ADDENDUM NO. 8 TO SUBSEQUENT ENVIRONMENTAL IMPACT REPORT

Date of Publication of Addendum: May 15, 2013
Date of Certification of Final Subsequent EIR: September 17, 1998

Lead Agency: Office of Community Investment and Infrastructure
Successor Agency to the San Francisco Redevelopment Agency
1 South Van Ness Avenue, 5th Floor, San Francisco, CA 94103

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Project Title: Successor Agency Case No. 919-97; Addendum #8
Mission Bay South Block 1

Project Sponsor/Contact: Strada Investment Group

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Project Address: Block 1 in the Mission Bay South Redevelopment Area. Approximately 2.7 acres, located north of Channel Street, west of Third Street, east of Fourth Street and southeast of Mission Bay Park P3, as depicted on Figure 1.

City and County: San Francisco

Determination:

The proposed Project would modify the Mission Bay South Redevelopment Plan ("Plan") to allow on Block 1 in the Plan Area either a 500-room hotel and 50,000 square feet of retail use, as currently provided for in the Plan, or a 250-room hotel, 350 housing units and 25,000 square feet of retail. If housing is constructed, the developer would pay an affordable housing in-lieu fee or construct inclusionary housing as part of the development. Based on the analysis described in this addendum, the proposed Project does not entail any substantial changes that would require major revisions to the *1998 Mission Bay Final Subsequent Environmental Impact Report* (Mission Bay FSEIR), nor would there be new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

Since certification, no substantial changes have occurred in the circumstances under which the *Mission Bay South Redevelopment Plan* would be undertaken, and no new information of substantial importance has emerged that would materially change any of the analyses or conclusions of the Mission Bay FSEIR; therefore, no additional environmental review is necessary beyond this Addendum.

(The basis for this determination is provided on the following pages.)

I do hereby certify that the above determination has been made pursuant to state and local requirements.

5-15-13

Tiffany Bohee, Executive Director
Successor Agency to the San Francisco
Redevelopment Agency

Date of Determination

Background

Mission Bay South Plan Approval Process and Prior Environmental Review

On August 23, 1990, the San Francisco Board of Supervisors certified the *Mission Bay Final Environmental Impact Report* (the "1990 FEIR").[1] 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*, with implementation of zoning. In 1996-97, the 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.

On September 17, 1998, the San Francisco Planning Commission and the Redevelopment Agency Commission certified the *Mission Bay Final Subsequent Environmental Impact Report* (the "Mission Bay FSEIR").[2] 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 the new Project. Thus, the 1990 FEIR and the Mission Bay FSEIR together constitute the environmental documentation for the Plans. The Mission Bay FSEIR assumed as part of the analysis that there would be a new hotel and retail space constructed on Block 1 of the Mission Bay South Redevelopment Area ("South Plan Area").

The Redevelopment Agency Commission adopted the Plans on September 17, 1998, along with the *Mission Bay South Owner Participation Agreement* (as subsequently amended, the "South OPA") and the *Mission Bay North Owner Participation Agreement* (as subsequently amended, the "North OPA") between the Redevelopment Agency and Catellus Development Corporation.[3] The North and South OPAs incorporated into the project the mitigation measures identified in the Mission Bay FSEIR and adopted by the Redevelopment Agency Commission at the time of project approval.[4] As authorized by the Plans, the Redevelopment Agency Commission simultaneously adopted design guidelines and standards governing development, contained in companion documents, *The Design for Development for the Mission Bay South Project Area* (the "South Design for Development") and *The Design for Development for the Mission Bay North Project Area* (the "North 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] The South OPA has been amended twice, the first amendment dated February 17, 2004, and the second dated November 1, 2005. Neither the North nor South Plans has been amended to date.

The Redevelopment Agency has prepared seven prior addenda to the Mission Bay FSEIR:

1. The first addendum, dated March 21, 2000, analyzed the ballpark parking lots.
2. 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.
3. 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.

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1 Planning Department Case No. 86.505E.
2 Planning Department Case No. 96.771E, Redevelopment Agency Case No. ER 919-97.
3 Resolution No. 188-98 and Resolution No. 193-98, respectively.
4 North and South OPAs, Attachment L.
5 Resolution No. 186-98 and Resolution No. 191-98, respectively.
6 Ordinance No. 327098 and Ordinance No. 335-98, respectively.

4. 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 bio-technical and similar research facilities, and specified certain changes to the North OPA to reflect a reduction in permitted commercial development and associated parking.
5. 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 Long Range Development Plan.
6. The sixth addendum, dated September 10, 2008, addressed revisions of the UCSF Medical Center at Mission Bay.
7. 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, the Southern Police Station, and new San Francisco Fire Department station, and adaptive reuse of historic Fire Station 30, along with parking for these uses.

A ninth addendum, for the proposed Family House Project and associated South OPA Amendment, is in process. The Family House Project is referenced and addressed below in the impact analysis where relevant.

Successor Agency/Oversight Board Jurisdiction

The 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 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 (collectively, the "Dissolution Law"). In response to the Dissolution Law, the City and County of San Francisco created the Successor Agency to the Redevelopment Agency of the City and County of San Francisco ("Successor Agency"), commonly known as the Office of Community Investment and Infrastructure ("OCII"). Pursuant to state and local legislation, the Successor Agency 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 Successor Agency. Pursuant to the Successor Agency Legislation, the Commission on Community Investment and Infrastructure exercises certain land use, development and design approval authority for the North and 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. The South OPA has been recognized as an "Enforceable Obligation" by the Oversight Board and the California Department of Finance.

