ongoing, as street construction and parcel development is completed. In February 2012, the Port Commission reconfirmed its approval for parking meters in Mission Bay. These new meters will have no time limit, thereby removing the two-hour time limited parking restrictions currently in effect in much of Mission Bay. Thus, streets with unrestricted and unmetered parking spaces, such as Terry A. Francois Boulevard, South Street, and 16th Street adjacent to the project site, will be metered. Special event pricing is in effect for all parking meters within Mission Bay South; rates are higher for meters located closer to AT&T Park.

On-street parking is well utilized during the daytime hours, with higher occupancies near completed and occupied buildings. Midday occupancy on streets within the UCSF Mission Bay campus are about 90 percent occupied, as is Terry A. Francois Boulevard. Parking utilization during the evening (about 25 percent) and overnight hours is low due to the limited evening uses in the area. On-street parking during the evening hours increase on days with a SF Giants evening game at AT&T Park (about 60 percent). See Section 5.2.3.8 for information on conditions with a SF Giants evening game.

Residential Permit Parking (RPP) regulations generally restrict on-street parking to a time-limited period, but vary on the days of the week and time of day that the regulations are in effect.¹⁴ South of the project site, there is an Area “X” RPP regulation that restricts on-street parking Monday through Friday, to a two- or four-hour period between the hours of 8:00 a.m. and 4:00 p.m. unless an RPP “X” permit is displayed, in which case there is no time limit enforced. East of I-280, Area “X” extends south of Mariposa Street between Indiana and Third Streets, and west of I-280 it extends south of 16th Street. Thus, within the parking study area, the streets between Mariposa and 18th Streets, between Indiana and Third Streets are subject to the RPP “X” regulation.

5.2.3.8 Conditions with a SF Giants Evening Game at AT&T Park

AT&T Park, which is home to the San Francisco Giants Major League Baseball team, is located south of King Street between Second and Third Streets, approximately 0.7 miles north of the project site. AT&T Park has a capacity of approximately 42,000 attendees. San Francisco Giants regular season baseball games occur generally from April through September, and there are about 81 regular season home games during the baseball season. There are typically two pre-season baseball games. Up to 12 post-season games are possible, generally in October. AT&T also hosts occasional non-baseball events such as concerts, soccer games, and private parties.

- AT&T Park provides a Transportation Management Center (TMC) that contains access to video cameras positioned at several key intersections north of the channel. A Parking Control Officer (PCO)¹⁵ Supervisor is stationed at the TMC, and there are two PCO supervisors in the field (one for the area north of the channel, and one for the area south of the channel) that manage the 22 to 24 other PCOs that are typically assigned to a baseball game. The PCOs are deployed and relocated based on real-time information from video cameras and radio and telephone communications with PCOs. Flashing beacons and signs can also be activated from the TMC. These beacons are designed to notify motorists when there is an event at AT&T Park and direct them to alternate routes. There are flashing beacons facing southbound traffic on The Embarcadero between Folsom and Harrison Streets, facing eastbound traffic on 16th Street east of Seventh Street, and on northbound I-280 approaching the Mariposa Street exit.¹⁶
- Eastbound King Street between Third and Second Streets is closed to vehicular traffic starting at the seventh inning, and is reopened after traffic dissipates, typically about 45 minutes to an hour following the end of the game. However, weekday games can partially overlap with the evening peak commute period, which can extend the temporary eastbound road closure on King Street and associated post-game congestion. There are about 10 weekday baseball games per year.

¹⁴ The preferential residential parking system (i.e., the Residential Permit Parking program) was established in 1976 to preserve neighborhood living within a major urban center. The main goal of the program is to provide more parking spaces for residents by discouraging long-term parking by people who do not live in the area. Local regulations regarding the establishment of permit areas and requirements for permits can be found in the San Francisco Transportation Code, Division II, Article 900. Available online at <https://law.resource.org/pub/us/code/city/ca/SanFrancisco/0-snapshots/S-44/Transportation.html>. Access May 28, 2015.

¹⁵ In San Francisco, Parking Control Officers (PCOs), also known as Traffic Control Officers, are deployed to manage and direct vehicular, transit, bicycle, and pedestrian flows, in an effort to increase safety and reduce congestion.

¹⁶ There is an existing flashing beacon on Third Street north of Mariposa Street. The permanent changeable message sign at this location installed by the SFMTA as part of SFgo will replace the beacon and associated signage, and the beacon and signage will be removed.

- The two easternmost travel lanes on Third Street between Terry A. Francois Boulevard and Berry Street are closed to vehicular traffic from approximately two hours prior to a game through about one hour after the end of the game to provide pedestrians additional walkway area. The three remaining lanes remain open to vehicular traffic; pre-game there are two southbound lanes and one northbound lane, while post-game there are two northbound lanes and one southbound lane.
- Fourth Street between Channel and Berry Streets is restricted to transit vehicles, taxis and bicycles only starting at the seventh inning, and is reopened after traffic dissipates.
- The northern portion of Terry A. Francois Boulevard is closed to vehicular traffic approximately two to three hours prior to a game, and is reopened when most vehicles have exited the parking lot (i.e., Lot A containing approximately 2,400 spaces).
- Vehicles exiting the parking facilities and traveling southbound on Terry A. Francois Boulevard are not permitted to turn right onto Mariposa Street westbound. Instead, drivers are directed south on Illinois Street. Tow-away regulations are in effect on game days on the west side of Illinois Street between Mariposa and 18th Streets to allow for two southbound lanes to continue on Illinois Street (i.e., Terry A. Francois Boulevard contains two southbound travel lanes, while Illinois Street contains one southbound travel lane, and without additional travel lane capacity this location would become a bottleneck). South of 18th Street one southbound travel lane is provided, as a substantial number of vehicles on Illinois Street turn right onto 18th Street westbound.
- Additional walking area for pedestrians is provided before and after games on the Lefty O'Doul (Third Street) Bridge, and on the closed portion of Terry A. Francois Boulevard. After games, pedestrians are permitted on the closed portion of King Street (i.e., the eastbound lanes) between Third and Second Streets. This area is used to stage Muni Metro riders in order to prevent the transit boarding island on King Street west of Second Street from getting overcrowded.
- At the intersection of Third Street/King Street, pedestrians are sometimes permitted to cross diagonally during the post-game surge. Otherwise, pedestrians are directed by PCOs to stay on the sidewalks and within crosswalks, crossing on the WALK indication, or when PCOs direct pedestrians to cross; in this fashion, pedestrians are prevented from shutting down the intersection to transit and traffic flow, and from obstructing Muni Metro tracks. Some sidewalks such as the east side of Third Street between King and Townsend Streets become very congested, and, as a result, some pedestrians walk in the traffic lanes on northbound Third Street. Right turns are prohibited during the post-game periods at several locations, such as northbound Third Street at Townsend Street, where conflicts between right turning traffic and pedestrians in the east crosswalk can cause delays to traffic on northbound Third Street.
- There are currently three taxi stands for AT&T Park on game days: west side of Second Street just south of Townsend Street, west side of Second Street north of Townsend Street (post-game period only), and west side of Third Street just north of King Street. Taxi operations work well before and during games. However, during the post-game period, taxis have difficulty leaving the ballpark area without getting stuck in post-game traffic congestion. Left turns are not allowed from southbound Second Street onto eastbound King Street/The Embarcadero because of conflicts with Muni Metro operations. Post-game traffic on westbound King Street between Second and Third Streets is typically very

congested due to heavy traffic and pedestrian volumes at the intersection of Third/King. The post-game only taxi stand on the west side of Second Street north of Townsend Street is designed to allow taxis on southbound Second Street to exit the area by turning either left or right onto Townsend Street, which is generally not congested with post-game traffic. However, this zone is often illegally occupied by limousines or TNC vehicles, instead of taxis. PCOs are regularly dispatched to enforce the taxi-only restriction.¹⁷

- Attendees arriving by auto are directed to two parking facilities north of the channel (i.e., the Pier 30 lot and the Bayside lot at Seawall Lot 330 containing a total of about 1,300 spaces), and six surface parking lots south of the channel (Lot A, Lot B, Lot C North, Lot C South, and Lot D, as well as Pier 48, with the six lots containing a total of 4,250 parking space. Lot B is located on the project site). Parking in Lot A is mainly reserved for pre-paid and ADA parking only. Event parking is also provided in other publicly-accessible off-street parking facilities north and south of the ballpark.
- Special event pricing is in effect at on-street parking meters within the area generally bounded by Bryant Street to the north, Fifth and Seventh Streets to the west, Mariposa Street to the south, and the San Francisco Bay to the east. In addition, evening hours at meters are extended to 10:00 p.m. Monday through Sunday. Special event meter rates are generally \$7 per hour north of the channel and south to Mission Bay Boulevard South, \$5 per hour between Mission Bay Boulevard South and 16th Street, and \$3 per hour between 16th and Mariposa Streets.¹⁸
- On game days, the SFMTA provides additional KT Ingleside-Third light rail service in order to increase light rail capacity. Two-car shuttle trains run continuously before and during the games between West Portal and the intersection of Fourth/King. Prior to the end of the game, the trains stage within the King Street median west of Fourth Street in order to facilitate loading of passengers and departure of trains from the ballpark area. The extra shuttle trains continue to run until all transit passengers leaving the ballpark are served.
- Special AT&T Ballpark ferry service is provided between the ballpark and Alameda, Marin and Solano Counties. The Golden Gate Bridge Highway and Transportation District provides service between AT&T Park and the Larkspur Ferry Terminal following a game. The Alameda/Oakland Ferry provides ferry service between the Oakland and Alameda ferry terminals and AT&T Park for most games. Vallejo Ferry provides service to and from the ballpark for all Saturday and Sunday games, and return service from the ballpark to Vallejo is also provided for select weeknight games Monday through Friday. In 2014, Caltrain provided regularly scheduled inbound trains on game day afternoons before the start of the game. Caltrain also provides two special trains departing San Francisco at the end of each game. These include an express train to San Carlos leaving approximately 15 minutes after the last out, or when full; this express train then makes all weekday local stops between San Carlos and the San Jose Diridon station. A second train departs San Francisco 25 minutes after the end of the game, or when full, serving all weekday local stops between San Francisco and San Jose Diridon.

¹⁷ Transportation Network Company (TNC) is a company or organization that provides transportation services using an online-enabled platform to connect passengers with drivers using their personal vehicles (e.g., Lyft, SideCar, Uber).

¹⁸ Parking meters also are in effect on Sundays at Fisherman's Wharf, The Embarcadero, five off-street parking facilities, and in the Special Event Zone if there is an event. Meters on Terry A. Francois Boulevard are subject to the Special Event Zone hours.

Intersection Operations. Table 5.2-10 presents the intersection LOS conditions at the study intersections for days with a SF Giants evening game at AT&T Park. Figure 5.2-1 through Figure 5.2-4 present a graphical comparison of the intersection LOS for the analysis hours for conditions without and with a SF Giants evening game at AT&T Park. As noted above, congestion in Mission Bay is affected by traffic associated with special events and during baseball season when the SF Giants have home games at AT&T Park. Transportation impacts associated with game day conditions are most severe prior to games and after the conclusion of games.

During the analysis hours, most study intersections currently operate at LOS D or better. The exceptions are the intersections of King/Third and King/Fifth/I-280 ramp that operate at LOS E during the weekday p.m. and weekday evening peak hours, and the intersection of Fifth/Bryant/I-80 eastbound on-ramp that operates at LOS F during the weekday p.m. and weekday evening peak hours. The poor operating conditions at these intersections are a result of high volumes destined to I-80 and I-280. In addition, with implementation of the transit-only lane on 16th Street as part of the 22 Fillmore Transit Priority Project, the intersection of Seventh/Mississippi/16th operates at LOS F during the weekday p.m. peak hour and LOS E during the weekday evening peak hour.

Intersection LOS cannot be calculated at the intersections where PCO's are currently deployed and direct traffic flow prior to or follow a SF Giants games (i.e., at the intersection of King/Third, King/Fourth, Third/Channel, Fourth/Channel, Illinois/Mariposa, and Third/Mariposa), and are therefore not presented in Table 5.2-10.¹⁹

Ramp Operations. Table 5.2-11 presents the ramp LOS conditions at the study locations for days with a SF Giants evening game at AT&T Park. During the analysis hours, all of the ramp merge and diverge sections currently operate at LOS D or better, except for the I-80 eastbound Sterling Street on-ramp which operates at LOS E during the weekday p.m. peak hour, and the I-80 eastbound Fifth/Bryant on-ramp which operates at LOS F during all the weekday p.m., weekday evening, and Saturday evening peak hours. The LOS E and LOS F conditions at the I-80 ramps reflect the congestion associated with traffic attempting to leave downtown San Francisco that is constrained by the limited capacity of the Bay Bridge ramps onto the bridge, causing queues to form on surface streets leading to the bridge. In addition, as for conditions without a SF Giants evening game, the I-280 southbound on-ramp merge at Pennsylvania Street also experiences LOS E conditions due to the high volume of southbound vehicles on I-280 during the weekday p.m. peak hour.

¹⁹ The HCM methodology (see Section 5.2.5.3, under "Approach to Impact Analysis Methodology") used to calculate intersection LOS at signalized intersections is based on the peak 15-minute period of the one hour with the greatest traffic volume, and it assumes that during the analysis period, the traffic signal operation and traffic movements and flow would generally operate under a regular pattern. This is not the case at intersections managed by PCOs after events at AT&T Park. At those locations, the normal operation of the traffic signal is interrupted due to travel lane or roadway closures, PCOs providing longer crossing times for pedestrians, PCOs halting traffic flow temporarily to clear out the intersection or to allow transit to move, among other event-related transportation management strategies. For these reasons, an intersection LOS is not presented for those locations where PCOs actively manage intersection operations.

**TABLE 5.2-10
INTERSECTION LEVEL OF SERVICE
EXISTING CONDITIONS – WITH A SF GIANTS EVENING GAME
WEEKDAY PM, EVENING, LATE EVENING, AND SATURDAY EVENING PEAK HOURS**

#	Intersection Location		Weekday Conditions						Saturday Evening ^d	
			PM ^a		Evening ^b		Late Evening ^c		Delay	LOS
			Delay ^e	LOS ^f	Delay	LOS	Delay	LOS		
1	King Street	Third Street	<i>PCO Controlled</i>							
2	King Street	Fourth Street	<i>PCO Controlled</i>							
3	King St/Fifth St	I-280 ramps	60.7	E	77.1	E	> 80	F	41.1	D
4	Fifth St/Harrison St	I-80 WB off-ramp	62.4	E	47.3	D	22.2	C	33.1	C
5	Fifth St/Bryant St	I-80 EB on-ramp	>80	F	>80	F	24.9	C	51.7	D
6	Third Street	Channel Street	<i>PCO Controlled</i>							
7	Fourth Street	Channel Street	11.5	B	< 10	A	<i>PCO Controlled</i>		< 10	A
8	Seventh Street	Mission Bay Drive	26.5	C	21.2	C	12.5	B	15.0	B
9	Terry Francois Blvd	South Street ^g	11.4 (eb)	B	11.5 (eb)	B	12.9 (eb)	B	10.4 (eb)	B
10	Third Street	South Street	25.1	C	21.8	C	11.5	B	< 10	A
11	Terry Francois Blvd	16th Street ^h	--	--	--	--	--	--	--	--
12	Illinois Street	16th Street ^g	14.1 (nb)	B	11.7 (nb)	B	< 10 (nb)	A	< 10 (nb)	A
13	Third Street	16th Street ⁱ	34.4	C	27.0	C	18.3	B	12.8	B
14	Fourth Street	16th Street ⁱ	28.7	C	19.7	B	15.1	B	14.0	B
15	Owens Street	16th Street ⁱ	49.2	D	22.0	C	11.5	B	10.1	B
16	Seventh/Mississippi	16th Street ⁱ	> 80	F	75.6	E	25.6	C	28.0	C
17	Illinois Street	Mariposa Street ^g	27.6 (eb)	D	15.1 (eb)	B	<i>PCO Controlled</i>		< 10 (eb)	A
18	Third Street	Mariposa Street	35.4	C	34.9	C	<i>PCO Controlled</i>		26.9	C
19	Fourth Street	Mariposa Street	14.4	B	12.0	B	< 10	A	< 10	A
20	Mariposa Street	I-280 NB off-ramp	21.6	C	20.2	C	17.2	B	16.2	B
21	Mariposa Street	I-280 SB on-ramp ^g	< 10	A	< 10	A	13.2	B	10.5	B
22	Third Street	Cesar Chavez St	44.6	D	32.2	C	35.3	D	32.3	C

NOTES:

- a Weekday p.m. peak hour of 4 to 6 p.m. peak period.
- b Weekday evening peak hour of 6 to 8 p.m. peak period.
- c Weekday late evening peak hour of 9 to 11 p.m. peak period.
- d Saturday evening peak hour of 6 to 9 p.m. peak period.
- e Delay presented in seconds per vehicle. For unsignalized intersections, delay and LOS presented for worst approach. Worst approach indicated in ().
- f Intersections operating at LOS E or LOS F conditions highlighted in **bold**.
- g All-way stop-controlled or side-street stop-controlled intersection.
- h Future analysis location. 16th Street not currently a through street between Illinois Street and Terry A. Francois Boulevard.
- i The traffic signal at the intersection of Mariposa/I-280 southbound on-ramp is part of the roadway improvements on Mariposa Street between the I-280 northbound off-ramp and I-280 southbound on-ramp and the extension of Owens Street between 16th and Mariposa Streets, and is currently planned to be operational by fall 2015.
- j Assumes implementation of the 22 Fillmore Transit Priority Project, which includes converting one mixed-flow lane in each direction to a side-running transit-only lane.

SOURCE: Advant Consulting/LCW Consulting, 2015

**TABLE 5.2-11
 FREEWAY RAMP LEVEL OF SERVICE
 EXISTING CONDITIONS – WITH A SF GIANTS EVENING GAME
 WEEKDAY PM, EVENING, LATE PM, AND SATURDAY EVENING PEAK HOURS**

# Ramp Location	Weekday Conditions						Saturday Evening ^d	
	PM ^a		Evening ^b		Late Evening ^c		Density	LOS
	Density ^f	LOS	Density	LOS	Density	LOS		
1 I-80 Eastbound On-ramp at Sterling	35	E	28	C	23	C	25	C
2 I-80 Eastbound On-ramp at Fifth/Bryant	--	F	--	F	32	D	--	F
3 I-80 Westbound Off-ramp at Fifth/Harrison	31	D	29	D	27	C	27	C
4 I-280 Southbound On-ramp at Pennsylvania	36	E	28	D	21	C	17	B
5 I-280 Northbound Off-ramp at Mariposa	29	C	30	D	13	B	18	B
6 I-280 Southbound On-ramp at Mariposa	31	D	26	C	18	B	14	B

NOTES:

- ^a Weekday p.m. peak hour.
 - ^b Weekday evening peak hour of 6 to 8 p.m. peak period.
 - ^c Weekday late p.m. peak hour of 9 to 11 p.m. peak period.
 - ^d Saturday evening peak hour of 6 to 9 p.m. peak hour.
 - ^e Density of vehicles per segment. Measures in passenger cars per mile per lane. Density value is not presented for segments where the demand volume exceeds the capacity, per *2000 Highway Capacity Manual*.
 - ^f Segments operating at LOS E or LOS F conditions highlighted in **bold**.
- SOURCE: Adavant Consulting/LCW Consulting, 2015

Transit Conditions. About 43 to 47 percent of SF Giants game attendees take transit to games on weekdays, and about 36 to 37 percent take transit on weekends.²⁰ As described above, on game days, SFMTA provides additional KT Ingleside-Third light rail service in order to increase light rail capacity. Two-car shuttle trains run continuously before and during the games between West Portal and the intersection of Fourth/King. Prior to the end of the game, the trains stage within the King Street median west of Fourth Street in order to facilitate loading of passengers and departure of trains from the ballpark area. The extra shuttle trains continue to run until all transit passengers leaving the ballpark are served. Additional regional ferry service is provided between the ballpark and Alameda, Marin and Solano Counties. In addition, Caltrain provides two outbound trains at the end of the game.

Pedestrian Conditions. Pedestrian volumes at the analysis locations on days with a SF Giants evening game are slightly higher, but similar to those on days without a SF Giants game. The higher pedestrian volumes in the project vicinity are associated with SF Giants game attendees parking on the existing surface lots on the project site and at other nearby UCSF parking garages. **Table 5.2-12** presents the hourly pedestrian volumes and LOS conditions for the crosswalk and sidewalk analysis locations. Similar to conditions without a SF Giants evening game at AT&T Park, all crosswalk and sidewalk analysis locations operate at LOS A conditions. On days with a SF Giants evening game, substantially heavier pedestrian flow conditions occur to the north, away from the project site, particularly on the section of Third Street north of Mission Rock Street

²⁰ Surveys of game attendees at AT&T Park conducted by the SF Giants in 2012, supplemented with similar data collected in 2007. More detailed survey results are provided in **Appendix TR**.

and on the Third Street Bridge, which is used by SF Giants game attendees as they walk between parking Lot A and AT&T Park.

TABLE 5.2-12
PEDESTRIAN LEVEL OF SERVICE
EXISTING CONDITIONS – WITH A SF GIANTS EVENING GAME
WEEKDAY P.M. AND EVENING, AND SATURDAY EVENING PEAK HOURS

Analysis Location	Weekday Conditions						Saturday Evening		
	PM			Evening					
	Peds/ Hour	MOE ^a	LOS	Peds/ Hour	MOE	LOS	Peds/Hour	MOE	LOS
Crosswalks									
<i>Third St/South St</i>									
North	67	294	A	41	401	A	23	714	A
South	135	144	A	108	150	A	39	421	A
East	69	1,045	A	66	1,253	A	55	1,502	A
<i>Third St/16th Street</i>									
North	32	814	A	34	764	A	23	1,594	A
South	70	370	A	44	590	A	39	973	A
East	32	1,296	A	28	1,479	A	55	2,472	A
West	107	351	A	120	313	A	27	1,102	A
Sidewalk									
<i>Third St between South and 16th Streets</i>									
East	42	0.1	A	30	0.1	A	29	0.1	A
West	103	0.3	A	111	0.3	A	19	0.1	A

NOTES:

^a The measure of effectiveness for crosswalks is density – pedestrians per square foot. The measure of effectiveness for sidewalks is the flow rate – pedestrians per minute per foot.

SOURCE: Advant Consulting/LCW Consulting, 2015

Bicycle Conditions. Table 5.2-8 in Section 5.2.3.7 presents the hourly bicycle volumes for conditions without and with a SF Giants evening game at AT&T Park. Overall, bicycle volumes in the project vicinity on days with a SF Giants evening game are slightly higher, but similar to those on days without a SF Giants game. Overall, on weekdays and weekends bicycle conditions were observed to be operating acceptably, with no conflicts between bicyclists, pedestrians and vehicles.

Parking Conditions. Table 5.2-13 presents the parking occupancy at the study area off-street facilities for a day with a SF Giants evening game at AT&T Park. In general, on days with a SF Giants evening game, weekday midday parking occupancy is lower at many facilities than on days without a SF Giants game, likely due to increase parking rates on game days at many facilities resulting in drivers destined to the area to change travel modes from auto to transit, bicycle, and/or walk modes. On SF Giants game days, a number of existing facilities open for event parking. These include 185 Berry Street (weekday evenings only), Piers 48 Sheds A and B and 1050 Third Street/Mission Rock (on both weekday and weekend evenings). Even accounting for the additional capacity provided in these facilities (1,090 spaces on weekday evenings and 830 spaces on weekend evenings), the overall

parking occupancy for the study area facilities increases from less than 40 percent on days without a SF Giants game to more than 70 percent on days with a SF Giants evening game. On days with a SF Giants game, there are lower weekday midday parking occupancy rates compared to typical weekdays, since facilities managed by SF Giants (Lot A, 455 South St, 1725 Third St, etc.) would charge higher game-day rates. It should be noted that additional facilities north of King Street accommodate parking demand associated with SF Giants games, including 1,000 spaces at the Pier 30 surface lot and 300 spaces on the Bayside surface lot across from Pier 30. In addition, numerous parking garages serving commercial uses accommodate game day parking.

**TABLE 5.2-13
 OFF-STREET PARKING SUPPLY AND OCCUPANCY
 EXISTING CONDITIONS – WITH A SF GIANTS EVENING GAME
 WEEKDAY AND SATURDAY**

Parking Facility ^a	Occupancy ^b			
	Weekday		Saturday	
	Midday	Evening	Midday	Evening
1. 185 Berry Street	100%	89%	--	--
2. Pier 48 Sheds A and B	--	62%	--	98%
3. West side of TF Blvd along Lot A	15%	92%	8%	92%
4. 74 Mission Rock (Lot A) ^b	28%	100%	5%	95%
5. Blocks 3E & 4E (Lot C) ^c	--	98%	--	95%
6. 601 TFB/Pier 52 Boat Launch	70%	18%	53%	35%
7. East side of TF Blvd at South St.	26%	0%	13%	13%
8. 450 South Street	71%	--	--	--
9. 1670 Owens Street	44%	--	--	--
10. UCSF 1650 Third Street	93%	79%	21%	66%
11. UCSF Block 23	95%	50%	91%	86%
12. UCSF 1625 Owens Street	79%	29%	64%	20%
13. UCSF Medical Center Phase 1 ^d	90%	54%	30%	35%
14. 455 South & 1725 Third (project site)	30%	34%	2%	95%
Total Supply	8,345	6,955	5,865	6,685
Average Occupancy	58%	77%	23%	75%

NOTES:

- ^a Existing parking supply. See **Appendix TR** for additional details related to owner/operator.
- ^b Reflects reduction in parking supply due to development associated with The Yard.
- ^c Reflects closure of 1000 Third Street (Lot D) with 320 spaces, and Lot C – Block 7 with 300 spaces, and increase in capacity at Lot C Blocks 3E and 4E (increase of 160 spaces).
- ^d New parking facilities associated with UCSF Medical Center Phase 1 operations.

SOURCE: Advant Consulting/LCW Consulting, 2015

5.2.4 Regulatory Framework

This section provides a summary of the plans and policies of the City and County of San Francisco, and regional, state and federal agencies that have policy and regulatory control over the proposed project site.

5.2.4.1 Federal and State Regulations

There are no federal or state transportation regulations applicable to the proposed project.

5.2.4.2 Regional Regulations

Water Emergency Transportation Authority's Water Transportation System Management Plan

WETA is a regional agency authorized by the State to operate a comprehensive San Francisco Bay Area public water transit system. In 2009, the WETA adopted the Emergency Water Transportation System Management Plan, which complements and reinforces other transportation emergency plans that will enable the Bay Area to restore mobility after a regional disaster.

San Francisco Bay Trail Plan

The Association of Bay Area Governments (ABAG) administers the San Francisco Bay Trail Plan (Bay Trail Plan). The Bay Trail is a multi-purpose recreational trail that, when complete, would encircle San Francisco Bay and San Pablo Bay with a continuous 400-mile network of bicycling and hiking trails; to date, 338 miles of the alignment have been completed. The 2005 Gap Analysis Study, prepared by ABAG for the entire Bay Trail area, attempted to identify the remaining gaps in the Bay Trail system; classify the gaps by phase, county, and benefit ranking; develop cost estimates for individual gap completion; identify strategies and actions to overcome gaps; and present an overall cost and timeframe for completion of the Bay Trail system.

5.2.4.3 Local Regulations and Plans

Transit First Policy

In 1998, the San Francisco voters amended the City Charter (Charter Article 8A, Section 8A.115) to include a Transit-First Policy, which was first articulated as a City priority policy by the Board of Supervisors in 1973. The Transit-First Policy is a set of principles that underscore the City's commitment that travel by transit, bicycle, and foot be given priority over the private automobile. These principles are embodied in the policies and objectives of the Transportation Element of the San Francisco General Plan. All City boards, commissions, and departments are required, by law, to implement transit-first principles in conducting City affairs.

San Francisco General Plan

The Transportation Element of the San Francisco General Plan is composed of objectives and policies that relate to the eight aspects of the citywide transportation system: General Regional

Transportation, Congestion Management, Vehicle Circulation, Transit, Pedestrian, Bicycles, Citywide Parking, and Goods Management. The Transportation Element references San Francisco's Transit First Policy in its introduction, and contains objectives and policies that are directly pertinent to consideration of the proposed project, including objectives related to locating development near transit investments, encouraging transit use, and traffic signal timing to emphasize transit, pedestrian, and bicycle traffic as part of a balanced multimodal transportation system. The San Francisco General Plan also emphasizes alternative transportation through positioning of building entrances, making improvements to the pedestrian environment, and providing safe bicycle parking facilities.

San Francisco Bicycle Plan

The *San Francisco Bicycle Plan (Bicycle Plan)* describes a City program to provide the safe and attractive environment needed to promote bicycling as a transportation mode. The *San Francisco Bicycle Plan* identifies the citywide bicycle route network, and establishes the level of treatment (i.e., Class I, Class II or Class III facility) on each route. The *Bicycle Plan* also identifies near-term improvements that could be implemented within the next five years, as well as policy goals, objectives and actions to support these improvements. It also includes long-term improvements, and minor improvements that would be implemented to facilitate bicycling in San Francisco.

Better Streets Plan

The *San Francisco Better Streets Plan (Better Streets Plan)* focuses on creating a positive pedestrian environment through measures such as careful streetscape design and traffic calming measures to increase pedestrian safety. The *Better Streets Plan* includes guidelines for the pedestrian environment, which it defines as the areas of the street where people walk, sit, shop, play, or interact. Generally speaking, the guidelines are for design of sidewalks as crosswalks; however, in some cases, the *Better Streets Plan* includes guidelines for certain areas of the roadway, particular at intersections.

5.2.5 Impacts and Mitigation Measures

5.2.5.1 Significance Thresholds

The project would have a significant impact related to transportation and circulation if the project were to:

- Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;
- Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, established by the county congestion management agency for designated roads or highways (unless it is practical to achieve the standard through increased use of alternative transportation modes);

- Result in a change in air traffic patterns, including either an increase in traffic levels, obstructions to flight, or a change in location, that causes substantial safety risks;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses;
- Result in inadequate emergency access; or
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., conflict with policies promoting bus turnouts, bicycle racks, etc.) regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities, or cause a substantial increase in transit demand which cannot be accommodated by existing or proposed transit capacity or alternative travel modes.

Below is a list of significance criteria that the Office of Community Investment and Infrastructure (OCII), in consultation with the San Francisco Planning Department, uses to assess whether the proposed project would result in significant transportation impacts. These criteria are organized by mode to facilitate the transportation impact analysis; however, the transportation significance criteria are essentially the same as the ones presented above.

- The project would have a significant effect on the environment if it would cause a substantial increase in transit demand that could not be accommodated by adjacent transit capacity, resulting in unacceptable levels of transit service; or cause a substantial increase in delays or operating costs such that significant adverse impacts in transit service levels could result. With the Muni and regional transit screenline analyses, the project would have a significant effect on the transit provider if project-related transit trips would cause the capacity utilization standard to be exceeded during the peak hour;
- The operational impact on signalized intersections is considered significant when project-related traffic causes the intersection level of service to deteriorate from LOS D or better to LOS E or LOS F, or from LOS E to LOS F. The operational impacts on unsignalized intersections are considered potentially significant if project-related traffic causes the level of service at the worst approach to deteriorate from LOS D or better to LOS E or LOS F and peak hour signal warrants²¹ would be met, or would cause peak hour signal warrants to be met when the worst approach is already operating at LOS E or LOS F. The project may result in significant adverse impacts at intersections that operate at LOS E or LOS F under existing conditions depending upon the magnitude of the project's contribution to the worsening of the average delay per vehicle. In addition, the project would have a significant adverse impact if it would cause major traffic hazards or contribute considerably to cumulative traffic increases that would cause deterioration in levels of service to unacceptable levels;

²¹ A signal warrant is a condition that an intersection must meet to justify a signal installation. There are different warrants, which examine factors such as the volume of vehicles, bicyclists, and pedestrian, the signal system, collision statistics, as well as the geometric/physical configuration of the intersection. Even if a signal warrant is not met under the strictest interpretation, the determination to signalize an intersection could be made based upon the city traffic engineer's professional judgment of intersection operations.

- The project would have a significant effect on the environment if it would result in substantial overcrowding on public sidewalks and crosswalks, create potentially hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility to the site and adjoining areas;
- The project would have a significant effect on the environment if it would create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas;
- A project would have a significant effect on the environment if it would result in a loading demand during the peak hour of loading activities that could not be accommodated within proposed on-site loading facilities or within convenient on-street loading zones, and would create potentially hazardous conditions or significant delays affecting traffic, transit, bicycles, or pedestrians; or
- A project would have a significant effect on the environment if it would result in inadequate emergency access.

Construction-related impacts generally would not be considered significant due to their temporary and limited duration.

5.2.5.2 Project Transportation Improvements Assumptions

Chapter 3, Project Description, summarizes the elements of the project description related to transportation features (e.g., on-site vehicle and bicycle parking spaces and truck loading spaces)²² and circulation improvements, including proposed vehicular access and on-site circulation, pedestrian and bicycle access, off-site streetscape improvements, changes to the Mission Bay shuttle service, and the project Transportation Management Plan (TMP); these elements are re-iterated and expanded upon in this section. The project TMP is included in its entirety in **Appendix TR**.

This section is organized as follows:

1. Roadway Network Improvements and Curb Regulations
2. Transit Network Improvements
3. Pedestrian Network Improvements
4. Bicycle Network Improvements
5. Mission Bay TMA Shuttle Program Improvements
6. Muni Special Event Transit Service Plan
7. Transportation Management Plan

²² Because the project site is located within the *Mission Bay South Redevelopment Plan Area*, it is not subject to the *San Francisco Planning Code* requirements, unless specifically noted. Instead, the proposed project is subject to the *Mission Bay South Design for Development* requirements. **Appendix TR** includes a comparison of the proposed project elements to the *Mission Bay South Design for Development* requirements. Because the *Mission Bay South Design for Development* does not contemplate off-street parking and loading standards for a multipurpose event center, the proposed project includes amendments to the *Mission Bay South Design for Development* to accommodate revised requirements for this land use.

1. Roadway Network Improvements and Curb Regulations

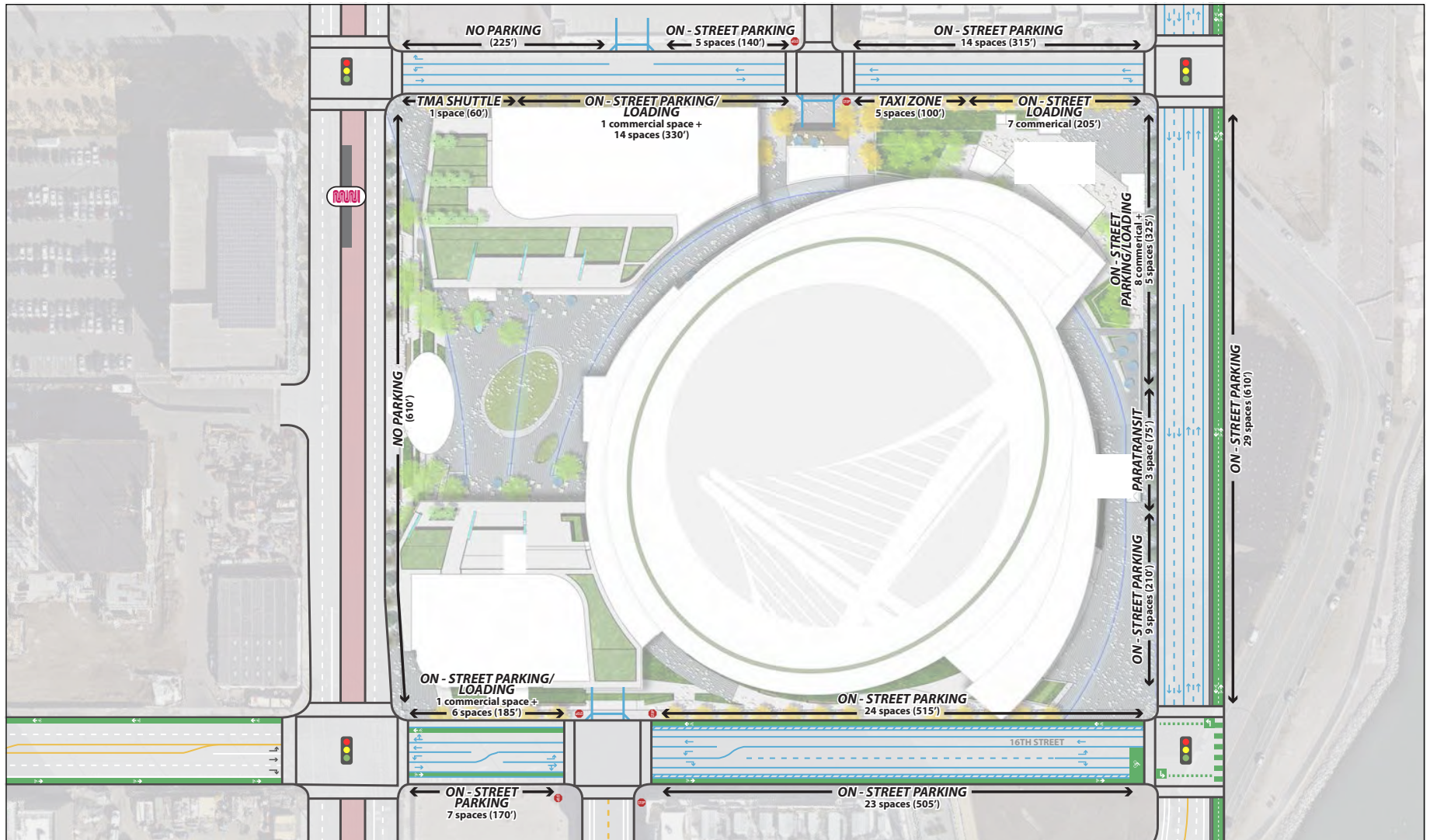
The proposed project includes completion of the roadway network adjacent to the project site.

Figure 5.2-9 presents the travel lane striping for the streets adjacent to the project site, subject to SFMTA review and approval.

- Adjacent to the project site, the number of travel lanes on Third Street and Terry A. Francois Boulevard would not change from existing conditions (i.e., two lanes each way without dedicated left-turn lanes). As part of the Mission Bay South Infrastructure Plan, Terry A. Francois Boulevard between South and 16th Streets would be relocated to align with the eastern edge of Blocks 29 and 30 (i.e., to the west of its current alignment).
- South Street currently has two travel lanes each way, with no on-street parking. With implementation of the proposed project, South Street would have one lane each way and on-street parking permitted on both sides of the street. At the westbound approach to Third Street, on-street parking would be prohibited for about 225 feet to provide for an additional right-turn only lane.
- 16th Street is currently open between Third and Illinois Streets, and with implementation of the proposed project, 16th Street would be rebuilt and extended to connect with the realigned Terry A. Francois Boulevard. Between Third and Illinois Streets, 16th Street would have one eastbound lane and one left-turn only lane (80 feet in length) into the project garage. In order to accommodate the single eastbound lane on 16th Street east of Third Street, one of the two eastbound lanes on the west leg of the intersection of Third Street/16th Street would be restriped as an eastbound right-turn only lane. East of Illinois Street, 16th Street would have two eastbound lanes which would become separate left turn and right turn only lanes about 100 feet east of Terry A. Francois Boulevard. Westbound 16th Street between Terry A. Francois Boulevard and Illinois Street would have one through travel lane and one left-turn only lane (about 80 feet in length) at the intersections with Illinois and Third Streets. On both sides of 16th Street between Illinois Street and Terry A. Francois Boulevard, a 6-foot wide bicycle lane would be provided adjacent to the curb, and a 4-foot wide buffer would separate the bicycle lane from the adjacent 8-foot wide parking lane.

In addition to the changes in travel lanes, the following intersection controls would be implemented as part of the proposed project:

- The intersection of Terry A. Francois Boulevard/South Street is currently stop-controlled at the eastbound approach to the intersection. This intersection would be signalized.
- The intersection of Bridgeview Way/South Street is currently uncontrolled. This intersection would be made a side-street stop-controlled intersection with southbound vehicles on Bridgeview Way and cars exiting the project garage on South Street required to stop.
- The new intersection of Terry A. Francois Boulevard/16th Street would be signalized.
- The intersection of Illinois Street/16th Street is currently uncontrolled. This intersection would be made an all-way stop-controlled intersection with northbound vehicles on Illinois Street, east- and westbound vehicles on 16th Street, and vehicles exiting the project garage required to stop. Conditions at this intersection would be monitored, and if determined by the SFMTA that a traffic signal is warranted, the intersection would be signalized.
- The intersection of Illinois Street/Mariposa Street is currently all-way stop-controlled. This intersection would be signalized.



SOURCE: Final Transportation Management Plan for the Warriors San Francisco Event Center, April 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E: Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 5.2-9

Proposed Roadway Configuration and Curb Management

Figure 5.2-9 also presents the proposed curb regulations for the streets adjacent to the project site, subject to SFMTA and Port Commission review and approval. Overall, adjacent to the project site, the proposed project would provide 17 on-street commercial loading spaces and 58 parking spaces, as well as a TMA shuttle stop, a taxi zone, and a paratransit²³ stop. Curb regulations on days with events are described in subsequent sections.

- On South Street, a Mission Bay TMA shuttle stop approximately 60 feet in length would be provided directly east of Third Street, and a taxi zone approximately 100 feet in length would be provided east of the project garage entrance/exit. Seven metered commercial loading spaces would be provided directly west of Terry A. Francois Boulevard and one metered commercial loading space would be provided between the TMA shuttle stop and the project garage driveway. The remaining curb would be dedicated to 14 metered parking spaces.
- On Terry A. Francois Boulevard, approximately eight metered commercial loading spaces would be provided directly south of South Street and a 75-foot wide paratransit stop would be provided midblock. The remaining curb would be dedicated to 14 metered parking spaces.
- On 16th Street, one metered commercial loading space and 30 metered parking spaces would be provided. On the segment of 16th Street between Illinois Street and Terry A. Francois Boulevard, the parking spaces would be located to the south of the curbside bicycle lane. The parking would be separated from the bicycle lane by a 4-foot wide buffer. On the segment between Third and Illinois Streets, the parking spaces would be adjacent to the curb, and the proposed bicycle lane would be adjacent to the curb parking lane.
- On Third Street, parking is currently prohibited at all times. As part of the proposed project, signage would be placed on the east sidewalk prohibiting stopping at all times, including passenger loading/unloading at all times.

On-street metered parking would be provided on the curbs across from the project site as part of SFMTA's Mission Bay Parking Management plan, including those under the Port of San Francisco's jurisdiction.²⁴ These include installation of new metered spaces on the north side of South Street (19 spaces), on the east side of Terry A. Francois Boulevard (29 spaces), and on the south side of 16th Street (30 spaces).

2. Transit Network Improvements

As part of the proposed project, the elevated northbound passenger platform at the UCSF/Mission Bay light rail stop would be extended. The existing northbound platform located in the median of Third Street north of South Street would be extended to the north away from South Street from 160 feet in length to 320 feet in length. This extension would allow for two two-car light rail trains to simultaneously board or alight passengers along the platform prior to or following a large event at

²³ Paratransit is a specialized, door-to-door transport service for people with disabilities who are not able to ride fixed-route public transit. This may be due to a disability or a disabling health condition. SF Paratransit, a service of the SFMTA, provides van and taxi paratransit service.

²⁴ SFMTA, *Mission Bay Parking Management Implementation*, July 2012. A copy of this report is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco as part of Case File No. 2014.1441E. Available online at http://sfpark.org/wp-content/uploads/2012/07/MissionBayParkingStrategy_July2012.pdf. Accessed May 28, 2015.

the project site. Passenger access to the expanded northbound platform would continue to be provided from a single point at the south end of the platform closest to South Street. The existing painted median area adjacent to the northbound track between South and 16th Streets would be raised 6 inches. This improvement would allow for staging of two, two-car northbound light rail trains. Fencing would also be placed in such a manner as to discourage pedestrian crossings midblock between the intersection of Campus Way with southbound Third Street, and the event center which would be located directly across from Campus Way.

In addition, crossover tracks would be constructed on Third Street near South Street within the light rail median to enable light rail vehicles to move from one set of tracks to another to reverse travel. The exact location (i.e., north and/or south of the UCSF/Mission Bay station) and the configuration of the crossover tracks (i.e., a single crossover, a double crossover, or a diamond crossover) have not been identified.

3. Pedestrian Network Improvements

Consistent with the Mission Bay South Infrastructure Plan, the proposed project includes construction of new sidewalks along the perimeter of the project site on South Street (12.5 feet wide), on Terry A. Francois Boulevard (12.5 feet wide), on 16th Street (15 feet wide), and widening of the existing sidewalk on Third Street from 12 to 16 feet. As required by the Mission Bay South Design for Development Guidelines, a 20-foot wide setback would be provided along the 16th Street frontage, and a 5-foot wide setback would be provided for buildings fronting South Street and Terry A. Francois Boulevard. The exceptions would be at the South Street Tower, where a setback in excess of 5 feet would be provided at grade to create a cantilever over the site's northwest corner, and on 16th Street at approximately midblock, where the event center curves slightly closer to the street. In addition, as shown on Figure 3-5 in Chapter 3, Project Description, buildings on the project site would be set back from all four corners to provide for a corner queuing/waiting area.

New pedestrian crosswalks, consistent with the continental design recommendations in the *Better Streets Plan*,²⁵ would be installed at the following intersections:

- South Street/Bridgeview Way (two-way stop-controlled)
- South Street/Terry A. Francois Boulevard (signalized)
- Illinois Street/Mariposa Street (signalized)
- 16th Street/Illinois Street (all-way stop-controlled)
- 16th Street/Terry A. Francois Boulevard (signalized)

In addition, the existing crosswalks at the signalized intersections of Third/South and Third/16th would be restriped with the continental design.

²⁵ Crosswalks with a continental design have parallel markings that are the most visible to drivers. Use of continental design for crosswalk marking also improves crosswalk detection for people with low vision and cognitive impairments. FHWA, Part Ii of II: Best Practices Design Guide, Designing Sidewalks and Trails for Access, Available online at http://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/sidewalk2/contents.cfm. Accessed May 28, 2015.

At the intersections of Terry A. Francois/South, Terry A. Francois/16th, and Illinois/Mariposa, where new traffic signals are proposed, pedestrian countdown signals would also be provided.

4. Bicycle Network Improvements

With implementation of the proposed project, 16th Street between Illinois Street and Terry A. Francois Boulevard would be completed, and Class II bicycle lanes on 16th Street (i.e., Bicycle Route 40) would be extended east to the reconfigured Terry A. Francois Boulevard. On both sides of 16th Street between Third and Illinois Streets, a 6-foot wide bicycle lane would be located adjacent to the 8-foot wide curb parking lane. On both sides of 16th Street between Illinois Street and Terry A. Francois Boulevard, a 6-foot wide bicycle lane would be provided adjacent to the curb, and a 4-foot wide buffer would separate the bicycle lane from the adjacent 8-foot wide parking lane.

In addition, with relocation of Terry A. Francois Boulevard between South and 16th Streets as part of the Mission Bay South Infrastructure Plan, the existing bicycle lanes on both sides of the street would be replaced with a 13-foot wide two-way protected bicycle lane, known as cycle track,²⁶ on the east side of the street. A 4-foot wide raised buffer would separate the bicycle lane from the adjacent 8-foot wide parking lane. As described in Chapter 3, the Mission Bay master developer would implement the realignment of Terry A. Francois Boulevard and associated improvements prior to occupancy of buildings at the project site.

At the intersections of Terry A. Francois/16th and Illinois/Mariposa, where new traffic signals are proposed, bicycle signals would be provided, and at the intersection of Terry A. Francois/16th two-stage turn queue boxes²⁷ would be installed to facilitate turns between the bicycle lanes on 16th Street and the two-way cycle track on the east side of Terry A. Francois Boulevard.

5. Mission Bay TMA Shuttle Program Improvements

With implementation of the project, the existing Mission Bay TMA shuttle service would be expanded with more frequent service, and a new TMA shuttle stop would be located on South Street east of Third Street adjacent to the project site. The project sponsor would join the Mission Bay TMA and the project's required contributions to the association would enable the expanded shuttle service. The additional service would enable office employees and retail visitors to access the site from key transit locations. All standard shuttle service funded in part by the proposed project would be an integrated part of the Mission Bay TMA network and would continue to be free of charge for all residents and employees in Mission Bay, regardless of their origin or destination. If the project sponsor chooses to fund incremental event-only shuttle service in partnership with the Mission Bay TMA, such service would be supported exclusively by the project sponsor and provided for the use by event attendees only. **Table 5.2-14** summarizes the headways between shuttles for the existing routes, and proposed service improvements.

²⁶ A cycle track is an exclusive bicycle facility that is separated from vehicle traffic and parked cars by a buffer zone. Cycle tracks offer safer and calmer cycling conditions for a much wider range of cyclists and cycling purposes, especially on street with greater traffic volumes traveling at relatively high speeds.

²⁷ Two-stage turn queue boxes offer bicyclists a safe way to make left turns at multi-lane signalized intersections from a right side cycle track or bicycle lane, or right turns from a left side cycle track or bicycle lane.

- The existing routes would be revised to provide additional service (i.e., more frequent service), plus extended service to late evenings and on Saturdays. In addition to the expanded service hours on the East route, the route would be modified to travel on South Street and stop at the new Mission Bay TMA shuttle stop. The Mission Bay TMA Mission Bay Loop service would be expanded from 6:00 to 7:00 a.m. to 6:00 to 10:00 a.m., and from 4:00 to 6:00 p.m.
- Three new regular routes (a Fourth/King Caltrain loop route, a 16th Street BART route, and a Transbay Terminal route) would operate throughout the day, similar to the existing shuttle service, but would have extended hours and operate on weekends.
- One Event Express route (the Fourth/King Caltrain route) with limited stops, would be provided prior to and following a peak event (i.e., events with more than 14,000 attendees).

**TABLE 5.2-14
EXISTING MISSION BAY TMA HEADWAYS AND
PROPOSED REVISIONS TO EXISTING ROUTES AND NEW ROUTES**

Existing and Proposed Routes	Weekday Headways ^a					Saturday Headways	
	Early Morning (6 to 7 a.m.)	AM Peak (7 to 10 a.m.)	PM Peak (4 to 6 p.m.)	Evening (6 to 8 p.m.)	Late Evening (9 to 11 p.m.)	Evening (6 to 8 p.m.)	Late Evening (9 to 11 p.m.)
Existing Routes^b							
East	--	10	15	15	--	--	--
West	--	15	15	20	--	--	--
Caltrain & Transbay	18	18	40	--	--	--	--
Mission Bay Loop	30	--	--	--	--	--	--
Revised Existing Routes^c							
East	--	10	12	12	60	60	--
West	--	15	15	15	60	60	--
Mission Bay Loop	30	30	30	30	--	--	--
New Regular Routes^d							
Caltrain	--	--	60	--	30	30	--
16th Street BART	--	--	30	30	30	30	--
Transbay Terminal	--	--	30	60	--	--	--
Event Express Routes^e							
Caltrain	--	--	20	15	10	10	--

NOTES:

^a Headways between shuttle buses in minutes.

^b Existing Mission Bay TMA shuttle routes operate Monday through Friday, generally between 7:00 and 10:00 a.m., and 4:00 and 8:00 p.m. Mission Bay Loop operates between 6:00 and 7:00 a.m. only.

^c With the proposed project, current service on the existing Mission Bay routes would be extended to 11:00 p.m. on weekdays, and would operate between 6:00 and 8:00 p.m. on Saturdays.

^d Proposed new routes would operate on weekdays between 7:00 and 10:00 a.m., and between 4:00 and 11:00 p.m., and on Saturdays between 6:00 and 8:00 p.m.

^e Event express routes would operate on weekday and weekend event days generally between 4 and 11 p.m. for weekday events and between 6:00 and 8:00 p.m. for weekend events.

SOURCE: Mission Bay TMA, Golden State Warriors, 2015

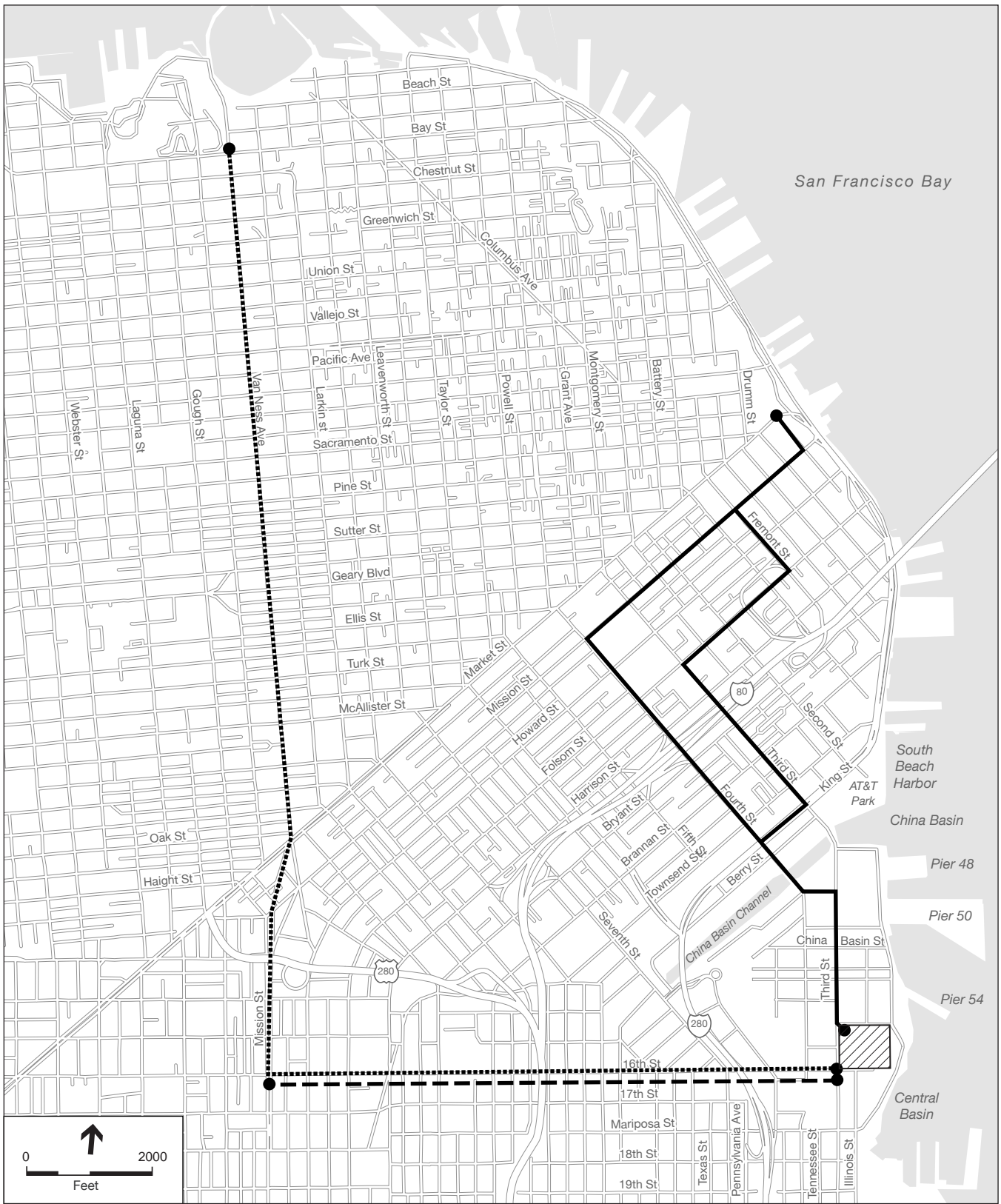
6. *Muni Special Event Transit Service Plan*

In addition to the existing scheduled transit service in the project vicinity, the SFMTA would provide additional service to accommodate large evening events. The Muni Special Event Transit Service Plan was developed by the SFMTA based on the estimated number of attendees taking transit, their origins and destinations, and arrival and departure patterns, as well as Muni's experience with providing shuttle services for special events (e.g., at Golden Gate Park, and for the 49ers stadium at Candlestick Park). The Muni Special Event Transit Service Plan includes increasing light rail service on the T Third, adding a Muni Metro shuttle via The Embarcadero, and three Muni special event shuttles. The three Muni Special Event Shuttles are presented in **Figure 5.2-10** and described below:

- **Muni Special Event 16th Street BART Shuttle** would run on 16th Street between the event center and the 16th Street BART station. This shuttle would primarily serve attendees originating from and destined to the East Bay and South Bay and the Mission district. Pre-event, the bus stop for the 16th Street BART shuttle would be located on the south side of 16th Street between Third and Illinois Streets, and post-event the bus stop would be located on the east side of Illinois Street south of 16th Street.
- **Muni Special Event Van Ness Avenue Shuttle** would run between the event center and Fort Mason. The shuttle would run on 16th Street, Mission Street, and Van Ness Avenue, with limited stops at key transfer locations (e.g., at Market Street to connect with Muni Metro and at Geary Boulevard to connect with the 38 Geary and 38L Geary Limited). Pre-event, the bus stop for the Van Ness Avenue shuttle would be located on the south side of 16th Street between Third and Illinois Streets, and post-event the bus stop would be located on the north side of 16th Street between Illinois Street and Terry A. Francois Boulevard.
- **Muni Special Event Transbay Terminal/Caltrain/Ferry Building Shuttle** would loop between the event center, the new Transbay Terminal, and the Ferry Building via Fourth, King, Third, Folsom, Fremont, and Mission Streets. Pre-event, the bus stop for the Transbay Terminal/Caltrain/Ferry Building shuttle would be located on the south side of South Street between Third Street and Bridgeview Way, and post-event the bus stop would be located on the east side of Third Street north of South Street.

Table 5.2-15 presents the proposed service for the T Third and the Muni Special Event Shuttles for large events (18,000 attendees), medium events (7,500 to 13,000 attendees), and small events (less than 7,500 attendees). The service levels are representative, and the actual service that would be provided would be appropriately scaled to respond to the projected attendance level for the event. For events with more than 13,000 attendees increases in T Third service and the three Muni Special Event Shuttles would be provided, while for events with fewer than 13,000 attendees increases in T Third service and only the Muni Special Event 16th Street BART Station Shuttle route would be provided.

The proposed project includes the procurement of up to four light rail vehicles to increase the Muni light rail capacity on the T Third line as part of the Muni Special Event Transit Service Plan.



- Project Site Boundary
- Van Ness Avenue Shuttle
- 16th Street BART Station Shuttle
- Ferry Building/Transbay Terminal Shuttle

SOURCE: SFMTA, 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 5.2-10
Proposed Muni Special Event Shuttles

**TABLE 5.2-15
PRELIMINARY MUNI SPECIAL EVENT TRANSIT SERVICE PLAN**

Special Event Service ^b	Headways ^a			
	Pre-Event		Post-Event	
	Weekday	Weekend	Weekday	Weekend
For Large Events (12,500 or more attendees)^c				
T Third/Central Subway with Special Event Shuttles	3	5	4	5
Muni Metro Shuttle via The Embarcadero	--	--	On demand ^g	On demand ^g
16th Street BART Station Shuttle	10	10	7-8	7-8
Van Ness Avenue Shuttle	12	15	On demand ^d	On demand ^d
Ferry Building/Caltrain/Transbay Terminal Shuttle	10	8-9	On demand ^d	On demand ^d
For Medium Events (7,500 to 12,500 attendees)				
T Third/Central Subway with Special Event Shuttles	3	5	5	5
Muni Metro Shuttle via The Embarcadero	--	--	On demand ^g	On demand ^g
16th Street BART Station Shuttle	13	13	15	15
For Small Events (less than 7,500 attendees)				
T Third/Central Subway with Special Event Shuttles	--	--	On demand ^{d,e}	On demand ^{d,e}
16th Street BART Station Shuttle	--	--	On demand ^{d,f}	On demand ^{d,f}

NOTES:

- ^a Headways between shuttle buses in minutes.
^b The service plan by event size is representative, and the actual service that would be provided would be appropriately scaled to respond to the projected attendance level for the event.
^c Service plan for large event presented for an event with 18,000 attendees.
^d Post event, the light rail or bus shuttles would depart as soon as the vehicles are full, rather than operate on a preset headway.
^e T Third/Central Subway with Special Event Shuttles - between three and seven two-car trains, depending on attendance level.
^f 16th Street BART Station Shuttle - between one and two shuttle buses, depending on attendance levels.
^g Muni Metro Shuttle via The Embarcadero – about three three-car trains.

SOURCE: SFMTA, 2015

7. Transportation Management Plan

As part of the proposed project operations, the project sponsor prepared and would implement a Transportation Management Plan (TMP) to serve as a management and operating plan to provide multi-modal access during events at the project site. See **Appendix TMP**. The TMP includes various management strategies designed to reduce use of single-occupant vehicles and to increase the use of rideshare, transit, bicycle and walk modes for trips to and from the project site. The TMP program was developed in consultation with the SFMTA and the Planning Department. The TMP is a working document that would be expanded and refined over time by the project sponsor and City agencies involved in implementing the plan. As described below, a monitoring and refinement process is included as part of the TMP.

The TMP includes the appointment of a full-time Event Center Transportation Coordinator to manage the transportation needs of employees and event attendees. In addition, an in-building and crowd-sourced smart phone application would be developed that would provide multi-modal travel information and real-time advisories on the status of the transportation system and

provide options to event center employees, event attendees, and anyone working in, living near, or visiting Mission Bay. The Event Center Transportation Coordinator would be responsible for distributing information related to temporary travel lane and/or street closures to event center attendees, emergency service providers, UCSF, and other neighbors prior to events. The following elements of the TMP are summarized below:

- Muni Special Event Transit Service Plan and Platform Improvements
- Mission Bay TMA Shuttle Event Express Routes
- Event Transportation Management Strategies
- Travel Demand Management Strategies
- Communication
- Monitoring, Refinement, and Performance Standards

Muni Special Event Transit Service Plan and Light Rail Platform and Track Improvements

As described above, in addition to the existing scheduled transit service in the project vicinity, the SFMTA would provide additional service (i.e., the Muni Special Event Transit Service Plan) to accommodate peak evening events such as basketball games and sold-out concerts, as presented in **Table 5.2-16**. Also, as described above, light rail platform and track improvements would also be made in order to support the additional light rail service, particularly for post-event conditions.

Expansion of Mission Bay TMA Shuttle Program

As described above, with implementation of the project, the existing Mission Bay TMA shuttle service would be expanded (see **Table 5.2-14**). The revised existing routes, new regular routes, and event express would generally operate on weekday evenings between 4:00 and 11:00 p.m., and on Saturdays between 6:00 and 8:00 p.m.

Event Transportation Management Strategies

The TMP identifies the additional strategies that would be implemented to accommodate travel to and from the event center during events by all modes to enhance safety through reduction of conflicts between modes, to facilitate ingress and egress to the project site and vicinity, and to minimize traffic congestion and delays to vehicles, including transit. **Table 5.2-16** below presents a summary of the transportation management strategies that would be implemented during the various types of events, as presented in the TMP. The transportation management strategies for small and convention events, and for large concerts and basketball games, are summarized below.

For all events, a PCO Supervisor would be located within the Event Center Command Center, and would manage the PCOs assigned to the event. The PCO Supervisor would have radio contact with the Field Supervisor and all PCOs on the street and phone contact with relevant city agencies and departments (Muni, SFMTA Signal Shop, SFPD, SFFD), transit operators (Muni, BART, Caltrans) and event center staff (security, valet attendants, etc.). The PCO Supervisor would also have authority and discretion in how PCOs are deployed, and may adjust the controls described below as conditions warrant. Transportation conditions during various-sized events would be monitored during the first year of operations to refine the appropriate number of PCOs and/or locations for the various event types.

**TABLE 5.2-16
SUMMARY OF TRANSPORTATION MANAGEMENT STRATEGIES BY EVENT TYPE**

Management Strategy	Event Type			
	Convention/ Small Event (Weekday Daytime) ^a	Arena Concert (Evening) ^b	Peak Event/ NBA Game (Evening)	Overlapping Peak Event with AT&T Park Event
Coordinate with SFMTA and Mission Bay Ballpark Transportation Coordinating Committee (MBBTCC)	√	√	√	√
Muni Ticket Sales at Event Center Box Office	√	√	√	√
Taxi Zone on Terry A. Francois Boulevard	√	√	√	√
Taxi Zone on South Street	√	√	√	√
Designated Commercial loading zone (non-event hours)	√	√	√	√
Dedicated TMA Shuttle Stop	√	√	√	√
Dedicated Charter Bus Stop on 16th Street	√			
Dedicated Shuttle Zone for Connection to 16th BART Station		√	√	√
Dedicated Paratransit Stop on Terry A. Francois Blvd	√	√	√	√
Dedicated Media Truck Zone			√	√
PCO Supervisor at Event Center Command Center		√	√	√
PCOs positioned at key locations throughout the surrounding intersections and transportation network	√	√	√	√
Event Center staff positioned at key locations throughout the site to facilitate crowd control, wayfinding, and curb management.	√	√	√	√
Post-Event Temporary Lane Closure: Northbound lanes on Third Street between 16th Street and Mission Bay Boulevard South		√	√	√
Post-Event Temporary Lane Closure: South Street between Third Street and 450 South Street garage entrance		√	√	√
Post-Event Temporary Lane Closure: Northbound lanes on Illinois Street between Mariposa and 16th Streets, except for local traffic and shuttle staging and loading		√	√	√
Post-Event Temporary Lane Closure: Westbound lanes on 16th Street between Terry A. Francois Blvd and Illinois Street, and eastbound lanes on 16th Street between Third Street and Illinois Street, Except for Shuttle staging and loading		√	√	√
Coordinate with BART, Caltrain, Muni	√	√	√	√
Coordinate with SF Giants/AT&T Park Special Events Staff	√	√	√	√

NOTES:

^a The 55 family shows held each year, with an average of 5,000 attendees, are expected to require similar controls to the small event.

^b Refers to an evening concert with more than 14,000 attendees.

SOURCE: *Final Transportation Management Plan for the Warriors San Francisco Event Center*, April 2015

Small Events and Convention Events. Prior to an event, up to six PCOs would be stationed at the following intersections: Third Street/South Street, Third Street/16th Street, Terry A. Francois Boulevard/South Street, Terry A. Francois Boulevard/16th Street, and Illinois Street/16th Street.

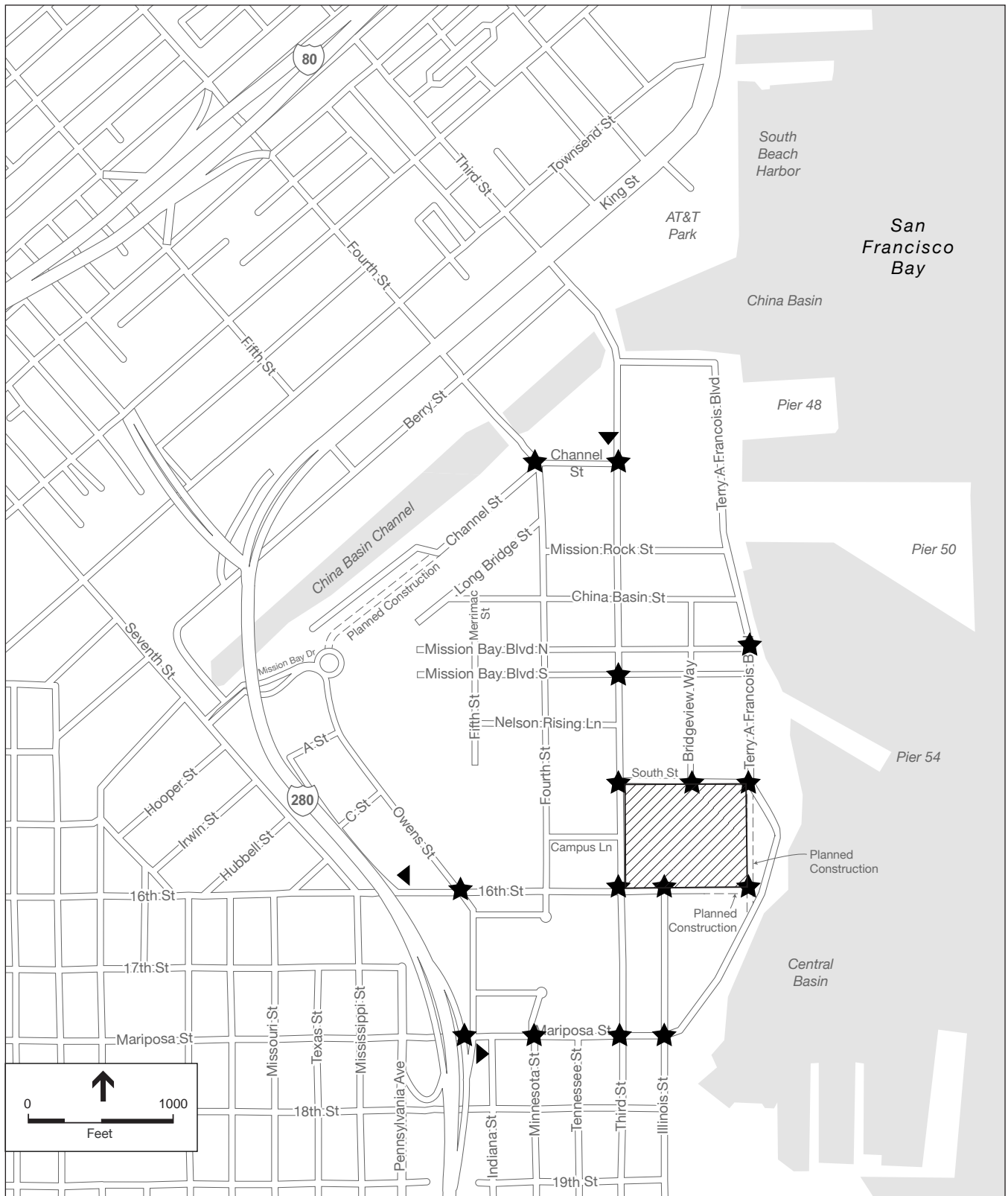
The following temporary curb regulations on the curb frontages adjacent to the project site would be initiated about two hours prior to the event start time, and would continue until about 1.5 hours following the end of the event. Only changes to the proposed curb regulations from conditions without an event (as described above) are noted.

- Two taxi zones would be provided: on South Street between Bridgeview Way and Terry A. Francois Boulevard (300 feet), and on Terry A. Francois Boulevard south of South Street (200 feet). Event center crowd control staff would be assigned to taxi zones to facilitate coordinated passenger loading/unloading and departure of taxis.
- A passenger loading/unloading zone approximately 340 feet in length would be provided on Terry A. Francois Boulevard and would accommodate private vehicles and TNC vehicles.²⁸ The proposed permanent 60-foot wide paratransit stop on Terry A. Francois Boulevard would not be affected during events. Event center crowd control staff would be assigned to passenger loading/unloading zones to ensure coordinated curb access, and to facilitate passenger loading/unloading, as well as departure of vehicles.
- A charter bus zone about 500 feet in length (accommodating about six buses) would be provided along the north curb of 16th Street west of Terry A. Francois Boulevard.


Basketball Games and Large Concert Events. The transportation management strategies for concerts with about 12,500 or more attendees and basketball games (with about 18,000 attendees) would be similar. During events with more than 12,500 attendees, up to 17 PCOs would be stationed in the project vicinity, managing vehicular, transit, bicycle and pedestrian flows, as shown in **Figure 5.2-11**. The exact locations would be determined by the PCO Supervisor, but it is anticipated that PCOs would be stationed at the following intersections pre-event and/or post-event:

- | | |
|---|---|
| • Fourth Street/Channel Street | • Third Street/16th Street |
| • Third Street/Channel Street | • Owens Street/16th Street |
| • Terry A. Francois Boulevard/Mission Bay Boulevard North | • Illinois Street/16th Street |
| • Third Street/Mission Bay Boulevard South | • Terry A. Francois Boulevard/16th Street |
| • Third Street/South Street | • I-280 northbound ramps/Owens Street/Mariposa Street |
| • Bridgeview Way/South Street | • Fourth Street/Mariposa Street |
| • Terry A. Francois Boulevard/South Street | • Third Street/Mariposa Street |
| | • Illinois Street/Mariposa Street |

²⁸ Transportation Network Company (TNC) is a company or organization that provides transportation services using an online-enabled platform to connect passengers with drivers using their personal vehicles (e.g., Lyft, SideCar, Uber).



 Project Site Boundary

 Parking Control Officer (PCO) Location

 Variable Message Sign (VMS) Location

SOURCE: Final Transportation Management Plan for the Warriors San Francisco Event Center, April 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E: Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 5.2-11

Proposed Locations of PCOs and VMSs

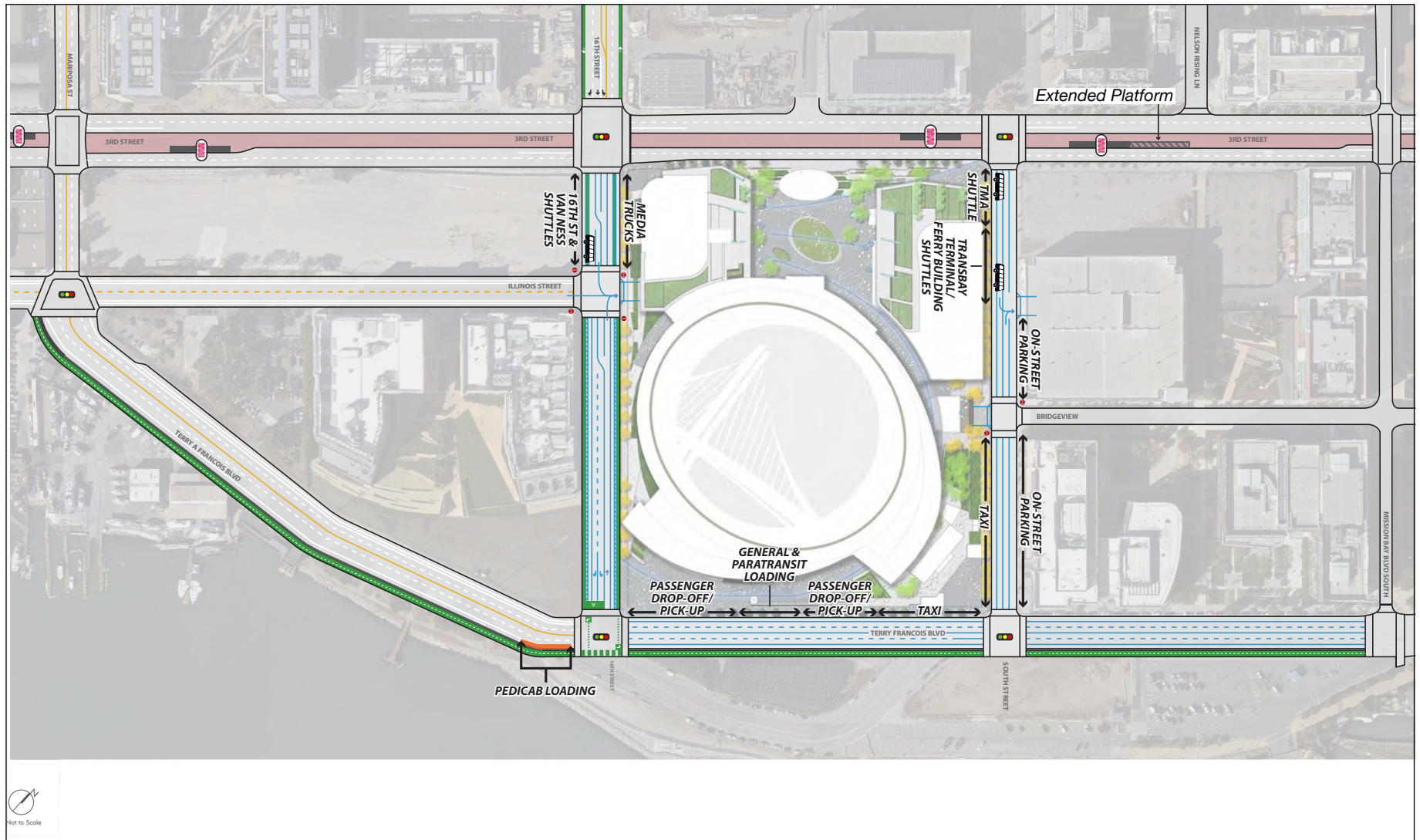
PCOs would also be stationed at the light rail platforms to facilitate pedestrian crossings, and to minimize conflicts between pedestrians, light rail, and vehicular traffic. In addition, it is anticipated that there would be roving PCO(s) in adjacent neighborhoods, as necessary, to monitor general parking issues and respond to calls during the events. Passenger loading onto the light rail vehicles would be monitored by SFMTA Transit Fare Inspectors and Passenger Assistance Program Staff, who would also be stationed at the light rail platforms.

Three permanent Variable Message Signs (VMS) would be installed to provide traffic alerts, messages, and alternate driving routes for drivers traveling to the event center, to destinations in the vicinity, or through the area. These would be in addition to the existing VMS located on northbound Third Street south of 16th Street, and all four VMSs would be used during large events. The proposed locations for the new VMSs include:

- Westbound 16th Street east of I-280
- Southbound Third Street south of the Lefty O'Doul Bridge
- Eastbound Mariposa Street east of the I-280 ramps

As shown on **Figure 5.2-12** and **Figure 5.2-13**, the following temporary curb regulations on the curb frontages adjacent to the project site would be initiated about two hours prior to the event start time, and would continue until about 1.5 hours following the end of the event:

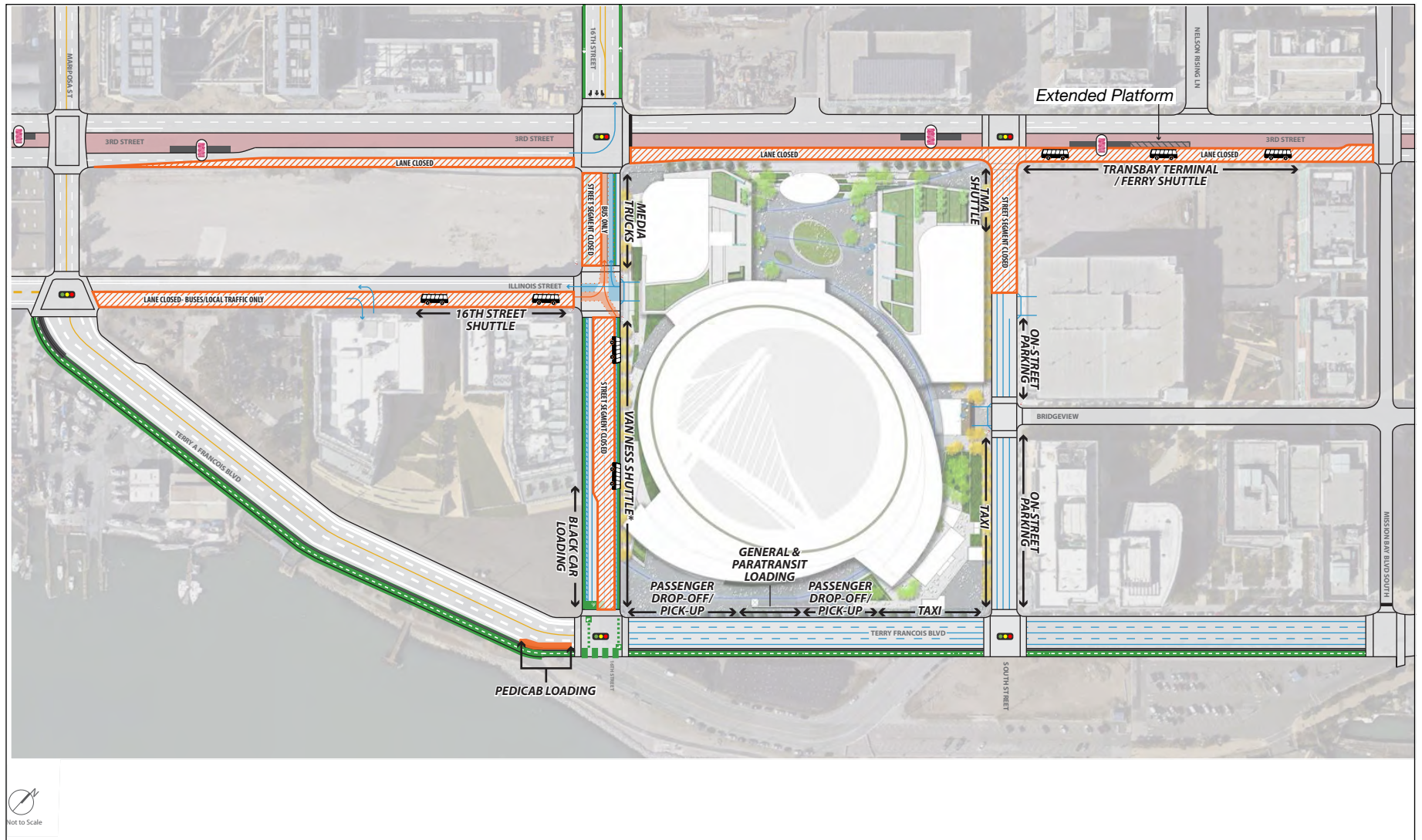
- Two taxi zones would be provided: on South Street between Bridgeview Way and Terry A. Francois Boulevard (300 feet), and on Terry A. Francois Boulevard south of South Street (200 feet). Event center crowd control staff would be assigned to taxi zones to facilitate coordinated passenger loading/unloading and departure of taxis.
- Two passenger loading/unloading zones with a total of about 535 feet in length would be provided on Terry A. Francois Boulevard. The proposed permanent 75-foot wide paratransit stop on Terry A. Francois Boulevard would not be affected during events.
- Media trucks would park on 16th Street adjacent to the project site, between Third Street and the entrance into the parking garage. About 185 feet of curb would be dedicated for media trucks.
- Prior to an event, the Muni Special Event Transbay Terminal/Caltrain/Ferry Building Shuttle stop would be on South Street adjacent to the project site, west of the proposed Mission Bay TMA shuttle stop, while the shuttle stop for the Muni Special Event 16th Street BART Shuttle route and the Muni Van Ness Avenue Shuttle route would be on the south side of 16th Street (i.e., across the street from the project site) between Third and Illinois Streets.
- Prior to the end of the event, temporary travel lane closures (except for emergency vehicles) would be implemented on Third Street between Mariposa Street and Mission Bay Boulevard South, on South Street between Third Street and Bridgeview Way, on 16th Street between Third Street and Terry A. Francois Boulevard, and on Illinois Street between Mariposa and 16th Streets. The temporary lane closures are anticipated to be in place for approximately 30 to 45 minutes after the end of the event, or until vehicular traffic dissipates and most event attendees taking transit have boarded. Southbound traffic flow on Third Street would not be affected by these temporary northbound travel lane closures. These travel lane closures would involve the following:



SOURCE: Final Transportation Management Plan for the Warriors San Francisco Event Center, April 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E: Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 5.2-12
Pre-Event Controls for Large Events



SOURCE: Final Transportation Management Plan for the Warriors San Francisco Event Center, April 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E: Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 5.2-13
Post-Event Controls for Large Events

- On northbound Third Street between Mariposa and 16th Streets, one of the two northbound travel lanes (i.e., the curb lane) would be temporarily closed, and all northbound traffic on this segment would be directed to turn left onto westbound 16th Street (i.e., about 140 vehicles during the late evening peak hour). On Third Street between 16th and South Streets, both of the northbound travel lanes would be closed to all vehicular traffic and bicycles. On Third Street between South Street and Mission Bay Boulevard South, both travel lanes would be closed to vehicular traffic, with the exception of the Muni Special Event Transbay Terminal/Caltrain/Ferry Building Shuttle route, which would have a bus stop/unloading zone on Third Street north of South Street.
- On Illinois Street between Mariposa and 16th Streets, the northbound lane would be temporarily closed, with the exception of the Muni Special Event 16th Street BART Shuttle and local access into the buildings at 409/499 Illinois Street (a vehicle entrance to the building is located approximately midblock). As noted above, the Muni Special Event 16th Street BART Shuttle would have a bus stop/loading zone on the east side of Illinois Street south of 16th Street. Southbound traffic flow on Illinois Street (i.e., from the project garage) would not be affected by these temporary northbound travel lane closures.
- On 16th Street, travel lanes on the segment between Illinois Street and Terry A. Francois Boulevard would be closed to vehicular traffic both ways, with the following exceptions: Muni Special Event Van Ness Avenue Shuttle would have a bus stop/loading zone on the north side of 16th Street (westbound travel) adjacent to the project site; a black car loading zone would be provided on the south side of 16th Street (eastbound travel) between a driveway to the 409/499 Illinois Street building and Terry A. Francois Boulevard (about 150 feet in length); vehicles exiting the 409/499 Illinois Street building on the south side of 16th Street would be permitted access onto eastbound 16th Street towards Terry A. Francois Boulevard; and bicyclists would be permitted with some on-street controls.
- Left turns would be restricted from westbound 16th Street onto Third, Owens and Mississippi Streets through signage, temporary barriers, and/or PCOs.
- On the segment of 16th Street between Third and Illinois Streets, the eastbound travel lane would be closed to vehicular traffic except transit and bicyclists, while the westbound lanes would remain open to accommodate: vehicles exiting the project garage; the Muni Special Event 16th Street BART Shuttle that would travel northbound on Illinois Street, and turn left onto 16th Street westbound to continue towards the 16th Street BART station; and the Muni Special Event Van Ness Avenue Shuttle that would travel westbound on 16th Street after loading passengers at the north curb of 16th Street between Illinois Street and Terry A. Francois Boulevard.
- On South Street, all travel lanes (both ways) on the segment between Third Street and the entrance/exit to the 450 South Street parking facility would be closed to vehicular traffic, except for the Mission Bay TMA shuttle routes, which would have a stop in this section of South Street. Taxis would be directed to arrive at the taxi zone on South Street prior to the temporary closure of South Street at Third Street, and to stage until the end of an event. Taxis arriving post-event would access this taxi zone on South Street from Bridgeview Way.
- Tow-away regulations, similar to those implemented following a SF Giants baseball game at AT&T Park, would be implemented on the west side of Illinois Street

between Mariposa and 18th Streets to allow for two southbound lanes to continue on Illinois Street. Additional signage would be added at tow-away locations.