South Plan Area Development Controls

The primary development controls for the South Plan Area are the South Plan and the South Design for Development, as amended on March 16, 2004, which together specify development standards for the site, including standards and guidelines for height, setbacks, and coverage. In accordance with 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 Redevelopment Agency, now the Successor Agency, as described above. Together, the South Plan and South Design for

Development constitute the regulatory land use framework for the Block 1 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 infrastructure serving the South Plan Area is provided by the master developer, FOCIL-MB, LLC, consistent with the South OPA, including the Mission Bay South Infrastructure Plan (Attachment D to the South OPA). The South OPA includes triggers for the phasing of required infrastructure requirements 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 Block 1 include:

- Mitigation measures included in the Mission Bay FSEIR and which the Successor Agency has identified as required to be implemented by the developer of the Block 1 Site (attached to this as Addendum as Exhibit A);[7] and
- All other associated adopted plans and documents that apply in the South Plan Area under the Plan and OPA, such as the 1999 Mission Bay Risk Management Plan, with amendments, including the Article 22A of the San Francisco Department of Public Health for analyzing soils for hazardous waste.
- 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"; required permits from the San Francisco Municipal Transportation Authority; and any engineering requirements applicable under City Code to the development.

Existing Conditions

The Project for purposes of this Addendum consists of an amendment to the South Plan and the South OPA, as defined and described below in the *Project Description*. In addition, the developer has proposed a Block 1 Major Phase, a specific plan that illustrates one way to implement the proposed amendments to the South Plan and South OPA. The Block 1 Major Phase proposal is also discussed in this addendum, although the change could be implemented in other ways that are consistent with the South Plan and South OPA, as amended, and the South Design for Development.

Before 1998, Mission Bay was characterized by low-intensity industrial development and vacant land. Since adoption of the South Plan in 1998, Mission Bay has undergone redevelopment into a mixture of residential, commercial (light industrial, research and development, labs and offices), and educational/institutional uses and open space. The North Plan Area is substantially complete. In the South Plan Area, approximately 620 of some 3,000 housing units are complete, with 940 under construction and another 540 to begin construction in the next few months, meaning that 70 percent of Mission Bay South housing units will soon be complete or under construction. Regarding office and laboratory space, approximately 40 percent of the 4.4 million square feet in the South Plan Area is complete, as is 2 million square feet of the approved 2.65 million-square-foot UCSF research campus. Meanwhile, the City's new Public Safety Building and first phase of the UCSF Mission Bay Medical Center are under construction.

[7] In addition to mitigation measures that must be implemented by the developer of Block 1, other mitigation measures may need to be implemented at the time infrastructure serving Block 1 is constructed, as provided for in the South OPA. The status of the implementation of all mitigation measures in the South Plan area, including those that will be implemented with any infrastructure serving Block 1, is available in the Office of Community Investment and Infrastructure, 2013 Block 1 Project File, which includes the Mission Bay South Redevelopment Plan Amendment #1, Mission Bay South Owner Participation Agreement Amendment #3, and the 2013 Block 1 Major Phase Application.

The site of the proposed Project, Block 1, is bounded by Channel Street to the south, Third Street to the east, Fourth Street to the west and Mission Bay Park P3 to the northwest ("Block 1 Site") (see **Figure 1**). The Block 1 Site is currently vacant and is used during baseball season as overflow parking for the nearby AT&T Park. The South Plan assigns a land use designation of *Hotel* to the site. As analyzed in the Mission Bay FSEIR, it is anticipated that the site would include a 500-room hotel, and associated facilities, including banquet and conference facilities and up to 50,000 gross square feet of entertainment-oriented commercial uses. Retail business and personal services, arts activities and spaces, nighttime entertainment, catering, and animal care services, are also permitted on the Block 1 Site. The Plan's maximum height limit is 160 feet. The Block 1 Site is within Height Zone 2 of the South Design for Development. Within this zone, the South Design for Development specifies that 15 percent of the developable area (within the entire height zone) may be occupied by a total of seven towers up to 160 feet in height; 10 percent of the developable area may be built to a midrise height of 90 feet, and the remaining 75 percent of the development would be at a maximum of 65 feet. Within this Height Zone 2, the South Design for Development also establishes bulk limits for development at a height greater than 90 feet. For residential buildings, the maximum plan dimension is 160 feet, and the maximum diagonal dimension is 190 feet. For hotels, the maximum plan dimension is 200 feet. The maximum residential floor plate size is 17,000 square feet, and the maximum hotel floor plate size is 20,000 square feet.

Project Description

This Addendum analyzes the environmental effects of a proposed change to the Mission Bay South development as analyzed in the FSEIR that would allow residential uses on Block 1 in addition to the presently allowed hotel and retail uses. This proposed change requires a first amendment to the South Plan and an amendment to the South OPA (as described below, collectively, the "Project"). The developer has proposed a Block 1 Major Phase, a specific plan that illustrates one way to effect the proposed change consistent with the South Plan Amendments and South Design for Development. The Block 1 Major Phase is also discussed in this addendum, and the change could be implemented in other ways that are consistent with the South Plan and South OPA, as amended, and South Design for Development.

South Plan and OPA Amendments

The project sponsor is seeking an amendment to the South Plan and the South OPA ("South Plan Amendments") to allow either a 500-room hotel and 50,000 square feet of retail uses on the Block 1 Site, or a smaller 250-room hotel with up to 350 residential units and 25,000 square feet of retail. The South Plan Amendments would allow dwelling units as a secondary use on the Block 1 Site and provide for a corresponding increase in the total number of dwelling units permitted within the South Plan Area. The amendments to the South OPA (the "South OPA Amendments") would provide for development on the Block 1 Site of either a 500-room hotel with up to 50,000 square feet of retail, as currently allowed by the Plan, or an alternative development of up to 350 dwelling units (with a corresponding increase the total number of housing), 250 hotel rooms, and 25,000 square feet of retail. If residential units are built, the South OPA Amendments would require as a condition of approval for any residential project on Block 1 that the developer pay an affordable housing in-lieu fee or construct inclusionary housing as part of the 350 units to address the need for affordable housing within San Francisco. No amendments to the South Design for Development are proposed as part of the Project, and any future development on Block 1 would be required to meet all South Design for Development requirements, including, but not limited to, height, massing, and parking.[8]

[8] The South Design for Development allows a maximum for residential uses of 1 parking space per residential unit; for hotel uses, 1 parking space per 16 guest rooms; and for retail uses, 1 space for each 500 gross square feet ("gsf"), of retail up to 20,000 gsf, plus 1 additional space per every 250 gsf over 20,000 gsf. There are no minimum parking requirements for residential and hotel uses. For retail uses over 20,000 gsf, there is a minimum requirement of 75 percent the maximum number of parking spaces allowed.

Location Map

Major Phase Ground Floor and Phasing Plan

SOURCES: Adavant Consulting (t); Block 1 Assoc. (b)

Figure 1
Project Location

Under applicable Community Redevelopment Law, redevelopment plan amendments require approval by the redevelopment agency and adoption by the legislative body. *California Health and Safety Code* Section 33453 also requires referral to the San Francisco Planning Commission for report and recommendation when there are substantial changes proposed to the plan which affect the General Plan.[9]

To implement the South Plan Amendments, the Successor Agency would take the South Plan Amendments to the Planning Commission for recommendation, if applicable, and then to the full Board of Supervisors for approval. To implement the OPA Amendments, the Oversight Board would need to direct the Successor Agency to adopt the South OPA Amendments. After the Oversight Board has acted, the OPA will be referred to the Department of Finance for final approval.

Block 1 Major Phase

The project sponsor has submitted a Major Phase Application for the Block 1 Site to the Successor Agency and is seeking a Major Phase approval that would permit up to 350 dwelling units and 250 hotel rooms ("Block 1 Major Phase"). The proposed Block 1 Major Phase application is a specific proposal to implement the previously described Option B. The Block 1 Major Phase includes a total of approximately 350 dwelling units, a 250-room hotel, 25,000 square feet of retail space, and up to 426 parking spaces. The Block 1 Major Phase consists of three primary components, including two residential components (a 155-foot-tall structure at the corner of Third Street and Park P3, with 200 dwelling units and 10,000 square feet of retail space, and a 65-foot-tall structure wrapping around the corners of Channel and Fourth Streets and Fourth Street and Park P3, with 150 dwelling units and 11,000 square feet of retail space); and a 155-foot-tall, 250-room hotel at the intersection of Channel and Third Streets, with approximately 4,000 square feet of ground-level retail space. The three components may be built all together or separately in phases, with each phase totaling approximately 20 – 30 months. Loading zones would also be provided for all three components, with trucks sharing the parking driveways for each building.

The Block 1 Major Phase is consistent with the proposed South Plan Amendments and the South Design for Development and is included in this addendum as one alternative Major Phase design that would implement the South Plan Amendments and South Design for Development. Other Major Phase site designs also could be developed that comply with the requirements of the South Plan and South OPA, as amended, and the South Design for Development.

Analysis of Potential Environmental Impacts

California Environmental Quality Act (CEQA) Guidelines Section 15164 allows an addendum to document if some changes or additions to the original certified EIR are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred. The lead agency should include in its addendum a brief explanation of the decision not to prepare a subsequent EIR pursuant to Section 15162, which must be supported by substantial evidence that the conditions that would trigger preparation of a Subsequent EIR, as specified in Section 15162, are not present.

Since certification, beyond the change to the South Plan and South OPA proposed as part of the Project, no other conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred, specifically, other changes in the Mission Bay South development proposal, substantial changes in the circumstances under which the plans would be undertaken, or new information of substantial importance that could not have reasonably been known at the time of preparation of the Mission Bay FSEIR and that would materially change any of the analyses or conclusions of the existing Mission Bay FSEIR.

[9] It has been determined that the proposed South Plan Amendments are not considered a substantial change for the purposes of the Community Redevelopment Law; however, the Planning Commission will be reviewing the project for consistency with the General Plan.

As summarized below, the analysis of the Project did not identify any new significant environmental effects or substantial increases in the severity of previously identified significant effects that affect the conclusions in the Mission Bay FSEIR. With the exception of the OPA and Redevelopment Plan amendments described above, the Project would be in compliance with the South Plan, South Design for Development, and other documents that control development and use of sites within Mission Bay. Accordingly, the analysis below is limited to the topics where the proposed amendments to land use controls and associated potential development under the Project could create new impacts not previously analyzed in the Mission Bay FSEIR. As part of the Project analysis, transportation and utility assessments were completed to identify any potential impacts other than those projected in the Mission Bay FSEIR.[10]

Land Use

The FSEIR considered the effects of a mix of uses in the South Plan area, specifically, hotel and retail on the Block 1 site; park, residential and retail uses on adjacent sites; and commercial-light industrial, research and development and UCSF institutional uses south of the Block 1 Site.[11] In addition to the proposed Project, various other projects are anticipated in the South Plan Area, including the ongoing construction of the Public Safety Building on Block 8, the proposed construction of Family House Project on Block 7E (the subject of a separate addendum), the new UCSF Medical Center (Phase 1 of which is under construction), and UCSF's pending update of its Long-Range Development Plan, which would likely lead to construction of new student housing, faculty office facilities, research laboratory and instructional space, parking facilities and open space.

The types of uses envisioned at Mission Bay in these current and foreseeable projects, including the Project, would be consistent with the uses considered in the FSEIR and that already exist in the vicinity. The Project hotel, while unique at Mission Bay, was considered in the FSEIR and would not result in any new or substantially more severe land use impacts beyond those identified in the Mission Bay FSEIR. The newly proposed residential units on the Block 1 Site, while not considered as a use at that site in the FSEIR, would be compatible with residential uses considered in the FSEIR and with other nearby residential uses.

The FSEIR also considered and analyzed adjacent uses on Port property. Although a mixed-use project currently under consideration by the San Francisco Giants on Seawall Lot 337 was not proposed when the FSEIR was prepared, the potential components of that development (office, residential, and retail/restaurant uses, open space, and parking) are consistent with and/or compatible with existing and approved uses in the Plan Area, and thus this potential future development, if realized, would not result in substantially different land use impacts than those identified in the FSEIR, either individually or cumulatively.

Therefore, the Project would not result in any new or substantially more severe land use impacts than were identified in the Mission Bay FSEIR.