Garage Operations. Attendees with pre-sold parking passes for the project garage would access the garage at 16th Street from the left turn pocket on eastbound 16th Street at the approach to Illinois Street, from westbound 16th Street, or from northbound Illinois Street to self-park. Event center staff would check parking passes before vehicles enter the garage. PCOs would be stationed at the project garage driveway to facilitate vehicle egress (office employees leaving on weekday evenings) and ingress (event attendees entering the garage), minimize conflicts with pedestrians and bicycles on 16th Street, and to coordinate with PCOs positioned at nearby intersections. PCOs stationed at the intersection of Illinois/16th Street would provide priority to the eastbound left turn movements from 16th Street into the garage to ensure that queues for the garage do not extend upstream onto Third Street. PCOs would also work with event center staff that would be checking attendees' tickets for valid access to the garage. Drivers who attempt to access the garage without a valid parking pass would be redirected eastbound on 16th Street to Terry A. Francois Boulevard to other nearby garages or parking lots.

Following an event, PCOs would manage alternating flows of vehicle traffic exiting the garage with pedestrian and bicycle flows along and crossing 16th Street, manage alternating flows of vehicle traffic exiting the garage with the Muni Special Event 16th Street BART shuttles accessing 16th Street eastbound from Illinois Street northbound and with the Muni Special Event Van Ness Avenue shuttles traveling westbound on 16th Street, and coordinate with PCOs along 16th Street that would be managing pedestrian flows across 16th Street.

Vehicles exiting the project garage on South Street, vehicles exiting the 450 South Street garage, and vehicles traveling southbound on Bridgeview Way would be directed eastbound on South Street to Terry A. Francois Boulevard.

Overlap between events at the proposed Event Center and at AT&T Park. In circumstance when events at the proposed event center partially or completely overlap with baseball games or other events at AT&T Park, additional adjustments to the Transportation Management Plan for the proposed event center would be made, specifically:

- Because PCOs would be stationed at some of the same intersections where PCOs are stationed during SF Giants evening games, staffing would be adjusted to eliminate duplication of efforts, and to address the overlapping impacts.
- Because the Fourth Street bridge is closed to northbound travel (transit and taxis excepted) and the Third Street bridge is congested following a SF Giant game, event center attendees would generally be directed to travel southbound on Terry A. Francois Boulevard, and then westbound on 16th Street to access locations to the west and north via Seventh Street. Some vehicles, depending on where they have parked, would access Seventh Street via Mission Bay Boulevard and Mission Bay Drive.

Transportation Demand Management (TDM) Strategies

The TMP includes TDM strategies for employees and for event center visitors. TDM strategies for office, retail, restaurant and event center employees:

TDM strategies for all on-site employees:*Policy/Operations*

- Participate in and promote pre-tax commuter benefits, a federal program that allows employees to reduce their commuting costs by up to 40 percent using tax-free dollars to pay for their commuting expenses.
- Enroll in free-to-employees ride-matching program through www.511.org.
- Enroll in free-to-employers Emergency Ride Home Program through the City of San Francisco.
- If applicable, comply with California's parking cash-out program.²⁹
- Contribute to the Mission Bay TMA shuttle program.
- Provide indoor secure bicycle parking facilities for employees.
- Provide shower and locker facilities for employee use.
- Identify potential tenants who may provide on-site amenities (such as fitness and exercise centers, food and beverage options, and/or automated banking resources) to encourage employees to stay on-site during the workday.
- Encourage tenants to allow certain employees to work flexible schedules and telecommute, to the extent reasonable.
- Designate parking spaces for carpool/vanpool participants.

Marketing/Communications

- Promote use of Mission Bay TMA shuttles to employees; notify them that they are eligible to ride the Mission Bay TMA shuttles for free; and provide information about routes, stop locations, and schedule.
- Encourage employees and visitors to participate in public events that promote bicycling such as the annual "Bike to Work" day.
- Organize and publicize community efforts, such as Spare the Air days (as declared for the Bay Area region) or a Rideshare Week.

Capital

- Sponsor a Bay Area Bike Share station in the project vicinity.
- Designate priority curb areas on-site for TMA shuttles.

TDM strategies for event center employees:

- Provide non-event day access to the enclosed bicycle valet facility (approximately 300 bike spaces; valet operations during events only).

²⁹ In accordance with California's parking cash-out law – Assembly Bill 2109, Katz; Chapter 554, Statutes of 1992. Available online at http://www.arb.ca.gov/planning/tsaq/cashout/cashout_guide_0809.pdf. Accessed May 28, 2015.

TDM strategies for event center visitors:

Policies/Operations

- Work with the City to identify arena event patrons arriving via transit and reward those patrons with promotional incentives that may include discounted food or beverage, team or venue merchandise, raffle entry, access to a “fast-track” security line or one or more other options. Market these incentives with a robust communications strategy prior to an event day so that visitors can make choices accordingly.
- Identify and reward patrons of the bike valet with promotional incentives that may include discounted food or beverage, team or venue merchandise, raffle entry, access to a “fast-track” security line or one or more other options. Market these incentives with a robust communications strategy prior to an event day so that visitors can make choices accordingly.
- Distribute GSW-branded Clipper Cards to encourage patrons to associate event attendance with transit usage during attendee’s trip planning process.
- Work with the SFMTA to determine the market feasibility and benefits of bundling the cost of a round-trip Muni fare (\$4.50) into the cost of all ticketed events.
- If parking is not bundled with ticket purchases for arena events (i.e., select event days and types), charge market-rate fees for on-site parking in connection with such arena events. Encourage off-site partners to charge market-rate parking fees for all arena events.
- Designate a TDM/TMP coordinator to develop and implement marketing/communications/incentive programs, and coordinate with facility on policies and capital needs to support sustainable trip making by GSW employees and event center visitors.
- Establish an annual TDM budget for all components of the TDM program applying to GSW employees and event center visitors.

Communications/Marketing

- At point of ticket purchase, encourage patrons to use sustainable modes of transportation via communications on the internet and through the ticket vendor.
- Design a “Getting There” page for the venue website that lists multi-modal options and comparisons before showing preferred driving routes or available parking. Promote transit access to the project site by providing: interactive trip-planning tools; transit maps with recommended stops/stations for accessing site and best routes to the event center; and walking directions from transit stations/stops. Promote transit information on event center website, mobile apps, websites of events taking place at the site (to be required as a standard part of event contract) and in event literature and advertisements, when appropriate.
- Provide real-time transit information, including train or bus arrivals and departures, in key event center locations (exit areas, gathering areas, etc.), inside the building (on TVs and other screens), and/or via mobile applications.
- Make available additional communication of transit options and wayfinding during playoff games for non-season pass holders who may be coming from out of town by providing information to, and encouraging displays within, hotels and local businesses in the event center vicinity.

- Promote use of the enclosed on-site bicycle valet facility (approximately 300 bike spaces). Provide a bicycle map, showing routes to the project site, on the event center web site, mobile applications, and in event literature and advertisements, when appropriate.
- Create schedules of upcoming events for display on electronic message boards, to discourage auto use and parking in the Event Center vicinity.

Capital

- Work with SFMTA to brand transit stops/stations near the project site, covering any costs associated with re-branding.
- Provide outdoor bicycle racks for visitors to the office, retail, and restaurant uses.
- If and when peak event bicycle storage demand exceeds the 300 space enclosed valet facility and on-site bike rack capacity, provide additional temporary outdoor bike valet parking areas.
- Sponsor a Bay Area Bike Share station(s) in the project vicinity.
- Designate priority curb areas on-site for taxis, charter buses, and rideshare vehicles. Explore partnership options with rideshare/carpool/TNC^[1] companies to offer discounts to event attendees and/or employees.

Communication

The TMP includes strategies related to distributing information on transportation management for the various modes at the event center for pre-event and post-event conditions as part of the ticket purchase process, and wayfinding signage for multi-modal access and egress. The communication strategies would discourage use of private autos and encourage use of transit and other modes.

Monitoring, Refinement, and Performance Standards

The TMP outlines the process to monitor and refine the strategies within the TMP in conjunction with the City throughout the life of the project. Monitoring methods include field monitoring of operations during the first four years and an annual surveying and reporting program, thereafter. Surveys of event attendees and event center employees would be conducted annually, and visitor surveys of Mission Bay neighbors and UCSF staff and emergency providers would be conducted in the initial years of operation.

The TMP also identifies performance standards for events that the project sponsor has committed to maintaining:

- **Weekday Auto Mode Share:** Implement measures intended to reach a goal of on average, attendees for peak events do not exceed a 53 percent auto mode share for weekday peak event arrivals (i.e., 6:00 to 8:00 p.m.). The performance standard is based on the mode of travel results shown in **Table 5.2-24** in Section 5.2.5.3, Approach to Analysis.

^[1] Transportation Network Company (TNC) is a company or organization that provides transportation services using an online-enabled platform to connect passengers with drivers using their personal vehicles (e.g., Lyft, SideCar, Uber).

- Weekend Auto Mode Share: Implement measures intended to reach a goal of on average, attendees for peak events do not exceed a 59 percent auto mode share for weekend peak event arrivals (i.e., 6:00 to 8:00 p.m.). The performance standard is based on the mode of travel results shown in **Table 5.2-24** in Section 5.2.5.3, Approach to Analysis.
- Vehicle Queuing on City Streets: Traffic entering the parking garage from eastbound 16th Street does not spill back from the eastbound left turn lane on 16th Street into the intersection with Third Street.
- Vehicle Queuing on City Streets: Event traffic does not block access to the UCSF emergency room entrance for emergency vehicles or patients on Mariposa Street between I-280 and Third Street.
- Pedestrian Flows: Pedestrians do not spill out of sidewalks onto streets with moving vehicles, or out of crosswalks when crossing the street.
- Bicycle Parking: Signage is clearly visible to direct bicyclists to event valet and other bicycle parking, and ensure that adequate bicycle parking supply is provided to accommodate a typical peak event.
- Transit Mode Share: All Muni light rail and special event shuttle passengers are able to board their transit vehicle within 45 minutes³⁰ following an event, if desired.
- Good Neighbor: Mission Bay TMA shuttles continue to run and maintain capacity for simultaneous neighborhood use.

In the event that ongoing monitoring shows at any time that the performance standards outlined above are not being met, the project sponsor would explore additional travel demand strategies, operational efforts, or design refinements to meet the goals identified in the TMP. Revisions to this policy would be brought before the Mission Bay CAC, or its successor body, for approval. A representative list of possible strategies is as follows:

- Increase project sponsor contribution to the Mission Bay TMA to directly fund incremental, event-only service, which may include additional shuttle bus purchases and/or expanded hours of operation.
- Establish a partnership with a private shuttle provider for incremental, event-only service to and from satellite parking locations (if designated) or transit centers.
- Facilitate charter bus/private shuttle program purchases for group ticket sales and/or suite purchases for events.
- Reduce the project parking demand through a variety of mechanisms, including pricing.
- Explore partnerships with car-sharing services (e.g., Zipcar, City CarShare) for spaces on-site to reduce car ownership amongst employees.

³⁰ The 45 minutes for boarding of all passengers was determined to be an appropriate period of time given the anticipated time attendees would spend exiting the building, crossing the plaza, and traveling to the appropriate shuttle stop. It reflects anticipated delay by some attendees who may remain within the event center following an event's end to take advantage of promotions, watch post-game interviews, etc. and by other attendees who may patronize the retail businesses located on-site following an event by prior to leaving Mission Bay.

- Undertake media campaigns, including in social media, which promote walking and/or bicycling to the event center.
- Conduct cross-marketing strategies with event center businesses (e.g., 10 percent off merchandise/food if patrons arrive by transit and/or bicycle or on foot).
- Carry out public education campaigns.
- Offer special event ferry service to the closest ferry station to the project site (similar to the existing service provided between AT&T Park and Alameda, Marin and Solano Counties by Golden Gate Transit, Alameda/Oakland and Vallejo ferry service).
- Provide transit fare subsidies to event ticket holders.
- In consultation with the SFMTA, remove any street furniture or landscaping obstructing pedestrian paths of travel or Muni staging areas.

5.2.5.3 Approach to Analysis

This section presents the methodologies for analyzing and organizing the transportation impacts and information considered in the travel demand and impact analysis. This section is organized in the following order:

1. Approach to impact analysis, including analysis scenarios, analysis periods, analysis years, and analysis methodology.
2. Organization of impacts and overarching scenario assumptions.
3. Methodology and results of travel demand forecasts for the proposed project.
4. Methodology for development of 2040 cumulative traffic, transit, and pedestrian forecasts.

1. Approach to Impact Analysis Methodology

This section presents the methodology for analyzing transportation impacts and information considered in developing travel demand for the proposed project. The impacts of the proposed project on the surrounding transportation network were analyzed using the *Transportation Impact Analysis Guidelines* issued by the Planning Department in 2002 (*SF Guidelines 2002*), which provides direction for analyzing transportation conditions and in identifying the transportation impacts of a proposed project.

As described in Chapter 3, Table 3-3, the event center would have up to 225 events per year, of which up to 60 would be Golden State Warriors basketball games. Other events would include about 45 small and large concert events, about 55 family shows, and about 61 convention, civic, and other sporting events. Average and maximum attendance estimates by type of event for the proposed event center were prepared by the project sponsor and are summarized in **Table 3-3** in Chapter 3. The expected attendance would vary depending on the type of event held (e.g., basketball game, concert, other non-Golden State Warriors sporting event), but would be expected to be similar on weekdays and on weekends. In the case of other non-Golden State Warriors sporting events, the expected attendance would also depend on the interest in competing teams, and, in the case of concerts, on the popularity of the performing artists.

Average visitor attendance for the proposed event center is projected to range between 5,000 attendees for a family show event, to between 17,000 and 18,000 attendees for a regular season or post season basketball game; concert average attendance is estimated to range between 3,000 attendees for arena theater concerts to 12,500 attendees for the typical end-stage full arena configuration, and average convention attendance is estimated at 9,000 attendees. Overall, it is estimated that there would be up to 225 event days in any given year.

Event Scenarios

For purposes of the transportation analysis, three analysis scenarios were analyzed as representative of the range of project impacts, depending on the type of activity at the event center.

- **No Event** – The No Event scenario reflects conditions associated with the 605,000 gross square feet (gsf) of office uses, the 62,500 gsf of retail uses, and 62,500 gsf of restaurant uses on days when there are no events scheduled at the event center.
- **Convention Event** – The Convention Event scenario reflects conditions for a convention-type event with an average attendance of about 9,000 attendees. For convention/corporate events, a 9,000-attendee event was analyzed, as this attendance level represents the average attendance for about 50 percent of the events that would occur at the proposed event center (i.e., the convention events, family shows, and other sporting events).³¹ This scenario assesses the impacts of a daytime event at the project site.
- **Basketball Game** – The Basketball Game scenario reflects sell-out conditions for a Golden State Warriors evening basketball game, as it would be the most conservative approach that assumes that the event center would be filled to capacity (i.e., 18,064 attendees). It also represents conditions for a sold-out evening concert.

Analysis Periods

Per the *SF Guidelines*, the weekday p.m. peak hour is the standard analysis period for development projects in San Francisco and was analyzed for the proposed project. In addition to the weekday p.m. peak hour typically studied, three additional analysis hours were selected for analysis of transportation impacts. These three additional analysis hours were selected to address impacts of the event center. Each project scenario was evaluated for the particular time periods during which the specific conditions would occur. For example, convention events are not anticipated to occur in the weekday evening and late evening peak hours or on weekends, and therefore, analysis of convention events during these time periods was not conducted. **Table 5.2-17** summarizes the time periods analyzed for each scenario.

- The weekday p.m. peak hour (the peak hour of the 4:00 to 6:00 p.m. peak commute period) was selected because it represents the period during which weekday background traffic volumes and transit demand are the greatest. The weekday p.m. peak hour was analyzed for the No Event, Convention Event, and Basketball Game scenarios.

³¹ The event center is expected to typically serve as a satellite venue for conventions/conferences held primarily at the Moscone Center, with an attendance of 9,000 people. The maximum attendance of 18,500 shown in Table 2 represents the maximum number of conference attendees that could be accommodated in a 360-degree center stage configuration, which would be infrequent.

**TABLE 5.2-17
 ANALYSIS HOURS FOR PROPOSED PROJECT SCENARIOS**

Proposed Project Scenario	Weekday			Saturday
	PM Peak Hour	Evening Peak Hour	Late Evening Peak Hour	Evening Peak Hour
No Event	X	--	--	X
Convention Event	X	--	--	--
Basketball Game ^a	X	X	X	X

NOTE:

^a The Basketball Game scenario represents conditions for a sold out evening concert.

- The weekday evening peak hour (the peak hour of the 6:00 to 8:00 p.m. period) was analyzed only for the Basketball Game scenario because basketball games typically start at 7:30 p.m. and therefore, a higher percentage of inbound event attendees would travel to the event center during the 6:00 to 8:00 p.m. period than during the 4:00 to 6:00 p.m. commute peak period.
- The weekday late evening peak hour (the peak hour of the 9:00 to 11:00 p.m. period) was analyzed only for the Basketball Game scenarios. For evening period the Basketball Game scenario, it represents the period during which the highest number of outbound event trips would occur after a basketball game or concert event.
- The Saturday evening peak hour (the peak hour of the 7:00 to 9:00 p.m. period) was analyzed for the No Event and Basketball Game scenarios. For the Basketball Game scenario it represents the period during which the highest number of inbound event trips would occur. Approximately 68 percent of attendees are projected to arrive at the event center during the 7:00 to 8:00 p.m. peak hour.

Analysis of weekday a.m. peak hour conditions was not conducted because travel demand associated with the proposed project would be greater during the p.m. peak hour than during the a.m. peak hour. For example, the retail and restaurant uses would generate substantially fewer trips in the a.m. peak hour than during the p.m. peak hour, as most would not be open during the a.m. Most events, including family shows, would not overlap with the a.m. peak hour, and daytime convention events would generate fewer trips in the a.m. peak hour than during the p.m. peak hour. Furthermore, comparison of a.m. and p.m. peak hour LOS conditions at intersections in the vicinity of the project site, as presented in the UCSF 2014 LRDP EIR, demonstrate that intersections operate similarly during both peak hours. Therefore, because the proposed project would generate more trips in the p.m. peak hour than in the a.m. peak hour, analysis of potential traffic impacts would be adequately addressed in the p.m. peak hour analysis.

The travel demand for concerts, family shows and other sporting events was not estimated quantitatively because, as shown in **Table 3-3** in Chapter 3, these types of events are expected to attract a lower attendance and require fewer employees than a basketball game. In addition, arrival and departure travel patterns for these types of events would also be expected to be similar to those of basketball game. As such, the transportation infrastructure (roadways, transit vehicles, stations, sidewalks, etc.) would be expected to operate similar to or better before and

after concerts than before or after a sold-out basketball game of the same attendance level. As noted above, the Basketball Game scenario also represents maximum impact conditions for a sold out evening concert. However, evening concerts could start later than basketball games, generally between 8:00 and 9:00 p.m., and have a more spread out arrival period than basketball games due to opening act performances before the featured headliner.

The analysis of the proposed project was conducted for existing and 2040 cumulative conditions. “Existing plus Project” conditions assess the near-term impacts of the proposed project, while “2040 Cumulative plus Project” conditions assess the long-term impacts of the proposed project in combination with other reasonably foreseeable development. Year 2040 was selected as the future analysis year because 2040 is the latest year for which travel demand forecasts were available from the San Francisco County Transportation Authority (SFCTA) travel demand forecasting model.

As discussed in Section 5.2.3 above, the data collected in 2013/2014 for the quantitative existing conditions analysis was adjusted upwards to reflect the opening of the UCSF Medical Center Phase 1 and Public Safety Building in early 2015. The travel demand associated with these two projects was determined from previous studies conducted by UCSF and the SF Department of Public Works, respectively.

Construction Analysis Methodology

Potential short-term construction impacts were assessed based on preliminary construction information for the proposed project. The construction impact evaluation addresses the staging and duration of construction activity, truck routings, estimated daily truck volumes, roadway and/or sidewalk closures, and evaluates the effect of construction activities on sidewalks, bicycle lanes, or travel lanes.

Vehicular Traffic Analysis Methodology

The traffic impact assessment for the proposed project was conducted for 23 study intersections and six freeway ramp locations in the vicinity of the project site. The study intersections were evaluated using the *HCM 2000* methodology. For signalized intersections, this methodology uses various intersection characteristics (e.g., traffic volumes, lane geometry, and signal phasing and timing) to estimate the capacity for each lane group approaching the intersection, and to calculate the average control delay experienced by motorists traveling through the intersection. The level of service (LOS) is based on average delay (in seconds per vehicle) for the various movements within the intersection. A combined weighted average delay and LOS is presented for the intersection. For unsignalized intersections, average delay and LOS operating conditions are calculated by approach (e.g., northbound) and movement (e.g., northbound left-turn), for those movements that are subject to delay. For purposes of this analysis, the operating conditions (LOS and delay) for unsignalized intersections are presented for the worst approach (i.e., the approach with the highest average delay per vehicle). **Table 5.2-18** presents the LOS descriptions and associated delays for signalized and unsignalized intersections.

TABLE 5.2-18
LEVEL OF SERVICE DEFINITIONS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS

Control/LOS	Description of Operations	Average Control Delay (seconds per vehicle)
<i>Signalized</i>		
A	Insignificant Delays: No approach phase is fully used and no vehicle waits longer than one red indication.	≤ 10
B	Minimal Delays: An occasional approach phase is fully used. Drivers begin to feel restricted.	> 10.0 and ≤ 20
C	Acceptable Delays: Major approach phase may become fully used. Most drivers feel somewhat restricted.	> 20.0 and ≤ 35
D	Tolerable Delays. Drivers may wait through no more than one red indication. Queues may develop but dissipate rapidly without excessive delays.	> 35.0 and ≤ 55
E	Significant Delays: Volumes approach capacity. Vehicles may wait through several signal cycles and long queues form upstream.	> 55.0 and ≤ 80
F	Excessive Delays: Represents conditions at capacity, with extremely long delays. Queues may block upstream intersections.	> 80
<i>Unsignalized</i>		
A	No delay for STOP-controlled approach.	≤ 10
B	Operations with minor delays.	> 10.0 and ≤ 15
C	Operations with moderate delays.	> 15.0 and ≤ 25
D	Operations with some delays.	> 25.0 and ≤ 35
E	Operations with high delays and long queues.	> 35.0 and ≤ 50
F	Operations with extreme congestion, with very high delays and long queues unacceptable to most drivers.	> 50

NOTE: LOS – Level of Service

SOURCE: Transportation Research Board, 2000. Highway Capacity Manual, Washington, DC.

It should be noted that at some of the study intersections, the average delay per vehicle would remain the same, or slightly reduced, with the addition of project-related traffic. Using the *HCM 2000* methodology, the level of service is calculated based on an average of the total vehicular delay per approach, weighted by the number of vehicles at each approach. Increases in traffic volumes at an intersection usually result in increases in the overall intersection delay. However, if there are increases in the number of vehicles at movements with low delays, the average weighted delay per vehicle may remain the same or decrease.

Under existing plus project conditions, the proposed project was determined to have a significant traffic impact at a signalized intersection if it would cause an intersection operating at LOS D or better under existing conditions to operate at LOS E or LOS F, or intersections operating at LOS E under existing conditions to deteriorate to LOS F conditions. At signalized intersections that operate at LOS E or LOS F under existing conditions and would continue to operate at LOS E or LOS F under existing plus project conditions, the change in traffic volumes was reviewed at the critical movements to determine whether a resulting increase in traffic volumes would contribute

considerably to unacceptable levels of service (i.e., a contribution of 5 percent or more to the traffic volumes at the critical movements operating at LOS E or LOS F).

Under 2040 cumulative conditions, the proposed project was also determined to have a significant cumulative impact if it would cause an intersection operating at LOS D or better to operate at LOS E or LOS F, or intersections operating at LOS E to deteriorate to LOS F conditions. At signalized intersections that operate at LOS E or LOS F under 2040 cumulative conditions and would continue to operate at LOS E or LOS F under 2040 cumulative plus project conditions, the proposed project would have a significant impact if it would contribute considerably to delays at intersections operating at LOS E or LOS F. The increases in project-related vehicle trips were reviewed at the critical movements to determine whether these increases would contribute considerably to the critical movements (i.e., a contribution of 5 percent or more to the traffic volumes at the critical movements operating at LOS E or LOS F).

Under existing plus project conditions and 2040 cumulative conditions, the proposed project was determined to have a significant traffic impact at an unsignalized intersection if project-related traffic causes the level of service at the worst approach to deteriorate from LOS D or better to LOS E or LOS F and peak hour signal warrants³² would be met, or would cause peak hour signal warrants to be met when the worst approach is already operating at LOS E or LOS F.

In addition, if it was determined that the proposed project would have a significant project-specific traffic impact at a signalized or unsignalized intersection under existing plus project conditions, then the impact would also be considered a significant cumulative impact under 2040 cumulative conditions.

Similar to intersections, the operating characteristics of freeway ramps are evaluated using the concept of LOS. Freeway ramp LOS is based on vehicle density (passenger cars per lane-mile) and service volume (passenger cars per hour). In San Francisco, LOS A through D is considered acceptable; LOS E and LOS F are considered unsatisfactory service levels. **Table 5.2-19** presents the level of service designation and associated maximum densities for ramp merge and diverge operations.

For freeway ramp merge and diverge analyses, the proposed project was determined to have a significant impact on ramp operations if it would cause a ramp operating at LOS D or better under existing conditions to operate at LOS E or LOS F, or a ramp operating at LOS E under existing conditions to deteriorate to LOS F conditions. At ramps that operate at LOS E or LOS F under existing conditions and would continue to operate at LOS E or LOS F under existing plus project conditions, the change in traffic volumes on the ramp was reviewed to determine whether a resulting increase in traffic volumes would contribute considerably to unacceptable levels of service (i.e., a contribution of 5 percent or more to the traffic volumes on the ramp).

³² A signal warrant is a condition that an intersection must meet to justify a signal installation. There are different warrants, which examine factors such as the volume of vehicles, bicyclists, and pedestrian, the signal system, collision statistics, as well as the geometric/physical configuration of the intersection. Even if a signal warrant is not met under the strictest interpretation, the determination to signalize an intersection could be made based upon the city traffic engineer's professional judgment of intersection operations.

**TABLE 5.2-19
 LEVEL OF SERVICE DEFINITIONS FOR FREEWAY RAMP JUNCTIONS**

LOS	Maximum Density (passenger cars per mile per lane)
A	< 10
B	> 11 to 20
C	> 20 to 28
D	> 28 to 35
E	> 35
F	Demand exceeds capacity

NOTE: LOS – Level of Service

SOURCE: Transportation Research Board, 2000. Highway Capacity Manual – Special Report, Washington, DC

Under 2040 cumulative conditions, the proposed project was also determined to have a significant cumulative impact if it would cause a ramp operating at LOS D or better to operate at LOS E or LOS F, or a ramp operating at LOS E to deteriorate to LOS F conditions. For ramps that operate at LOS E or LOS F under 2040 cumulative conditions and would continue to operate at LOS E or LOS F under 2040 cumulative plus project conditions, the proposed project would have a significant impact if it would contribute considerably to the ramp volumes (i.e., a contribution of 5 percent or more to the traffic volumes on the ramp. In addition, if it was determined that the proposed project would have a significant project-specific traffic impact at a ramp under existing plus project conditions, then the impact would also be considered a significant cumulative impact under 2040 cumulative conditions.

Transit Analysis Methodology

The impact of additional transit ridership generated by the proposed project on local and regional transit providers was assessed by comparing the projected ridership to the available transit capacity at the maximum load point. Transit “capacity utilization” refers to transit riders as a percentage of the capacity of the transit line, or group of lines combined and analyzed as screenlines across which transit lines travel. The transit analyses were conducted for the peak direction of travel for each of the analysis time periods.

- For the weekday p.m. peak hour analyses, the transit capacity utilization was conducted at the Planning Department’s three regional screenlines (for transit trips from the East Bay, North Bay, and South Bay), and at the four Muni downtown screenlines. In addition, transit capacity utilization was conducted for the T Third light rail line and the 22 Fillmore bus route that serve the project site. Weekday p.m. peak hour analysis was conducted for the outbound direction of travel (i.e., away from the project site). The weekday p.m. peak hour coincides with the peak evening commute period, and with the time when most employees at the site would be departing work.
- For the weekday evening peak hour, the transit analysis was conducted for the T Third light rail line and the 22 Fillmore bus route and for the regional screenlines in the inbound direction of travel (i.e., towards the project site, and into San Francisco). The weekday evening peak hour coincides with the period when most attendees would be traveling to the event center for a weekday evening event.

- For the weekday late evening peak hour, the transit analysis was conducted for the T Third light rail line and the 22 Fillmore bus route and for the regional screenlines in the outbound direction of travel (i.e., away from the project site). The weekday late evening peak hour coincides with the period when attendees would be leaving the event center following a weekday evening event.
- For the Saturday evening peak hour, the transit analysis was conducted for the T Third light rail line and the 22 Fillmore bus route and for the regional screenlines in the inbound direction of travel (i.e., towards the project site, and into San Francisco). The Saturday evening peak hour coincides with the period when most attendees would be traveling to the event center for a Saturday evening event.

The existing peak hour ridership and capacity data were obtained from Muni and reflect conditions that would occur following completion of the Central Subway project and the 22 Fillmore Transit Priority Project. (As explained below, both of these projects have been approved and are funded and are scheduled to become operational in the near future.) For service provided by Muni, the capacity includes seated passengers and an appreciable number of standing passengers per vehicle (the number of standing passengers is between 30 and 80 percent of the seated passengers depending upon the specific transit vehicle configuration). Muni has established a capacity utilization standard of 85 percent, which was applied for assessment of weekday p.m. peak hour conditions. For analysis of events at the project site, a capacity utilization standard of 100 percent was used, since more congested conditions on transit are acceptable for temporary special event conditions.

Weekday p.m. peak hour ridership and capacity for the regional transit service providers at the three regional screenlines were based on the *SF Guidelines* regional screenline data. Weekday evening, weekday late evening, and Saturday evening ridership and capacity were obtained from the regional transit providers, including AC Transit, BART, Caltrain, WETA, SamTrans, and Golden Gate Transit. All regional transit providers have a peak hour capacity utilization standard of 100 percent.

Because the Central Subway is anticipated to be operational in 2019, the existing plus project transit impact analysis was conducted assuming the additional light rail capacity in the project vicinity that would be provided via the Central Subway. Similarly, the 22 Fillmore Transit Priority Project is anticipated to be operational in 2020, and was also included in the existing plus project transit analysis. The ridership at the maximum load point and capacity of the 22 Fillmore and the T Third conditions reflect 2020 conditions for the Central Subway (i.e., conditions for the year following the start of revenue service on the light rail line and when the 22 Fillmore Transit Priority Project is completed and replaces the 55 16th Street route).³³

The proposed project was determined to have a significant transit impact if project-generated transit trips would cause downtown or regional screenlines, and, where applicable, directly affected routes, operating at less than its capacity utilization standard under existing conditions,

³³ Ridership and capacity for year 2020 was used in the analysis of existing transit conditions, as it is the year for which near-term transit ridership forecasts that include implementation of the Central Subway and Muni Forward projects (e.g., the 22 Fillmore Transit Priority Project) are available.

to operate at more than capacity utilization standard. For Muni, the capacity utilization standard is 85 percent for conditions without an event at the project site, and 100 percent for conditions with an event at the project site. For regional operators, the capacity utilization standard is 100 percent for conditions without and with an event at the project site.

Under 2040 cumulative conditions, the proposed project was determined to have a significant cumulative impact if its implementation would cause the capacity utilization at the Muni and regional screenlines and/or corridors within the screenlines to exceed the capacity utilization standard noted above for conditions without and with an event at the project site, or if its implementation would contribute considerably to a screenline or corridor projected to operate at greater than the capacity utilization standard under 2040 cumulative plus project conditions (i.e., a contribution of 5 percent or more to the transit ridership on the screenline or route). In addition, if it was determined that the proposed project would have a significant project-specific transit impact under existing plus project conditions, then the impact would also be considered a significant cumulative impact under 2040 cumulative conditions.

Pedestrian Analysis Methodology

Pedestrian conditions were assessed qualitatively and quantitatively. Quantitative analysis of operating characteristics of the pedestrian sidewalk and crosswalk locations was conducted using the *HCM 2000* methodology. Sidewalk operating conditions are measured by average pedestrian flow rate, which is defined as the average number of pedestrians that pass a specific point on the sidewalk during a certain period (pedestrians per minute per foot or p/m/f). The width of the sidewalk at this point is considered the “effective width”, which accounts for reduction in amount of sidewalk available for travel due to street furniture and the side of buildings. The level of service for sidewalks is presented for “platoon” conditions, which represents the conditions when pedestrians are walking together in a group. Pedestrian level of service conditions were calculated at the most restrictive sidewalk location (i.e., at the “pinch point”) along a given block face.

Crosswalk LOS are measurements of the amount of space (square feet) each pedestrian has in the crosswalk or corner. These measurements depend on pedestrian volumes, signal timing, corner dimensions, crosswalk dimensions and roadway widths.

With the HCM methodology, an upper limit for acceptable conditions is LOS D, which equals approximately 15 to 24 square feet per pedestrian for crosswalks, and approximately 10 to 15 pedestrians per minute per foot for sidewalks. LOS E and LOS F represent unacceptable conditions. At LOS E normal walking gaits must be adjusted due to congested conditions, and independent movements are difficult; at LOS F walking speeds are severely restricted. **Table 5.2-20** shows the LOS criteria for pedestrians based on the 2000 HCM methodology.

Under existing plus project and 2040 cumulative conditions, the proposed project was determined to have a significant pedestrian impact at a sidewalk or crosswalk location if it would cause the analysis location to deteriorate from LOS D or better to LOS E or LOS F, or from LOS E to LOS F conditions. In addition, if it was determined that the proposed project would have a significant project-specific pedestrian impact under existing plus project conditions, then the impact would also be considered a significant cumulative impact under 2040 cumulative conditions.

**TABLE 5.2-20
 PEDESTRIAN LEVEL OF SERVICE CRITERIA**

LOS	Crosswalks Density (sq ft per pedestrian)	Sidewalk Flow Rate (pedestrians per minute per foot)
A	> 13	< 0.5
B	> 10 – 13	> 0.5 – 3
C	> 6 – 9.9	> 3 – 6
D	> 3 – 5.9	> 6 – 11
E	> 2 – 2.9	> 11 – 18
F	< 2	> 18

SOURCE: Transportation Research Board, 2000. Highway Capacity Manual – Special Report, Washington, DC

Bicycle Analysis Methodology

The project impact analysis includes a qualitative assessment of bicycle conditions. Bicycle conditions are assessed as they related to the proposed project area, including bicycle routes, safety and right-of-way issues, and potential conflicts with traffic.

Loading Analysis Methodology

Loading analysis for the proposed project was conducted by comparing the loading supply that would be provided to the projected demand that would be generated.

Emergency Vehicle Access Analysis Methodology

Potential changes to emergency vehicle access were assessed qualitatively. Specifically, the analysis assessed whether any of the event center transportation management strategies would impair adequate emergency vehicle access.

Parking Conditions

As discussed in Chapter 2, Introduction, Section 2.8, Senate Bill 743 amended CEQA by adding Public Resources Code §21099 regarding the analysis of parking impacts for certain urban infill projects in transit priority areas.³⁴ Public Resources Code §21099(d), effective January 1, 2014, provides that "... parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a transit priority area shall not be considered significant impacts on the environment." Accordingly, parking is no longer to be considered in determining if a project has the potential to result in significant environmental effects for projects that meet all three criteria established in the statute. The proposed project meets all of the criteria, and thus the

³⁴ A "transit priority area" is defined as an area within one-half mile of an existing or planned major transit stop. A "major transit stop" is defined in California Public Resources Code §21064.3 as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods. A map of San Francisco's Transit Priority Areas is available online at <http://sfmea.sfplanning.org/Map%20of%20San%20Francisco%20Transit%20Priority%20Areas.pdf>. Accessed May 28, 2015.

transportation impact analysis does not consider the adequacy of parking in determining the significance of project impacts under CEQA. However, the OCII acknowledges that parking conditions may be of interest to the public and the decision-makers. Therefore, this SEIR presents a parking demand analysis for informational purposes only, and considers any secondary physical impacts associated with constrained supply (e.g., queuing by drivers waiting for scarce on-site parking spaces that affects the public right-of-way) as applicable in the following transportation impact analysis.

Furthermore, SB 743 requires that the State Office of Planning and Research (OPR) develop revisions to the *CEQA Guidelines* establishing criteria for determining the significance of transportation impacts of projects within transit priority areas that promote a reduction in greenhouse gas emissions and do not use automobile delay (level of service) in determining significance (see p. 4.A.3). These provisions of SB 743 have not yet been established and currently are only available in preliminary draft form. Therefore, as directed by OCII, this SEIR analyzes the traffic-related impacts of the project as they pertain to LOS.

A parking assessment was conducted by comparing the proposed parking supply to the parking demand generated by the proposed project uses. An assessment of cumulative parking conditions at build-out of the Mission Bay Area was also conducted.

2. Organization of Impacts and Overarching Scenario Assumptions

The general organization of the impact analysis is construction impacts, followed by operational impacts, followed by cumulative impacts, and ending with a discussion of parking conditions. Construction impacts are discussed in **Impact TR-1**. Operational impacts are covered in **Impact TR-2** through **Impact TR-25**, under three overarching scenarios, described below. Cumulative impacts are described in **Impact C-TR-1** through **Impact C-TR-10**. These impact evaluations are then followed by a discussion of parking conditions under proposed project conditions, but not in terms of a CEQA impact, as described above.

For the operational impacts, the impact evaluations uses the methodologies described above to address each of the following topics: vehicular traffic; transit; pedestrian; bicycle; loading; air traffic; and emergency vehicle access. These topics are all analyzed under each of three overarching scenario assumptions that represent the range of potential project impacts, including the reasonable worst-case scenarios. The three overarching scenario assumptions are:

- Conditions *without* a SF Giants game at AT&T Park (“Without a SF Giants Game”), **Impact TR-2** through **Impact TR-10**. This represents the most typical conditions expected to occur if the project were to be implemented.
- Conditions *with* an overlapping SF Giants evening game at AT&T Park (“With a SF Giants Evening Game”), **Impact TR-11** through **Impact TR-17**. As described further below, there is the likelihood that some events at the proposed event center could overlap with SF Giants evening games, with the potential to exacerbate transportation effects as analyzed in the first group of impacts.
- Conditions *without* implementation of the Muni Special Event Transit Service Plan, **Impact TR-18** to **Impact TR-24**. The two overarching scenarios above assume

implementation of the Muni Special Event Transit Service Plan, as described above in Section 5.2.5.2 and on Table 5.2-15, which indicate that the SFMTA intends to provide additional transit service to accommodate peak evening events, including basketball games and concerts with more than 14,000 attendees. The City and County of San Francisco fully anticipates implementation of this plan and has identified sufficient funding.³⁵ However, in order to provide a conservative CEQA analysis as well as information to the public and decision-makers, this group of impacts discloses the impacts of the proposed project if for some unknown reasons in the future, the City is unable to implement the Muni Special Event Transit Service Plan. This group of impacts analyzes only the Basketball Game scenario as the representative worst-case scenario.

For the conditions *with* an overlapping SF Giants evening game at AT&T Park, it is estimated that there would be a potential for about 32 overlapping events per year, but in rare circumstances there could be as many as 40 events (with varying combined total attendance) in one year. These estimates are based on the following assumptions, which are conservative because they rely on current scheduling information and do not account for any advanced coordination between the SF Giants and the Golden State Warriors, or internal schedule coordination at the event center:

- Overlap with Golden State Warriors games. The regular NBA (late October through mid-April) and regular baseball seasons (April through September) overlap slightly in the first half of April, and for both teams, only half of the games are home games. Conservatively, about 2 games per year could overlap during the regular season. If either or both of the Warriors and SF Giants were to move on to the post season, there would be increased likelihood of overlapping events, with up to approximately 5 additional overlapping events if both teams were to advance to their respective championship final series in the same year.
- Overlap with concerts. As indicated in Chapter 3, Project Description, Table 3-3, the major concert season is fall, winter, and early spring. Thus, of the 45 yearly concerts, about 20 could overlap with the regular baseball season, but at most, only half of these (10) are estimated to occur on the same day as a SF Giants home game.
- Overlap with family shows. As indicated in Chapter 3, Project Description, Table 3-3, the approximate 55 family shows would be distributed throughout the year on Wednesday through Sunday. Since the SF Giants play for 6 months of the year during the regular season, it is assumed that half of the family shows (27) would occur during the baseball season (April through September), but the SF Giants only play home games at AT&T Park for half of that time, leaving 14 days of possible overlap. However, the SF Giants also play games on Monday and Tuesday when there would be no family shows. So, about 10 of the family shows are estimated to occur on the same day as a SF Giants home game.
- Overlap with other non-Golden State Warriors sporting events. Of the approximate 30 other non-Golden State Warriors sporting events that would be held at the event center, it is assumed that half could occur during baseball season, and half of those could overlap with SF Giants home games, or about 7 events.
- Overlap with conventions/corporate events. Of the approximate 31 conventions or corporate events, it is assumed that half could occur during baseball season, and half of

³⁵ Letter to Tiffany Bohee, Executive Director, OCII, from Edward D. Reiskin, Director of Transportation, SFMTA, Re: SFMTA Transit Service Plan, Enforcement Support and Capital Investment Funding for the Golden State Warriors Multipurpose Arena, dated May 15, 2015.

those could overlap with SF Giants home games. However, these events would almost exclusively be during the day, and only about 35 percent of the SF Giants games are day games; this indicates the potential for an estimated 3 overlapping events.

Based on league schedules and concert scheduling as described above and in Chapter 3, Project Description, Table 3-3, it is anticipated that in a regular year, on average, there is a possibility of about nine large events (about 12,500 or more attendees) at the event center overlapping with a SF Giants evening game at AT&T Park (i.e., two basketball games and seven concerts) annually. If either or both teams make it to their respective championships, the number of large events overlapping could moderately increase; however, it is unlikely that this scenario would occur on a regular basis.

3. *Travel Demand Methodology and Results*

The memorandum containing the detailed methodology and information used to calculate the project travel demand is included in **Appendix TR**. This section summarizes the information and analysis contained in the travel demand memorandum.³⁶ As described above, travel demand estimates for the Basketball Game scenario assume that the SFMTA would provide additional transit service to accommodate peak evening events. However, travel demand estimates for the Basketball Game scenario for conditions without implementation of the Muni Special Event Transit Service Plan are also included in this section.

Introduction

Travel demand refers to the new vehicle, transit, pedestrian and bicycle trips generated by the proposed project. The methods commonly used for forecasting travel demand for development projects in San Francisco are based on person-trip generation rates, trip distribution information, and mode splits data described in the *SF Guidelines*, and which are based on a number of detailed travel behavior surveys conducted within San Francisco. The data in the *SF Guidelines* are generally accepted as more appropriate for use in transportation impact analyses for San Francisco development projects than conventional transportation planning data because of the unique mix of uses, density, availability of transit, and cost of parking in San Francisco.

However, the *SF Guidelines* do not include travel demand characteristics for the specialized uses (e.g., sports events, conventions, and other events) that would take place at the proposed event center. Similarly, standard trip generation resources, such as the Institute of Transportation Engineer's *Trip Generation Manual*, do not include sufficiently detailed trip generation data for such specialized uses. Therefore, the travel demand for the event center component of the proposed project was based on the estimated attendance, as well as information on current travel characteristics of Golden State Warriors basketball attendees at the Oracle arena in Oakland. In addition, the trips generation rates presented in the *SF Guidelines* and ITE's *Trip Generation Manual* cannot be directly applied to some development projects, such as the proposed project, because of its large scale, unique location, and mixed-use character (restaurant and retail uses

³⁶ Travel, Parking, and Loading Demand Estimates for the Proposed Event Center & Mixed-Use Development at Mission Bay Blocks 29-32 – Case No. 2014.1441E, Final Memorandum, May 2015. See **Appendix TR**.

supporting an event center as an anchor use). Thus, adjustments have been made to account for these factors. See **Appendix TR**.

The weekday daily p.m. peak hour travel demand for standard project land uses, such as office, retail, and restaurant uses were developed in accordance with the *SF Guidelines*, which provides p.m. peak hour trip generation rates and modal split, trip distribution, and average vehicle occupancy data specific to the southeast quadrant of San Francisco (Superdistrict 3, referred to as SD 3) where the project site is located.³⁷ The modal split and trip distribution assumptions presented in the *SF Guidelines* for work trips into and out of SD 3 were further refined using more recent travel pattern data of existing Mission Bay employees collected by the Mission Bay TMA. Travel demand was also determined for weekday evening and late evening and for Saturday daily and evening conditions based on adjusted trip generation rates developed for the office, retail, and restaurant uses using information obtained from ITE's *Trip Generation Manual*, the *Urban Land Institute's Shared Parking (2nd Edition)*, and Pushkarev and Zupan's, *Urban Space for Pedestrians*. See **Appendix TR**.

The No Event scenario reflects travel demand associated with the office uses, retail, and restaurant uses for the weekday p.m. commute peak hour of analysis and the Saturday evening peak hour. The Convention Event scenario reflects the travel demand of the office, retail and restaurant uses, plus a daytime convention event.

The Basketball Game scenario reflects the travel demand of the office, retail and restaurant uses, plus an evening basketball game. The transportation impact analysis of the Basketball Game scenario was conducted for four analysis hours (weekday p.m., weekday evening, weekday late evening, and Saturday evening), for conditions without and with an overlapping SF Giants evening game at AT&T Park.

Table 5.2-21 presents the expected temporal distribution of arrival and departure patterns for basketball game attendees of the proposed project. The data are based on information provided by the Golden State Warriors for their current facility, which was then adjusted to provide for earlier arrival patterns based on comparable information collected at similar NBA facilities to account for the increased availability of retail and restaurant uses at the proposed project site compared to Oracle Arena in Oakland. A summary of this data is provided in the travel demand technical memorandum included in **Appendix TR**. Based on this information, it was assumed that approximately 5 percent of arrivals to a basketball game would occur during the p.m. peak hour (5:00 to 6:00 p.m.), and up to 66 percent of arrivals would occur during the evening peak hour (7:00 to 8:00 p.m.). Similarly, up to 70 percent of the departures would occur during the late evening peak hour (9:00 to 10:00 p.m.). Event staff for basketball games would be expected to arrive between 4:30 and 5:00 p.m. and would be on post prior to the gate opening time; event staff would leave between 11:00 and 11:30 p.m.

³⁷ Superdistricts are travel analysis zones established by the Metropolitan Transportation Commission (MTC). These Superdistricts provide geographic subareas for planning purposes in San Francisco; a map with the Superdistrict boundaries is included in **Appendix TR**.

**TABLE 5.2-21
 BASKETBALL GAME ATTENDEE ARRIVAL AND DEPARTURE PATTERNS
 FOR 7:30 P.M. START TIME AND 9:40 P.M. END TIME**

Time Period	by Hour	Cumulative
Arrivals		
5:00 to 5:30 p.m.	1%	1%
5:30 to 6:00 p.m.	4%	5%
6:00 to 6:30 p.m.	11%	16%
6:30 to 7:00 p.m.	20%	35%
7:00 to 7:30 p.m.	33%	68%
7:30 to 8:00 p.m.	33%	100%
Departures		
9:00 to 9:30 p.m.	30%	30%
9:30 to 10:00 p.m.	40%	70%
10:00 to 10:30 p.m.	30%	100%

SOURCE: *Technical Memorandum - Travel, Parking and Loading Demand Estimates for the Proposed Event Center & Mixed-Use Development at Mission Bay Blocks 29-32*, May 2015. See **Appendix TR**.

Trip Generation

The person-trip³⁸ generation for the proposed project includes trips made by event attendees, employees, and other visitors to the project site and are based on the appropriate trip generation rates as described in a previous section, and which were then applied, as appropriate, to the number of expected event attendees, 1,000 gross square feet (GSF) of office, retail and restaurant uses in order to obtain the number of person trips generated by each land use. See **Appendix TR** for additional details.

The trip generation rates represent the number of person trips that would be generated by each project component as a stand-alone use. Some of the visitor trips entering/exiting the project retail and restaurant uses would be made by individuals destined to other components of the proposed project (referred to as visitor linked trips), such as the event center or the office uses. Thus, to account for the linked visitor trips, based on studies of non-work (visitor) trips conducted along the San Francisco waterfront and the type of retail and restaurant uses accessory to the event center, a daily 67 percent linked trips reduction was applied to non-work (visitor) trips for retail and restaurant uses during an event day (i.e., 33 percent of the visitor trips are considered new trips to the area unrelated to other nearby uses). On the other hand, because it is likely that more people would come to the area to specifically visit the project retail and restaurant uses on a non-event day, the daily linked trip factor was reduced to 33 percent for the sit-down restaurant and retail uses when no events are planned to take place at the site (i.e., 67 percent of the visitor trips are new trips to the site and to the area on non-event days). These assumptions are consistent with and more conservative (i.e., generates more trips) than the data obtained from a survey of shoppers conducted in the vicinity of the San Francisco Center at Powell and Market Streets, which found a

³⁸ A person trip is a trip made by one person by any means of transportation (auto, transit, walk, etc.).

linked trip factor of 67 percent for retail uses. Higher visitor linked trip ratios were assumed for the evening and late evening periods during an event when the percent of visitors unrelated to nearby project uses would be expected to be lower. It was assumed that the visitor linked trip factor would generally be constant throughout the day during non-event days. For event days, however, it was assumed that the linked trip factor would progressively increase as the event start time approaches. No linked trip factors were assumed under any scenario for visitors to the office uses.

Table 5.2-22 presents the number of person trips generated by the proposed project uses for the weekday and Saturday daily and peak hour analysis periods.

No Event. As shown in **Table 5.2-22**, the overall daily person trip generation would be lower on a Saturday than on a weekday, due to the higher trip generation associated with the office use on a weekday. On a weekday without an event, the proposed project would generate 26,998 daily person trips (inbound plus outbound), and 2,796 person trips during the weekday p.m. peak hour. On a Saturday without an event, the proposed project would generate 21,883 daily person trips and 3,130 person trips during the Saturday evening peak hour.

**TABLE 5.2-22
 PROPOSED PROJECT PERSON TRIP GENERATION BY LAND USE AND TIME PERIOD^a**

Land Use Type	Weekday				Saturday	
	Daily	PM Peak Hour	Evening Peak Hour	Late Evening Peak Hour	Daily	Evening Peak Hour
No Event						
Event Center ^b	263	22	--	--	263	0
Office	10,951	931	--	--	2,442	27
Retail	6,405	576	--	--	7,496	300
Quick Service Restaurant ^d	2,376	321	--	--	2,959	710
Sit-down Restaurant ^d	7,004	946	--	--	8,724	2,093
Total person trips w/out event	26,998	2,796	N.A. ^c	N.A. ^c	21,883	3,130
With Event						
Basketball Game	38,128	1,803	11,742	12,845	38,128	11,742
Convention Event	28,688	3,113	N.A. ^c	N.A. ^c	N.A. ^c	N.A. ^c
Office	10,951	931	186	47	2,442	27
Retail ^d	3,375	304	56	26	3,950	39
Quick Service Restaurant ^d	2,376	321	118	118	2,959	174
Sit-down Restaurant ^d	3,708	501	184	184	4,618	271
Total person trips w/ event						
Basketball Game	58,538	3,859	12,285	13,218	52,098	13,252
Convention Event	49,097	5,169	N.A. ^c	N.A. ^c	N.A. ^c	N.A. ^c

NOTES:

- ^a Numbers may not sum to total due to rounding to the nearest person-trip.
- ^b 105 employees would work at the event center on no-event days.
- ^c Not applicable; not part of the travel demand analysis.
- ^d Includes linked trip reductions as appropriate.

SOURCE: *Technical Memorandum - Travel, Parking and Loading Demand Estimates for the Proposed Event Center & Mixed-Use Development at Mission Bay Blocks 29-32*, May 2015. See **Appendix TR**.

Basketball Game. The total number of daily person trips generated on a weekday event day with a basketball game would be 58,538 person trips. Of these, 3,859 person trips would occur during the p.m. peak hour, 12,285 person trips would occur during the evening peak hour, and 13,218 person trips would occur during the weekday late evening peak hour. The total number of daily person trips generated on a Saturday with a basketball game would be 52,098 for a basketball game, of which 12,252 person trips would occur during the evening peak hour.

Convention Event. Convention events would generate fewer daily person trips than a basketball game (38,128 person trips for a basketball game versus 28,688 person trips for a convention event). However, because convention events would typically occur during the weekday, the proportion of convention event trips during the weekday p.m. peak hour would be greater than during a basketball game. This is because it is anticipated that many people would leave the convention event during the weekday p.m. peak hour while the majority of basketball fans arrive after the end of the p.m. peak hour (i.e., after 6:00 p.m.). The total number of daily person trips generated on a weekday event day with a convention event would be 49,097 trips, of which 5,169 person trips would occur during the p.m. peak hour.

Trip Distribution

The directional distribution is based on the origins and destinations of trips for each specific land use, which are then assigned to the four quadrants of San Francisco (Superdistricts 1 through 4), East Bay, North Bay, South Bay and Out of Region. The trip distribution percentages are summarized in **Table 5.2-23**.

The directional distribution of visitor trips for the proposed office, restaurant, and retail uses was obtained from the *SF Guidelines* for SD 3, in which the project is located. The distribution of convention/corporate events attendees was based on data provided by the Moscone Center Operator and documented in the Moscone Center Expansion EIR. The distribution of basketball game attendees was derived from information provided by Golden State Warriors (based on a market study assessment conducted by the project sponsor for the previously-proposed project location at Piers 30-32 in San Francisco). The directional distribution of employee trips for all proposed project uses was obtained from information provided by the Mission Bay TMA derived from transportation surveys of residents and employees in Mission Bay conducted in 2012, 2013, and 2014.

For worker trips to all land uses, the majority would be to/from San Francisco (47.3 percent), with the greatest proportion within SD 3 (22.3 percent), followed by East Bay (27.7 percent), and then South Bay (19.0 percent) origins/destinations. For visitor trips to a basketball game, the majority of trips would be to/from East Bay origins/destinations (31.1 to 33.0 percent), followed by the South Bay (26.7 to 28.0 percent), and then San Francisco (22.0 to 29.3 percent) origins/destinations.

The origin/destination distribution range for a weekday basketball game reflects an adjustment for event attendees who would travel to the event center directly from work rather than from their place of residence. The adjustment was based on a survey of Golden State Warriors season ticket holders (see **Appendix TR**). As shown in **Table 5.2-23**, the number of trips starting in

**TABLE 5.2-23
PROPOSED PROJECT TRIP DISTRIBUTION PATTERNS BY LAND USE^a**

Place of Trip Origin/Destination	Basketball Game			Convention Event		Retail		Office/Restaurant	
	Workers	Visitors		Workers	Visitors	Workers	Visitors	Workers	Visitors
		Weekday Inbound	All Other						
San Francisco									
Superdistrict 1	7.7%	14.8%	11.1%	7.7%	55.0%	7.7%	6.0%	7.7%	13.0%
Superdistrict 2	9.9%	4.6%	3.4%	9.9%	5.0%	9.9%	9.0%	9.9%	14.0%
Superdistrict 3	22.3%	5.5%	4.2%	22.3%	5.0%	22.3%	61.0%	22.3%	44.0%
Superdistrict 4	7.4%	4.4%	3.3%	7.4%	5.0%	7.4%	5.0%	7.4%	7.0%
East Bay	27.7%	31.1%	33.0%	27.7%	7.5%	27.7%	3.0%	27.7%	9.0%
North Bay	3.5%	8.9%	13.0%	3.5%	2.5%	3.5%	2.0%	3.5%	1.0%
South Bay	19.0%	26.7%	28.0%	19.0%	10.0%	19.0%	9.0%	19.0%	9.0%
Out of Region	2.5%	4.0%	4.0%	2.5%	10.0%	2.5%	5.0%	2.5%	3.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

NOTES:

^a Percentages may not sum to 100 due to rounding.

SOURCE: *Technical Memorandum - Travel, Parking and Loading Demand Estimates for the Proposed Event Center & Mixed-Use Development at Mission Bay Blocks 29-32*, May 2015. See **Appendix TR**.

San Francisco on a weekday is projected to be about 7.5 percentage points greater than on a weekend, with the corresponding reductions in trips arriving from the East Bay (2 percentage points), North Bay (4 percentage points), and South Bay (1.5 percentage points) areas.

The majority of visitor trips to a convention event, retail, office, and restaurant uses would be from within San Francisco (70 to 81 percent), followed by South Bay (9 to 10 percent), and then East Bay (3 to 9 percent) origins/destinations.

Mode of Travel

The estimated daily, p.m. peak hour, evening peak hour, and late evening peak hour person trips were allocated to travel modes in order to determine the number of auto, transit, taxi, TNC vehicles, motor coaches, bicycle, walk, and other trips. For event center basketball games, the “other” category includes motorcycles and non-conventional travel modes such as pedicabs, while for the non-event related uses of the proposed project (office, retail, and restaurant) “other” includes bicycles, motorcycles, taxis, and TNC vehicles. The bicycle trips generated by a basketball game were calculated as a separate mode of travel, but have been aggregated with those under the “other” category in the summary tables presented in this technical memorandum.

Travel mode splits of visitor trips for the non-event related uses were estimated from information in the *SF Guidelines* to the southeastern waterfront (i.e., SD 3), where the project site is located. Travel mode splits of all employee trips (including event employees at basketball games and conventions) were estimated from information provided by the Mission Bay TMA based on transportation surveys conducted in 2012, 2013, and 2014.

Mode split assumptions for convention/corporate events attendees were based on data provided by the Moscone Center Operator and documented in the Moscone Center Expansion EIR, with some adjustments to account for the SD 3 location of the proposed project. Specifically, it was assumed that the overall auto usage would be twice the Moscone Center (20 percent at the proposed project site versus 10 percent at the Moscone Center), with minimal walk trips (2 percent at the proposed project site versus 30 percent at the Moscone Center). Taxi and shuttle bus trips would continue to represent about half of all the trips, while transit trips would increase to 23 percent. The modal split allocation for each major origin/destination was estimated by using the *SF Guidelines* data for visitor trips to SD 3 as a guide and proportionally shifting walk trips from SD 1, SD 2 and SD 4 to transit trips and shifting walk trips starting or ending outside of San Francisco to auto trips; no adjustments were made for walk trips within SD 3.

The estimation of the mode of travel assumptions for the basketball game attendees and the configuration of the Muni Special Event Transit Service Plan presented in Section 5.2.5.2, Project Transportation Improvements Assumptions, were developed concurrently. On one side, the modal splits for basketball game attendee trips were derived from similar data obtained from surveys conducted in 2012 by the SF Giants.³⁹ The transit utilization for an event at the project

³⁹ The overall modal split to a SF Giants game on a weekday was 38 percent auto, 45 percent transit, and 17 percent by other means of travel, including walking. The overall modal split to a weekend game was 45 percent auto, 40 percent transit, and 15 percent by other means of travel, including walking.

site was assumed to be lower than for a baseball game given that transit access to the project site is more limited than at AT&T Park. Similarly, given that the project site is located further away from downtown and the Market Street corridor (approximately 0.6 additional miles to the south of AT&T Park), the component of event attendees either walking to the event center or taking transit to downtown and then walking to the project site would also be lower than at AT&T Park. In addition, the area surrounding the proposed project would be expected to have larger parking availability concentrated in a relatively small number of large easy to locate facilities, making it more appealing to drive to the proposed event center than to AT&T Park. Parking near the event center would be closer to, more prominent, and easier to find, and with more availability than the parking facilities near AT&T Park.

The number of attendees taking transit to and from the event center was also compared against the transit service that could reasonably be provided by Muni prior to and following the largest event that could be accommodated at the proposed event center. The T Third light rail line and the 22 Fillmore bus route are the only existing Muni routes providing close transit access to the project site's immediate vicinity. The operation of the T Third is constrained by the length of the station platforms along the line, both above and within the planned subway, which are designed to accommodate trains that are no longer than two cars. In addition, the number of trains that can be accommodated on the subway where they have to be turned around at the end of the line also limits the maximum frequency of the T Third service that can be offered. Similarly, the frequency of operation of the 22 Fillmore line is constrained by the maximum number of trolley buses that can be operated on a given segment of the line, traffic congestion along other portions of the line, and the need to provide reasonable minimum headways to avoid bunching of transit vehicles.

Given these limitations, a supplemental system of transit shuttles (i.e., the Muni Special Event Transit Service Plan) was developed to operate during the evening period immediately prior to events and after events, thereby providing additional transit options for attendees. A system of three event-oriented shuttle bus line was developed by SFMTA to provide attendees with additional transit access along 16th Street (supplementing the 22 Fillmore), and to/from the Van Ness corridor and the Transbay/Ferry Building area (supplementing the T Third). The sizing of these three supplemental Muni shuttle bus services considered, in addition to the potential event transit ridership, the need to provide reasonable accommodation adjacent to the site for buses to pick up passengers, the estimated travel time from the site to its destination, and the potential for some buses to turnaround at the end of their trip and return to the event center to pick up passengers.

As a result of this combination of potential basketball game attendee transit demand with Muni's modified transit capacity under conditions with the Muni Special Event Transit Service Plan, and in consultation with SFMTA, the estimated modes of travel assumptions were developed, in consultation with SFMTA. The overall auto share for a basketball game at the project site was estimated to be 54 percent (weekdays) and 60 percent (weekends), which is 16 and 8 percentage points higher than at AT&T Park (38 and 52 percent, respectively). At the same time, the overall auto share for a basketball game at the project site, would be 3 to 10 percentage points lower than a similar average for the proposed project location (64 percent for retail and 57 percent for other uses for proposed developments within SD 3) per information within the *SF Guidelines*. Similarly,

the overall transit mode share was estimated to be about 35 percent, compared to 45 percent (weekdays) and 36 percent (weekends) at AT&T Park, and 19 percent (retail uses) to 22 percent (other uses) for projects within SD 3. Thus, the overall transit mode share of 35 percent reflects the anticipated additional transit service to and from the event center during large events, as well as the TDM strategies in the proposed project's TMP designed to encourage use of non-auto modes by event attendees.

Table 5.2-24 summarizes the trip generation by mode of travel for the proposed project land uses for the standard weekday p.m. peak hour, as well for the weekday evening and late evening peak hours, and for the Saturday evening peak hour. The overall percentage of trips shown in **Table 5.2-24** as arriving to the event center for the Basketball Game scenario by automobile during the weekday evening peak hour (i.e., 53 percent) and during the Saturday evening peak hour (i.e., 59 percent) were used to establish the weekday and weekend evening auto mode share minimum performance standards committed to by the project sponsor in the proposed project's TMP (see description of the TMP above in Section 5.2.5.2, Project Transportation Improvements Assumptions).

The resulting weekday and Saturday basketball game attendee transit demand was then assigned to the various Muni lines depending on their origins and destinations so that the initial Muni Special Event Transit Service Plan could be refined by SFMTA. The resulting plan was then incorporated into the proposed project as an intrinsic element of the design. Mode split assumptions and travel demand estimates for the Basketball Game scenario for conditions without implementation of the Muni Special Event Transit Service Plan (i.e., without the incorporation of this design feature) are included at the end of this section.

To determine the number of vehicle trips generated by the proposed project under various scenarios, an average vehicle occupancy rate was applied to the number of person trips by automobile mode. Average vehicle occupancies for a convention event as well as for standard project land uses, such as office, retail, and restaurant uses were estimated in accordance with the methodologies in the *SF Guidelines*. Vehicle occupancy data for the basketball games at the event center were developed based on information from surveys conducted by the SF Giants in 2007; data from 2007 were used because the 2012 SF Giants survey used to derive the modal split ratios did not include information about vehicle occupancy. The average vehicle occupancy for attendees for a weekday and Saturday evening event derived from the SF Giants survey (2.7 passengers per vehicle) is comparable to data obtained from other similar transportation planning studies for arenas in urban settings, which estimated average vehicle occupancies between 2.35 and 2.8 passengers per vehicle, with the higher values being observed on weekends. When combined with employee trips and trips to/from other on-site uses, the overall average vehicle occupancy during a convention event and a basketball would range between 1.5 and 3.6 passengers per vehicle, depending on the type, day of the event, and peak hour. It should be noted that the trips made by rideshare, such as taxis, shuttle buses, Uber and similar other smart phone application-based transportation services, were included in the vehicle trips as two vehicle trips during the analysis hour (i.e., one inbound and one outbound trip).

The overall number of vehicle trips generated by the proposed project by origin and destination is also presented in **Table 5.2-25**, while the number of transit trips is presented in **Table 5.2-26**.

**TABLE 5.2-24
PROPOSED PROJECT TRIP GENERATION BY MODE, LAND USE AND TIME PERIOD^a**

Project Land Use	Weekday												Saturday			
	PM Peak Hour				Evening Peak Hour				Late Evening Peak Hour				Evening Peak Hour			
	Auto	Transit	Walk/ Other ^b	Total	Auto	Transit	Walk/ Other ^b	Total	Auto	Transit	Walk/ Other ^b	Total	Auto	Transit	Walk/ Other ^b	Total
No Event																
Event Center	6	14	3	22	--	--	--	--	--	--	--	--	0	0	0	0
Office	298	506	127	931	--	--	--	--	--	--	--	--	7	17	3	27
Retail ^e	357	84	135	576	--	--	--	--	--	--	--	--	185	44	70	300
Quick Service Restaurant ^e	170	75	76	321	--	--	--	--	--	--	--	--	376	167	168	710
Sit-down Restaurant ^e	514	201	230	946	--	--	--	--	--	--	--	--	1,139	446	509	2,093
<i>Total person trips w/out event</i>	1,344	881	570	2,796	N.A. ^c				N.A. ^c				1,707	673	750	3,130
	48%	32%	20%	100%									55%	22%	24%	100%
With Event																
Basketball Game	731	872	200	1,803	6,340	4,121	1,280	11,742	7,126	4,527	1,191	12,845	7,045	4,110	587	11,742
Convention Event ^e	633	772	1,708	3,113	N.A. ^c				N.A. ^c				N.A. ^c			
Office	298	506	127	931	50	115	21	186	13	29	5	47	7	17	3	27
Retail ^e	182	52	69	304	26	19	10	56	12	9	5	26	18	13	7	39
Quick Service Restaurant ^e	170	75	76	321	50	45	22	118	50	45	22	118	74	66	33	174
Sit-down Restaurant ^e	265	118	118	501	79	70	35	184	79	70	35	184	116	104	51	271
<i>Total person trips w/ event</i>																
Basketball Game ^f	1,645	1,625	590	3,859	6,546	4,371	1,368	12,285	7,280	4,680	1,258	13,218	7,261	4,310	681	12,2526
	43%	42%	15%	100%	53%	36%	11%	100%	55%	35%	10%	100%	59%	35%	6%	100%
Convention Event	1,547	1,524	2,098	5,169	N.A. ^c				N.A. ^c				N.A. ^c			
	30%	29%	41%	100%												

NOTES:

^a Numbers may not sum to total due to rounding.

^b "Other" includes walk, bicycle, motorcycle, taxis, limousines, TNC vehicles, etc.

^c Not applicable; not part of the travel demand analysis.

^d Transit mode includes trips made by convention event shuttle.

^e Includes linked trip reductions.

^e The overall percentage of trips arriving to the event center for the Basketball Game scenario by automobile during the weekday evening peak hour (i.e., 53 percent) and during the Saturday evening peak hour (i.e., 59 percent), highlighted in **bold**, were used to establish the weekday and weekend evening auto mode share minimum performance standards committed to by the project sponsor in the proposed project's TMP.

SOURCE: Technical Memorandum - Travel, Parking and Loading Demand Estimates for the Proposed Event Center & Mixed-Use Development at Mission Bay Blocks 29-32, May 2015. See **Appendix TR**.

**TABLE 5.2-25
PROPOSED PROJECT VEHICLE TRIPS BY PLACE OF ORIGIN AND TIME PERIOD^{a,b}**

Place of Trip Origin/ Destination	Weekday					Saturday	
	PM Peak Hour			Evening Peak Hour	Late Evening Peak Hour	Evening Peak Hour	
	No Event	Basketball Game	Convention Event	Basketball Game	Basketball Game	No Event	Basketball Game
San Francisco							
Superdistrict 1	46	58	161	266	217	66	191
Superdistrict 2	101	93	87	128	106	141	103
Superdistrict 3	236	193	165	162	136	266	143
Superdistrict 4	52	63	54	161	133	59	120
East Bay	70	146	93	787	898	74	831
North Bay	19	46	51	286	446	10	422
South Bay	148	261	245	907	1,024	129	938
Out of Region	30	27	62	55	59	40	66
Total Vehicles	702	886	919	2,752	3,018	785	2,815
Inbound	255	524	256	2,553	134	367	2,687
Outbound	447	362	663	198	2,883	418	128

NOTES:

^a Numbers may not sum due to rounding.

^b For all analysis scenarios, vehicle trips include the proposed office, retail, and restaurant uses, as well as an event or no event at the event center, depending on the analysis scenario (i.e., No Event, Basketball Game, Convention Event).

SOURCE: Technical Memorandum - Travel, Parking and Loading Demand Estimates for the Proposed Event Center & Mixed-Use Development at Mission Bay Blocks 29-32, May 2015. See **Appendix TR**.

TABLE 5.2-26
PROPOSED PROJECT TRANSIT TRIPS BY PLACE OF ORIGIN AND TIME PERIOD^{a,b}

Place of Trip Origin/Destination	Weekday					Saturday	
	PM Peak Hour			Evening Peak Hour	Late Evening Peak Hour	Evening Peak Hour	
	No Event	Basketball Game	Convention Event	Basketball Game	Basketball Game	No Event	Basketball Game
San Francisco							
Superdistrict 1	88	177	467	834	681	82	698
Superdistrict 2	93	149	99	184	157	72	151
Superdistrict 3	261	311	228	188	167	290	163
Superdistrict 4	61	104	81	125	107	43	94
East Bay	237	535	387	1,663	1,898	124	1,698
North Bay	18	55	19	295	460	5	399
South Bay	94	236	139	855	967	34	854
Out of Region	30	57	104	227	244	23	253
Total Transit Trips	881	1,625	1,524	4,371	4,680	673	4,310
Inbound	157	944	212	4,138	0	261	4,134
Outbound	724	681	1,312	232	4,680	413	176

NOTES:

^a Numbers may not sum due to rounding.

^b For all analysis scenarios, the transit trips include the proposed office, retail, and restaurant uses, as well as an event or no event at the event center, depending on the analysis scenario (i.e., No Event, Basketball Game, Convention Event).

SOURCE: *Technical Memorandum - Travel, Parking and Loading Demand Estimates for the Proposed Event Center & Mixed-Use Development at Mission Bay Blocks 29-32*, May 2015. See **Appendix TR**.

No Event Scenario. On a weekday with no event, the proposed project would generate 1,344 person trips by automobile (48 percent), 881 person trips by transit (32 percent), and 570 person trips by other modes (20 percent) during the p.m. peak hour. On a Saturday with no event, the proposed project would generate 1,707 person trips by automobile (55 percent), 673 person trips by transit (22 percent), and 750 person trips by other modes (24 percent) during the evening peak hour.

During the weekday p.m. peak hour without an event, the proposed project land uses would generate 702 vehicle trips. On Saturdays without an event, the number of vehicle trips during the Saturday evening peak hour (785 vehicle trips) would be higher but comparable to those occurring during the weekday p.m. peak hour (702 vehicle trips). The number of vehicle trips would be higher because trip generation associated with the office uses would be minimal on a Saturday, and the reduction in office trip generation (with a higher transit than auto mode split) would be offset by a greater trip generation for the retail and restaurant uses (with a higher auto than transit mode split) on a Saturday than on a weekday.

Basketball Game Scenario. The person trips by mode generated by the proposed project on a weekday with a basketball game would be as follows:

- The overall project would generate 1,645 person trips by automobile (43 percent), 1,625 person trips by transit (42 percent), and 590 person trips by other modes (15 percent) during the weekday p.m. peak hour.
- The overall project would generate 6,546 person trips by automobile (53 percent), 4,371 person trips by transit (36 percent), and 1,368 person trips by other modes (11 percent) during the weekday evening peak hour.
- The overall project would generate 7,280 person trips by automobile (55 percent), 4,680 person trips by transit (35 percent), and 1,258 person trips by other modes (10 percent) during the weekday late evening peak hour.

On weekdays with a basketball game, the proposed project would generate 886 vehicle trips during the p.m. peak hour, and the number of vehicle trips would increase to 2,752 vehicle trips during the evening peak hour (mostly arrivals to the event center), and to 3,018 vehicle trips during the late evening peak hour (mostly departures from the event center). More vehicle trips would be generated by a basketball game during the weekday late evening peak hour than during the p.m. peak hour because arrivals (inbound trips) tend to be spread out over a longer period of time as sport fans shop, buy food or meet on their way to their seats, whereas departures (outbound trips) are typically concentrated within the one hour immediately following the conclusion of an event.

On a Saturday with a basketball game, the proposed project would generate 7,261 person trips by automobile (59 percent), 4,310 person trips by transit (35 percent), and 681 person trips by other modes (6 percent). On a Saturday event day during the evening peak hour, the project would generate a higher percentage of auto trips than on a weekday event day (59 percent on a Saturday, as compared to 53 percent on a weekday), as a result of the typically lower transit service available, combined with a greater number of attendees arriving from outside San Francisco.

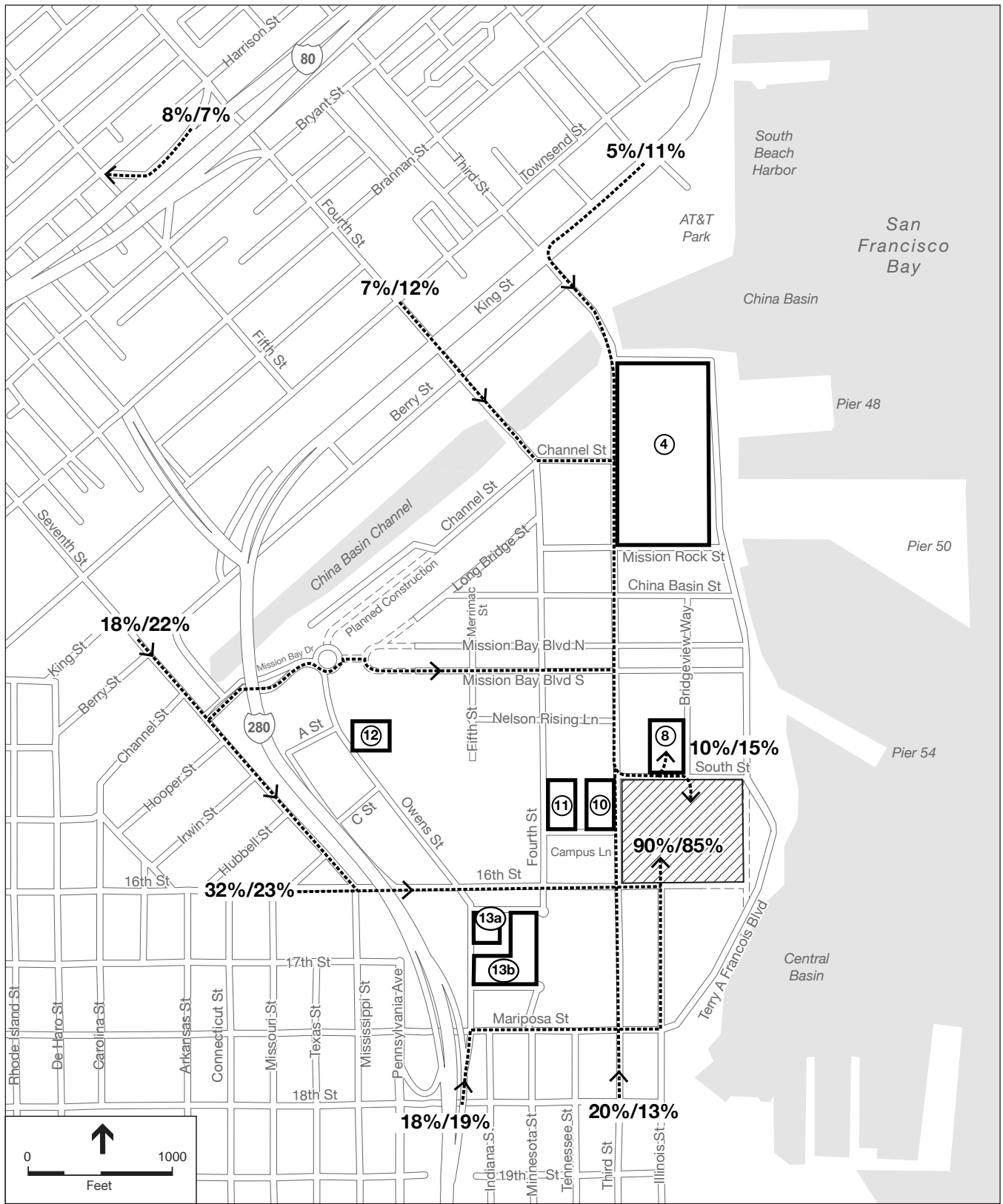
On Saturdays with a basketball game, the proposed project would generate 2,815 vehicle trips during the evening peak hour. As indicated in **Table 5.2-25**, there would be a somewhat greater vehicle trip generation for a Saturday basketball game (2,815 vehicle trips) than for a weekday basketball game (2,752 vehicle trips) as more people tend to drive on weekends because of the typically lighter traffic, more parking availability, and less transit service (e.g., fewer routes and/or longer headways between buses on Saturdays than on weekdays). In addition, retail, and restaurant uses would generate more vehicle trips on a Saturday than on a weekday.

Convention Event Scenario. On a weekday with a convention event, during the p.m. peak hour the proposed project would generate a relatively low percentage of weekday auto trips (30 percent for a convention event compared to 43 percent for a basketball game), since about 80 percent of the convention trips would be expected to arrive by transit, taxi, TNC vehicles, or convention shuttle bus service. Approximately 2 percent of the convention attendees are expected to walk to the site.

On a weekday with a convention event, the proposed project would generate 919 vehicle trips during the p.m. peak hour, slightly more than those generated by a basketball game during the same period (886 vehicle trips). Although a convention event would generate fewer weekday p.m. peak hour private vehicles trips than a basketball game, the addition of vehicle trips made by taxis and shuttle buses, (which are counted twice - once arriving and once departing the event center) would result in more trips being generated by convention events.

Vehicle Assignment

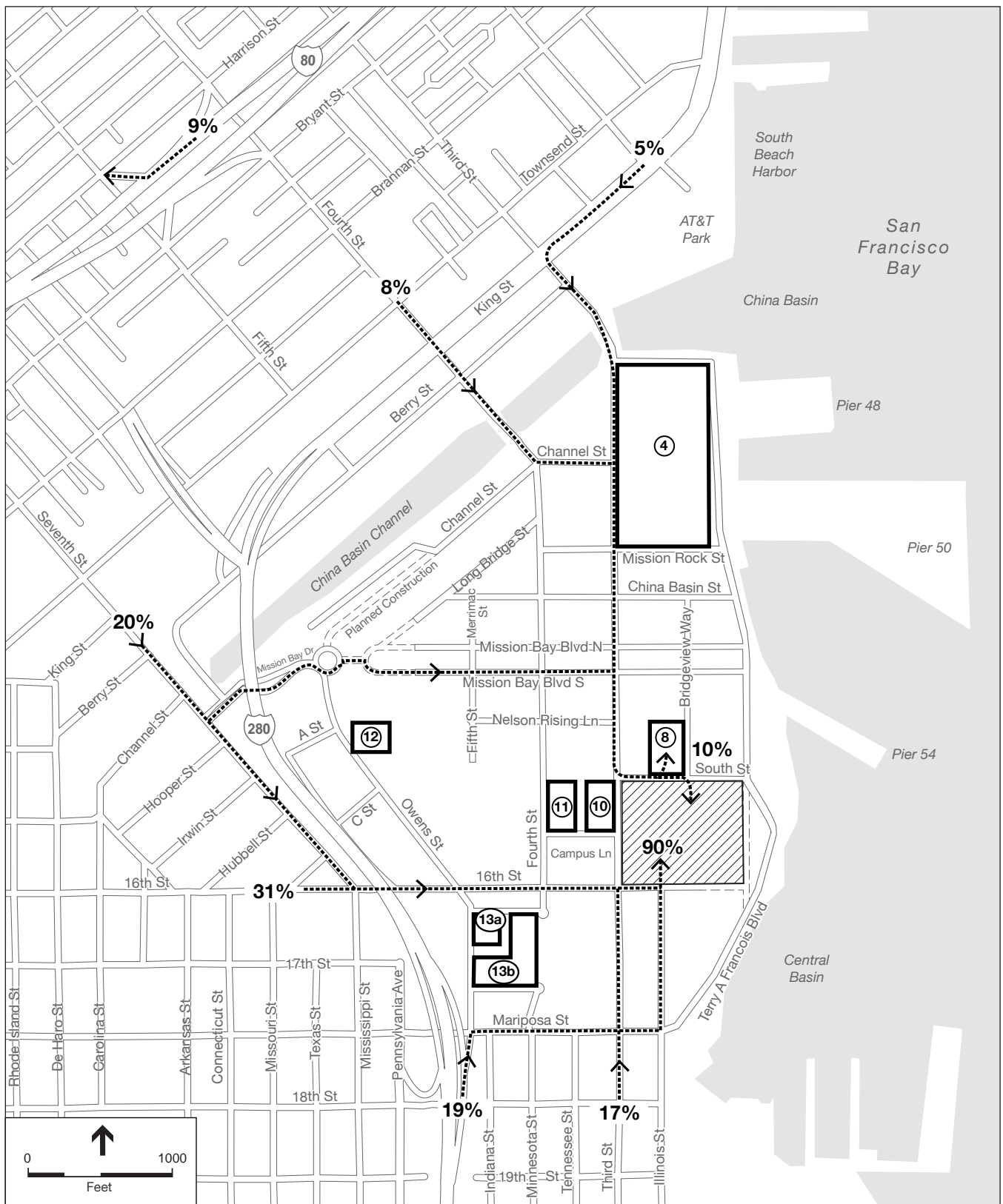
The trip distribution presented in **Table 5.2-25** was used as the basis for assigning project generated vehicle trips to the local streets in the study area during the analysis periods. **Figure 5.2-14A** and **Figure 5.2-14B** graphically depict the assignment paths for the vehicles accessing and departing the project site, respectively, for the No Event and Convention Event scenarios for the weekday p.m. peak hour, **Figure 5.2-14C** and **Figure 5.2-14D** present the inbound and outbound paths, respectively, for the No Event scenario for the Saturday evening peak hour, while **Figure 5.2-14E** and **Figure 5.2-14F** present the inbound and outbound paths, respectively for the Basketball Game scenario for the weekday and Saturday peak hours for conditions without an overlapping SF Giants evening game. For the analysis of No Event and Convention Event scenarios, vehicles were assumed to arrive at or depart from the proposed project garage or the 450 South Street garage. For the analysis of the Basketball Game scenario, vehicles were assumed to arrive/depart from the proposed project garage as well as other public parking facilities in the vicinity of the project site, such as Lot A, or various UCSF garages in the Mission Bay Area. Lot A (on Mission Rock Street) and other SF Giants-managed parking facilities such as Pier 48 and Lot C were assumed to be unavailable to basketball game attendees when evaluating overlapping baseball-basketball game conditions. Thus, for purposes of this analysis, all off-street parking facilities that are open to the paying public were assumed to be available for patrons of the event center in order to analyze the most conservative distribution of arriving vehicles (i.e., assigning more vehicles to parking facilities closer to the project site and through the greatest number of study intersections).



Project Site Boundary
 Keyed to Table 5.2-8
 No Event/Convention Event

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015
 OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E: Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 5.2-14A
Project Vehicle Trip Patterns to Major Parking Facilities-Inbound
Weekday PM Peak Hour - No Event and Convention Event

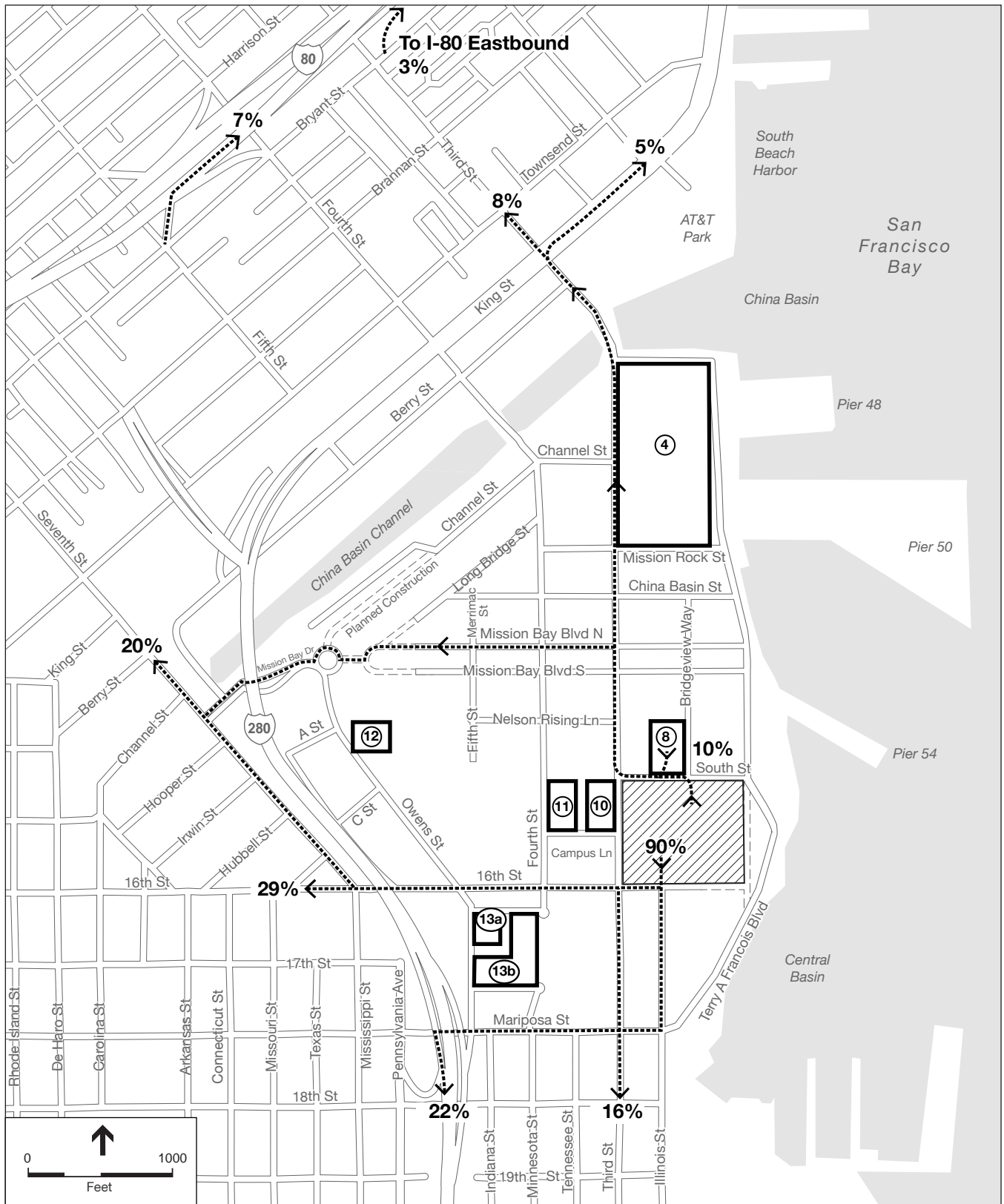


Project Site Boundary
 # Keyed to Table 5.2-8

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
 Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 5.2-14C
 Project Vehicle Trip Patterns to Major Parking Facilities-Inbound
 Saturday Evening Peak Hour - No Event

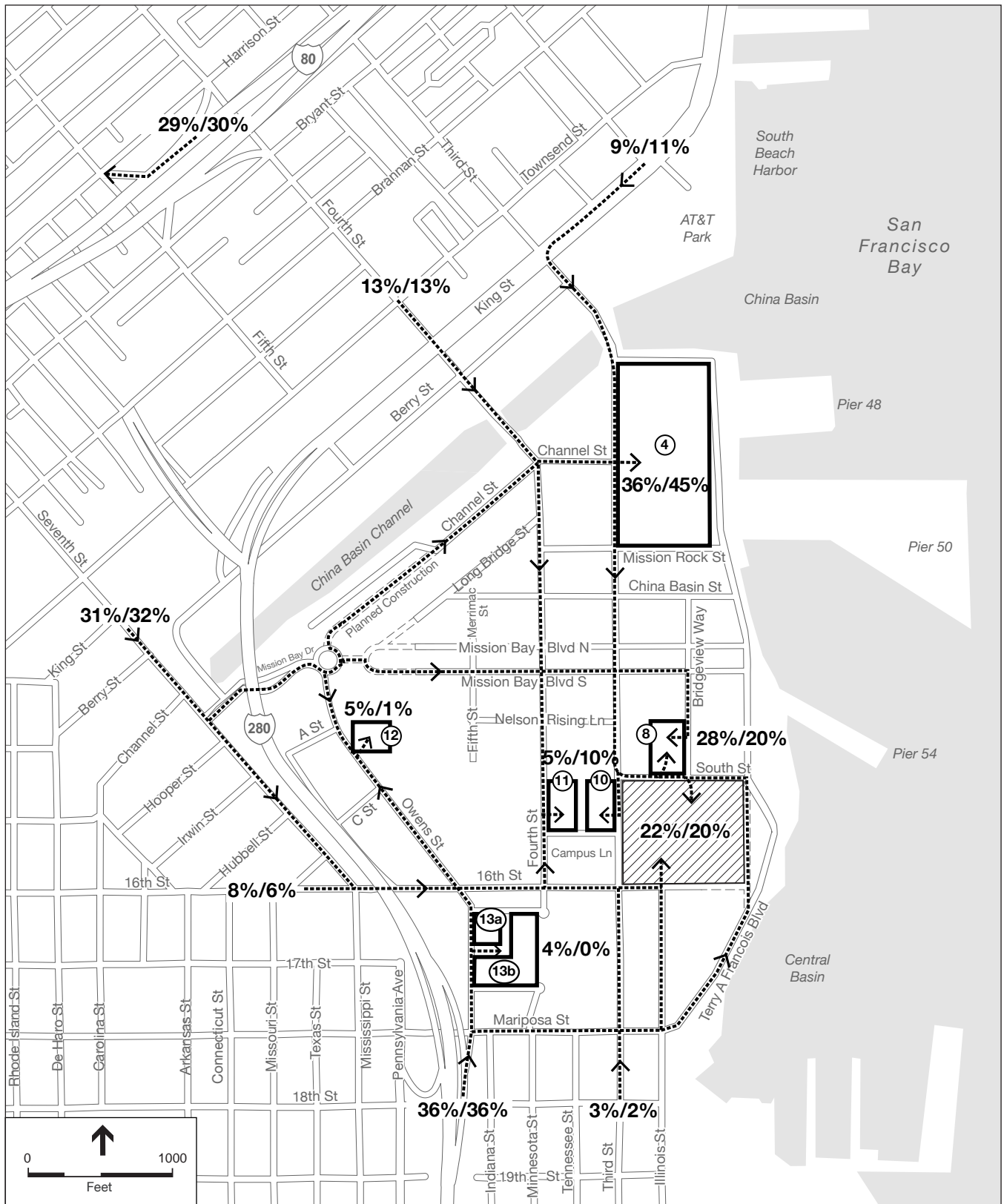


 Project Site Boundary  Keyed to Table 5.2-8

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

OClI Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

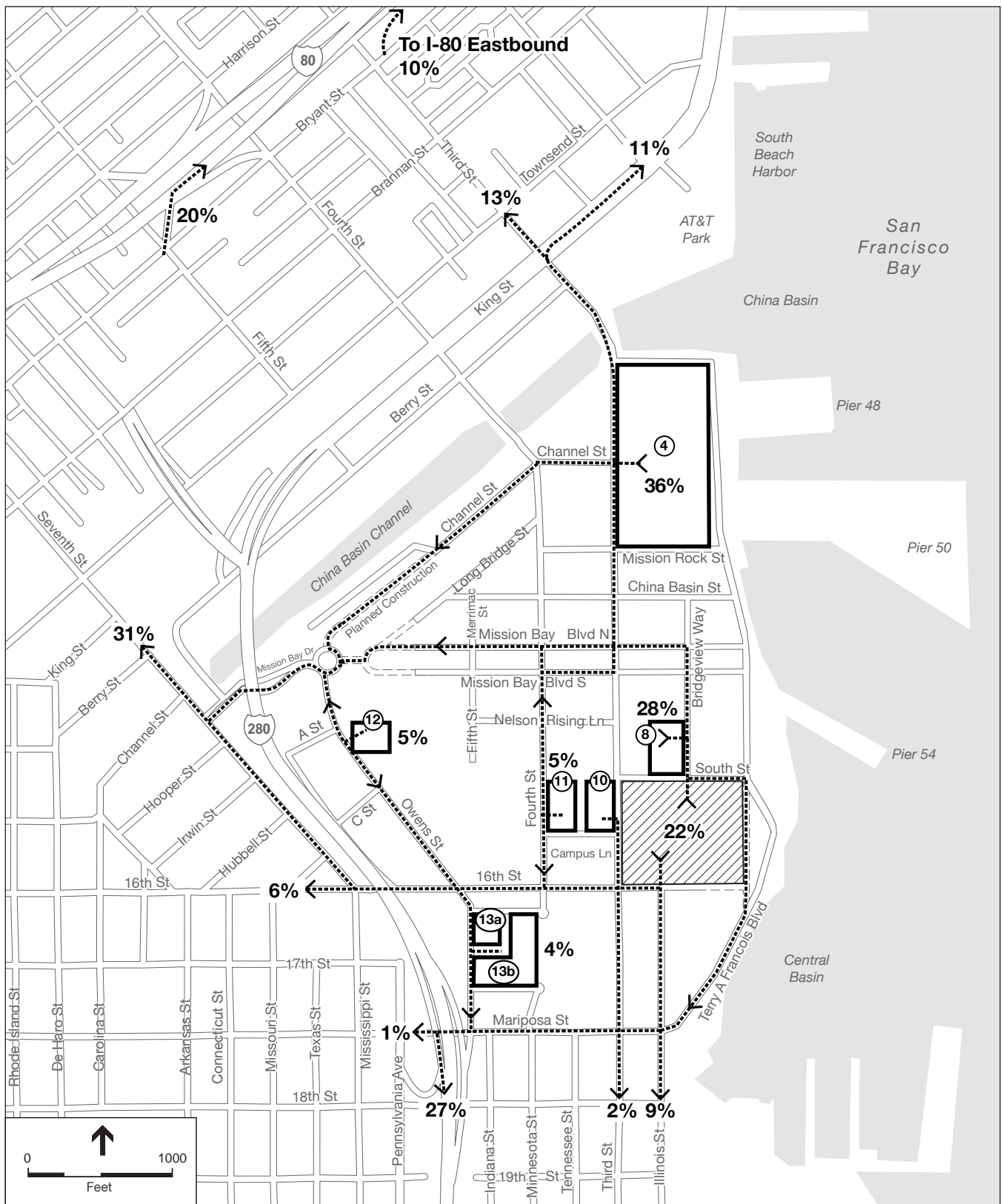
Figure 5.2-14D
Project Vehicle Trip Patterns to Major Parking Facilities-Outbound
Saturday Evening Peak Hour - No Event



SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

OClI Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 5.2-14E
Project Vehicle Trip Patterns to Major Parking Facilities-Inbound
Weekday and Saturday Peak Hours
Basketball Game Without a SF Giants Evening Game
5.2-99



SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

OClI Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 5.2-14F
Project Vehicle Trip Patterns to Major Parking Facilities-Outbound
Weekday Late Evening Peak Hour-
Basketball Game Without a SF Giants Evening Game
5.2-100

As discussed below in Section 5.2.5.6, and quantified in **Table 5.2-69** and **Table 5.2-70**, it is possible that some parking facilities (such as the 450 South Street Parking Garage or UCSF parking facilities) may not be made available (e.g., permit parking after 7 p.m.) for weekday and weekend evening events at the project site. In this case, the vehicle assignment paths graphically depicted in **Figure 5.2-14E** and **Figure 5.2-14F** would still be applicable, except that project-generated vehicles that were assumed to park at those facilities would instead park at Lot A, or at other parking facilities outside of the study area. Thus, while in the future, more existing and planned parking facilities may have limited public access, the approach described above represents a reasonable assignment of project-generated vehicle trips to the study intersections.

As discussed below in Section 5.2.5.4, parking facilities in the study area would be expected to be full during overlapping SF Giants and basketball evening games. In those instances, drivers would have to park farther away, most likely outside of the study area, and then walk the rest of the way to the event center; as a result, they would not drive through many of the study intersections in the project vicinity. However, for a more conservative traffic impact analysis, it has been assumed that in those instances when parking facilities in the vicinity of the proposed project would be full, vehicles would still arrive at the vicinity of the project site.

For conditions without and with a SF Giants evening game at AT&T Park, it was assumed that the vehicles currently traveling to and from the two surface parking lots on the project site (610 parking spaces) that would be eliminated with the project would park instead at nearby garages (e.g., UCSF Third Street Garage, 450 South Street Garage), following similar travel paths to these alternate parking facilities. Thus, no vehicle assignment credit was applied to the project, and therefore the project-generated trips would be in addition to those vehicles already traveling to and from the parking facilities on the project site.

Freight Delivery and Service Vehicle Demand

The *SF Guidelines* methodology for estimating commercial vehicle and freight loading demand was used to calculate the daily truck/service vehicle trips and the average hour and peak hour loading space demand for the office, retail, and restaurant uses. Daily truck trips generated per 1,000 square feet were calculated based on the rates contained within the *SF Guidelines*, then converted to hourly demand based on a 9-hour day and a 25-minute average stay. Average hour loading space demand was converted to a peak hour demand by applying a peaking factor, as specified in the *SF Guidelines*. For the event center, information from the project sponsor on the loading activity for the Golden State Warriors at the Oracle Arena in Oakland, and event loading activity at the Toyota Center in Houston, Texas and at the Barclays Center in Brooklyn, New York was used to estimate the event center loading demand.

Table 5.2-27 presents the number of trucks generated on a daily basis, and the demand for loading dock spaces during the average hour and peak hour of loading activity. The office, retail, and restaurant uses would generate about 360 delivery and service vehicle trips per day, which corresponds to a demand for 17 loading spaces during the average hour of loading activity and 21 loading spaces during the peak hour of loading activity. In addition, as indicated in **Table 5.2-27**, the event center would generate a demand of up to 30 delivery and service vehicle trips on the

day prior to an event. Non-Golden State Warriors events would generate a greater number of delivery and service vehicle trips associated with show components (e.g., stage, sound equipment and controls, video equipment and controls, and props), as well as food and beverage trucks, than basketball games. As indicated in **Table 5.2-27**, the event center would generate a loading space demand for seven loading spaces during the average and peak hour of loading activity. The loading space demand for seven loading spaces takes into consideration that the loading demand would occur over a shorter period (i.e., over a period of about four hours, rather than 9-hour period for the office, retail, and restaurant uses), and some loading spaces would be occupied for one or more days (e.g., TV crew trucks).

**TABLE 5.2-27
 PROPOSED PROJECT DELIVERY/SERVICE VEHICLE TRIPS AND LOADING SPACE DEMAND**

Land Use	GSF	Daily Trucks/ Service Vehicle Trip Generation	Loading Space Demand	
			Average Hour Loading Spaces	Peak Hour Loading Spaces
Event Center ^a	750,000	30	7	7
Office	605,000	127	6	7
Retail	62,500	14	1	1
Restaurant	62,500	225	10	13
Total		396	24	28

NOTE:

^a Represents maximum loading demand associated with non-Golden State Warriors events, which would be higher than Golden State Warriors events (see text for explanation).

SOURCE: *Technical Memorandum - Travel, Parking and Loading Demand Estimates for the Proposed Event Center & Mixed-Use Development at Mission Bay Blocks 29-32*, May 2015. See **Appendix TR**.

Vehicle Parking Demand

Weekday and Saturday parking demand for the proposed project was determined based on methodologies presented in the *SF Guidelines*, supplemented with data obtained from the Urban Land Institute⁴⁰ and the project sponsor on the characteristics of the event center. Parking demand consists of both long-term demand (typically employees) and short-term demand (typically visitors). Peak parking demand was estimated for the midday period (1:00 to 3:00 p.m.) when parking occupancy is typically greatest for office and retail uses, and for the late evening (7:00 to 9:00 p.m.) period when parking demand is greater for the evening events and restaurant uses. Long-term parking demand for the office, retail, and restaurant uses was estimated by applying the average mode split and vehicle occupancy from the trip generation estimation to the number of employees for each of the proposed land uses. Short-term parking for these uses was estimated based on the total daily vehicle visitor trips and an average daily parking turnover rate of 5.5 vehicles per space per day for the office, retail, and restaurant uses.⁴¹

⁴⁰ Shared Parking, Urban Land Institute, Second Edition, 2005.

⁴¹ A turnover of 5.5 means that each parking space is utilized by an average of 5.5 vehicles during the day.

Parking demand for attendees at a basketball game and convention event were estimated based on the total number of attendee vehicle trips expected at each event (i.e., the maximum number of vehicles arriving for the event, not just during the analysis hours) and an average daily parking turnover rate (1 vehicle per space per day for all basketball games on weekdays and Saturdays, and 1.5 vehicles per space per day for convention events). Event employee parking demand was estimated by applying the average mode split and vehicle occupancy from the trip generation estimation described in the previous sections to the number of employees expected at each event. **Table 5.2-28** summarizes the estimated weekday and Saturday parking demand for the proposed project during the midday and late evening periods.

**TABLE 5.2-28
 PROJECT PARKING DEMAND BY LAND USE AND TIME PERIOD^a**

Land Use Type	Weekday		Saturday	
	Midday Period	Late Evening Period	Midday Period	Late Evening Period
	Total spaces	Total spaces	Total spaces	Total spaces
No Event				
Event Center	22	2	22	2
Office	613	54	82	0
Retail	222	211	254	193
Quick Service Restaurant	54	44	66	53
Sit-down Restaurant	138	178	165	214
<i>Total spaces w/out event</i>	1,049	489	589	462
With Event				
Basketball Game	137	3,885	143	4,222
Convention Event	971	284	N.A. ^b	N.A. ^b
Office	613	54	82	0
Retail	164	155	185	141
Quick Service Restaurant	54	44	66	53
Sit-down Restaurant	104	132	122	157
<i>Total spaces with event</i>				
Basketball Game	1,072	4,270	598	4,573
Convention Event	1,906	669	N.A. ^b	N.A. ^b

NOTES:

^a Numbers may not sum due to rounding.

^b Not applicable; not part of the travel demand analysis.

SOURCE: *Technical Memorandum - Travel, Parking and Loading Demand Estimates for the Proposed Event Center & Mixed-Use Development at Mission Bay Blocks 29-32*, May 2015. See **Appendix TR**.

No Event. On weekdays without an event, the proposed project would generate a maximum parking demand for 1,049 spaces during weekday midday period and 489 spaces during the late evening period. The parking demand on Saturday (589 spaces during the midday and 462 spaces during the late evening period) would be lower because the parking demand associated with the office use would be substantially less on a Saturday than on a weekday, particularly at midday, and the reduction in the office parking demand would not be offset by the higher Saturday parking demand associated with the retail and restaurant uses.

With Event. On weekdays with an event, the proposed project would generate a maximum parking demand for 1,906 spaces during weekday midday period during a convention event, and 4,270 spaces during the late evening period with a basketball game.

On a Saturday with a basketball game, the midday parking demand would be similar to conditions with no event because basketball games start at 7:30 p.m. and game attendees would not have had arrived during the midday period. Thus, on Saturdays with a basketball game the midday parking demand associated with the event center would be somewhat greater, but similar to conditions without an event (i.e., 598 spaces with an event, as compared to the parking demand for 589 spaces without an event). The late evening parking demand on Saturday with a basketball game (4,573 spaces) would be greater than on weekdays (4,270 spaces) due to the higher auto mode share for basketball game attendees on Saturdays than on weekdays. As discussed above, concerts are anticipated to have a similar travel mode characteristics as a basketball game, and therefore, parking demand for sell-out event concerts would be similar to a basketball game.

Travel Demand for Conditions without Implementation of the Muni Special Event Transit Service Plan

The project sponsor is working with the City to secure funding for the Muni Special Event Transit Service Plan described above as part of the project improvements, and which would be implemented by the SFMTA before, during, and immediately after large events at the project site. The transportation impact analysis assumes that the special event transit service would be provided during basketball games to accommodate the transit demand. However, in the event that the SFMTA would not be able to provide all or a portion of the Muni Special Event Transit Service Plan, it is expected that transit would be less convenient for event attendees, and, therefore, that fewer attendees would travel to the site by transit. In order to determine the impact of not providing additional transit service during large events, the travel demand estimates were recalculated for conditions assuming the existing and planned (i.e., Central Subway) transit serving the project site.

Because the Muni Special Event Transit Service Plan was assumed only for analysis of a basketball game at the event center (i.e., the analysis did not assume that additional service would be provided for the Convention Event or No Event analysis scenarios), the travel demand and subsequent analysis of conditions without the Muni Special Event Transit Service Plan was conducted only for the Basketball Game scenario for the weekday p.m., evening and late evening and for Saturday evening hours of analysis.

The travel mode for attendees for conditions without the Muni Special Event Transit Service Plan for the Basketball Game scenario was estimated from information in the *SF Guidelines* for SD 3, similar as described above for non-event related project land uses, with some adjustments to account for availability of transit service. With these adjustments for no additional transit service specifically for the game or concert, the mode split for attendees was estimated to be 63 percent auto, 20 percent transit, and 17 percent walk/other (as compared to 54 percent auto, 35 percent transit, and 11 percent walk/other for conditions with the Muni Special Event Transit Service Plan). This shift in the mode choice for attendees reflects the conservative assumption that the SFMTA would not provide any additional transit service during a large event, though it is anticipated that the SFMTA would provide some additional transit service, as they currently do for large events throughout San Francisco.

Table 5.2-29 presents the trip generation by mode, by land use, and by time period for the Basketball Game scenario without implementation of the Muni Special Event Transit Service Plan. **Table 5.2-30** presents the vehicle trips by origin and destination, while **Table 5.2-31** presents the transit trips by origin and destination. **Table 5.2-32** presents a summary comparison for the Basketball Game scenario for conditions with and without the Muni Special Event Transit Service Plan. The complete set of travel demand calculations are included in **Appendix TR**.

Overall, without implementation of the Muni Special Event Transit Service Plan for a basketball game, during the weekday p.m. peak hour the number of vehicle trips would increase by 54 trips, while the number of transit trips would decrease by 136 trips. During the weekday and Saturday evening peak hours (i.e., the peak hour of arrivals to the event center), the number of vehicle trips would increase by 697 vehicles, while the number of transit trips would decrease by 1,762 trips. During the weekday late evening peak hour (i.e., departures from the event center), the number of vehicle trips would increase by 742 vehicles, while the number of transit trips would decrease by 1,878 trips. The number of pedestrian/other trips would remain similar for conditions with and without implementation of the Muni Special Event Transit Service Plan.

Because more attendees would be driving to the event center, the parking demand would also increase over conditions with the Muni Special Event Transit Service Plan, particularly during the late evening period when parking demand would be greatest. **Table 5.2-32** also presents the parking demand comparison. During the late evening the parking demand would increase by 606 spaces on weekdays and 669 spaces on a Saturday.

These travel demand estimates were used in the assessment of transportation impacts of conditions without implementation of the Muni Special Event Transit Service Plan, as presented in Section 5.2.5.5, **Impact TR-18** to **Impact TR-24**.

**TABLE 5.2-29
PROPOSED PROJECT TRIP GENERATION BY MODE, LAND USE AND TIME PERIOD FOR
BASKETBALL GAME SCENARIO WITHOUT IMPLEMENTATION OF THE MUNI SPECIAL EVENT TRANSIT SERVICE PLAN^a**

Project Land Use	Weekday												Saturday			
	PM Peak Hour				Evening Peak Hour				Late Evening Peak Hour				Evening Peak Hour			
	Auto	Transit	Walk/ Other ^b	Total	Auto	Transit	Walk/ Other ^b	Total	Auto	Transit	Walk/ Other ^b	Total	Auto	Transit	Walk/ Other ^b	Total
Basketball Game	810	737	256	1,803	7,374	2,360	2,008	11,742	8,304	2,649	1,892	12,845	8,219	2,348	1,174	11,742
Office	298	506	127	931	50	115	21	186	13	29	5	47	7	17	3	27
Retail ^c	182	52	69	304	26	19	10	56	12	9	5	26	18	13	7	39
Quick Service Restaurant ^c	170	75	76	321	50	45	22	118	50	45	22	118	74	66	33	174
Sit-down Restaurant ^c	265	118	118	501	79	70	35	184	79	70	35	184	116	104	51	271
<i>Total person trips w/ event</i>	1,724	1,489	646	3,859	7,579	2,609	2,096	12,285	8,458	2,802	1,959	13,218	8,435	2,548	1,268	12,252
	45%	39%	17%	100%	62%	21%	17%	100%	64%	21%	15%	100%	69%	21%	10%	100%

NOTES:

^a Numbers may not sum to total due to rounding.

^b "Other" includes walk, bicycle, motorcycle, taxis, limousines, TNC vehicles, etc.

^c Not applicable; not part of the travel demand analysis.

^d Transit mode includes trips made by convention event shuttle.

^e Includes linked trip reductions.

SOURCE: *Technical Memorandum - Travel, Parking and Loading Demand Estimates for the Proposed Event Center & Mixed-Use Development at Mission Bay Blocks 29-32, May 2015. See Appendix TR.*

**TABLE 5.2-30
PROPOSED PROJECT VEHICLE TRIPS BY PLACE OF ORIGIN AND TIME PERIOD FOR BASKETBALL GAME
SCENARIO WITHOUT IMPLEMENTATION OF THE MUNI SPECIAL EVENT TRANSIT SERVICE PLAN^{a,b}**

Place of Trip Origin/ Destination	Weekday			Saturday
	PM Peak Hour	Evening Peak Hour	Late Evening Peak Hour	Evening Peak Hour
San Francisco				
Superdistrict 1	68	403	327	302
Superdistrict 2	95	160	132	128
Superdistrict 3	195	182	152	158
Superdistrict 4	65	189	155	141
East Bay	166	1,050	1,198	1,104
North Bay	49	333	519	488
South Bay	275	1,077	1,216	1,109
Out of Region	27	56	60	82
Total Vehicles	940	3,449	3,760	3,512
Inbound	566	3,094	287	3,253
Outbound	374	355	3,473	259

NOTES:

^a Numbers may not sum due to rounding.

^b For all analysis scenarios, vehicle trips include the proposed office, retail, and restaurant uses, as well as an event or no event at the event center, depending on the analysis scenario (i.e., No Event, Basketball Game, Convention Event).

SOURCE: Technical Memorandum - Travel, Parking and Loading Demand Estimates for the Proposed Event Center & Mixed-Use Development at Mission Bay Blocks 29-32, May 2015. See **Appendix TR**.

**TABLE 5.2-31
PROPOSED PROJECT TRANSIT TRIPS BY PLACE OF ORIGIN AND TIME PERIOD FOR BASKETBALL GAME
SCENARIO WITHOUT IMPLEMENTATION OF THE MUNI SPECIAL EVENT TRANSIT SERVICE PLAN^{a,b}**

Place of Trip Origin/Destination	Weekday			Saturday
	PM Peak Hour	Evening Peak Hour	Late Evening Peak Hour	Evening Peak Hour
San Francisco				
Superdistrict 1	151	498	409	415
Superdistrict 2	143	110	97	89
Superdistrict 3	306	124	115	107
Superdistrict 4	100	73	65	55
East Bay	487	1,042	1,188	1,038
North Bay	46	170	263	223
South Bay	207	482	545	469
Out of Region	48	112	121	154
Total Transit Trips	1,489	2,609	2,802	2,548
Inbound	808	2,377	0	2,372
Outbound	681	232	2,802	176

NOTES:

^a Numbers may not sum due to rounding.

^b For all analysis scenarios, the transit trips include the proposed office, retail, and restaurant uses, as well as an event or no event at the event center, depending on the analysis scenario (i.e., No Event, Basketball Game, Convention Event).

SOURCE: Technical Memorandum - Travel, Parking and Loading Demand Estimates for the Proposed Event Center & Mixed-Use Development at Mission Bay Blocks 29-32, May 2015. See **Appendix TR**.

**TABLE 5.2-32
 COMPARISON OF PROPOSED PROJECT VEHICLE TRIPS, TRANSIT TRIPS, AND PARKING
 DEMAND FOR BASKETBALL GAME SCENARIO WITH AND WITHOUT IMPLEMENTATION OF
 THE MUNI SPECIAL EVENT TRANSIT SERVICE PLAN**

Trips and Parking Demand by Time Period	With Muni Special Event Transit Service Plan	Without Muni Special Event Transit Service Plan	Difference
Weekday PM			
Vehicle Trips	886	940	54
Transit Trips	1,625	1,489	-136
Weekday Evening			
Vehicle Trips	2,752	3,449	697
Transit Trips	4,371	2,609	-1,762
Weekday Late Evening			
Vehicle Trips	3,018	3,760	742
Transit Trips	4,680	2,802	-1,878
Saturday Evening			
Vehicle Trips	2,815	3,512	687
Transit Trips	4,310	2,548	-1,762
Parking Demand			
Weekday Late Evening	4,270	4,876	606
Saturday Late Evening	4,573	5,242	669

SOURCE: *Technical Memorandum - Travel, Parking and Loading Demand Estimates for the Proposed Event Center & Mixed-Use Development at Mission Bay Blocks 29-32*, May 2015. See **Appendix TR**.

4. Development of 2040 Cumulative Traffic and Transit Forecasts Methodology

Foreseeable Nearby Development Projects

In addition to full build-out of the Mission Bay South area and associated roadway infrastructure improvements, other reasonably foreseeable development projects that were considered in the cumulative transportation analysis include the following, which are described in Section 5.1.5.

- University of California at San Francisco (UCSF), 2014 Long Range Development Plan (LRDP), Mission Bay Campus
- Eastern Neighborhoods Program
- Seawall Lot 337 and Pier 48 Mixed-Use Project (Mission Rock Project)
- Pier 70 Mixed-Use Development

Cumulative Transportation Network Changes

The following transportation network changes, some of which were originally identified in the Mission Bay FSEIR, are incorporated into the cumulative analysis:

Improvements identified in Mission Bay FSEIR

- **Mission Bay FSEIR Mitigation Measure E.19b.** Restripe the I-280 off-ramp touchdown and narrow the median on the south side of King Street for a distance of about 300 feet beginning at the intersection with Fifth Street, to increase the number of eastbound lanes from the existing two to three.
- **Mission Bay FSEIR Mitigation Measure E.27.** Reroute the Muni 22-Fillmore trolleybus line to travel on 16th Street to Third Street, and then north on Third Street to The Common. If not already accomplished, install trolleybus wire support poles and/or eyebolts on buildings along the new route, and complete North Common Street and South Common Street east of Third Street. Prohibit parking on North Common and South Common Streets at trolleybus stops.

Central Subway Project. The Central Subway Project is the second phase of the Third Street light rail line (i.e., T Third), which opened in 2007. Construction is currently underway, and the Central Subway will extend the T Third line northward from its current terminus at Fourth and King Streets to a surface station south of Bryant Street and go underground at a portal under U.S. 101. From there it will continue north to stations at Moscone Center, Union Square—where it will provide passenger connections to the Muni/BART Powell station— and in Chinatown, where the line will terminate on Stockton Street at Clay Street. Construction of the Central Subway is scheduled to be completed in 2017, and revenue service is scheduled for 2019.

Central SoMa Plan. The San Francisco Planning Department is in the process of developing an integrated community vision for the southern portion of the Central Subway rail corridor. This area is located generally between Townsend and Market Streets along Fourth Street, between Second and Sixth Streets. The plan's goal is to integrate transportation and land uses by implementing changes to the allowed land uses and building heights. The plan also includes a strategy for improving the pedestrian experience in this area. These changes will be based on a synthesis of community input, past and current land use efforts, and analysis of long-range regional, citywide, and neighborhood needs. This project is currently under environmental review.

The Central SoMa Plan includes two different options for the couplet of Howard and Folsom Streets. Howard Street would be modified between 11th and Third Streets, while Folsom Street would be modified between 11th Street and The Embarcadero. Under the Howard/Folsom One-way Option, both streets would retain a one-way configuration (except Folsom Street east of Second Street which would retain its existing two-way operation). Under the Howard/Folsom Two-way Option, both streets would be converted into two-way operation, and some modifications to Harrison Street would also occur. The 2040 cumulative conditions assume implementation of the Howard/Folsom One-way Option.

Muni Forward. As indicated in Section 5.2.3.2, Muni Forward anticipates service changes to routes in the vicinity of the proposed project. Year 2040 cumulative analysis assumes changes to the capacity as identified by route changes and headway changes indicated within Muni Forward.

Railyard Alternatives and I-280 Boulevard Feasibility Study (RAB). The San Francisco Planning Department is currently conducting the Railyard Alternatives and I-280 Boulevard Feasibility Study (RAB) to holistically study transportation and land use alternatives within southeast

San Francisco that affect the City as a whole. The RAB is made up of five distinct components of analysis: (1) Reconfigure and/or relocate portions of the Fourth/King railyard storage and maintenance functions (service to the Fourth/King would remain), (2) Verify and/or potentially modify the proposed Downtown Rail Extension (DTX) (e.g., alignment, construction methods, etc.), (3) Create a loop track out of east side of Transbay Transit Center (TTC), (4) Replace the elevated portion of I-280 north of Mariposa or 16th Streets with a surface boulevard, similar to The Embarcadero or Octavia Boulevard, including improved circulation and connections throughout the area, and (5) Create opportunities for new public spaces, housing and jobs at the existing Caltrain railyard and along the freeway/rail alignment between Townsend and Mariposa Streets, including the potential to raise additional revenue to realize the transportation infrastructure.⁴²

The Phase I feasibility assessment of options for each of the five components is currently underway; a future Phase II alternatives development phase will focus on developing and defining alternatives from those options. A substantial amount of additional discussion and analysis is required before the details of the feasibility and potential design and removal of I-280 and construction of California's planned high-speed rail network and related components within San Francisco are developed to a level at which that project's effects on the transportation system in Mission Bay could be understood. If a study to determine the environmental impacts of such a project is initiated, members of the public, City, State, and Federal agencies, among others, would be given a period to provide comment on the scope of the analysis. Funding has not been secured to study these identified options beyond the Phase II alternatives development phase, or to undertake or implement any aspect of this project, and thus the project is speculative and not reasonably foreseeable. Therefore, the transportation analysis of 2040 cumulative conditions does not include changes to the existing I-280 or Caltrain alignments within Mission Bay, and the RAB study is described in this section for informational purposes only.

Cumulative Traffic, Transit and Pedestrian Demand

Future 2040 cumulative traffic volumes were estimated based on cumulative development and growth identified by the San Francisco County Transportation Authority SF-CHAMP travel demand model, using model output that represents Existing conditions and model output for 2040 cumulative conditions. The SF-CHAMP model is an activity-based travel demand model that has been validated to represent future transportation conditions in San Francisco and is updated regularly. The model predicts person travel for a full day based on assumptions of growth in population, housing units, and employment. Future year 2040 intersection turning movement volumes were developed by applying growth factors calculated from traffic volume growth between existing and 2040 conditions, obtained from the SF-CHAMP model to actual traffic volumes collected in the field. The 2040 cumulative traffic volumes take into account cumulative development projects in the project vicinity, such as the build-out of the Mission Bay Area, completion of the UCSF Research Campus and the UCSF Medical Center, the Mission Rock Project at Seawall Lot 337, Pier 70, etc., as well as the additional vehicle trips generated by the proposed project.

⁴² San Francisco Planning Department, Railway Alternatives and I-280 Boulevard Feasibility Study. Available online at: <http://www.sf-planning.org/index.aspx?page=3717> Accessed May 12, 2015.

The 2040 cumulative transit analysis accounts for ridership and/or capacity changes associated with Muni Forward, the Central Subway Project (which is scheduled to open in 2019), the new Transbay Transit Center, the electrification of Caltrain, the extension of Caltrain to the new Transbay Transit Center, expanded Water Emergency Transportation Authority (WETA) ferry service, and additional capacity planned by BART, AC Transit, SamTrans, and Golden Gate Transit. The 2040 cumulative Muni routes and Muni and regional screenline analysis was developed by the SFMTA based on the SF-CHAMP model analysis conducted as part of the ongoing Central SoMa Plan EIR.

Future 2040 cumulative pedestrian volumes were estimated based on cumulative development and growth identified by the SFCTA SF-CHAMP travel demand model, using model output that represents Existing conditions and model output for 2040 cumulative conditions. The 2040 cumulative pedestrian volumes include the additional pedestrian trips generated by the growth associated with the proposed project.

Since the SF-CHAMP model is a weekday travel demand model, future year Saturday evening peak hour conditions were estimated based on the net growth developed for the weekday p.m. condition. This approach is consistent with the methodology used on previous analyses of weekend conditions in San Francisco and provided conservative results, since in addition to the expected growth of visitor-oriented uses such as retail and restaurant, it includes additional growth from standard uses, such as office, that would not generate as many trips on a weekend as they would on a weekday.

5.2.5.4 Impact Evaluation

Project Impacts: Construction

Impact TR-1: The proposed project would not result in construction-related ground transportation impacts because of their temporary and limited duration. (Less than Significant)

The construction impact assessment is based on currently available information from the project sponsor, as described in Chapter 3, Project Description, and professional knowledge of typical construction practices citywide. Prior to construction, as part of the construction application phase, the project sponsor and construction contractor(s) would be required to meet with San Francisco Department of Public Works (DPW) and SFMTA staff to develop and review truck routing plans for disposal of excavated materials, materials delivery and storage, as well as staging for construction vehicles. The construction contractor would be required to meet the City of San Francisco's Regulations for Working in San Francisco Streets, the Blue Book, including those regarding sidewalk and lane closures, and would meet with SFMTA staff to determine if any special traffic permits would be required.⁴³ Prior to construction, the project contractor would coordinate with Muni's Street Operations and Special Events Office to coordinate construction activities and avoid impacts to transit operations. In addition to the regulations in the Blue Book,

⁴³ The SFMTA Parking and Traffic Regulations for Working in San Francisco Streets (The Blue Book), 8th Edition, is available online at <http://www.sfmta.com/services/streets-sidewalks/construction-regulations>. Accessed May 28, 2015.

the contractor would be responsible for complying with all City, State and federal codes, rules and regulations.

Construction of the proposed project is anticipated to begin in late 2015, and occur over an approximate 26-month period. Construction activities would include, but not be limited to: site demolition, clearing and excavation; dewatering; pile installation and foundation construction; construction of all proposed development, including event center, podium structure, office towers and plazas; installation of associated utilities; interior finishing; and exterior hardscaping and landscaping improvements.

The majority of the construction is proposed to occur Monday through Friday, although some construction activities would occur on nights and weekends. A typical work day shift would be between 7:00 a.m. and 6:00 p.m., and a typical second shift (i.e., for below-grade and interior work within buildings) would be between 4:00 p.m. and 12:30 a.m. There would also be the potential for overnight deliveries of materials and/or equipment. All construction activities are proposed to be conducted within allowable construction requirements permitted by City code. The project would also be subject to the Mission Bay Good Neighbor Policy, which limits extreme noise-generating activities in Mission Bay to Monday to Friday from 8:00 a.m. to 5:00 p.m.⁴⁴

Table 3-5 in Chapter 3 summarizes major construction tasks, and presents a preliminary construction schedule. **Table 5.2-33** presents a summary of the major construction phases and duration, as well as the average and peak hour number of construction trucks and workers by phase. Construction duration of the event center is anticipated to be about 24 months, about 18 months each for the north and south office towers, and about 10 months for the parking garage and podium. Because construction of each of these project components would overlap, construction activities would be expected to be concentrated and intensive for the entire 26-month construction period.

The proposed construction staging area for the majority of the project construction would take place between the existing alignment of Terry A. Francois Boulevard and the west face of the proposed event center. This staging area would be used until such time the planned realignment of Terry A. Francois Boulevard occurs. Any deliveries of materials that could not be accommodated within the above-described staging area would be staged on Terry A. Francois Boulevard between Piers 48 and 50. All construction equipment is proposed to be staged on-site. Refer to Section 5.2.6, Project Impacts on UCSF Helipad Operations for the discussion of construction-related impacts related to temporary effects of construction tower cranes on the UCSF emergency helicopter operations.

During construction, the southern-most eastbound lane on South Street adjacent to the project site; and the westbound curb lane on 16th Street between Third and Illinois Streets adjacent to the project site would be temporarily closed. On South Street one eastbound and two westbound travel lanes would be maintained for local circulation throughout the construction period.

⁴⁴ The Mission Bay Good Neighbor Policy specifies that pile driving or other extreme noise-generating activity shall be limited to 8:00 am to 5:00 pm, Monday through Friday.

**TABLE 5.2-33
 SUMMARY OF CONSTRUCTION PHASES AND DURATION AND
 DAILY CONSTRUCTION TRUCKS AND WORKERS BY PHASE**

Construction Work	Duration (months)	Daily Construction Trucks		Daily Construction Workers	
		Peak	Average	Peak	Average
Entire Site					
Demolition	1	10	8	12	10
Excavation and Shoring	3	125	75	30	25
Event Center					
Foundation and Below-Grade Construction	6	25	20	125	100
Base Building	16	30	25	250	200
Exterior Finishing	10	30	25	75	50
Interior Finishing	18.5	40	30	300	150
Garage / Podium					
Foundation and Below-Grade Construction	6	25	20	75	50
Base Building	9	25	20	75	50
Northwest Tower					
Base Building	8	20	15	60	40
Exterior Finishing	5	5	2	15	10
Interior Finishing	12	15	10	150	100
Southwest Tower					
Base Building	8	20	15	60	40
Exterior Finishing	5	5	2	15	10
Interior Finishing	12	15	10	150	100
Entire Site					
Street Improvements	5	12	10	50	40

SOURCE: Mortenson Clark Joint Venture, 2014

It is also anticipated that the sidewalk on Third Street adjacent to the project site between 16th and South Streets would be temporarily closed during the building steel erection phase in this area, and pedestrians between 16th and South Streets would be directed to use the west side of Third Street for north/south travel. Existing pedestrian volumes on the east side of Third Street between South and 16th Streets are low, less than 60 pedestrians per hour on days without a SF Giants game and less than 50 pedestrians per hour on days with a SF Giants evening game. Pedestrian volumes on the west side of Third Street between 16th and South Streets are slightly higher (about 100 pedestrians per hour on days without and with a SF Giants evening game), and therefore, the sidewalk would be able to accommodate the additional pedestrians during the temporary sidewalk closures. Sidewalks on South Street, 16th Street and Terry A. Francois Boulevard adjacent to the project site are currently not provided, and sidewalks would be constructed as part of the project.

Construction activities on the project site would not affect access to the existing portion of the Bay Trail that runs along the shoreline east of Terry A. Francois Boulevard. However, it should be noted that the realignment of Terry A. Francois Boulevard and expansion and improvements at the Bayfront Park would overlap with a portion of construction on the project site. The Mission Bay master developer will be constructing the Bayfront Park.

Terry A. Francois Boulevard would be the primary vehicular ingress/egress to/from the project site during construction. Third Street, Illinois Street and Terry A. Francois Boulevard are the primary streets in the immediate project vicinity that are proposed to be used to connect to routes leading to/from I-280, I-80 and U.S. 101 during construction.

During the construction period, there would be a flow of construction-related trucks into and out of the site, with the greatest number occurring over a three-month period during the excavation and shoring phase (see **Table 5.2-33**). Truck access driveways at the project site would be from multiple locations on South Street (three driveways), Terry A. Francois Boulevard (two driveways), and 16th Street (two driveways). The location of the midblock driveway on South Street between Third Street and Bridgeview Way would shift as construction proceeds (i.e., the driveway would be closer to Third Street for the first three months of construction, and closer to Bridgeview Way for the remainder of the construction period). The number of driveways that would be in use at any one time would depend on the construction phase. The impact of construction truck traffic would be a temporary lessening of the capacities of streets due to the slower movement and larger turning radii of trucks, which may affect both traffic and Muni operations.

Access from I-280 northbound would be via the I-280 off-ramp at the intersection of Mariposa/Owens, continuing on Mariposa Street to Third Street or Terry A. Francois Boulevard, then to 16th Street or South Street, or from the off-ramp continuing on the new Owens Street segment to 16th Street. Alternately, trucks would exit I-280 northbound at the Cesar Chavez Street, and continue north on Third Street to 16th Street, Terry A. Francois Boulevard, and South Street.

Access to I-280 southbound would be via South Street, Third Street, 16th Street, to the new Owens Street segment and onto the on-ramp, or Third Street to Mariposa Street to the I-280 on-ramp at Owens Street. Alternately, trucks could access the I-280 southbound via South Street, Third Street, 25th Street, to the on-ramp at Pennsylvania Street. Access from I-80 westbound would be via the Eighth Street off-ramp at Harrison Street, continuing on Eighth Street, Bryant Street, and Seventh Street to 16th Street. Access to I-80 eastbound would be via South Street, Third Street, 16th Street, Seventh Street, Bryant Street to the on-ramp at Fifth Street. Truck access routes would be reviewed with the SFMTA as part of the permit process prior to construction. Construction vehicles (i.e., construction trucks and construction workers driving to and from the project site) would not substantially affect peak period intersection conditions, as the construction traffic would be less than the vehicle trips associated with operation of the project (see Impact TR-2), and because construction work schedules do not typically overlap with peak commute periods.

The proposed project also includes extension of the existing northbound Muni light rail platform and associated track work within the median of Third Street north and south of South Street. The extension of the light rail platform would occur over a 14-month period, although construction activities would not be continuous for the entire period. Construction of the track crossovers would occur over a three-day period. Construction activities would require temporary travel lane closure of one of the two northbound lanes on Third Street, depending on the phase of construction activity. On Third Street, the temporary lane closures would reduce the roadway capacity and require all vehicles to use the remaining lane. Temporary lane closures would result in additional vehicle delay, and some drivers might shift to Terry A. Francois Boulevard to access their destinations. Construction activities that involve track work or staging within the track area would require motor coach substitution. To the extent feasible, this work would be scheduled on weekends when impacts on light rail service would be less than during the weekdays.

As presented in **Table 5.2-33**, during peak overlapping construction periods, there would be between 330 and 705 construction workers at the project site. The trip distribution and mode split of construction workers are not known. In San Francisco, some construction workers use transit or carpool to a site, particularly when located downtown, to reduce traffic and parking problems during construction. However, it is anticipated that the addition of the worker-related vehicle- or transit-trips would not substantially affect transportation conditions, as any impacts on local intersections or the transit network would be similar to, or less than, those associated with the proposed project and would be temporary in nature. Construction workers who drive to the site would cause a temporary parking demand. Nearby parking facilities, such as Lot A, the 450 South Street Garage, and UCSF's Third Street Garage, currently have availability during the day, and it is anticipated that construction worker parking demand could be accommodated without substantially affecting areawide parking conditions.

It is anticipated that construction at the project site over the 26-month construction period would overlap with the construction activity of other projects in the area, notably the UCSF LRDP projects, planned for construction between 2015 and 2019. These include 523 residential units, about 440,000 gsf of research, clinical and medical space, and a parking garage containing 500 vehicle parking spaces. Detailed construction schedules for these projects are not currently known, however, it is anticipated that a portion of the construction schedules would overlap with the project construction period. In particular, the UCSF East Campus project on Blocks 33/34, located directly south of the project site across 16th Street, consists of 500,000 gsf of office space, but may include up to 250,000 gsf of clinical space with the remainder dedicated to research/office uses.⁴⁵ The project will be built in two phases, with the first phase (about 250,000 gsf) starting construction in 2016 and continuing for about 18 to 24 months. The UCSF projects are projected to generate about 40 daily truck trips on average, and these trucks would enter/exit the UCSF campus via Mission Bay Boulevard North, Nelson Rising Lane, Owens Street, 16th Street, and Fourth Street. In addition, the Uber/ARE project on Mission Bay Blocks 26/27, located directly north of the project site across South Street, consists of 423,000 gsf of office space. Construction on this project is

⁴⁵ Clinical uses are considered a "secondary use" under the Mission Bay South Plan and would require a finding of consistency with the Plan by OCII.

estimated to start by the end of 2015 and continue for 18 to 24 months. Impact C-TR-1 presents the cumulative construction-related transportation impact analysis.

The construction activities associated with overlapping projects would affect traffic operations in the nearby vicinity, however, it is not anticipated that construction activities would substantially affect pedestrian movements. It is anticipated that the construction manager for each project would be required to work with the various departments of the City to develop a detailed and coordinated plan that would address construction vehicle routing, traffic control and pedestrian movement adjacent to the construction area for the duration of the overlap in construction activity. See **Impact C-TR-1** for discussion on cumulative construction-related construction impacts.

Overall, because construction activities would be temporary and limited in duration, and are required to be conducted in accordance with City requirements, construction-related ground transportation impacts of the proposed project would be *less than significant*.

Mitigation: Not required

While the proposed project's construction-related transportation impacts would be less than significant, the following improvement measure may be recommended for consideration by City decision makers to further reduce the proposed project's less-than-significant impacts related to construction activities.

Improvement Measure I-TR-1: Construction Management Plan and Public Updates

Construction Coordination – To reduce potential conflicts between construction activities and pedestrians, bicyclists, transit and vehicles at the project site, the project sponsor shall require that the contractor prepare a Construction Management Plan for the project construction period. The preparation of a Construction Management Plan could be a requirement included in the construction bid package. Prior to finalizing the Plan, the project sponsor/construction contractor(s) shall meet with DPW, SFMTA, the Fire Department, Muni Operations and other City agencies to coordinate feasible measures to include in the Construction Management Plan to reduce traffic congestion, including temporary transit stop relocations and other measures to reduce potential traffic, bicycle, and transit disruption and pedestrian circulation effects during construction of the proposed project. This review should consider other ongoing construction in the project vicinity, such as construction of the nearby UCSF LRDP projects and construction on Blocks 26 and 27.

Carpool, Bicycle, Walk and Transit Access for Construction Workers – To minimize parking demand and vehicle trips associated with construction workers, the construction contractor could include as part of the Construction Management Plan methods to encourage carpooling, bicycle, walk and transit access to the project site by construction workers (such as providing transit subsidies to construction workers, providing secure bicycle parking spaces, participating in free-to-employee ride matching program from www.511.org, participating in emergency ride home program through the City of San Francisco (www.sferh.org), and providing transit information to construction workers.

Construction Worker Parking Plan – As part of the Construction Management Plan that would be developed by the construction contractor, the location of construction worker parking could be identified as well as the person(s) responsible for monitoring the implementation of the proposed parking plan. The use of on-street parking to

accommodate construction worker parking could be discouraged. All construction bid documents could include a requirement for the construction contractor to identify the proposed location of construction worker parking. If on-site, the location, number of parking spaces, and area where vehicles would enter and exit the site could be required. If off-site parking is proposed to accommodate construction workers, the location of the off-site facility, number of parking spaces retained, and description of how workers would travel between off-site facility and project site could be required.

Project Construction Updates for Adjacent Businesses and Residents – To minimize construction impacts on access to nearby institutions and businesses, the project sponsor could provide nearby residences and adjacent businesses with regularly-updated information regarding project construction, including construction activities, peak construction vehicle activities (e.g., concrete pours), travel lane closures, and parking lane and sidewalk closures. A regular email notice could be distributed by the project sponsor that would provide current construction information of interest to neighbors, as well as contact information for specific construction inquiries or concerns.

Comparison of Impact TR-1 to Mission Bay FSEIR Impact Analysis

The Mission Bay FSEIR did not identify any significant impacts related to construction-related transportation impacts within Mission Bay, and did not require any mitigation measures. Consequently, no new or different mitigation measures or alternatives to reduce project impacts related to construction activities are identified or required with respect to the currently proposed project. On the basis of the facts discussed above, the project would not have any new or substantially more severe effects than those identified in the Mission Bay FSEIR related to construction-related transportation impacts.

Project Impacts: Operations

Conditions Without a SF Giants Game at AT&T Park

Traffic Impacts

Impact TR-2: The proposed project would result in significant traffic impacts at multiple intersections that would operate at LOS E or LOS F under Existing plus Project conditions without a SF Giants game at AT&T Park. (Significant and Unavoidable with Mitigation)

Impact TR-2 presents the traffic impact analysis at the study intersections for the No Event, Convention Event, and Basketball Game scenarios for conditions without an overlapping SF Giants evening game at AT&T Park for the four analysis hours. As described in Section 5.2.5.3, each project scenario was evaluated for the particular time period(s) during which the specific conditions would occur. **Table 5.2-34, Figure 5.2-15 and Figure 5.2-16** present the weekday p.m. peak hour intersection LOS conditions for the three scenarios, **Table 5.2-35 and Figure 5.2-17** present the weekday evening and late evening peak hour conditions for the Basketball Game scenario, and **Table 5.2-36 and Figure 5.2-18** present the Saturday evening peak hour conditions for the No Event and Basketball Game scenarios.

**TABLE 5.2-34
INTERSECTION LEVEL OF SERVICE - EXISTING PLUS PROJECT CONDITIONS -
WITHOUT A SF GIANTS GAME - WEEKDAY PM PEAK HOUR**

#	Intersection Location		Existing plus Project							
			Existing		No Event		Convention Event		Basketball Game	
			Delay ^a	LOS ^b	Delay	LOS	Delay	LOS	Delay	LOS
1	King St	Third Street	72.7	E	73.2	E	72.3	E	72.7	E
2	King St	Fourth Street	51.9	D	52.5	D	60.0	E	60.2	E
3	King St/Fifth St	I-280 ramps	59.2	E	59.2	E	59.2	E	59.2	E
4	Fifth St/Harrison	I-80 WB off-ramp	48.4	D	48.5	D	48.5	D	49.8	D
5	Fifth St/Bryant St	I-80 EB on-ramp	>80	F	>80	F	>80	F	>80	F
6	Third Street	Channel Street	38.0	D	38.3	D	44.3	D	46.0	D
7	Fourth Street	Channel Street	< 10	A	< 10	A	< 10	A	11.3	B
8	Seventh Street	Mission Bay Dr	23.1	C	30.2	C	38.5	D	52.3	D
9	TA Francois Blvd	South Street ^c	10.8(eb)	B	< 10	A	< 10	A	< 10	A
10	Third Street	South Street	24.9	C	28.5	C	29.3	C	27.4	C
11	TA Francois Blvd	16th Street ^c	--	--	17.2	B	17.2	A	16.8	A
12	Illinois Street	16th Street ^c	12.6(nb)	B	12.8 (nb)	B	13.0 (nb)	B	11.5(nb)	B
13	Third Street	16th Street ^e	29.3	C	32.2	C	32.9	C	33.6	C
14	Fourth Street	16th Street ^e	21.5	B	32.7	C	37.9	D	28.0	C
15	Owens Street	16th Street ^e	35.5	C	41.2	D	53.4	D	44.2	C
16	7th/Mississippi	16th Street ^e	68.6	E	> 80	F	> 80	F	> 80	F
17	Illinois Street	Mariposa Street ^c	10.6(eb)	B	16.1	B	17.1	B	17.0	B
18	Third Street	Mariposa Street	36.2	D	42.5	D	39.4	D	42.0	D
19	Fourth Street	Mariposa Street	13.2	B	15.3	B	15.3	B	14.3	B
20	Mariposa Street	I-280 NB off-ramp	25.8	C	26.4	C	27.0	C	25.8	C
21	Mariposa Street	I-280 SB on-ramp ^d	11.9	B	12.9	B	13.9	B	12.8	B
22	Third Street	Cesar Chavez St	43.0	D	49.7	D	47.5	D	47.6	D

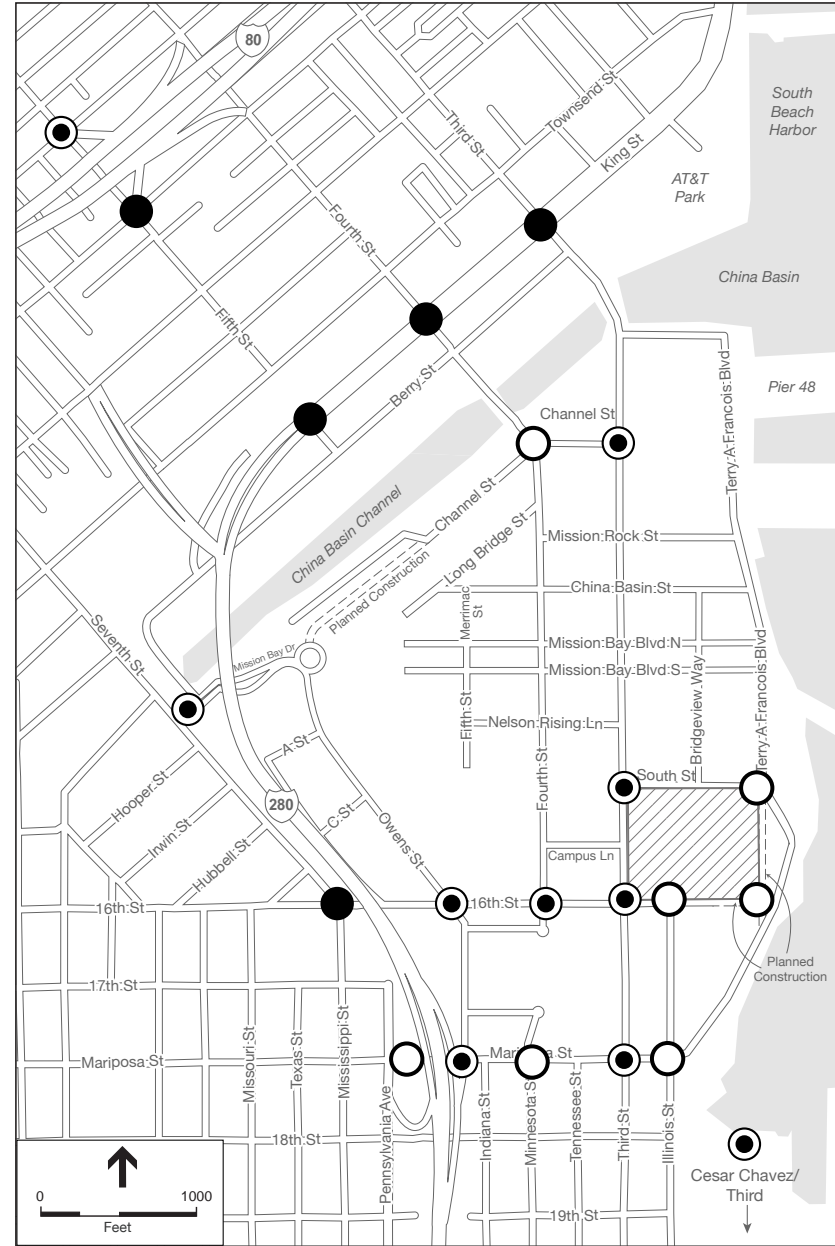
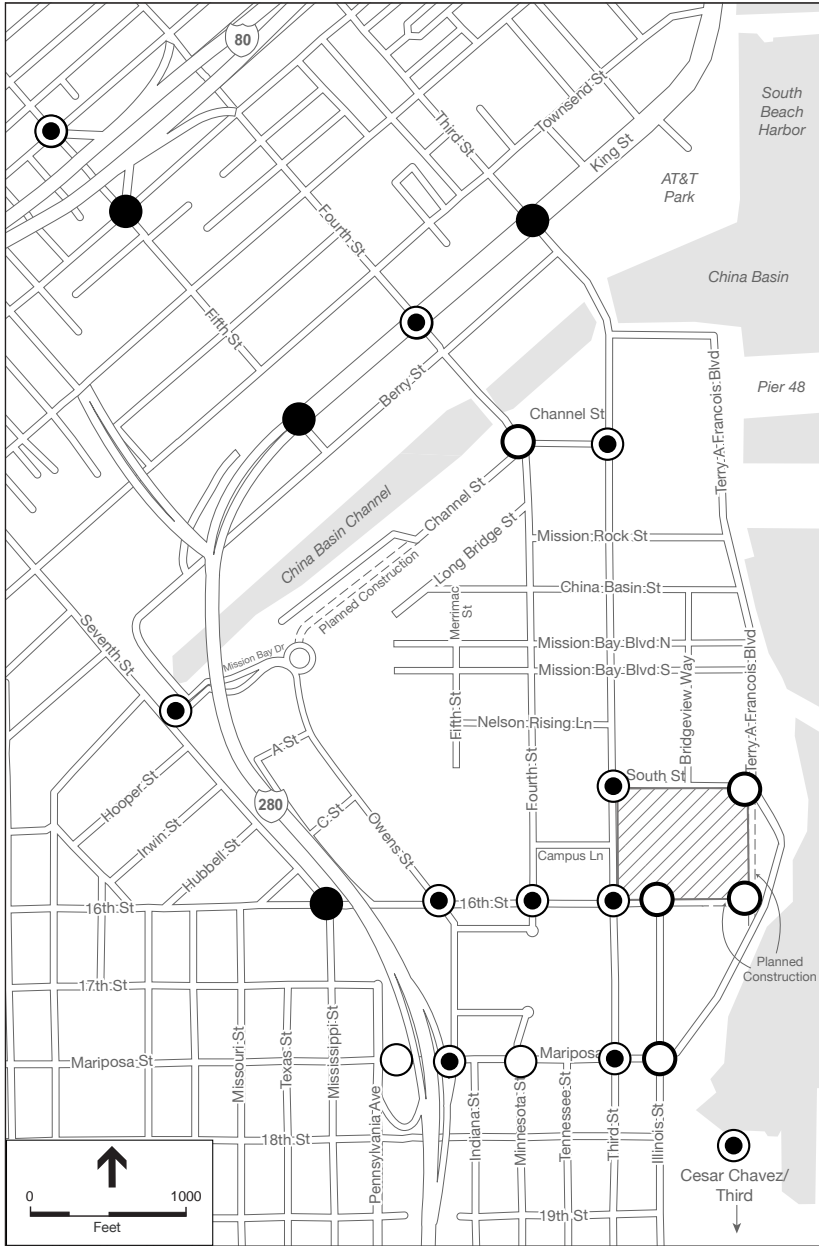
NOTES:

- ^a Delay presented in seconds per vehicle. For unsignalized intersections, delay and LOS presented for worst approach. Worst approach indicated in ().
- ^b Intersections operating at LOS E or LOS F conditions highlighted in **bold**. Significant project impacts shaded.
- ^c All-way stop-controlled intersection. The existing intersections of Terry A. Francois/South and Illinois/Mariposa would be signalized as part of the proposed project.
- ^d The traffic signal at the intersection of Mariposa/I-280 southbound on-ramp is part of the roadway improvements on Mariposa Street between the I-280 northbound off-ramp and I-280 southbound on-ramp and the extension of Owens Street between 16th and Mariposa Streets, and is currently planned to be operational by fall 2015.
- ^e Includes implementation of the 22 Fillmore Transit Priority Project, which includes converting one mixed-flow lane in each direction to a side-running transit-only lane.

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

NO EVENT SCENARIO

CONVENTION EVENT SCENARIO



 Project Site Boundary
  LOS A-B
  LOS C-D
  LOS E-F

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

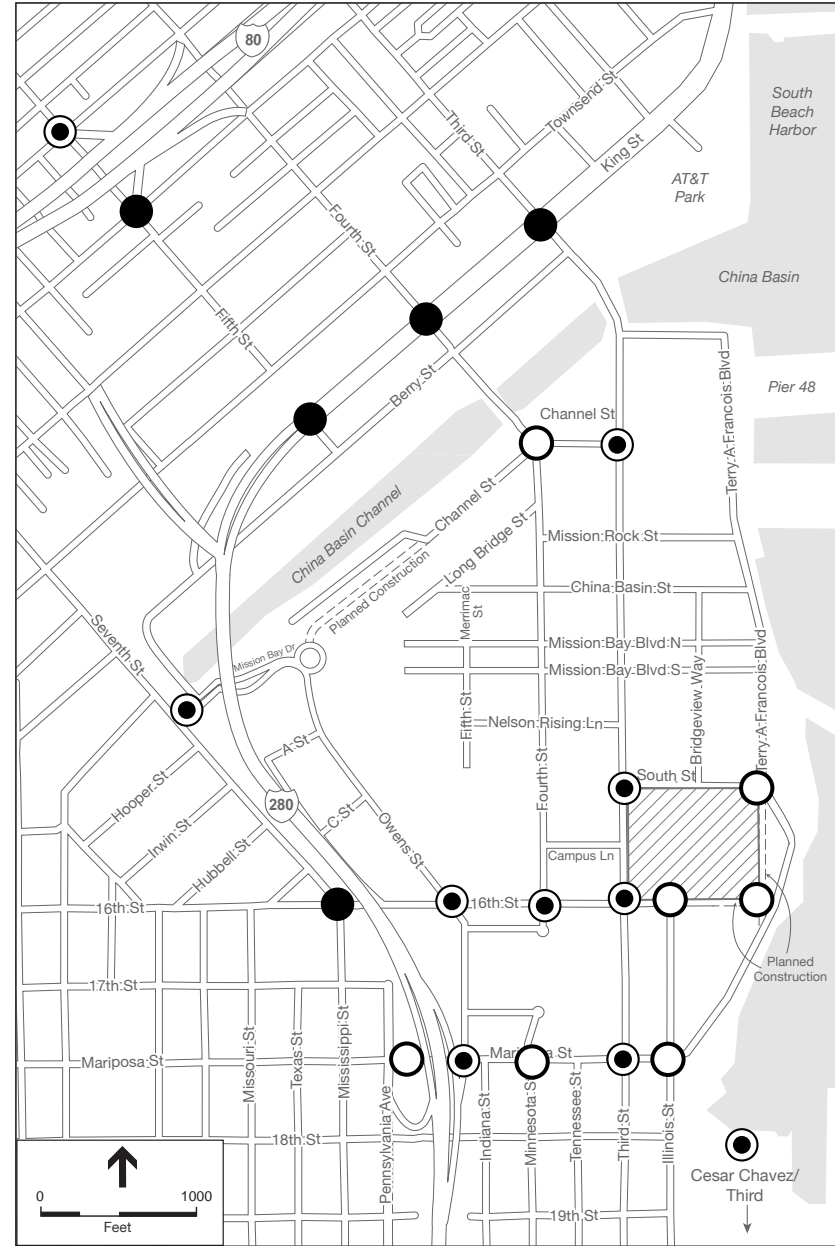
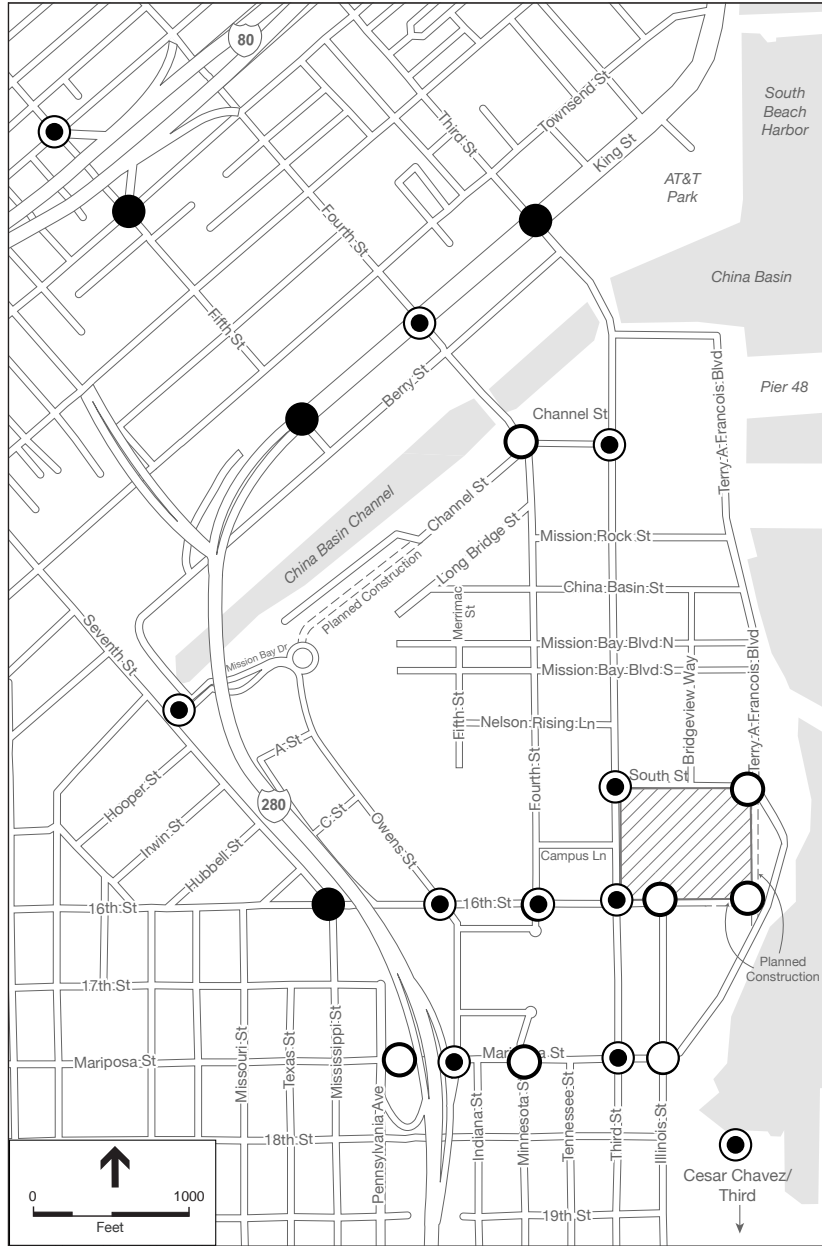
OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E: Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 5.2-15

Existing Plus Project Intersection LOS-Without a SF Giants Game - Weekday PM Peak Hour - No Event and Convention Event Scenarios

NO EVENT SCENARIO

BASKETBALL GAME SCENARIO



 Project Site Boundary
  LOS A-B
  LOS C-D
  LOS E-F

SOURCE: SOURCE: Advant Consulting/Fehr & Peers/LCW Consulting, 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E: Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 5.2-16

Existing Plus Project Intersection LOS-Without a SF Giants Game - Weekday PM Peak Hour - No Event and Basketball Game Scenarios

**TABLE 5.2-35
INTERSECTION LEVEL OF SERVICE - EXISTING PLUS PROJECT CONDITIONS -
WITHOUT A SF GIANTS GAME - WEEKDAY EVENING AND LATE EVENING PEAK HOURS**

#	Intersection Location		Evening				Late Evening			
			Existing		Existing plus Project - Basketball Game		Existing		Existing plus Project - Basketball Game	
			Delay ^a	LOS ^b	Delay	LOS	Delay	LOS	Delay	LOS
1	King St	Third Street	58.3	E	64.6	E	19.0	B	23.6	C
2	King St	Fourth Street	47.9	D	61.4	E	24.1	C	22.5	C
3	King St/Fifth St	I-280 ramps	57.2	E	56.9	E	10.8	B	10.8	B
4	Fifth St/Harrison	I-80 WB off-ramp	49.8	D	>80	F	22.1	C	22.3	C
5	Fifth St/Bryant St	I-80 EB on-ramp	>80	F	>80	F	24.2	C	>80	F
6	Third Street	Channel Street ^f	33.1	C	>80	F	< 10	A	37.5	D
7	Fourth Street	Channel Street ^f	< 10	A	72.5	E	10.6	B	>80	F
8	Seventh Street	Mission Bay Dr	19.5	B	>80	F	12.0	B	38.8	D
9	TA Francois Blvd	South Street ^{c,f}	10.3(eb)	B	< 10	A	< 10 (eb)	A	13.4	B
10	Third Street	South Street ^f	24.7	C	45.1	D	< 10	A	<10	A
11	TA Francois Blvd	16th Street ^{c,f}	--	--	17.7	B	--	--	16.9	B
12	Illinois Street	16th Street ^{c,f}	<10(nb)	A	15.7(nb)	C	< 10 (nb)	A	< 10 (sb)	A
13	Third Street	16th Street ^{e,f}	27.8	C	34.2	C	10.6	B	15.7	B
14	Fourth Street	16th Street ^e	20.6	C	37.0	D	15.3	B	18.0	B
15	Owens Street	16th Street ^{e,f}	21.0	C	39.0	D	12.2	B	31.2	C
16	7th/Mississippi	16th Street ^e	60.1	E	>80	F	15.9	B	24.1	C
17	Illinois Street	Mariposa Street ^{c,f}	< 10(eb)	A	45.8	D	< 10 (eb)	A	22.6	C
18	Third Street	Mariposa Street ^f	34.8	C	37.1	D	16.2	B	23.6	C
19	Fourth Street	Mariposa Street ^f	10.8	B	13.0	B	< 10	A	<10	A
20	Mariposa Street	I-280 NB off-ramp ^f	20.0	B	32.5	C	15.9	B	24.7	C
21	Mariposa Street	I-280 SB on-ramp ^d	< 10	A	<10	A	< 10	A	14.3	B
22	Third Street	Cesar Chavez St	32.9	C	33.9	C	21.1	C	21.9	C

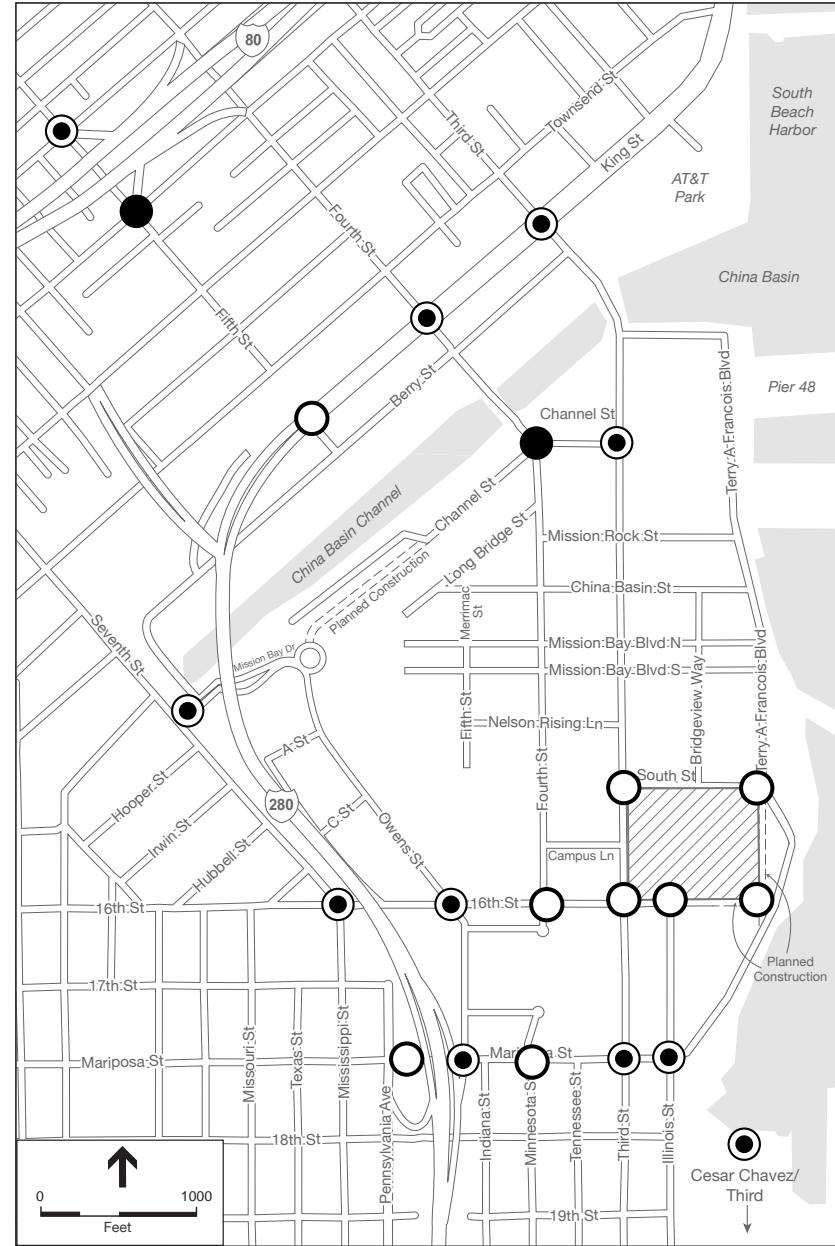
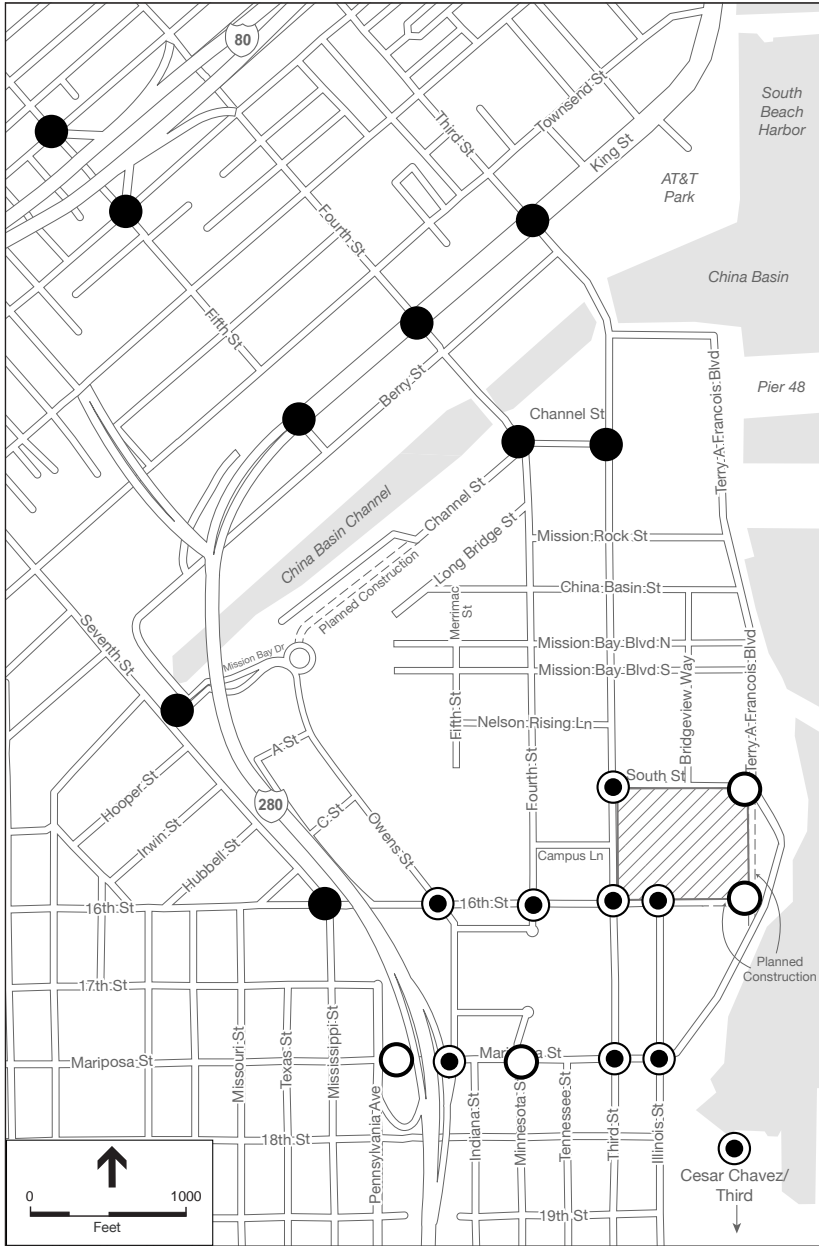
NOTES:


- ^a Delay presented in seconds per vehicle. For unsignalized intersections, delay and LOS presented for worst approach. Worst approach indicated in ().
- ^b Intersections operating at LOS E or LOS F conditions highlighted in **bold**. Significant project impacts shaded.
- ^c All-way stop-controlled intersection. The existing intersections of Terry A. Francois/South and Illinois/Mariposa would be signalized as part of the proposed project.
- ^d The traffic signal at the intersection of Mariposa/I-280 southbound on-ramp is part of the roadway improvements on Mariposa Street between the I-280 northbound off-ramp and I-280 southbound on-ramp and the extension of Owens Street between 16th and Mariposa Streets, and is currently planned to be operational by fall 2015.
- ^e Includes implementation of the 22 Fillmore Transit Priority Project, which includes converting one mixed-flow lane in each direction to a side-running transit-only lane.
- ^f Under the Basketball Game scenario, a PCO would be stationed at this study intersection during pre-event and/or post-event periods, and, as necessary, would manually direct vehicles, pedestrians, transit, and bicyclists through the intersection. LOS reflects conditions without PCO intervention.