Aesthetics – Visual Quality and Urban Design

The Mission Bay FSEIR considered development on the Block 1Site of a hotel at a height of up to 160 feet, the same height as currently proposed under the Project.[12] In particular, development at a height of 160 feet on the Block 1 Site was conceptually illustrated in the FSEIR in the visual simulation looking

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[10] Office of Community Investment and Infrastructure, 2013 Block 1 Project File, which includes the Mission Bay South Redevelopment Plan Amendment #1, Mission Bay South Owner Participation Agreement Amendment #3, and the 2013 Block 1 Major Phase Application.

[11] Mission Bay FSEIR, pp. V.B.11 – V.B.30; especially, Central Subarea impacts analysis on pp. V.B.21 – V.B.23.

[12] Mission Bay FSEIR, pp. V.D.14 – V.D.45.

south from the north end of the Lefty O'Doul Bridge (FSEIR Figure V.D.9, p. V.D.33), as well as in the wide-angle visual simulation entitled "Potential Panoramic View from Potrero Hill" (FSEIR Figure V.D.4, p. V.D.24), in which development on the project site is visible to the right of the China Basin Building. The Project would occupy the entirety of the Block 1 Site and would include a range of heights from approximately 35 feet at the podium and 65 to 90 feet for much of the façade to 160 feet for the two towers. The proposed height and massing of the building would be within the range of development that exists in the vicinity of the Block 1 Site and within the building envelope analyzed for the Block 1 Site in the Mission Bay FSEIR. Moreover, the Project would be required to comply with the South Design for Development, a companion document to the South Plan that contains design standards and guidelines that apply to all development within the South Plan Area. The Project would change the appearance of the currently undeveloped Block 1 Site, but in a way that was anticipated and analyzed in the Mission Bay FSEIR. As noted above, the FSEIR analyzed and illustrated development on the Block 1 Site at the same 160-foot height currently proposed. While the massing of the current Project could be different, the overall aesthetic effect would be comparable to that analyzed in the FSEIR. Moreover, the Project's affect on scenic views is consistent with the effect of the project analyzed in the Mission Bay FSEIR. Given that the Project massing would be consistent with the assumed development in the FSEIR, would comply with the South Design for Development, and would not adversely affect visual character views in a manner substantially different from that analyzed in the Mission Bay FSEIR, the Project would not result in any new or substantially more severe aesthetic impacts than were identified in the Mission Bay FSEIR.

Wind and Shadow

The Mission Bay FSEIR analyzed wind and shadow impacts in the Initial Study, FSEIR Appendix A.[13] The FSEIR found no significant shadow impacts, but did identify a potential significant impact with respect to pedestrian-level winds. The FSEIR therefore identified a mitigation measure that would require project-specific wind analysis for subsequent buildings that exceed 100 feet in height. Accordingly, the South Design for Development requires wind impacts analysis for buildings over 100 feet in height. Because the Project would contain two towers 160 feet in height, the Project would be required to undergo project-specific wind analysis during the Basic Concept and Schematic Design phases, in accordance with Mitigation Measure D.07 of the Mission Bay FSEIR. Based on Mitigation Measure D.07, if the wind analysis identifies any pedestrian wind hazards (ground-level winds that exceed 26 miles per hour for a single full hour of the year), the project sponsor would be required to make revisions to the Project to avoid such new wind hazard(s) and to submit building design modifications to mitigate pedestrian-level wind impacts to City during project review, and to incorporate such revisions as approved by the City into the building(s) as constructed. The existing South OPA requires compliance with Mitigation Measure D.07. With implementation of Mitigation Measure D.07, the Project would not result in any new or substantially more severe wind impacts, compared to those identified in the Mission Bay FSEIR.

With respect to shadow impacts, the South Design for Development requires project-specific shadow analysis for projects that request a variance from the Design Standards. Since the Project would not seek a variance and because the proposed massing would be within what was assumed in the Mission Bay FSEIR, the requirement for additional shadow analysis is not triggered and the Project would not be expected to result in substantial new shadow as compared to what was identified in the Mission Bay FSEIR.

Transportation

The Mission Bay FSEIR analyzed a 500-room hotel and 50,000 square feet of retail space on the Block 1 Site as part of the overall transportation analysis for the South Plan and North Plan. The FSEIR also

[13] Mission Bay FSEIR, Appendix A, pp. A.32 – A.36.

assumed a number of changes in the street network, many of which (such as the southward extension of Fourth Street parallel to Third Street and the construction of Channel Street[14] between, and perpendicular to, Third and Fourth Streets) have been completed. The FSEIR found significant, unavoidable impacts at a number of intersections, street segments, and freeways and freeway ramps, and significant impacts on Muni and AC Transit service.[15]

The Mission Bay FSEIR found that the original hotel and retail project would generate about 9,850 daily person-trips, including approximately 3,952 daily vehicle trips. In the p.m. peak hour, the original project would generate about 580 person-trips, of which 425 would be made by automobile (representing 220 vehicle trips), and 75 each by transit and on foot.[16] Based on the transportation analysis, the Project would generate about 9,000 daily person trips (9 percent less than the original project) and about 3,050 daily vehicle trips (22 percent less than the original project). In the p.m. peak hour, the Project would generate 1,119 person-trips (95 percent more than the original project), including 575 trips by auto (35 percent more), 410 vehicle trips (87 percent more), 279 transit trips (272 percent more), and 210 walk trips (180 percent more).

The transportation assessment prepared for the Project examined the development analyzed in the Mission Bay FSEIR and subsequent addenda, to determine if the proposed Project and associated trips were within the range of travel demand analyzed under the Mission Bay FSEIR. It also compared the traffic impacts of the Project to the existing conditions to confirm that the Project, when added to the existing setting, would not trigger any new significant traffic impacts (in terms of LOS), or would lead to substantially worse traffic impacts than those identified in the Mission Bay FSEIR. [17]

As noted above, the Mission Bay FSEIR assumed a 500-room hotel and 50,000 square feet of retail space on the Block 1 Site. The Project allows either the hotel/retail use or a hotel/residential/retail use, which would encompass the Block 1 Major Phase or another hotel/residential program that is consistent with the South Plan and OPA, as amended. Because the hotel/retail land use was previously analyzed in the Mission Bay FSEIR, the focus of the analysis is on the potential impacts of the potential development under the amended South Plan and OPA, as amended.