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

WEEKDAY EVENING PEAK HOUR

WEEKDAY LATE EVENING PEAK HOUR



 Project Site Boundary
  LOS A-B
  LOS C-D
  LOS E-F

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E: Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 5.2-17

Existing Plus Project Intersection LOS-Without a SF Giants Game - Weekday Evening and Late Evening Peak Hour - Basketball Game Scenarios

**TABLE 5.2-36
INTERSECTION LEVEL OF SERVICE - EXISTING PLUS PROJECT CONDITIONS –
WITHOUT A SF GIANTS GAME – SATURDAY EVENING PEAK HOUR**

#	Intersection Location		Existing plus Project					
			Existing		No Event		Basketball Game	
			Delay ^a	LOS ^a	Delay	LOS	Delay	LOS
1	King St	Third Street	26.6	C	28.4	C	29.0	C
2	King St	Fourth Street	22.6	C	23.0	C	31.8	C
3	King St/Fifth St	I-280 ramps	< 10	A	< 10	A	<10	A
4	Fifth St/Harrison	I-80 WB off-ramp	29.2	C	29.5	C	64.9	E
5	Fifth St/Bryant St	I-80 EB on-ramp	27.0	C	27.6	C	32.8	C
6	Third Street	Channel Street ^f	< 10	A	< 10	A	78.9	E
7	Fourth Street	Channel Street ^f	13.6	B	13.0	B	45.7	D
8	Seventh Street	Mission Bay Dr	12.4	B	12.5	B	>80	F
9	TA Francois Blvd	South Street ^{c,f}	< 10(eb)	A	< 10	A	<10	A
10	Third Street	South Street ^f	< 10	A	10.1	B	15.3	B
11	TA Francois Blvd	16th Street ^f	--	--	17.4	B	18.2	B
12	Illinois Street	16th Street ^{g,f}	< 10(nb)	A	12.3 (eb)	B	11.8(nb)	B
13	Third Street	16th Street ^{e,f}	10.7	B	13.8	B	14.0	B
14	Fourth Street	16th Street ^e	14.3	B	12.9	B	16.2	B
15	Owens Street	16th Street ^e	< 10	A	13.6	B	20.4	C
16	7th/Mississippi	16th Street ^e	18.4	B	29.3	C	40.7	D
17	Illinois Street	Mariposa Street ^{c,f}	< 10(eb)	A	15.8	B	44.6	D
18	Third Street	Mariposa Street ^f	16.6	B	19.4	B	21.1	C
19	Fourth Street	Mariposa Street ^f	< 10	A	< 10	A	<10	A
20	Mariposa Street	I-280 NB off-ramp, ^f	16.1	B	16.3	B	24.8	C
21	Mariposa Street	I-280 SB on-ramp ^d	< 10	A	< 10	A	<10	A
22	Third Street	Cesar Chavez St	18.4	B	17.5	B	18.2	B

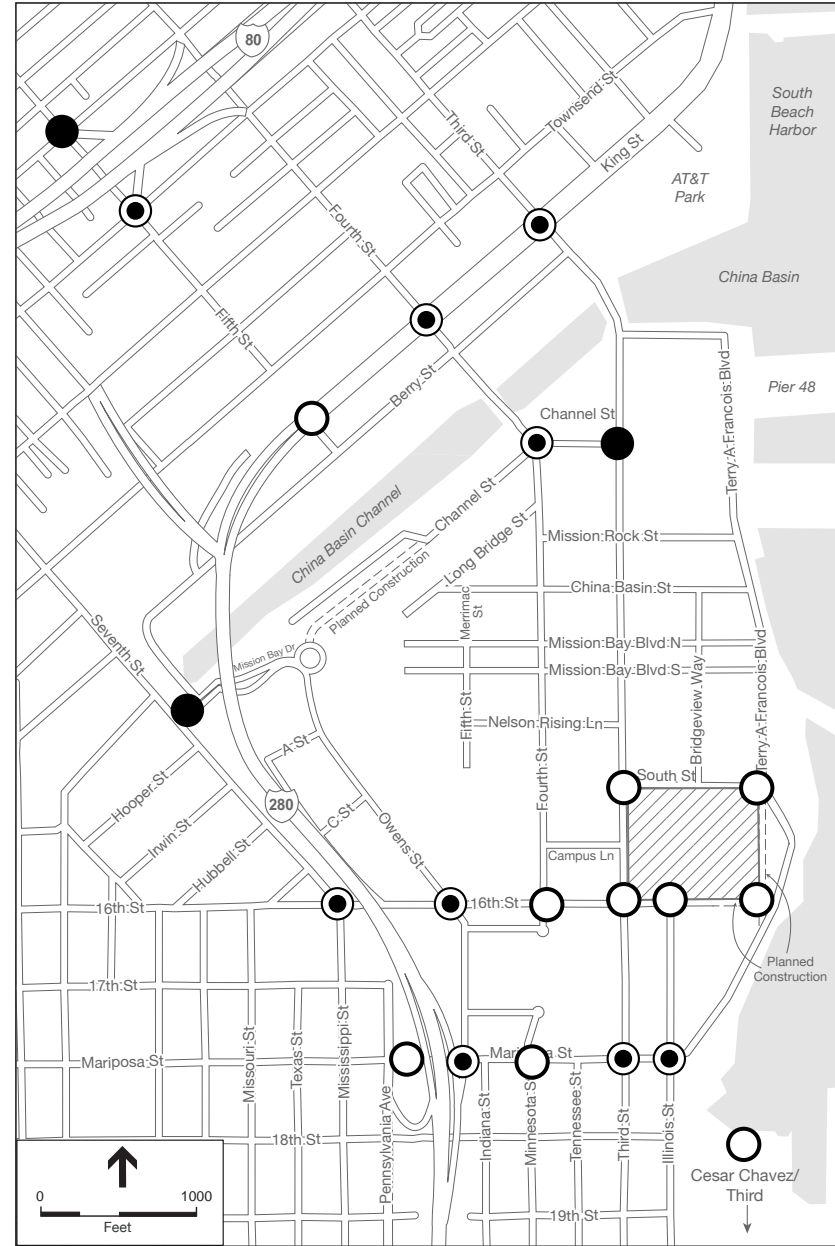
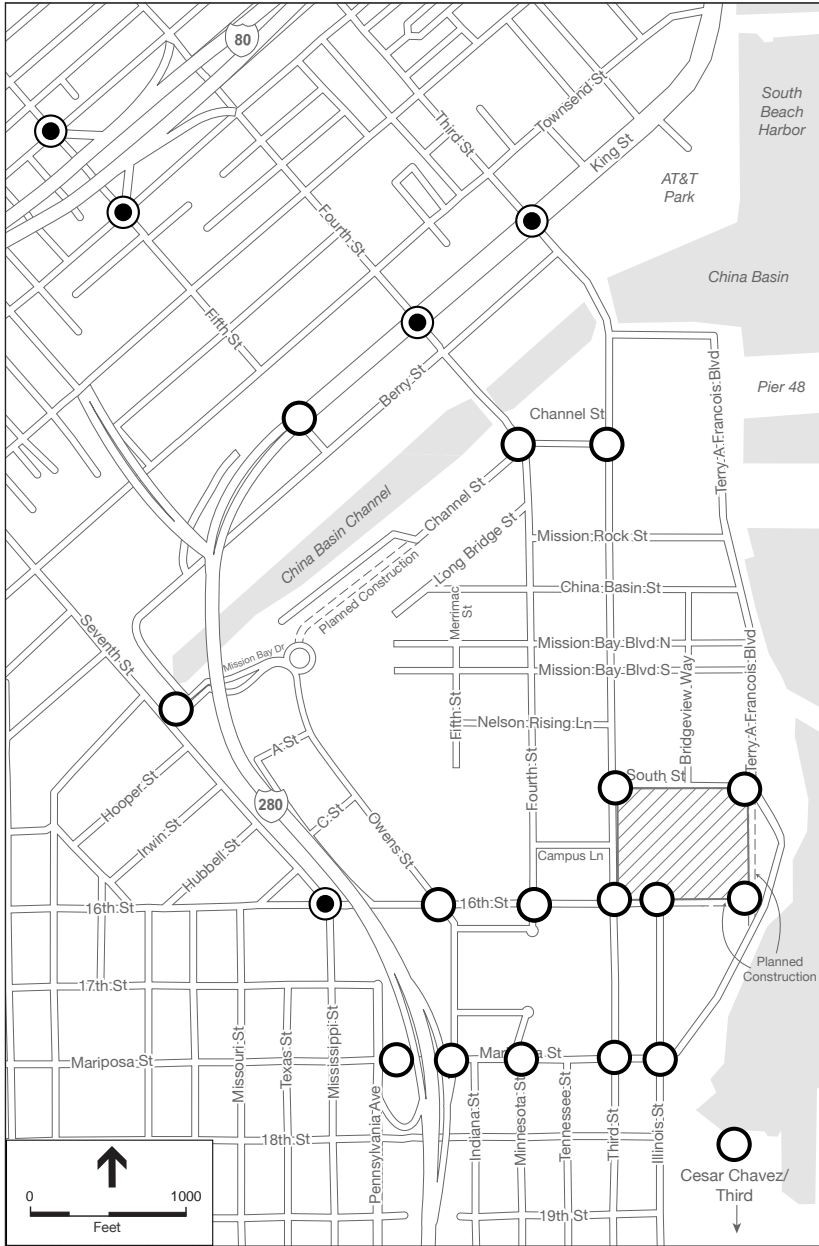
NOTES:

- ^a Delay presented in seconds per vehicle. For unsignalized intersections, delay and LOS presented for worst approach. Worst approach indicated in ().
- ^b Intersections operating at LOS E or LOS F conditions highlighted in **bold**. Significant project impacts shaded.
- ^c All-way stop-controlled intersection. The existing intersections of Terry A. Francois/South and Illinois/Mariposa would be signalized as part of the proposed project.
- ^d The traffic signal at the intersection of Mariposa/I-280 southbound on-ramp is part of the roadway improvements on Mariposa Street between the I-280 northbound off-ramp and I-280 southbound on-ramp and the extension of Owens Street between 16th and Mariposa Streets, and is currently planned to be operational by fall 2015.
- ^e Includes implementation of the 22 Fillmore Transit Priority Project, which includes converting one mixed-flow lane in each direction to a side-running transit-only lane.
- ^f Under the Basketball Game scenario, a PCO would be stationed at this study intersection during the Saturday pre-event period, and, as necessary, would manually direct vehicles, pedestrians, transit, and bicyclists through the intersection. LOS reflects conditions without PCO intervention.

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

NO EVENT SCENARIO

BASKETBALL GAME SCENARIO



 Project Site Boundary
  LOS A-B
  LOS C-D
  LOS E-F

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E: Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 5.2-18

Existing Plus Project Intersection LOS-Without a SF Giants Game - Saturday Evening Peak Hour - No Event and Basketball Game Scenarios

No Event Scenario

The No Event scenario would generate 702 new vehicle trips during the weekday p.m. peak hour (255 inbound and 477 outbound), and 785 vehicle trips during the Saturday evening peak hour (367 inbound and 418 outbound). All project-generated vehicles were assigned to the on-site project garage. Intersection LOS for the No Event scenario are presented in **Table 5.2-34** for the weekday p.m. peak hour, and in **Table 5.2-36** for the Saturday evening peak hour. For both weekday p.m. and Saturday evening peak hour conditions under the No Event scenario, the proposed project would result in a significant impact at the study intersection of Seventh/Mississippi/16th. With the addition of project-generated vehicle trips, the intersection LOS would worsen from LOS E under existing conditions to LOS F. All other study intersections would continue to operate at LOS D or better, with the exception of the three intersections that currently operate at LOS E or LOS F during the weekday p.m. peak hour and would continue to operate at the same LOS with the proposed project (i.e., King/Third, King/Fifth/I-280 ramps, and Fifth/Bryant/ I-80 eastbound on-ramp). At these three intersections, the proposed project's vehicle trips were reviewed to determine whether the project's contribution to the intersection's overall LOS E or LOS F operating conditions would be considerable.

The vehicle trips associated with the No Event scenario was determined not to contribute considerably to the existing LOS E or LOS F conditions, and the project's traffic impacts at these intersections would not be considered significant. Detailed calculations and percent contributions to critical movements⁴⁶ operating at LOS E or LOS F conditions are included in **Appendix TR**.

Convention Event Scenario

The Convention Event scenario would generate 919 new vehicle trips during the weekday p.m. peak hour (256 inbound and 663 outbound). Because the on-site garage would not accommodate the daily parking demand associated with a convention event, some vehicles would be expected to park at other public parking facilities, primarily Lot A which would accommodate approximately 50 percent of the overall convention event parking demand. However, the convention event parking demand during the p.m. peak hour represents about one third of the maximum parking demand. This level of parking demand can be accommodated at the project site. In other words, the p.m. peak hour coincides with a period when the on-site parking garage can accommodate all of the parking demand generated by the project under this scenario. For this reason, all of the weekday p.m. peak hour vehicles generated by the convention event were assigned to travel to and from the project garage. Weekday p.m. peak hour intersection LOS for the Convention Event scenario are presented in **Table 5.2-34**. During the weekday p.m. peak hour, with the additional vehicle trips generated under the Convention Event scenario, the LOS

⁴⁶ The critical movement with respect to an intersection analysis, is the movement or lane for a given signal phase (for example, northbound/southbound versus eastbound/westbound) that requires the most green time, and is determined for each phase based on flow ratios calculated using the HCM2000 intersection operations methodology. The movement or lane with the highest flow ratio for each phase is the critical movement. The critical movements are determined in the quantitative calculations conducted for the study intersections, taking into consideration the available geometric conditions (for example, number of lanes), signalization conditions (for example, cycle length, green time), and traffic conditions (for example, traffic volumes, pedestrian flows, heavy vehicle percentages). The critical movements, using the HCM2000 methodology, were identified by the Synchro intersection analysis software/traffic model developed for this analysis. Poorly operating critical movements are those operating at LOS E or LOS F conditions.

at the intersection of King/Fourth would worsen from LOS D to LOS E, and at the intersection of Seventh/Mississippi/16th would worsen from LOS E to LOS F, and this would be considered a significant traffic impact. All other study intersections would continue to operate at LOS D or better, with the exception of the three intersections that currently operate at LOS E or LOS F during the weekday p.m. peak hour and would continue to operate at the same LOS (i.e., King/Third, King/Fifth/I-280 ramps, and Fifth/Bryant/I-80 eastbound on-ramp). The Convention Event scenario was determined not to contribute considerably to the LOS E or LOS F conditions, and traffic impacts at these three intersections would not be considered significant.

Basketball Game Scenario

Because the on-site garage would be reserved for attendees with pre-issued on-site parking passes, and would be limited to 950 parking spaces, a substantial portion of the vehicle trips associated with attendees driving to the event center were assigned to other public parking facilities, taking into account their proximity to the project site and existing parking occupancy. For all analysis peak hours, event-related vehicle trips would travel, in addition to the project site garage, to and from other nearby parking facilities such as the 450 South Street garage and Lot A. Approximately 20 percent of the weekday p.m. peak hour vehicles were assigned to the project garage, about 30 percent were assigned to the 450 South Street garage, which was assumed to remain open to the general public on basketball game days, and 35 percent were assigned to Lot A; the remaining 15 percent were assigned to UCSF parking garages and lots. The analysis of conditions prior to and following a basketball game at the project site assumes implementation of the proposed project's TMP, which is described in Section 5.2.5.2. Specifically, the TMP specifies that for all events with more than 14,000 attendees, up to 17 PCOs would be stationed in the project vicinity to manage vehicular, transit, bicycle and pedestrian flows (see **Figure 5.2-11**), including at the intersections of Fourth/Channel, Third/Channel, Third/South, Bridgeview/South, Terry A. Francois/South, Third/16th, Illinois/16th, Terry A. Francois/16th, I-280 northbound ramps/Owens/Mariposa, Fourth/Mariposa, Third/Mariposa, and Illinois/Mariposa.

- During the weekday p.m. peak hour, the Basketball Game scenario would generate 886 new vehicle trips (524 inbound and 362 outbound). Weekday p.m. peak hour intersection LOS for the Basketball Game scenario are presented in **Table 5.2-34**. During the weekday p.m. peak hour, with the additional vehicle trips generated under the Basketball Game scenario, the LOS at the intersection of King/Fourth would worsen from LOS D to LOS E conditions, and the LOS at the intersection of Seventh/Mississippi/16th would worsen from LOS E to LOS F. These changes would be considered significant traffic impacts. All other study intersections would continue to operate at LOS D or better, with the exception of the three intersections that currently operate at LOS E or LOS F during the weekday p.m. peak hour (i.e., King/Third, King/Fifth/I-280 ramps, and Fifth/Bryant/I-80 eastbound on-ramp) and would continue to operate at the same LOS. The Basketball Game scenario was determined not to contribute considerably to the existing LOS E or LOS F conditions, and traffic impacts at these three intersections would not be considered significant.
- No travel lane closures are proposed for the weekday evening pre-event conditions. During the weekday evening peak hour, the Basketball Game scenario would generate 2,752 new vehicle trips (2,553 inbound and 198 outbound). Weekday evening intersection LOS for the Basketball Game scenario are presented in **Table 5.2-35**. During the weekday evening peak hour, with the additional vehicle trips associated with event attendees

arriving to the study area parking facilities, average delays at most study intersections would increase from existing conditions. The LOS at the intersections of King/Fourth, Fifth/Harrison/I-80 westbound off-ramp, Third/Channel (PCO location), Fourth/Channel (PCO location), and Seventh/Mission Bay Drive (PCO location) would worsen from LOS D or better to LOS E or LOS F conditions, and would worsen from LOS E to LOS F conditions at the intersection of Seventh/Mississippi/16th, and this would be considered a significant traffic impact. All other signalized study intersections would continue to operate at LOS D or better, with the exception of the three intersections that currently operate at LOS E or LOS F during the weekday p.m. peak hour (i.e., King/Third, King/Fifth/I-280 ramps, and Fifth/Bryant/I-80 eastbound on-ramp) and would continue to operate at the same LOS with the project. The Basketball Game scenario was determined not to contribute considerably to the existing LOS E or LOS F conditions, and traffic impacts at these three intersections would not be considered significant.

- Prior to the end of an event under the Basketball Game scenario, temporary travel lane closures would be implemented on Third Street between Mariposa Street and Mission Bay Boulevard South, on South Street between Third Street and Bridgeview Way, on 16th Street between Third Street and Terry A. Francois Boulevard, and on Illinois Street between Mariposa and 16th Streets. These temporary lane closures are anticipated to be in place for approximately 30 to 45 minutes after the end of the event, or until vehicular traffic dissipates and most event attendees taking transit have boarded. As a result of the northbound lane closures, approximately 140 vehicles currently traveling northbound on Third Street and continuing north of 16th Street during the late evening peak hour would be rerouted westbound onto 16th Street (i.e., left turn only at the northbound approach to 16th Street). The 140 northbound vehicles that would be rerouted are based on existing volumes at the intersection, and the number of vehicles that would need to be diverted would likely be lower since drivers would likely avoid the area after an event (e.g., would use I-280, U.S. 101, or Potrero Avenue instead). Some of the rerouted vehicles would be expected to turn left at Mariposa Street, while others would continue to 16th Street where they would be rerouted. It is not expected that the rerouted vehicles would then travel north via Fourth Street, as it is a one-lane local street, but would instead chose Owens Street, Seventh Street, or other streets to the west to continue north. Southbound traffic flow on Third Street would not be affected by these temporary northbound travel lane closures. Additional details related to the travel lane closure are described in Section 5.2.5.2. During the weekday late evening peak hour, the Basketball Game scenario would generate 3,018 new vehicle trips (134 inbound and 2,883 outbound). Weekday late evening (post-event) intersection LOS for the Basketball Game scenario are presented in **Table 5.2-35**. During the weekday late evening peak hour, the additional vehicle trips would result in the LOS at the intersections of Fifth/Bryant/I-80 eastbound on-ramp, and Fourth Channel (PCO location) worsening from LOS D or better to LOS F conditions. This would be considered a significant traffic impact. All other study intersections would continue to operate at LOS D or better.
- No travel lane closures are proposed for the Saturday evening pre-event conditions. During the Saturday evening peak hour, the Basketball Game scenario would generate 2,815 new vehicle trips (2,687 inbound and 128 outbound). Saturday evening intersection LOS for the Basketball Game scenario is presented in **Table 5.2-36**. During the Saturday evening peak hour, with the additional vehicle trips generated, the intersection LOS at the intersections of Fifth/Harrison/I-80 westbound off-ramp, Third/Channel (PCO location), and Seventh/Mission Bay Drive (PCO location) would worsen from LOS D or better to LOS E or LOS F conditions, and this would be considered a significant traffic impact. All other study intersections would continue to operate at LOS D or better.

Other Events

Intersection LOS operating conditions during other events at the project site would be similar to or better than described above for the Basketball Game scenario which assessed the maximum attendance event for evening conditions, and which would also be representative of conditions for sell-out concert events. Intersection LOS operating conditions for daytime events during the weekday p.m. peak hour would be similar to or better than described above for the Convention Event scenario, which reflects the maximum impact during the weekday p.m. peak hour. TMP measures, such as street closures for events with more than 14,000 attendees, would not be required for many of the other events. See **Table 5.2-16** for the TMP measures associated with various events at the proposed event center.

Overall, under existing plus project conditions without a SF Giants game at AT&T Park, the proposed project would result in *significant* project-specific impacts at seven study intersections:

- King/Fourth (weekday p.m., weekday evening)
- Fifth/Harrison/I-80 westbound off-ramp (weekday evening, Saturday evening)
- Fifth/Bryant/I-80 eastbound on-ramp (weekday late evening)
- Third/Channel (weekday evening, Saturday evening)
- Fourth/Channel (weekday evening, weekday late evening)
- Seventh/Mission Bay Drive (weekday evening, Saturday evening)
- Seventh/Mississippi/16th (weekday p.m., weekday evening)

At the study intersections where project-specific impacts were identified, each intersection was reviewed to determine if mitigation measures could reduce the impact to less-than-significant levels or lessen the severity of the project's contribution to existing LOS E or LOS F conditions. Generally, to mitigate poor operating conditions of study intersections, additional travel lane capacity would be needed on one or more approaches to the intersection, particularly at intersections with the I-80 ramps. The provision of additional travel lane capacity by narrowing sidewalks, removal of on-street parking, and/or removal of transit lanes or bicycle lanes would generally be infeasible and inconsistent with the transit, bicycle, and pedestrian environment encouraged by the City's *Transit First* Policy by removing space dedicated to pedestrians, and/or bicycles and increasing the distances required for pedestrians to cross streets. As noted above, the proposed project includes a TMP for events at the project site, and which would minimize impacts of peak arrivals and departures.

Mitigation Measure M-TR-2a: Additional PCOs during Events

As a mitigation measure to manage traffic flows and minimize congestion associated with events at the project site, the proposed project's TMP shall be modified to include four additional PCOs that shall be deployed to intersections where the proposed project would result in significant impacts, as conditions warrant during events. These could include the intersections of King/Fourth, Fifth/Harrison/I-80 westbound off-ramp, Fifth/Bryant/I-80 eastbound on-ramp, Seventh/Mission Bay Drive, and Seventh/Mississippi/16th. The PCO Supervisor shall make the determination where the additional PCOs would be located, based on field conditions during an event.

Mitigation Measure M-TR-2b: Additional Strategies to Reduce Transportation Impacts

The project sponsor shall work with the City to pursue and implement, if feasible, additional strategies to reduce transportation impacts. In addition, the City shall pursue and implement, if feasible, additional strategies that could be implemented by the City or other public agency (e.g., Caltrans). These strategies could include the following:

Strategies to Reduce Traffic Congestion

- The City to work with Caltrans to install changeable message signs upstream of key entry points onto the street network, such as on I-280 northbound.
- The City to provide coordinated outreach efforts to surrounding neighborhoods to explore the need/desire for new on-street parking management strategies, which could include implementation of time limits and Residential Parking Permit program areas.
- The project sponsor to offer for pre-purchase substantially all available on-site parking spaces not otherwise committed to office tenants, retail customers or season ticket holders, and to cooperate with neighboring private garage operators to pre-sell parking spaces, as well as notify patrons in advance that nearby parking resources are limited and travel by non-auto modes is encouraged.
- The project sponsor to create a smart phone application, or integrate into an existing smart phone application, transportation information that promotes transit first, allows for pre-purchase of parking and designates suggested paths of travel that best avoid congested areas or residential streets such as Bridgeview north of Mission Bay Boulevard and Fourth Street.
- The City and the project sponsor to work to identify off-site parking lot(s) in the vicinity of the event center, if available, where livery and TNC vehicles could stage prior to the end of an event.
- The City to include on-street parking spaces within Mission Bay in the expansion and permanent implementation of *SFpark*, including dynamic pricing, and smart phone application providing real-time parking availability and cost.
- The City shall work to include the publicly accessible off-street facilities into the permanent implementation of *SFpark*, and incorporate data into its platforms used to disseminate information to the public.
- If necessary to support achievement of non-auto mode shares for the project, the project sponsor shall cooperate with future City efforts for active interventions to effectively manage and price the parking supply in the project vicinity to reduce travel by automobile, thus improving traffic conditions.
- The project sponsor to seek partnerships with car-sharing services.

Strategy to Enhance Non-auto Modes

- The project sponsor to provide a promotional incentive (e.g., show Clipper card or bike valet ticket for concession savings, chance to win merchandise or experience, etc.) for public transit use and/or bicycle valet use at the event center.

Strategies to Enhance Transportation Conditions in Mission Bay and Nearby Neighborhoods

- The project sponsor to participate as a member of the Mission Bay Ballpark Transportation Coordination Committee (MBBTCC) and to notify at least one month prior to the start of any non-GSW event with at least 12,500 expected attendees. If commercially reasonable circumstances prevent such advance notification, the GSW shall notify the MBBTCC within 72 hours of booking.
- The City and the project sponsor to meet to discuss transportation and scheduling logistics following signing any marquee events (national tournaments or championships, political conventions, or tenants interested in additional season runs: NHL, NCAA, etc.).

Strategies to Increase Transit Access

- The City to coordinate with regional providers to encourage increased special event service, particularly longer BART and Caltrain trains, and increased ferry and bus service.
- The City to work in good faith with the Water Emergency Transportation Agency, the project sponsor, UCSF, and other interested parties to explore the possibility of construction of a ferry landing at the terminus of 16th Street, and provision of ferry service during events.

Mitigation Measure M-TR-2a: Additional PCOs during Events would reduce the proposed project's impacts related to event-related traffic conditions, and would not result in secondary transportation-related impacts, but would not reduce impacts to less-than-significant levels.

Mitigation Measure M-TR-2b: Additional Measures to Reduce Transportation Impacts would require the project sponsor to continue to work with the City to seek additional feasible measures to reduce transportation impacts. The measures identified above would reduce traffic congestion in the project vicinity by providing drivers information on traffic conditions and alternate routes, providing information on on-street and off-street parking conditions, discouraging use of on-street parking through the Residential Permit Parking program, encouraging non-auto modes through parking pricing, and enhancing regional transit access to the area, and would not result in secondary transportation impacts. However, even with implementation of these measures, the arrival and departure peak of vehicle trips to and from the event center through these intersections would continue to occur, and therefore, the proposed project's significant traffic impacts at the seven intersections of King/Fourth, Fifth/Harrison/I-80 westbound off-ramp, Fifth/Bryant/I-80 eastbound on-ramp, Third/Channel, Fourth/Channel, Seventh/Mission Bay Drive, and Seventh/Mississippi/16th would remain *significant and unavoidable with mitigation*.

Comparison of Impact TR-2 to Mission Bay FSEIR Impact Analysis

The Mission Bay FSEIR identified significant and unavoidable traffic impacts at seven intersections, including the proposed project study intersection of Fifth/Bryant/I-80 eastbound on-ramp (which was also identified above as a significant impact for the proposed project). Because the proposed project would result in significant traffic impacts at additional intersections, the project would result in *new significant* impacts not previously identified in the Mission Bay FSEIR.

Mission Bay FSEIR Mitigation Measures 47a - 47c, and 47e – 47i were adopted to encourage use of alternate modes and reduce auto mode. A Mission Bay South Transportation Management Plan has been developed which incorporates these mitigation measures, and it is part of the Mission Bay South Owner Participation Agreement for development within Mission Bay. Because the project sponsor would be subject to the Owner Participation Agreement, these mitigation measures are assumed to be part of the proposed project.

Mission Bay FSEIR Mitigation Measure E.47: Transportation System Management Plan

Prepare a TSM Plan, which could include the following:

FSEIR Mitigation Measure E.47.a: Shuttle Bus - Operate shuttle bus service between Mission Bay and regional transit stops in San Francisco (e.g., BART, Caltrain, Ferry Terminal, Transbay Transit Terminal), and specific gathering points in major San Francisco neighborhoods (e.g., Richmond and Mission Districts).

FSEIR Mitigation Measure E.47.b: Transit Pass Sales - Sell transit passes in neighborhood retail stores and commercial buildings in the Project Area.

FSEIR Mitigation Measure E.47.c: Employee Transit Subsidies - Provide a system of employee transportation subsidies for major employers.

FSEIR Mitigation Measure E.47.e: Secure Bicycle Parking - Provide secure bicycle parking area in parking garages of residential buildings, office buildings, and research and development facilities. Provide secure bicycle parking areas by 1) constructing secure bicycle parking at a ratio of 1 bicycle parking space for each 20 automobile parking spaces, and 2) carry out an annual survey program during project development to establish trends in bicycle use and to estimate actual demand for secure bicycle parking and for sidewalk bicycle racks, increasing the number of secure bicycle parking spaces or racks either in new buildings or in existing automobile parking facilities to meet the estimated demand. Provide secure bicycle racks throughout Mission Bay for the use of visitors.

FSEIR Mitigation Measure E.47.f: Appropriate Street Lighting - Ensure that streets and sidewalks in Mission Bay are sufficiently lit to provide pedestrians and bicyclists with a greater sense of safety, and thereby encourage Mission Bay employees, visitors and residents to walk and bicycle to and from Mission Bay.

FSEIR Mitigation Measure E.47.g: Transit and Pedestrian and Bicycle Route Information - Provide maps of the local and citywide pedestrian and bicycle routes with transit maps and information on kiosks throughout the Project Area to promote multi-modal travel.

FSEIR Mitigation Measure E.47.h: Parking Management Strategies - Establish parking management guidelines for the private operators of parking facilities in the Project Area.

FSEIR Mitigation Measure E.47.i: Flexible Work Hours/Telecommuting - Where feasible, offer employees in the Project Area the opportunity to work on flexible schedules and/or telecommute so they could avoid peak hour traffic conditions.

The proposed project would result in significant and unavoidable impacts at intersections not previously identified in the Mission Bay FSEIR due to event-related vehicles that would result in exceedance of the intersection LOS threshold. Mission Bay FSEIR Mitigation Measures 47a - 47c, and 47e - 47i would minimize but not reduce traffic impacts to less-than-significant levels, and traffic impacts would remain *significant and unavoidable with mitigation*.

Impact TR-3: The proposed project would result in significant traffic impacts at freeway ramps that would operate at LOS E or LOS F under Existing plus Project conditions without a SF Giants game at AT&T Park. (Significant and Unavoidable with Mitigation)

Table 5.2-37 presents the weekday p.m. peak hour ramp LOS conditions for the three scenarios, **Table 5.2-38** presents the weekday evening and late evening peak hour conditions for the Basketball Game scenario, and **Table 5.2-39** presents the Saturday evening peak hour ramp LOS conditions for the No Event and Basketball Game scenarios. At ramp locations currently operating at LOS E or LOS F, percent contributions to the freeway ramps were calculated to determine the project contribution to the existing LOS E and LOS F conditions, and are included in **Appendix TR**.

No Event Scenario

For the weekday p.m. peak hour condition, the proposed project would not result in any project-specific impacts at the ramp locations. In addition, under the No Event scenario, the proposed project would not contribute considerably to the three ramps operating at LOS E or LOS F under existing conditions (i.e., the I-80 eastbound on-ramp at Sterling Street during the weekday p.m. peak hour, the I-80 eastbound on-ramp at Fifth/Bryant during the weekday p.m. peak hour and Saturday evening peak hour, and the I-280 southbound on-ramp at Pennsylvania Street during the weekday p.m. peak hour), and therefore, under the No Event scenario, traffic impacts at these freeway ramp locations would be less than significant.

Convention Event Scenario

Similar to the No Event scenario, the Convention Event scenario would not result in any project-specific impacts at the ramp locations. In addition, under the Convention Event scenario, the proposed project would not contribute considerably to the three ramps operating at LOS E or LOS F under existing conditions (i.e., the I-80 eastbound on-ramp at Sterling Street during the weekday p.m. peak hour, the I-280 southbound on-ramp at Pennsylvania during the weekday p.m. peak hour, and the I-80 eastbound on-ramp at Fifth/Bryant during the weekday p.m. and Saturday evening peak hours), and therefore, under the Convention Event scenario, traffic impacts at these freeway ramp locations would be less than significant.

**TABLE 5.2-37
FREEWAY RAMP LEVEL OF SERVICE - EXISTING PLUS PROJECT CONDITIONS –
WITHOUT A SF GIANTS GAME - WEEKDAY PM PEAK HOUR**

#	Ramp Location	Existing plus Project							
		Existing		No Event		Convention Event		Basketball Game	
		Density ^a	LOS ^b	Density	LOS	Density	LOS	Density	LOS
1	I-80 EB on-ramp at Sterling	35	E	36	E	36	E	36	E
2	I-80 EB on-ramp at Fifth/Bryant	--	F	--	F	--	F	--	F
3	I-80 WB off-ramp at Fifth/Harrison	30	D	30	D	30	D	31	D
4	I-280 SB on-ramp at Pennsylvania	35	E	35	E	36	E	35	E
5	I-280 NB off-ramp at Mariposa	26	C	26	C	26	C	28	C
6	I-280 SB on-ramp at Mariposa	31	D	32	D	33	D	32	D

NOTES:

^a Density of vehicles in merge and diverge influence area for on-ramp and off-ramp analysis, respectively. Measured in passenger cars per mile per lane. Density value is not presented for ramp analyses where the demand volume exceeds the capacity.

^b Ramps operating at LOS E or LOS F conditions highlighted in **bold**. Significant project impacts shaded.

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

**TABLE 5.2-38
FREEWAY RAMP LEVEL OF SERVICE - EXISTING PLUS PROJECT CONDITIONS –
WITHOUT A SF GIANTS GAME - WEEKDAY EVENING AND LATE EVENING PEAK HOURS**

#	Ramp Location	Evening				Late Evening			
		Existing		Existing plus Project - Basketball Game		Existing		Existing plus Project - Basketball Game	
		Density ^a	LOS	Density	LOS	Density	LOS	Density	LOS
1	I-80 EB on-ramp at Sterling	28	C	28	C	20	C	23	C
2	I-80 EB on-ramp at Fifth/Bryant	--	F	--	F	30	D	34	D
3	I-80 WB off-ramp at Fifth/Harrison	28	D	36	E	27	C	27	C
4	I-280 SB on-ramp at Pennsylvania	27	C	28	C	15	B	21	C
5	I-280 NB off-ramp at Mariposa	25	C	34	D	13	B	13	B
6	I-280 SB on-ramp at Mariposa	25	C	25	C	13	B	20	B

NOTES:

^a Density of vehicles in merge and diverge influence area for on-ramp and off-ramp analysis, respectively. Measured in passenger cars per mile per lane. Density value is not presented for ramp analyses where the demand volume exceeds the capacity.

^b Ramps operating at LOS E or LOS F conditions highlighted in **bold**. Significant project impacts shaded.

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

**TABLE 5.2-39
 FREEWAY RAMP LEVEL OF SERVICE - EXISTING PLUS PROJECT CONDITIONS –
 WITHOUT A SF GIANTS GAME – SATURDAY EVENING PEAK HOUR**

#	Ramp Location	Existing plus Project					
		Existing		No Event		Basketball Game	
		Density ^a	LOS ^b	Density	LOS	Density	LOS
1	I-80 EB on-ramp at Sterling	22	C	22	C	22	C
2	I-80 EB on-ramp at Fifth/Bryant	35	E	36	E	36	E
3	I-80 WB off-ramp at Fifth/Harrison	25	C	26	C	34	D
4	I-280 SB on-ramp at Pennsylvania	13	B	13	B	13	B
5	I-280 NB off-ramp at Mariposa	16	B	17	B	25	C
6	I-280 SB on-ramp at Mariposa	12	B	13	B	12	B

NOTES:

^a Density of vehicles in merge and diverge influence area for on-ramp and off-ramp analysis, respectively. Measured in passenger cars per mile per lane. Density value is not presented for ramp analyses where the demand volume exceeds the capacity.

^b Ramps operating at LOS E or LOS F conditions highlighted in **bold**. Significant project impacts shaded.

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

Basketball Game Scenario

The proposed project under the Basketball Game scenario would result in a significant traffic impact at the I-80 westbound off-ramp at Harrison Street during the weekday evening peak hour (i.e., attendees driving to San Francisco from the East Bay). The proposed project would not contribute considerably to the other ramps currently operating at LOS E or LOS F (i.e., the I-80 eastbound on-ramp at Sterling Street during the weekday p.m. peak hour, the I-80 eastbound on-ramp at Fifth/Bryant during the weekday p.m., weekday evening, and Saturday evening peak hours, or the I-280 southbound on-ramp at Pennsylvania Street during the weekday p.m. peak hour), and therefore, traffic impacts at these freeway ramp locations would be less than significant.

Other Events

Ramp LOS operating conditions during other events at the project site would be similar to or better than described above for the Basketball Game scenario, which assessed the maximum attendance event for evening conditions and which would be representative of conditions for sell-out concert events. Intersection LOS operating conditions for daytime events during the weekday p.m. peak hour would be similar to or better than described above for the Convention Event scenario, which reflects the maximum impact during the weekday p.m. peak hour.

Overall, under existing plus project conditions without a SF Giants game at AT&T Park, the proposed project would result in *significant* project-specific impacts at the I-80 westbound off-ramp at Fifth/Harrison during the weekday evening.

No feasible mitigations are available for the freeway ramp impacts because there is insufficient physical space for additional capacity without redesign of the I-80 and I-280 ramps and mainline structures, which may require acquisition of additional right-of-way. Moreover, any changes to

the ramps would require approval of Caltrans, which operates the freeways and ramps. Potential demand-oriented measures to that could be applied to improve operations at the I-80 westbound off-ramp at Fifth/Harrison would involve reducing the traffic volumes on westbound I-80 by increasing tolls on the San Francisco-Oakland Bay Bridge, or other means, such as mainline traffic metering at the toll plaza in Oakland. Ramp metering, however, would likely exacerbate congestion on streets leading to the on-ramp, while tolling would need to be implemented as a system-wide improvement in order to prevent concentration of vehicular traffic and increased congestion on non-tolled facilities. **Mitigation Measure M-TR-2b: Additional Strategies to Reduce Transportation Impacts** would encourage non-auto modes of travel to the event center through parking pricing and enhance regional transit access to the area, which would reduce the project traffic increase on regional freeway mainline and ramps. However, the reduction in project-generated vehicle trips would not reduce impacts to less-than-significant levels. Thus, for these reasons, the proposed project's impacts related to freeway ramp operations would be *significant and unavoidable with mitigation*.

Mitigation Measure M-TR-2b: Additional Strategies to Reduce Transportation Impacts
(see Impact TR-2, above)

Comparison of Impact TR-3 to Mission Bay FSEIR Impact Analysis

The Mission Bay FSEIR did not address traffic impacts on freeway ramp facilities as a distinct transportation topic. The significant and unavoidable project impact at the I-80 westbound off-ramp at Fifth/Harrison would be a *new significant* effect not identified in the Mission Bay FSEIR. As explained above, no feasible mitigation measures are available to avoid this impact. The impact is therefore *significant and unavoidable with mitigation*.

Impact TR-4: The proposed project would not result in a substantial increase in transit demand that could not be accommodated by adjacent Muni transit capacity such that significant adverse impacts to Muni transit service would occur under Existing plus Project conditions without a SF Giants game at AT&T Park. (Less than Significant)

Capacity Utilization. Table 5.2-40 presents the Muni route analysis and regional screenline analysis for the existing plus project conditions for weekday p.m. peak hour conditions for the No Event, Convention Event, and Basketball Game scenarios. Table 5.2-41 presents the transit analysis for the weekday evening and weekday late evening peak hours for the Basketball Game scenario, while Table 5.2-42 presents the transit analysis for the Saturday evening peak hour for the No Event and Basketball Game scenario. It should be noted that depending on the origin and destination of the transit trip, the majority of the transit trips arriving from outside of San Francisco would also be required to take a Muni line to their destination, and these trips were included in the transit analysis. Table 5.2-43 presents the weekday p.m. peak hour downtown screenlines for the No Event and Basketball Event scenarios.

**TABLE 5.2-40
TRANSIT ANALYSIS - EXISTING PLUS PROJECT CONDITIONS – WITHOUT A SF GIANTS GAME – WEEKDAY PM PEAK HOUR**

Route/Service Provider	NO EVENT OUTBOUND			CONVENTION EVENT OUTBOUND			BASKETBALL GAME OUTBOUND		
	Ridership	Capacity	Capacity Utilization ^a	Ridership	Capacity	Capacity Utilization	Ridership	Capacity	Capacity Utilization
San Francisco									
T Third ^b	2,467	3,808	64.8%	3,037	3,808	79.7%	2,441	3,808	64.1%
22 Fillmore ^b	714	942	75.8%	719	942	76.3%	696	942	73.9%
<i>Total</i>	3,181	4,750	67.0%	3,755	4,750	79.1%	3,137	4,750	66.0%
East Bay									
BART	20,160	21,220	95.0%	20,271	21,220	95.5%	20,159	21,220	95.0%
AC Transit	2,297	3,926	58.5%	2,309	3,926	58.8%	2,296	3,926	58.5%
Ferries	813	1,615	50.3%	817	1,615	50.6%	813	1,615	50.3%
<i>Total</i>	23,270	27,761	87.0%	23,398	27,761	87.4%	23,268	27,761	86.9%
North Bay									
Buses	1,399	2,817	49.6%	1,399	2,817	49.7%	1,399	2,817	49.6%
Ferries	976	1,959	49.8%	976	1,959	49.8%	976	1,959	49.8%
<i>Total</i>	2,374	4,776	49.7%	2,375	4,776	49.7%	2,374	4,776	49.7%
South Bay									
BART	8,720	16,963	51.4%	8,729	16,963	51.5%	8,720	16,963	51.4%
Caltrain	2,472	3,100	79.7%	2,498	3,100	80.6%	2,472	3,100	79.4%
SamTrans	147	320	45.9%	147	320	46.0%	147	320	45.9%
<i>Total</i>	11,339	20,383	55.6%	11,375	20,383	55.8%	11,339	20,383	55.6%

NOTES:

^a For weekday p.m. peak hour conditions, capacity utilization exceeding 85 percent for Muni and 100 percent for regional transit highlighted in **bold**. Significant project impacts shaded.

^b Ridership and capacity for the T Third and 22 Fillmore reflect implementation of the Central Subway and 22 Fillmore Transit Priority Project.

SOURCE: Advant Consulting/Fehr & Peers/LCW Consulting, 2015

**TABLE 5.2-41
TRANSIT ANALYSIS - EXISTING PLUS PROJECT CONDITIONS –
WITHOUT A SF GIANTS GAME – WEEKDAY EVENING AND LATE EVENING PEAK HOURS**

Route/Service Provider	BASKETBALL GAME SCENARIO WEEKDAY EVENING INBOUND			BASKETBALL GAME SCENARIO WEEKDAY LATE EVENING OUTBOUND		
	Ridership	Capacity	Capacity Utilization ^a	Ridership	Capacity	Capacity Utilization
<i>San Francisco</i>						
T Third ^b	4,542	4,886	93.0%	3,763	5,046	74.6%
22 Fillmore ^b	281	628	44.7%	212	252	84.1%
Muni Special Event Shuttles	1,139	1,218	93.5%	942	978	96.3%
<i>Total</i>	5,962	6,732	88.6%	4,916	6,276	78.3%
<i>East Bay</i>						
BART	5,557	15,870	35.0%	5,869	6,095	96.3%
AC Transit	306	520	58.9%	168	200	84.2%
Ferries	101	576	17.5%	0	0	0%
<i>Total</i>	5,964	16,966	35.2%	6,038	6,295	85.9%
<i>North Bay</i>						
Buses	111	120	92.2%	51	80	63.8%
Ferries	468	1,357	34.5%	918	637	144.1%
<i>Total</i>	579	1,477	39.2%	969	717	135.2%
<i>South Bay</i>						
BART	3,980	18,400	21.6%	2,190	5,290	41.4%
Caltrain	2,641	2,600	101.6%	902	650	138.8%
SamTrans	44	160	27.3%	32	40	79.0%
<i>Total</i>	6,664	21,160	31.5%	3,124	5,980	52.2%

NOTES:

^a For pre-event and post-event conditions, capacity utilization exceeding 100 percent highlighted in **bold**. Significant project impacts shaded.

^b Ridership and capacity for the T Third and 22 Fillmore reflect implementation of the Central Subway and 22 Fillmore Transit Priority Project.

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

TABLE 5.2-42
TRANSIT ANALYSIS - EXISTING PLUS PROJECT CONDITIONS –
WITHOUT A SF GIANTS GAME – SATURDAY EVENING PEAK HOURS

Route/Service Provider	NO EVENT INBOUND			BASKETBALL GAME INBOUND		
	Ridership	Capacity	Capacity Utilization ^a	Ridership	Capacity	Capacity Utilization
<i>San Francisco</i>						
T Third ^b	508	1,714	29.6%	3,130	4,332	72.3%
22 Fillmore ^b	317	378	84.0%	257	378	67.9%
Muni Special Event Shuttles	0	0	0%	1,004	1,372	73.2%
<i>Total</i>	825	2,092	39.4%	4,391	6,082	72.2%
<i>East Bay</i>						
BART	2,399	8,740	27.4%	3,968	8,740	45.4%
AC Transit	52	200	25.9%	88	200	43.9%
Ferries	0	0	0%	0	0	0%
<i>Total</i>	2,451	8,940	27.4%	4,056	8,940	45.4%
<i>North Bay</i>						
Buses	80	137	58.6%	115	137	84.0%
Ferries	826	1,594	51.8%	1,186	1,594	74.4%
<i>Total</i>	906	1,731	52.4%	1,301	1,731	75.2%
<i>South Bay</i>						
BART	2,136	11,925	19.5%	2,339	10,925	21.4%
Caltrain	694	1,300	53.4%	1,307	1,300	100.5%
SamTrans	20	80	25.4%	29	80	36.4%
<i>Total</i>	2,850	12,305	23.2%	3,675	12,305	29.9%

NOTE:

^a For No Event scenario, capacity utilization exceeding 85 percent for Muni and 100 percent for regional transit highlighted in **bold**. For pre-event conditions, capacity utilization exceeding 100 percent highlighted in **bold**. Significant project impacts shaded.

^b Ridership and capacity for the T Third and 22 Fillmore reflect implementation of the Central Subway and 22 Fillmore Transit Priority Project.

SOURCE: Advant Consulting/Fehr & Peers/LCW Consulting, 2015

**TABLE 5.2-43
MUNI DOWNTOWN TRANSIT SCREENLINES – EXISTING PLUS PROJECT - NO EVENT AND
CONVENTION EVENT SCENARIOS - WEEKDAY P.M. PEAK HOUR**

Screenline/Transit Provider ^a	Existing Ridership	Project Trips	Existing plus Project Ridership	Existing Capacity	Capacity Utilization
No Event					
<i>Northeast</i> Kearny/Stockton Corridor	2,157	35	2,192	3,291	66.6%
All Other Lines	<u>570</u>	<u>9</u>	<u>579</u>	<u>1,078</u>	<u>53.7%</u>
<i>Subtotal</i>	2,728	45	2,772	4,369	63.4%
<i>Northwest</i> Geary Corridor	1,814	26	1,840	2,526	72.8%
California	1,366	20	1,386	1,686	82.2%
Sutter/Clement	470	7	477	630	75.7%
Fulton/Hayes	965	14	979	1,176	83.2%
Balboa	<u>637</u>	<u>9</u>	<u>646</u>	<u>929</u>	<u>69.6%</u>
<i>Subtotal</i>	5,252	76	5,328	6,949	76.7%
<i>Southeast</i> Third Street	550	23	573	714	80.2%
Mission Street	1,529	63	1,592	2,789	57.1%
San Bruno/Bayshore	1,320	54	1,374	2,134	64.4%
All Other Lines	<u>1,034</u>	<u>42</u>	<u>1,076</u>	<u>1,712</u>	<u>62.9%</u>
<i>Subtotal</i>	4,433	182	4,615	7,349	62.8%
<i>Southwest</i> Subway Lines	4,747	41	4,788	6,294	76.1%
Haight/Noriega	1,105	9	1,114	1,651	67.5%
All Other Lines	<u>276</u>	<u>2</u>	<u>278</u>	<u>700</u>	<u>39.8%</u>
<i>Subtotal</i>	6,128	52	6,180	8,645	71.5%
<i>Total All Muni Screenlines</i>	18,541	355	18,895	27,312	69.2%
Convention Event					
<i>Northeast</i> Kearny/Stockton Corridor	2,158	198	2,357	3,291	71.6%
All Other Lines	<u>570</u>	<u>52</u>	<u>622</u>	<u>1,078</u>	<u>57.7%</u>
<i>Subtotal</i>	2,728	251	2,979	4,369	68.2%
<i>Northwest</i> Geary Corridor	1,814	28	1,842	2,526	72.8%
California	1,366	21	1,387	1,686	82.3%
Sutter/Clement	470	7	477	630	75.8%
Fulton/Hayes	965	15	980	1,176	83.3%
Balboa	<u>637</u>	<u>10</u>	<u>647</u>	<u>929</u>	<u>69.6%</u>
<i>Subtotal</i>	5,252	82	5,334	6,949	76.8%
<i>Southeast</i> Third Street	550	21	571	714	80.2%
Mission Street	1,529	58	1,587	2,789	56.9%
San Bruno/Bayshore	1,320	50	1,370	2,134	64.2%
All Other Lines	<u>1,034</u>	<u>39</u>	<u>1,073</u>	<u>1,712</u>	<u>62.7%</u>
<i>Subtotal</i>	4,433	169	4,602	7,349	62.6%
<i>Southwest</i> Subway Lines	4,747	54	4,801	6,294	76.3%
Haight/Noriega	1,105	13	1,118	1,651	67.7%
All Other Lines	<u>276</u>	<u>3</u>	<u>279</u>	<u>700</u>	<u>39.9%</u>
<i>Subtotal</i>	6,128	70	6,198	8,645	71.7%
<i>Total All Muni Screenlines</i>	18,541	572	19,112	27,312	70.0%

NOTE:

^a Muni downtown screenlines reflect outbound trips from downtown San Francisco.

SOURCE: Advant Consulting/Fehr & Peers/LCW Consulting, 2015

No Event Scenario

Under the No Event scenario (i.e., the office, retail and restaurant uses), the proposed project would generate 881 new transit trips (157 inbound and 724 outbound) during the weekday p.m. peak hour. These new transit trips would utilize the nearby Muni lines and regional transit lines, and would include transfers to other Muni bus and light rail lines, or other regional transit providers. Based on the location of the project site and the anticipated origin/destination of the new employees and visitors to the office, retail and restaurant uses, the transit trips were assigned to Muni and the various regional transit operators.

Table 5.2-40 presents the transit analysis for the T Third light rail line and 22 Fillmore routes serving the project site, as well as the three regional screenlines for the weekday p.m. peak hour. **Table 5.2-42** presents the transit analysis for the Saturday evening peak hour, which typically has less transit capacity than during the weekday p.m. peak hour. During both the weekday p.m. and Saturday evening peak hours, the project-generated trips assigned to the T Third line and 22 Fillmore route would be accommodated during the weekday p.m. and Saturday evening peak hours without exceeding the 85 percent capacity utilization standard.

Table 5.2-43 presents the results of the Muni screenline analysis for the existing plus project conditions for weekday p.m. peak hour conditions for the No Event scenario. Based on the trip distribution patterns, it was estimated that out of the 724 outbound transit trips, about 355 would cross the Muni screenlines, 325 would cross the regional screenlines, and the remaining 44 would not cross any screenlines (i.e., would travel within the downtown area). The analysis of Muni screenlines assesses the effect of project-generated transit-trips on transit conditions in the outbound direction from downtown (and away from the project site) during the weekday p.m. peak hour. Based on the origins/destinations of the transit trips generated by the proposed project, the outbound transit trips within San Francisco were assigned to the four screenlines and the sub-corridors within each screenline. Overall, the addition of the project-generated riders to the four screenlines would not substantially increase the peak hour capacity utilization. Capacity utilization for all screenlines and corridors would remain similar to those under existing conditions, and below the capacity utilization standard of 85 percent.

Convention Event Scenario

During the weekday p.m. peak hour, the Convention Event scenario would generate 1,524 new transit trips (212 inbound and 1,312 outbound). **Table 5.2-40** presents the transit analysis for the T Third light rail line and the 22 Fillmore bus route serving the project site. During the weekday p.m. peak hour, the Convention Event Scenario would generate more outbound transit trips than the No Event scenario, with the majority of the increase using the T Third line. As indicated in **Table 5.2-40**, with the addition of the new transit trips associated with the Convention Event scenario, both the T Third line and 22 Fillmore route would continue to operate at less than the 85 percent capacity utilization standard.

Table 5.2-43 presents the Muni screenline analysis for the Convention Event scenario for weekday p.m. peak hour conditions. Based on the trip distribution patterns, it was estimated that out of the 1,312 outbound transit trips, about 572 would cross the Muni screenlines, 490 would cross the regional screenlines, and the remaining 250 would not cross any screenlines (i.e., would

travel within the downtown area). Overall, the addition of the project-generated riders to the four screenlines would not substantially increase the peak hour capacity utilization. Capacity utilization for all screenlines and corridors would remain similar to those under Existing conditions, and below the capacity utilization standard of 85 percent.

Basketball Game Scenario

Capacity Utilization. As indicated in Section 5.2.5.2, in addition to the existing scheduled transit service in the project vicinity, the SFMTA would provide additional service to accommodate peak evening events, including basketball games and concerts with more than 14,000 attendees (see **Table 5.2-15** for the proposed frequencies). Light rail service on the T Third would be increased, and three Muni Special Event Shuttle routes would be implemented. The additional capacity that would be provided during the pre-event and post-event periods was incorporated into the transit analysis presented on **Table 5.2-41** for weekday evening (inbound to the project site) and weekday late evening (outbound from the project site) peak hours, and on **Table 5.2-42** for the Saturday evening peak hour (inbound towards the project site).

- During the weekday p.m. peak hour, the Basketball Game scenario would generate 1,625 new transit trips (944 inbound and 681 outbound). As indicated in **Table 5.2-40**, the additional outbound trips would be accommodated on the T Third line and 22 Fillmore.
- During the weekday evening peak hour, the Basketball Game scenario would generate 4,371 new transit trips (4,138 inbound and 232 outbound). About 64 percent of the inbound transit demand would be on the T Third (2,663 trips), about 28 percent on the Muni Special Event Shuttles (1,139 trips), 8 percent would walk from Caltrain (305 trips), and 1 percent would take the 22 Fillmore route (32 trips). As shown on **Table 5.2-41**, the additional trips would be accommodated within the available capacity. The Muni Special Event Shuttles would operate at about 94 percent, which would be below the 100 percent capacity utilization standard for event conditions.
- During the weekday late evening peak hour, the Basketball Game scenario would generate 4,680 new outbound transit trips. About 67 percent of the outbound transit demand would be on the T Third (3,157 trips), about 24 percent on the Muni Special Event Shuttles (1,133 trips), 8 percent would walk to Caltrain (359 trips), and 1 percent would take the 22 Fillmore route (31 trips). As presented in **Table 5.2-41**, the additional trips generated by the project would be accommodated within the proposed transit service plan.
- During the Saturday evening peak hour, the Basketball Game scenario would generate 4,310 new vehicle trips (4,134 inbound and 176 outbound). About 63 percent of the inbound transit demand would be on the T Third (2,611 trips), about 29 percent on the Muni Special Event Shuttles (1,188 trips), 7 percent would walk from Caltrain (308 trips), and 1 percent would take the 22 Fillmore route (27 trips). As presented in **Table 5.2-42**, the additional trips generated by the proposed project would be accommodated within the proposed transit service plan capacities.

Overall, the proposed Muni Special Event Transit Service Plan developed for large events would accommodate transit riders destined to and from the proposed event center during the weekday p.m., weekday evening, weekday late evening, and Saturday evening peak hour, and therefore, proposed project impacts on transit capacity would be less than significant.

Light Rail Platform Operations Assessment. During pre-event and post-event periods, when surges of Muni Metro riders generated by a high attendance event would be arriving or departing the UCSF/Mission Bay station at South Street, there is the potential for crowding to occur on the two raised platforms, northbound and southbound. Such crowding on the Muni platforms, if it were to occur, would be considered a significant transit impact. Therefore, an assessment of conditions at both platforms at the UCSF/Mission Bay Muni Metro station was conducted for event conditions. Overall, it was determined that the proposed project's impacts on light rail platform conditions would be less than significant.

- **Pre-event Operations.** The assessment of pre-event conditions was conducted by comparing the available effective platform area to the pedestrian density required to accommodate passengers within acceptable conditions during pre-event conditions. The methodology used in the analysis was developed by the Transportation Research Board, and is presented in the platform and waiting areas section of Chapter 10 of the *TCRP Transit Capacity and Quality of Service Manual*.⁴⁷ See **Appendix TR** for information on methodology and calculations.

The majority of attendees taking Muni's T Third Metro line to the project site would travel from downtown and would exit the train at the southbound platform, located in the median of Third Street, immediately south of South Street; they would then proceed down the ramp towards the south crosswalk to cross Third Street and arrive at the project site. Thus, the assessment looked at whether passengers exiting a Muni train and having to stop at the crosswalk for a red signal immediately after their arrival could be accommodated within the available area on the ramp and platform. The Muni Metro southbound rail platform is about 9 feet wide and 160 feet in length, and the ramp is about 4 feet wide and 50 feet in length. Combined, accounting for obstacles and a waiting area buffer (i.e., the buffer zone at the east edge of the platform adjacent to the tracks; a fence is provided at the west edge of the platform), the effective area available to disembarking transit riders to queue would be about 950 square feet. The area required to accommodate the maximum passenger demand arriving on a Muni Metro train (i.e., a two-car train) that would serve the platform was estimated based on the capacity of a full two-car train, plus some additional passengers waiting at the platform for the southbound train (i.e., a total of about 250 passengers). The total number of passengers was then multiplied by the passenger density standard (square feet per passenger) established by the TCRP for queuing area expected to operate at a LOS D. The typical design LOS used for station platforms is LOS C to LOS D, and LOS D is considered an acceptable level of crowding during short periods (e.g., to be reached while passengers move away from the platform, but not for the 10- to 15-minute period while waiting for the next train to arrive), and would be considered acceptable for event conditions. The minimum queuing space required to accommodate the expected number of exiting passengers from a full two-car train is about 750 square feet. Therefore, the existing southbound platform, which has approximately 950 square feet, would be able accommodate the expected demand project at LOS D or better conditions. In the event that a following Muni Metro train arrives at the platform while train riders are still queued on the ramp and/or platform waiting to cross Third Street, per standard operating practice, the train operator would not to open the doors until the queue would be cleared from the ramp. The proposed project's TMP includes PCOs that would be

⁴⁷ TCRP Report 165. *Transit Capacity and Quality of Service Manual, Third Edition*, Chapter 10: Station Capacity. Available online at <http://www.trb.org/Main/Blurbs/169437.aspx>. Accessed May 28, 2015.

stationed at the entrances to the light rail platforms on South Street to facilitate pedestrian crossings, and to minimize conflicts between pedestrians, light rail, and southbound vehicular traffic. Nevertheless, **Improvement Measure I-TR-4: Operational Study of the Southbound Platform at the T Third UCSF/Mission Bay Station**, presented below, is identified to further reduce the proposed project's less than significant impacts related to potential crowding conditions at the platform. This measure would study the feasibility and efficacy of enlarging the southbound platform by extending it south towards 16th Street in order to provide additional queuing area for passengers on the platform.

- **Post-event Operations.** As described above in Section 5.2.5.2, as part of the proposed project, the elevated northbound passenger platform at the UCSF/Mission Bay T Third line stop would be extended to the north of South Street. The existing northbound platform located in the median of Third Street immediately north of South Street would be extended to the north from 160 feet in length to 320 feet in length. This extension would allow for two, two-car light rail trains to simultaneously board or alight passengers along the platform prior to or following a large event at the project site. Passenger access to the expanded northbound platform would continue to be provided from a single point, the end of the platform closest to South Street. The existing painted median area adjacent to the northbound track between South and 16th Streets would be raised 6 inches. This improvement would allow for staging of two, two-car northbound light rail trains.

Following an event, northbound Third Street would be closed to vehicular traffic between 16th Street and Mission Bay Boulevard South. As noted above, PCOs would also be stationed at the entrances to the light rail platforms on South Street to facilitate pedestrian crossings, and to minimize conflicts between pedestrians, light rail, and southbound vehicular traffic. PCOs would stage passengers at a defined passenger waiting area within the closed portion of Third Street, and would allow them to enter the northbound platform as soon as a train departs until the platform becomes reasonably full. Passenger loading onto the trains would be monitored by SFMTA Transit Fare Inspectors and Passenger Assistance Program Staff, who would be stationed at the light rail platforms. This technique is currently employed at AT&T Park following SF Giants games to ensure that no overcrowding of transit riders occurs near the train tracks, and would be effective following events at the proposed project site. For these reasons, the platforms would not become too crowded.

Other Events

Transit conditions during other events at the project site would be similar to or better than described above for the Basketball Game scenario which assessed the maximum attendance event for evening conditions, and which would also be representative of conditions for sell-out concert events. The proposed Muni Special Event Transit Service Plan would be provided for other large events (i.e., with more than 14,000 attendees), and the service levels of the additional service would be adjusted to reflect the anticipated attendance level.

Summary of Impact TR-4, Muni Transit Impacts

Overall, the proposed Muni Special Event Transit Service Plan developed for large events would accommodate transit riders destined to and from the proposed event center during the weekday p.m., weekday evening, weekday late evening, and Saturday evening peak hours. In addition, with implementation of the TMP, operations at the T Third light rail platforms would not become overcrowded during events. For these reasons, the proposed project's impacts on transit would be *less than significant*.

Mitigation: Not required

While the proposed project's transit impacts would be less than significant, the following improvement measure may be recommended for consideration by City decision makers to further reduce the proposed project's less-than-significant transit impacts.

Improvement Measure I-TR-4: Operational Study of the Southbound Platform at the T Third UCSF/Mission Bay Station

As an improvement measure to enhance T Third operations at the UCSF/Mission Bay station for pre-event arrivals, the project sponsor shall fund a study of the effects of pedestrian flows on Muni's safety and operations prior to an event as well as the feasibility and efficacy of enlarging the southbound platform by extending it south towards 16th Street. The study shall include an assessment of exiting pedestrian flows from a fully occupied two-car light rail train on the platform and ramp to the crosswalk at South Street across Third Street, also taking into consideration the presence of non-event transit riders waiting to board the train, service frequency, and current traffic signal operations. The study shall be performed by a qualified transportation professional approved by SFMTA.

Implementation of **Improvement Measure I-TR-4: Operational Study of the Southbound Platform at the T Third UCSF/Mission Bay Station** would study the need for and feasibility of physical improvements to the existing light rail platform, and would not result in any secondary transportation-related impacts.

Comparison of Impact TR-4 to Mission Bay FSEIR Impact Analysis

The Mission Bay FSEIR did not identify any significant impacts related to transit within Mission Bay, and did not require any mitigation measures. Consequently, no new or different mitigation measures or alternatives to reduce project impacts related to transit impacts are identified or required with respect to the currently proposed project. On the basis of the facts discussed above, the project would result in no new or substantially more severe significant effects than those identified in the Mission Bay FSEIR related to transit impacts.

Impact TR-5: The proposed project would result in a substantial increase in transit demand that could not be accommodated by regional transit capacity such that significant adverse impacts to regional transit service would occur under Existing plus Project conditions without a SF Giants game at AT&T Park. (Significant and Unavoidable with Mitigation)

Table 5.2-40 above presents the regional screenline analysis for the existing plus project conditions for weekday p.m. peak hour conditions for the No Event, Convention Event, and Basketball Game scenarios. **Table 5.2-41** above presents the regional screenline analysis for the weekday evening and weekday late evening peak hours for the Basketball Game scenario, while **Table 5.2-42** above presents the regional screenline analysis for the Saturday evening peak hour for the No Event and Basketball Game scenario.

No Event Scenario

Similar to the Muni screenline analysis presented in Impact TR-4, the analysis of regional transit screenlines assess the effect of project-generated transit-trips on transit conditions in the outbound direction during the weekday p.m. peak hour. Under the No Event scenario, the proposed project would generate 349 new transit trips (24 inbound and 325 outbound) during the weekday p.m. peak hour and 163 new transit trips (41 inbound and 122 outbound) during the Saturday evening peak hour. Of the 325 outbound trips during the weekday p.m. peak hour, 218 would be destined to the East Bay, 17 to the North Bay, and 90 to the South Bay. Of the 41 inbound trips during the Saturday evening peak hour, 35 would be arriving from the East Bay and 6 from the South Bay. **Table 5.2-40** presents the existing plus project screenline analysis for the regional transit carriers for the weekday p.m. peak hour, while **Table 5.2-42** presents the analysis for the Saturday evening peak hour. In general, the additional project-related passengers would not have a substantial effect on the regional transit providers during the analysis hours, as the capacity utilization for all screenlines would remain similar to those under existing conditions. In addition, the capacity utilization for all regional transit providers would be under their capacity utilization standards of 100 percent.

Convention Event Scenario

During the weekday p.m. peak hour, the Convention Event scenario would generate 545 new transit trips (56 inbound and 489 outbound) to and from outside of San Francisco. Based on the trip distribution patterns, it was estimated that during the weekday p.m. peak hour there would be 346 transit trips destined to the East Bay, 18 transit trips to the North Bay, and 126 transit trips to the South Bay. **Table 5.2-40** presents the existing plus project screenline analysis for the regional transit carriers. In general, the addition of the 489 project-related passengers would not have a substantial effect on the regional transit providers during the weekday p.m. peak hour, as the capacity utilization for all screenlines would remain similar to those under existing conditions. In addition, the capacity utilization for all regional transit providers would be under their capacity utilization standards of 100 percent.

Basketball Game Scenario

The proposed project's TMP does not include any provisions for additional regional transit service during events at the project site. Therefore, the regional screenline analysis conducted for the project assumes existing capacities, as identified by the regional transit service providers.

- During the weekday p.m. peak hour, the Basketball Game scenario would add 324 outbound trips to the regional screenlines. As indicated in **Table 5.2-40** above, the additional outbound trips would not substantially affect the capacity utilization of the regional service providers.
- During the weekday evening peak hour, the Basketball Game scenario would add 2,697 new transit trips to the regional screenlines (i.e., about 59 percent destined to the East Bay, 11 percent to the North Bay, and 30 percent to the South Bay). While the majority of trips would be from the East Bay, the additional trips on Caltrain would increase the capacity utilization to more than 100 percent, and this would be considered a significant impact. See **Table 5.2-41**, above.

- During the weekday late evening peak hour, the Basketball Game scenario would add about 5,496 new outbound transit trips to the regional screenlines (i.e., about 57 percent destined to the East Bay, 14 percent to the North Bay, and 29 percent to the South Bay). As presented in **Table 5.2-41** above, this additional demand would exceed the capacity of the existing service provided on the Golden Gate Transit and WETA buses and ferries to the North Bay, and on Caltrain to the South Bay, and this would be considered a significant impact.
- During the Saturday evening peak hour, the Basketball Game scenario would add about 2,867 new inbound transit trips to the regional screenlines (i.e., about 57 percent from the East Bay, 14 percent from the North Bay, and 29 percent from the South Bay). As presented in **Table 5.2-42** above, this additional demand would exceed the capacity of the existing service provided on Caltrain from the South Bay, and this would be considered a significant impact.

Other Events

Conditions for the regional transit operators during other events at the project site would be similar to or better than described above for the Basketball Game scenario, which assessed the maximum attendance event for evening conditions, and which would also be representative of conditions for sell-out concert events.

Summary of Impact TR-5, Regional Transit Impacts

Overall, under existing plus project conditions without a SF Giants game at AT&T Park, the proposed project would result in *significant* project-specific regional transit impacts, as follows:

- On Caltrain to and from the South Bay during the weekday evening, weekday late evening, and Saturday evening peak hours for the Basketball Game scenario.
- On WETA and Golden Gate Transit service to the North Bay during the weekday late evening peak hours.

In order to accommodate the additional transit demand to the South Bay during weekday and Saturday evening conditions, one additional train car (average capacity of 130 passengers per car) on at least one inbound train per hour would be needed. For the weekday late evening period, two additional train cars (average capacity of 130 passengers per car) on at least one outbound train per hour would be needed. Alternatively, the transit demand could be accommodated within one special outbound train (total capacity up to 650 passengers) at the end of the basketball game, similar to the service currently being offered for SF Giants home games (two special outbound trains).

In order to accommodate the additional transit demand to the North Bay, four additional Golden Gate Transit buses (40 passengers per bus) plus one ferry boat (250 to 320 passengers per boat) per hour, or alternatively seven additional buses per hour would need to be provided.

Implementation of **Mitigation Measure M-TR-5a: Additional Caltrain Service** and **Mitigation Measure M-TR-5b: Additional North Bay Ferry and/or Bus Service** would reduce or minimize the severity of the capacity utilization exceedances for the regional transit service providers, and would not result in secondary transportation impacts. However, since the provision of additional

South Bay and North Bay service is uncertain and full funding for the service has not yet been identified, implementation of both mitigation measures remain uncertain. Accordingly, the proposed project's significant impacts to Caltrain, Golden Gate Transit and WETA transit capacity would remain *significant and unavoidable with mitigation*.

Mitigation Measure M-TR-5a: Additional Caltrain Service

As a mitigation measure to accommodate transit demand to and from the South Bay for weekday and weekend evening events, the project sponsor shall work with the Ballpark/Mission Bay Transportation Coordinating Committee to coordinate with Caltrain to provide additional Caltrain service to and from San Francisco on weekdays and weekends. The need for additional service shall be based on surveys of event center attendees conducted as part of the TMP.

Mitigation Measure M-TR-5b: Additional North Bay Ferry and/or Bus Service

As a mitigation measure to accommodate transit demand to the North Bay following weekday and weekend evening events, the project sponsor shall work with the Ballpark/Mission Bay Transportation Coordinating Committee to coordinate with Golden Gate Transit and WETA to provide additional ferry and/or bus service from San Francisco following weekday and weekend evening events. The need for additional service shall be based on surveys of event center attendees conducted as part of the TMP.

Comparison of Impact TR-5 to Mission Bay FSEIR Impact Analysis

The Mission Bay FSEIR did not identify any significant regional transit impacts for existing plus project conditions, and did not require any mitigation measures. Because the proposed project would result in significant impacts to Caltrain, Golden Gate Transit, and WETA transit capacity, the project would result in *new significant* impacts not previously identified in the Mission Bay FSEIR.

Pedestrian Impacts

Impact TR-6: The proposed project could result in a substantial overcrowding on public sidewalks, or create potentially hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility on the site and adjoining areas under Existing plus Project conditions without a SF Giants game at AT&T Park. (Less than Significant with Mitigation)

Pedestrian Improvements

The proposed project includes numerous sidewalk network and traffic control improvements that would improve and define the pedestrian environment adjacent to the project site. Specifically, the proposed project includes construction of new sidewalks along the perimeter of the project site on South Street (12.5 feet wide), on Terry A. Francois Boulevard (12.5 feet wide), on 16th Street (15 feet wide), and widening of the existing sidewalk on Third Street from 12 to 16 feet. A 20-foot wide setback would generally be provided along the 16th Street frontage, and a 5-foot wide setback would be provided for buildings fronting South Street, Third Street, and

Terry A. Francois Boulevard. These setbacks, as well as additional ground floor building setbacks on all four corners as shown on **Figure 3-5** in the Project Description, and additional midblock queuing area on 16th Street in the vicinity of the proposed Muni Special Event Van Ness Avenue Shuttle stop (see **Appendix TR**), would allow for additional queuing space at the corners for pedestrians waiting to cross the street and for pedestrians waiting to load onto shuttle buses on 16th Street.

Additional project pedestrian improvements include signalization of the intersections of Terry A. Francois Boulevard/16th Street, Terry A. Francois Boulevard/South Street, and Illinois Street/Mariposa Street, including installation of pedestrian countdown signals. New pedestrian crosswalks, consistent with the continental design recommendations in the *Better Streets Plan*, would be installed at the intersections of Bridgeview Way/South Street, Terry A. Francois Boulevard/South Street, Terry A. Francois Boulevard/16th Street, Illinois Street/16th Street, Terry A. Francois Boulevard/16th Street, and Illinois/Mariposa. In addition, the existing crosswalks at the signalized intersections of Third Street/South Street and Third Street/16th Street would be restriped to the continental design.

As part of the light rail station improvements that would be made as part of the proposed project, fencing would be placed adjacent to the light rail tracks in such a manner as to discourage pedestrian crossings midblock between the intersection of Campus Way with southbound Third Street and the event center on the east side of the street, directly across from Campus Way. The exact location of the fencing (i.e., either the east side or west side of the light rail tracks) and the configuration of the fencing have not been identified.

Pedestrian Access

Figure 3-14 in Chapter 3 presents the proposed pedestrian circulation at the project site. Pedestrian access to the project site uses, including buildings and plazas, would be available from multiple locations along all four perimeter streets. Within the project site, a 40-foot wide curving pedestrian path would lead from the elevated Third Street Plaza around the north and east sides of the event center, past retail uses and a proposed bayfront overlook, and terminate on the southeast side of the event center. An outdoor, glass covered passageway would extend from ground level on 16th Street curving around the southwest side of the event center to the Third Street Plaza.

The primary pedestrian access to the event center for large-attendance events would be on the northwest side of the event center via the elevated Third Street Plaza. A secondary access point to the event center for large-attendance events would be on the southeast side of the event center via the elevated pedestrian path. The primary pedestrian access to the event center for smaller-attendance events would be at the ground-level theater entrance on the southeast side of the event center, via the Southeast Plaza. As noted above, ground floor building setbacks would be provided on all four corners of the project site to allow for additional queuing space at the corners.

Pedestrian access to the two office and retail building lobbies and the ground-floor retail/restaurant uses would be from South and 16th Streets and from the Third Street Plaza. The

food hall in the northeast corner of the site would be accessed directly via Terry A. Francois Boulevard and South Street, and also from the elevated pedestrian path within the project site.

Pedestrian Demand

Pedestrians trips generated by the proposed project would include walk trips to and from the project site, walk trips to and from transit stops (e.g., the Caltrain station at Fourth/King and Muni bus and light rail transit stops), and walk trips between the project site and nearby parking facilities. As noted above, pedestrians would access the buildings on the project site from multiple streets, with the greatest proportion of pedestrians traveling through the intersection of Third/South.

- No Event – During the weekday p.m. peak hour, the No Event scenario would add about 1,452 new pedestrian trips to the surrounding streets, which includes 882 person trips to and from nearby transit stops and 570 walk/other trips. During the Saturday evening peak hour, the No Event scenario would add about 1,423 new pedestrian trips to the surrounding streets, which includes 673 person trips to and from nearby transit stops and 750 walk/other trips.
- Convention Event – During the weekday p.m. peak hour, the Convention Event scenario would add about 4,396 new pedestrian trips to the surrounding streets, which includes 1,524 person trips to and from nearby transit stops, 774 person trips to and from nearby parking facilities and 2,098 walk/other trips. The Convention Event scenario would add the greatest number of pedestrian trips to the adjacent street network during the weekday p.m. peak hour (i.e., attendees leaving the convention event during the weekday p.m. peak hour).
- Basketball Game – During the weekday p.m. peak hour, the Basketball Game scenario would add about 3,531 new pedestrian trips to the surrounding streets, which includes 1,625 person trips to and from nearby transit stops, 1,316 person trips to and from nearby parking facilities and 590 walk/other trips.

During the weekday evening peak hour (i.e., per-game), the Basketball Game scenario would add about 10,976 new pedestrian trips to the surrounding streets, which includes 4,371 person trips to and from nearby transit stops, 5,237 person trips to and from nearby parking facilities, and 1,368 walk/other trips. During the weekday late evening peak hour (i.e., post-game), the Basketball Game scenario would add about 11,762 new pedestrian trips to the surrounding streets, which includes 4,680 person trips to and from nearby transit stops, 5,824 person trips to and from nearby parking facilities and 1,258 walk/other trips.

During the Saturday evening peak hour (i.e., pre-game), the Basketball Game scenario would add about 10,800 new pedestrian trips to the surrounding streets, which includes 4,310 person trips to and from nearby transit stops, 5,809 person trips to and from nearby parking facilities and 681 walk/other trips.

The new pedestrian peak hour trips were distributed to the streets in the project vicinity based on the location of the transit/event shuttle stops, location of parking facilities (for event scenarios when associated parking demand would not be accommodated within the on-site garage), and nearby attractions. The resulting project-generated pedestrian trips were then added to the existing sidewalk and crosswalk volumes (i.e., as described in Section 5.2.3.3, the existing pedestrian volumes counted in 2014 were adjusted to reflect the recent completion of the UCSF Medical Center Phase 1 and Public Safety Building projects) to determine the existing plus project pedestrian volumes at the study locations.

Pedestrian LOS at Crosswalks and Sidewalks

Table 5.2-44 presents the existing plus project pedestrian LOS conditions for the weekday p.m. peak hour for the three analysis scenarios. **Table 5.2-45** presents the existing plus project pedestrian LOS for the weekday evening and late evening conditions for the Basketball Game scenario, while **Table 5.2-46** presents the pedestrian LOS for Saturday evening No Event and Basketball Game scenarios.

**TABLE 5.2-44
 PEDESTRIAN LEVEL OF SERVICE - EXISTING PLUS PROJECT CONDITIONS -
 WITHOUT A SF GIANTS GAME - WEEKDAY PM PEAK HOUR**

Analysis Location	Existing		Existing plus Project					
			No Event		Convention Event		Basketball Game	
	MOE ^a	LOS ^b	MOE	LOS	MOE	LOS	MOE	LOS
Crosswalks								
<i>Third St/South St</i>								
North	472	A	198	A	76	A	194	A
South	216	A	48	B	25	C	17	D
East	1,093	A	95	A	27	C	52	B
<i>Third St/16th St</i>								
North	868	A	104	A	44	B	69	A
South	432	A	214	A	122	A	63	A
East	1,338	A	239	A	73	A	124	A
West	424	A	251	A	156	A	85	A
<i>Terry A. Francois Blvd/South St</i>								
North	--	--	529	A	102	A	126	A
South	--	--	676	A	121	A	73	A
West	--	--	728	A	62	A	96	A
Sidewalks								
<i>Third St between South & 16th Streets</i>								
East	0.2	A	0.6	B	1.7	B	0.7	B
West	0.2	A	0.3	A	0.5	A	0.3	A
<i>South Street – South Side</i>								
	--	--	0.6	B	1.9	B	0.8	B
<i>16th Street – North Side</i>								
	--	--	0.5	B	1.7	B	0.8	B

NOTES:

- ^a MOE – Measure of Effectiveness. Circulation area measured in average square feet per pedestrian for crosswalk analysis, and pedestrian unit flow measured in average pedestrians per minute per foot for sidewalk analysis.
- ^b Crosswalks operating at LOS E or LOS F highlighted in **bold**.

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

**TABLE 5.2-45
PEDESTRIAN LEVEL OF SERVICE - EXISTING PLUS PROJECT CONDITIONS -
WITHOUT A SF GIANTS GAME - WEEKDAY EVENING AND LATE EVENING PEAK HOURS**

Analysis Location	Evening				Late Evening			
	Existing		Existing plus Project - Basketball Game		Existing		Existing plus Project - Basketball Game	
	MOE ^a	LOS ^b	MOE	LOS	MOE	LOS	MOE	LOS
Crosswalks								
<i>Third St/South St^c</i>								
North	793	A	10	E	--	--	4	F
South	313	A	3	F	--	--	5	F
East	2,333	A	19	D	--	--	10	E
<i>Third St/16th St^c</i>								
North	1,131	A	41	B	--	--	30	C
South	618	A	39	C	--	--	33	C
East	2,180	A	29	C	--	--	51	B
West	564	A	59	B	--	--	76	A
<i>Terry A. Francois Blvd/South St^c</i>								
North	--	--	36	C	--	--	33	C
South	--	--	18	D	--	--	16	D
West	--	--	24	D	--	--	21	D
Sidewalks								
<i>Third St between South & 16th Streets</i>								
East	0.1	A	1.4	B	--	--	1.8	B
West	0.2	A	0.5	A	--	--	0.7	B
<i>South Street – South Side</i>								
	--	--	1.7	B	--	--	2.3	B
<i>16th Street – North Side</i>								
	--	--	2.0	B	--	--	1.9	B

NOTES:

^a MOE – Measure of Effectiveness. Circulation area measured in average square feet per pedestrian for crosswalk analysis, and pedestrian unit flow measured in average pedestrians per minute per foot for sidewalk analysis.

^b Crosswalks operating at LOS E or LOS F highlighted in **bold**. Significant project impacts shaded.

^c Under the Basketball Game scenario, a PCO would be stationed at this study intersection during the pre-event and post-event periods, and, as necessary, would manually direct vehicles, pedestrians, transit, and bicyclists through the intersection. LOS reflects conditions without PCO intervention.

SOURCE: Advant Consulting/Fehr & Peers/LCW Consulting, 2015

**TABLE 5.2-46
 PEDESTRIAN LEVEL OF SERVICE - EXISTING PLUS PROJECT CONDITIONS -
 WITHOUT A SF GIANTS GAME - SATURDAY EVENING PEAK HOUR**

Analysis Location	Existing		Existing plus Project			
			No Event		Basketball Game	
	MOE ^a	LOS ^b	MOE	LOS	MOE	LOS
Crosswalks						
<i>Third St/South St^c</i>						
North	1,285	A	237	A	11	E
South	875	A	66	A	3	F
East	1,909	A	62	A	21	D
<i>Third St/16th St^c</i>						
North	2,024	A	115	A	40	C
South	896	A	194	A	34	C
East	3,079	A	124	A	20	D
West	1,424	A	225	A	40	B
<i>Terry A. Francois Blvd/South St^c</i>						
North	--	--	532	A	34	C
South	--	--	745	A	16	D
West	--	--	732	A	22	D
Sidewalks						
<i>Third St between South & 16th Streets</i>						
East	0.1	A	0.6	B	0.9	B
West	0.1	A	0.2	A	0.3	A
<i>South Street - South Side</i>						
	--	--	0.7	B	1.2	B
<i>16th Street - North Side</i>						
	--	--	0.6	B	1.5	B

NOTES:

- ^a MOE – Measure of Effectiveness. Circulation area measured in average square feet per pedestrian for crosswalk analysis, and pedestrian unit flow measured in average pedestrians per minute per foot for sidewalk analysis.
- ^b Crosswalks operating at LOS E or LOS F highlighted in **bold**. Significant project impacts shaded.
- ^c Under the Basketball Game scenario, a PCO would be stationed at this study intersection during the Saturday pre-event period, and, as necessary, would manually direct vehicles, pedestrians, transit, and bicyclists through the intersection. LOS reflects conditions without PCO intervention.

SOURCE: Advant Consulting/Fehr & Peers/LCW Consulting, 2015

No Event Scenario. As shown on **Table 5.2-44** and **Table 5.2-46**, with the addition of the new pedestrian trips associated with the office, retail and restaurant uses during the weekday p.m. and Saturday evening peak hours, the pedestrian LOS conditions for the No Event scenario would be LOS A or LOS B at the crosswalk and sidewalk locations.

Convention Event Scenario. As shown on **Table 5.2-44**, with the addition of the new pedestrian trips during the weekday p.m., the pedestrian LOS conditions for the Convention Event scenario would be LOS C or better at the crosswalk and sidewalk locations. The greatest number of new pedestrians would be at the intersection of Third/South, accessing the light rail platform within the median of Third Street. During convention events, PCOs would be stationed at the intersections of

Third/South and Third/16th to facilitate pedestrian travel through these intersections and to minimize conflicts. During convention events when Moscone Center event shuttle buses would be used to transport attendees between the event center and downtown locations, a shuttle bus zone would be provided along the north curb of 16th Street between Illinois Street and Terry A. Francois Boulevard. The proposed 15 foot wide sidewalk, with additional midblock setbacks along 16th Street, would be adequate to accommodate pedestrians walking to and from the shuttle buses, as well as pedestrians waiting for shuttle buses and pedestrians traveling along 16th Street.

Basketball Game Scenario. Analysis of pedestrian conditions for the Basketball Game scenario was conducted for the weekday p.m. peak hour, as well as for the peak arrival (weekday evening) and peak departure (late evening) hours for a weekday evening game, and for the Saturday evening peak hour for peak arrivals for a Saturday evening game. During the weekday p.m. peak hour, the number of pedestrians on crosswalks and sidewalks would increase over the No Event scenario, as basketball game attendees would start arriving to the event center during the p.m. peak hour for an evening event which would typically start at 7:30 p.m. With the increase in pedestrians, the pedestrian LOS conditions would be LOS A or LOS B at all study locations, with the exception of the south crosswalk at the intersection of Third/South, which would operate at LOS D. The LOS D conditions for the south crosswalk reflect the increased number of pedestrians traveling to the event center via the T Third during the p.m. peak hour, and getting off at the UCSF/Mission Bay station.

During the weekday evening peak hour, pedestrians in the project vicinity would increase substantially (i.e., about 11,000 new pedestrians during the weekday evening peak hour, as compared to 3,500 new pedestrians during the weekday p.m. peak hour), and include arrivals via the existing T Third light rail line and 22 Fillmore bus route as well as attendees arriving via the Muni Special Event Shuttles. For pre-event conditions, the Muni Special Event Shuttle stops would be located adjacent to the project site on South Street (i.e., the Muni Special Event Ferry Building/Transbay Terminal Shuttle) and on the south side of 16th Street between Third and Illinois Streets (i.e., the Muni Special Event Van Ness Avenue Shuttle and the Muni Special Event 16th Street BART Station Shuttle). During the weekday evening peak hour, pedestrian LOS conditions would worsen from weekday p.m. peak hour, however, the sidewalks and crosswalks would be able to accommodate the increased pedestrian volumes.

During the weekday evening and Saturday evening peak hours during pre-event conditions, all analysis locations would operate at LOS D or better, except for the north (LOS E) and south (LOS F) crosswalks at the intersection of Third/South. These poor operating conditions would be due to the high volume of transit riders leaving the T Third light rail platforms and crossing Third Street. Post-event, Muni Special Event Shuttle stops would be located adjacent to the project site on 16th Street, and on the east side of Illinois Street south of 16th Street and on the east side of Third Street north of South Street.

During the weekday late evening, reflecting conditions with pedestrians leaving the event center, crosswalks and sidewalks would also operate at LOS D or better, with the exception of all three crosswalks at the intersection of Third/South which would operate at LOS E or LOS F. The LOS E and LOS F conditions at the intersection of Third/South during the weekday evening and late

evening, and Saturday evening peak hours would be considered a significant pedestrian impact. Following an event, the proposed 15-foot wide sidewalk, with additional setbacks along 16th Street to provide for midblock queuing area in the vicinity of the proposed Muni Special Event Van Ness Avenue Shuttle stop, would be adequate to accommodate pedestrians walking to the Muni Special Event Van Ness Avenue Shuttle, as well as pedestrians waiting for shuttle buses and pedestrians traveling along 16th Street.