To confirm that the Project would not result in any significant impacts compared to existing conditions, the transportation analysis also evaluated traffic effects of vehicle trips generated by the Project when added to existing volumes at local intersections. During the weekday p.m. peak hour, 410 new vehicles (208 inbound and 202 outbound) would access the Block 1 Site under the Project. The addition of Project-generated traffic would result in minor increases in the average delay per vehicle at most of the seven study intersections considered in the transportation analysis (16th St./Third St., 16th St./Owens St., Mission Rock St./Third St., Channel St./Third St., Channel St./Fourth St., King St./Third St., and King St., Fourth St.). However, all study intersections would continue to operate at the same LOS as under Existing conditions. Six of the seven study intersections would continue to operate at LOS D or better while the intersection of intersection of King Street and Fourth Street would continue to operate at LOS E. Moreover, the Project's contribution to the critical movements at the intersection of King Street and Fourth Street during the pm peak hour would be below five percent. Therefore, the Project would

[14] Channel Street along the southern edge of the Block 1 Site was identified as Owens Street in the FSEIR.

[15] Mission Bay FSEIR, pp. V.E.60 – V.E.120.

[16] The number of automobile trips is converted to vehicle trips on the basis of 1.94 persons per vehicle. Hotels have a generally higher average number of persons per vehicle than many other uses owing to the nature of their operations. Trip generation rates are taken from the Planning Department's *Transportation Impact Analysis Guidelines* (2002) for the new residential use, and from the Mission Bay FSEIR for the hotel and retail uses analyzed in the FSEIR.

[17] Adavant Consulting, Transportation Assessment for the Proposed Development of a Mixed-Use Project on Block 1 of the Mission Bay South Area of San Francisco; May 15, 2013. (See Exhibit B).

result in a less-than-significant traffic impact with respect to LOS. Accordingly, the Project would not result in any new or substantially more severe impacts than those identified in the Mission Bay FSEIR.

Likewise, the transportation analysis evaluated effects of the Project on transit and determined that, while transit trips from the Block 1 Site would increase compared to those for the original project, the increased ridership could be accommodated on the N-Judah and T-Third Muni Metro lines, which would carry the great majority of Project ridership, without resulting in capacity utilization that would exceed Muni's 85 percent standard. Moreover, the maximum ridership on these and other Muni lines serving the Block 1 Site and vicinity occurs closer to downtown, and there is relatively greater capacity near the Block 1 Site. Thus, effects on Muni would be less than significant. The relatively smaller increase in ridership on Caltrain, BART, AC Transit, and Golden Gate Transit would likewise not result in any significant impacts.

With respect to cumulative effects and overall trip generation within the South Plan Area, the change in the land use mix on the Block 1 Site from hotel and retail to a smaller hotel, less retail space, and the addition of residential units, along with the proposed Family House Project on Block 7E and other changes in the South Plan Area,[18] would result in a decrease in daily vehicle trips (3.7 percent less) generated within the South Plan Area, compared to the trip generation totals reported in the Mission Bay FSEIR for the Combination of Variants Alternative (essentially the project approved by the Board of Supervisors).[19] The overall number of p.m. peak hour person trips and vehicle trips would also be lower than for the approved Combination of Variants project (0.2 percent and 1.6 percent, respectively), while overall p.m. peak-hour transit trips would be 1.9 percent greater. However, this overall incremental increase in South Plan Area ridership, including Project trips, would be within expected daily and seasonal fluctuation in ridership and would not be anticipated to result in adverse effects on Muni or other carriers, particularly given that the maximum ridership on nearby Muni lines occurs closer to downtown. Thus, the Project would not result in any new or substantially more severe traffic or transit impacts than those identified in the Mission Bay FSEIR.

With respect to other impacts transportation and circulation categories, the transportation assessment for the Project found that impacts to pedestrians, bicycles, loading, construction, emergency vehicle access, and parking to be less than significant, both when considering the addition of the Project to existing conditions and when evaluating it in combination to other changes in the South Plan Area in comparison to what was concluded in the Mission Bay FSEIR. The Project would comply with all the requirements for pedestrian and bicycle conditions as contained in the South Design for Development and Streetscape Master Plan documents adopted as part of the overall Mission Bay Redevelopment Project.

While the Project would generate greater peak-hour person trips than assumed for the Block 1 site in the Mission Bay FSEIR, the overall p.m. peak-hour person trip generation and vehicle trip generation for the South Plan area as a whole would be lower than the numbers analyzed in the Mission Bay FSEIR. Also, while the Project would increase transit usage compared to what the Mission Bay FSEIR assumed for the Block 1 site, the overall number of transit and other trips in the South Plan area would be incrementally greater but not to the extent that adverse impacts would arise. For these reasons, the transportation

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[18] Changes to South Plan Area development have included revisions to UCSF development (including the UCSF Medical Center and office/R&D space on Blocks 36 through 39 and X3) and the new Public Safety Building now under construction on Block 8.

[19] Comparisons to Mission Bay South trip generation use the FSEIR's trip generation rates for the previously proposed hotel and retail uses and the Planning Department *Guidelines* for the newly proposed residential use. The net addition in vehicle trips from the Block 1 Site only, compared to the development assumed there in the Mission Bay FSEIR, would amount to a 0.7 percent decrease in daily vehicle trips and a 1.1 percent increase in p.m. peak-hour vehicle trips. However, as explained in the text, overall South Plan Area vehicle trip generation, both daily and peak-hour, would be less than analyzed in the Mission Bay FSEIR.

analysis found that implementation of the Project would not be expected to result in any new significant impacts or impacts of substantially greater severity than those analyzed in the Mission Bay FSEIR.

In light of the foregoing, the Project would not result in any new or substantially more severe impacts on traffic, transit, or other modes of transportation, compared to the impacts reported in the Mission Bay FSEIR.

Air Quality – Mobile Sources

As with the transportation analysis, the air quality analysis in the Mission Bay FSEIR assumed a 500-room hotel and 50,000 square feet of retail space on the Block 1 Site as part of the overall development program for the South Plan and North Plan. Given that operational emissions are generated primarily from motor vehicle trips, the FSEIR identified a significant, unavoidable impact with respect to vehicle emissions from project-generated traffic for the overall Mission Bay North and South Plans.[20] With respect to such emissions from the Project, as noted above under Transportation, the Project would result in a decrease in daily vehicle traffic compared to that evaluated for Block 1 in the Mission Bay FSEIR. Therefore, the Project would likewise result in a decrease in emissions of criteria air pollutants from travel to and from the Block 1 Site, compared to emissions assumed and analyzed in the Mission Bay FSEIR. Additionally, the Project uses would be required to comply with Mission Bay FSEIR Mitigation Measure E.47 to implement measure to reduce vehicle trips. Therefore, the Project would not result in any new or substantially more severe air quality impacts, compared to the impacts reported in the Mission Bay FSEIR.

Public Utilities

The Mission Bay FSEIR assumed a 500-room hotel and 50,000 square feet of retail space on the Block 1 Site as part of the overall development program for the South Plan and North Plan. The FSEIR did not identify significant effects that could not be mitigated with respect to water use or other community services and utilities;[21] for water use, a mitigation measure was identified to incorporate water conservation in buildings and landscaping.[22] Estimated water demand was calculated for the Project, using San Francisco Public Utilities Commission (SFPUC) factors. It was determined that water demand by the proposed Project would be about 48,400 gallons per day, or about 17.65 million gallons per year, assuming compliance with current green building codes and SPFUC conservation strategies. [23] This represents approximately 46 percent less water demand than the 90,000 gallons per day for the original hotel use on the Block 1 Site, calculated using the higher water demand rates in the Mission Bay FSEIR.[24]

Because the Project would permit either the original 500-room hotel or a smaller hotel along with residential use, for public utilities impact purposes, the Project is encompassed through a combination of the Mission Bay FSEIR (as to the original hotel use) and the Project analysis in this Addendum. Both the State of California and the City have adopted stricter controls on potable water use since the Mission Bay FSEIR was certified. For example, the City has adopted both a Green Building Ordinance (Chapter 13C of the *San Francisco Building Code*) and Commercial and Residential Water Conservation Ordinances (Chapter 13A of the *San Francisco Building Code* and Chapter 12A of the *San Francisco Housing Code,* respectively) that include water conservation requirements, as does the San Francisco Water Efficient Irrigation Ordinance (Chapter 63 of the *San Francisco Administrative Code*). Therefore, even accounting for an incremental increase in water demand due to the proposed Family House Project on Block 7E (the subject of a separate addendum), overall water use in the South Plan Area would be lower when estimated

[20] Mission Bay FSEIR, pp. V.F.17 – V.F.19.
[21] Mission Bay FSEIR, pp. V.M.1 – V.M.56.
[22] Mitigation Measure M.2, *Mission Bay FSEIR* p. VI.53.
[23] Water Demand Calculations for Mission Bay Block 1 Project, April 5, 2013.
[24] Mission Bay FSEIR, Appendix L, p. L.9.

using current SFPUC factors than the use assumed in the Mission Bay FSEIR. Moreover, actual water use could be less if new code requirements or conservation strategies are developed in the future.

Based on the above, the Project would not be expected to result in new or more severe impacts with respect to water demand as compared to what was analyzed in the Mission Bay FSEIR, either individually or in combination with the Project and other changes in the South Plan Area.

A decline in water consumption, compared to that estimated in the Mission Bay FSEIR, would also translate to a similar decline in wastewater generation, resulting in little, if any, increase compared to the original project. With respect to stormwater generation, the Project would be required to comply with the San Francisco Stormwater Design Guidelines, which require implementation of Best Management Practices (BMPs) to reduce the flow rate and volume of stormwater.[25] An engineering study prepared for the Project found that adequate capacity exists in water, wastewater, and storm drainage lines surrounding the Block 1 Site to accommodate the Project.[26]

Based on the foregoing, the Project would not result in any new or substantially more severe impacts related to public utilities, compared to the impacts reported in the Mission Bay FSEIR.

Other Environmental Topics

As discussed above, the Project would not result in a significant change to the type, location, and intensity of land uses anticipated for the Block 1 Site in the Mission Bay FSEIR. Therefore, implementation of the Project would result in the same or similar environmental impacts as those already identified and analyzed in the Mission Bay FSEIR with respect to the following environmental topics: plans, policies and permits; business activity, employment, housing, and population; historical and archeological resources; stationary source air quality; seismicity; health and safety; contaminated soils and groundwater;[27] hydrology and water quality; China Basin Channel vegetation and wildlife; community services; and growth inducement. As a result, no further discussion of these topics is required.

Conclusion

Implementation of the proposed Project would not require major revisions to the Mission Bay FSEIR because no new, significant environmental effect or substantial increase in the severity of previously identified significant effects would result. Additionally, since certification, no material changes have occurred in the circumstances under which the South Plan would be implemented, and no new information has emerged that would materially change any of the analyses or conclusions of the Mission Bay FSEIR. Therefore, no additional environmental review is necessary.

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25 The current version of the Stormwater Design Guidelines (November 2009) are "directed primarily to San Francisco's separate storm sewer areas, which include … Mission Bay," among other such areas (Stormwater Design Guidelines, p. 2; available on the internet at: http://www.sfwater.org/modules/showdocument.aspx?documentid=2779).

26 Freyer & Laureta Inc., Mission Bay Planning Block 1 – Utility Analysis (Revised), October 15, 2012. It is noted that this analysis evaluated infrastructure improvements necessary for the Project, not daily or annual water demand. Thus, this study identified an increase in *peak* water and sewer flow that is greater than previously projected for Block 1 development. However, this is a separate question from the calculation of water supply evaluated herein, which found lesser demand than identified in the FSEIR, as well as a concomitant decrease in wastewater generation. Moreover, the Freyer & Laureta analysis found that both water and sewer infrastructure is adequate to accommodate the Project.