Mitigation Measure M-TR-6: Active Management of Pedestrian Flows at the Intersection of Third/South (presented below) would implement strategies to facilitate pedestrian travel to and from the light rail platforms, including extending the green time for pedestrians crossing the street, manually overriding the traffic signal and directing pedestrians to cross, and allowing use of the closed Third Street as a pedestrian access route. These strategies would complement the proposed project's TMP protocols for event operations that include posting of PCOs at this and other nearby intersections (see **Figure 5.2-11**) for pre-event and post-event to facilitate pedestrian flows and minimize conflicts. With the travel lane closures and active management of pedestrian flows, pedestrians would be able to cross outside of the designated crosswalk (i.e., disperse over a greater crossing area) and pedestrian crossing conditions would improve to LOS D or better. For these reasons, implementation of **Mitigation Measure M-TR-6: Active Management of Pedestrian Flows at the Intersection of Third/South** would mitigate the significant pedestrian impacts for the crosswalks at the intersection of Third/South to less than significant.

At the intersection of Illinois/16th Street, PCOs would manage alternating flows of vehicle traffic exiting the garage with pedestrian and bicycle flows along and crossing 16th Street, manage alternating flows of vehicle traffic exiting the garage with the Muni Special Event 16th Street BART shuttles accessing 16th Street eastbound from Illinois Street northbound and with the Muni Special Event Van Ness Avenue shuttles traveling westbound on 16th Street, and coordinate with PCOs along 16th Street that would be managing pedestrian flows across 16th Street.

Other Events

Pedestrian LOS conditions at the sidewalk and crosswalk locations during other smaller events at the project site would be similar to or better than described above for the Convention Event and Basketball Game scenarios, which assessed the maximum attendance event, and which would be representative of conditions for sell-out concert events (i.e., the Basketball Game scenario), and a daytime event with about 9,000 attendees (i.e., the Convention Event scenario). Pedestrian travel associated with smaller events would be accommodated within the nearby sidewalks and crosswalks without requiring temporary lane closures to accommodate pedestrian flows, however, similar to large events, during smaller events PCOs would be posted at nearby intersections to manage pedestrian flows and reduce conflicts (see **Table 5.2-16** for a list of the TMP transportation management strategies by event type).

Pedestrian Corner Conditions

The three buildings on the project site (i.e., the South Street Tower, the 16th Street Tower, and the event center) would be set back at all four corners of the project site to provide for corner queuing area to accommodate pedestrians waiting during the red signal phase, and for an area for

pedestrians to congregate. These areas are shown on **Figure 3-5** in the Project Description, and the additional on-site areas that would be provided would be about 11,000 gsf at the northwest corner of the site (at the intersection of Third/South), 4,700 gsf would at the northeast corner of the site (at the intersection of Terry A. Francois/South), 2,700 gsf at the southwest corner of the site (at the intersection of Third/16th), and 13,200 gsf at the southeast corner of the site (at the intersection of Terry A. Francois/16th). These building setbacks would provide generous queuing space for pedestrians exiting the project site and waiting to cross either South Street or Third Street (e.g., the on-site area at the northeast corner could accommodate about 3,700 pedestrians queuing at one time), and therefore, it is not anticipated that pedestrians would spill out into the adjacent travel lanes.

Pedestrian Safety

Under the No Event scenario, there would be an increased potential for pedestrian-vehicle and pedestrian-bicycle conflicts as traffic, pedestrian, and bicycle volumes would increase from existing conditions. There are a number of factors that contribute to increased pedestrian-vehicle and pedestrian-bicycle conflicts, and the number of collisions at an intersection is a function of the vehicle and bicycle volumes, traffic control, vehicle speeds, types of pedestrian facilities, surrounding land uses, location, and the number of pedestrians. The project's numerous pedestrian network improvements described above, including new sidewalks, building setbacks, continental crosswalks, and new traffic signals with pedestrian countdown signals, would define the pedestrian network and would offset risks associated with increased pedestrian-vehicle and pedestrian-bicycle conflicts. The enhanced roadway, bicycle and pedestrian network, as well as an increased pedestrian presence, would cause drivers to expect and adapt to increased interactions with pedestrians.

As described in Impact TR-4, when a full two-car T Third light train arrives at the southbound platform prior to an event, exiting pedestrians on the southbound platform and ramp would experience queued conditions, and more than one signal cycle may be needed to clear the platform of pedestrians. While queuing on the platform and ramp would occur, this condition would be expected for peak arrivals to the event center, and would not be considered a significant pedestrian impact.

As noted above, the proposed project includes installation of fencing along the existing light rail right-of-way in the center of Third Street to deter pedestrians from crossing southbound Third Street near Campus Way.

During event days at the event center there would be increased potential for pedestrian-vehicle and pedestrian-bicycle conflicts compared to the No Event scenario. However, as described above, the proposed project's TMP would be in effect, and PCOs would be posted at key nearby locations to manage pedestrian flows and minimize potential conflicts with vehicles and bicycles, and proposed project impacts related to pedestrian safety would be less than significant.

Summary of Impact TR-6, Pedestrian Impacts

Overall, the proposed project would implement numerous improvements that would enhance pedestrian conditions and safety in the project vicinity. The existing and proposed pedestrian

facilities would be adequate to meet the pedestrian demand associated with the project uses. The exception would be the crosswalks at the intersection of Third/South, which would operate at LOS E or LOS F conditions during the weekday evening and late evening, and Saturday evening conditions for sell-out events (i.e., the Basketball Game scenario). **Mitigation Measure M-TR-6: Active Management of Pedestrian Flows at the Intersection of Third/South** and the proposed project's TMP protocols for events would manage short-term peak pedestrian flows at adjacent intersections and would mitigate pedestrian impacts to less-than-significant levels. At all other locations and project conditions, the addition of project-generated pedestrian trips would not substantially affect pedestrian flows, create potentially hazardous conditions for pedestrians or otherwise interfere with pedestrian accessibility to the site and adjoining areas.

Mitigation Measure M-TR-6: Active Management of Pedestrian Flows at the Intersection of Third/South

As a mitigation measure to accommodate pedestrians traveling to and from the event center through the intersection of Third/South, PCOs stationed at this location shall implement strategies to allow pedestrians to cross the street safely. The strategies and level of active management shall be tailored to the event size, and could include extending the green time for pedestrians crossing the street, manually overriding the traffic signal and directing pedestrians to cross, erecting temporary pedestrian crossing barriers, allowing use of the closed Third Street as a pedestrian access route, providing a defined passenger waiting area within the closed Third Street, shielding passengers waiting to board light rail from adjacent pedestrian traffic, and deploying additional PCOs to this intersection.

Mitigation Measure M-TR-6: Active Management of Pedestrian Flows at the Intersection of Third/South⁴⁸ would reduce the proposed project's pedestrian impacts at the intersection of Third/South to less-than-significant levels, and would not result in secondary transportation-related impacts. Therefore, the proposed project's impact on pedestrians would be *less than significant with mitigation*.

Comparison of Impact TR-6 to Mission Bay FSEIR Impact Analysis

The Mission Bay FSEIR did not identify any significant impacts related to pedestrians within Mission Bay, and did not require any mitigation measures. Because the proposed project would result in significant pedestrian impacts at the crosswalks at the intersection of Third/South, the project would result in *new significant impacts* not previously identified in the Mission Bay FSEIR.

⁴⁸ As an example, PCOs actively manage pedestrian flows at the intersections of Third/King and Second/King prior to and following a SF Giants game at AT&T Park.

Bicycle Impacts

Impact TR-7: The proposed project would not result in potentially hazardous conditions for bicyclists, or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas under Existing plus Project conditions without a SF Giants game at AT&T Park. (Less than Significant)

Bicycle Improvements

The proposed project would provide bicycle storage rooms accommodating 111 Class 1 bicycle parking spaces within the proposed office and retail/restaurant buildings (i.e., 55 bicycle parking spaces in the South Street office and retail building, 52 spaces in the 16th Street office and retail building, and 4 spaces in the Food Hall).⁴⁹ In addition, an enclosed bicycle parking center would be provided at the southeast plaza area near 16th Street, and would accommodate up to 300 Class 2 bicycle parking spaces for employees and visitors on days without an event. This bicycle parking center would be conveniently located and easily accessible from the bicycle lanes on 16th Street and Terry A. Francois Boulevard. On event days, this facility would be valet staffed, which would then convert the 300 spaces to Class 1; an additional 100 Class 1 bicycle parking spaces would be provided when necessary in a temporary bicycle corral within the main plaza or southeast plaza areas, for a total of 400 Class 1 bicycle parking spaces on event days. The bicycle valet is proposed to be staffed by a partner such as the San Francisco Bicycle Coalition for evening uses during peak events, such as NBA games and concerts, and may also be staffed during smaller events. The entrance to the valet parking would face east to direct departing bicyclists towards the signalized intersection of Terry A. Francois/16th Street, where they can safely mount their bicycles. The valet parking would be attended from two hours prior to the start of the event, to approximately an hour after the event ends. The proposed project would also provide 75 Class 2 bicycle parking spaces via bicycle racks on adjacent sidewalks and on-site at key locations. **Figure 3-15** in Chapter 3 presents the general location of the proposed bicycle parking spaces.

The proposed project would include sponsorship of a Bay Area Bike Share station on or near the project site. The location of the station would be determined through coordination between the project sponsor, the SFMTA, the Port of San Francisco, and the bicycle share operator.

With implementation of the proposed project, and as part of the Mission Bay Infrastructure Plan, 16th Street would be built out between Illinois Street and Terry A. Francois Boulevard. Class II bicycle lanes on 16th Street would be extended in both directions east of Third Street to Terry A. Francois Boulevard. On both sides of 16th Street between Third and Illinois Streets, a 6-foot wide bicycle lane would be located adjacent to the 8-foot wide curb parking lane. On both sides of 16th Street between Illinois Street and Terry A. Francois Boulevard a 6-foot wide bicycle lane would

⁴⁹ Per Planning Code Section 155.1, Bicycle Parking Definitions and Standards, Class 1 bicycle parking facilities are those that protect the entire bicycle and accessories against theft and inclement weather. Examples of Class 1 facilities include lockers, check-in facilities, monitored parking, restricted access parking, and personal storage. Class 2 bicycle racks permit the bicycle frame and one wheel to be locked in the rack (with one u-shaped lock), and provide support to bicycles without damage to the wheels, frame, or components. Available online at <http://planning.sanfranciscocode.org/1.5/155.1/>. Accessed May 28, 2015.

be provided adjacent to the curb, and a 4-foot wide buffer would separate the bicycle lane from the adjacent 8-foot wide parking lane. The extension of the bicycle lanes on 16th Street to the intersection of Terry A. Francois Boulevard/16th Street would facilitate access to the planned cycle track and the Bay Trail that runs along the shoreline parallel to Terry A. Francois Boulevard. The incorporation of appropriate bicycle crossing markings and signals to transition between bicycle lanes on 16th Street and cycle track on Terry A. Francois Boulevard would ensure efficient operation of the intersection and would reduce potential conflicts between bicycles, pedestrians, and automobiles.

The relocation of Terry A. Francois Boulevard as part of the Mission Bay Infrastructure Plan (and constructed by the master developer) will include replacing the existing bicycle lane in each direction with a 13-foot wide two-way separated bicycle lane (i.e., a cycle track) on the east side of the street, and the existing bicycle lane on the west side of Terry A. Francois Boulevard will be removed. A 4-foot wide raised buffer will separate the bicycle lane from the adjacent 8-foot wide parking lane. With the provision of a cycle track, and as Mission Bay gets built out along Terry A. Francois Boulevard to the north and south of the project site, it is anticipated that some bicyclists currently traveling on Third Street would instead travel on the improved bicycle facility on Terry A. Francois Boulevard (Third Street is not a designated bicycle route, and on Third Street bicyclists share the travel lane with vehicles).

Bicycle Conditions

No Event Scenario. With implementation of the proposed project, bicycle volumes would increase on the adjacent roadways and bicycle facilities. A portion of the walk/other trips generated by the proposed project uses, as presented in **Table 5.2-24**, would be bicycle trips. The bicycle demand would be accommodated within the 111 Class 1 and 375 Class 2 bicycle parking spaces (i.e., the 300 Class 2 spaces within an enclosed bicycle parking center for employees, and 75 spaces on the adjacent sidewalks) that would be available on the project site and adjacent sidewalks. During the weekday p.m. peak hour, about 150 of the 570 walk/other trips would be bicycle trips, and during the Saturday evening peak hour, about 230 of the 750 walk/other trips would be bicycle trips.

Proposed Class II bicycle lanes on 16th Street between Third Street and Terry A. Francois Boulevard would connect to existing bicycle lanes to the west, as well as to the planned bicycle track on Terry A. Francois Boulevard. The entrance to the project's parking garage and loading area on 16th Street would be located at the all-way stop-controlled intersection of Illinois/16th, which would minimize the potential for conflicts between bicyclists traveling on 16th Street and vehicles entering and exiting the garage.

Convention Event Scenario. Similar to the No Event scenario, bicycle parking demand would be accommodated within the proposed 111 Class 1 and 375 Class 2 bicycle parking spaces. During the weekday p.m. peak hour, a portion of the 2,098 walk/other person trips would be bicycle trips, with 1,484 of these being convention event shuttle/taxi trips, 614 being walk trips, and 265 being other trips, including bicycles, with the majority being bicycle trips. Depending on the size of the convention event, the enclosed bicycle parking center may be staffed, and therefore the

300 bicycle parking spaces within the enclosed bicycle parking center would be considered Class 1 spaces. Bicycle circulation and access would be similar to the No Event scenario. For convention events, when Moscone Center event shuttle buses are anticipated to transport attendees to and from the project site, passenger loading/unloading would occur on 16th Street between Illinois Street and Terry A. Francois Boulevard, adjacent to the north curb within the westbound bicycle lane. When the north curb of 16th Street is used for passenger loading/unloading, the on-street parking located between the curb bicycle lane and the travel lane would be subject to tow-away restrictions, and bicyclists would travel between the stopped buses and the travel lane (i.e., within the area designated for parking) and bicyclists would be permitted full use of the adjacent travel lane.

Basketball Game Scenario. The number of bicycle trips was estimated for the basketball game (i.e., bicycle modes as a separate mode is not available for other project uses). For weekday evening basketball games, there would be about 360 attendees accessing the site by bicycling, while on Saturdays, there would be about 270 attendees accessing the site by bicycling. This would be in addition to the bicycle trips generated by the office, retail, and restaurant uses (about 50 to 80 person trips during the peak hours).

Prior to an event, bicycle access to the project site would be similar to the No Event scenario, and would occur primarily from Terry A. Francois Boulevard and 16th Street. A basketball game would result in an increase in vehicles, bicycles, and pedestrians in the project area, which would result in an increased potential for conflicts. Implementation of the TMP strategies, such as posting of PCOs, would reduce potential conflicts. Nevertheless, prior to and following events, bicycle access may become more difficult due to heavier vehicle and pedestrian volumes, and some bicyclists may shift to other streets (e.g., from Third Street to Fourth Street or to the planned cycle track on Terry A. Francois Boulevard), however, bicycle access would be maintained. During events, PCOs would be stationed at key intersections adjacent to the project site to facilitate vehicle, bicycle, and pedestrian flows. Specifically, PCOs are proposed to be stationed at the intersection of 16th Street at Third, Illinois and Terry A. Francois Boulevard, and on South Street at Third, Bridgeview Way and Terry A. Francois Boulevard.

Before the end of the game, temporary lane or street closures would be implemented on Third Street and 16th Street that would affect bicycle access. The northbound travel lanes on Third Street would be closed to vehicles and bicycles in order to facilitate pedestrian access to the Third Street light rail platforms within the median, and to reduce conflicts between vehicles on Third Street and the Muni Special Event shuttles traveling on 16th Street from the project site. Bicyclists traveling on northbound Third Street would need to detour to Terry A. Francois Boulevard or Fourth Street to continue northbound.

Sixteenth Street between Third Street and Terry A. Francois Boulevard would be closed to vehicular traffic to facilitate Muni Special Event Shuttle operations. On-street parking would not be permitted, with the exception of media trucks on the north curb of 16th Street between Third and Illinois Streets. As bicycle valet parking would be accessed from the north sidewalk along this segment of 16th Street, a plan would be developed to direct departing bicyclists towards the

signalized intersection of Terry A. Francois/16th Street, where they can safely mount their bicycles. On the section of 16th Street between Illinois Street and Terry A. Francois Boulevard, the north curb (i.e., the proposed bicycle lane) would be utilized for staging of the Muni Special Event Van Ness Avenue Shuttle, and therefore bicyclists traveling westbound on 16th Street in this section would not have access to the bicycle lane. On these event days, a temporary bicycle lane would be provided within the street, delineated with cones, that would provide a clear path of travel for bicyclists on this section of 16th Street.

At the intersection of Illinois/16th, vehicles would be exiting the project garage and would be continuing southbound on Illinois Street or turning right onto westbound 16th Street, the Muni Special Event Van Ness Avenue Shuttle would be traveling westbound on 16th Street, and the Muni Special Event 16th Street BART Shuttle would be turning left from northbound Illinois Street onto 16th Street westbound (passenger loading for the Muni Special Event 16th Street BART Shuttle would occur on the east side of Illinois Street south of 16th Street). A PCO would be stationed at this location to facilitate these vehicle movement, as well as direct pedestrians across 16th Street. At the approach to Third Street, all transit shuttles, vehicles, and bicyclists would be directed to continue westbound across Third Street (i.e., no left or right turns would be permitted). Bicyclists traveling in this section between Illinois and Third Streets would be within the bicycle lane, and would continue through into the existing bicycle lane on 16th Street west of Third Street. As noted above, vehicles and bicyclists would not be permitted to turn right into the closed portion of Third Street north of 16th Street. It is not anticipated that the media trucks parked within the north curb parking lane between Third and Illinois Streets during events would affect bicycle lane operations in this section as media trucks typically leave the event center between 11:30 p.m. and midnight (i.e., after most attendees would have departed the event center). As noted above, on this segment of 16th Street between Third and Illinois Streets, the 6-foot wide bicycle lane would be located adjacent to the 8-foot wide curb parking lane. Media trucks would likely depart the staging area after most event attendees depart the event center.

Other Events. Bicycle conditions during other events at the project site would be similar to or better than described above for the Basketball Game scenario, which assessed the maximum attendance event, and which is also representative of conditions for sell-out evening concert events. TMP measures, such as street closures for events with more than 14,000 attendees, would not be required for many of the other events. For small events when charter buses are anticipated to bring attendees to the project site, charter bus loading/unloading would occur on the north curb of 16th Street between Illinois Street and Terry A. Francois Boulevard. On-street parking would be restricted in this segment, and bicyclists would travel within the parking lane, or would share the adjacent travel lane with vehicles. Bicycle travel in the project vicinity would be accommodated within the existing, planned, and proposed bicycle facilities. As for large events, during smaller events PCOs would be posted at nearby intersections to manage vehicle, bicycle, and pedestrian flows and reduce conflicts.

Overall, it is anticipated that the existing, planned, and proposed bicycle facilities would be well utilized, and it is not expected that the additional vehicle, bicycle or pedestrian trips associated with the proposed project would result in significant impacts on bicyclists. It is possible that

increased congestion associated with the proposed project, primarily during post-event conditions, could result in an increased potential for vehicular-bicycle and pedestrian-bicycle conflicts, however, it would not increase to a level that would adversely affect bicycle facilities in the area. At some locations, bicycle access may become more difficult due to heavier vehicle and pedestrian volumes, however bicycle access would be maintained. Implementation of proposed TMP measures during events would facilitate bicycle access and minimize conflicts. Thus, for these reasons, the impacts of the proposed project on bicycle facilities and circulation would be *less than significant*.

Mitigation: Not required

Comparison of Impact TR-7 to Mission Bay FSEIR Impact Analysis

The Mission Bay FSEIR did not identify any significant impacts related to bicycles within Mission Bay, and did not require any mitigation measures. Consequently, no new or different mitigation measures or alternatives to reduce project impacts related to bicycle conditions are identified or required with respect to the currently proposed project. On the basis of the facts discussed above, the project would result in no new or substantially more severe significant effects than those identified in the Mission Bay FSEIR related to bicycle impacts.

Loading Impacts

Impact TR-8: The proposed project's loading demand would be accommodated within the proposed on-site loading facilities or proposed adjacent on-street commercial loading spaces, and would not create potentially hazardous conditions or significant delays for traffic, transit, bicyclists, or pedestrians under Existing plus Project conditions. (Less than Significant)

Truck Freight and Service Vehicle Loading/Unloading

Proposed project truck and service vehicle loading impacts would be the same for conditions without and with an overlapping SF Giants evening game at AT&T Park.

Loading Supply. The proposed project includes 13 truck loading spaces with a loading area in the first below-grade level of the garage, separate from the vehicle parking garage, as shown on **Figure 3-7** in Chapter 3. The loading area would be accessed via a dedicated 24-foot wide driveway on 16th Street at Illinois Street (adjacent to the driveway into the vehicle parking garage). Four loading spaces would serve the two commercial towers (i.e., two loading spaces per tower), two loading spaces would serve the retail and restaurant uses, and seven loading spaces would serve the event center. The loading spaces would be 10 feet wide by 35 feet in length and with a 14-foot vertical clearance, with the exception of five of the seven event center loading spaces that would be 75 feet in length to accommodate semi-trailer trucks. The number and size of the loading spaces for the event center was based on experience at the existing arena in Oakland. Separate trash compactor areas for the various components of the project would be provided within the loading area.

Trucks, including semi-trailer trucks, would access the driveway to the below-grade loading area from eastbound or westbound 16th Street, or from northbound Illinois Street. A truck turnaround area would be provided at the northern portion of the below-grade loading area to allow for trucks to maneuver and back into the event center loading spaces, as well as to turn around to readily exit the project site head first onto 16th Street.

In addition to the on-site below-grade loading area, 17 on-street commercial loading spaces would be provided on South Street (eight spaces), on Terry A. Francois Boulevard south of South Street (eight spaces), and on 16th Street (one space) to serve the office uses and the restaurant and retail uses at the Market Hall. Overall, the proposed project would have 30 commercial loading spaces serving the project uses.

Loading Demand. As indicated in **Table 5.2-27**, the proposed project would generate about 400 truck trips per day, with the majority of the trips related to the office and restaurant uses. The office, retail, and restaurant uses would generate a loading space demand of 17 loading spaces during an average hour, and 21 loading spaces during the peak hour. The peak loading space demand would be met by the six on-site loading spaces dedicated to office, retail and restaurant uses, and the 17 on-street commercial loading spaces on South Street (eight spaces), on Terry A. Francois Boulevard (eight spaces), and on 16th Street (one space).

During events, the event center would generate an additional demand for seven loading spaces during the average and peak hour of loading activities. As noted in **Table 5.2-27**, this loading demand is for non-Golden State Warriors events, which would generate a greater number of delivery and service vehicle trips. Based on information obtained from the project sponsor for the existing Oracle arena, truck deliveries would occur a day before a game, and would be distributed over the entire day. Television trucks would arrive in advance of events to allow for appropriate set-up and to avoid peak travel periods. Television trucks staging would be located on the north curb (i.e., within the parking lane) of 16th Street adjacent to the project side, between Third Street and the driveway into the project garage. The staging area would be used for loading/unloading on the days leading to a game.

The loading demand would be accommodated within the seven loading spaces dedicated to the event center. The majority of these delivery trucks would make their deliveries in advance of events to avoid peak travel periods. Vendors would be notified by the arena management of appropriate delivery times.

As noted above, separate trash, recycling and compost areas for the various components (e.g., South Street Tower, 16th Street Tower, event center, Market Hall) of the project would be provided within the below-grade loading area in the vicinity of the loading spaces. Trash associated with all land uses, including the ground floor retail and restaurant uses, would be accommodated within these on-site trash area, and Recology collection trucks would access the on-site loading area for pickup (i.e., no trash bins would be taken to the edge of the sidewalk).

During the daytime hours when most loading activities occur, pedestrian and bicycle volumes on 16th Street adjacent to the project site are expected to be relatively low, except around midday,

and truck access into and out of the below-grade loading area is not anticipated to substantially conflict with pedestrians on the sidewalk or bicyclists within the bicycle lane on the north side of 16th Street between Third Street and Terry A. Francois Boulevard. No Muni bus routes would operate on 16th Street between Third Street and Terry A. Francois Boulevard, and therefore truck access into and out of the project site would not affect Muni operations. The majority of event-related loading would occur in advance of events, and therefore would not overlap with pre-event or post-event vehicle, pedestrians, bicycle, and Muni Special Event Shuttles circulation on 16th Street.

The proposed loading facilities would be sufficient to accommodate projected demand, and would not result in significant delays affecting traffic, transit, bicycles, or pedestrians, and therefore, the impacts related to loading would be *less than significant*.

Passenger Loading/Unloading

Proposed accommodation for passenger loading/unloading for conditions without and with an event at the project site are included in the proposed project's TMP. **Figure 5.2-9** presents the curb regulations for No Event conditions. In general, the curb adjacent to the project site on South Street, Terry A. Francois Boulevard, and 16th Street would have metered on-street parking, with areas reserved for the Mission Bay TMA shuttle stop, taxi zones, commercial loading/unloading spaces, and a paratransit stop. On days with events at the project site, on-street parking would be restricted at certain locations prior the start of the event to accommodate the Muni Special Event Transit Service Plan and passenger loading/unloading demand.

No Event. Under the No Event scenario, passenger loading/unloading would be accommodated within a taxi zone approximately 100 feet in length on South Street east of the parking garage entrance/exit. The Mission Bay TMA shuttle stop (about 60 feet in length) would also be located on South Street east of Third Street.

Convention and Small Events. During conventions and small events, passenger loading/unloading would be accommodated in multiple locations: taxi zones would be provided adjacent to the project site on South Street between Bridgeview Way and Terry A. Francois Boulevard (about 300 feet in length) and on Terry A. Francois Boulevard south of South Street (about 200 feet in length). On Terry A. Francois Boulevard, a dedicated passenger loading/unloading zone about 140 feet in length would be provided midblock for private auto drop-off and pick-up. The designated Moscone Center event shuttle bus loading/unloading, and charter buses loading/unloading for other events, would be on the north curb of 16th Street between Illinois Street and Terry A. Francois Boulevard (about 600 feet in length). About six buses could be accommodated within this zone at any one time. The Moscone Center event shuttle buses operate on a "bump system" in which a waiting bus leaves the curb when another bus from the same route arrives. Six event shuttle bus routes currently serve the Moscone Center. It is not anticipated that more than the maximum level of event shuttle buses for the Moscone Center would be required to accommodate attendees arriving by event shuttle buses. In the event that additional curb is needed for event shuttle bus or charter bus loading/unloading activities, additional curb frontage on 16th Street between Third and Illinois Streets could be made available by temporarily restricting on-street parking.

Basketball Game and Large Events. During large events, the roadway and curb management controls depicted on **Figure 5.2-12** for pre-event condition, and **Figure 5.2-13** for post-event conditions would be implemented. In particular, the following temporary curb regulations would be implemented about two hours prior to the event to accommodate the projected passenger loading/unloading demand:

- Two taxi zones would be provided: on South Street between Bridgeview Way and Terry A. Francois Boulevard (300 feet), and on Terry A. Francois Boulevard south of South Street (200 feet).
- Passenger loading/unloading zone approximately 340 feet in length would be provided on Terry A. Francois Boulevard for passenger loading/unloading. The proposed permanent paratransit stop (75 feet in length) on Terry A. Francois Boulevard would not be affected during events.
- Prior to an event, the Muni Special Event Transbay Terminal/Caltrain/Ferry Building Shuttle stop would be on South Street adjacent to the project site, west of the proposed Mission Bay TMA shuttle stop, while the shuttle stop for the Muni Special Event 16th Street BART and Van Ness Avenue shuttle routes would be on the south side of 16th Street (i.e., across the street from the project site) between Third and Illinois Streets.
- A pedicab passenger loading/unloading area would be provided on the east side of Terry A. Francois Boulevard adjacent to the planned two-way cycletrack and immediately south of 16th Street.

Before the end of an event, temporary travel lane closures would be implemented on northbound Third Street between Mariposa Street and Mission Bay Boulevard South, on South Street between Third Street and the entry to the 450 South Street parking garage, on 16th Street between Third Street and Terry A. Francois Boulevard, and on northbound Illinois Street between Mariposa and 16th Streets. The temporary lane closures are anticipated to be in place for approximately 30 to 45 minutes after the end of the event, or until vehicular traffic dissipates and most event attendees taking transit have boarded.

The proposed traffic lane closures would facilitate passenger transit boardings on Third Street (Muni Metro and Muni bus shuttles), South Street (TMA bus shuttles), Illinois Street (Muni bus shuttles), and 16th Street (Muni bus shuttles) in a safe and expeditious manner, avoiding conflicts with vehicles.

Thus, passenger loading/unloading demand would be distributed to Third Street (including the two northbound traffic lanes at the end of an event), South Street, Terry A. Francois Boulevard, and 16th Street, which would reduce potential for crowding at the adjacent sidewalks and walkways. As noted in **Impact TR-6**, the proposed project would include setbacks along all four sides of the project site that would further reduce the potential for pedestrian crowding. Therefore, impacts on passenger loading/unloading would be less than significant.

Summary of Impact TR-8, Loading Impacts

Overall, the proposed project would implement numerous improvements that would facilitate freight/service vehicle and pedestrian loading/unloading conditions and promote safety in the

project vicinity. The number of proposed on-site loading spaces would be adequate to meet the expected freight/service vehicle demand associated with the project uses, and would not result in significant delays affecting traffic, transit, bicycles, or pedestrians. The proposed project TMP for event conditions would manage pre- and post-event pedestrian loading/unloading operations along Third, South, 16th and Illinois Streets, as well as along Terry A. Francois Boulevard. As a result, the proposed project's impact related to freight/service vehicles and passenger loading/unloading operations would be *less than significant*.

Mitigation: Not required

While the proposed project's impacts related to freight/service vehicles and passenger loading/unloading operations would be less than significant, **Improvement Measure I-TR-8, Truck and Service Vehicle Loading Operations Plan** is provided for consideration by City decision makers to further reduce the proposed project's less-than-significant impacts related to potential conflicts between proposed project-generated loading/unloading activities and pedestrians, transit, bicyclists, and autos.

Improvement Measure I-TR-8: Truck and Service Vehicle Loading Operations Plan

As an improvement measure to reduce potential conflicts between driveway operations, including loading activities, and pedestrians, bicycles and vehicles on South Street, Terry A. Francois Boulevard, and 16th Street, the project sponsor shall prepare a Loading Operations Plan, and submit the plan for review and approval by the OCII, or its designee, and the SFMTA. As appropriate, the Loading Operations Plan shall be periodically reviewed by the sponsor, the OCII or its designee, and SFMTA and revised if feasible to more appropriately respond to changes in street or circulation conditions.

The Loading Operations Plan shall include a set of guideline related to the operation of the on-site and on-street loading facilities, as well as large truck curbside access guidelines; it shall also specify driveway attendant responsibilities to minimize truck queuing and/or substantial conflicts between project-generated loading/unloading activities and pedestrians, bicyclists, transit and autos. Elements of the Loading Operations Plan shall include:

- Commercial loading activities within on-street commercial loading spaces on South Street, Terry A. Francois Boulevard, and 16th Street should comply with all posted time limits and all other posted restrictions.
- Double parking or any form of illegal parking or truck loading/unloading should not be permitted on any streets adjacent to the project site, and particularly on 16th Street which would include a bicycle lane. Working with the SFMTA Parking Control Officers, building management should ensure that no truck loading/unloading activities occur within the bicycle lanes on 16th Street.
- All move-in and move-out activities for commercial office uses should be coordinated by building management, and, in the event that moving trucks cannot be accommodated within the below-grade loading area, building management should obtain a reserved curbside permit from the SFMTA in advance of move-in or move-out activities.

Implementation of **Improvement Measure I-TR-8: Truck and Service Vehicle Loading Operations Plan** would reduce the potential for conflicts between proposed project-generated loading/unloading activities and pedestrians, bicyclists, transit and autos, and would not result in any secondary transportation-related impacts.

Comparison of Impact TR-8 to Mission Bay FSEIR Impact Analysis

The Mission Bay FSEIR did not identify any significant impacts related to loading within Mission Bay, and did not require any mitigation measures. Because the project was determined to have a less-than-significant impact related to freight/service vehicles or passenger loading impacts, no new or different mitigation measures or alternatives to reduce project impacts related to loading are identified or required with respect to the currently proposed project. On the basis of the facts discussed above, the project would result in no new or substantially more severe significant effects than those identified in the Mission Bay FSEIR.

Impacts on UCSF Helipad Operations

Impact TR-9a to TR-9d: The proposed project could result in significant impacts on UCSF Helipad operations under Existing plus Project conditions. (Less than Significant with Mitigation)

See Section 5.2.6, Project Impacts on UCSF Helipad Operations regarding impacts of the proposed project on the UCSF helipad operations.

Emergency Vehicle Access Impacts

Impact TR-10: The proposed project would not result in significant impacts on emergency vehicle access under Existing plus Project conditions without a SF Giants game at AT&T Park. (Less than Significant)

No Event

Emergency vehicle access to the project site would remain similar to existing conditions. With implementation of the proposed project, 16th Street would be extended from Illinois Street to Terry A. Francois Boulevard (generally two westbound and two eastbound lanes), and emergency vehicle access from the west and south to the project site would be enhanced. In addition, as part of the Mission Bay Infrastructure Plan, Terry A. Francois Boulevard will be relocated to the west, to be directly adjacent to the project (two northbound and two southbound travel lanes, a two-way cycle track on the east side of the street, and on-street parking on both sides of the street), which would also enhance emergency vehicle access to the site. Emergency vehicles would continue to access the site from Third Street from north and south of the site, including from the new fire station at Mission Rock Street via either Third Street or Terry A. Francois Boulevard, as well as from the west via 16th Street. With implementation of the

22 Fillmore Transit Priority Project, one of the two mixed-flow lanes in each direction on 16th Street between Seventh and Third Streets will be converted to a curbside transit-only lane, and emergency vehicles are permitted to use transit-only lanes, if needed.

Development of the project site, and associated increases in vehicles, pedestrians, and bicycle travel would not substantially affect emergency vehicle access to other buildings and areas within Mission Bay, including the UCSF campus. The new UCSF Medical Center Phase 1 opened in February 2015, and contains an emergency room and urgent care center for the UCSF Children's Hospital at the southern end of the hospital complex, with access from Fourth Street, north of Mariposa Street. Access to the Fourth Street urgent care center is directly from Mariposa Street, or from Owens Street via the Southern Connector Road (an internal road within the Medical Center campus site that provides access between the south Medical Center entrance and the parking facilities). Owens Street can be accessed from 16th Street, the I-280 northbound off-ramp, and Mariposa Street. As part of Phase 1 of the UCSF Medical Center, a number of roadway improvements were implemented, that will enhance access to UCSF and the critical hospital services, including extending Owens Street between Mariposa and 16th Streets, widening of Mariposa Street to five lanes, installation of a new signal at the Mariposa Street and Owens Street intersection, an additional lane on the I-280 northbound off-ramp at Mariposa Street, and a new signal at Mariposa Street at the I-280 northbound off-ramp. On Mariposa Street, if necessary, emergency vehicles and other persons accessing the emergency room and urgent care center in their personal vehicles during an emergency would be able to travel within the center left-turn lane to access the intersection of Fourth/Mariposa. As described in **Impact TR-2**, under existing plus project conditions for the No Event scenario, the majority of the study intersections in the vicinity of the project site and the UCSF Medical Center Phase 1 are projected to operate at the same LOS as under existing conditions, and would operate at LOS D or better (the exception would be the intersection of Seventh/Mississippi/16th which would change from LOS E to LOS F conditions). Therefore, for these reasons, the proposed project would not result in a substantial increases in vehicle delay for emergency vehicles or other persons accessing the emergency room and urgent care center in their personal vehicles.

With Event

Pre-event and post-event vehicular traffic destined to the on-site garage containing 950 parking spaces would be managed to minimize impacts on UCSF facilities. The TMP for the event center includes strategies to provide attendees with suggested driving routes to and from the garage. Examples of strategies include website, emails, and smart phone applications. For example, during pre-game conditions, attendees driving from the south of the project site exiting at the I-280 northbound off-ramp would be directed to use Mariposa Street, rather than Owens Street and 16th Street, to reduce congestion during UCSF's shift changes. For post-event, attendees destined to the south would be encouraged to use Mariposa, Illinois or Third Streets, and not 16th or Owens Streets, to access the I-280 southbound on-ramp. As specified in the TMP, the pre-event and post-event recommended routes would be subject to revision based on monitoring during the first year of operation.

Event attendees driving to the site would park within the on-site parking garage containing 950 spaces, as well as in multiple parking facilities in the vicinity of the project site. The majority of the parking spaces available to event attendees would be located to the north of the project site, with the majority located in Lot A. However, it is anticipated that event attendees may also park within UCSF facilities to the west and southwest of the project site. Thus, travel to and from the event center would be dispersed over a broader area, reducing the effect of traffic associated with an event, particularly following an event.

During pre-event and post-event conditions, up to 17 PCOs would be stationed at up to 17 locations to direct and facilitate vehicular and pedestrian travel. Locations where PCOs would be stationed in the vicinity of the UCSF Children's Hospital emergency room and urgent care facility include the intersections of Third/16th, Mariposa/I-280 northbound off-ramp/Owens (pre-game only), Mariposa/Third, Mariposa/Illinois, and 16th/Owens (post-game only). No roadway closures are proposed for pre-event conditions for any events. For events that necessitate closure of the northbound travel lanes of Third Street between 16th and South Streets (generally events with 14,000 or more attendees) for post-game conditions for a period of one to two hours depending on the size of the event, emergency vehicles traveling on Third Street southbound would not be affected, and if necessary, emergency vehicles traveling northbound on Third Street would be permitted to continue through the closed segment between 16th and South Streets, as PCOs would be able to remove the temporary barriers. If necessary, emergency vehicles would also be able to travel on Muni's light rail right-of-way in the median or northbound within the southbound lanes on Third Street. The Event Center Transportation Coordinator would provide emergency service providers, including the fire stations and UCSF facilities, with a list of dates and times during which temporary closure of Third Street would be required following an event. Furthermore, all drivers must comply with the California Vehicle Code § 21806, which requires that drivers yield right-of-way to authorized emergency vehicles, drive to the right road curb or edge, stop, and remain stopped until the emergency vehicle has passed.

In addition, as described above, with implementation of the planned 22 Fillmore Transit Priority Project, transit-only lanes will be implemented adjacent to the curb on 16th Street west of Third Street, and emergency vehicles will be permitted use of the transit-only lanes. The transit-only lanes on 16th Street would have fewer vehicles in them than the adjacent mixed-flow lanes, and would not be subject to any turn restrictions. Persons accessing the UCSF Medical Center emergency room and urgent care center in their personal vehicles during an emergency would, if necessary, also be able to utilize the transit-only lanes to bypass congested segments on 16th Street. As described above, on Mariposa Street, emergency vehicles and other persons accessing the emergency room and urgent care center in their personal vehicles during an emergency would be able to travel within the center left-turn lane to access the intersection of Fourth/Mariposa. For smaller events, PCOs would be stationed at key intersections, monitoring traffic conditions, and could be reassigned to respond to conflicts between event center traffic and UCSF hospital access. In addition, when PCOs are deployed for an event, they would have the capability to radio ahead to other PCOs down the street regarding the approaching vehicle requiring emergency access.

Also see **Impact TR-2** regarding traffic conditions at study intersections for pre-game and post-game conditions.

Summary of Impact TR-10, Emergency Vehicle Access Impacts

Roadway improvements adjacent to the project site would facilitate emergency vehicle access to the site. Before and after events emergency vehicle access to the project site and nearby hospital uses would be maintained, as would emergency access for persons traveling to the emergency room and urgent care center in their personal vehicles. For these reasons, the proposed project would not inhibit emergency vehicles access to the project site and nearby vicinity; therefore, the proposed project impact on emergency vehicle access would be *less than significant*.

Mitigation: Not required

While the proposed project's impact on emergency vehicle access would be less than significant, the following improvement measures are provided for consideration by City decision makers to further reduce the proposed project's less-than-significant impacts related to emergency vehicle access.

Improvement Measure I-TR-10a: UCSF Emergency Vehicle Access and Garage Signage Plan

As an improvement measure to enhance access for emergency vehicles and other visitors to the UCSF Children's Hospital emergency room and parking facilities at the UCSF Medical Center, the project sponsor shall work with UCSF to develop and implement a UCSF emergency vehicle access and garage signage plan for I-280 and Mariposa, Owens, and 16th Streets to reflect desirable access routes for UCSF and event center access.

Improvement Measure I-TR-10b: Mariposa Street Restriping Study

As an improvement measure to enhance access to the UCSF Medical Center Children's Hospital, the project sponsor shall retain a qualified transportation professional approved by SMTA to conduct a traffic engineering study to evaluate potential changes to the travel lane configuration and related signage on Mariposa Street between the I-280 ramps and Fourth Street. The study, to be conducted in coordination with UCSF and SFMTA, would determine if the eastbound left turn lane into Fourth Street/UCSF passenger loading/unloading and emergency vehicle entrance to the UCSF Children's Hospital could be extended west from its existing length of about 150 feet to provide for additional queuing area.

Implementation of **Improvement Measure I-TR-10a: UCSF Emergency Vehicle Access and Garage Signage Plan** and **Improvement Measure I-TR-10b: Mariposa Street Restriping** would provide advance direction for drivers and would reduce the potential for conflicts between vehicles destined to the emergency room and vehicles traveling eastbound on Mariposa Street, and would not result in any secondary transportation-related impacts.

Comparison of Impact TR-10 to Mission Bay FSEIR Impact Analysis

The Mission Bay FSEIR did not address emergency vehicle access as a distinct transportation topic. However, as discussed in the Initial Study, the Mission Bay FSEIR Community Services and Utilities impacts section determined that the Mission Bay Plan would potentially significantly increase demand for fire protection services in the Mission Bay Plan area, and that a new fire station and additional fire department personnel and equipment, including a Hazardous Materials Unit, would be required in the Mission Bay South Plan area at build-out in order to facilitate access in the event of a major emergency, and maintain adequate levels of service. The Mission Bay FSEIR also indicated the Mission Bay Plan would increase demand for a new police station and additional police protection personnel. The Mission Bay Plan included the provision of land at the corner of Third Street and Mission Rock Street in the Mission Bay Plan area for a new police/fire station. The Mission Bay FSEIR determined that with implementation of Mitigation Measures M.6a (Construct New Fire Station) and M.6b (Provide New Engine Company) to ensure funding for additional fire protection personnel, equipment and fire station, impacts to fire protection services would be less than significant. Construction of the new Public Safety Building at Third and Mission Rock Streets is complete and the facility began operations in early 2015, which satisfies the requirements of these mitigation measures.

Also please refer to Initial Study Impact HZ-3 regarding the project's impact on the City's Emergency Response Plan in an event of a catastrophic event (e.g., and earthquake), and Section 5.12, Public Services, in this SEIR regarding potential impacts on law enforcement and fire protection services.

Conditions With a SF Giants Evening Game at AT&T Park

Impacts TR-11 through TR-17 present the impact evaluation for traffic, transit, pedestrian, bicycle, and emergency vehicle access for conditions with an event at the proposed event center overlapping with a SF Giants evening game at AT&T Park. At the time of preparation of the Mission Bay FSEIR, the San Francisco Giants ballpark was under construction, and therefore, the Mission Bay FSEIR did not include a separate analysis of conditions with baseball games. Instead, the Mission Bay FSEIR summarized the transportation impact analysis as contained within the San Francisco Giants Ballpark at China Basin EIR. The Mission Bay FSEIR indicated that the Ballpark EIR determined that the mitigation measures to address significant transportation impacts before and after games would be defined as part of a Ballpark Transportation Management Plan prepared by the Giants in coordination with a Ballpark Transportation Coordinating Committee. Therefore, this group of impacts does not include a comparison of impact conclusions with the Mission Bay FSEIR.

The proposed project would result in an increase in the number of large events occurring in the Mission Bay area, and some of these events would overlap with the SF Giants baseball games at AT&T Park that occur generally between April and the end of September. This would result in about 32 days per year—and up to about 40 days under rare circumstances—with intersection LOS as described below for weekday and Saturday conditions (the SF Giants season has

46 weekday and 6 weekend evening games scheduled for the 2015 season). Based on league schedules and concert scheduling as described above and in Chapter 3, Project Description, Table 3-3, it is estimated that in a typical year, on average, about nine *large* events at the event center (i.e., two basketball games and seven concerts with average attendance of 12,500 or more attendees) could overlap with a SF Giants evening game at AT&T Park. If either or both teams make it to their respective championships, the number of large events overlapping could moderately increase; however, it is unlikely that this scenario would occur on a regular basis. See Section 5.2.5.3 above for discussion of potential overlap of proposed project events with a SF Giants evening game.

Traffic Impacts

Impact TR-11: The proposed project would result in significant traffic impacts at multiple intersections that would operate at LOS E or LOS F under Existing plus Project conditions with an overlapping SF Giants evening game at AT&T Park. (Significant and Unavoidable with Mitigation)

Because a portion of the events at the proposed event center would overlap with SF Giants evening games, the traffic impact analysis at the study intersections was also conducted for the Basketball Game scenario for conditions with an overlapping SF Giants evening game at AT&T Park for the four analysis hours. The analysis represents conditions for high attendance events at both the proposed event center and at AT&T Park, which are estimated to occur, an average of nine times a year. For the remaining 23 days during which events at both facilities could overlap, the average attendance levels for the event center events is anticipated to be less than 12,500 attendees, and therefore, the number of vehicle trips generated by the smaller event would be less, as would the impact on intersection operating conditions. **Table 5.2-47** and **Figure 5.2-19** present the weekday p.m. and Saturday evening intersection LOS conditions, while **Table 5.2-48** and **Figure 5.2-20** present the weekday evening and late evening peak hours. As indicated in the tables and figures, a number of intersections currently are controlled by PCOs pre-game and post-game, and it is assumed that these intersections would continue to be PCO controlled during SF Giants games. These would be in addition to the PCOs that are currently deployed during SF Giants games. See Section 5.2.3.8 for a description of the existing transportation management measures that are in force during SF Giants games. Due to the restricted access on the Third and Fourth Street bridges, no project-generated vehicles were assumed to travel northbound on the Third and Fourth Street bridges during overlapping events. Project-generated vehicles would instead be directed west and south to avoid roadway closures and congestion on Third Street near Lot A and AT&T Park. During overlapping events, the TMP indicates that a PCO would be stationed at the intersection of Fourth/16th to discourage use of this street except for local access.

**TABLE 5.2-47
 INTERSECTION LEVEL OF SERVICE – EXISTING PLUS PROJECT CONDITIONS –
 WITH A SF GIANTS EVENING GAME – WEEKDAY PM AND SATURDAY EVENING PEAK HOURS**

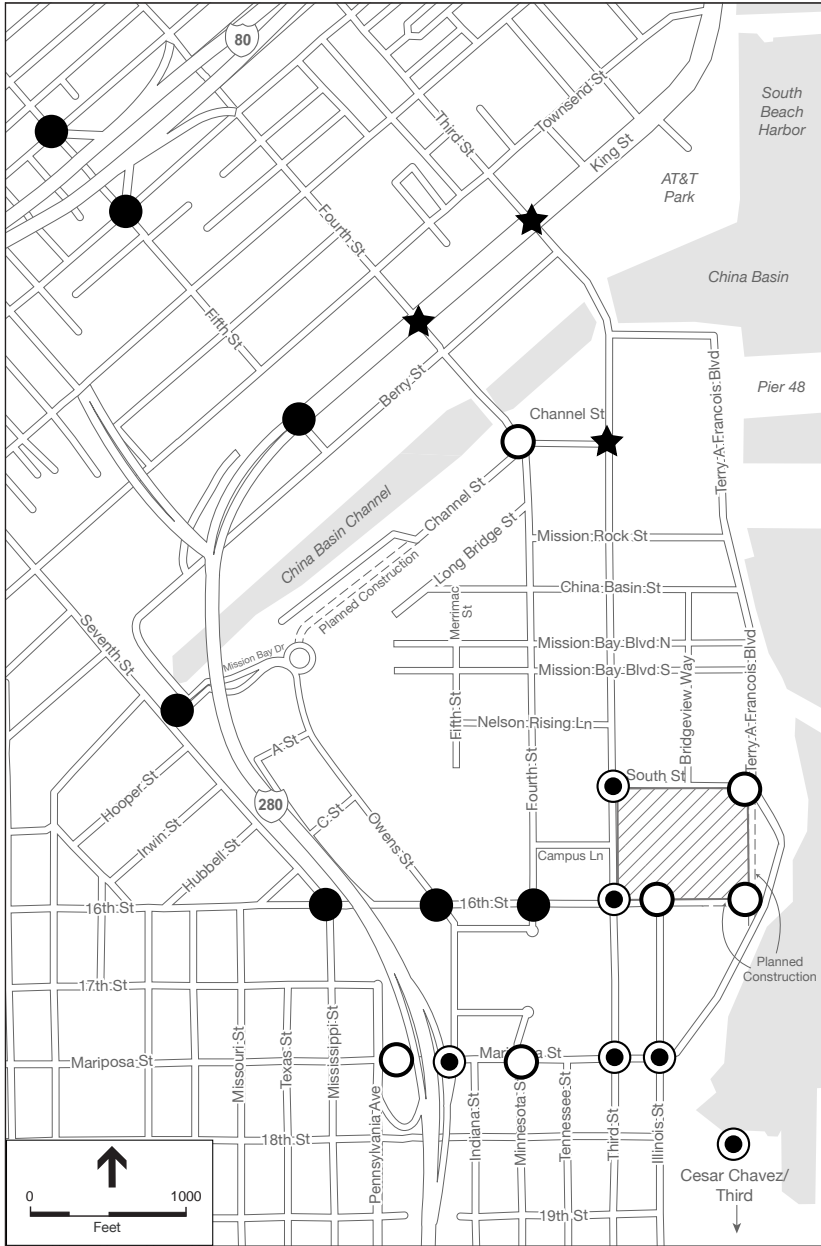
#	Intersection Location		Weekday PM				Saturday Evening			
			Existing		Existing plus Project – Basketball Game		Existing		Existing plus Project – Basketball Game	
			Delay ^a	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	King St	Third Street	PCO controlled		PCO controlled		PCO controlled		PCO controlled	
2	King St	Fourth Street	PCO controlled		PCO controlled		PCO controlled		PCO controlled	
3	King St/Fifth St	I-280 ramps	60.7	E	60.7	E	41.1	D	54.3	D
4	Fifth St/Harrison	I-80 WB off-ramp	62.4	E	66.7	E	33.1	C	> 80	F
5	Fifth St/Bryant St	I-80 EB on-ramp	>80	F	>80	F	51.7	D	50.0	D
6	Third Street	Channel Street ^f	PCO controlled		PCO controlled		PCO controlled		PCO controlled	
7	Fourth Street	Channel Street ^f	11.5	B	11.4	B	< 10	A	10.3	B
8	Seventh Street	Mission Bay Dr	26.5	C	56.9	E	15.0	B	> 80	F
9	TA Francois Blvd	South Street ^{c,f}	11.4 (eb)	B	< 10	A	10.4 (eb)	B	< 10	A
10	Third Street	South Street ^f	25.1	C	27.3	C	< 10	A	22.5	C
11	TA Francois Blvd	16th Street ^f	--	--	16.9	B	--	--	18.3	B
12	Illinois Street	16th Street ^{c,f}	14.1 (nb)	B	13.8 (nb)	B	< 10 (nb)	A	12.5 (nb)	B
13	Third Street	16th Street ^{e,f}	34.4	D	39.3	D	12.8	B	24.7	C
14	Fourth Street	16th Street ^e	28.7	C	70.9	E	14.0	B	18.0	B
15	Owens Street	16th Street ^e	49.2	D	71.6	E	10.1	B	22.2	C
16	7th/Mississippi	16th Street ^e	> 80	F	> 80	F	28.0	C	69.2	E
17	Illinois Street	Mariposa Street ^{c,f}	27.6 (eb)	D	26.8	C	< 10 (eb)	A	51.7	D
18	Third Street	Mariposa Street ^f	35.4	C	44.9	D	26.9	C	34.6	C
19	Fourth Street	Mariposa Street ^f	14.4	B	16.0	B	< 10	A	< 10	A
20	Mariposa Street	I-280 NB off-ramp ^f	21.6	C	22.1	C	16.2	B	19.7	B
21	Mariposa Street	I-280 SB on-ramp ^d	< 10	A	10.9	B	10.5	B	< 10	A
22	Third Street	Cesar Chavez St	44.6	D	47.6	D	32.3	C	31.9	C

NOTES:

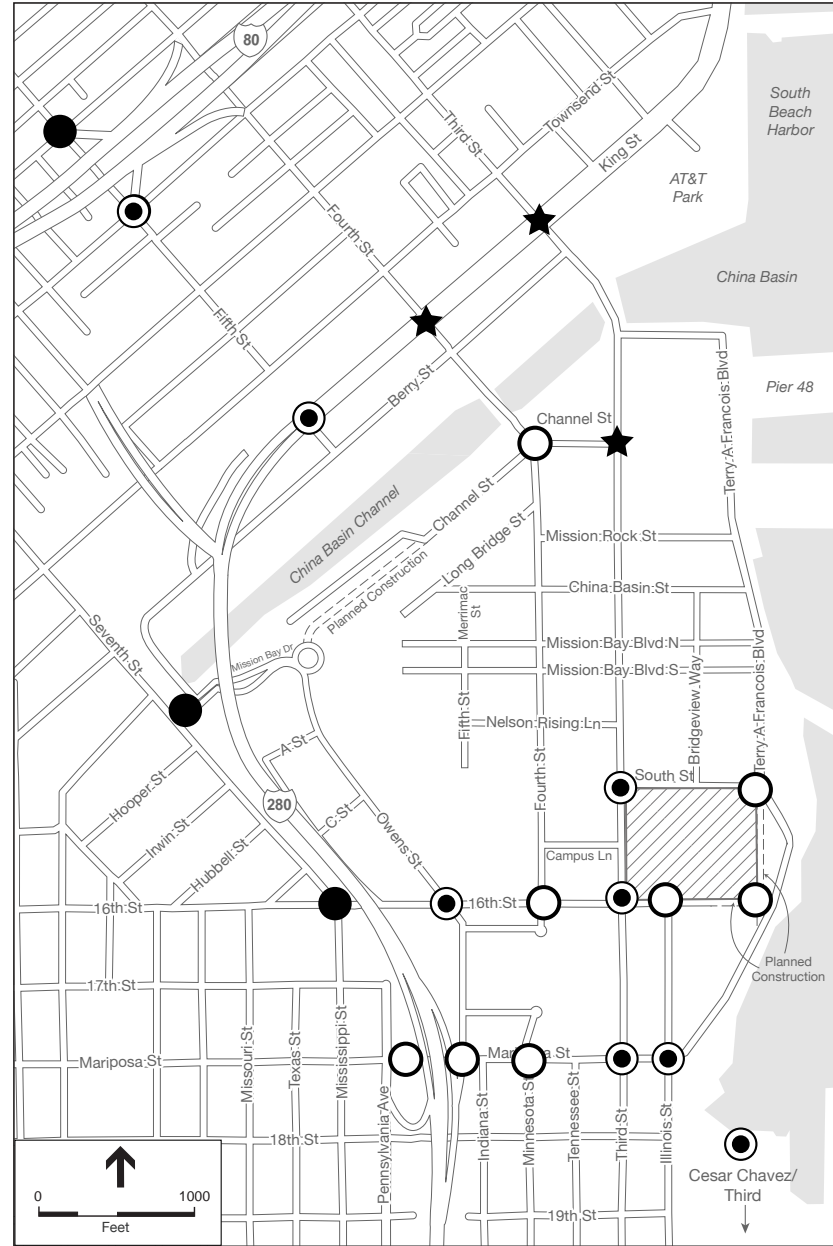
- ^a Delay presented in seconds per vehicle. For unsignalized intersections, delay and LOS presented for worst approach. Worst approach indicated in ().
- ^b Intersections operating at LOS E or LOS F conditions highlighted in **bold**. Significant project impacts shaded.
- ^c All-way stop-controlled intersection. The intersections of Terry A. Francois/South and Illinois/Mariposa would be signalized as part of the proposed project.
- ^d The traffic signal at the intersection of Mariposa/I-280 southbound on-ramp is part of the roadway improvements on Mariposa Street between the I-280 northbound off-ramp and I-280 southbound on-ramp and the extension of Owens Street between 16th and Mariposa Streets, and is currently planned to be operational by fall 2015.
- ^e Includes implementation of the 22 Fillmore Transit Priority Project, which includes converting one mixed-flow lane in each direction to a side-running transit-only lane.
- ^f Under the Basketball Game scenario, a PCO would be stationed at this study intersection during the Saturday pre-event period, and, as necessary, would manually direct vehicles, pedestrians, transit, and bicyclists through the intersection. LOS reflects conditions without PCO intervention.

OURCE: Advant Consulting/Fehr & Peers/LCW Consulting, 2015

WEEKDAY PM PEAK HOUR



SATURDAY EVENING PEAK HOUR



- Project Site Boundary
- LOS A-B
- LOS C-D
- LOS E-F
- PCO Controlled

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 5.2-19
Existing Plus Project Intersection LOS-With a SF Giants Evening Game -
Weekday PM and Saturday Evening Peak Hour - Basketball Game Scenarios

**TABLE 5.2-48
 INTERSECTION LEVEL OF SERVICE – EXISTING PLUS PROJECT CONDITIONS –
 WITH A SF GIANTS EVENING GAME – WEEKDAY EVENING AND LATE EVENING PEAK HOURS**

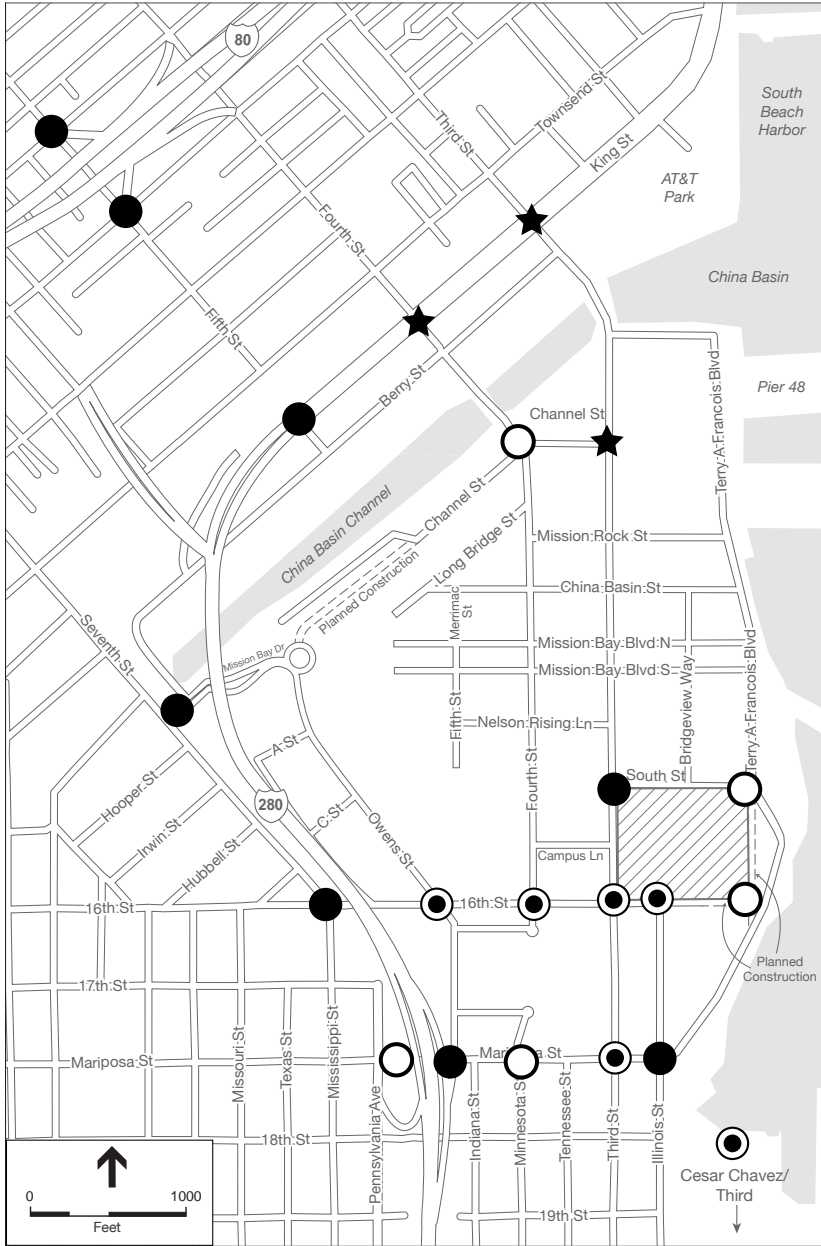
#	Intersection Location		Evening				Late Evening			
			Existing		Existing plus Project – Basketball Game		Existing		Existing plus Project – Basketball Game	
			Delay ^a	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	King St	Third Street	PCO controlled		PCO controlled		PCO controlled		PCO controlled	
2	King St	Fourth Street	PCO controlled		PCO controlled		PCO controlled		PCO controlled	
3	King St/Fifth St	I-280 ramps	77.1	E	>80	F	>80	F	> 80	F
4	Fifth St/Harrison	I-80 WB off-ramp	47.3	D	>80	F	22.2	C	22.2	C
5	Fifth St/Bryant St	I-80 EB on-ramp	>80	F	>80	F	24.9	C	> 80	F
6	Third Street	Channel Street ^f	PCO controlled		PCO controlled		PCO controlled		PCO controlled	
7	Fourth Street	Channel Street ^f	< 10	A	11.5	B	PCO controlled		PCO controlled	
8	Seventh Street	Mission Bay Dr	21.2	C	>80	F	12.5	B	> 80	F
9	TA Francois Blvd	South Street ^{c,f}	11.5 (eb)	B	< 10	A	12.9 (eb)	B	41.2	D
10	Third Street	South Street ^f	21.8	C	>80	F	11.5	B	< 10	A
11	TA Francois Blvd	16th Street ^f	--	--	19.4	B	--	--	22.2	C
12	Illinois Street	16th Street ^{c,f}	11.7 (nb)	B	19.7 (nb)	C	< 10 (nb)	A	< 10 (sb)	A
13	Third Street	16th Street ^{e,f}	27.0	C	28.9	C	18.3	B	33.5	C
14	Fourth Street	16th Street ^e	19.7	B	23.7	C	15.1	B	22.3	C
15	Owens Street	16th Street ^e	22.0	C	54.8	D	11.5	B	33.6	C
16	7th/Mississippi	16th Street ^e	75.6	E	>80	F	25.6	C	29.6	C
17	Illinois Street	Mariposa Street ^{c,f}	15.1 (eb)	B	75.6	E	PCO controlled		PCO controlled	
18	Third Street	Mariposa Street ^f	34.9	C	47.6	D	PCO controlled		PCO controlled	
19	Fourth Street	Mariposa Street ^f	12.0	B	17.2	B	< 10	A	< 10	A
20	Mariposa Street	I-280 NB off-ramp ^f	20.2	C	59.9	E	17.2	B	24.4	C
21	Mariposa Street	I-280 SB on-ramp ^d	< 10	A	< 10	A	13.2	B	24.6	C
22	Third Street	Cesar Chavez St	32.2	C	33.0	C	35.3	D	35.1	D

NOTES:

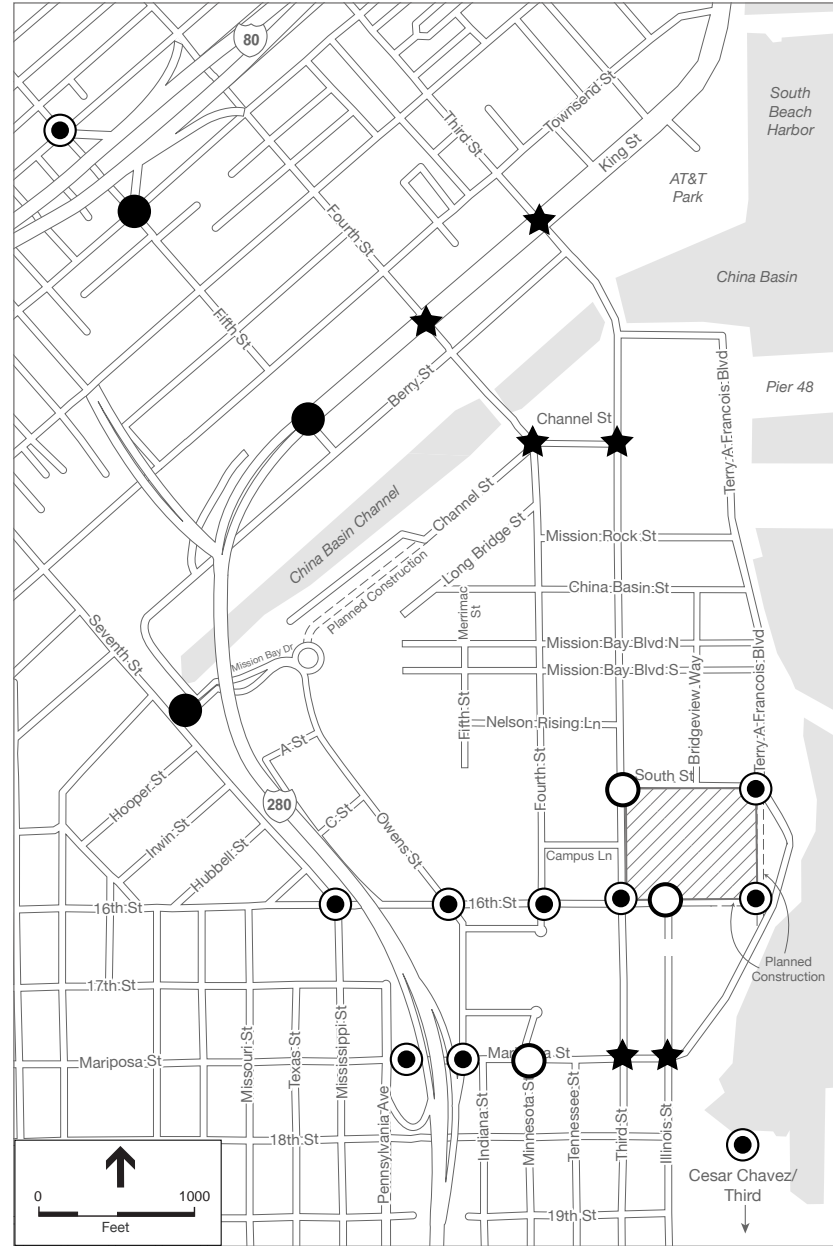
- ^a Delay presented in seconds per vehicle. For unsignalized intersections, delay and LOS presented for worst approach. Worst approach indicated in ().
- ^b Intersections operating at LOS E or LOS F conditions highlighted in **bold**. Significant project impacts shaded.
- ^c All-way stop-controlled intersection. The intersections of Terry A. Francois/South and Illinois/South signalized as part of the proposed project.
- ^d The traffic signal at the intersection of Mariposa/I-280 southbound on-ramp is part of the roadway improvements on Mariposa Street between the I-280 northbound off-ramp and I-280 southbound on-ramp and the extension of Owens Street between 16th and Mariposa Streets, and is currently planned to be operational by fall 2015.
- ^e Includes implementation of the 22 Fillmore Transit Priority Project, which includes converting one mixed-flow lane in each direction to a side-running transit-only lane.
- ^f Under the Basketball Game scenario, a PCO would be stationed at this study intersection during pre-event and/or post-event periods, and, as necessary, would manually direct vehicles, pedestrians, transit, and bicyclists through the intersection. LOS reflects conditions without PCO intervention.

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

WEEKDAY EVENING PEAK HOUR



WEEKDAY LATE EVENING PEAK HOUR



- Project Site Boundary
- LOS A-B
- LOS C-D
- LOS E-F
- PCO Controlled

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 5.2-20

Existing Plus Project Intersection LOS-With a SF Giants Evening Game -
Weekday Evening and Late Evening Peak Hour - Basketball Game Scenarios

During the weekday p.m. peak hour with an overlapping SF Giants evening game, the additional vehicle trips generated under the Basketball Game scenario would worsen the intersection LOS conditions at the intersections of Seventh/Mission Bay Drive, Fourth/16th, and Owens/16th from LOS D or better to LOS E conditions, and this would be considered a significant traffic impact. All other study intersections would continue to operate at LOS D or better, with the exception of the four intersections that currently operate at LOS E or LOS F during the weekday p.m. peak hour with a SF Giants evening game (i.e., Fifth/King/I-280, Fifth/Harrison/I-80 westbound off-ramp, Fifth/Bryant/I-80 eastbound on-ramp, and Seventh/Mississippi/16th). At the intersections of King/Fifth/I-280 and Fifth/Bryant/I-80 eastbound on-ramp, the Basketball Game scenario was determined not to contribute considerably to the existing LOS E or LOS F conditions, and project-related traffic impacts at these intersections would be considered less than significant. At the intersections of Fifth/Harrison/I-80 westbound off-ramp and Seventh/Mississippi/16th, the proposed project would contribute to the LOS E or LOS F conditions, and this would be considered a significant traffic impact.

During the weekday evening peak hour with overlapping evening events, the additional vehicle trips associated with the proposed project would worsen the intersection LOS at the intersections of King/Fifth/I-280 ramps, Fifth/Harrison/I-80 westbound off-ramp, and Seventh/Mission Bay Drive, Third/South, Seventh/Mississippi/16th, Mariposa/I-280 northbound off-ramp from LOS D or better to LOS E or LOS F conditions, or from LOS E to LOS F conditions, and this would be considered a significant traffic impact. All other study intersections would continue to operate at LOS D or better, with the exception of the intersection of Fifth/Bryant/I-80 eastbound on-ramp that currently operates at LOS F during the weekday evening peak hour with a SF Giants evening game; at this intersection, the Basketball Game scenario would not contribute considerably to the existing LOS F conditions, and project-related traffic impacts at this intersection would be considered less than significant.

During the weekday late evening peak hour with overlapping evening events, the additional project vehicle trips would worsen the intersection LOS at the intersections of Fifth/Bryant/I-80 eastbound on-ramp and Seventh/Mission Bay Drive from LOS D or better to LOS F conditions, and this would be considered a significant traffic impact. All other study intersections would continue to operate at LOS D or better, with the exception of the intersection of Fifth/Bryant/I-80 eastbound on-ramp which currently operate at LOS F during the weekday late evening peak hour with a SF Giants evening game; at this intersection, the Basketball Game scenario would not contribute considerably to the existing LOS F conditions, and project-related traffic impacts at this intersection would be considered less than significant.

During the Saturday evening peak hour with overlapping evening events, with the additional vehicle trips generated, the intersection LOS at the intersections of Fifth/Harrison/I-80 westbound off-ramp, Seventh/Mission Bay Drive, and Seventh/Mississippi/16th would worsen from LOS D or better to LOS F conditions, and this would be considered a significant traffic impact. All other signalized study intersections would continue to operate at LOS D or better.

Thus, with overlapping evening events, additional study intersections from those identified in Impact TR-2 for conditions without an overlapping SF Giants game, would operate at LOS E or LOS F conditions. Existing plus project conditions for the Basketball Game scenario with a SF Giants evening game at AT&T Park would result in *significant* traffic impacts at ten study intersections not currently subject to PCO control during a SF Giants evening game. These intersections are:

- King/Fifth/I-280 ramps (weekday evening)
- Fifth/Harrison/I-80 westbound off-ramp (weekday p.m., weekday evening, Saturday evening)
- Fifth/Bryant/I-80 eastbound on-ramp (weekday late evening)
- Third/South (weekday evening)
- Seventh/Mission Bay Drive (weekday p.m., weekday evening, weekday late evening, Saturday evening)
- Fourth/16th (weekday p.m.)
- Owens/16th (weekday p.m.)
- Seventh/Mississippi/16th Street (weekday p.m., weekday evening, and Saturday evening)
- Illinois/Mariposa (weekday evening)
- Mariposa/I-280 northbound off-ramp (weekday evening)

The four study intersections of Fifth/Harrison/I-80 westbound off-ramp, Fifth/Bryant/I-80 eastbound on-ramp, Seventh/Mission Bay Drive, and Seventh/Mississippi/16th were identified as project-specific impacts in **Impact TR-2** for existing plus project conditions without an overlapping evening event, while the six intersections of King/Fifth/I-280 ramps, Third/South, Fourth/16th, Owens/16th, Illinois/Mariposa, and Mariposa/I-280 northbound off-ramp would be additional significant impacts resulting from overlapping evening events. The proposed project's TMP identifies PCOs at the intersections of Third/South, Owens/16th, Illinois/Mariposa, and Mariposa/I-280 ramps for pre-event and post-event conditions to manage traffic (see **Figure 5.2-11**).

Overall, on days with overlapping evening events at the project site and at AT&T Park, intersections in the project vicinity would become more congested prior to and following the events, and the proposed project would result in significant traffic impacts at the following ten study intersections: King/Fifth/I-280 ramps, Fifth/Harrison/I-80 westbound off-ramp, Fifth/Bryant/I-80 eastbound on-ramp, Third/South, Seventh/Mission Bay Drive, Fourth/16th, Owens/16th, Seventh/Mississippi/16th Street, Illinois/Mariposa, Mariposa/I-280 northbound off-ramp. Implementation of **Mitigation Measure M-TR-2b: Additional Strategies to Reduce Transportation Impacts**, **Mitigation Measure M-TR-11a: Additional PCOs During Overlapping Events** and **Mitigation Measure M-TR-11b: Regular Participation in Ballpark/Mission Bay Transportation Coordinating Committee** would minimize the severity of traffic impacts at these intersections and would not result in secondary transportation impacts, but would not improve

intersection LOS to LOS D or better. Thus, traffic impacts at the ten study intersections would remain *significant and unavoidable with mitigation*.

In addition to the mitigation measures describe above, **Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts of Overlapping Events**, would require the project sponsor to continue to work with the City to seek additional feasible mitigation measures to reduce transportation impacts. The feasibility of these measures has not been determined. One strategy involves using off-site parking lot(s) south of the event center and providing shuttles to the event center if the location of off-site parking is not within walking distance to the event center. If this strategy were to become feasible, the City would identify one or more off-site parking lot(s) on Port of San Francisco or other lands to the south of the event center to provide approximately 250 additional parking spaces for all events and up to an approximately 750 additional parking spaces (for a total of approximately 1,000 spaces) during dual events of 12,500 or more event center attendees or for other circumstances if needed, and the project sponsor shall provide free shuttles from such off-site parking lot(s) to the event center on a maximum 10-minute headway (i.e., six shuttles per hour) before and after events. Preliminary discussions with the Port have identified potential parking lot locations at an area northwest of Pier 70 in the vicinity of the intersection of Illinois/19th and an area near Pier 80 referred to as the Western Pacific site. These locations are approximate only and subject to change based on a variety of factors including, but not limited to, proximity to the event center, infrastructure and development cost, and availability. In addition, any specific locations identified for this purpose would be subject to subsequent review, design, and approvals that may involve both local and State agencies.

Given the current uncertainties regarding the availability, location, and size of one or more off-site parking lots, the effectiveness of this strategy cannot be quantified at this time. If such an off-site parking lot(s) were to be determined to be feasible, it is possible that use of this off-site parking could reduce traffic impacts in the project vicinity. However, drivers who may use these potential additional parking facilities could travel along different routes, which could result in significant traffic impacts south of the project site such as along Third Street, Cesar Chavez Street, 25th Street or other streets that may be used as access to or from affected freeway on-ramps and off-ramps and approaches in the vicinity of the parking lot(s). Mitigation for such traffic impacts may be available depending on the areas affected. Standard mitigation techniques that could be employed involve temporary or permanent removal of on-street parking to accommodate traffic flow, addition of stop signs or traffic signals, adjustment to signal timing where signals exist, addition of dedicated turn lanes or turning lane traffic indicators if the physical constraints of the intersection or adjoining streets could accommodate such changes, and other available traffic control devices. These measures could be implemented where feasible to maintain a LOS D or better. Similar physical or geometric constraints to fully mitigating traffic impacts may also be applicable at affected freeway on-ramps, off-ramps and approaches. However, due to the physical limitations of the City's street grid, land may not be available for City purchase that would allow for the expansion of street width to accommodate additional travel lanes or other design techniques to achieve the standard of LOS D or better, and City policies disfavor expansion of roadway capacity in order to achieve the City's Transit First and other goals that

attempt to limit private vehicle use. Consequently, until a site-specific analysis of the identified parking lot(s) is conducted, it cannot be determined what mitigation measures may be available for affected areas, and then whether the measures would be feasible given the physical constraints of the street network and the availability of funding to implement the measures. Under the circumstances, the City would implement those measures that it deems feasible to achieve a LOS D or better in the affected areas, but regardless, secondary traffic impacts associated with Mitigation Measure M-TR-11c, Additional Strategies to Reduce Transportation Impacts of Overlapping Events, involving the use of one or more off-site parking lot(s) at this time would be considered potentially *significant and unavoidable with mitigation*.

Mitigation Measure M-TR-2b: Additional Strategies to Reduce Transportation Impacts
(see Impact TR-2, above)

Mitigation Measure M-TR-11a: Additional PCOs during Overlapping Events

As a mitigation measure to manage traffic flows and minimize congestion associated with overlapping events, the proposed project's TMP shall be expanded to include additional PCOs that shall be deployed to the following intersections where the proposed project would result in significant traffic impacts, as conditions warrant during events: King/Fifth/I-280 ramps, Fifth/Harrison/I-80 westbound off-ramp, Fifth/Bryant/I-80 eastbound on-ramp, Seventh/Mission Bay Drive, Fourth/16th, and Seventh/Mississippi/16th. The PCO Supervisor shall make the determination where the additional PCOs would be located, based on field conditions during an event. This measure shall be implemented in coordination with Mitigation Measure M-TR-2a: Additional PCOs during Events.

Mitigation Measure M-TR-11b: Participation in the Ballpark/Mission Bay Transportation Coordinating Committee

As a mitigation measure to optimize effectiveness of the transportation management strategies for day-to-day operations and events in the Mission Bay area, at AT&T Park, UCSF Mission Bay campus, and the proposed project, the project sponsor shall actively participate as a member of the Ballpark/Mission Bay Transportation Coordinating Committee in order to evaluate and plan for operations of all three facilities (i.e., AT&T Park, UCSF Mission Bay Campus, and the proposed event center). This committee would, among other roles, serve as a single point for coordination of transportation management strategies.

The Transportation Coordinating Committee shall consult on changes to and expansion of transit services, and for developing and implementing strategies within their purview that address transportation issues and conflicts as they arise. In addition, the committee shall serve as a liaison for operation of the facilities, monitoring conditions, and addressing community issues related to events and the project sponsor shall make good faith efforts to notify the committee regarding events.

Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts of Overlapping Events

The project sponsor shall work with the City to pursue and implement, if feasible, additional strategies to reduce transportation impacts associated with overlapping events at AT&T Park and the proposed event center. These strategies could include the following:

- The project sponsor shall exercise commercially reasonable efforts to avoid scheduling non-Golden State Warriors events of 12,500 or more event center attendees that start within 60 minutes of the start (respectively) of events at AT&T Park.
- When overlapping non-Golden State Warriors events of 12,500 or more event center attendees and evening SF Giants games cannot be avoided through commercially reasonable efforts, the project sponsor shall negotiate with the event promoter as feasible to stagger start times such that the event headliner starts no earlier than 8:30 p.m.
- The City shall identify one or more off-site parking lot(s) on Port of San Francisco or other lands to the south of the event center to provide approximately 250 additional parking spaces for all events and up to approximately 950 additional parking spaces for use during dual events of 12,500 or more event center attendees (for a total of approximately 1,000 additional off-site parking spaces). The project sponsor shall: (1) acquire sufficient rights for the use of such parking lot(s) through lease, purchase, or other means as necessary; (2) pay its fare-share contribution towards any improvements required for the use of such parking lot(s), including but not limited to grading, paving, striping, fencing, lighting, drainage, stormwater pollution prevention measures, curb cuts, and ramps; and (3) provide free shuttles to the event center from such off-site parking lot(s) that are more than ¼-mile from the event center on a maximum 10-minute headway before and after events.

Impact TR-12: The proposed project would result in significant traffic impacts at freeway ramps that would operate at LOS E or LOS F under Existing plus Project conditions with an overlapping SF Giants evening game at AT&T Park. (Significant and Unavoidable with Mitigation)

Table 5.2-49 presents the ramp LOS conditions for the Basketball Game scenario for the weekday p.m. and Saturday evening peak hours for conditions with an overlapping SF Giants evening game at AT&T Park, while **Table 5.2-50** presents the weekday evening and late evening peak hour conditions. The analysis represents conditions for high attendance events at both the proposed event center and at AT&T Park, which are estimated to occur, an average of nine times a year. For the remaining 23 days during which events at both facilities could overlap, the average attendance levels for the event center events is anticipated to be less than 12,500 attendees, and therefore, the number of vehicle trips generated by the smaller event would be less, as would the impact on intersection operating conditions.

**TABLE 5.2-49
FREEWAY RAMP LEVEL OF SERVICE - EXISTING PLUS PROJECT CONDITIONS – WITH A
SF GIANTS EVENING GAME - WEEKDAY PM AND SATURDAY EVENING PEAK HOURS**

#	Ramp Location	Weekday PM				Saturday Evening			
		Existing		Existing plus Project - Basketball Game		Existing		Existing plus Project - Basketball Game	
		Density ^a	LOS ^b	Density	LOS	Density	LOS	Density	LOS
1	I-80 EB on-ramp at Sterling	35	E	36	E	25	C	25	C
2	I-80 EB on-ramp at Fifth/Bryant	--	F	--	F	--	F	--	F
3	I-80 WB off-ramp at Fifth/Harrison	31	D	32	D	27	C	35	E
4	I-280 SB on-ramp at Pennsylvania	36	E	36	E	17	B	17	B
5	I-280 NB off-ramp at Mariposa	29	D	31	D	18	B	26	C
6	I-280 SB on-ramp at Mariposa	31	D	32	D	14	B	15	B

NOTES:

- ^a Density of vehicles in merge and diverge influence area for on-ramp and off-ramp analysis, respectively. Measured in passenger cars per mile per lane. Density value is not presented for ramp analyses where the demand volume exceeds the capacity.
^b Ramps operating at LOS E or LOS F conditions highlighted in **bold**. Significant project impacts shaded.

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

**TABLE 5.2-50
FREEWAY RAMP LEVEL OF SERVICE - EXISTING PLUS PROJECT CONDITIONS – WITH A
SF GIANTS EVENING GAME - WEEKDAY EVENING AND LATE EVENING PEAK HOURS**

#	Ramp Location	Evening				Late Evening			
		Existing		Existing plus Project - Basketball Game		Existing		Existing plus Project - Basketball Game	
		Delay ^a	LOS ^b	Delay	LOS	Delay	LOS	Delay	LOS
1	I-80 EB on-ramp at Sterling	28	D	28	D	23	C	27	C
2	I-80 EB on-ramp at Fifth/Bryant	--	F	--	F	32	D	--	F
3	I-80 WB off-ramp at Fifth/Harrison	29	D	37	E	27	C	27	C
4	I-280 SB on-ramp at Pennsylvania	28	D	26	D	21	C	27	C
5	I-280 NB off-ramp at Mariposa	30	D	--	F	13	B	13	B
6	I-280 SB on-ramp at Mariposa	26	C	27	C	18	B	24	C

NOTES:

- ^a Density of vehicles in merge and diverge influence area for on-ramp and off-ramp analysis, respectively. Measured in passenger cars per mile per lane. Density value is not presented for ramp analyses where the demand volume exceeds the capacity.
^b Ramps operating at LOS E or LOS F conditions highlighted in **bold**. Significant project impacts shaded.

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

The proposed project under the Basketball Game scenario with an overlapping SF Giants evening game at AT&T Park would result in a significant impact at the I-80 westbound off-ramp at Fifth/Harrison Street during the weekday evening and Saturday evening peak hours (i.e., attendees driving to San Francisco from the East Bay), and at the I-280 northbound off-ramp at Mariposa Street during the weekday evening peak hour (i.e., attendees driving to the event center and AT&T Park from the south of the project site). The proposed project would also result in a significant impact at the I-80 eastbound on-ramp at Fifth/Bryant Street during the weekday late evening peak hour (i.e., attendees returning to the East Bay).

The proposed project would not contribute considerably to the other ramps operating at LOS E or LOS F under existing conditions (i.e., the I-80 eastbound on-ramp at Sterling Street during the weekday p.m. peak hour, the I-280 southbound on-ramp at Pennsylvania Street during the weekday p.m. peak hour, or the I-80 eastbound on-ramp at Fifth/Bryant during the weekday p.m., weekday evening, and Saturday evening peak hours), and therefore, traffic impacts at these ramp locations would be considered less than significant.

Overall, under existing plus project conditions with a SF Giants evening game at AT&T Park, the proposed project would result in *significant* project-specific impacts at the following three freeway ramp locations:

- I-80 eastbound on-ramp at Fifth/Bryant (weekday late evening)
- I-80 westbound off-ramp at Fifth/Harrison (weekday evening, Saturday evening)
- I-280 northbound off-ramp at Mariposa Street (weekday evening)

As discussed in **Impact TR-3** for conditions without an overlapping SF Giants evening game, no feasible mitigations are available for the freeway ramp impacts because there is insufficient physical space for additional capacity without redesign of the I-80 and I-280 ramps and mainline structures, and which may require acquisition of additional right-of-way, and other potential measures would not adequately address the short-term peak travel patterns associated with special events.