27 The Mission Bay FSEIR assumed the possibility of subsurface parking, which could disturb contaminated soil and/or groundwater (FSEIR, p. V.J.64); however, underground parking is not proposed with the Project, which proposes parking in a three-level podium at and above grade, in the center of the Project. Any excavation for foundations would comply with the Mission Bay Risk Management Plan, which would preclude any more substantial effects related to soil and groundwater contamination than were identified in the FSEIR.

Exhibit A
Mitigation Measures

MISSION BAY MITIGATION MEASURES

Block 1

Mitigation Measures	Mitigation Response	S.A.	Responsible (Other)	Mitigation Schedule	Implementation Procedures
Major Phase					
D.06 UNKNOWN ARCHAEOLOGICAL REMAINS					
D.06. The entire Mission Bay Project Area has at least some sensitivity for the presence of unknown archaeological remains. Prehistoric cultural deposits could be encountered in three identified areas and unknown historical features, artifact caches and debris areas could be located anywhere in the Project Area. Follow procedures for instructing excavation crews, notifying the ERO and President of the LPAB, and developing recovery measures, as described in Measure D.03, above. In addition, in the event that prehistoric archaeological deposits are discovered, consult local Native American organizations. Dialogue with the ERO, LPAB and the archaeological consultant would take place in developing acceptable archaeological testing & excavation procedures, particularly in regard to the disposition of cultural materials and Native American burials.	Owner, other developers	S.A.	Planning Department, ERO; LPAB President	Prior to excavation; ongoing implementation as required by measure	Prior to preparation of the work plan consultant shall consult with ERO and LPAB to develop a testing and excavation procedures.
D.47 TRANSPORTATION SYSTEM MANAGEMENT (TSM) PLAN					
E.47a. Shuttle Bus System – 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 residential neighborhoods (e.g., Richmond and Mission Districts).	Owner (TMA)	S.A.	MTA/SSD; PC	As identified by TMA; ongoing review with Agency	See implementation procedures identified for Mitigation Measure E.47.
E.47b. Transit Pass Sales – Sell transit passes in neighborhood retail stores and commercial buildings in the Project Area.	Owner (TMA); other developers	S.A.		As identified by TMA; ongoing review with Agency	See implementation procedures identified for Mitigation Measure E.47.
E.47c. Employee Transportation Subsidies – Provide a system of employee transportation subsidies for major employers.	Owner (TMA); major employers	S.A.	MTA/SSD; PC	As identified by TMA; ongoing review with Agency	See implementation procedures identified for Mitigation Measure E.47.
E.47e. Secure Bicycle Parking – Provide secure bicycle parking areas 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 every 20 automobile parking spaces, and 2) carrying out an annual survey program during project development to establish trends in bicycle use and to estimate 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.	Owner (TMA), other developers	S.A.		As identified by TMA; ongoing review with Agency	See implementation procedures identified for Mitigation Measure E.47.

MISSION BAY MITIGATION MEASURES

Block 1

Mitigation Measures	Mitigation Response	S.A.	Responsible (Other)	Mitigation Schedule	Implementation Procedures
Major Phase (cont.)					
D.47 TRANSPORTATION SYSTEM MANAGEMENT (TSM) PLAN (cont.)					
E.47f. Appropriate Street Lighting – Ensure that 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.	Owner (TMA)	S.A.		As identified by TMA; ongoing review with Agency	See implementation procedures identified for Mitigation Measure E.47.
E.47g. Transit, 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 multimodal travel.	PC, DPW to provide in connection with transit shelters and other transit signage		PC; DPW	In conjunction with transit shelter and signage plans	See implementation procedures identified for Mitigation Measure E.47.
E.47h. Parking Management Guidelines – Establish parking management guidelines for the private operators of parking facilities in the Project Area.	Owner (TMA)	S.A.		As identified by TMA; ongoing review with Agency	See implementation procedures identified for Mitigation Measure E.47.
E.47l. Flexible Work Time/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.	Owner (TMA); other major employers	S.A.		As warranted by development; ongoing review with Agency	See implementation procedures identified for Mitigation Measure E.47.
H.03 COMPREHENSIVE PREPAREDNESS AND RESPONSE PLAN					
H.03b. In addition to the Project Area-wide plan, require each building or complex in the Project Area to prepare an emergency response plan. Each plan would be the responsibility of the owner(s) of each building or complex, and would be reviewed by the City periodically to ensure it is kept up to date.	Owner, other developers	S.A.	Office of Emergency Services (OES)	Include in Project level response plan; update as necessary	Submit Plan prior to issuance building Certificate of Occupancy.
Tentative Map					
H.07 CORROSIVITY					
H.07. Test soils for sulfate and chloride content. If necessary, use admixtures in concrete so it would not be susceptible to attack by sulfates, and/or use coated metal pipes so that pipes would be more resistant to corrosion by chlorides.	Owner, other developers		DPW; DBI	Include in relevant Infrastructure Improvement plans	1. In conjunction with building permit review applicant shall submit a soils report which analyzes soil for sulfate and chloride content. 2. DPW in consultation with DBI to require testing prior to issuance of building or site permits. 3. Owner/other developers to retain services of a geotechnical consultant to test soils.