Mitigation Measure M-TR-2b: Additional Strategies to Reduce Transportation Impacts and **Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts of Overlapping Events** would encourage non-auto modes of travel to the event center through parking pricing, provide additional off-site parking facilities to the south of the project site, and enhance regional transit access to the area, which would reduce the project traffic increase on regional freeway mainline and ramps. However, the feasibility of **Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts of Overlapping Events** is uncertain, and the reduction in vehicle trips would not reduce impacts related to freeway ramp operations to less-than-significant levels. Thus, for these reasons, the proposed project's impacts related to freeway ramp operations would be *significant and unavoidable with mitigation*.

Mitigation Measure M-TR-2b: Additional Strategies to Reduce Transportation Impacts
(see Impact TR-2, above)

Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts of Overlapping Events (see Impact TR-11, above)

Transit Impacts

Impact TR-13: The proposed project could result in a substantial increase in transit demand that could not be accommodated by adjacent Muni transit capacity such that significant adverse impacts to Muni transit service would occur under Existing plus Project conditions with an overlapping SF Giants evening game at AT&T Park. (Less than Significant with Mitigation)

The transit analysis represents conditions for overlapping high attendance events at both the proposed event center and at AT&T Park, which are estimated to occur, an average of nine times a year. For the remaining 23 days during which events at both facilities could overlap, the average attendance levels for the event center events is anticipated to be less than 12,500 attendees, and therefore, the number of transit trips generated by the smaller event would be less, as would the impact on transit ridership and capacity utilization conditions. With overlapping evening events at the event center and AT&T Park, additional capacity on the T Third would be provided pre-game as currently occurs for SF Giants games, but overlapping evening events at both venues would cause the weekday evening capacity utilization of 93 percent for the Basketball Game scenario without a SF Giants game (see Impact TR-4) to increase further, and would exceed the 100 percent capacity utilization standard for special events, and this would be considered a significant impact. With overlapping evening events, the Muni Special Event Shuttles to the event center would continue to accommodate project demand as these shuttles would exclusively serve the proposed event center attendees.

During the weekday evening peak hour with overlapping evening events, it is anticipated that if overlapping events end at similar times, the demand for T Third service would exceed the available capacity, and this would be an additional impact for overlapping events (Impact TR-4 did not identify a significant impact on light rail operations during the weekday late evening).

During the Saturday evening peak hour with overlapping events, similar peak arrivals for similar start times (e.g., 7:15 p.m. for a SF Giants evening game, and 7:30 p.m. for a Golden State Warriors game), would result in the ridership demand exceeding the capacity of the T Third, and this would be considered a significant impact. While the analysis identifies a capacity shortfall during the Saturday evening peak hour for inbound trips, additional capacity would need to be provided for the late evening period for trips departing the event center and AT&T Park post-event.

Overall, on days with overlapping evening events at the project site and at AT&T Park, transit demand would exceed the capacity prior to and following the events, and the proposed project would result in significant transit impacts. Implementation of **Mitigation Measure M-TR-13: Additional Muni Transit Service During Overlapping Events** would minimize transit impacts. The additional Muni capacity would generally be within what is currently provided for SF Giants games and the additional capacity provided as part of the Muni Special Event Transit Service Plan for the proposed project. Implementation of the mitigation measure would ensure that Muni service would be provided to accommodate the T Third demand via Muni bus shuttles to AT&T Park and/or the proposed event center, and would not result in secondary transportation impacts. Thus, with implementation of this mitigation measure, the proposed project's transit impacts would be *less than significant with mitigation*.

Mitigation Measure M-TR-13: Additional Muni Transit Service during Overlapping Events

As a mitigation measure to accommodate Muni transit demand to and from the project site and AT&T Park on the T Third light rail line during overlapping evening events, the project sponsor shall work with the Ballpark/Mission Bay Transportation Coordinating Committee to coordinate with the SFMTA to provide additional shuttle buses between key Market Street locations and the project. Examples of the additional service include Muni bus shuttles between Union Square and/or Montgomery BART/Muni station and the project site. The need for additional Muni service shall be based on characteristics of the overlapping events (e.g., projected attendance levels, and anticipated start and end times).

Impact TR-14: The proposed project would result in a substantial increase in transit demand that could not be accommodated by regional transit such that significant adverse impacts to regional transit service would occur under Existing plus Project conditions with an overlapping SF Giants evening game at AT&T Park. (Significant and Unavoidable with Mitigation)

In general, during the weekday p.m. peak hour, because the peak direction of travel on regional transit operators is in the outbound direction (i.e., workers leaving downtown San Francisco), transit capacity would generally be available to accommodate inbound riders associated with the overlapping evening events. The number of attendees arriving for 7:15 or 7:30 p.m. start times during the weekday p.m. peak hour is low, as most attendees for both SF Giants and Golden State Warriors games arrive within an hour of the start time. As presented in **Table 5.2-40** and **Table 5.2-41** above, additional capacity is available on transit service providers from the East Bay and North Bay during the weekday p.m. and weekday evening peak hours, respectively.

As determined in Impact TR-5, during the weekday evening peak hour, the proposed project would exceed the Caltrain northbound capacity, and result in a significant transit impact. With a basketball game without an overlapping SF Giants game, the capacity utilization of Caltrain would exceed the 100 percent capacity utilization standard. With overlapping evening events, the transit demand from the South Bay would further increase, and thus increase the capacity utilization. Thus, similar to Impact TR-5, overlapping evening events would result in a significant impact to Caltrain capacity.

During the weekday late evening period, Caltrain currently provides an additional train for SF Giants evening games, and it is anticipated that this service would continue. The proposed project would add about 720 transit trips to Caltrain during the weekday late evening peak hour, which would not be accommodated within the existing and proposed special event service during overlapping evening events. Similar, as identified in Impact TR-5, overlapping evening events would further increase the capacity utilization of the North Bay service providers, resulting in significant impacts on Golden Gate Transit and WETA. During the weekday late evening following the end of a SF Giants evening game, BART occasionally provides additional capacity to accommodate the SF Giants post-game demand. With overlapping events, additional capacity would be required to accommodate the combined BART East Bay transit demand. Thus,

the Basketball Game scenario, with an overlapping SF Giants evening game, would result in a significant transit impact at one additional regional transit service provider (i.e., BART) than for conditions without an overlapping evening event. Overall, under existing plus project conditions with an overlapping SF Giants evening game at AT&T Park, the proposed project would result in *significant* project-specific transit impacts on BART, Caltrain, Golden Gate Transit, and WETA.

Implementation of **Mitigation Measure M-TR-5a: Additional Caltrain Service, Mitigation Measure M-TR-5b: Additional North Bay Ferry and Bus Service, and Mitigation Measure M-TR-14: Additional BART Service to the East Bay during Overlapping Events** would reduce or minimize the severity of the capacity utilization exceedances for the regional transit service providers, and would not result in secondary transportation impacts. However, since the provision of additional East Bay, South Bay, and North Bay service is uncertain and full funding for the service has not yet been identified, implementation of these mitigation measures remain uncertain. Accordingly, the proposed project's significant impacts to BART, Caltrain, Golden Gate Transit and WETA transit capacity would be *significant and unavoidable with mitigation*.

Mitigation Measure M-TR-5a: Additional Caltrain Service during Events (see Impact TR-5, above)

Mitigation Measure M-TR-5b: Additional North Bay Bus and Ferry Service during Events (see Impact TR-5, above)

Mitigation Measure M-TR-14: Additional BART Service to the East Bay during Overlapping Events

As a mitigation measure to accommodate transit demand to the East Bay following weekday and weekend evening events, the project sponsor shall work with the Ballpark/Mission Bay Transportation Coordinating Committee to coordinate with BART to provide additional service from San Francisco following weekday and weekend evening events. The additional East Bay BART service could be provided by operating longer trains. The need for additional BART service shall be based on characteristics of the overlapping events (e.g., event type, projected attendance levels, and anticipated start and end times).

Pedestrian Impacts

Impact TR-15: The proposed project could result in a substantial overcrowding on public sidewalks, or create potentially hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility on the site and adjoining areas under Existing plus Project conditions with an overlapping SF Giants evening game at AT&T Park. (Less than Significant with Mitigation)

A quantitative pedestrian analysis was conducted for the Basketball Game scenario assuming an overlapping SF Giants evening game at AT&T Park. Proposed project impacts on pedestrians for other evening events at the event center (e.g., concerts, family shows) would be similar to or less than those identified in this analysis for a basketball game, as the Basketball Game scenario

reflects the maximum attendance level for evening events. In addition, as noted in **Impact TR-6** and **Table 5.2-16**, for small and large events at the proposed event center, PCOs would be posted at nearby intersections to manage pedestrian flows and reduce conflicts. **Table 5.2-51** presents the results of the pedestrian LOS analysis for overlapping SF Giants and basketball evening game conditions for the weekday p.m. and Saturday evening peak hours, while **Table 5.2-52** presents this information for the weekday evening and late evening peak hours.

**TABLE 5.2-51
 PEDESTRIAN LEVEL OF SERVICE - EXISTING PLUS PROJECT CONDITIONS –
 WITH A SF GIANTS EVENING GAME - WEEKDAY PM AND SATURDAY EVENING PEAK HOURS**

Analysis Location	Weekday PM				Saturday Evening			
	Existing		Existing plus Project - Basketball Game		Existing		Existing plus Project - Basketball Game	
	MOE ^a	LOS ^b	MOE	LOS	MOE	LOS	MOE	LOS
Crosswalks								
<i>Third St/South St^c</i>								
North	294	A	155	A	714	A	11	E
South	144	A	16	D	421	A	3	F
East	1,045	A	52	B	1,502	A	20	D
<i>Third St/16th St^c</i>								
North	814	A	68	A	1,594	A	40	C
South	370	A	61	A	973	A	34	C
East	1,296	A	124	A	2,472	A	20	D
West	351	A	81	A	1,102	A	40	C
<i>Terry A. Francois Blvd/South St^c</i>								
North	--	--	126	A	--	--	34	C
South	--	--	73	A	--	--	16	D
West	--	--	96	A	--	--	22	D
Sidewalks								
<i>Third St between South & 16th Streets</i>								
East	0.1	A	0.7	B	0.1	A	1.0	B
West	0.3	A	0.4	A	0.1	A	0.3	A
<i>South Street – South Side</i>								
	--	--	0.8	B	--	--	1.2	B
<i>16th Street – North Side</i>								
	--	--	0.8	B	--	--	1.5	B

NOTES:

- ^a MOE – Measure of Effectiveness. Circulation area measured in average square feet per pedestrian for crosswalk analysis, and pedestrian unit flow measured in average pedestrians per minute per foot for sidewalk analysis.
- ^b Crosswalks operating at LOS E or LOS F highlighted in **bold**. Significant project impacts shaded.
- ^c Under the Basketball Game scenario, a PCO would be stationed at this study intersection during the Saturday pre-event period, and, as necessary, would manually direct vehicles, pedestrians, transit, and bicyclists through the intersection. LOS reflects conditions without PCO intervention.

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

**TABLE 5.2-52
PEDESTRIAN LEVEL OF SERVICE - EXISTING PLUS PROJECT CONDITIONS –
WITH A SF GIANTS EVENING GAME - WEEKDAY EVENING AND LATE EVENING PEAK HOURS**

Analysis Location	Evening				Late Evening			
	Existing		Existing plus Project - Basketball Game		Existing		Existing plus Project - Basketball Game	
	MOE ^a	LOS ^b	MOE	LOS	MOE	LOS	MOE	LOS
Crosswalks								
<i>Third St/South St^c</i>								
North	401	A	10	E	--	--	4	F
South	150	A	3	F	--	--	5	F
East	1,253	A	19	D	--	--	10	E
<i>Third St/16th St^c</i>								
North	764	A	40	C	--	--	30	C
South	590	A	39	C	--	--	33	C
East	1,479	A	29	C	--	--	51	B
West	313	A	54	B	--	--	76	A
<i>Terry A. Francois Blvd/South St^c</i>								
North	--	--	36	C	--	--	32	C
South	--	--	18	D	--	--	16	D
West	--	--	24	D	--	--	21	D
Sidewalks								
<i>Third St between South & 16th Streets</i>								
East	0.1	A	1.4	B	--	--	1.8	B
West	0.3	A	0.6	A	--	--	0.7	B
<i>South Street – South Side</i>								
	--	--	1.7	B	--	--	2.3	B
<i>16th Street – North Side</i>								
	--	--	2.0	A	--	--	1.9	B

NOTES:

^a MOE – Measure of Effectiveness. Circulation area measured in average square feet per pedestrian for crosswalk analysis, and pedestrian unit flow measured in average pedestrians per minute per foot for sidewalk analysis.

^b Crosswalks operating at LOS E or LOS F highlighted in **bold**. **Significant project impacts shaded**.

^c Under the Basketball Game scenario, a PCO would be stationed at this study intersection during pre-event and post-event periods, and, as necessary, would manually direct vehicles, pedestrians, transit, and bicyclists through the intersection. LOS reflects conditions without PCO intervention.

SOURCE: Advant Consulting/Fehr & Peers/LCW Consulting, 2015

The pedestrian analysis for overlapping events represents conditions for high attendance events at both the proposed event center and at AT&T Park, which are estimated to occur an average of nine times a year. For the remaining 23 days during which events at both facilities could overlap, the average attendance levels for the event center events is anticipated to be less than 12,500 attendees, and therefore, the number of pedestrian trips generated by the smaller event would be less, as would the impact on pedestrian conditions.

Pedestrian conditions in the vicinity of the project site for the Basketball Game scenario with an overlapping SF Giants evening game at AT&T Park would be similar to conditions without a SF Giants game presented above in **Impact TR-6**. The existing parking lots on the project site are

currently available for SF Giants evening game parking, and, with implementation of the proposed project, would no longer be available (existing overall parking utilization at the two lots in the study area on a SF Giants evening game day is below 50 percent). SF Giants game attendees currently parking at those two lots would seek parking elsewhere, or would switch modes. The pedestrian analysis of conditions with overlapping evening events assumes that SF Giants attendees currently parking at the project site would seek parking in other nearby facilities (e.g., at the UCSF garage at 1650 Third Street, which currently has available capacity during SF Giants evening games), and would continue to walk along Third Street and through the crosswalks at adjacent intersections.

As presented in **Table 5.2-51**, during the weekday p.m. peak hour, LOS conditions on crosswalks and sidewalks in the project vicinity would remain at LOS D or better. Similarly, as pedestrian volumes associated with the event center increase during the weekday evening and Saturday evening peak periods, the pedestrian LOS at the north and south crosswalks at the intersection of Third/South would operate at LOS E or LOS F conditions. During the weekday late evening peak hour, as pedestrians leave the event center, all three crosswalks at this intersection would operate at LOS E or LOS F (as for the Basketball Game scenario without an overlapping evening event at AT&T Park). The LOS E and LOS F conditions would be considered a significant pedestrian impact. All other analysis locations would operate at LOS D or better.

As discussed in **Impact TR-6**, with implementation of **Mitigation Measure M-TR-6: Active Management of Pedestrian Flows at the Intersection of Third/South**, these significant pedestrian impacts would be reduced to less than significant levels. During post-event conditions, the northbound travel lanes on Third Street between 16th Street and Mission Bay Boulevard South, and South Street between Third Street and the entrance/exit to the 450 South Street Garage, would be closed to vehicular traffic in order to facilitate pedestrian egress from the event center and access to the light rail platforms within the Third Street median. With implementation of **Mitigation Measure M-TR-6: Active Management of Pedestrian Flows at the Intersection of Third/South**, PCOs stationed at this location would implement strategies to allow pedestrians to cross the street safely, including extending the green time for pedestrians crossing the street, manually overriding the traffic signal and directing pedestrians to cross, erecting temporary pedestrian crossing barriers, allowing use of the closed Third Street as a pedestrian access route, providing a defined passenger waiting area within the closed Third Street, and shielding passengers waiting to board light rail from adjacent pedestrian traffic.

Overall, on days with overlapping evening events at the project site and at AT&T Park, pedestrian conditions would become more crowded prior to and following the events, however, with the TMP transportation management strategies and implementation of **Mitigation Measure M-TR-6: Active Management of Pedestrian Flows at the Intersection of Third/South**, the impact of the proposed project on pedestrians during overlapping evening events would be *less than significant with mitigation*.

Mitigation Measure M-TR-6: Active Management of Pedestrian Flows at the Intersection of Third/South (See Impact TR-6, above)

Bicycle Impacts

Impact TR-16: The proposed project would not result in potentially hazardous conditions for bicyclists, or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas under Existing plus Project conditions with an overlapping SF Giants evening game at AT&T Park. (Less than Significant)

A qualitative assessment of bicycle conditions was conducted for the Basketball Game scenario assuming an overlapping SF Giants evening game at AT&T Park. Bicycle conditions in the vicinity of the project site for the Basketball Game scenario with an overlapping SF Giants evening game at AT&T Park would be similar to conditions without a SF Giants game presented above in **Impact TR-7**. It is anticipated that bicyclists traveling to both facilities would be accommodated with the existing, planned and proposed bicycle lanes. However, with overlapping evening events, traffic volumes on streets leading to and from the off-site parking facilities would be greater, which could result in increased potential for bicycle-vehicle conflicts. During overlapping evening events, transportation management strategies for the proposed event center and AT&T Park would be coordinated to minimize congestion and conflicts between modes. Proposed project impacts on bicycle access and circulation for other evening events at the event center (e.g., concerts, family shows) would also be similar to or less than that for the Basketball Game scenario.

Overall, on days with overlapping evening events at the project site and at AT&T Park, the number of bicyclists traveling in the project vicinity would increase prior to and following the events, however, the coordinated TMP transportation management strategies for the proposed event center and AT&T Park, including posting of PCOs, would ensure that the impact of the proposed project on bicyclists during overlapping evening events would be *less than significant*.

Mitigation: Not required

Emergency Vehicle Access Impacts

Impact TR-17: The proposed project would not result in significant impacts on emergency vehicle access under Existing plus Project conditions with an overlapping SF Giants evening game at AT&T Park. (Less than Significant)

Emergency vehicle access impacts under existing plus project conditions with a SF Giants evening game at AT&T Park would be similar to those described above in Impact TR-10 for conditions with an event but without an overlapping SF Giants evening game. The proposed project's TMP includes measures to manage pre-event and post-event vehicle traffic destined to the project parking garage and other parking facilities serving the event center, in order to minimize congestion and reduce potential conflicts between event center traffic and nearby UCSF hospital operations. During overlapping evening events, the 17 PCOs that would be stationed to direct and facilitate vehicular, bicycle, transit, and pedestrian traffic during large events at the

project site would be supplemented by the PCOs that are currently deployed during SF Giants evening games. For smaller events, PCOs would be stationed at key intersections and would be monitoring conditions, and could be reassigned to respond to conflicts between event center traffic and UCSF hospital access. With implementation of the planned 22 Fillmore Transit Priority Project, transit-only lanes will be implemented on 16th Street, and emergency vehicles will be permitted use of the transit-only lanes. The transit-only lanes on 16th Street would have fewer vehicles in them than the adjacent mixed-flow lanes, and would not be subject to any turn restrictions. Persons accessing the UCSF Medical Center emergency room and urgent care center in their personal vehicles during an emergency would, if necessary, also be able to utilize the transit-only lanes to bypass congested segments on 16th Street. On Mariposa Street, if needed, emergency vehicles and other persons accessing the emergency room and urgent care center in their personal vehicles during an emergency would be able to travel within the left-center turn lane to access the intersection of Fourth/Mariposa. When PCOs are deployed for an event, they would have the capability to radio ahead to other PCOs down the street regarding the approaching vehicle requiring emergency access. In addition, the transportation management measures currently implemented during SF Giants games would minimize congestion on area roadways. Implementation of **Mitigation Measure M-TR-11a: Additional PCOs During Overlapping Events** and **Mitigation Measure M-TR-11b: Participation in Ballpark/Mission Bay Transportation Coordinating Committee** would minimize the severity of traffic congestion prior to and following events. As discussed in Impact TR-10, implementation of **Improvement Measure I-TR-10a: UCSF Emergency Vehicle Access and Garage Signage Plan** and **Improvement Measure I-TR-10b: Mariposa Street Restriping** would enhance emergency vehicle access to UCSF emergency facilities.

Furthermore, all drivers must comply with the California Vehicle Code § 21806, which requires that drivers yield right-of-way to authorized emergency vehicles, drive to the right road curb or edge, stop, and remain stopped until the emergency vehicle has passed.

Overall, roadway improvements adjacent to the project site would facilitate emergency vehicle access to the site. Before and after events emergency vehicle access to the project site and nearby hospital uses would be maintained with overlapping evening events at the project site and AT&T Park. For these reasons, the proposed project would not inhibit emergency vehicles access to the project site and nearby vicinity; therefore, the proposed project impact on emergency vehicle access even with overlapping basketball and SF Giants evening games would be *less than significant*.

Mitigation: Not required

Improvement Measure I-TR-10a: UCSF Emergency Vehicle Access and Garage Signage Plan (see Impact TR-10, above)

Improvement Measure I-TR-10b: Mariposa Street Restriping (see Impact TR-10, above)

Conditions Without Implementation of the Special Events Transit Service Plan

As described in Section 5.2.5.3, the project sponsor is working with the City to secure funding for the Muni Special Event Transit Service Plan as part of the project improvements, and which would be implemented by the SFMTA during large evening events with more than 14,000 attendees at the project site. The transportation impact analysis presented in **Impact TR-2** through **Impact TR-17** assumes that the special event transit service would be provided during basketball games to accommodate the transit demand. **Impact TR-18** through **Impact TR-24** below present a qualitative assessment of potential transportation impacts of the proposed project without implementation of the Muni Special Events Transit Service Plan.

Impact TR-18: Without implementation of the Muni Special Event Transit Service Plan, the proposed project would result in additional significant traffic impacts at intersections that would operate at LOS E or LOS F under Existing plus Project conditions. (Significant and Unavoidable with Mitigation)

In the event that the SFMTA would not be able to provide all or a portion of the Muni Special Event Transit Service Plan, it is expected that transit would be less convenient for event attendees, and, therefore, that fewer attendees would travel to the site by transit. Because the Muni Special Event Transit Service Plan was assumed only for analysis of a basketball game at the event center (i.e., the analysis did not assume that additional service would be provided for the Convention Event or No Event analysis scenarios), the transportation impact assessment focuses on the Basketball Game scenario for the weekday p.m., evening and late evening and for Saturday evening hours of analysis, but would be applicable for all large events (i.e., concerts, other sporting events, and conventions/corporate events) for which the Muni Special Event Transit Service Plan would be needed to serve attendees traveling to the event center.

Without implementation of the Muni Special Event Transit Service Plan for a basketball game, during the weekday p.m. peak hour the number of project-generated vehicle trips would increase by 54 trips. During the weekday and Saturday evening peak hours (i.e., the peak hour of arrivals to the event center), the number of vehicle trips would increase by 697 vehicles, while during the weekday late evening peak hour (i.e., departures from the event center), the number of vehicle trips would increase by 742 vehicles. During the weekday p.m. peak hour, the additional 54 vehicle trips could increase delay at some study intersections, however, it is anticipated that the intersection LOS would remain the same as presented in **Impact TR-2** for weekday p.m. peak hour conditions, and would not result in additional significant traffic impacts at intersections during the weekday p.m. peak hour.

Table 5.2-53 and **Table 5.2-54** present a comparison of the intersection LOS conditions for the Basketball Game scenario with and without the Muni Special Event Transit Service Plan for the weekday p.m. and Saturday evening peak hours (Table 5.2-53) and for the weekday evening and weekday late evening (Table 5.2-54) peak hours, respectively. During the weekday evening and late evening, and Saturday evening peak hours, the additional 700 to 750 vehicle trips could increase or exacerbate delay at intersection such that the intersection LOS becomes unacceptable (i.e., LOS E or LOS F), or could substantially worsen existing LOS E or LOS F conditions, beyond those identified in **Impact TR-2**.

**TABLE 5.2-53
 INTERSECTION LEVEL OF SERVICE - EXISTING PLUS PROJECT CONDITIONS –
 WITHOUT A SF GIANTS GAME – WITHOUT IMPLEMENTATION OF THE MUNI SPECIAL EVENT
 TRANSIT SERVICE PLAN - WEEKDAY PM AND SATURDAY EVENING PEAK HOURS**

#	Intersection Location		BASKETBALL GAME SCENARIO WEEKDAY PM				BASKETBALL GAME SCENARIO SATURDAY EVENING			
			With Muni Special Event Transit Service Plan		Without Muni Special Event Transit Service Plan		With Muni Special Event Transit Service Plan		Without Muni Special Event Transit Service Plan	
			Delay ^a	LOS ^b	Delay	LOS	Delay	LOS	Delay	LOS
1	King St	Third Street	72.7	E	72.9	E	29.0	C	30.7	C
2	King St	Fourth Street	60.2	E	60.1	E	31.8	C	34.4	C
3	King St/Fifth St	I-280 ramps	59.2	E	59.2	E	<10	A	<10	A
4	Fifth St/Harrison	I-80 WB off-ramp	49.8	D	50.3	D	64.9	E	>80	F
5	Fifth St/Bryant St	I-80 EB on-ramp	>80	F	>80	F	32.8	C	36.7	D
6	Third Street	Channel Street ^f	46.0	D	46.9	D	78.9	E	>80	F
7	Fourth Street	Channel Street ^f	11.3	B	11.5	B	45.7	D	59.9	E
8	Seventh Street	Mission Bay Dr	52.3	D	53.8	D	>80	F	>80	F
9	TA Francois Blvd	South Street ^{c,f}	<10	A	<10	A	<10	A	<10	A
10	Third Street	South Street ^f	27.4	C	28.4	C	15.3	B	28.0	C
11	TA Francois Blvd	16th Street ^{c,f}	16.8	B	16.8	B	18.2	B	18.5	B
12	Illinois Street	16th Street ^{c,f}	11.5(nb)	B	11.5(nb)	B	11.8(nb)	B	13.3(nb)	B
13	Third Street	16th Street ^{e,f}	33.6	C	33.9	C	14.0	B	14.4	B
14	Fourth Street	16th Street ^e	28.0	C	28.3	C	16.2	B	16.8	B
15	Owens Street	16th Street ^e	44.2	D	45.4	D	20.4	C	24.3	C
16	7th/Mississippi	16th Street ^e	>80	F	>80	F	40.7	D	44.5	D
17	Illinois Street	Mariposa Street ^{c,f}	17.0	B	17.1	B	44.6	D	56.2	E
18	Third Street	Mariposa Street ^f	42.0	D	42.0	D	21.1	C	21.7	C
19	Fourth Street	Mariposa Street ^f	14.3	B	14.4	B	<10	A	<10	A
20	Mariposa Street	I-280 NB off-ramp ^f	25.8	C	25.8	C	24.8	C	39.5	D
21	Mariposa Street	I-280 SB on-ramp ^d	12.8	B	12.9	B	<10	A	<10	A
22	Third Street	Cesar Chavez St	47.6	D	47.6	D	18.2	B	18.3	B

NOTES:

- ^a Delay presented in seconds per vehicle. For unsignalized intersections, delay and LOS presented for worst approach. Worst approach indicated in ().
- ^b Intersections operating at LOS E or LOS F conditions highlighted in **bold**. Significant project impacts shaded.
- ^c All-way stop-controlled intersection. The intersections of Terry A. Francois/South and Illinois/Mariposa would be signalized as part of the proposed project.
- ^d The traffic signal at the intersection of Mariposa/I-280 southbound on-ramp is part of the roadway improvements on Mariposa Street between the I-280 northbound off-ramp and I-280 southbound on-ramp and the extension of Owens Street between 16th and Mariposa Streets, and is currently planned to be operational by fall 2015.
- ^e Includes implementation of the 22 Fillmore Transit Priority Project, which includes converting one mixed-flow lane in each direction to a side-running transit-only lane.
- ^f Under the Basketball Game scenario, a PCO would be stationed at this study intersection during the Saturday pre-event period, and, as necessary, would manually direct vehicles, pedestrians, transit, and bicyclists through the intersection. LOS reflects conditions without PCO intervention.

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

TABLE 5.2-54
INTERSECTION LEVEL OF SERVICE - EXISTING PLUS PROJECT CONDITIONS –
WITHOUT A SF GIANTS GAME – WITHOUT IMPLEMENTATION OF THE MUNI SPECIAL EVENT
TRANSIT SERVICE PLAN – WEEKDAY EVENING AND LATE EVENING PEAK HOURS

#	Intersection Location		BASKETBALL GAME SCENARIO EVENING				BASKETBALL GAME SCENARIO LATE EVENING			
			With Muni Special Event Transit Service Plan		Without Muni Special Event Transit Service Plan		With Muni Special Event Transit Service Plan		Without Muni Special Event Transit Service Plan	
			Delay ^a	LOS ^b	Delay	LOS	Delay	LOS	Delay	LOS
1	King St	Third Street	64.6	E	68.4	E	23.6	C	25.7	C
2	King St	Fourth Street	61.4	E	70.7	E	22.5	C	22.3	C
3	King St/Fifth St	I-280 ramps	56.9	E	57.1	E	10.8	B	10.7	B
4	Fifth St/Harrison	I-80 WB off-ramp	>80	F	>80	F	22.3	C	22.7	C
5	Fifth St/Bryant St	I-80 EB on-ramp	>80	F	>80	F	>80	F	>80	F
6	Third Street	Channel Street ^f	>80	F	>80	F	37.5	D	>80	F
7	Fourth Street	Channel Street ^f	72.5	E	>80	F	>80	F	>80	F
8	Seventh Street	Mission Bay Dr	>80	F	>80	F	38.8	D	>80	F
9	TA Francois Blvd	South Street ^{c,f}	< 10	A	< 10	A	13.4	B	22.4	D
10	Third Street	South Street ^f	45.1	D	47.4	D	<10	A	<10	A
11	TA Francois Blvd	16th Street ^{c,f}	17.7	B	17.8	B	16.9	B	17.7	B
12	Illinois Street	16th Street ^{c,f}	15.7(nb)	C	19.3(nb)	C	< 10 (sb)	A	< 10 (sb)	A
13	Third Street	16th Street ^{e,f}	34.2	C	40.3	D	15.7	B	22.1	C
14	Fourth Street	16th Street ^e	37.0	D	44.1	D	18.0	B	22.8	C
15	Owens Street	16th Street ^e	39.0	D	49.3	D	31.2	C	62.0	E
16	7th/Mississippi	16th Street ^e	>80	F	> 80	F	24.1	C	31.5	C
17	Illinois Street	Mariposa Street ^{c,f}	45.8	D	71.5	E	22.6	C	37.7	D
18	Third Street	Mariposa Street ^f	37.1	D	41.9	D	23.6	C	24.2	C
19	Fourth Street	Mariposa Street ^f	13.0	B	13.6	B	<10	A	<10	A
20	Mariposa Street	I-280 NB off-ramp ^f	32.5	C	53.7	D	24.7	C	26.1	C
21	Mariposa Street	I-280 SB on-ramp ^d	<10	A	<10	A	14.3	B	13.4	B
22	Third Street	Cesar Chavez St	33.9	C	34.1	C	21.9	C	22.0	C

NOTES:

- ^a Delay presented in seconds per vehicle. For unsignalized intersections, delay and LOS presented for worst approach. Worst approach indicated in ().
- ^b Intersections operating at LOS E or LOS F conditions highlighted in **bold**. Significant project impacts shaded.
- ^c All-way stop-controlled intersection. The intersections of Terry A. Francois/South and Illinois/Mariposa would be signalized as part of the proposed project.
- ^d The traffic signal at the intersection of Mariposa/I-280 southbound on-ramp is part of the roadway improvements on Mariposa Street between the I-280 northbound off-ramp and I-280 southbound on-ramp and the extension of Owens Street between 16th and Mariposa Streets, and is currently planned to be operational by fall 2015.
- ^e Includes implementation of the 22 Fillmore Transit Priority Project, which includes converting one mixed-flow lane in each direction to a side-running transit-only lane.
- ^f Under the Basketball Game scenario, a PCO would be stationed at this study intersection during pre-event and/or post-event periods, and, as necessary, would manually direct vehicles, pedestrians, transit, and bicyclists through the intersection. LOS reflects conditions without PCO intervention.

SOURCE: Advant Consulting/Fehr & Peers/LCW Consulting, 2015

The proposed project without implementation of the Muni Special Event Transit Service Plan would result in *significant* traffic impacts at the following additional study intersections, or analysis periods:

- Third/Channel (weekday late evening)
- Fourth/Channel (Saturday evening)
- Seventh/Mission Bay Drive (weekday late evening)
- Illinois/Mariposa (weekday evening, Saturday evening)
- Owens/16th (weekday late evening)

Impacts at these five intersections would be in addition to the significant impacts identified for the proposed project with implementation of the Muni Special Event Transit Service Plan in Impact TR-2 for conditions without an overlapping SF Giants evening game, and in Impact TR-11 for conditions with an overlapping SF Giants evening game. **Mitigation Measure M-TR-2a: Additional PCOs during Events**, and **Mitigation Measure M-TR-2b: Additional Strategies to Reduce Transportation Impacts** may reduce the severity of traffic impacts.

As discussed in Section 5.2.5.2, the City fully anticipates implementation of the Muni Special Event Transit Service Plan and has identified sufficient funding to deliver the additional transit service. As described above, in order to provide a conservative CEQA analysis as well as information to the public and decision makers, the discussion above discloses the impacts of the proposed project if for some unknown reasons in the future, the City is unable to implement the Muni Special Event Transit Service Plan. The analysis shows that without the additional transit service, the proposed project would result in additional significant traffic impacts. In order to reduce the severity of these impacts, the project sponsor shall implement **Mitigation Measure M-TR-18: Auto Mode Share Performance Standard and Monitoring**, which would ensure that the severity of Impact TR-18 through Impact TR-24 would be the same as the corresponding Impact TR-2 through Impact TR-17 irrespective of whether the Muni Special Event Transit Service Plan was implemented, and would not result in secondary transportation impacts. With implementation of this mitigation measure, the proposed project's traffic impacts would remain *significant and unavoidable with mitigation*.

Mitigation Measure M-TR-2a: Additional PCOs during Events (see Impact TR-2, above)

Mitigation Measure M-TR-2b: Additional Measures to Reduce Transportation Impacts (see Impact TR-2, above)

Mitigation Measure M-TR-18: Auto Mode Share Performance Standard and Monitoring
Performance Standards and Strategies for Achieving Them

The project sponsor shall be responsible for implementing TDM measures intended to reach an auto mode share performance standard for different types of events. Specifically, the project sponsor shall work to achieve the following performance standards:

1. For weekday events that have 12,500 or more attendees, the project shall not exceed an arrival auto mode share of 53 percent.

2. For weekend events that have 12,500 or more attendees, the project shall not exceed an arrival auto mode share of 59 percent.

The performance standards shall be achieved by the middle of the Golden State Warriors' third season at the event center, and for every Golden State Warriors season thereafter.

The project sponsor may implement any combination of TDM strategies, including those identified in the proposed project's TMP, to achieve the above performance standards. Potential strategies include, but are not limited to:

- Providing shuttle bus service between major transportation hubs such as Transbay Transit Terminal, BART stations, Caltrain stations and the event center.
- Providing bus shuttles between park & ride lots, remote parking facilities, or other facilities or locations within San Francisco, and the event center.
- Facilitating charter bus packages through the event sales department to encourage large groups to travel to and from the event center on charter buses.
- Reducing the project parking demand through a variety of mechanisms, including pricing.
- Offering high occupancy vehicle parking at more convenient locations than parking for the general public and/or at reduced rates.
- Undertaking media campaigns, including in social media, that promote walking and/or bicycling to the event center.
- Conducting cross-marketing strategies with event center businesses (e.g., 10 percent off merchandise/food if patrons arrive by transit and/or bike or on foot).
- Carrying out public education campaigns.
- Offering special event ferry service to the closest ferry station to the project site (similar to the existing service provided between AT&T Park and Alameda and Marin Counties by Golden Gate Transit, Alameda/Oakland and Vallejo ferry service).
- Providing incentive for arrivals by bike.
- Providing transit fare incentives to event ticket holders.

Monitoring and Reporting

The project sponsor shall retain a qualified transportation professional⁵⁰ to conduct travel surveys, as outlined below, and to document the results in a *Transportation Demand Management Report*. Prior to beginning the travel survey, the transportation professional shall develop the data collection methodology in consultation with and approved by OCII (or its designated representative such as the Environmental Review Officer (ERO)) and in consultation with SFMTA. It is anticipated that data collection would occur at least during

⁵⁰ The Transportation Demand Management Report shall be performed by a qualified transportation professional from the Planning Department's *Transportation Consultant Pool*.

four days for two different types of events, for a total of eight days. Specifically, data collection shall be conducted during at least two weekday and two weekend NBA basketball games with 12,500 or more attendees, and two weekday and two weekend non-basketball events with attendance of 12,500 or more attendees.

The schedule of the travel surveys shall be as follows:

- Comprehensive travel surveys of basketball game attendees shall be conducted between December and April of every season.
- Comprehensive travel surveys of non-basketball event attendees (conventions events, concerts, family shows, etc.) could be collected any time during the year.

The following data of event attendees shall be collected as part of the travel surveys:

- Origin/destination of the trip (city, zip code, home/work/other)
- Mode of travel to/from event center
 - If by transit, list mode and name of transit operator (AC Transit, BART, Caltrain, Muni, etc.)
 - If by rail, name of station trip started and ended
 - If by auto, number of people in the vehicle
 - If by auto, parking location and approximate walking time to event center
 - If by auto, ask if following trips would continue as auto, or if anticipate a mode shift.
 - If by bicycle or walking, name the origin of the trip. If a transfer from regional transit, name the origin and operator.
 - If by bike share, name the origin (i.e., the pick up location) of the trip. Note if trip is a “last mile” connection from regional transit, and include the origin and operator.
- Arrival and departure times at the event center

The travel survey shall employ whatever methodology necessary, as approved by the OCII (or the ERO) in consultation with SFMTA, to collect the above described data including but not limited to: manual or automatic (e.g., video or tubes) traffic volume counts, intercept surveys, smart phone application-based surveys, and on-line surveys.

The *Transportation Demand Management Report(s)* shall be submitted to OCII, or its designee, for review within 30 days of completion of the data collection. If the City finds that the project exceeds the stated mode share performance standard, the project sponsor shall revise the proposed project’s Transportation Management Plan (TMP) to incorporate a set of measures that would lower the auto mode share. For basketball events, the TMP shall be revised by no later than August 15th of the calendar year to ensure adequate lead time to implement TDM measures prior to the start of the following basketball season. For non-basketball events, the proposed project’s TMP shall be revised within 90 days of submittal of the *Transportation Demand Management Report* to incorporate a set of measure that would lower the auto mode share.

If the project does not meet the stated performance standard, the project sponsor shall implement TDM measures and collect data on a semi-annual basis (i.e., twice during a calendar year) to assess their effectiveness for basketball games and other events. The implementation of TDM measures shall be intensified until the auto mode split performance standard is achieved. Upon achievement of the performance standard, the project sponsor may resume travel survey data collection for basketball and non-basketball events on an annual basis. If the sponsor demonstrates three consecutive years of meeting the auto mode share performance standard, the comprehensive data collection effort may occur every two years.

The data collection plan described above may be modified by OCII (or the ERO) in coordination with SFMTA if field observations and/or other circumstances require data collection at different times and/or for different events than specified above. The modification of the data collection plan, however, shall not change the performance standards set forth in this mitigation measure.

Impact TR-19: Without implementation of the Muni Special Event Transit Service Plan, the proposed project would result in additional significant traffic impacts at freeway ramps that would operate at LOS E or LOS F under Existing plus Project conditions. (Significant and Unavoidable with Mitigation)

As described in Impact TR-18, without implementation of the Muni Special Event Transit Service Plan for large events, the number of event-related vehicle trips would increase over conditions with implementation of the Muni Special Event Transit Service Plan. For the Basketball Game scenario, the increase in the number of vehicles would be 54 vehicle trips during the weekday p.m. peak hour, 697 vehicles during the weekday evening and Saturday evening peak hours, and 742 during the weekday late evening peak hour. A portion of these vehicles would travel on I-80 and I-280, and may increase traffic volumes on the study ramp locations. Thus, without implementation of the Muni Special Event Transit Service Plan, the additional vehicle trips may increase or exacerbate the density at the ramp merge and diverge locations, such that the ramp LOS becomes unacceptable (i.e., LOS E or LOS F), or could substantially worsen existing LOS E or LOS F conditions.

Table 5.2-55 and **Table 5.2-56** present a comparison of the ramp LOS conditions for the Basketball Game scenario with and without the Muni Special Event Transit Service Plan for the weekday p.m. and Saturday evening peak hours (Table 5.2-53) and for the weekday evening and weekday late evening (Table 5.2-54) peak hours, respectively.

**TABLE 5.2-55
 FREEWAY RAMP LEVEL OF SERVICE - EXISTING PLUS PROJECT CONDITIONS –
 WITHOUT A SF GIANTS GAME - WITHOUT IMPLEMENTATION OF THE MUNI SPECIAL EVENT
 TRANSIT SERVICE PLAN – WEEKDAY PM AND SATURDAY EVENING PEAK HOURS**

#	Ramp Location	BASKETBALL GAME SCENARIO WEEKDAY PM				BASKETBALL GAME SCENARIO SATURDAY EVENING			
		With Muni Special Event Transit Service Plan		Without Muni Special Event Transit Service Plan		With Muni Special Event Transit Service Plan		Without Muni Special Event Transit Service Plan	
		Density ^a	LOS	Density	LOS	Density	LOS	Density	LOS
1	I-80 EB on-ramp at Sterling	36	E	36	E	22	C	22	C
2	I-80 EB on-ramp at Fifth/Bryant	--	F	--	F	36	E	36	E
3	I-80 WB off-ramp at Fifth/Harrison	31	D	31	D	34	D	36	E
4	I-280 SB on-ramp at Pennsylvania	35	E	35	E	13	B	13	B
5	I-280 NB off-ramp at Mariposa	28	C	28	C	25	C	27	C
6	I-280 SB on-ramp at Mariposa	32	D	32	D	12	B	13	B

NOTES:

^a Density of vehicles in merge and diverge influence area for on-ramp and off-ramp analysis, respectively. Measured in passenger cars per mile per lane. Density value is not presented for ramp analyses where the demand volume exceeds the capacity.

^b Ramps operating at LOS E or LOS F conditions highlighted in **bold**. Significant project impacts shaded.

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

**TABLE 5.2-56
 FREEWAY RAMP LEVEL OF SERVICE - EXISTING PLUS PROJECT CONDITIONS –
 WITHOUT A SF GIANTS GAME - WITHOUT IMPLEMENTATION OF THE MUNI SPECIAL EVENT
 TRANSIT SERVICE PLAN – WEEKDAY EVENING AND LATE EVENING PEAK HOURS**

#	Ramp Location	BASKETBALL GAME SCENARIO EVENING				BASKETBALL GAME SCENARIO LATE EVENING			
		With Muni Special Event Transit Service Plan		Without Muni Special Event Transit Service Plan		With Muni Special Event Transit Service Plan		Without Muni Special Event Transit Service Plan	
		Density ^a	LOS	Density	LOS	Density	LOS	Density	LOS
1	I-80 EB on-ramp at Sterling	28	C	28	C	23	C	24	C
2	I-80 EB on-ramp at Fifth/Bryant	--	F	--	F	34	D	36	E
3	I-80 WB off-ramp at Fifth/Harrison	36	E	38	E	27	C	27	C
4	I-280 SB on-ramp at Pennsylvania	28	C	28	C	21	C	22	C
5	I-280 NB off-ramp at Mariposa	34	D	35	E	13	B	13	B
6	I-280 SB on-ramp at Mariposa	25	C	26	C	20	B	21	C

NOTES:

^a Density of vehicles in merge and diverge influence area for on-ramp and off-ramp analysis, respectively. Measured in passenger cars per mile per lane. Density value is not presented for ramp analyses where the demand volume exceeds the capacity.

^b Ramps operating at LOS E or LOS F conditions highlighted in **bold**. Significant project impacts shaded.

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

The proposed project without implementation of the Muni Special Event Transit Service Plan would result in *significant* traffic impacts at the following three additional freeway ramp locations:

- I-80 eastbound on-ramp at Fifth/Bryant (weekday late evening)
- I-80 westbound off-ramp at Fifth/Harrison (Saturday evening)
- I-280 northbound off-ramp at Mariposa Street (weekday evening)

Impacts at these three freeway ramps would be in addition to the significant impacts identified for the proposed project with implementation of the Muni Special Event Transit Service Plan in Impact TR-3 for conditions without an overlapping SF Giants evening game, and in Impact TR-12 for conditions with an overlapping SF Giants evening game.

Mitigation Measure M-TR-2b: Auto Mode Share Performance Standard and Monitoring and **Mitigation Measure M-TR-18: Auto Mode Share Performance Standard and Monitoring**, described above, would also be applicable to address the freeway ramp impacts. Implementation of these measure would ensure that the severity of **Impact TR-18** would be the same as the corresponding Impact TR-3, irrespective of whether the Muni Special Event Transit Service Plan was implemented or not. With implementation of this mitigation measure, the proposed project's impacts related to freeway ramp operations would remain *significant and unavoidable with mitigation*.

Mitigation Measure M-TR-2b: Additional Measures to Reduce Transportation Impacts
(see Impact TR-2, above)

Mitigation Measure M-TR-18: Auto Mode Share Performance Standard and Monitoring
(see Impact TR-18, above)

Impact TR-20: Without implementation of the Muni Special Event Transit Service Plan, the proposed project would result in a substantial increase in transit demand that could not be accommodated by adjacent Muni transit capacity such that significant adverse impacts to Muni transit service would occur under Existing plus Project conditions. (Significant and Unavoidable with Mitigation)

Without implementation of the Muni Special Event Transit Service Plan, the transit capacity for the Basketball game scenario would decrease from those presented in **Table 5.2-41** (weekday evening and late evening) and **Table 5.2-42** (Saturday evening) in **Impact TR-4**. Without the additional T Third light rail service and the Muni Special Event Shuttles, the hourly capacity for the Muni service to the project site would decrease from about 6,700 passengers per hour to 2,900 passengers per hour during the weekday evening peak hour (i.e., inbound to the site), from 6,300 to 2,000 passengers per hour during the late evening peak hour (i.e., outbound from the project site, and from 6,100 to 2,100 passengers per hour during the Saturday evening peak hour (i.e., inbound to the site).

Table 5.2-57 presents the capacity utilization analysis for weekday p.m. and Saturday evening peak hours for the Basketball Game scenario without implementation of the Muni Special Event Transit Service Plan, while **Table 5.2-58** presents this information for the weekday evening and weekday late evening peak hours. Without implementation of the Muni Special Event Transit Service Plan for large events at the project site, the number of attendees arriving by transit is expected to decrease. Overall, without implementation of the Muni Special Event Transit Service Plan for a basketball game, during the weekday and Saturday evening peak hours (i.e., the peak hour of arrivals to the event center), the number of transit trips would decrease by 1,762 trips. During the weekday late evening peak hour the number of transit trips would decrease by 1,878 trips.

**TABLE 5.2-57
 TRANSIT ANALYSIS - EXISTING PLUS PROJECT CONDITIONS –
 WITHOUT A SF GIANTS GAME WITHOUT IMPLEMENTATION OF THE MUNI SPECIAL EVENT
 TRANSIT SERVICE PLAN – WEEKDAY PM AND SATURDAY EVENING PEAK HOURS**

Route/Service Provider	BASKETBALL GAME SCENARIO WEEKDAY PM OUTBOUND			BASKETBALL GAME SCENARIO SATURDAY EVENING INBOUND		
	Ridership	Capacity	Capacity Utilization	Ridership	Capacity	Capacity Utilization
<i>San Francisco</i>						
T Third	2,441	3,808	64.1%	2,278	1,714	132.9%
22 Fillmore	545	942	73.9%	495	378	131.0%
Muni Special Event Shuttles	0	0	0%	0	0	0%
<i>Total</i>	2,490	4,750	66.0%	2,773	2,092	132.8%
<i>East Bay</i>						
BART	19,972	21,220	95.0%	3,323	8,740	38.0%
AC Transit	2,275	3,926	58.5%	73	200	36.4%
Ferries	805	1,615	50.3%	0	0	0%
<i>Total</i>	23,062	27,761	86.9%	3,396	8,940	38.0%
<i>North Bay</i>						
Buses	1,389	2,817	49.6%	99	137	72.3%
Ferries	968	1,959	49.8%	1,026	1,594	64.4%
<i>Total</i>	2,357	4,776	49.7%	1,125	1,731	65.5%
<i>South Bay</i>						
BART	8,698	16,963	51.4%	2,244	10,925	20.5%
Caltrain	2,405	3,100	79.7%	1,021	1,300	78.6%
SamTrans	145	320	45.9%	25	80	31.6%
<i>Total</i>	11,249	20,383	55.6%	3,280	12,305	26.7%

NOTES:

- ^a For pre-event and post-event conditions, capacity utilization exceeding 100 percent highlighted in **bold**. Significant project impacts shaded.
- ^b Ridership and capacity for the T Third and 22 Fillmore reflect implementation of the Central Subway and 22 Fillmore Transit Priority Project.

SOURCE: Advant Consulting/Fehr & Peers/LCW Consulting, 2015

**TABLE 5.2-58
 TRANSIT ANALYSIS - EXISTING PLUS PROJECT CONDITIONS –
 WITHOUT A SF GIANTS GAME WITHOUT IMPLEMENTATION OF THE MUNI SPECIAL EVENT
 TRANSIT SERVICE PLAN – WEEKDAY EVENING AND LATE EVENING PEAK HOURS**

Route/Service Provider	BASKETBALL GAME SCENARIO WEEKDAY EVENING INBOUND			BASKETBALL GAME SCENARIO WEEKDAY LATE EVENING OUTBOUND		
	Ridership	Capacity	Capacity Utilization	Ridership	Capacity	Capacity Utilization
<i>San Francisco</i>						
T Third	3,795	2,285	166.1%	2,682	1,714	156.5%
22 Fillmore	544	628	86.8%	515	252	204.4%
Muni Special Event Shuttles	0	0	0%	0	0	0%
<i>Total</i>	4,339	2,913	185.6%	3,197	1,966	162.7%
<i>East Bay</i>						
BART	5,019	15,870	31.6%	5,184	6,095	85.1%
AC Transit	245	520	47.1%	144	200	72.2%
Ferries	79	576	13.7%	0	0	0%
<i>Total</i>	5,343	16,966	31.5%	5,329	6,295	84.6%
<i>North Bay</i>						
Buses	106	120	88.0%	41	80	51.3%
Ferries	347	1,357	25.6%	732	637	114.9%
<i>Total</i>	453	1,477	30.6%	773	717	107.8%
<i>South Bay</i>						
BART	3,887	18,400	21.1%	2,086	5,290	39.4%
Caltrain	2,364	2,600	90.9%	589	650	90.5%
SamTrans	40	160	24.9%	27	40	68.2%
<i>Total</i>	6,291	21,160	29.7%	2,702	5,980	45.2%

NOTES:

- ^a For pre-event and post-event conditions, capacity utilization exceeding 100 percent highlighted in **bold**. Significant project impacts shaded.
- ^b Ridership and capacity for the T Third and 22 Fillmore reflect implementation of the Central Subway and 22 Fillmore Transit Priority Project.

SOURCE: Advant Consulting/Fehr & Peers/LCW Consulting, 2015

Without the three additional Muni Special Event Shuttles, the number of attendees accessing the project site via the T Third would increase, and, because the additional capacity would also not be provided on the T Third, the capacity utilization on the T Third would increase during the weekday evening and weekday late evening peak hours, and would exceed the 100 percent capacity utilization standard for special events. In addition, more attendees would use the 22 Fillmore (e.g. to access the 16th Street BART station), and the capacity utilization of the 22 Fillmore during the weekday late evening would increase from less than 85 percent to more than 100 percent capacity utilization. Thus, during the weekday late evening peak hour, conditions without the Muni Special Event Transit Service Plan would result in additional significant impacts on the T Third and 22 Fillmore during the weekday late evening peak hour.

During the Saturday evening peak hour, without the additional Muni light rail and special event shuttle capacity, the capacity utilization on the T Third and 22 Fillmore would increase to more than the 100 capacity utilization standard. Thus, during the Saturday evening peak hour, conditions without the Muni Special Event Transit Service Plan would result in an additional significant impact on the T Third and 22 Fillmore during the Saturday evening peak hour.

Overall, under existing plus project conditions without the Muni Special Event Transit Service Plan, the proposed project would result in *significant* project-specific transit impacts, as follows:

- T Third during the weekday evening, weekday late evening, and Saturday evening peak hours.
- 22 Fillmore during the weekday late evening, and Saturday evening peak hours.

Mitigation Measure M-TR-18: Auto Mode Share Performance Standard and Monitoring would also be applicable to address the impact on Muni service. Implementation of this measure would ensure that the severity of Impact TR-20 would be the same as the corresponding Impact TR-13, irrespective of whether the Muni Special Event Transit Service Plan was implemented or not. With implementation of this mitigation measure, the proposed project's impacts related to transit operations would remain *significant and unavoidable with mitigation*.

Mitigation Measure M-TR-18: Auto Mode Share Performance Standard and Monitoring
(see Impact TR-18, above)

Impact TR-21: Without implementation of the Muni Special Event Transit Service Plan, the proposed project would result in a substantial increase in transit demand that could not be accommodated by regional transit capacity such that significant adverse impacts to regional transit service would occur under Existing plus Project conditions. (Significant and Unavoidable with Mitigation)

As described in **Impact TR-20**, without implementation of the Muni Special Event Transit Service Plan for large events at the project site, the number of attendees arriving by transit, including those from the East Bay, North Bay, and South Bay, is projected to decrease, as more attendees would chose to drive to the event center because Muni service between the regional transit stops and the event center would be limited and operating at overcapacity conditions. Overall, without implementation of the Muni Special Event Transit Service Plan for a basketball game, during the weekday and Saturday evening peak hours (i.e., the peak hour of arrivals to the event center), the number of transit trips traveling to and from outside of San Francisco would decrease by 1,121 trips during the weekday evening peak hour, by 1,329 trips during the weekday late evening peak hour, and by 1,221 trips during the Saturday evening peak hour.

As presented in **Table 5.2-57** weekday p.m. and Saturday evening peak hours and **Table 5.2-58** for the weekday evening and weekday late evening peak hours, without implementation of the Muni Special Event Transit Service Plan for the Basketball Game scenario, the number of

attendees arriving via Caltrain would decrease, which would result in a reduction in the capacity utilization on Caltrain such that the proposed project would not result in the significant impacts on Caltrain during the weekday evening, weekday late evening, and Saturday evening peak hours, as reported in **Impact TR-5** and **Impact TR-14**.

The reduction in project transit demand on regional transit operators would also reduce the capacity utilization for service to the North Bay buses and ferries. However, capacity utilization would still exceed 100 percent during the weekday late evening, and therefore, without implementation of the Muni Special Event Transit Service Plan, impacts to WETA and Golden Gate Transit capacity would remain significant and unavoidable.

Overall, under existing plus project conditions without a SF Giants game at AT&T Park and without the Muni Special Event Transit Service Plan, the proposed project would result in *significant* project-specific transit impacts on WETA and Golden Gate Transit service during the weekday late evening peak hours.

Implementation of **Mitigation Measure M-TR-5a: Additional Caltrain Service** and **Mitigation Measure M-TR-5b: Additional North Bay Ferry and Bus Service** would reduce or minimize the severity of the capacity utilization exceedances for the regional transit service providers. However, as noted in Impact TR-5, since the provision of additional Caltrain and North Bay service is uncertain and full funding for the service has not yet been identified, implementation of this mitigation measures is uncertain. Accordingly, the proposed project's significant impacts to Caltrain, Golden Gate Transit, and WETA transit capacity would remain *significant and unavoidable with mitigation*.

Mitigation Measure M-TR-5a: Additional Caltrain Service (see Impact TR-5, above)

Mitigation Measure M-TR-5b: Additional North Bay Ferry and Bus Service (see Impact TR-5, above)

Impact TR-22: Without implementation of the Muni Special Event Transit Service Plan, the proposed project could result in a substantial overcrowding on public sidewalks, nor create potentially hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility on the site and adjoining areas under Existing plus Project conditions. (Less than Significant with Mitigation)

Without implementation of the Muni Special Event Transit Service Plan for large events at the project site, the number of attendees arriving by transit is expected to decrease, while the number of attendees arriving by auto mode would increase. Overall, without implementation of the Muni Special Event Transit Service Plan for a basketball game, during the weekday p.m. peak hour the number of vehicle trips would increase by 54, while the number of transit trips would decrease by 136 trips. During the weekday and Saturday evening peak hours (i.e., the peak hour of arrivals to the event center), the number of vehicle trips would increase by 697 vehicles, while the number of transit trips would decrease by 1,762 trips. During the weekday late evening peak hour (i.e.,

departures from the event center), the number of vehicle trips would increase by 742 vehicles, while the number of transit trips would decrease by 1,878 trips. In general, the number of pedestrian trips traveling to and from the event center would not change, however, the direction of travel to and from the project site may change depending on where the increased parking demand is accommodated. As a result, the number of pedestrians at the intersection of Third/South may decrease somewhat, and increase at the intersection of Third/16th as event attendees seek and find parking farther east and south of the project site.

During all events, the proposed project's TMP assumes that PCOs would be stationed at intersections adjacent to the proposed site (and elsewhere) to manage pedestrian flows and minimize conflicts, and that a similar level of management would be needed via police officers or PCOs regardless of whether the Muni Special Event Transit Service Plan is implemented. The increase in auto mode and project vehicle trips without implementation of the Muni Special Event Transit Service Plan and associated PCOs at the intersection of Third/South could result in overcrowding on the sidewalks and light rail platforms, and may result in potentially hazardous conditions for pedestrians, which would be considered a significant pedestrian impact.

Mitigation Measure M-TR-22: Provide Safe Pedestrian Access to Adjacent Transit and Parking Facilities and Monitoring

During events with 3,000 or more attendees, the project sponsor shall be responsible for providing trained personnel (e.g., off-duty SFPD staff) to control pedestrian, bicycle and vehicular flows to and from the event center at the intersections immediately adjacent to the project site and to ensure that Muni platforms serving the site are not over capacity. The trained personnel shall be provided during pre- and post-event periods. The project sponsor shall ensure that conflicts between various modes are reduced to the maximum extent possible through adequate staffing of trained personnel as well as other measures, as appropriate.

Other pedestrian management measures that could be implemented include but are not limited to: installation of barricades, proper signage and announcements to disperse patrons to other streets around the project site, such as to Terry A. Francois Boulevard, and cross-marketing incentives such as 20 percent discount at the restaurant and retail establishments to extend the peak departure period. Through the implementation of various strategies, the project sponsor shall ensure that pedestrian conflicts with other modes are minimized by separating vehicles, bicycles, transit and pedestrian flows to the greatest extent possible, including ensuring that various modes are adequately instructed about when it is their turn to proceed. The project sponsor shall also ensure that Muni platforms are not overcrowded by staging event attendees on the adjacent sidewalks until there is sufficient space on the Muni platforms, which are proposed to be expanded as part of the project.

At the intersection of Third/South, the trained personnel shall implement strategies to allow pedestrians to cross the street safely. The strategies could include manually overriding the traffic signal and directing pedestrians to cross, erecting temporary pedestrian crossing barriers, allowing use of the closed Third Street as a pedestrian access route, providing a defined passenger waiting area within the closed Third Street, and shielding passengers waiting to board light rail from adjacent pedestrian traffic.

Monitoring and Reporting

The project sponsor shall retain a qualified transportation professional⁵¹ to conduct field observations of pedestrian hazards and safety conditions along Third Street adjacent to the project site, as outlined below, and to document the results in a *Pedestrian Access Report*. City staff shall verify the field data collection results. Prior to beginning field observations, the transportation professional shall develop the data collection methodology in consultation with and approved by OCII (or its designated representative such as the ERO) in coordination with SFMTA. The data collection methodology shall be reviewed and revised annually, if appropriate. Field observations shall be conducted during the following event types and attendance levels:

- at least two weekday NBA basketball games with 12,500 or more attendees;
- at least two weekend NBA basketball games with 12,500 or more attendees;
- at least two weekday non-basketball game events with 12,500 or more attendees;
- at least two weekend non-basketball game events with 12,500 or more attendees;
- at least two weekday non-basketball game events with 3,000 to 9,000 attendees; and,
- at least two weekend non-basketball game events with 3,000 to 9,000 attendees; and
- at least two weekday convention events of 9,000 or more attendees.

The pedestrian hazard and safety conditions field observations shall occur on an annual basis. The *Pedestrian Access Report* shall be submitted to SFMTA, OCII and Planning Department for review within 30 days of completion of the data collection. If the City finds that the project does not meet the performance standard outlined below, the Transportation Management Plan (TMP) shall be revised to incorporate techniques to minimize conflicts between pedestrians and other modes. The TMP shall be revised within 90 days of submittal of the *Pedestrian Access Report*. When the project is not meeting the stated performance standard, the project sponsor shall collect data on a semi-annual basis (i.e., twice during a calendar year) to assess the effectiveness of various measures incorporated into the revised TMP. The implementation of various measures shall be intensified until pedestrian access to and from the site occurs in a safe manner, as determined by OCII (or the ERO).

The performance standard for safe pedestrian operations consists of the following: substantial numbers of pedestrians are not spilling onto the Muni right-of-way area, are not illegally crossing Third Street midblock, are not overcrowding the Muni platforms, and are not crossing intersections against the signal. Upon achievement of the performance standard, the project sponsor may resume field observations for basketball, non-basketball and convention events on an annual basis. If the sponsor demonstrates three consecutive years of meeting the performance standard, the comprehensive data collection effort may occur every two years.

⁵¹ The Transportation Demand Management Report shall be performed by a qualified transportation professional from the San Francisco Planning Department's *Transportation Consultant Pool*. Available online at <http://www.sf-planning.org/index.aspx?page=1886>. Accessed May 28, 2015.

Further, in reviewing the *Pedestrian Access Report*, OCII (or the ERO) may adjust the size of the events for which this measure is applicable. For example, if small scale events (e.g., those with 5,000 attendees) do not result in crosswalk and/or Muni platform overcrowding or other similar pedestrian safety conditions, OCII (or the ERO) may revise this mitigation measure to apply to events of 5,001 or more attendees.

Mitigation Measure M-TR-22: Provide Safe Pedestrian Access to Adjacent Transit and Parking Facilities and Monitoring would ensure that the pedestrian impacts would remain the same as those identified in **Impact TR-6** for pedestrian conditions without an overlapping SF Giants evening game and **Impact TR-15** for pedestrian conditions with an overlapping SF Giants evening game irrespective of whether SFMTA PCOs were available during various events, and would not result in secondary transportation impacts. With implementation of **Mitigation Measure M-TR-22: Provide Safe Pedestrian Access to Adjacent Transit and Parking Facilities**, project-generated pedestrian demand during large events would not substantially affect pedestrian flows, create potentially hazardous conditions for pedestrians or otherwise interfere with pedestrian accessibility to the site and adjoining areas. Therefore, without implementation of the Muni Special Event Transit Service Plan, the proposed project's impact on pedestrians would be *less than significant with mitigation*.

Impact TR-23: Without implementation of the Muni Special Event Transit Service Plan, the proposed project would not result in potentially hazardous conditions for bicyclists, or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas under Existing plus Project conditions. (Less than Significant)

Without implementation of the Muni Special Event Transit Service Plan for large events at the project site, the number of attendees arriving by bicycle is expected to increase by about 25 percent compared to conditions with the Muni Special Event Transit Service Plan. About 60 additional bicycle trips could be expected during the peak hour arriving or departing a large event. With the additional bicycle trips, bicycle conditions in the vicinity of the project site without the Muni Special Event Transit Service Plan would be similar to those presented above in Impact TR-7. However, because more event center attendees would be arriving by auto, traffic volumes on streets leading to and from the off-site parking facilities would be greater, which could result in increased potential for bicycle-vehicle conflicts. Project TMP measures, such as PCOs and post-event temporary lane closures, would serve to minimize congestion and conflicts between modes.

Overall, without implementation of the Muni Special Event Transit Service Plan, the number of attendees arriving by vehicle would increase prior to and following a large event, which may increase vehicle-bicycle conflicts, however, the proposed project TMP measures would minimize the potential for conflicts. Therefore, without implementation of the Muni Special Event Transit Service Plan, the proposed project's impact on bicyclists would be *less than significant*.

Mitigation: Not required

Impact TR-24: Without implementation of the Muni Special Event Transit Service Plan, the proposed project would not result in significant impacts on loading under Existing plus Project conditions. (Less than Significant)

Impacts related to passenger loading/unloading activities without implementation of the Muni Special Event Transit Service Plan would be similar to those identified above for Impact TR-8. Without implementation of the Muni Special Event Transit Service Plan, the number of event attendees arriving by transit would decrease, which would in turn reduce the passenger loading/unloading demand associated with passengers alighting and boarding the proposed Muni Special Event Shuttles on South, 16th, Illinois, and Third Streets. However, with fewer light rail vehicles serving the event center transit demand at the UCSF Mission Bay station, it would take longer for all attendees taking transit to board and depart the area. Therefore conditions on the sidewalks on Third and South Streets would become more congested. During all events, the proposed project's TMP assumes that PCOs would be stationed at intersections adjacent to the proposed site (and elsewhere) to manage pedestrian flows and minimize conflicts, and that a similar level of management would be provided via police officers or PCOs regardless of whether the Muni Special Event Transit Service Plan is implemented. The increase in auto mode and project vehicle trips without implementation of the Muni Special Event Transit Service Plan could lead to additional traffic circling in the area seeking parking, which could result in increased pedestrian-vehicle conflicts associated with passenger loading/unloading activity on Terry A. Francois Boulevard and South Street. Project TMP information on parking facilities and real-time information on availability would serve to minimize the impact of additional vehicles on passenger loading/unloading activities. Thus, similar to pedestrian conditions described above in Impact TR-8 for conditions that assume implementation of the Muni Special Event Transit Service Plan, proposed passenger loading/unloading facilities would be adequate to meet the demand associated with the project uses even without the Muni Special Event Transit Service Plan.

Impacts related to truck and service vehicle loading/unloading activities, which would not occur immediately before or after events at the project site, would be the same as those described above for Impact TR-8. Freight deliveries would occur prior to events, and would be accommodated on-site with the loading area, and at the curb adjacent to the project site on South Street and Terry A. Francois Boulevard. **Improvement Measure I-TR-8: Truck and Service Vehicle Loading Operations Plan** would reduce the potential for conflicts between proposed project-generated loading/unloading activities and pedestrians, transit, bicyclists, and autos.

For the reasons noted above, the truck/service vehicle and passenger loading/unloading activities adjacent to the project site would not be substantially affected, and therefore, without implementation of the Muni Special Event Transit Service Plan, impacts related to loading would be *less than significant*.

Mitigation: Not required

Improvement Measure I-TR-8: Truck and Service Vehicle Loading Operations Plan (see Impact TR-8, above)

Impact TR-25: Without implementation of the Muni Special Event Transit Service Plan, the proposed project would not result in significant impacts on emergency vehicle access under Existing plus Project conditions. (Less than Significant)

Impacts related to emergency vehicle access without implementation of the Muni Special Event Transit Service Plan would be similar to those identified in **Impact TR-10**. The additional vehicle trips resulting from the projected shift from transit to auto mode would be dispersed over a broader area, as more drivers would have to park at off-street facilities located further away from the project site (most likely north of the Mission Creek Channel), reducing the effect of the increased vehicle traffic on the roadway network. Some increase in vehicles on Terry A. Francois Boulevard would be anticipated at the proposed passenger loading/unloading zones, as it is anticipated that without implementation of the Muni Special Event Transit Service Plan more attendees would be dropped off and picked up at the passenger loading/unloading zone. However, this increase in vehicles adjacent to the project site would be accommodated without a substantial increase in vehicle conflicts as adequate project frontage would be available to accommodate the increase passenger loading/unloading demand. The proposed roadway improvements that are planned to be built as part of the Mission Bay South Infrastructure Plan in the vicinity of the project site (i.e., extension and widening of 16th Street between Illinois and Terry A. Francois Boulevard, realignment of Terry A. Francois Boulevard, widening of Mariposa Street, implementation of the transit-only lane on 16th Street) would facilitate emergency access to the site such that before and after events, emergency vehicle access to the project site and nearby hospital uses would be maintained. As discussed in Impact TR-10, implementation of **Improvement Measure I-TR-10a: UCSF Emergency Vehicle Access and Garage Signage Plan** and **Improvement Measure I-TR-10b: Mariposa Street Restriping** would enhance emergency vehicle access to UCSF emergency facilities. For the reasons noted above, the emergency vehicle access to the site or to the surrounding area would not be substantially affected, and therefore, without implementation of the Muni Special Event Transit Service Plan, impacts related to emergency vehicle access would be *less than significant*.

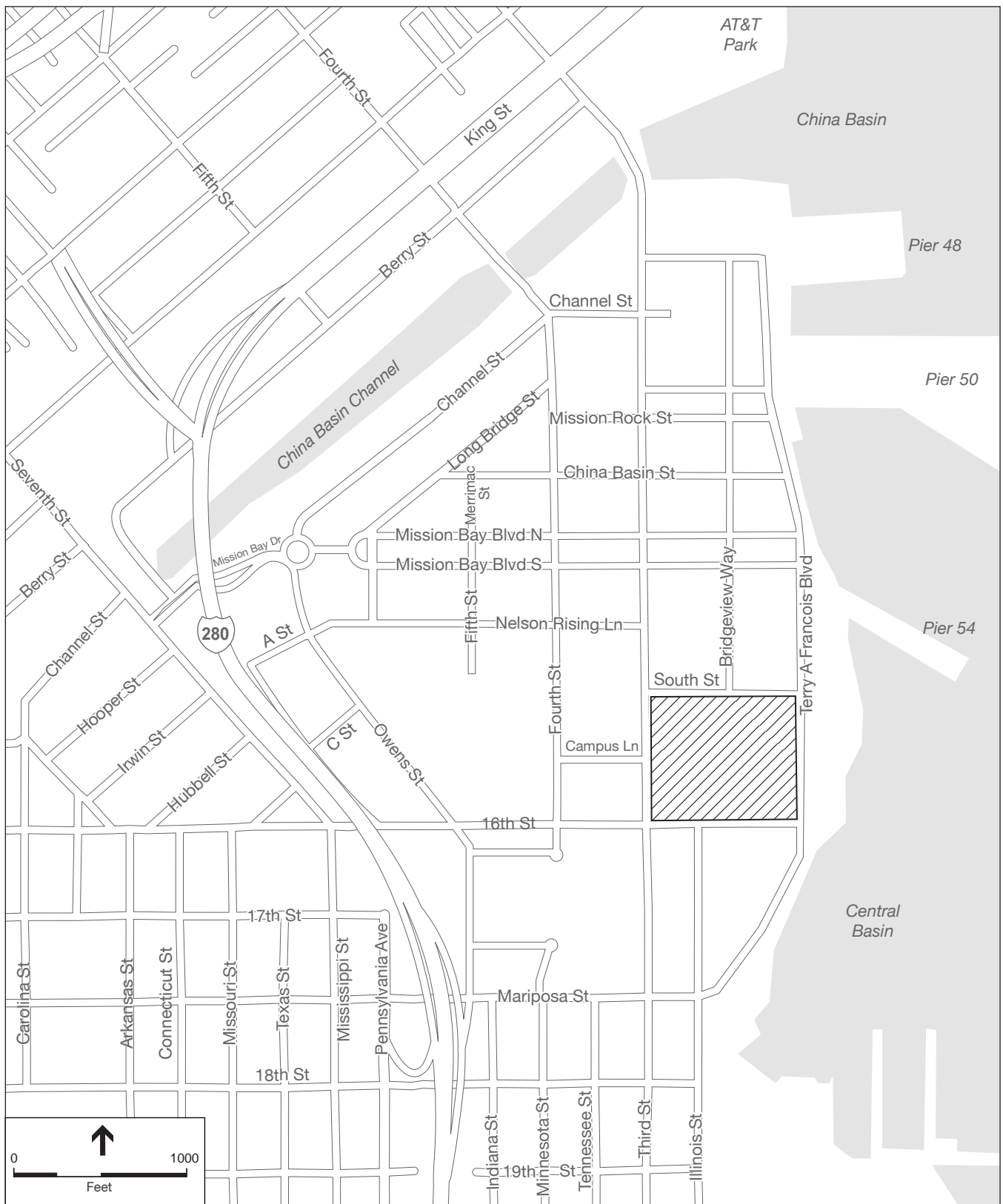
Mitigation: Not required

Improvement Measure I-TR-10a: UCSF Emergency Vehicle Access and Garage Signage Plan (see Impact TR-10, above)

Improvement Measure I-TR-10b: Mariposa Street Restriping (see Impact TR-10, above)

5.2.5.5 Cumulative Impacts

This section discusses the cumulative impacts to transportation that could result from the project, in conjunction with past, present, and reasonably foreseeable future projects. The geographic context for the analysis of cumulative transportation impacts includes the sidewalks and roadways adjacent to the project site, and the local roadway and transit network in the vicinity of the project. The cumulative analysis reflects the completion of the roadway network within Mission Bay, as presented in **Figure 5.2-21**. The discussion of cumulative transportation impacts



 Project Site Boundary

SOURCE: OCII, 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 5.2-21

2040 Cumulative Roadway Network in Mission Bay

assesses the degree to which the project would affect the transportation network in conjunction with other reasonably foreseeable projects. Detailed calculations are included in **Appendix TR**.

As described in Section 5.2.5.3 above, future 2040 cumulative traffic, transit and pedestrian forecasts were estimated based on cumulative development and growth identified by the SFCTA SF-CHAMP travel demand model.

Cumulative Construction Impacts

Impact C-TR-1: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative construction-related ground transportation impacts. (Less than Significant)

The construction of the proposed project may overlap with the construction of other reasonably foreseeable projects listed in Section 5.1.3 above, including the UCSF LRDP Mission Bay campus projects, Seawall Lot 337 and Pier 48 Mixed-Use Project (Mission Rock Project), the Kaiser Medical Offices at 1600 Owens Street (currently under construction), Uber/ARE project on Mission Bay Blocks 26/27, The Exchange project on Mission Bay Block 40, the Family House project on Mission Bay Block 7 East, affordable housing projects on Mission Bay Blocks 3, 6, and 7, the Residential and Hotel project on Mission Bay Block 1, and 360 Berry Street project on Mission Bay Block N4/P3. In addition, project construction would overlap with construction activities associated with realignment of Terry A. Francois Boulevard to the east of the project site, and construction of the Bayfront Park, as well as other parks on Mission Bay Blocks P23 and P24.

The Uber/ARE project on Mission Bay Blocks 26/27, located directly north of the project site across South Street, consists of 423,000 gsf of office space. Construction on this project is estimated to start by the end of 2015 and continue for 18 to 24 months.

The buildout of Mission Bay has been ongoing since 1999, and as of 2014, roughly 64 percent of the housing units have been completed and close to 40 percent of the planned office and laboratory space is complete. In 2013 and 2014 when the transportation data was collected for this EIR for the existing setting conditions, about 1.13 million gsf of development were under construction at the Mission Bay Campus. The majority of the remaining construction is included as part of the UCSF LRDP and would be constructed over the next 20 years.⁵² The timing of construction of other development projects noted above is not currently known. As discussed in Impact TR-1, it is anticipated that construction at the project site over the 26-month construction period would overlap with the construction activity of other projects in the area, notably the UCSF LRDP projects, planned for construction between 2015 and 2019. These include 523

⁵² When the LRDP in Mission Bay is completed, there will be approximately 3 million gsf of UCSF-occupied space, excluding structure parking and temporary childcare. The 2014 Plan-level analysis of the UCSF LRDP determined that although construction activities would be temporary, construction impacts would be considered potentially significant given the magnitude of the LRDP development over the course of many years (over 20 plus years), and need for ongoing coordination and monitoring. However, with implementation of mitigation measures, the UCSF LRDP construction-related transportation impacts would be reduced to less than significant levels. UCSF LRDP, pp. 3-39 and 7-89.

residential units, about 440,000 gsf of research, clinical and medical space, and a parking garage containing 500 vehicle parking spaces. In particular, the UCSF East Campus project on Blocks 33/34, located directly south of the project site across 16th Street, consists of 500,000 gsf of office space, but may include up to 250,000 gsf of clinical space with the remainder research/office space. The project will be built in two phases, with the first phase (about 250,000 gsf) starting construction in 2016 and continuing for about 18 to 24 months. Detailed construction schedules of other UCSF projects are not currently known, however, it is anticipated that a portion of the construction schedules would overlap with the 26-month project construction period. These UCSF projects are projected to generate about 40 daily truck trips on average, and these trucks would enter/exit the UCSF campus via Mission Bay Boulevard North, Nelson Rising Lane, Owens Street, 16th Street, and Fourth Street.

In addition, construction of the planned Bayfront Park east of a realigned Terry A. Francois Boulevard (on Mission Bay Block P22), a neighborhood park located along the west side of Terry A. Francois Boulevard south of 16th Street (on Mission Bay Block P23), as well as a neighborhood park on the north side of Mariposa Street east of Owens Street (on Mission Bay Block P24) would overlap with construction of the proposed project. Construction on the parks on Mission Bay Blocks P23 and P24 has been initiated, with construction completed by the end of 2016. Construction on the Bayfront Park (P22) directly to the east of the project site would begin following realignment of Terry A. Francois Boulevard, and would be completed by 2018.

The Exchange project on Mission Bay Block 40 is located about 1,200 southwest of the project site, while the Family House project on Mission Bay Block 7 East, affordable housing projects on Mission Bay Blocks 3, 6, and 7, the Residential and Hotel project on Mission Bay Block 1, and 360 Berry Street project on Mission Bay Block N4/P3 are located between 1,000 and 3,000 feet to the northwest of the project site, respectively. Construction truck traffic associated with these projects traveling between the sites and I-80 and I-280 may travel on the same roadways and at the same time as project-generated construction traffic further from the project site and on the regional facilities.

If Caltrain adopts the electrification project and funding remains available, construction of the Peninsula Corridor Electrification Project could start in 2016, and the first electrically-powered trains would be in service by 2020 or 2021.⁵³ Construction activities would occur primarily within the Caltrain right-of-way to the west of the project site.

Localized cumulative construction-related transportation impacts could occur as a result of reasonably foreseeable projects in the vicinity of the project site that would generate increased traffic at the same time and on the same roads as the proposed project. As part of the construction permitting process, each development project would be required to work with the various departments of the City to develop a detailed and coordinated plan that would address

⁵³ Peninsula Corridor Electrification Project FAQ Update December 2014. Available online at <http://www.caltrain.com/projectsplans/CaltrainModernization/Modernization/PeninsulaCorridorElectrificationProject.html>. Accessed May 28, 2015.

construction vehicle routing, traffic control, and pedestrian movement adjacent to the construction area. The cumulative construction-related transportation impacts of the multiple nearby construction projects would occur over an extended duration, and the project sponsor would coordinate with various City departments such as SFMTA and DPW through the SFMTA Transportation Advisory Committee (TASC), a multi-agency review body, to develop coordinated plans that would address construction-related vehicle routing and pedestrian movements adjacent to the construction area for the duration of construction overlap.

Overall, because proposed project's construction activities would be temporary and limited in duration, and are required to be conducted in accordance with City requirements, the proposed project would not contribute considerably to the cumulative construction-related transportation impacts. Furthermore, proposed project **Improvement Measure I-TR-1: Construction Management Plan and Public Updates** would further reduce the proposed project's less-than-significant impacts related to potential conflicts between construction activities and pedestrians, transit, and autos, and includes provisions for construction truck traffic management, construction worker parking plan, project construction updates for adjacent businesses and residents, and carpool and transit access for construction workers.

Therefore, for the above reasons, the proposed project, in combination with past, present and reasonably foreseeable development in San Francisco, would not contribute considerably to the significant cumulative construction-related transportation impacts, and the project's cumulative impact would be *less than significant*.

Mitigation: Not required

Comparison of Impact C-TR-1 to Mission Bay FSEIR Impact Analysis

The Mission Bay FSEIR did not identify any significant cumulative impacts related to construction-related transportation impacts. Consequently, no new or different mitigation measures or alternatives to reduce project impacts related to construction activities are identified or required with respect to the currently proposed project. On the basis of the above, the project would result in no new or substantially more severe significant effects than those identified in the Mission Bay FSEIR related to construction-related transportation impacts.

Cumulative Traffic Impacts

Impact C-TR-2: The project, in combination with other past, present, and reasonably foreseeable future projects, would result in significant cumulative traffic impacts at multiple intersections in the project vicinity under 2040 Cumulative conditions. (Significant and Unavoidable with Mitigation)

Under 2040 cumulative conditions, proposed project impacts were assessed by calculating the project-generated traffic conditions at intersections that are projected to operate at LOS E or LOS F under 2040 cumulative conditions for the No Event scenario for the weekday p.m. and

Saturday evening peak hours. Because the SF-CHAMP travel demand model does not include the travel demand associated with events, the proposed project cumulative impacts for events at the project site (i.e., the Convention Event and Basketball Game scenarios) for the weekday p.m. peak hour were assessed by adding the event-related traffic volumes to the No Event scenario.

At intersections that are projected to operate at LOS E or LOS F under 2040 cumulative conditions, the increase in proposed project vehicle trips was reviewed to determine whether the increase would contribute considerably to critical movements operating at LOS E or LOS F. In addition, the intersections where project-specific significant impacts were identified for existing plus project conditions, the proposed project would also be considered to result in a cumulative impact under 2040 cumulative conditions. Supporting documentation regarding the cumulative contributions is included in **Appendix TR**.

Table 5.2-59, **Figure 5.2-22**, and **Figure 5.2-23** present the intersection LOS analysis for 2040 cumulative conditions for the weekday p.m. peak hour, while **Table 5.2-60** and **Figure 5.2-24** present the intersection LOS analysis for the Saturday evening peak hour.

As shown in **Table 5.2-59**, for 2040 cumulative weekday p.m. peak hour conditions with the proposed project (i.e., for the No Event, Convention Event, and Basketball Game scenarios), 10 of the 22 study intersections would operate at LOS E or LOS F conditions during the weekday p.m. peak hour, including the intersections of King/Third, King/Fourth, Fifth/Harrison/I-80 westbound off-ramp, Fifth/Bryant/I-80 eastbound on-ramp, Third/Channel, Seventh/Mission Bay Drive, Third/16th, Owens/16th, Seventh/Mississippi/16th, and Third/Cesar Chavez. The proposed project would result in project-specific impacts (i.e., from LOS D or better to LOS E or LOS F, or from LOS E to LOS F under either existing plus project or 2040 cumulative conditions), or contribute considerably (i.e., more than 5 percent) to the poorly operating critical movements at intersections that are projected to operate at LOS E or LOS F conditions at 9 of the 10 intersections that would operate at LOS E or LOS F under 2040 cumulative conditions: King/Third, King/Fourth, Fifth/Harrison/I-80 westbound off-ramp, Third/Channel, Seventh/Mission Bay Drive, Third/16th, Owens/16th, Seventh/Mississippi/16th, and Third/Cesar Chavez.

In addition, as shown in **Table 5.2-60**, for 2040 cumulative Saturday evening peak hour conditions with the proposed project, the intersection of Fifth/Harrison/I-80 westbound off-ramp is projected to operate at LOS E under the No Event scenario. For the Basketball Game scenario, 8 of the 22 study intersections would operate at LOS E or LOS F conditions, including the intersections of King/Third, King/Fourth, Fifth/Harrison/I-80 westbound off-ramp, Fifth/Bryant/I-80 eastbound on-ramp, Third/Channel, Fourth/Channel, and Seventh/Mission Bay Drive, and Seventh/Mississippi/16th. The proposed project would result in project-specific impacts, or contribute considerably to the poorly operating critical movements at all eight intersections that are projected to operate at LOS E or LOS F conditions.

**TABLE 5.2-59
 INTERSECTION LEVEL OF SERVICE – 2040 CUMULATIVE CONDITIONS –
 WEEKDAY PM PEAK HOUR**

#	Intersection Location		No Event		Convention Event		Basketball Game	
			Delay ^{a,b}	LOS	Delay	LOS	Delay	LOS
1	King St	Third Street	>80	F	>80	F	>80	F
2	King St	Fourth Street	>80	F	>80	F	>80	F
3	King St/Fifth St	I-280 ramps	24.5	C	23.8	C	23.8	C
4	Fifth St/Harrison	I-80 WB off-ramp	>80	F	>80	F	>80	F
5	Fifth St/Bryant St	I-80 EB on-ramp	>80	F	>80	F	>80	F
6	Third Street	Channel Street	65.7	E	> 80	F	71.6	E
7	Fourth Street	Channel Street	17.6	B	15.1	B	18.7	B
8	Seventh Street	Mission Bay Dr	47.7	D	52.9	D	66.5	E
9	TA Francois Blvd	South Street	< 10	A	< 10	A	< 10	A
10	Third Street	South Street	34.8	C	40.1	D	38.2	D
11	TA Francois Blvd	16th Street	20.4	C	20.4	C	20.5	C
12	Illinois Street	16th Street ^c	21.4 (nb)	C	22.6 (nb)	C	17.9 (nb)	C
13	Third Street	16th Street ^e	51.9	D	69.4	E	70.9	E
14	Fourth Street	16th Street ^e	27.0	C	25.1	C	24.6	C
15	Owens Street	16th Street ^e	61.4	E	66.4	E	58.9	E
16	7th/Mississippi	16th Street ^e	77.9	E	>80	F	>80	F
17	Illinois Street	Mariposa Street	20.4	C	21.2	C	21.2	C
18	Third Street	Mariposa Street	48.7	D	51.3	D	48.2	D
19	Fourth Street	Mariposa Street	21.9	C	21.0	C	19.5	B
20	Mariposa Street	I-280 NB off-ramp	38.9	D	40.2	D	37.4	D
21	Mariposa Street	I-280 SB on-ramp ^d	13.1	B	14.3	B	13.1	B
22	Third Street	Cesar Chavez St	63.6	E	>80	F	>80	F

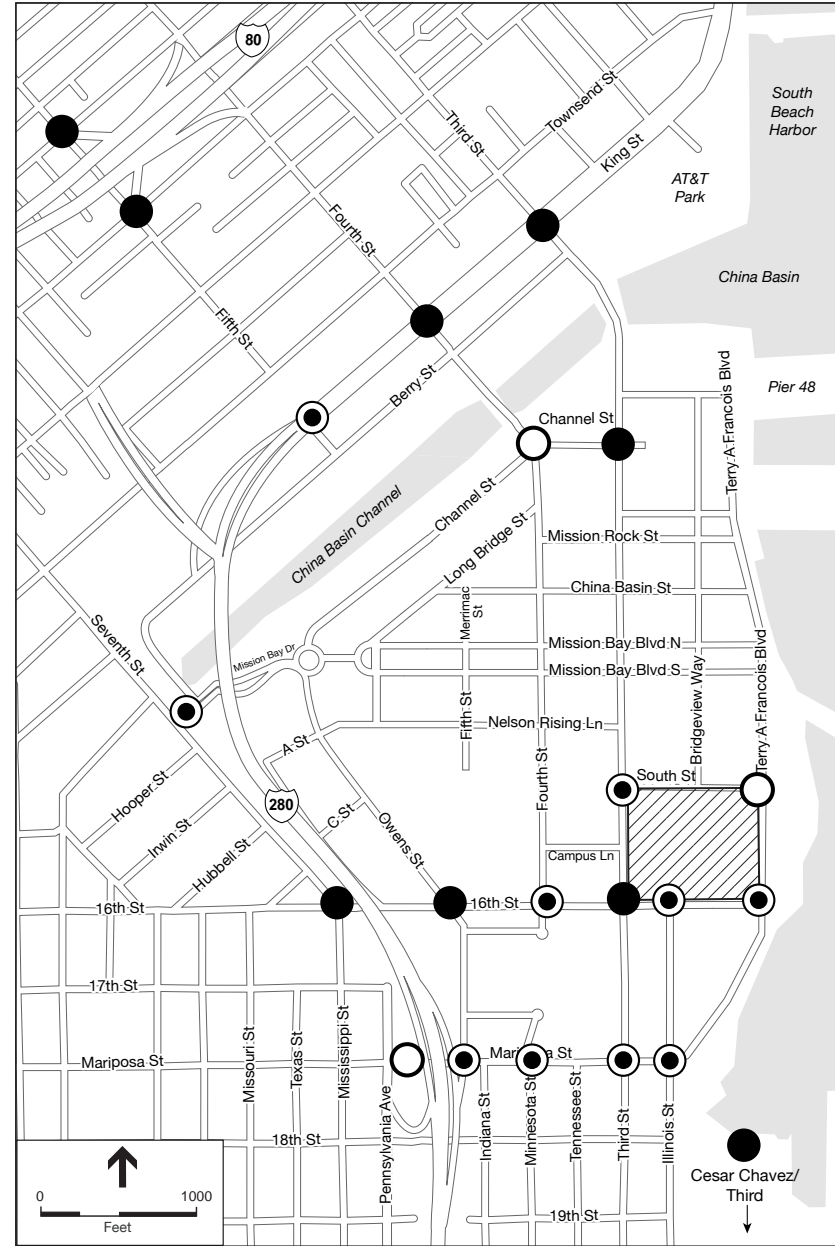
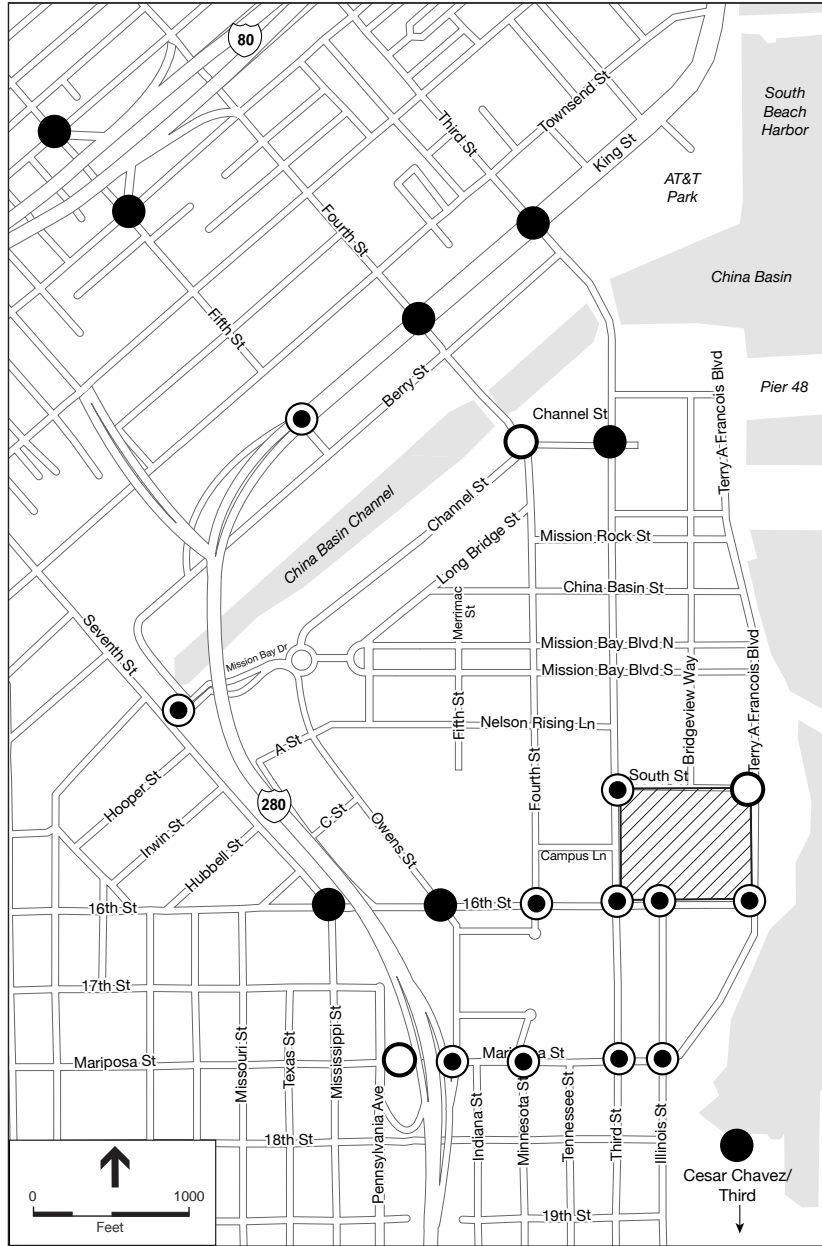
NOTES:


- ^a Delay presented in seconds per vehicle. For unsignalized intersections, delay and LOS presented for worst approach. Worst approach indicated in ().
- ^b Intersections operating at LOS E or LOS F conditions highlighted in **bold**. Significant project impacts shaded.
- ^c All-way stop-controlled intersection.
- ^d The traffic signal at the intersection of Mariposa/I-280 southbound on-ramp is part of the roadway improvements on Mariposa Street between the I-280 northbound off-ramp and I-280 southbound on-ramp and the extension of Owens Street between 16th and Mariposa Streets, and is currently planned to be operational by fall 2015.
- ^e Includes implementation of the 22 Fillmore Transit Priority Project, which includes converting one mixed-flow lane in each direction to a side-running transit-only lane.
- ^f Under the Basketball Game scenario, a PCO would be stationed at this study intersection during the Saturday pre-event period, and, as necessary, would manually direct vehicles, pedestrians, transit, and bicyclists through the intersection. LOS reflects conditions without PCO intervention.

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

NO EVENT SCENARIO

CONVENTION EVENT SCENARIO



 Project Site Boundary
  LOS A-B
  LOS C-D
  LOS E-F

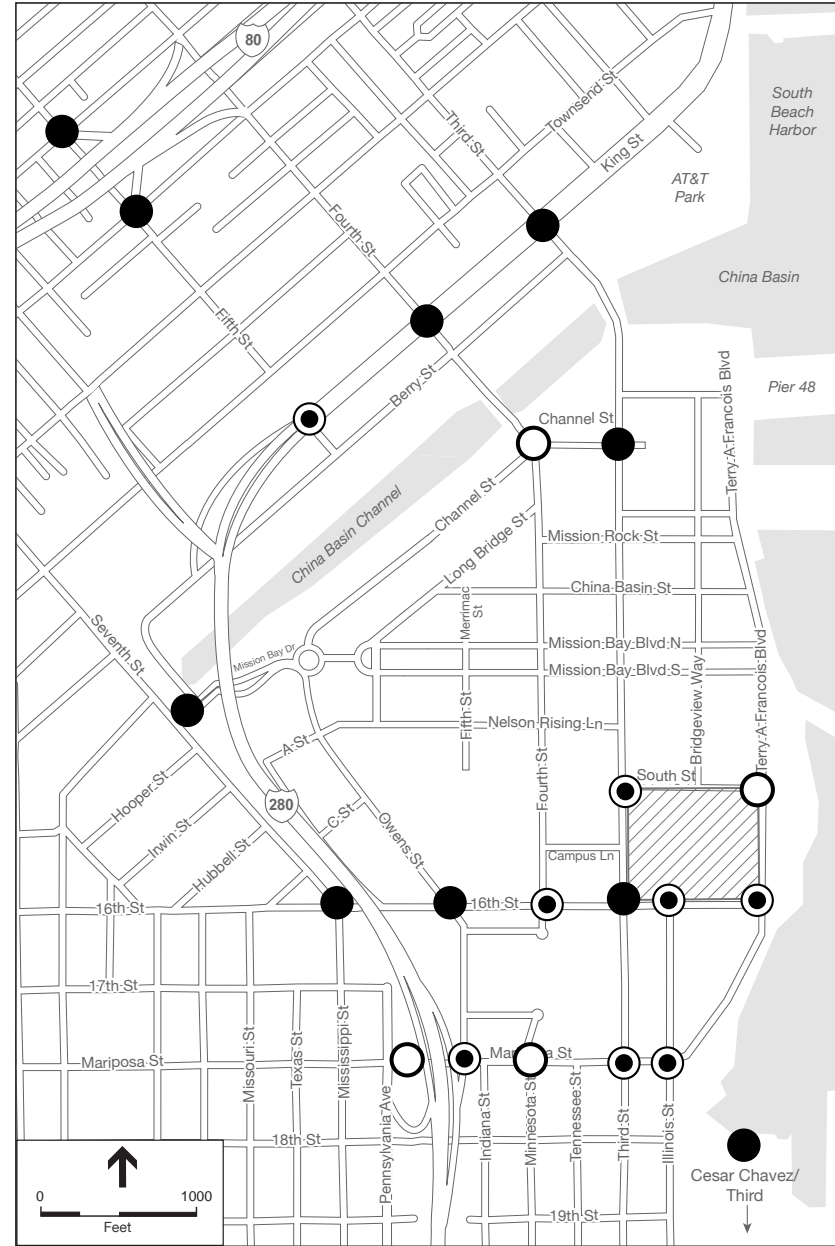
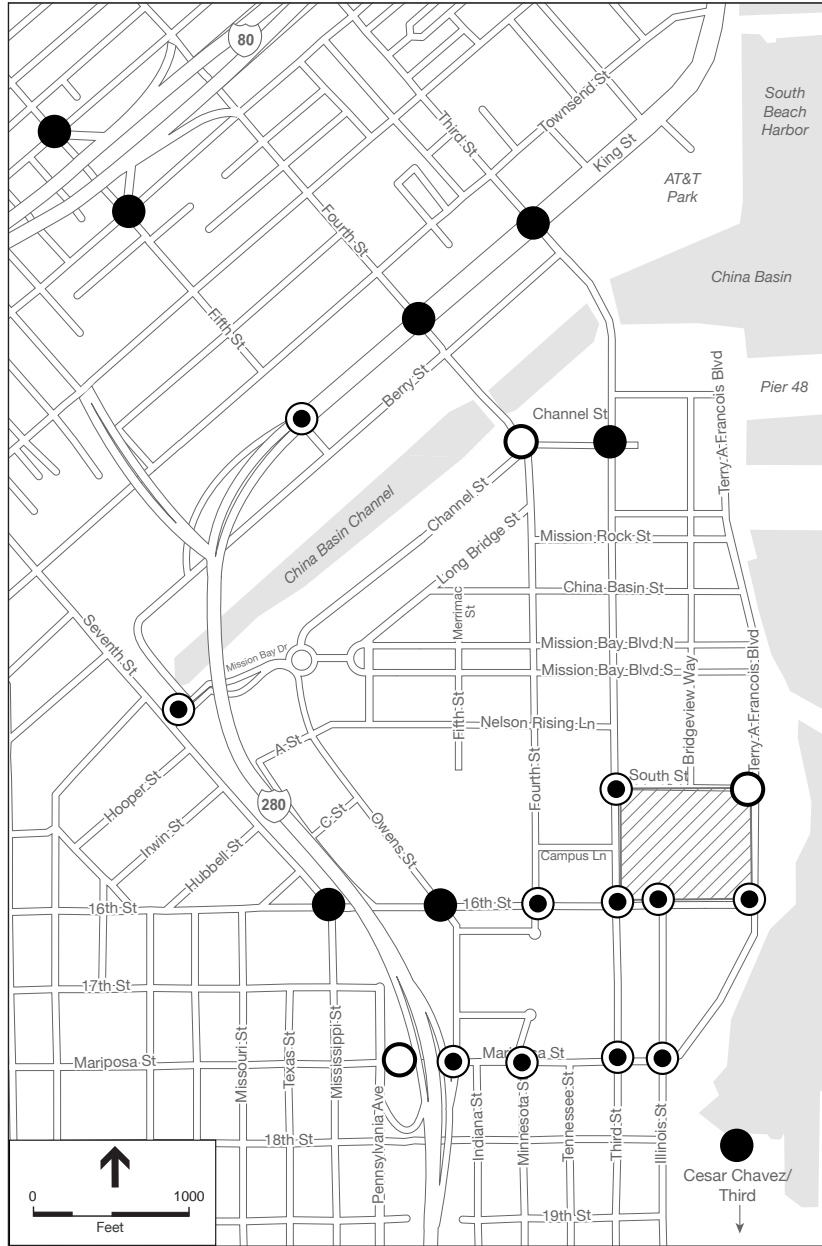
SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E: Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 5.2-22
2040 Cumulative Intersection LOS-Weekday PM Peak Hour - No Event and Convention Event Scenarios

NO EVENT SCENARIO

BASKETBALL GAME SCENARIO



 Project Site Boundary
  LOS A-B
  LOS C-D
  LOS E-F

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E: Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 5.2-23
2040 Cumulative Intersection LOS-Weekday PM Peak Hour - No Event and Basketball Game Scenarios

**TABLE 5.2-60
INTERSECTION LEVEL OF SERVICE – 2040 CUMULATIVE CONDITIONS –
SATURDAY EVENING PEAK HOUR**

#	Intersection Location		No Event		Basketball Game	
			Delay ^a	LOS ^b	Delay	LOS
1	King St	Third Street	44.3	D	56.8	E
2	King St	Fourth Street	36.7	D	70.8	E
3	King St/Fifth St	I-280 ramps	15.7	B	< 10	A
4	Fifth St/Harrison	I-80 WB off-ramp	74.9	E	>80	F
5	Fifth St/Bryant St	I-80 EB on-ramp	43.9	D	71.4	E
6	Third Street	Channel Street ^f	12.4	B	>80	F
7	Fourth Street	Channel Street ^f	< 10	A	67.5	E
8	Seventh Street	Mission Bay Dr	26.6	C	>80	F
9	TA Francois Blvd	South Street ^f	< 10	A	<10	A
10	Third Street	South Street ^f	< 10	A	15.0	B
11	TA Francois Blvd	16th Street ^f	19.5	B	19.0	B
12	Illinois Street	16th Street ^{c,f}	12.2 (eb)	B	13.3 (nb)	B
13	Third Street	16th Street ^{e,f}	17.4	B	18.0	B
14	Fourth Street	16th Street ^e	17.8	B	20.3	C
15	Owens Street	16th Street ^e	13.9	B	24.8	C
16	7th/Mississippi	16th Street ^e	42.6	D	61.2	E
17	Illinois Street	Mariposa Street ^f	15.5	B	16.9	B
18	Third Street	Mariposa Street ^f	22.9	C	24.2	C
19	Fourth Street	Mariposa Street ^f	< 10	A	<10	A
20	Mariposa Street	I-280 NB off-ramp ^f	18.2	B	35.3	D
21	Mariposa Street	I-280 SB on-ramp ^d	10.2	B	<10	A
22	Third Street	Cesar Chavez St	23.7	C	22.8	C

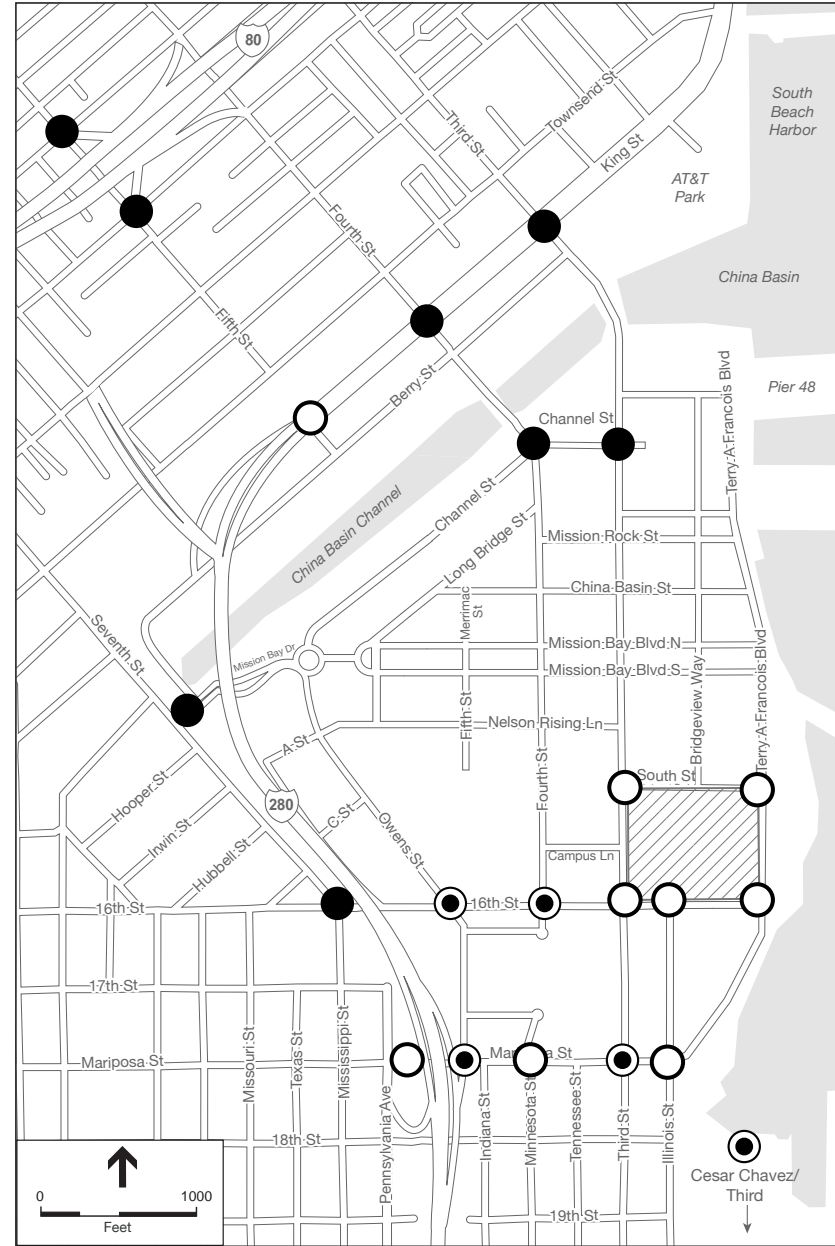
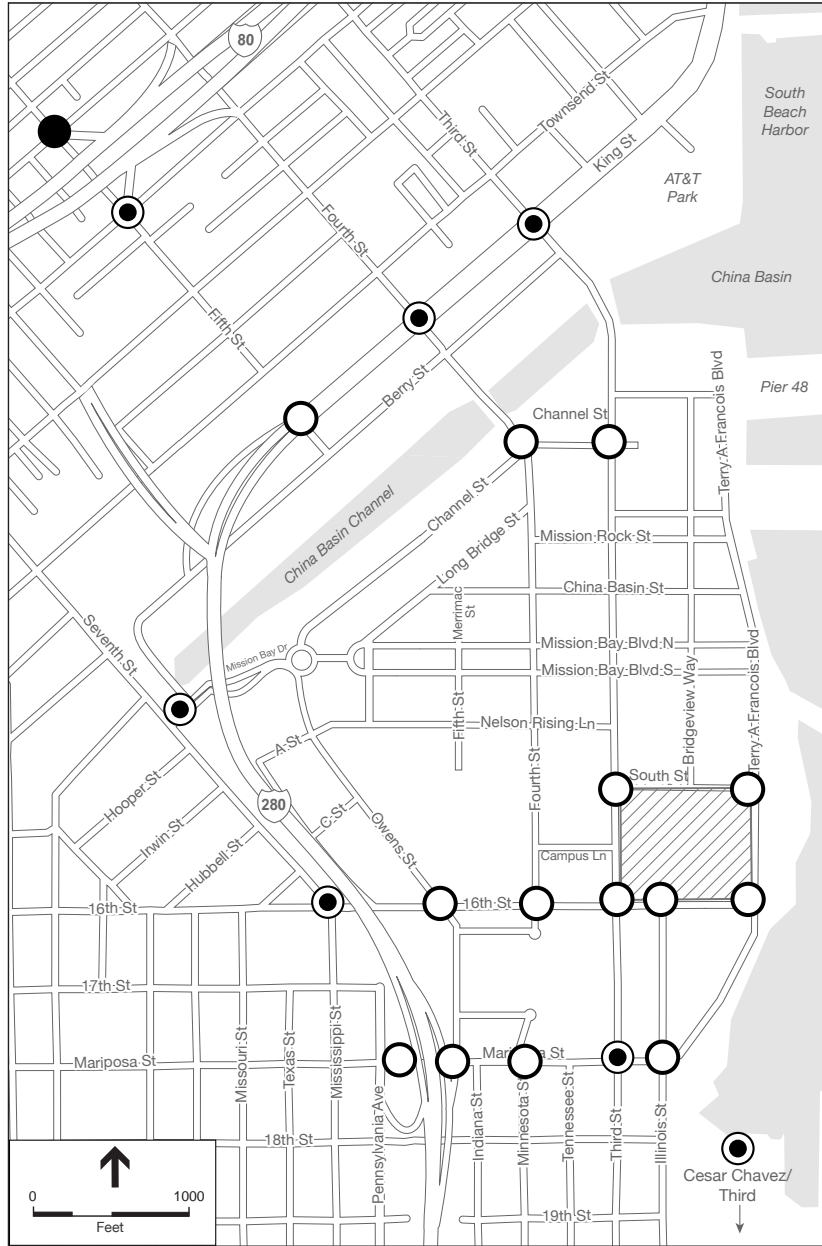
NOTES:

- ^a Delay presented in seconds per vehicle. For unsignalized intersections, delay and LOS presented for worst approach. Worst approach indicated in ().
- ^b Intersections operating at LOS E or LOS F conditions highlighted in **bold**. Significant project impacts shaded.
- ^c All-way stop-controlled intersection.
- ^d The traffic signal at the intersection of Mariposa/I-280 southbound on-ramp is part of the roadway improvements on Mariposa Street between the I-280 northbound off-ramp and I-280 southbound on-ramp and the extension of Owens Street between 16th and Mariposa Streets, and is currently planned to be operational by fall 2015.
- ^e Includes implementation of the 22 Fillmore Transit Priority Project, which includes converting one mixed-flow lane in each direction to a side-running transit-only lane.
- ^f Under the Basketball Game scenario, a PCO would be stationed at this study intersection during the Saturday pre-event period, and, as necessary, would manually direct vehicles, pedestrians, transit, and bicyclists through the intersection. LOS reflects conditions without PCO intervention.

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

NO EVENT SCENARIO

BASKETBALL GAME SCENARIO



 Project Site Boundary
  LOS A-B
  LOS C-D
  LOS E-F

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E: Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 5.2-24

2040 Cumulative Intersection LOS-Saturday Evening Peak Hour - No Event and Basketball Game Scenarios

In addition, as discussed in under existing plus project conditions in **Impact TR-11**, the proposed project would result in significant traffic impacts at five additional study intersections during the weekday p.m. and weekday evening peak hours for conditions with an overlapping evening event at AT&T Park, including: King/Fifth/I-280 ramps (weekday evening), Third/South (weekday evening), Fourth/16th (weekday p.m.), Illinois/Mariposa (weekday evening), and Mariposa/I-280 northbound off-ramp (weekday evening), and project-specific traffic impacts at these intersection would be also considered significant cumulative impacts of the project.

Generally, to mitigate poor operating conditions of study intersections, additional travel lane capacity would be needed on one or more approaches to the intersection, particularly at intersections with the I-80 ramps. The provision of additional travel lane capacity by narrowing sidewalks, removal of on-street parking, and/or removal of bicycle lanes would generally be infeasible and inconsistent with the transit, bicycle, and pedestrian environment encouraged by the City's *Transit First* Policy by removing space dedicated to pedestrians, and/or bicycles and increasing the distances required for pedestrians to cross streets. Implementation of **Mitigation Measure M-TR-2a: Additional PCOs during Events**, **Mitigation Measure M-TR-2b: Additional Strategies to Reduce Transportation Impacts**, **Mitigation Measure M-TR-11a: Additional PCOs During Overlapping Events**, **Mitigation Measure M-TR-11b: Participation in Ballpark/Mission Bay Transportation Coordinating Committee**, and **Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts of Overlapping Events** would reduce the proposed project's contribution to cumulative impacts related to event-related traffic conditions but would not reduce the contribution to less-than-significant levels.

Overall, combined for all analysis peak hours, the proposed project would result in cumulative impacts, or contribute to 2040 cumulative impacts at the following 16 study intersections: King/Third, King/Fourth, King/Fifth/I-280 ramps, Fifth/Harrison/I-80 westbound off-ramp, Fifth/Bryant/I-80 eastbound on-ramp, Third/Channel, Fourth/Channel, Seventh/Mission Bay Drive, Third/South, Third/16th, Fourth/16th, Owens/16th, Seventh/Mississippi/16th, Illinois/Mariposa, Mariposa/I-280 northbound off-ramp, and Third/Cesar Chavez. As noted above, the proposed project would result in project-specific impacts or contribute considerably to cumulative impacts at nine intersections during the weekday p.m. peak hour, and at the eight intersections during the Saturday evening peak hour, and these impacts would be *significant and unavoidable with mitigation*.

Mitigation Measure M-TR-2a: Additional PCOs during Events (see Impact TR-2, above)

Mitigation Measure M-TR-2b: Additional Strategies to Reduce Transportation Impacts (see Impact TR-2, above)

Mitigation Measure M-TR-11a: Additional PCOs During Overlapping Events (see Impact TR-11, above)

Mitigation Measure M-TR-11b: Participation in Ballpark/Mission Bay Transportation Coordinating Committee (see Impact TR-11, above)

Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts of Overlapping Events (see Impact TR-11, above)

Comparison of Impact C-TR-2 to Mission Bay FSEIR Impact Analysis

Cumulative traffic impacts were identified as significant and unavoidable in the Mission Bay FSEIR, which was based on Plan-level contributions to significant cumulative impacts at seven intersections at or near freeway ramps (Brannan/Sixth/I-280 ramps, Bryant/Second, Bryant/Fifth/I-80 eastbound on-ramp, Harrison/First, Harrison/Second, Harrison/Fremont/I-80 westbound off-ramp, and Harrison/Essex), and on the Bay Bridge and its approaches during the weekday p.m. peak hour. The significant and unavoidable cumulative impacts at 15 of the 16 study intersections identified above would be a new significant effect not identified in the Mission Bay FSEIR (i.e., the intersection of Bryant/Fifth/I-80 eastbound on-ramp was identified as a significant and unavoidable impact in the Mission Bay FSEIR). Therefore, the proposed project would result in *new significant* cumulative traffic impacts not previously identified in the Mission Bay FSEIR.

Impact C-TR-3: The project, in combination with other past, present, and reasonably foreseeable future projects, would result in significant cumulative traffic impacts at multiple freeway ramps in the project vicinity under 2040 Cumulative conditions. (Significant and Unavoidable with Mitigation)

Similar to the analysis for 2040 cumulative intersection operations, proposed project impacts at the freeway ramps were assessed by calculating the project-generated traffic conditions at ramp locations that are projected to operate at LOS E or LOS F under 2040 cumulative conditions for the No Event scenario for the weekday p.m. and Saturday evening peak hours. Because the SF-CHAMP travel demand model does not include the travel demand associated with events, the proposed project cumulative impacts for events at the project site for the weekday p.m. peak hour were assessed by adding the event-related traffic volumes (i.e., the Convention Event and Basketball Game scenarios) to the No Event scenario. At freeway ramps that are projected to operate at LOS E or LOS F under 2040 cumulative conditions, the increase in proposed project vehicle trips was reviewed to determine whether the increase would contribute considerably to the ramp volumes. In addition, the freeway ramps where project-specific significant impacts were identified for existing plus project conditions, the proposed project would also be considered to result in a cumulative impact under 2040 cumulative conditions. Supporting documentation regarding the cumulative contributions is included in **Appendix TR**.

Table 5.2-61 presents the 2040 cumulative analysis for freeway ramp operations for the weekday p.m. peak hour, while **Table 5.2-62** presents this information for the Saturday evening peak hour. Under 2040 cumulative No Event conditions, ramp operations would worsen from existing conditions, and five of the six freeway ramps would operate at LOS E or LOS F. Because the proposed project would result in significant impacts at three ramp locations under existing plus project conditions (i.e., I-80 eastbound on-ramp at Fifth/Bryant, I-80 westbound off-ramp at Fifth/Harrison, and I-280 northbound off-ramp at Mariposa Street), these impacts under 2040 cumulative conditions would be considered significant cumulative impacts. The proposed project would contribute considerably to the LOS F conditions at the I-280 southbound on-ramp at

**TABLE 5.2-61
FREEWAY RAMP LEVEL OF SERVICE – 2040 CUMULATIVE CONDITIONS –
WEEKDAY PM PEAK HOUR**

#	Ramp Location	No Event		Convention Event		Basketball Game	
		Density ^a	LOS ^b	Density	LOS	Density	LOS
1	I-80 EB on-ramp at Sterling	--	F	--	F	--	F
2	I-80 EB on-ramp at Fifth/Bryant	--	F	--	F	--	F
3	I-80 WB off-ramp at Fifth/Harrison	40	E	40	E	--	F
4	I-280 SB on-ramp at Pennsylvania	--	F	--	F	--	F
5	I-280 NB off-ramp at Mariposa	34	D	34	D	35	D
6	I-280 SB on-ramp at Mariposa	--	F	--	F	--	F

NOTES:

^a Density of vehicles in merge and diverge influence area for on-ramp and off-ramp analysis, respectively. Measured in passenger cars per mile per lane. Density value is not presented for ramp analyses where the demand volume exceeds the capacity.

^b Ramps operating at LOS E or LOS F conditions highlighted in **bold**. Significant project impacts shaded.

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

**TABLE 5.2-62
FREEWAY RAMP LEVEL OF SERVICE – 2040 CUMULATIVE CONDITIONS –
SATURDAY EVENING PEAK HOUR**

#	Ramp Location	No Event		Basketball Game	
		Density ^a	LOS ^b	Density	LOS
1	I-80 EB on-ramp at Sterling	24	C	24	C
2	I-80 EB on-ramp at Fifth/Bryant	37	E	36	E
3	I-80 WB off-ramp at Fifth/Harrison	33	D	41	E
4	I-280 SB on-ramp at Pennsylvania	16	B	16	B
5	I-280 NB off-ramp at Mariposa	19	B	27	C
6	I-280 SB on-ramp at Mariposa	15	B	15	B

NOTES:

^a Density of vehicles in merge and diverge influence area for on-ramp and off-ramp analysis, respectively. Measured in passenger cars per mile per lane. Density value is not presented for ramp analyses where the demand volume exceeds the capacity.

^b Ramps operating at LOS E or LOS F conditions highlighted in **bold**. Significant project impacts shaded.

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

Mariposa Street during the weekday p.m. peak hour, and this would be considered a significant impact. The proposed project would have a cumulatively considerable contribution to the cumulative impacts at the two other freeway ramps that would operate at LOS E or LOS F under 2040 cumulative conditions (i.e., I-80 eastbound on-ramp at Sterling Street, and I-280 southbound on-ramp at Pennsylvania Street).

As described for existing plus project conditions, no feasible mitigations are available for the freeway ramp impacts because there is insufficient physical space for additional capacity without redesign of

the I-80 and I-280 ramp and mainline structures, and which may require acquisition of additional right-of-way. Implementation of **Mitigation Measure M-TR-2b: Additional Strategies to Reduce Transportation Impacts** and **Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts of Overlapping Events** would reduce the proposed project's contribution to cumulative impacts related to event-related traffic conditions but would not mitigate the contribution to less-than-significant levels. Therefore, for the above reasons, the proposed project, in combination with past, present and reasonably foreseeable development in San Francisco, would contribute considerably to cumulative traffic impacts at three freeway ramps (i.e., I-80 eastbound on-ramp at Fifth/Bryant, I-80 westbound off-ramp at Fifth/Harrison, and I-280 southbound on-ramp at Mariposa Street), and impacts would be *significant and unavoidable with mitigation*.

Mitigation Measure M-TR-2b: Additional Strategies to Reduce Transportation Impacts
(see Impact TR-2, above)

Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts of Overlapping Events (see Impact TR-11, above)

Comparison of Impact C-TR-3 to Mission Bay FSEIR Impact Analysis

The Mission Bay FSEIR did not address cumulative traffic impacts on freeway ramp facilities as a distinct transportation topic. The significant and unavoidable cumulative impacts at the I-80 westbound Harrison/Fremont off-ramp and Fifth Street on-ramp, the I-80 eastbound Seventh Street off-ramp, and the I-280 southbound Sixth Street on-ramp would be a *new significant* cumulative impact not identified in the Mission Bay FSEIR.

Cumulative Transit Impacts

Impact C-TR-4: The project, in combination with other past, present, and reasonably foreseeable future projects, could have significant transit impacts on Muni service under 2040 Cumulative conditions, and could contribute to significant cumulative transit impacts at Muni screenlines. (Less than Significant with Mitigation)

Proposed project transit impacts for 2040 cumulative conditions were assessed by calculating the project contribution to the Muni downtown screenlines operating at more than Muni's established 85 percent capacity utilization standard during the weekday p.m. peak hour. The ridership and capacity utilization for the T Third line and 22 Fillmore bus route was also assessed for 2040 cumulative conditions. In addition, where project-specific significant impacts were identified for the existing plus project transit analysis, the proposed project would also be considered to result in a cumulative impact under 2040 cumulative conditions.

Table 5.2-63A presents the ridership and capacity utilization for the T Third and 22 Fillmore for the weekday p.m. peak hour for 2040 cumulative conditions for the No Event and Convention Event scenarios. Under 2040 cumulative conditions, capacity on the T Third would increase over existing conditions, and capacity utilization would remain similar to existing plus project

conditions. For weekday p.m. peak hour conditions, for both scenarios, the capacity utilization would be less than the 85 percent capacity utilization standard.

TABLE 5.2-63A
MUNI TRANSIT ANALYSIS – WEEKDAY PM PEAK HOUR –
2040 CUMULATIVE CONDITIONS

Route ^b	No Event Scenario Outbound from the Project Site			Convention Event Scenario Outbound from Project Site	
	Ridership	Capacity	Capacity Utilization ^a	Ridership	Capacity Utilization
T Third	3,018	5,712	52.8%	3,588	62.8%
22 Fillmore	714	942	75.8%	719	76.3%
<i>Total</i>	3,732	6,654	56.1%	4,306	64.7%

NOTES:

^a For weekday p.m. peak hour, a capacity utilization standard of 85 percent used to determine significant impacts.

^b 2040 cumulative ridership and capacity for the T Third and 22 Fillmore include implementation of the Central Subway and 22 Fillmore Transit Priority Project.

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

Table 5.2-63B presents the ridership and capacity utilization for the T Third and 22 Fillmore for the weekday evening and weekday late evening peak hours for 2040 cumulative conditions for the Basketball Game scenario. Under 2040 cumulative conditions, for both weekday pre-event and post-event conditions, the capacity utilization would be less than the 100 percent capacity utilization standard for events.

TABLE 5.2-63B
MUNI TRANSIT ANALYSIS – WEEKDAY EVENING AND LATE EVENING PEAK HOURS –
BASKETBALL GAME SCENARIO - 2040 CUMULATIVE CONDITIONS

Route ^b	Basketball Game Scenario Weekday Evening Inbound to the Project Site			Basketball Game Scenario Weekday Late Evening Outbound from Project Site		
	Ridership	Capacity	Capacity Utilization ^a	Ridership	Capacity	Capacity Utilization
T Third	5,434	6,028	90.1%	3,880	5,046	76.9%
22 Fillmore	304	628	48.5%	212	252	84.1%
Muni Special Event Shuttles	1,139	1,218	93.5%	942	978	96.3%
<i>Total</i>	6,877	7,874	87.3%	5,034	6,276	80.2%

NOTES:

^a For event conditions, a capacity utilization of 100 percent was used to determine significant impacts.

^b 2040 cumulative ridership and capacity for the T Third and 22 Fillmore include implementation of the Central Subway and 22 Fillmore Transit Priority Project.

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

Table 5.2-64 presents the results of the Muni and regional screenline analysis for existing and 2040 cumulative conditions for the weekday p.m. peak hour. The 2040 cumulative transit screenline analysis accounts for ridership and/or capacity changes associated with the TEP, the Central Subway, the new Transbay Transit Center, the electrification of Caltrain, and expanded WETA service. During the weekday p.m. peak hour, the capacity utilization of some screenlines and corridors within the Muni downtown screenlines would exceed Muni's 85 percent capacity utilization standard. These exceedances of the capacity utilization standard would be considered a significant cumulative impact. Overall, the addition of the project-generated riders to the Muni downtown screenlines and corridors that exceed the 85 percent capacity utilization standard would be less than 5 percent, and therefore the proposed project would not contribute considerably to the cumulative impact.

By 2040, additional Muni transit service capacity is planned to become available on the T Third and 22 Fillmore routes to accommodate transit demand generated by the proposed project as well as nearby development. Therefore, with the increases in Muni capacity, as well as expansion of the Mission Bay TMA shuttle routes, capacity utilization for the analysis scenarios would not exceed the capacity utilization standard (i.e., 85 percent during non-event conditions and during the weekday p.m. peak hour, and 100 percent during events) during the weekday p.m., weekday late evening, and Saturday evening peak hours. The exception would be on the T Third on days with overlapping evening events at AT&T Park and at the event center where capacity utilization during the weekday evening, weekday late evening, and Saturday evening peak hours would exceed 100 percent, and this would be considered a significant cumulative impact of the project. However, Mitigation Measure M-TR-13: Additional Muni Transit Service During Overlapping Events would reduce the transit impacts on the T Third to a less-than-significant level, and therefore the proposed project's transit cumulative impacts would be *less than significant with mitigation*.

Mitigation Measure M-TR-13: Additional Muni Transit Service During Overlapping Events (see Impact TR-13, above)

Comparison of Impact C-TR-4 to Mission Bay FSEIR Impact Analysis

Cumulative transit impacts on the T Third were identified as less than significant with mitigation in the Mission Bay FSEIR, which was based on Plan-level contributions to T Third ridership in 2015 cumulative conditions. Mission Bay FSEIR Mitigation Measure E.45 to provide additional T Third light rail to the Mariposa Street stop was found to reduce Plan-level cumulative transit impacts to less-than-significant levels. Consequently, no new or different mitigation measures or alternatives to reduce project impacts related to transit are identified or required with respect to the currently proposed project. On the basis of the above, the project would result in no new or substantially more severe significant effects than those identified in the Mission Bay FSEIR related to transit impacts.

TABLE 5.2-64
MUNI DOWNTOWN AND REGIONAL SCREENLINES –
WEEKDAY PM PEAK HOUR – 2040 CUMULATIVE CONDITIONS

Screenline/Transit Provider ^a	Existing Conditions			2040 Cumulative Conditions		
	Ridership	Capacity	Capacity Utilization	Ridership	Capacity	Capacity Utilization
Muni Downtown Screenlines						
Northeast						
Kearny/Stockton	2,172	3,291	66.0%	6,295	8,329	75.6%
Other lines	570	1,078	52.9%	1,229	2,065	59.5%
<i>Screenline Total</i>	2,742	4,369	62.8%	7,524	10,394	72.4%
Northwest						
Geary	1,821	2,528	72.0%	2,996	3,621	82.7%
California	1,371	1,686	81.3%	1,765	2,021	87.3%
Sutter/Clement	472	630	74.9%	749	756	99.1%
Fulton/Hayes	969	1,176	82.4%	1,762	1,877	93.9%
Balboa	640	929	68.8%	775	974	79.6%
<i>Screenline Total</i>	5,273	6,949	75.9%	8,048	9,248	87.0%
Southeast						
Third Street	553	714	77.5%	2,300	5,712	40.3%
Mission	1,539	2,789	55.2%	2,673	3,008	88.9%
San Bruno/Bayshore	1,328	2,134	62.2%	1,817	2,134	85.2%
Other lines	1,040	1,712	60.8%	1,583	1,927	82.1%
<i>Screenline Total</i>	4,461	7,349	60.7%	8,373	12,781	65.5%
Southwest						
Subway lines	4,766	6,294	75.7%	5,691	6,804	83.6%
Haight/Noriega	1,109	1,651	67.2%	1,265	1,596	79.3%
Other lines	277	700	39.6%	380	840	45.2%
<i>Screenline Total</i>	6,152	8,645	71.2%	7,337	9,240	79.4%
<i>Muni Screenlines Total</i>	18,628	27,312	68.2%	27,096	35,952	75.4%
Regional Screenlines						
East Bay						
BART	19,940	21,220	94.0%	30,383	33,170	91.6%
AC Transit	2,275	3,926	57.9%	7,000	12,000	58.3%
Ferry	806	1,615	49.9%	5,319	5,940	89.5%
<i>Screenline Total</i>	23,021	26,761	86.0%	42,702	51,110	83.5%
North Bay						
GGT Buses	1,400	2,817	49.7%	2,070	2,817	73.5%
Ferry	971	1,959	49.6%	1,619	1,959	82.6%
<i>Screenline Total</i>	2,371	4,776	49.6%	3,689	4,776	77.2%
South Bay						
BART	8,686	16,963	51.2%	13,971	24,182	57.8%
Caltrain	2,405	3,100	77.6%	2,529	3,600	70.3%
SamTrans	146	320	45.6%	150	320	46.9%
Ferries	0	0	0.0%	59	200	29.5%
<i>Screenline Total</i>	11,237	20,383	55.1%	16,709	28,302	59.0%
<i>Regional Screenlines Total</i>	36,629	51,920	70.5%	63,101	84,188	75.0%

NOTES:

^a Muni Downtown and Regional screenlines reflect outbound trips from downtown San Francisco.

^b Muni Downtown screenlines or corridors operating at more than Muni's 85 percent capacity utilization standard are highlighted in **bold**.

SOURCE: SF Planning Department Memorandum, *Transit Data for Transportation Impact Studies*, June 2013 and Regional and Local 2040 Cumulative Transit Screenlines for Transportation Impact Studies, March 2014. Advant Consulting/Fehr & Peers/LCW Consulting, 2015

Impact C-TR-5: The project, in combination with other past, present, and reasonably foreseeable future projects, would have significant transit impacts on regional transit under 2040 Cumulative conditions. (Significant and Unavoidable with Mitigation)

Proposed project transit impacts for 2040 cumulative conditions were assessed by calculating the project contribution to the weekday p.m. peak hour regional screenlines operating at more than the 100 percent capacity utilization standard. In addition, where project-specific significant impacts were identified for the existing plus project transit analysis, the proposed project would also be considered to result in a cumulative impact under 2040 cumulative conditions.

Table 5.2-64 presents the regional screenlines for the weekday p.m. peak hour. Under 2040 cumulative conditions, all regional transit service providers are projected to operate under the capacity utilization standard of 100 percent, and therefore, the proposed project would have less-than-significant transit impacts on regional transit service during the weekday p.m. peak hour.

However, as discussed in Impact TR-5, for the Basketball Game scenario without a SF Giants game at AT&T Park, the proposed project would result in *significant* project-specific transit impacts to Caltrain capacity during the weekday evening, weekday late evening, and Saturday evening peak hours, and to WETA and Golden Gate Transit ferry and bus capacity during weekday late evening peak hour. In addition, as discussed in Impact TR-14, for the Basketball Game scenario with an overlapping evening game at AT&T Park, the proposed project would result in an additional significant project-specific transit impact to BART capacity to the East Bay during the weekday late evening peak hour.

Overall, under 2040 cumulative conditions, the proposed project would result in *significant* cumulative transit impacts on BART, Caltrain, Golden Gate Transit, and WETA. Implementation of **Mitigation Measure M-TR-5a: Additional Caltrain Service, Mitigation Measure M-TR-5b: Additional North Bay Ferry and Bus Service, and Mitigation Measure M-TR-14: Additional BART Service to the East Bay during Overlapping Events** would reduce or minimize the severity of the capacity utilization exceedances for the regional transit service providers. However, since the provision of additional East Bay, South Bay, and North Bay service is uncertain, and full funding for the service has not yet been identified, implementation of these mitigation measures is uncertain. Accordingly, the proposed project's significant cumulative impacts to BART, Caltrain, Golden Gate Transit and WETA transit capacity would remain *significant and unavoidable with mitigation*.

Mitigation Measure M-TR-5a: Additional Caltrain Service (see Impact TR-5, above)

Mitigation Measure M-TR-5b: Additional North Bay Ferry and Bus Service (see Impact TR-5, above)

Mitigation Measure M-TR-14: Additional BART Service to the East Bay During Overlapping Events (see Impact TR-14, above)

Comparison of Impact C-TR-5 to Mission Bay FSEIR Impact Analysis

Cumulative transit impacts on AC transit was identified as less than significant with mitigation in the Mission Bay FSEIR, which was based on Plan-level contributions to the regional screenlines during the weekday p.m. peak hour for 2015 cumulative conditions. Mission Bay FSEIR Mitigation Measure E.44 to encourage AC Transit to expand service and Mission Bay FSEIR Mitigation Measure E.45 to provide additional T Third light rail to the Mariposa Street stop were found to reduce Plan-level cumulative transit impacts to less than significant levels.

Under the proposed project, no cumulative impacts on AC Transit are projected for 2040 cumulative conditions for the weekday p.m. peak hour. However, the proposed project's significant and unavoidable with mitigation cumulative impacts to BART, Caltrain, Golden Gate Transit and WETA would be a significant effect not identified in the Mission Bay FSEIR. Therefore, the proposed project would result in new *significant* cumulative transit impacts not previously identified in the Mission Bay FSEIR.

Cumulative Pedestrian Impacts

Impact C-TR-6: The project, in combination with other past, present, and reasonably foreseeable future projects, could result in significant adverse cumulative pedestrian impacts. (Less than Significant with Mitigation)

The pedestrian volumes in the project vicinity would increase between implementation of the proposed project and 2040 cumulative conditions due to buildout of planned Mission Bay developments in the project vicinity (e.g., UCSF Mission Bay Campus) and construction of the Bayfront Park east of the project site. As described in Impact TR-6, the proposed project includes numerous sidewalks network and traffic control improvements that would improve and define the pedestrian network adjacent to the project site. Some improvements, such as new sidewalks along 16th Street between Illinois Street and Terry A. Francois Boulevard and signalization of the intersections of Terry A. Francois Boulevard/South and Terry A. Francois Boulevard/16th would enhance pedestrian circulation and access to the planned Bayfront Park and Bay Trail. **Table 5.2-65** presents the 2040 cumulative pedestrian LOS conditions at the study locations for the weekday p.m. peak hour for the No Event, Convention Event, and Basketball Game scenarios, while **Table 5.2-66** presents the pedestrian LOS for the Saturday evening peak hour for the No Event and Convention Event scenarios. Under 2040 cumulative conditions, pedestrian LOS for the weekday p.m. peak hour would be LOS D or better for the three scenarios. The 2040 cumulative pedestrian LOS for the Saturday evening peak hour would be LOS B or better for the No Event scenario, but LOS D or better for the Basketball Game scenario. The exceptions are the south and east crosswalks at the intersection of Third/South, which would operate at LOS E or LOS F for the Basketball Game scenario. As for existing plus project conditions, the LOS E and LOS F conditions would be considered a significant pedestrian impact, and as under existing plus project conditions, with implementation of **Mitigation Measure M-TR-6: Active Management of Pedestrian Flows at the intersection of Third/South** would reduce the pedestrian impacts to less-than-significant levels.

**TABLE 5.2-65
 PEDESTRIAN LEVEL OF SERVICE – 2040 CUMULATIVE CONDITIONS –
 WEEKDAY PM PEAK HOUR**

Analysis Location	No Event		Convention Event		Basketball Game	
	MOE ^a	LOS	MOE	LOS	MOE	LOS
Crosswalks						
<i>Third St/South St</i>						
North	138	A	65	A	136	A
South	38	A	22	D	15	D
East	86	A	26	C	49	B
<i>Third St/16th St</i>						
North	94	A	42	B	64	B
South	142	A	94	A	54	B
East	203	A	68	A	113	A
West	155	A	112	A	69	A
<i>Terry A. Francois Blvd/South St</i>						
North	336	A	91	A	110	A
South	391	A	107	A	67	A
West	463	A	59	B	89	A
Sidewalks						
<i>Third St between South & 16th Streets</i>						
East	0.8	B	1.8	B	0.9	B
West	0.4	A	0.6	A	0.5	A
<i>South Street – South Side</i>						
	0.7	B	1.9	B	0.8	B
<i>16th Street – North Side</i>						
	0.6	B	1.8	B	0.9	B

NOTE:

^a MOE – Measure of Effectiveness. Circulation area measured in average square feet per pedestrian for crosswalk analysis, and pedestrian unit flow measured in average pedestrians per minute per foot for sidewalk analysis.

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

In addition, there would be a projected increase in background vehicle and bicycle traffic between existing plus project and 2040 cumulative conditions that could result in increased potential for pedestrian-vehicle and pedestrian-bicycle conflicts. However, the project’s numerous pedestrian network improvements would define the pedestrian network adjacent to the project site and would offset the risks associated with increases in vehicle and bicycle volumes. For the above reasons, the proposed project’s contribution to potential cumulative impacts on pedestrians would be *less than significant with mitigation*.

Mitigation Measure M-TR-6: Active Management of Pedestrian Flows at the Intersection of Third/South (see Impact TR-6, above)

**TABLE 5.2-66
PEDESTRIAN LEVEL OF SERVICE – 2040 CUMULATIVE CONDITIONS –
SATURDAY EVENING PEAK HOUR**

Analysis Location	No Event		Basketball Game	
	MOE ^a	LOS ^b	MOE	LOS
Crosswalks				
<i>Third St/South St^c</i>				
North	199	A	11	E
South	61	A	3	F
East	30	A	21	D
<i>Third St/16th St^c</i>				
North	109	A	39	C
South	157	A	33	C
East	120	A	20	D
West	194	A	39	C
<i>Terry A. Francois Blvd/South St^c</i>				
North	374	A	33	C
South	240	A	16	D
West	388	A	21	D
Sidewalks				
<i>Third St between South & 16th Streets</i>				
East	0.6	B	1.0	B
West	0.2	A	0.4	A
<i>South Street – South Side</i>				
	0.7	B	1.2	B
<i>16th Street – North Side</i>				
	0.8	B	1.5	B

NOTES:

^a MOE – Measure of Effectiveness. Circulation area measured in average square feet per pedestrian for crosswalk analysis, and pedestrian unit flow measured in average pedestrians per minute per foot for sidewalk analysis.

^b Crosswalks operating at LOS E or LOS F highlighted in **bold**. Significant project impacts shaded.

^c Under the Basketball Game scenario, a PCO would be stationed at this study intersection during the Saturday pre-event period, and, as necessary, would manually direct vehicles, pedestrians, transit, and bicyclists through the intersection. LOS reflects conditions without PCO intervention.

SOURCE: Advant Consulting/Fehr & Peers/LCW Consulting, 2015

Comparison of Impact C-TR-6 to Mission Bay FSEIR Impact Analysis

The Mission Bay FSEIR did not identify any significant cumulative impacts related to pedestrians. Although the proposed project could result in significant pedestrian impacts at the crosswalks at the intersection of Third/South, this impact would be reduced to less than significant with identified mitigation measures. Therefore, the project would not result in new significant impacts from what was previously identified in the Mission Bay FSEIR.

Cumulative Bicycle Impacts

Impact C-TR-7: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative bicycle impacts. (Less than Significant)

The proposed project would not considerably contribute to cumulative bicycle circulation or conditions. The proposed project would include on-site elements to accommodate bicyclists traveling to and from the project site. In addition, Class II bicycle lanes on 16th Street would be extended in both directions east of Third Street to Terry A. Francois Boulevard, which would facilitate access to the planned cycle track and the Bay Trail that runs along the shoreline parallel to Terry A. Francois Boulevard. The intersection of Terry A. Francois Boulevard/16th Street would be signalized, and a bicycle signal and two-stage turn queue boxes would be installed to facilitate turns between the bicycle lanes on 16th Street and the two-way cycle track on the east side of Terry A. Francois Boulevard. The proposed project improvements on 16th Street and at the intersection of Terry A. Francois Boulevard/16th Street would be in addition to the planned cycle track on Terry A. Francois Boulevard that would be made as part of the Mission Bay Plan. These bicycle improvements would enhance cycling conditions in the study area. As bicycling continues to increase throughout San Francisco, the number of bicyclists on the area bicycle facilities is also anticipated to increase. While there would be a general increase in vehicle traffic that is expected through the future 2040 cumulative conditions, the proposed project would not create potentially hazardous conditions for bicycles, or otherwise interfere with bicycle accessibility to the site and adjoining areas, or substantially affect the existing, planned, and proposed bicycle facilities in the project vicinity. Therefore, for the above reasons, the proposed project, in combination with past, present and reasonably foreseeable development in San Francisco, would result in *less-than-significant cumulative impacts on bicyclists*.

Mitigation: Not required

Comparison of Impact C-TR-7 to Mission Bay FSEIR Impact Analysis

The Mission Bay FSEIR did not identify any significant cumulative impacts related to bicycles. Consequently, no new or different mitigation measures or alternatives to reduce project impacts related to bicycles are identified or required with respect to the currently proposed project. On the basis of the above, the project would result in no new or substantially more severe significant effects than those identified in the Mission Bay FSEIR related to bicycle impacts.

Cumulative Loading Impacts

Impact C-TR-8: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative loading impacts. (Less than Significant)

Loading impacts, like pedestrian impacts, are by their nature localized and site-specific, and would not contribute to impacts from other reasonably foreseeable projects in the vicinity of the

project site. Moreover, the proposed project would not result in loading impacts related to freight/service vehicles and passenger loading/unloading activities, as the estimated loading demand would be met on-site at the proposed service area/truck loading area, and on South Street and Terry A. Francois Boulevard. **Improvement Measure I-TR-8: Truck and Service Vehicle Operations Plan** would reduce the potential for conflicts between proposed project freight and service vehicle activities and pedestrians, transit, bicyclists, and autos on the adjacent streets. Therefore, the proposed project, in combination with past, present and reasonably foreseeable future development in the project vicinity, would result in *less-than-significant cumulative loading impacts*.

Mitigation: Not required

Improvement Measure I-TR-8: Truck and Service Vehicle Operations Plan (see Impact TR-8, above)

Comparison of Impact C-TR-8 to Mission Bay FSEIR Impact Analysis

The Mission Bay FSEIR did not identify any significant cumulative impacts related to loading. Consequently, no new or different mitigation measures or alternatives to reduce project impacts related to loading/unloading activities are identified or required with respect to the currently proposed project. On the basis of the above, the project would result in no new or substantially more severe significant effects than those identified in the Mission Bay FSEIR related to loading impacts.

Cumulative Impacts on UCSF Helipad Operations

Impact C-TR-9: The project, in combination with other past, present, and reasonably foreseeable future projects, could result in significant adverse cumulative impacts to the UCSF helipad. (Less than Significant with Mitigation)

See Section 5.2.6, Project Impacts on UCSF Helipad Operations regarding cumulative impacts related to the UCSF helipad operations.

Cumulative Emergency Vehicle Access Impacts

Impact C-TR-10: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative emergency vehicle access impacts. (Less than Significant)

The proposed project would not contribute considerably to cumulative emergency vehicle access impacts in the area. With implementation of the proposed project, emergency vehicle access to the project site would remain similar to existing conditions, however, as discussed in **Impact TR-10**,

with implementation of the proposed project, 16th Street would be built out between Illinois Street and Terry A. Francois Boulevard. By 2040, the planned roadway network in Mission Bay would be completely built out, and would provide emergency vehicle access to planned development. With implementation of the planned 22 Fillmore Transit Priority Project, transit-only lanes will be implemented on 16th Street, and emergency vehicles will be permitted use of the transit-only lanes. The transit-only lanes on 16th Street would have fewer vehicles in them than the adjacent mixed-flow lanes, and would not be subject to any turn restrictions. Emergency vehicles may adjust travel routes to respond to incidents; however, emergency vehicle access in the area would not be substantially affected. As discussed in **Impact TR-10** and **Impact TR-17**, emergency vehicle access would be maintained during events at the event center, without and with overlapping events at AT&T Park. Persons accessing the UCSF Medical Center emergency room and urgent care center in their personal vehicles during an emergency would, if necessary, also be able to utilize the transit-only lanes to bypass congested segments on 16th Street. On Mariposa Street, emergency vehicles and other persons accessing the emergency room and urgent care center in their personal vehicles during an emergency would be able to travel within the center left-turn lane to access the intersection of Fourth/Mariposa.

During large events at the event center, including during overlapping events, PCOs would be stationed at the intersections of Fourth/Mariposa, Owens/Mariposa/I-280 northbound off-ramp, and Owens/16th, and would prevent queues from blocking access to the UCSF Medical Center. For smaller events, PCOs would be stationed at key intersections and would be monitoring conditions, and could be reassigned to respond to conflicts between event center traffic and UCSF hospital access. In addition, when PCOs are deployed for an event, they would have the capability to radio ahead to other PCOs down the street regarding the approaching vehicle requiring emergency access. **Improvement Measure I-TR-10a: UCSF Emergency Vehicle Access and Garage Signage Plan** and **Improvement Measure I-TR-10b: Mariposa Street Restriping** would enhance emergency vehicle access to UCSF emergency facilities. Therefore, for the above reasons, the proposed project, in combination with past, present and reasonably foreseeable development in San Francisco, would result in *less than significant* emergency vehicle access impacts.

Mitigation: Not required

Improvement Measure I-TR-10a: UCSF Emergency Vehicle Access and Garage Signage Plan (see Impact TR-10, above)

Improvement Measure I-TR-10b: Mariposa Street Restriping (see Impact TR-10, above)

Comparison of Impact C-TR-10 to Mission Bay FSEIR Impact Analysis

The Mission Bay FSEIR did not address cumulative emergency vehicle access impacts as a distinct transportation topic. Given that the project would have less than significant impacts on emergency vehicle access, the project would result in no new or substantially more severe significant effects than those identified in the Mission Bay FSEIR.

5.2.5.6 Parking Conditions

As discussed in Chapter 2, Introduction, SB 743 amended CEQA by adding Public Resources Code Section 21099 regarding the analysis of parking impacts for certain urban infill projects in transit priority areas. Public Resources Code Section 21099(d), effective January 1, 2014, provides that “parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a transit priority area shall not be considered significant impacts on the environment.” The proposed project meets each of the above three criteria: it is in a transit priority area because of its location within ½ mile of a major transit stop; it is an infill site because it is located on a previously developed site in an urban area; and it is an employment center because it would be an expansion of existing commercial support uses, located in a transit priority area on a site already developed and zoned for commercial uses. Thus, this SEIR does not consider adequacy of parking in determining the significance of project impacts under CEQA. However, OCII acknowledges that parking conditions may be of interest to the public and the decision makers. Therefore, a parking demand analysis is presented for informational purposes and considers secondary physical impacts associated with constrained supply (e.g., queuing by drivers waiting for scarce onsite parking spaces that affects the public right-of-way).

The Mission Bay FSEIR did not identify any significant impacts related to the identified parking shortfall, and did not require any mitigation measures. The project would not have any new or substantially more severe significant effects than those identified in the Mission Bay FSEIR related to parking, although, as noted above, the discussion of parking conditions is presented for informational purposes only.

Proposed Project Parking Supply

The project site currently contains two surface metered parking facilities containing about 605 parking spaces. With implementation of the proposed project, the existing surface parking lots would be eliminated. The proposed project would provide a total of 950 on-site vehicle parking spaces, including 22 ADA accessible spaces within an on-site parking garage containing 899 spaces and 51 parking spaces within the separate loading center. With the exception of about six spaces, which would be tandem spaces, all vehicle parking spaces would be independently-accessible.⁵⁴ Vehicular access to the garage would be from both South Street and 16th Street, and 51 of the vehicle spaces would be located within the separate below-grade loading area within the parking garage. The 51 vehicle parking spaces within the loading area would be reserved for use by the Golden State Warriors. As part of the project, the sponsor has also acquired the right to park at 132 existing off-street parking spaces in the 450 South Street parking garage, accessed from South Street and Bridgeview Way directly north of the project site. Combined, the proposed project would have 1,082 vehicle parking spaces serving the project uses.

⁵⁴ Independently-accessible parking spaces allow a vehicle to be accessed without having to move another vehicle.

During non-event periods, ticket-issuing machines paired with a pay-on-foot ticket kiosks⁵⁵ would be set up to manage project visitor parking, while an Automatic Vehicle Identification System (AVI)⁵⁶ would be implemented to control on-site employee parking. During Golden State Warriors basketball games, a prepaid parking system is proposed for patrons to access the parking garage, where the parking attendant would scan a prepaid barcode hang tag on vehicles (prepaid credentials would be sold through the Golden State Warriors season ticket process). An AVI system may also be used for members of the Golden State Warriors to access the garage.

With implementation of the proposed project, on-street parking adjacent to the project site would be provided on South Street, Terry A. Francois Boulevard, and 16th Street, as follows:

- On the south side of South Street, a Mission Bay TMA shuttle stop approximately 60 feet in length would be provided immediately east of Third Street, and a taxi zone approximately 100 feet in length would be provided east of Bridgeview Way, where the project garage entrance/exit is located. Seven metered commercial loading spaces would be provided directly west of Terry A. Francois Boulevard, and one metered commercial loading space would be located between the TMA shuttle stop and the project garage driveway. The remaining curb length would be dedicated to 14 metered parking spaces. Nineteen metered parking spaces would be located on the north side of South Street, between Terry A. Francois Boulevard and Third Street.
- On the west side of Terry A. Francois Boulevard, approximately eight metered commercial loading spaces would be provided immediately south of South Street and a 75-foot wide paratransit stop would be provided midblock. The remaining curb length would be dedicated to 14 metered parking spaces. Twenty-nine metered parking spaces would be located on the east side of Terry A. Francois Boulevard between 16th and South Streets.
- On the north side of 16th Street one metered commercial loading space and 30 metered parking spaces would be provided. On the segment of 16th Street between Illinois Street and Terry A. Francois Boulevard, 24 metered parking spaces would be located to the south of the curbside bicycle lane. The parking lane would be separated from the bicycle lane by a 4-foot wide buffer. On the segment between Third and Illinois Streets, seven metered parking spaces (including one commercial loading space) would be located adjacent to the curb, and the proposed bicycle lane would be adjacent to the curb parking lane. Thirty metered parking spaces would be located on the south side of 16th Street, between Terry A. Francois Boulevard and Third Street.
- On Third Street, no stopping or parking is allowed at any time on either side of the street, and the prohibition would be maintained as part of the proposed project. Additional signage would be placed as part of the proposed project on the east sidewalk to emphasize the existing stopping and parking prohibitions, including the prohibition of passenger loading/unloading at any time.

⁵⁵ A machine that accepts payment and validates pay-parking access tickets without cashier assistance. These machines are also known as automatic pay stations.

⁵⁶ An Automatic Vehicle Identification (AVI) system involves using radio frequency identification (RFID) system to automatically identify a vehicle when it enters a garage, so that it can be authorized and permitted to enter and exit. The system is able to identify a vehicle as it approaches the gate, allowing the parking system to authorize entry and open the gate, without the driver having to stop or open the window.

As discussed below, during post-event conditions, temporary parking restrictions would reduce vehicular travel on the affected streets, and would displace the existing parking demand to other streets or to off-street facilities in the nearby vicinity.

Project Parking Supply and Demand

Table 5.2-67 summarizes the proposed project parking demand and supply for the project scenarios for midday (between 11:30 a.m. and 1:30 p.m.) and evening (7:00 and 8:30 p.m.) conditions on weekdays and Saturdays. The proposed project parking supply of 1,082 parking spaces includes 950 parking spaces within the on-site parking garage, as well as 132 parking spaces off-site within the 450 South Street Parking Garage for which the project sponsor has acquired parking rights to serve the project.

**TABLE 5.2-67
 PROJECT PARKING SUPPLY AND DEMAND BY SCENARIO**

Supply and Demand	Weekday		Saturday	
	Midday	Evening	Midday	Evening
Project Supply	1,082	1,082	1,082	1,082
Project Demand^a				
No Event	1,049	489	589	462
Convention Event	1,906	669	--	--
Basketball Game	1,072	4,270	589	4,573

NOTE:

^a Instances where the project demand exceeds the proposed supply are in **bold** and shaded.

SOURCE: Adavant Consulting/LCW Consulting, 2015

The project parking demand would change depending on the event condition, and would be greatest during the weekday midday on days with a convention event (1,906 spaces), on weekday evenings with a basketball game (4,270 spaces), and on Saturday evenings with a basketball game (4,573 spaces).

As highlighted in **Table 5.2-67**, for the No Event scenario, the project-generated parking demand would be accommodated within the proposed supply. For the Convention Event scenario⁵⁷, the parking demand would exceed the project supply during the weekday midday period, while for the Basketball Game scenario, the parking demand would exceed the project supply during both weekday and Saturday evenings. This unmet parking demand would need to be accommodated in other off-street parking facilities in the study area or by means of on-street parking.

As indicated in **Section 5.2.3.7** above, on-street parking within Mission Bay is well utilized during the daytime hours, with midday occupancies about 90 percent. Given this high level of

⁵⁷ Daytime convention event with about 9,000 attendees.

parking occupancy and the fact that all on-street spaces will be metered in the future as part of the SFMTA/Port parking management plan, no credit for on-street parking availability has been assumed for the analysis of midday parking conditions under any scenario.

Typical parking utilization in the area during the evening and overnight hours is about 25 percent due to the current limited evening uses in the area, increasing to 60 percent during on SF Giants evening game days. On days with evening events at the project site, some visitors may seek on-street parking, and parking occupancy would increase in the project vicinity during events at the project site. However, the SFMTA and Port of San Francisco are implementing special event rates in the general vicinity of AT&T Park during SF Giants games, which would also be applicable during events at the project site. Metered rates would be comparable to those charged at off-street parking facilities during events.

Thus, given that the availability of on-street parking in the evening would be relatively small (150 to 250 spaces overall) and that all on-street spaces would be metered and charge special event rates, no credit for on-street parking availability has been assumed for the analysis of evening parking conditions with a basketball game.

For these reasons, the analysis of parking supply and demand conditions focused on all the off-street facilities within the transportation study area (i.e., those facilities listed in **Table 5.2-8**) and presented in **Figure 5.2-8**). The following section presents the off-street parking supply for the project analysis scenarios for conditions without and with a SF Giants evening game at AT&T Park grouped by facility owner/operator.

Existing plus Project Study Area Off-street Parking Supply

Table 5.2-68 presents the midday and evening parking supply within the transportation study area for weekday and Saturdays for conditions without a SF Giants game at AT&T Park and for conditions with a SF Giants evening game at AT&T Park. Additional detail by parking facility is included in **Appendix TR**. A number of parking facilities currently open, or remain open, during games at AT&T Park to accommodate attendees driving to a baseball game. Specifically, parking facilities at 185 Berry Street, Pier 48 Sheds A and B, and Lot C with about 1,100 parking spaces overall are closed on no game days but become available for public parking during a SF Giants game on weekdays, while Pier 48 Sheds A and B and Lot C become available for public parking on Saturdays.⁵⁸ As a result of this variation in the operation of existing parking facilities during SF Giants games at AT&T Park, the parking supply would also vary for existing plus project conditions without and with an event at the project site, and without and with an overlapping SF Giants evening game at AT&T Park.

The transportation analysis assumes that current operating characteristics of the public parking facilities supporting the SF Giants evening game at AT&T Park do not change, and that the existing facilities currently open to the general public on weekdays and weekends would remain

⁵⁸ Lot A is only available to SF Giants parking permit holders on home game days.

**TABLE 5.2-68
EXISTING PLUS PROJECT STUDY AREA PARKING SUPPLY BY SCENARIO**

Parking Facility Grouping	No Event and Convention Event				Basketball Game ^e			
	Weekday		Saturday		Weekday		Saturday	
	Midday	Evening	Midday	Evening	Midday	Evening	Midday	Evening
Conditions without a SF Giants Game at AT&T Park								
1 Project Site	950	950	950	950	950	950	950	950
2 SF Giants Facilities ^a	2,530	2,530	2,530	2,530	2,530	2,530	2,530	2,530
3 UCSF Facilities ^b	2,590	2,590	2,590	2,590	2,590	2,590	2,590	2,590
4 Alexandria Facilities ^c	2,180	--	--	--	2,180	1,400	--	1,400
5 Other Facilities ^d	435	135	135	135	435	135	135	135
Total	8,685	6,205	6,205	6,205	8,685	7,605	6,205	7,605
Conditions with a SF Giants Evening Game at AT&T Park								
1 Project Site	950	950	950	950	950	950	950	950
2 SF Giants Facilities	2,530	3,350	2,530	3,350	2,530	3,530	2,530	3,350
3 UCSF Facilities	2,590	2,590	2,590	2,590	2,590	2,590	2,590	2,590
4 Alexandria Facilities	2,180	--	--	--	2,180	2,180	--	2,180
5 Other Facilities	435	405	135	135	435	405	135	435
Total	8,685	7,295	6,205	7,025	8,685	9,475	6,205	9,505

NOTES:

^a SF Giants facilities include Pier 48 Sheds A and B and Lot C (Blocks 3E and 4E)

^b UCSF facilities include 1650 Third Street, Block 23, 1625 Owens Street (Rutter Community Center), and Medical Center Phase 1 Garage and Lot

^c Alexandria facilities include 450 South Street and 1670 Owens Street

^d Other facilities include 601 Terry A. Francois Boulevard (Pier 52 boat launch) and a temporary Port lot on the east side of Terry A. Francois Boulevard.

^e Basketball Game scenario assumes that about 1,200 parking spaces within 450 South Street would be available for event parking on weekday and weekend evening for conditions without a SF Giants game, and that 450 South Street, 1670 Owens Street and 185 Berry Street facilities would be available on Saturdays for conditions with a SF Giants evening game.

SOURCE: Adavant Consulting/LCW Consulting, 2015

available to the public (e.g., most UCSF parking facilities currently operate 24 hours a day every day), including employees and visitors to the proposed project site.

Thus, for existing plus project conditions for the No Event and Convention Event scenarios, the weekday parking supply would be about 8,700 spaces during the midday and 6,200 during the evening periods, and on Saturdays the parking supply would be about 6,200 spaces during the midday and evening periods (i.e., parking facilities at 185 Berry Street, 450 South Street, and 1670 Owens Street would remain closed on Saturdays, as under Existing conditions).

Study Area Parking Supply for Conditions without a SF Giants Game at AT&T Park

For purposes of the transportation analysis, it was assumed that in addition to the facilities currently available for parking by the general public, the 450 South Street garage containing approximately 1,400 spaces, which is currently closed to the general public after 7:00 p.m., would also be available to accommodate event-related parking during weekday and weekend evening

events. This would be similar to what currently occurs at the 185 Berry Street garage on weekdays during a SF Giants evening game. Thus, as noted in **Table 5.2-68**, during the Saturday analysis period, the parking supply in the study area would increase from the current 6,200 parking spaces to 7,600 spaces.

It should be noted that the Mission Rock Project would eliminate the existing surface parking lot (i.e., Lot A), and replace it with a combination of residential, office, and commercial uses. The Mission Rock Project would provide approximately 3,100 parking spaces on-site, including construction of a structured parking garage that would also serve patrons of AT&T Park on a parcel at the south end of Seawall Lot 337 (i.e., Parcel D), with a capacity of about 2,300 vehicle spaces (the approximate capacity of Lot A). The preliminary construction-phasing plan calls for this parking garage to be built in the first phase as to maintain the maximum number of parking spaces for SF Giants games.⁵⁹ When the Mission Rock Project parking garage is under construction, about 1,600 vehicles (estimated at about two-thirds of the existing Lot A capacity based on the size of Parcel D as compared to the overall size of Lot A) would be accommodated in the remainder of Lot A. Under the Basketball Game scenario, between 1,500 and 2,000 attendees are estimated to park at Lot A, and, therefore, when the Mission Rock Project parking garage is under construction, approximately 400 project-generated vehicles would seek and find parking elsewhere (such as at the 450 Fourth Street Garage and UCSF's Third Street Parking Garage).

Study Area Parking Supply for Conditions with a SF Giants Evening Game at AT&T Park

The existing plus project parking supply for No Event and Convention Event scenarios during a baseball game at AT&T Park was assumed to be the same as for existing conditions (i.e., on weekdays about 8,700 spaces during the midday and 7,300 spaces during the evening periods, and on Saturdays about 6,200 spaces during the midday and 7,000 spaces during the evening periods).

For the Basketball Game scenario with a SF Giants evening game at AT&T Park, the transportation analysis assumes that additional facilities that currently remain closed during baseball games at AT&T Park would open during the evenings to accommodate the additional project event-related parking. Specifically, the supply assumes that both Alexandria facilities (i.e., 450 South Street and 1670 Owens Street) would open on weekday evening, and that on Saturday evenings, both Alexandria facilities, as well as the 185 Berry Street garage, would be also available.

Existing plus Project Conditions without a SF Giants game at AT&T Park

Table 5.2-69 presents the existing plus project parking demand and supply for the analysis scenarios for conditions without a SF Giants game at AT&T Park. The parking assessment assumes that the existing parking demand associated with the surface parking facilities on the project site without at SF Giants game at AT&T Park would be accommodated at other nearby facilities, and is, therefore, included in the existing areawide parking demand within the study

⁵⁹ Seawall Lot 337 and Pier 48 Mixed-Use Project, Notice of Preparation of an EIR, December 11, 2013. Case No. 2013.0208E. Available online at http://sfmea.sfplanning.org/2013.0208E_NOA.pdf. Accessed May 28, 2015.

**TABLE 5.2-69
EXISTING PLUS PROJECT STUDY AREA PARKING DEMAND AND
SUPPLY WITHOUT A SF GIANTS GAME AT AT&T PARK**

Parking Facility Grouping	No Event		Convention Event		Basketball Game	
	Midday	Evening	Midday	Evening	Midday	Evening
Weekday Conditions						
Existing Demand	5,409	2,111	5,409	2,111	5,409	2,111
Project Demand	1,049	489	1,906	669	1,072	4,270
Total Demand	6,458	2,600	7,315	2,780	6,481	6,381
Total Supply	8,685	6,205	8,685	6,205	8,685	7,605
Total Parking Occupancy	74%	42%	84%	45%	75%	84%
Surplus/(Shortfall) ^a	2,227	3,605	1,370	3,425	2,204	1,224
Shortfall if Additional Facilities Not Open after 7:00 p.m.	No shortfall (facilities are open at midday)	No shortfall	No shortfall (facilities are open at midday)	No shortfall	No shortfall (facilities are open at midday)	(176)
Shortfall if UCSF Facilities Not Available for Event Parking	No shortfall	No shortfall	No shortfall	No shortfall	No shortfall	No shortfall
Saturday Conditions						
Existing Demand	1,159	919	—	—	1,159	919
Project Demand	589	462	—	—	589	4,573
Total Demand	1,748	1,381	—	—	1,757	5,492
Total Supply	6,205	6,205	—	—	6,205	7,605
Total Parking Occupancy	28%	22%	—	—	28%	72%
Surplus/(Shortfall)	4,457	4,824	—	—	4,448	2,113
Shortfall if Additional Facilities Not Open on Saturdays	No shortfall	No shortfall	—	—	No shortfall	No shortfall
Shortfall if UCSF Facilities Not Available for Event Parking	No shortfall	No shortfall	—	—	No shortfall	No shortfall

NOTE:

^a Parking supply shortfall highlighted in **bold** and shaded.

SOURCE: Adavant Consulting/LCW Consulting, 2015

area. The existing parking supply of 610 spaces within the two surface parking lots on the project site was removed from the areawide parking supply.

No Event Scenario

As noted above, under the No Event scenario (i.e., assuming the parking demand generated by the office, retail and restaurant uses) for both weekday and Saturday conditions, parking would be accommodated within the proposed project parking supply, and therefore would not affect other off-street parking facilities in the study area. Total areawide parking occupancy would be

about 74 percent during the weekday midday and 42 percent during the weekday evening, and substantially lower (about 22 to 28 percent) on a Saturday. It should be noted that the weekday midday occupancy is greater at some nearby facilities, such as the UCSF garages which currently operate at 90 to 95 percent during the midday period; as such, it is possible that some of those vehicles parking at those facilities could migrate to the project garage, evening out the distribution of overall utilization.

Convention Event Scenario

Under the Convention Event scenario, the parking demand would exceed the total project parking supply, and a portion of the demand would need to be accommodated in other nearby off-street parking facilities, such as Lot A which contains approximately 2,400 spaces and is currently 30 to 40 percent occupied during the weekday midday period. Overall, weekday midday parking utilization within the study area would increase from 74 percent under the No Event scenario to 84 percent under the Convention Event scenario. Weekday evening occupancy within the study area under the Convention Event scenario would be similar to the No Event, below 50 percent occupied, as the daytime convention event would be practically over at that time.

Basketball Game Scenario

On weekdays under the Basketball Game scenario, the midday parking demand would be similar to the No Event scenario (i.e., primarily the parking demand associated with the office, retail, and restaurant uses), and would be accommodated on-site. During the weekday evening, however, the basketball game-generated parking demand would exceed the project supply, and would need to be accommodated at other nearby off-street parking facilities. It is anticipated that a substantial portion of the project-generated parking demand under the Basketball Game scenario would be accommodated in Lot A (about 1,500 vehicles), as well as in the 450 South Street Parking Garage (about 1,200 vehicles, and which the analysis assumes would be open). In addition, it is anticipated that about 600 vehicles would be accommodated within various UCSF parking facilities, including the 1650 Third Street, 1625 Owens Street, and Medical Center Phase 1 garages. On Saturday evenings, more vehicles would be parked at Lot A (about 2,100 vehicles, reflecting the lower current parking occupancy at Lot A), and slightly fewer at the UCSF facilities (about 500 vehicles). As indicated in **Table 5.2-69**, the overall weekday evening parking occupancy in the study area would increase from 42 percent under the No Event scenario to 64 percent under the Basketball Game scenario. On Saturdays, the overall parking occupancy would increase from 22 percent under the No Event scenario to 72 percent under the Basketball Game scenario.

In the event that the 450 South Street Parking Garage would not be made available for event parking during weekday and weekend evenings (i.e., only those parking facilities that are currently open in the evenings would be able to accommodate the proposed project parking demand), occupancy of other facilities (such as the nearby UCSF garages and lots) would increase to their capacity, and overall occupancy would increase from 84 percent to more than 100 percent on weekday evenings, and from 69 percent to 89 percent on Saturday evenings. As a result of the approximately 200-space parking shortfall on weekdays (about 3 percent of the project demand), individuals who would have preferred to drive may instead use transit to arrive at the site because

the perceived convenience of driving is lessened by a shortage of parking. By promoting carpooling, providing parking attendant services, providing clear direction to alternative parking locations in advance of events, and adjusting event parking rates, the parking supply would likely be more efficiently utilized during the event days and the potential parking deficit would be eliminated.

In the event that the 450 South Street parking garage would not be made available for event parking during weekday evenings, and the proposed parking supply in the study area would not meet demand, and it is possible that some drivers may seek available parking in adjacent residential areas to the south. South of the project site within the study area, the streets between Mariposa and 18th Streets, between Indiana and Third Streets are subject to the RPP "X" regulation which restricts on-street parking Monday through Friday, to a two or four-hour period between the hours of 8:00 a.m. and 4:00 p.m. unless an RPP "X" permit is displayed, in which case there is no time limit enforced. On these streets, the RPP regulation is not in effect during the weekday evenings, thus residents arriving to these areas could have difficulty parking on-street. If residents in adjacent residential areas to the south perceive an increased challenge in finding on-street parking in their neighborhoods, residents can request to establish a new or expand existing RPP Area "X" through the SFMTA. They may also explore other possible parking management strategies to address spillover parking in residential areas. The extent of spillover into the nearby residential neighborhoods to the south could be minimized by extending the RPP regulations to a larger area, reducing all non-residential on-street parking to two hours, adding parking meters at key locations, and increasing weekday midday enforcement.

Table 5.2-69 also shows that in the event that the UCSF parking facilities would not be made available for event parking during weekday and weekend evenings, the expected project parking demand could still be accommodated among the remaining facilities (assuming that the 450 South Street parking garage is available), with the overall occupancy increasing from 84 percent to 91 percent on weekday evenings, and from 69 percent to 77 percent on Saturday evenings.

As part of post-event transportation management, temporary parking restrictions on South Street (34 spaces between Third Street and Terry A. Francois Boulevard), Terry A. Francois Boulevard (15 spaces between South and 16th Streets), 16th Street (61 spaces between Third Street and Terry A. Francois Boulevard), and Illinois Street (40 spaces between 16th and 18th Streets) would reduce vehicular travel on the affected streets, and would displace the existing parking demand to other streets or to off-street facilities in the nearby vicinity. As noted above, lack of available on-street parking may result in drivers looking for a parking space on other streets, primarily to the west and south of the project site. During the weekday and weekend evening periods, on-street parking occupancy is low, and the overall number of parking spaces that would be affected would be relatively low (less than 150 spaces), and would not be expected to substantially affect overall on-street parking conditions.

Overall, under existing plus project conditions without a SF Giants evening game at AT&T Park, the project-generated parking demand would be accommodated with the existing off-street and on-street supply during weekday and Saturday conditions, as long as the 450 South Street parking garage becomes available for event parking on weekday evenings.

Existing plus Project Conditions with a SF Giants Evening Game at AT&T Park

Table 5.2-70 presents the existing plus project parking demand and supply for the analysis scenarios for conditions with a SF Giants evening game at AT&T Park. The parking assessment assumes that the existing parking demand associated with the surface parking facilities on the project site with a SF Giants evening game at AT&T Park would be accommodated at other nearby facilities, and is, therefore, included in the areawide parking demand within the study area. The existing parking supply of 610 spaces within the two surface parking lots on the project site was removed from the areawide parking supply.

**TABLE 5.2-70
 EXISTING PLUS PROJECT STUDY AREA PARKING DEMAND AND SUPPLY WITH A
 SF GIANTS EVENING GAME AT AT&T PARK**

Parking Facility Grouping	No Event		Convention Event		Basketball Game	
	Midday	Evening	Midday	Evening	Midday	Evening
Weekday Conditions						
Existing Demand	4,865	5,344	4,865	5,344	4,865	5,344
Project Demand	1,049	489	1,906	669	1,072	4,270
Total Demand	5,914	5,833	6,771	6,013	5,937	9,614
Total Supply	8,685	7,295	8,685	7,295	8,685	9,475
Total Parking Occupancy	68%	80%	78%	82%	68%	101%
Surplus/(Shortfall) ^a	2,771	1,462	1,914	1,282	2,748	(139)
Shortfall if Additional Facilities Not Open after 7:00 p.m.	No shortfall (facilities are open at midday)	No shortfall	No shortfall (facilities are open at midday)	No shortfall	No shortfall (facilities are open at midday)	(2,319)
Shortfall if UCSF Facilities Not Available for Event Parking	No shortfall	No shortfall	No shortfall	No shortfall	No shortfall	(1,065)
Saturday Conditions						
Existing Demand	1,319	5,003	-	-	1,319	5,003
Project Demand	589	462	-	-	598	4,573
Total Demand	1,908	5,465	-	-	1,917	9,576
Total Supply	6,205	7,025	-	-	6,205	9,505
Total Parking Occupancy	31%	78%	-	-	31%	101%
Surplus/(Shortfall)	4,297	1,560	-	-	4,288	(71)
Shortfall if Additional Facilities Not Open after 7:00 p.m.	No shortfall	No shortfall	-	-	No shortfall	(2,521)
Shortfall if UCSF Facilities Not Available for Event Parking	No shortfall	No shortfall	-	-	No shortfall	(969)

NOTE:

^a Parking supply shortfall highlighted in **bold** and shaded.

SOURCE: Adavant Consulting/LCW Consulting, 2015

No Event Scenario

As shown in **Table 5.2-70**, under the No Event scenario for both weekday and Saturday conditions, parking would be accommodated within the proposed project parking supply, and therefore would not affect other off-street parking facilities in the study area. Thus, the No Event scenario with a SF Giants evening game at AT&T Park would be similar to existing conditions. Total areawide parking occupancy would be about 68 percent during the weekday midday and 80 percent during the weekday evening, while on a Saturday the total areawide parking occupancy would be about 31 percent during the midday and 78 percent during the evening. This occupancy reflects the parking demand associated with the SF Giants game attendees parking within the study area, as well as the additional parking supply typically provided by the SF Giants and others on baseball game days. For SF Giants evening game, 185 Berry Street, Piers 48, and Lot C are open to accommodate SF Giants parking demand on weekday evenings, and Piers 48 and Lot C are open to accommodate SF Giants parking demand on weekends. Lot A is only available to SF Giants permit parking holders on game days.

Convention Event Scenario

Under the Convention Event scenario with a SF Giants evening game at AT&T Park, parking occupancy during the weekday midday and evening would be similar to conditions without a SF Giants game. On days with a SF Giants evening game at AT&T Park, overall midday occupancy is currently somewhat lower than on days without a SF Giants game, and the demand associated with the convention event would be accommodated without substantially affecting overall parking conditions. During the weekday evening period, parking demand associated with the convention event would be low, and would also not substantially affect the overall parking conditions.

However, on weekdays when SF Giants games start at 12:05 p.m., 12:45 p.m., 1:15 p.m., or 1:35 p.m., the midday parking demand would be greater than that presented in **Table 5.2-70** for evening games, and therefore, there would be a parking shortfall in the area on those days. The number of SF Giants day games is limited, with about 11 of the 54 weekday games scheduled for the 2015 regular season (about two games per month between April and October). In those instances, the approximately 900 project vehicles that would otherwise park at Lot A would not be able to do so, as Lot A would only be available to SF Giants parking permit holders. It could be expected that convention event planners would provide additional shuttle bus service to the project site on those days, to minimize parking demand. In addition, promoting public transit and encouraging carpooling would further reduce parking demand, while providing parking attendant services could increase the parking supply.

Basketball Game Scenario

On weekdays with an evening basketball game, the midday parking demand would be similar to the No Event scenario (i.e., primarily the parking demand associated with the office, retail, and restaurant uses), and parking would be accommodated on-site. During the weekday evening, however, the project-generated parking demand, combined with the SF Giants parking demand, would exceed the project supply, and would need to be accommodated in other nearby facilities.

On weekday evenings, overall parking demand would increase from 84 percent on days without SF Giants games to a theoretical 101 percent (about 140-space parking deficit) on days with a SF Giants evening game. As a result of the approximately 140-space parking shortfall on weekdays (less than 3.5 percent of the project demand), individuals who would have preferred to drive may instead use transit to arrive at the site because the perceived convenience of driving is lessened by a shortage of parking. By promoting carpooling, providing parking attendant services, and adjusting event parking rates, the parking supply would likely be more efficiently utilized during the event days and the potential parking shortfall could be eliminated. If the additional spaces provided at 450 South Street and 1670 Owens Street facilities were not available as assumed to accommodate public parking on days with a SF Giants evening game, the unmet project parking demand would increase from about 140 spaces to about 2,300 spaces. Similarly, if UCSF parking facilities would not be made available for event parking during weekday evenings the unmet project parking demand would increase from about 140 spaces to about 1,070 spaces.

On Saturdays, the overall parking occupancy during the evening period would increase from 78 percent to a theoretical 101 percent (about 70-space parking deficit, which would be less than 1.6 percent of the project parking demand and well within the daily variation of traffic). If the additional parking spaces at 450 South Street, 1670 Owens Street, and 185 Berry Street garages were not available as assumed to accommodate public parking on days with a SF Giants evening game, the expected 70-space parking deficit would increase to about 2,520 spaces. Similarly, if UCSF parking facilities would not be made available for event parking during Saturday evenings the unmet project parking demand would increase from about 70 spaces to about 970 spaces.

Overall, under existing plus project conditions with a SF Giants evening game at AT&T Park, the project-generated parking demand would be accommodated with the existing off-street and on-street supply during weekday and Saturday conditions, as long as the 450 South Street and 1670 Owens Street and UCSF-owned parking garages become available for event parking on weekday and weekend evenings, and the 185 Berry Street garage becomes available for event parking on weekend evenings.

Existing plus Project Conditions without the Muni Special Event Transit Service Plan

As described in Section 5.2.5.3, this SEIR assessed conditions if the Muni Special Event Transit Service Plan for large events at the event center were not to be implemented as part of the project. **Table 5.2-29** through **Table 5.2-32** present the resulting change in travel modes of event attendees for a basketball game from transit to auto modes. Because more attendees would be driving, the event-related parking demand would also increase over conditions with implementation of the Muni Special Event Transit Service Plan, particularly during the late evening period when parking demand associated with events would be greatest. During the late evening the parking demand for the Basketball Game scenario would increase by 606 spaces on weekdays and 669 spaces on a Saturday.

On weekday and Saturday evening basketball games without an overlapping SF Giants evening game at AT&T Park, the additional parking demand would be accommodated within the study area parking supply, although parking occupancies would increase to close to capacity. On weekday and Saturday evening basketball games with an overlapping SF Giants evening game, the identified weekday and Saturday parking shortfalls in the study area would increase from approximately 140 spaces to 745 spaces, and from approximately 70 spaces to 740 spaces, respectively. It is likely that if the Muni Special Event Transit Service Plan is not implemented, additional parking facilities outside of the study area would be identified to accommodate the increased demand (e.g., potential parking lot(s) in the vicinity of Pier 70), and existing facilities would be more efficiently utilized during event days through the use of attendant parking. Parking utilization of existing parking facilities for the SF Giants to the north of the study area (e.g., the Pier 30 lot and the Bayside lot at Seawall Lot 330 containing a total of about 1,300 spaces, and are about 35 percent occupied on weekday evenings and 50 percent on weekend evenings during SF Giants evening games) would increase from existing conditions. In addition, because the proposed parking supply in the study area would not meet demand, it is possible that some drivers may seek available parking in adjacent residential areas to the south.

2040 Cumulative Parking Conditions

Considering cumulative parking conditions, over time, due to build-out of Mission Bay and particularly UCSF in the project vicinity, parking demand and competition for on-street and off-street parking would increase. **Table 5.2-71** provides a summary of the estimated planned cumulative increases in non-residential development and corresponding parking supply and demand changes in the Mission Bay South area. The 2040 cumulative non-residential parking supply and demand was based on data obtained from previous and ongoing studies being conducted in the Mission Bay area, including the UCSF 2014 LRDP EIR and the Seawall Lot 337 and Pier 48 Mixed-Use Project; more detailed information is provided in **Appendix TR**. As shown in the table, the proposed overall supply would accommodate about 40 percent of the estimated overall non-residential parking demand (weekday midday), and 70 percent of the weekday evening parking demand. **Figure 5.2-25** presents the location of the proposed off-street parking facilities associated with proposed and planned future development.

The estimates of future parking demand for planned Mission Bay projects was based on standard *SF Guidelines* methodologies that do not consider the likely long-term shift from auto to non-auto modes of travel that is likely to occur over the next 25 years as a result of the Mission Bay Plan providing parking at approximately half the rate of the estimated demand as well as improved transit service to Mission Bay in the future. A similar effect is likely to occur to the proposed project, as transit service to Mission Bay is improved, as the available parking supply on undeveloped parcels is eliminated, and as parking becomes more expensive, particularly during overlapping events. As such, the parking shortfalls presented in **Table 5.2-72**, which are based on existing travel patterns, can be considered conservative, that is, higher than could be expected for the above reasons.

**TABLE 5.2-71
 ADDITIONAL CUMULATIVE NON-RESIDENTIAL DEVELOPMENT PLANNED IN THE
 MISSION BAY SOUTH AREA - FROM EXISTING CONDITIONS TO YEAR 2040**

Proposed Development	Net Change in Non-Residential Parking Supply ^d	Increase in Non-Residential Parking Demand			
		Weekday		Saturday	
		Midday	Evening	Midday	Evening
Mission Rock Project ^a	-350 ^e	2,600	2,350	1,560	1,500
Remainder of the Mission Bay Plan ^b	875	1,810	475	490	290
Remainder of UCSF LRDP to 2040 ^c	2,750	3,410	1,800	860	680
Total	3,275	7,820	4,625	2,910	2,470

NOTES:

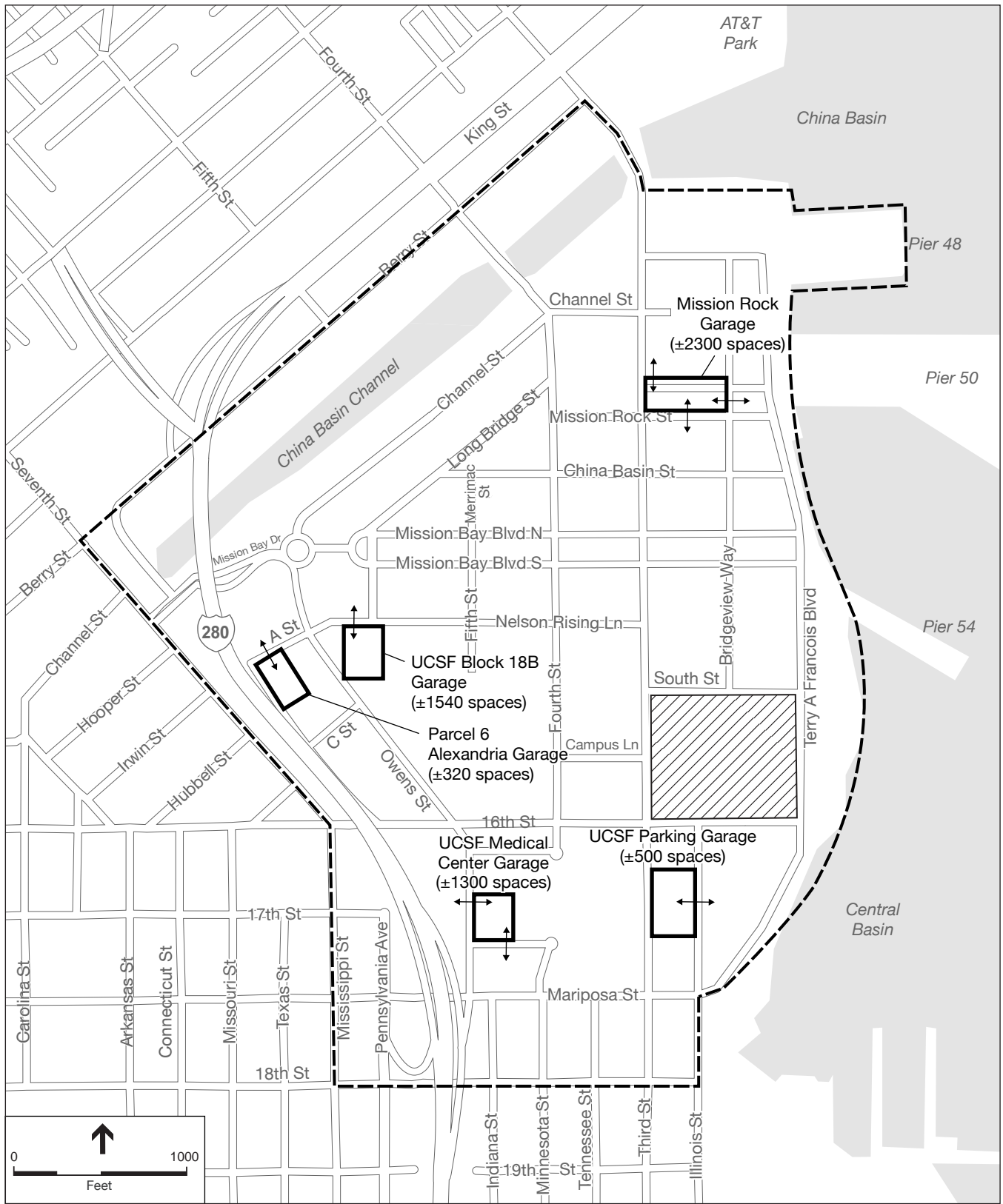
- ^a Mixed-use development project with 1.25 million to 1.6 million gsf of commercial/office/research and development (R&D) uses and 150,000 to 250,000 gsf of retail/entertainment/ancillary uses.
- ^b Includes hotel/commercial development in Block 1 (250 rooms and 25,000 gsf retail), Kaiser Permanente at 1600 Owens St (220,000 gsf MOB), Parcel 1 at Block 26 (200,000 gsf office/research), Parcel 1 at Block 27 (300,000 gsf office/research), Block 40 (660,000 gsf office/research), and Parcel 7 at Blocks 41-43 (60,000 gsf office/research).
- ^c Blocks 15, 16, 18A, 23A and 25B at the North Campus, Phase 2 of the Medical Center at the South campus, and Blocks 33-34 (500,000 gsf office/research, but may include up to 250,000 gsf clinical space with the remainder dedicated to research/office uses) at the East Campus.
- ^d Includes removal of existing temporary parking spaces at currently undeveloped parcels, such as those used for SF Giants game parking (Lot A, Lot C, Pier 48, etc.).
- ^e A net addition of 600 spaces on days when SF Giants do not play at AT&T Park.

SOURCE: Adavant Consulting/LCW Consulting, 2015

2040 Cumulative with Project Conditions without a SF Giants game at AT&T Park

Table 5.2-72 presents the 2040 cumulative with project parking demand and supply for the analysis scenarios for conditions without a SF Giants game at AT&T Park. A comparison between existing plus project (**Table 5.2-69**) and 2040 cumulative with project (**Table 5.2-72**) parking conditions shows that, under 2040 cumulative conditions, parking demand would exceed parking supply during the weekday midday period for all project scenarios (No Event, Convention Event, and Basketball Game), as opposed to existing plus project conditions where no shortfall was identified. The weekday midday parking shortfall, estimated to be between 1,370 and 2,225 spaces, would be a result of cumulative development and growth in Mission Bay. These planned developments would provide parking spaces at approximately 50 percent of the estimated peak parking demand.

As a result of the 2040 cumulative parking shortfall during the weekday midday period, individuals who would have preferred to drive may instead use non-auto modes of travel to arrive at Mission Bay. By promoting carpooling, providing parking attendant services, adjusting work schedules, and increasing parking rates, the cumulative parking supply would likely be more efficiently utilized during peak demand times (weekday midday), although the overall 2040 cumulative parking shortfall would likely not be eliminated.



 Project Site Boundary
  Parking Study Area

SOURCE: OCII/UCSF, 2015 OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
 Event Center and Mixed-Use Development at Mission Bay Blocks 29-32
Figure 5.2-25
New Parking Facilities by 2040

**TABLE 5.2-72
 2040 CUMULATIVE WITH PROJECT STUDY AREA PARKING DEMAND
 AND SUPPLY WITHOUT A SF GIANTS GAME AT AT&T PARK**

Parking Facility Grouping	No Event		Convention Event		Basketball Game	
	Midday	Evening	Midday	Evening	Midday	Evening
Weekday Conditions						
Existing Supply + Project	8,685	6,205	8,685	6,205	8,685	7,605
Additional existing facilities that remain open after hours	0	0	0	0	0	780
Cumulative Changes	4,225	2,837	4,225	2,837	4,225	3,065
Total Cumulative Supply	12,910	9,042	12,910	9,042	12,910	11,450
Existing Demand + Project	6,458	2,600	7,315	2,780	6,481	6,381
Cumulative Changes	7,820	4,625	7,820	4,625	7,820	4,625
Total Cumulative Demand	14,278	7,225	15,135	7,405	14,301	11,006
Surplus/(Shortfall) ^a	(1,368)	1,817	(2,225)	1,637	(1,391)	444
Total Parking Occupancy	111%	80%	117%	82%	111%	96%
Saturday Conditions						
Existing Supply + Project	6,205	6,205	–	–	6,205	7,605
Additional existing facilities open on Saturday	0	0	–	–	0	0
Cumulative Changes	2,837	2,837	–	–	2,837	2,837
Total Cumulative Supply	9,042	9,042	–	–	9,042	10,442
Existing Demand + Project	1,748	1,381	–	–	1,757	5,492
Cumulative Changes	3,420	2,850	–	–	3,420	2,850
Total Cumulative Demand	5,168	4,231	–	–	5,177	8,342
Surplus/(Shortfall)	3,874	4,811	–	–	3,865	2,100
Total Parking Occupancy	57%	47%	–	–	57%	80%

NOTE:

^a Parking supply shortfall highlighted in **bold** and shaded.

SOURCE: Adavant Consulting/LCW Consulting, 2015

Because the proposed cumulative parking supply in Mission Bay would not meet cumulative demand on weekdays at midday, it is possible that some drivers may seek available parking in adjacent residential areas to the south, some of which are subject to the RPP “X” regulation (currently limits parking to two or four hours, depending on the block, between the hours of 8:00 a.m. and 4:00 p.m. unless an RPP “X” permit is displayed). Because some visitors might park for less than four hours, residents of these areas could find it more challenging to find parking on the street. Expansion of an existing RPP area, or altering the existing time limits and/or time-of-day of enforcement for an RPP zone, is typically a resident-driven process. As noted above, if residents in adjacent residential areas to the south perceive an increased challenge in finding

on-street parking in their neighborhoods, residents can request to establish a new or expand existing RPP Area "X" through the SFMTA. They may also explore other possible parking management strategies to address spillover parking in residential areas. The extent of spillover into the nearby residential neighborhoods to the south could be minimized by extending the RPP regulations to a larger area, reducing all non-residential on-street parking to two hours, adding parking meters at key locations, and increasing weekday midday enforcement.

2040 Cumulative with Project with a SF Giants evening game at AT&T Park

Table 5.2-73 presents the 2040 cumulative with project parking demand and supply for the analysis scenarios for conditions with an overlapping SF Giants evening game at AT&T Park. A comparison between existing plus project (**Table 5.2-70**) and 2040 cumulative with project (**Table 5.2-73**) parking conditions with an overlapping SF Giants evening game shows that, under 2040 cumulative conditions, parking demand would exceed parking supply during the weekday midday period for all project scenarios (No Event, Convention Event, and Basketball Game), as opposed to existing plus project conditions where no shortfall has been identified. The weekday midday parking shortfall, estimated to be between 800 and 1,700 spaces, would be a result of cumulative development and growth in Mission Bay, which, as noted above, would provide parking spaces at approximately 50 percent of the estimated peak parking demand based on current travel characteristics.

The 2040 cumulative weekday midday parking shortfall with an overlapping SF Giants evening game at AT&T Park would be 60 to 75 percent of the shortfall that would be experienced without an overlapping SF Giants evening game at AT&T Park. This is because the daytime parking demand in Mission Bay on days when the SF Giants play in the afternoon is typically lower than on no-game days, as a result of the higher daily parking rates (\$50 and higher) charged on game days at parking facilities managed by the SF Giants. As a result of the cumulative parking shortfall during the weekday midday period, individuals who would have preferred to drive may instead use non-auto modes of travel to arrive at Mission Bay, and as noted above, the cumulative parking supply would likely be more efficiently utilized during peak demand times, but the overall cumulative parking shortfall would likely not be eliminated.

Because the projected 2040 cumulative parking supply in Mission Bay would not meet 2040 cumulative demand during the weekday midday, it is possible that some drivers may seek available parking in adjacent residential areas to the south. Because some cumulative visitors might park for less than four hours, residents of these areas could find it difficult to park on the street. The extent of spillover into the nearby residential neighborhoods to the south could be minimized by extending the RPP regulations to a larger area, reducing all non-residential on-street parking to two hours, and increasing weekday midday enforcement.

A 2,000-space larger parking shortfall would also be experienced on weekday evenings with overlapping evening games at the event center and at AT&T Park (about 150 spaces under existing plus project conditions compared to 2,150 spaces under 2040 cumulative conditions). Similarly, a 230-space larger parking shortfall would also be experienced on Saturday evenings with an overlapping event at the event center and at AT&T Park (about 70 spaces under existing

**TABLE 5.2-73
 2040 CUMULATIVE WITH PROJECT STUDY AREA PARKING DEMAND
 AND SUPPLY WITH A SF GIANTS EVENING GAME AT AT&T PARK**

Parking Facility Grouping	No Event		Convention Event		Basketball Game	
	Midday	Evening	Midday	Evening	Midday	Evening
Weekday Conditions						
Existing Supply + Project	8,685	7,295	8,685	7,295	8,685	9,475
Additional existing facilities that remain open after hours	0	1,390	0	1,390	0	0
Cumulative Changes	4,225	1,887	4,225	2,115	4,225	2,615
Total Cumulative Supply	12,910	10,572	12,910	10,800	12,910	12,090
Existing Demand + Project	5,914	5,833	6,771	6,013	5,937	9,614
Cumulative Changes	7,820	4,625	7,820	4,625	7,820	4,625
Total Cumulative Demand	13,734	10,458	14,591	10,638	13,757	14,239
Surplus/(Shortfall) ^a	(824)	114	(1,681)	162	(847)	(2,149)
Total Parking Occupancy	106%	99%	113%	99%	107%	118%
Saturday Conditions						
Existing Supply + Project	6,205	7,025	-	-	6,205	9,505
Additional existing facilities that open on Saturday	0	0	-	-	0	0
Cumulative Changes	2,837	1,887	-	-	2,837	2,615
Total Cumulative Supply	9,042	8,912	-	-	9,042	12,120
Existing Demand + Project	1,908	5,465	-	-	1,917	9,576
Cumulative Changes	3,420	2,850	-	-	3,420	2,850
Total Cumulative Demand	5,328	8,315	-	-	5,337	12,426
Surplus/(Shortfall)	3,714	597	-	-	3,705	(306)
Total Parking Occupancy	59%	93%	-	-	59%	103%

NOTE:

^a Parking supply shortfall highlighted in **bold** and shaded.

SOURCE: Advant Consulting/LCW Consulting, 2015

plus project conditions compared to 310 spaces under 2040 cumulative conditions). The parking supply shortfall would be due to a combination of several factors: the unavailability of existing baseball-oriented parking during an SF Giants game, an increase of cumulative parking at a lower rate than the estimated cumulative demand for the Mission Bay area, and an increase in evening demand as a result of new retail and restaurant uses associated cumulative development.

The project sponsor of the Mission Rock development project is currently developing a Transportation Demand Management (TDM) Program as part of the Mission Rock project that would include a plan to coordinate and facilitate parking and traffic at and around the Mission

Rock site on SF Giant game days. One of the key elements of the TDM program would be to manage and optimize the shared parking opportunities between office, retail, commercial, and AT&T Park users on game days. Based on preliminary information on the TDM program, approximately 2,000 of the spaces located at the proposed 2,300-space parking structure stalls would be dedicated to the visitors AT&T Park. This would be accomplished through a combination of promotion of carpooling, increased provision of parking attendant services, adjustment of work schedules, and increased event day parking rates. It would be expected that as a result of the robust TDM program for the Mission Rock project, approximately 2,000 vehicles unrelated to the SF Giants game would not be parked within the study area on weekday evenings during a overlapping basketball game at the project site and SF Giants evening game at AT&T Park, thus increasing the parking supply available to event center attendees and reducing or potentially eliminating the future cumulative parking shortfall.

5.2.6 Project Impacts on the UCSF Helipad Operations

This section of the SEIR addresses potential impacts associated with the implementation of the proposed project in consideration of the helipad operations that occur at the nearby UCSF Benioff Children's Hospital. This section documents available information on the existing UCSF hospital helipad facilities and operations, describes applicable regulations governing helipad operations and development in the vicinity of helipads, and addresses potential safety issues associated with construction and operation of the proposed project in the vicinity of the helipad.

5.2.6.1 Summary of the Mission Bay FSEIR and Other Applicable Environmental Review Documents in Mission Bay Plan Area

While the Mission Bay FSEIR assumed the development of a range of UCSF land uses in the Mission Bay Plan area, no helipad was specifically proposed by UCSF in the Plan area at that time of preparation of the Mission Bay FSEIR, and consequently, the Mission Bay FSEIR did not address potential impacts associated with development or operation of a helipad in the Plan area.

On March 17, 2005, The Regents of the University of California ("The Regents") certified the *Long Range Development Plan Amendment No. 2 – Hospital Replacement Final Environmental Impact Report*⁶⁰ (UCSF LRDP Amendment No. 2 Final EIR), which preliminarily addressed potential public safety impacts associated with the development of a potential helipad for medical helicopter transports on one of two possible sites: Block 16 (North Site) and Block 36 (South site) in the Mission Bay South Plan area. The UCSF LRDP Amendment No. 2 Final EIR determined that although there were no existing surrounding structures in the Mission Bay South Plan area that constituted an obstruction based upon Federal Aviation Administration (FAA) or California Department of Transportation Division of Aeronautics (DOA) final approach and takeoff area (FATO) standards, the maximum building heights from future development within the Mission Bay South Plan area could have the potential to create a flight path obstruction for a future helipad. The UCSF LRDP Amendment No. 2

⁶⁰ UCSF, *Long Range Development Plan (LRDP) Amendment No. 2 – Hospital Replacement Final Environmental Impact Report*, certified March 17, 2005, SCH No. 2004072067.

Final EIR Hazards and Hazardous Materials section noted; however, that approval of a helipad at that site would be subject to future project-specific environmental review, including safety conflicts for the helipad, and concluded that compliance with future CEQA requirements for individual UCSF projects in Mission Bay, together with FAA and DOA review and approval for any subsequent Mission Bay South Plan area projects that could create an obstruction, would reduce this potential impact to a less-than-significant level.

On September 30, 2005, the former San Francisco Redevelopment Agency approved an Addendum to the Mission Bay FSEIR (Addendum No. 5)⁶¹ determining that the UCSF LRDP Amendment No. 2 did not entail any substantial changes that would require major revisions to the Mission Bay FSEIR, nor would new significant impacts or a substantial increase in the severity of previously-identified significant effects occur, and no new information had emerged that would materially change any of the analyses or conclusions in the Mission Bay FSEIR.

On September 17, 2008, The Regents certified the *UCSF Medical Center at Mission Bay Final Environmental Impact Report*⁶² (UCSF Medical Center Final EIR), which also addressed potential environmental impacts associated with the development and operation of a helipad on the roof of the proposed medical center's outpatient building on Block 36 in the Mission Bay South Plan area. The UCSF Medical Center Final EIR analyzed 1.4 average daily helicopter transports and 3 daily helicopter transports on a busy day. The UCSF Medical Center Final EIR Aeromedical Helicopter Flight Operations and Public Safety section, relying in part on the results of a Risk Assessment for Helicopter Operations prepared in support of the EIR, determined that the helipad operations would result in a negligible risk to human safety in the vicinity of the helipad site. Furthermore, the UCSF Medical Center Final EIR determined that the operation of the proposed helipad in conjunction with another potential future helipad in the same general area (i.e., San Francisco General Hospital) would result in a less-than-significant cumulative public safety risk.

The former San Francisco Redevelopment Agency approved an Addendum to the Mission Bay FSEIR (Addendum No. 6)⁶³ on September 10, 2008 determining that UCSF Medical Center Draft EIR did not entail any substantial changes that would require major revisions to the Mission Bay FSEIR, nor would new significant impacts or a substantial increase in the severity of previously-identified significant effects occur, and no new information had emerged that would materially change any of the analyses or conclusions in the Mission Bay FSEIR.

The Regents approved construction of the helipad as part of its approval of Phase 1 of the Medical Center at Mission Bay on September 17, 2008. However, it deferred approval of operation of the helipad until the development of a residential sound reduction program (RSRP), which was identified as a mitigation measure in the 2008 Medical Center at Mission Bay Final EIR. In 2009, an

⁶¹ San Francisco Redevelopment Agency, *Mission Bay Subsequent EIR Addendum, ER 919-97 Addendum No. 5*, approved September 20, 2005.

⁶² UCSF, *UCSF Medical Center at Mission Bay Final Environmental Impact Report*, certified September 17, 2008, SCH No. 2008012075.

⁶³ San Francisco Redevelopment Agency, *Mission Bay Subsequent EIR Addendum, ER 919-97 Addendum No. 6*, approved September 10, 2008.

RSRP was developed with community involvement. The effectiveness of the RSRP in mitigating helicopter noise was analyzed in the Final Supplemental Environmental Impact Report for the UCSF Medical Center at Mission Bay – Residential Sound Reduction Program for Helicopter Operations, which was certified by the Regents on April 20, 2009, followed by UC approval of helipad operations.⁶⁴ On July 28, 2009, the San Francisco Board of Supervisors, as a responsible agency for the helipad project under CEQA, considered the UCSF Medical Center at Mission Bay Final EIR adequate as supplemented and amended, and approved the proposed UCSF helipad.⁶⁵

On November 20, 2014, The Regents certified the *UCSF 2014 Long Range Development Plan Final EIR*⁶⁶ (UCSF 2014 LRDP Final EIR) which addressed additional planned development on the UCSF campus in Mission Bay South. The 2014 UCSF LRDP Final EIR Hazards and Hazardous Materials section addressed potential public safety impacts associated with additional land use development proposed under the 2014 LRDP in the helipad vicinity in the Mission Bay South Plan area, and determined that the implementation of the 2014 LRDP would have a less-than-significant impact for people residing or working near the helipad.

5.2.6.2 Setting

UCSF Benioff Children's Hospital Helipad

UCSF Helipad Overview

The UCSF Benioff Children's Hospital helipad began operating in February 2015, and is currently the only operating hospital helipad in San Francisco. Helicopter access to the hospital is limited to children and pregnant women with critical and life-threatening conditions.⁶⁷ All patients with less serious conditions are transported by ground ambulance. The helipad is not used for routine transport of stable patients, transport of patients to other UCSF facilities, or for any non-patient related travel. The hospital is not a trauma center; and consequently, is not used for trauma scene transport.⁶⁸

UCSF Helipad Location and Design

Figure 5.2-26 presents the location of the UCSF Benioff Children's Hospital helipad with respect to the project site. The helipad is located atop the roof of the UCSF Ron Conway Gateway Medical Building at 1825 4th Street, on Block 36 in the Mission Bay South Plan area. The helipad is located approximately 500 horizontal feet west of the southwest corner of the project site. The

⁶⁴ UCSF, *UCSF Medical Center at Mission Bay - Residential Sound Reduction Program for Helicopter Operations Final Supplemental EIR*, certified April 20, 2009, SCH No. 2008012075.

⁶⁵ San Francisco Board of Supervisors, Resolution No. 310-09, *Resolution Approving the Proposed Helipad at the UCSF Medical Center at Mission Bay under California Public Utilities Code Section 21661.5 and Adopting Environmental Findings under the California Environmental Quality Act, including a Mitigation Monitoring and Reporting Program and a Statement of Overriding Considerations*, adopted July 28, 2009.

⁶⁶ UCSF, *UCSF 2014 Long Range Development Plan Final EIR*, November 20, 2014, SCH No. 2103092047.

⁶⁷ Examples of life-threatening conditions include a baby born with a life-threatening birth defect, a child with septic shock and organ failure that may die within hours, or a pregnant woman with a condition threatening her life and/or the life of her baby.

⁶⁸ UCSF, *Facts About UCSF Medical Center at Mission Bay: UCSF Benioff Children's Hospital San Francisco Helipad*, August 8, 2014.

5.2-254



- Mission Bay Redevelopment Plan Area Boundary
- - - Project Site Boundary

SOURCE: UCSF, 2014; ESA, 2015; Google Maps, 2014

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 5.2-26
UCSF Benioff Children's Hospital Helipad
and Designated Flight Paths

helipad deck is located at an elevation of approximately 140 feet above ground level (agl) [156 feet above mean sea level (msl)]. The helipad facility contains applicable design and safety features, including a raised landing area with required markings, perimeter lighting, safety netting, lighted windcone, and rooftop obstruction lighting.⁶⁹

UCSF Helipad Existing Operations

As was assumed in the UCSF Medical Center at Mission Bay Final EIR, UCSF projects the hospital will experience approximately 500 annual medical transports per year to the helipad, amounting to about 42 monthly transports, or 1.4 average daily transports and 3 daily transports on a busy day. UCSF contracts with medical companies that base their medical transport teams and helicopters in Oakland. Helicopter daily average arrival times are 7:00 a.m. to 3:00 p.m. (42 percent), 3:00 p.m. to 11:00 p.m. (40 percent) and 11:00 p.m. to 7:00 a.m. (18 percent).⁷⁰

Figure 5.2-26 presents the designated helicopter arrival and departure flight paths for the helipad. These flight paths were developed through extensive coordination with the City and local community considering a number of factors, including wind conditions and a goal of minimizing noise effects to residential uses in the area. As shown in Figure 5.2-26, the primary arrival/departure route is from/to the east along 16th Street and over the Bay. Alternate and secondary flight paths are only used if the primary flight path is not desirable due to wind conditions or safety considerations. One alternate arrival/departure route is from/to the west along 16th Street, along Interstate 280, Mission Bay Commons, and over the Bay; another alternate arrival/departure route is from/to the north for a short distance, hence east-west along South Street and over the Bay. The secondary departure route is along 16th Street to points west.

UCSF estimates the flight time for UCSF helicopters from the Bay shoreline to the helipad is approximately one to two minutes, and the estimated descent-to-landing and ascent-to-departure is approximately 30 seconds. Helicopter hovering is not a routine part of helicopter landing operations at the helipad.⁷¹

UCSF service contracts with air medical companies require that all pilots be routinely trained to ensure that optimum arrival and departure flight paths are followed for each helicopter type that serves UCSF.

UCSF Helipad Airspace and Obstruction Clearance Surfaces

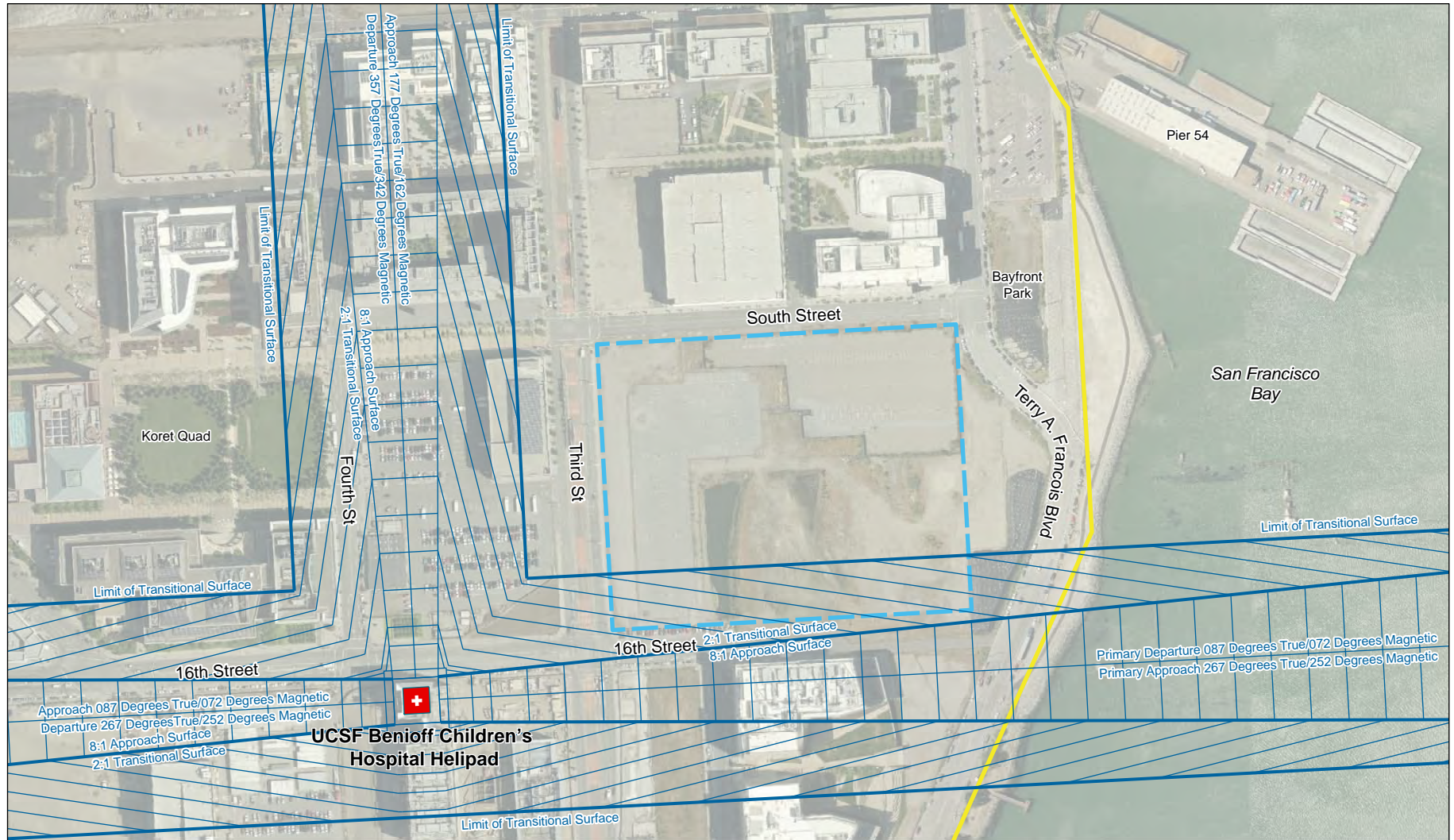
The airspace surfaces for a heliport⁷² are prescribed in Title 14 *Code of Federal Regulations* (CFR) Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace*. Section 77.23 defines imaginary airspace surfaces for civil (non-military) heliports. The applicable airspace surfaces for the UCSF helipad are described below and illustrated in **Figure 5.2-27**.

⁶⁹ Heliplanners, Exhibit HP-1, UCSF Medical Center at Mission Bay Heliport Layout Plan, revised September 25, 2014

⁷⁰ UCSF, *Facts About UCSF Medical Center at Mission Bay: UCSF Benioff Children's Hospital San Francisco Helipad*, August 8, 2014.

⁷¹ *Ibid.*

⁷² Please note the terms "helipad" and "heliport" are used interchangeably in this SEIR.



- Mission Bay Redevelopment Plan Area Boundary
- Project Site Boundary



SOURCE: Heliplanners, Inc., 2014 (UCSFC Helipad Features and Airspace Contours); Golden State Warriors, 2015 (Proposed Site Plan); www.DataSF.org, 2012 (Aerial). Adapted by ESA, 2015.

NOTE: Airspace contours are expressed in mean feet above sea level (msl).

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E: Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Figure 5.2-27
UCSF Benioff Children's Hospital Helipad Airspace Surfaces

Primary Surface – The Primary Surface is a horizontal plane at the elevation of the established heliport elevation (approximately 156 feet msl). The Primary Surface for the UCSF helipad is 98 feet by 98 feet square, which coincide with the location and dimensions of the facility's Final Approach and Takeoff Area (FATO).

Approach Surface – Each Approach Surface associated with a heliport begins at the edge of the heliport's Primary Surface and the inner width of the surface is the same width as the Primary Surface. The Approach Surface then extends outward and upward for a horizontal distance of 4,000 feet where its outer width is 500 feet. The slope of the Approach Surface for civil heliports is 8:1 (one foot upward for every eight feet outward).

Transitional Surfaces – The Transitional Surfaces extend outward and upward from the lateral boundaries of the Primary Surface and the Approach Surface(s) at a slope of 2:1. The Transitional Surfaces extend for a lateral distance of 250 feet measured horizontally from the centerline of the Primary Surface and Approach Surfaces.

FAA Order 8260.3B, United States Standard for Terminal Instrument Procedures (TERPS), contains the criteria used to formulate, review, approve, and publish procedures for instrument flight procedures to and from civil and military airports. The Order identifies Obstacle Clearance Surfaces required for different types of instrument approach procedures (i.e., night time straight-in instrument approach). The UCSF Medical Center helipad operates under Visual Flight Rules. There are no published instrument approach procedures for the UCSF Medical Center helipad. Therefore, TERPS Obstacle Clearance Surface criteria are not applicable to the hospital's helipad. However, UCSF indicates it is currently developing a GPS instrument approach procedure.

5.2.6.3 Regulatory Framework

Federal Regulations

Federal Aviation Administration

The Federal Aviation Administration (FAA) is the agency of the U.S. Department of Transportation that is charged with (1) regulating air commerce to promote its safety and development; (2) achieving the efficient use of navigable airspace of the United States; (3) promoting, encouraging, and developing civil aviation; (4) developing and operating a common system of air traffic control and air navigation for both civilian and military aircraft; and (5) promoting the development of a national system of airports.

Heliport Design Standards

FAA Advisory Circular (AC) 150/5390-2C, *Heliport Design*, provides standards, guidelines, and specifications for the siting, design, and construction of heliports.⁷³ Chapter 4 of AC 5390-2C provides information and guidance for the layout and design of hospital heliports. These standards are required for projects funded by the FAA, but are the FAA's recommendations for all heliports.

⁷³ It should be noted that at the time the UCSF helipad was designed, FAA AC 150/5390-2B (published September 30, 2004) was in effect. FAA AC 150/5390-2C (published April 24, 2012) cancels FAA AC 150/5390-2B.

Notice of Landing Area Proposal

14 CFR Part 157, *Notice of Construction, Alteration, Activation and Deactivation*, requires persons proposing to construct, activate, deactivate, or alter a heliport to give advance notice of their intent to the FAA. Pursuant to Federal Regulation 14 CFR Part 157, prior to construction of the UCSF helipad, the FAA conducted an aeronautical study that evaluated the effects the helipad would have on existing or future traffic patterns of neighboring airports; the effects on the existing airspace structure and projected programs of the FAA; the effects it would have on the safety of persons and property on the ground; and the effects that existing or proposed manmade objects (on file with the FAA) and natural objects within the affected area would have on the helipad. The FAA aeronautical study and determination do not consider environmental or land use compatibility impacts.

Following the study, the FAA issued an advisory airspace determination that the helipad would not adversely affect the safe and efficient use of the navigable airspace by aircraft, provided among other stipulations, that all operations are conducted in Visual Flight Rules (VFR) weather conditions, and routes of ingress and egress are established and maintained obstruction-free. UCSF obtained its airspace determination from the FAA on June 1, 2011. As discussed above, UCSF is currently developing a GPS instrument approach procedure; a followup FAA airspace study and airspace determination would be required to convert the facility from VFR only to both VFT and IFR.

Hazards to Air Navigation

14 CFR Part 77 establishes requirements for notification to the FAA of objects that may affect navigable airspace. It sets standards for determining obstructions to navigable airspace and provides for aeronautical studies of such obstructions to determine their effect on the safe and efficient use of airspace. Although the requirements of 14 CFR Part 77 only applies to public airports and heliports, it provides meaningful criteria for the protection of navigable airspace associated with private heliports.

Part 77 defines objects that are obstructions to imaginary airspace surfaces. The FAA presumes these obstructions to be a hazard to air navigation unless an FAA study determines otherwise. Objects presumed to affect navigable airspace may be mitigated by: 1) removing the object, 2) altering (i.e., lowering) the object, or 3) marking and/or lighting the object (providing it would not be a hazard if marked or lighted).

Outdoor Lighting / Nuisance Lighting

FAA Advisory Circular 70-1, *Outdoor Laser Operations*, provides information for outdoor laser operations that may affect aircraft operations. The Advisory Circular describes how to notify the FAA of planned laser operations and what action the FAA will take to respond to such notifications.⁷⁴

⁷⁴ FAA also issued Advisory Circular 70/7460-1K which provides guidance on lighting and/or marking obstructions.

Airspace Management

FAA Order JO 7400.2K, *Procedures for Handling Airspace Matters*, prescribes policy, criteria, guidelines, and procedures applicable to the Air Traffic (ATO) division of the FAA in regard to airspace management. The Order also prescribes the methods for conducting aeronautical studies and making determinations as to whether or not an obstruction constitutes a hazard to air navigation.

Chapter 30 of Order 7400.2K prescribes policy and guidelines for determining the potential effect of “high intensity light operations”⁷⁵ on users of the national airspace system (NAS). The Order outlines the methods by which the FAA would conduct an aeronautical study and issue a determination on the effect of a proposal to use a HIL. FAA policy on this topic notes that consideration must be given to commercial and general aviation requirements as well as to the public right of “freedom of transit” through the airspace. The FAA policy states that “while a sincere effort must be made to negotiate equitable solutions to conflicts over the use of the NAS for non-aviation purposes, aviation must receive primary emphasis.” Chapter 29 of the Order also addresses the process of conducting an aeronautical study for outdoor laser operations.

State Regulations

California Department of Transportation

Helicopter Permit

State Helicopter Permit requirements are promulgated in the California Public Utilities Code (PUC), Section 21001 et seq., otherwise known as the State Aeronautics Act, and the California Code of Regulations (CCR), Title 21, Sections 3525-3560, Airports and Helicopters. The California Department of Transportation (Caltrans) Division of Aeronautics (DOA) issues permits for all helipads in the State of California. Helipads must meet the FAA’s FATO standards in order to obtain a Caltrans operating permit.

Pursuant to Public Utilities Commission (PUC) Section 21666, among other requirements, before issuing a State Helicopter Permit:

1. The site meets or exceeds the minimum helicopter standards specified by Caltrans in its rules and regulations
2. Safe air traffic patterns have been established for the proposed helicopter and all existing airports/helicopters and approved airport/helicopter sites in its vicinity.
3. Safe “zones of approach” for the helicopter have been engineered in conformity with the provisions of PUC 21403 (i.e., compliance with FAR Part 77).

⁷⁵ A High Intensity Light (HIL) is defined in Order 7400.2K as a “lighting system other than laser designed to penetrate the navigable airspace. A sky searchlight is an example of an HIL.

On November 24, 2009, UCSF received a Heliport Site Approval Permit issued by the Caltrans DOA which effectively authorized helipad construction. On September 18, 2013, UCSF received a Heliport Permit for a special-use heliport issued by the Caltrans DOA, which authorized startup of flight operations.

Local Regulations

As discussed above, UCSF obtained approval from the San Francisco Board of Supervisors in July 2009 for the construction and operation of a helipad within City limits.

5.2.6.4 Impacts and Mitigation Measures

Significance Threshold

As discussed in the Initial Study, Hazards and Hazardous Materials section (see Appendix NOP-IS), the project site is not located within an airport land use plan, within two miles of a public airport or public use airport, or within the vicinity of private airstrip. Consequently, these criteria are not applicable to the proposed project. The project is, however, within the vicinity of a private helipad and its operational flight paths. Furthermore, the Initial Study, Transportation and Circulation section indicated that the project's effect on the helipad's air traffic patterns could be affected and merited analysis in the SEIR.

Consequently, for purposes of this SEIR, the construction and/or operation of the project would have a significant impact related to air safety and hazards if the project were to:

- Involve features that would result in substantial air safety risk and/or create a safety hazard for people residing or working in the project area.

Buildings or structures that penetrate Part 77 airspace surfaces associated with the UCSF Benioff Children's Hospital helipad would be considered "obstructions" to air navigation and assumed to be a potential hazard. Although a hazard determination is made by the FAA only for public airports and private facilities with published instrument approaches, penetrations to the airspace surfaces associated with the private UCSF helipad would be considered a significant impact to the safe operation and utility of the helipad.⁷⁶

Substantial light emissions and/or glare from potential nuisance light sources could adversely affect the vision of pilots using the UCSF helipad and interfere with executing visual approaches to the helipad and landing and takeoff maneuvers. Although a specific threshold indicating a significant impact is not established, a potential to adversely affect the vision of pilots and interfere with the execution of a visual approach to the hospital helipad would indicate a significant impact.

⁷⁶ It is anticipated that instrument approach procedures for the private UCSF helipad would not be published for public use. Further, it is unknown at this time whether or not the FAA would make a hazard determination for the UCSF helipad with a "private" instrument approach procedure. However, for the purpose of this study, a conservative approach was applied in which an apparent obstruction to the helipad's airspace was assumed to be a hazard.

Approach to Analysis

Methodology for Analysis of Direct Impacts

Airspace

The impact analysis in this SEIR determines whether or not the proposed project's temporary and permanent structures would penetrate the Part 77 Approach and Transitional airspace surfaces established for the UCSF Benioff Children's Hospital helipad. If potential obstructions are identified, the amount by which one or more airspace surfaces would be penetrated was evaluated to determine whether measures may be needed to eliminate or minimize the impact.

Information used to conduct the analysis included:

- aerial photography obtained from the City of San Francisco (DataSF.org)
- the UCSF Benioff Children's Hospital Helipad Layout Plan prepared by Heliplanners, Inc. for UCSF, which depicts the location of the hospital's helipad and its airspace surfaces and elevations
- site plans for the proposed project development, including building heights, provided by the project sponsor
- preliminary construction tower crane plan details, including type, size, and location of tower cranes, provided by the project sponsor
- ALTA/ACSM Land Title Survey for the project site, prepared by Martin M. Ron Associates, provided by the project sponsor

First, a base map was prepared depicting the helipad's existing airspace surfaces in the vicinity of the proposed project. The location and heights of the principal proposed permanent structures, including proposed office and retail building podium and towers, and the event center, were added to the base map to depict the location and approximate elevation of the structures in relation to the existing airspace surfaces. In addition, the location and heights of the temporary project construction cranes, as provided by the project sponsor, were separately added to the base map to illustrate the location and approximate elevations of the construction cranes in relation to the existing airspace surfaces.⁷⁷

As a conservative approach in evaluating the proposed buildings, the average post-construction ground elevation at the project site was assumed to be equal to the highest existing curb elevation adjacent to the project site (southwest corner). The curb elevations on the land survey referenced in Mission Bay Datum values were adjusted in reference to North American Vertical Datum of 1988 (NAVD 88), which is commonly used for airport and heliport drawings and for conducting airspace evaluations. Consistent with the *Mission Bay South Design for Development* guidelines, the maximum heights of the proposed office and retail buildings included an additional 20 feet above

⁷⁷ It should be noted that both the sponsor's proposed site plans and preliminary construction tower crane plan details are not design level plans, and consequently, reported elevations and effects on airspace are considered approximate.

the building rooftops to account for assumed rooftop mechanical equipment and enclosures. The maximum building heights were then added to the post-construction ground elevation to obtain the maximum building elevations. The analysis then compared the elevation data to determine if the proposed buildings would penetrate the airspace surfaces. The analysis evaluated representative test points for the proposed buildings and estimated the approximate clearance or penetration for each test point.

As a conservative approach in evaluating the temporary project construction cranes, the crane maximum working elevation (ground elevation plus crane height) within each crane's working radius was assumed. This accounts for some mobility of the cranes during construction. The crane maximum working elevations were then assessed to determine if they had the potential to penetrate the airspace surfaces associated with the helipad.

Light Emissions

No proposed exterior lighting details are currently available for the proposed project. Due to the lack of specific information regarding specific proposed exterior lighting, including temporary construction lighting, and long-term operational lighting, this SEIR provides a qualitative evaluation of potential associated lighting impacts.

Methodology for Analysis of Cumulative Impacts

Foreseeable past, present, and probable future projects in the project area that could result in cumulative construction or operational impacts in combination with the proposed project are described in Section 5.1, Impact Overview. The analysis considers whether or not there would be a significant, adverse cumulative impact associated with the helipad operations in combination with past, present, and probable future projects in the immediate vicinity, and if so, whether or not the project's contribution to the cumulative impact would be significant (i.e., cumulatively considerable).

Impact Evaluation—Construction

Airspace

Impact TR-9a: Construction of the proposed project could temporarily obstruct helipad airspace surfaces. (Less than Significant with Mitigation)

As described in detail in Chapter 3, Project Description, construction of the proposed project is anticipated to begin in late 2015 and occur over an approximate 26-month period. Construction activities would include, among other activities, construction of all proposed development, including event center, podium structure, office towers, and plazas. Building erection would require the use of tower cranes, which may be used throughout the construction duration. Tower cranes are comprised of a fixed vertical mast (or tower), a long horizontal jib arm, a shorter horizontal machinery arm, operators cab, and slewing unit (engine).

The preliminary project construction plan as proposed by the sponsor anticipates the placement and use of multiple construction cranes on the project site during construction. Four cranes are anticipated to be required between months 3 through 5 of construction, and five cranes would be

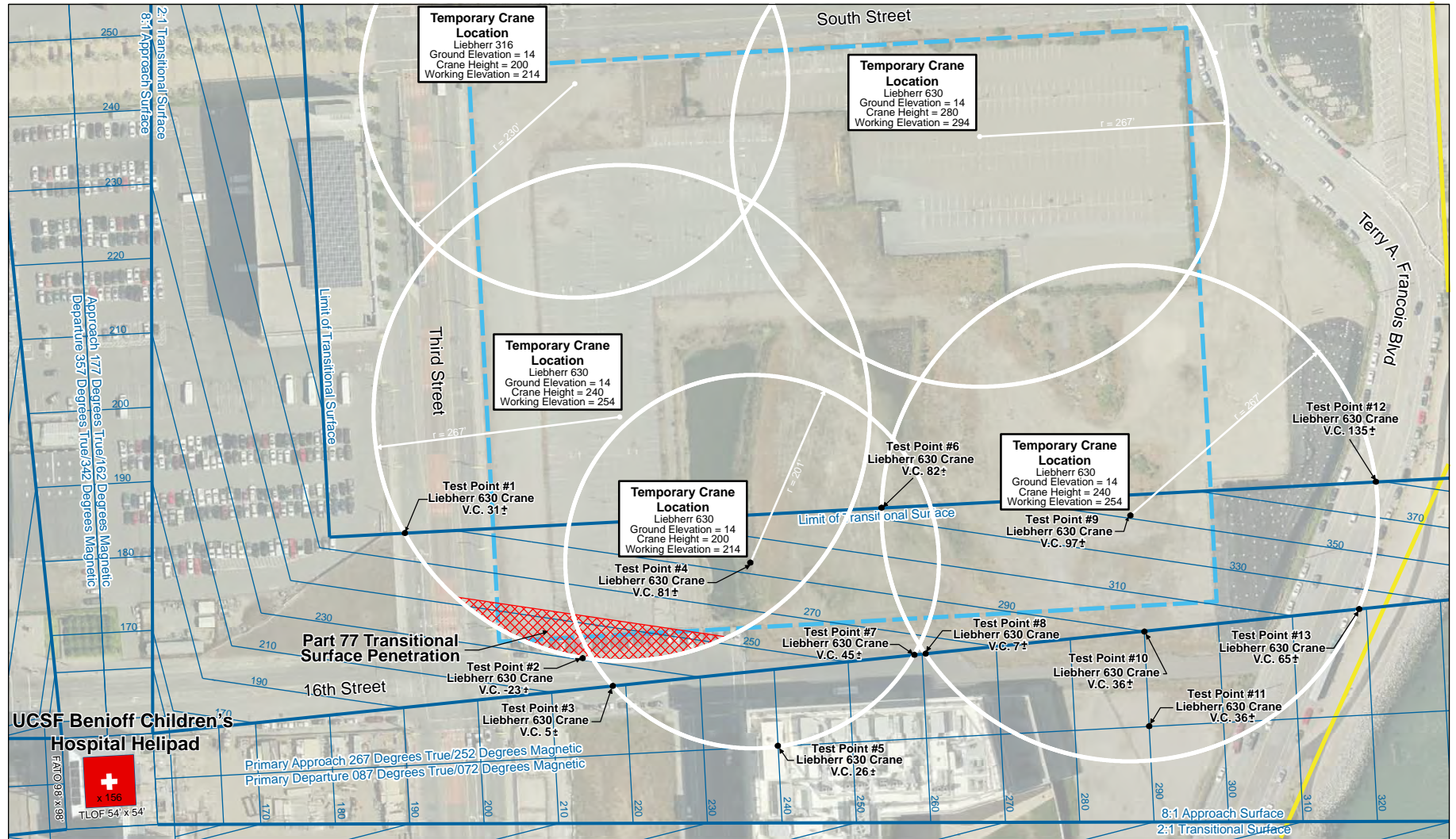
used starting in month 6 and used through to approximately to the end of construction period. The maximum crane heights would be either 200 or 240 feet agl, depending on crane and its location. **Figure 5.2-28** illustrates the proposed construction crane locations, crane maximum working elevations (msl) and crane working radii.⁷⁸ As shown in Figure 5.2-28, the estimated maximum working elevation of the cranes would be either 214 or 254 feet msl, with a working radii of between 201 and 267 horizontal feet, depending on the crane and its location.

Using the approach and methodology discussed under *Approach to Analysis* above, the project construction cranes were assessed to determine if they would have the potential to penetrate the Part 77 Approach and Transitional airspace surfaces established for the UCSF helipad. **Figure 5.2-28** shows the UCSF helipad and illustrates its existing airspace surfaces in relation to the proposed construction cranes and their maximum working elevation. Based on the information provided and the evaluation of potential obstructions conducted for this study, the following observations can be made:

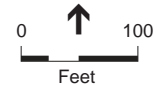
- The working radii of the central-west project construction crane would penetrate the helipad's Transitional Surface adjacent to primary Approach Surface (i.e., the westbound approach from the Bay) by up to approximately 23 feet (see Point No. 2 in Figure 5.2-28). The penetration would occur if this construction crane were to work over the southwest corner of the project site at an elevation of between approximately 232 to 254 feet msl. The potential penetration in this area would be a temporary obstruction to the helipad's Transitional Surface.
- The working radii of the two southern project construction cranes would extend under the helipad's primary Approach Surface and adjacent Transitional Surface, with minimum vertical clearances of 5 and 7 feet, respectively (see Points No. 3 and 8 in Figure 5.2-28)
- None of project construction crane masts would be located under the helipad's Approach Surfaces. However, the masts of the two southernmost project construction cranes would be located under the helipad's Transitional Surface adjacent to primary Approach Surface, but with vertical clearances of 81 and 91 feet, respectively.
- As shown in Figure 5.2-26, one of UCSF's alternative arrival/departure flight paths follows along the alignment of South Street. As shown in Figure 5.2-28, while the working radii of two project construction cranes would extend over South Street, they are not located under any of the Part 77 Approach or Transitional Surfaces. Assuming that an 8:1 "curved" Approach Surface was established along this segment of the alternate flight path and it intercepted the existing northern approach surface for a 90 degree turn⁷⁹ at an elevation of approximately 250 feet msl, the minimum amount of clearance over the construction crane in the northwest corner of the project site would be approximately 44 feet; and the minimum amount of clearance over the clearance over the construction crane in the northeast corner of the project site would be approximately 64 feet.

⁷⁸ Crane "heights" are expressed feet above ground level (agl). "Elevations" in Figure 5.2-28 are expressed in mean feet above sea level (msl) referencing NAVD 88 datum, which is commonly used for airport and heliport drawings and conducting airspace evaluations.

⁷⁹ Curved approach/departure surfaces have not been established for the helipad. Although FAA criteria for curved approach/departure surfaces would require a wider turn radius, this analysis assumed a tighter turn radius based on the use of existing approach/departure flight paths.



- Mission Bay Redevelopment Plan Area Boundary
- Project Site Boundary



SOURCE: Heliplanners, Inc., 2014 (UCSFM Helipad Features, Airspace Contours, and Elevations); Golden State Warriors, 2015 (Proposed Site Plan, Tower Crane Plan, and Associated Elevations); ALTA/ACSM Land Title Survey, 2014 (Existing Ground Elevations); www.DataSF.org, 2012 (Aerial). Adapted by ESA, 2015.

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E: Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

NOTES: Elevations and airspace contours are expressed in mean feet above sea level (msl).
 All elevation values reference NAVD88. All elevations are approximate.
 V.C. = Vertical Clearance

Figure 5.2-28
 Project Construction Cranes and UCSF Benioff Children's Hospital Helipad Airspace Surfaces

In summary, based on the preliminary project construction plan for the project construction cranes, one of the project construction cranes would have the potential to result in a temporary penetration of a Part 77 Transitional Surface associated the helipad, which would be considered a potentially significant impact. If the preliminary project construction plan details were to change with respect to proposed tower crane size, location, or other factors, then the project would have the potential to result in greater and/or less airspace penetration effects than those reported above. **Mitigation Measure M-TR-9a, Crane Safety Plan for Project Construction**, identifies feasible measures that would reduce potential temporary impacts associated with the use of cranes during the construction period to less than significant. The objective of the crane safety plan is to ensure the safe use of the UCSF Benioff Children's Hospital helipad, and the safety for people residing or working in the project area during construction. Therefore, with implementation of Mitigation Measure M-TR-9a, this impact would be *less than significant with mitigation*.

Mitigation Measure M-TR-9a: Crane Safety Plan for Project Construction

Prior to construction, the project construction contractor shall develop a crane safety plan for the project construction cranes that would be implemented during the construction period. The crane safety plan shall identify appropriate measures to reduce, and where possible, avoid, potential conflicts that may be associated with the operation of the construction cranes in the vicinity of the UCSF Benioff Children's Hospital helipad airspace. These safety protocols shall be developed in consultation and coordination with OCII (or its designated representative) and UCSF, and the crane safety plan shall be subject to approval by OCII or its designated representative. The crane safety plan shall include, but may not be limited to, the following measures:

- Convey project crane activity schedule to UCSF and OCII
- If other projects on adjacent properties are under construction concurrent with the proposed project and are using tower cranes, the project sponsor shall participate in joint coordination with those project sponsors and OCII or its designated representative to ensure any potential cumulative construction crane effects on the UCSF helipad would be minimized.
- Use appropriate markings, flags, and/or obstruction lighting on all project construction cranes working in proximity to the helipad's airspace surfaces.
- Light all construction crane structures at night (e.g., towers, arms, and suspension rods) to enhance a pilot's ability to discern the location and height of the cranes.
- Inform crane operators of the location and elevation of the hospital helipad's Part 77 airspace surfaces and the need to minimize penetrations to the surfaces.
- Use construction methods that minimize the duration of Part 77 airspace surface penetrations that may occur.
- Issue a Notice to Airmen (NOTAM) to advise pilots in the area of the presence of construction cranes at the project site.

Comparison of Impact TR-9a to Mission Bay FSEIR Impact Analysis

At the time the Mission Bay FSEIR was prepared, no helipad was specifically proposed by UCSF in the Plan area. As such, the Mission Bay FSEIR did not discuss potential construction-related impacts from new development in the Plan area on a helipad. Addenda to the Mission Bay FSEIR were prepared in 2005 and 2008 that analyzed potential impacts associated with operation of a UCSF helipad (explained further above), however, those addenda also did not address potential construction-related impacts from new development in the Plan area on the helipad operations. However, because project construction impacts to the UCSF helipad airspace discussed in this SEIR would be less than significant with mitigation, the project would result in no new or substantially more severe significant impacts than was previously identified in the Mission Bay FSEIR, as addended.

Lighting

Impact TR-9b: Project construction lighting would not adversely affect helipad flight operations (Less than Significant)

As discussed in Chapter 3, Project Description, some construction activities would occur at night. Potential exterior nighttime construction would use temporary lighting to illuminate work areas immediately surrounding construction equipment and work site. This type of lighting is normally shielded to direct the light downward to the work area and/or diffused to reduce glare to workers and equipment operators. Given the proposed project's urban setting, the use of this type of lighting would be noticeable to pilots using the hospital helipad, but would not be expected to have a significant impact. Consequently this impact is determined to be *less than significant*.

Mitigation: Not required.

Comparison of Impact TR-9b to Mission Bay FSEIR Impact Analysis

As discussed above, Mission Bay FSEIR as addended did not address potential construction-related impacts from new development in the Plan area on the helipad operations. However, because project construction lighting impacts to UCSF helicopter pilots discussed in this SEIR would be less than significant, the project would result in no new or substantially more severe significant impacts than was previously identified in the Mission Bay FSEIR, as addended.

Impact Evaluation—Operation

Airspace

Impact TR-9c: Development of the proposed project would not obstruct UCSF helipad airspace surfaces. (Less than Significant)

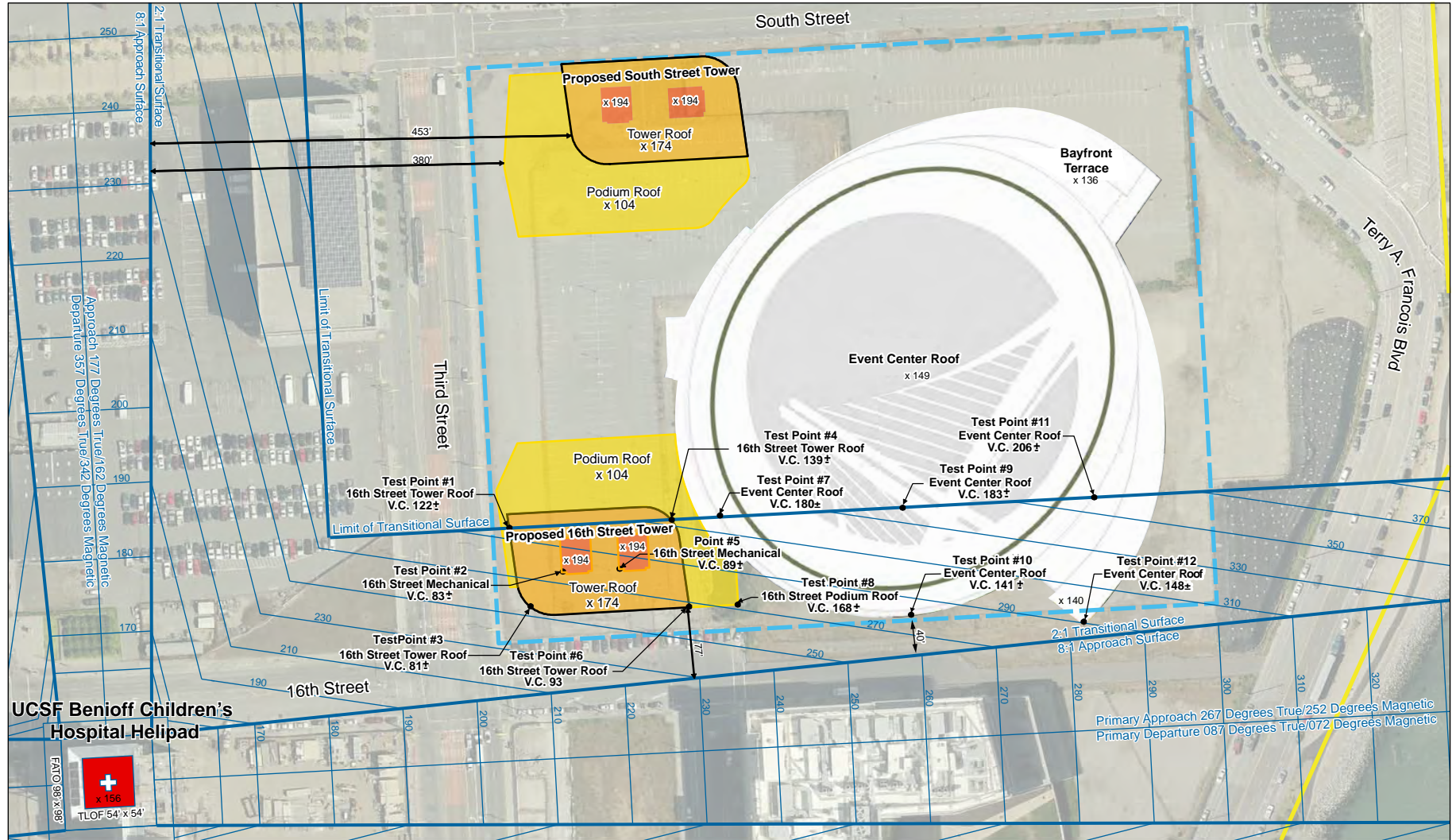
As described in detail in Chapter 3, Project Description, the project development would include a multi-purpose event center on the east side of the project site, two office and retail buildings on the west side of the project site, and miscellaneous other structures, such as a food hall and gatehouse building. The proposed 11-story office and retail buildings would be the tallest buildings on the project site, with each building comprised of 6-story podiums (90 feet) and 5-story (70-foot) towers above. When accounting for up to an additional 20 feet for rooftop mechanical enclosures, the maximum heights of the proposed office and retail buildings would be 180 feet agl. The proposed event center building would be approximately 135 feet agl at its roof peak, and other locations on the roof up to 126 feet agl (e.g., at southeast corner at 16th Street). **Figure 5.2-29** illustrates the proposed location of the proposed tallest project buildings (i.e., the two office and retail buildings, and the event center) and their corresponding elevations (msl).^{80,81}

Using the approach and methodology discussed under *Approach to Analysis* above, the project buildings were assessed to determine if they have the potential to penetrate the Part 77 Approach and Transitional airspace surfaces established for the UCSF Benioff Children’s Hospital helipad. Figure 5.2-29 shows the UCSF helipad and illustrates its existing airspace surfaces in relation to the proposed project buildings. Based on the information provided by the project sponsor and the evaluation of potential obstructions conducted for this study, the following observations can be made:

- None of the proposed project structures, including the office and retail buildings and the event center, are located directly under any of the helipad’s Approach Surfaces. Portions of the 16th Street tower/podium and event center are located under the Transitional Surface adjacent to the primary Approach Surface (the westbound approach from San Francisco Bay).
- None of the proposed project structures would penetrate the helipad’s Approach or Transitional Surfaces.

⁸⁰ As discussed in Chapter 4, Plans and Policies, to accommodate the proposed project, the South Design for Development would be amended to allow an event center not to exceed 135 feet agl (building height limit is currently 90 feet); and to allow for two 160-foot agl towers (exclusive of rooftop mechanical enclosures) – the limit is currently one tower.

⁸¹ Building “heights” are expressed feet above ground level (agl). “Elevations” in Figure 5.2-19d are expressed in mean feet above sea level (msl) referencing NAVD 88 datum, which is commonly used for airport and heliport drawings and conducting airspace evaluations.



- Mission Bay Redevelopment Plan Area Boundary
- Project Site Boundary



SOURCE: Heliplanners, Inc., 2014 (UCSFC Helipad Features, Airspace Contours, and Elevations); Golden State Warriors, 2015 (Proposed Site Plan and Associated Elevations); ALTA/ACSM Land Title Survey, 2014 (Existing Ground Elevations); www.DataSF.org, 2012 (Aerial). Adapted by ESA, 2015.

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E: Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

NOTES: Elevations and airspace contours are expressed in mean feet above sea level (msl). All elevation values reference NAVD88. All elevations approximate. V.C. = Vertical Clearance

Figure 5.2-29
Project Development and UCSF Benioff Children's Hospital Helipad Airspace Surfaces

Table 5.2-74 provides the estimated vertical clearance between the helipad’s Transitional Surface and the underlying proposed principal structures (16th Street tower/podium and event center). As shown, the minimum vertical clearance between the 16th Street tower and the helipad Transitional Surface would be 81 feet at the southwest corner of the proposed 16th Street tower roof (Point #3; see location in Figure 5.2-29). The minimum vertical clearance between the proposed event center and the helipad Transitional Surface would be 141 feet (Point #10; see location in Figure 5.2-29).

**TABLE 5.2-74
 PART 77 AIRSPACE VERTICAL CLEARANCES - PROPOSED PRINCIPAL STRUCTURES**

Test Point ID	Description	Elevation (feet msl)	Lowest Affected Part 77 Surface	Vertical Clearance (feet)	Part 77 Surface Penetration (feet)
1	16th Street Tower Roof	174	Transitional Surface	122	--
2	16th Street Tower Mechanical Enclosure	194	Transitional Surface	83	--
3	16th Street Tower Roof	174	Transitional Surface	81	--
4	16th Street Tower Roof	174	Transitional Surface	139	--
5	16th Street Tower Mechanical Enclosure	194	Transitional Surface	89	--
6	16th Street Tower Roof	174	Transitional Surface	93	--
7	Event Center Roof	138	Transitional Surface	180	--
8	16th Street Podium Roof	104	Transitional Surface	168	--
9	Event Center Roof	144	Transitional Surface	183	--
10	Event Center Roof	138	Transitional Surface	141	--
11	Event Center Roof	138	Transitional Surface	220	--
12	Event Center Roof at Southeast Corner	140	Transitional Surface	148	--

^a See also location of test points in Figure 5.2-29.

SOURCE: Golden State Warriors Site Plan information, 2015; UCSF Mission Bay Medical Center Helipad Layout Drawing, 2015; ESA, 2015

Because the proposed buildings would not penetrate the helipad’s Part 77 airspace surfaces and would not be obstructions to air navigation, the impact is determined to be *less than significant*.

Mitigation: Not required.

Comparison of Impact TR-9c to Mission Bay FSEIR Impact Analysis

At the time the Mission Bay FSEIR was prepared, no helipad was specifically proposed by UCSF in the Plan area. As such, the Mission Bay FSEIR did not address potential impacts associated with operation of a helipad in the Plan area. However, Addendum No. 5 to the Mission Bay FSEIR (September 2005) analyzed operation of a potential helipad contemplated under the UCSF Long Range Development Plan Amendment No. 2 – Hospital Replacement project; and Addendum No. 6 to the Mission Bay FSEIR (September 2008) further analyzed operation of this

helipad as part of the UCSF Medical Center project.⁸² Addenda No. 5 and 6 to the Mission Bay FSEIR determined that the UCSF hospital project, including operation of a proposed helipad, did not entail any substantial changes that would require major revisions to the Mission Bay FSEIR, nor would new significant impacts or a substantial increase in the severity of previously-identified significant effects occur, and no new information had emerged that would materially change any of the analyses or conclusions in the Mission Bay FSEIR. As discussed above, the impact of the proposed project buildings on the UCSF helipad airspace would be less than significant. Therefore, the project would result in no new or substantially more severe significant impacts than those previously identified in the Mission Bay FSEIR, as addended.

Lighting

Impact TR-9d: Certain project specialized exterior lighting could adversely affect UCSF helipad flight operations (Less than Significant with Mitigation)

A project lighting plan is not currently available for this analysis. However, for the purposes of this analysis, it is assumed the exterior lighting for the proposed project would include lighting on the event center façade and roof, lighting at the office and retail buildings, lighting in the proposed plazas, green roofs, and along walkways, and signage lighting. Nightlighting would also be emitted from certain interior areas of the office and retail buildings and the event center. In addition, headlights from project-generated vehicles would also be visible in the evening at project vehicular entrances and on surrounding roadways. As identified in the Project Description, the project would require an amendment to the Mission Bay South Signage Master Plan; this would provide guidelines for proposed exterior lighting for the event center. In the absence of information regarding specific proposed exterior lighting, this analysis provides a qualitative evaluation of potential impacts by discussing different types of possible exterior lighting and their potential to affect helipad flight operations.

Mixed-Uses Lighting

In general, the exterior lighting associated with the proposed mixed uses (i.e., non-event center uses) on the site, including the office and retail buildings would be typical of other mixed-use developments in the Mission Bay Plan area and elsewhere in the City. Given the likely common light sources and lighting intensity for these uses, and the existing urban setting of the site, the exterior lighting associated with non-event center uses, and any incidental interior lighting from these uses that may be visible, would be noticeable but would not be expected to have a significant impact on helicopter pilots approaching or departing from the UCSF helipad.

⁸² Please also see *Summary of the Mission Bay FSEIR and Other Applicable Environmental Review Documents in Mission Bay Plan Area* in the Setting for a discussion of environmental review conducted by UCSF for the helipad operations.

Event Center Lighting

Routine Lighting - Based on the operation of other enclosed arenas and event centers, it is likely that during routine night games and events at the event center, additional outdoor lighting could be used at the project site to illuminate walkways, event center entrances, and other potential miscellaneous outdoor structures like sponsor tents and concession areas, in the immediate vicinity of the event center. These lights would be typically building or pole mounted and shielded to direct light downward, or may include muted embedded pavement or stair lighting that would not emit bright light past ground level. Outdoor lighted signs announcing the event and/or associated programming could also be used. Given these common light sources and the urban setting of the proposed project, the outdoor lighting associated with the routine use of the enclosed event center would be noticeable, but would not be expected to have a significant impact on pilots using the UCSF helipad.

Specialized Lighting – The event center and/or certain games and/or events at the event center, or occasional outdoor events/performances in the proposed plazas, could incorporate specialized outdoor lighting systems and large display screens that may have the potential to adversely affect a pilot’s vision and may interfere with visual nighttime approaches and departures to/from the UCSF helipad. Although no specific information currently exists indicating the use of specialized exterior lighting systems at the proposed event center or for outdoor events/performances, potential lighting could include lights that are directed upward or may be of such intensity to affect pilots arriving to or departing from the helipad. These types of temporary or permanent lighting systems may include:

- high-intensity area and/or building exterior lighting
- outdoor stage lighting (that may be directed upward)
- large outdoor lighted displays and television/lighted screens
- high-intensity lights that may be directed upward (i.e., spot lights, rotating search lights, klieg lights)
- high-intensity flashing or strobe lights
- laser and laser displays (that may be directed upward)
- projection lighting
- fireworks
- light configurations that may unintentionally be similar to those associated with the hospital heliport landing area

The effect of nuisance light on a pilot can vary due to numerous factors (i.e., intensity, light direction, type, and distance of the light source), and the effect reported by pilots can also be somewhat subjective. In some cases, the effects can be distracting to the pilot. In other cases (i.e., lasers and spot lights directed at an aircraft), the effects can constitute a hazard.

Based on these facts, the use of certain specialized lighting systems identified above would have the potential to adversely affect a pilot’s vision and execution of a visual night time approach or

departure to/from the UCSF helipad. Lights that adversely affect the night vision of pilots and interfere with the execution of a visual nighttime approach to the helipad would endanger the pilot, passengers, and people on the ground. Therefore, the possible use of these specialized lighting systems would be considered a potentially significant impact. **Mitigation Measure M-TR-9d, Event Center Exterior Lighting Plan**, identifies feasible measures that would reduce potential impacts associated with potential specialized lighting systems to less than significant. Therefore, this impact would be *less than significant with mitigation*.

Mitigation Measure M-TR-9d: Event Center Exterior Lighting Plan

The project sponsor shall develop an exterior lighting plan that incorporates measures to ensure specialized exterior lighting systems would not have an undue impact on helipad operations. Feasible measures shall be developed in consultation and coordination with San Francisco International Airport (SFO) staff knowledgeable of the effects of lighting on pilots and safe air navigation, and OCII (or its designated representative), and the exterior lighting plan shall be subject to approval by OCII or its designated representative. Measures shall include, but may not be limited to, the following:

- prohibit the use of high-intensity lights that are directed towards the UCSF helipad
- prohibit the use of high-intensity outdoor flashing lights or strobe lights in proximity to the hospital helipad's three approaches
- prohibit the use of outdoor lasers directed upward, and laser light shows that have not been subject to prior review by OCII in consultation with SFO staff knowledgeable of the effects of lighting on pilots and safe air navigation and, if necessary the FAA
- avoid outdoor fireworks proximate to flight paths unless (1) the SFFD approves the proposed use of fireworks, and (2) notice of the event is provided to UCSF
- avoid the use of light configurations similar to those associated with the UCSF helipad landing area locate primary outdoor lighted displays and television/lighted screens away from the project property line at 16th Street, South Street, or Third Street, where feasible
- advance notification and coordination of planned special event lighting with OCII and UCSF representatives
- develop exterior specialized lighting guidelines and ensure event organizers are informed of the hospital helipad, its approaches, and safety concerns related to outdoor nuisance lighting

Comparison of Impact TR-9d to Mission Bay FSEIR Impact Analysis

As discussed above under Impact TR-9c, while the Mission Bay FSEIR did not address potential impacts associated with operation of a helipad in the Plan area, Addenda No. 5 and 6 to the Mission Bay FSEIR did address operation of the UCSF helipad, and determined that the proposed helipad did not entail any substantial changes that would require major revisions to the Mission Bay FSEIR, nor would new significant impacts or a substantial increase in the severity of

previously-identified significant effects occur, and no new information had emerged that would materially change any of the analyses or conclusions in the Mission Bay FSEIR. As discussed above, the impact of the project's exterior lighting on UCSF helicopter pilots would be less than significant with mitigation. Therefore, the project would result in no new or substantially more severe significant impacts than those previously identified in the Mission Bay FSEIR, as addended.

Cumulative Impacts

Impact C-TR-9: The project, in combination with other past, present, and reasonably foreseeable future projects, could result in significant adverse cumulative impacts to the UCSF helipad. (Less than Significant with Mitigation)

Under cumulative conditions, past, present, and reasonably foreseeable future development in the immediate project vicinity would have the potential to result in cumulative effects on the UCSF helipad airspace surfaces, and night lighting effects on the UCSF pilots.

In the immediate project vicinity, cumulative building development is anticipated on the currently undeveloped portions of Blocks 27, 25, X3, and 33, located north, west, southwest and south of the project site, respectively. As with the proposed site, these parcels are located in the vicinity of the UCSF helipad airspace surfaces and/or its arrival/departure flight paths. Of these, Blocks 25, X3, and 33 are planned for development by UCSF under its 2014 LRDP. As discussed above, the 2014 UCSF LRDP Final EIR determined that the implementation of the 2014 LRDP, including new UCSF development immediately west, southwest, and south of the project site, would have a less than significant impact for people residing or working near the helipad. It is also reasonable to assume that UCSF, as operator of its helipad, would design, construct, and operate all of its other planned development on its Mission Bay campus in consideration of ensuring safety operating conditions for the helipad and helicopter pilots. Furthermore, none of the planned development on Blocks 27, 25, X3, and 33 would include outdoor entertainment facilities, such that there would be no cumulative impact related to exterior specialized lighting.

However, depending on the construction schedules for the planned developments on Blocks 27, 25, X3, and 33, the construction of the proposed project in combination with other planned development could result in a cumulative adverse impact to the UCSF helipad. Mitigation Measure M-TR-9a would require that the project's crane safety plan include a measure to coordinate the project crane activity schedule with UCSF and OCII. Furthermore, Mitigation Measure M-TR-9a would require that if other projects on adjacent properties are under construction concurrent with the proposed project and are using tower cranes, the sponsor would participate in joint coordination with those project sponsors and OCII to ensure any potential cumulative construction crane effects on the UCSF helipad would be minimized. With implementation of Mitigation Measures M-TR-9a, the contribution to cumulative impacts by the project would not be considerable, and the impact would be *less than significant with mitigation*.

Mitigation Measure M-TR-9a: Crane Safety Plan for Project Construction (see Impact TR-9)

Comparison of Impact C-TR-9 to Mission Bay FSEIR Impact Analysis

At the time the Mission Bay FSEIR was prepared, no helipad was specifically proposed by UCSF in the Plan area. As such, the Mission Bay FSEIR did not address potential impacts, including cumulative impacts, associated with operation of a helipad in the Plan area. Addenda No. 5 and 6 to the Mission Bay FSEIR did consider cumulative effects associated with operation of the UCSF helipad, and determined that the proposed helipad did not entail any substantial changes that would require major revisions to the Mission Bay FSEIR, nor would new significant impacts or a substantial increase in the severity of previously-identified significant effects occur, and no new information had emerged that would materially change any of the analyses or conclusions in the Mission Bay FSEIR.

As discussed above, the proposed project's contribution to cumulative construction impacts of the project on the UCSF helipad operations would be less significant with mitigation. Therefore, the project would result in no new or substantially more severe significant impacts than those previously identified in the Mission Bay FSEIR, as addended.