Block 1

Mitigation Measures	Mitigation Response	S.A.	Responsible (Other)	Mitigation Schedule	Implementation Procedures
Tentative Map (cont'd.)					
					4. Consultant prepares report of results. 5. Owner/other developers to submit report to DPW and DBI for review. 6. DBI to impose building material modifications as necessary to reduce impacts of corrosivity during project review and approval. 7. Owner/other developers to construct project with required building material modifications. 8. DPW or DBI to inspect buildings to ensure compliance with mitigation measure.
K.01 STORMWATER POLLUTION PREVENTION PLAN (SWPPP)					
K.01a. Minimize dust during demolition, grading, and construction by lightly spraying exposed soil on a regular basis.	Owner, other developers		DPW; DBI	Condition Tentative Map to require approval of SWPPP. Incorporate into plans and submit as part of Subdivision Improvement Plans approval.	See implementation procedures identified for Mitigation Measure K.01.
K.01b. Minimize wind and water erosion on temporary soil stockpiles by spraying with water during dry weather and covering with plastic sheeting or other similar material during the rainy season (November to April).	Owner, other developers		DPW; DBI	Condition Tentative Map to require approval of SWPPP. Incorporate into plans and submit as part of Subdivision Improvement Plans approval.	See implementation procedures identified for Mitigation Measure K.01.
K.01c. Minimize the area and length of time during which the site is cleared and graded.	Owner, other developers		DPW; DBI	Condition Tentative Map to require approval of SWPPP. Incorporate into plans and submit as part of Subdivision Improvement Plans approval.	See implementation procedures identified for Mitigation Measure K.01.

MISSION BAY MITIGATION MEASURES

Block 1

Mitigation Measures	Mitigation Response	S.A.	Responsible (Other)	Mitigation Schedule	Implementation Procedures
Tentative Map (cont.)					
K.01 STORMWATER POLLUTION PREVENTION PLAN (SWPPP) (cont.)					
K.01d. Prevent the release of construction pollutants such as cement, mortar, paints and solvents, fuel and lubricating oils, pesticides, and herbicides by storing such materials in a bermed, or otherwise secured, area.	Owner, other Developers		DPW; DBI	Condition Tentative Map to require approval of SWPPP. Incorporate into plans and submit as part of Subdivision Improvement Plans approval.	See implementation procedures identified for Mitigation Measure K.01.
K.01e. As needed, install filter fences around the perimeter of the construction site to prevent off-site sediment discharge. Prior to grading the bank slopes of China Basin Channel for the proposed channel-edge treatments, install silt or filter fences to slow water and remove sediment. As needed, properly trench and anchor in the silt or filter fences so that they stand up to the forces of tidal fluctuation and wave action, and do not allow sediment-laden water to escape underneath them.	Owner, other developers		DPW; DBI	Condition Tentative Map to require approval of SWPPP. Incorporate into plans and submit as part of Subdivision Improvement Plans approval.	See implementation procedures identified for Mitigation Measure K.01.
K.01f. Follow design and construction standards found in the Manual of Standards for Erosion and Sediment Control Measures for placement of riprap and stone size.	Owner, other developers		DPW; DBI	Condition Tentative Map to require approval of SWPPP. Incorporate into plans and submit as part of Subdivision Improvement Plans approval.	See implementation procedures identified for Mitigation Measure K.01.
K.01g. Install and maintain sediment and oil and grease traps in local stormwater intakes during the construction period, or otherwise properly control oil and grease discharges.	Owner, other developers		DPW; DBI	Condition Tentative Map to require approval of SWPPP. Incorporate into plans and submit as part of Subdivision Improvement Plans approval.	See implementation procedures identified for Mitigation Measure K.01.
K.01h. Clean wheels and cover loads of trucks carrying excavated soils before they leave the construction site.	Owner, other developers		DPW; DBI	Condition Tentative Map to require approval of SWPPP. Incorporate into plans and submit as part of Subdivision Improvement Plans approval.	See implementation procedures identified for Mitigation Measure K.01.

Block 1

Mitigation Measures	Mitigation Response	S.A.	Responsible (Other)	Mitigation Schedule	Implementation Procedures
Tentative Map (cont.)					
K.01 STORMWATER POLLUTION PREVENTION PLAN (SWPPP) (cont.)					
K.01I. Implement a hazardous material spill prevention, control, and clean-up program for the construction period. As needed, the program would include measures such as constructing swales and barriers that would direct any potential spills away from the Channel and the Bay and into containment basins to prevent the movement of any materials from the construction site into water.	Owner, other developers		DPW; DBI	Condition Tentative Map to require approval of SWPPP. Incorporate into plans and submit as part of Subdivision Improvement Plans approval.	See implementation procedures identified for Mitigation Measure K.01.
K.03 SEWER IMPROVEMENT DESIGN					
K.03. Design and construct sewer improvements such that potential flows to the City's combined sewer system from the project do not contribute to an increase in the annual overflow volume as projected by the Bayside Planning Model by providing increased storage in oversized pipes, centralized storage facilities, smaller dispersed storage facilities, or detention basins, or through other means to reduce or delay stormwater discharges to the City system.	Subject to regulatory approvals, owner, other developers		Agency; DPW; SFPUC	Submit as part of subdivision improvement plans	1. Owner/other developers to prepare sewer improvement plan in consultation with SFPUC. 2. Owner/other developers to submit sewer improvement plan with SFPUC approval as part of subdivision improvement plans for Agency and DPW review. 3. Agency and DPW to approve plans. 4. Owner/other developers to construct sewer improvements. 5. DPW to inspect improvements to ensure compliance with mitigation measure.
K.04 ALTERNATIVE TECHNOLOGIES TO IMPROVE STORMWATER DISCHARGE QUALITY					
K.04. Implement alternative technologies or use other means to reduce settleable solids and floatable materials in stormwater discharges to China Basin Channel to levels equivalent to, or better than City-treated combined sewer overflows. Such alternative technologies could include one or more of the following: biofilter system, vortex sediment system, catch basin filters, and/or additional source control measures to remove particulates from streets and parking lots.	Subject to regulatory approvals, owner, other developers		Agency; DPW; SFPUC	Submit as part of subdivision improvement plans	1. Owner/other developers to decide on an alternative technology in consultation with SFPUC. 2. Owner/other developers to include alternative technology with SFPUC approval in subdivision improvement plans for Agency and DPW review. 3. Agency and DPW to approve plans. 4. Owner/other developers to construct improvements. 5. DPW to inspect improvements to ensure compliance with mitigation measure.

Block 1

Mitigation Measures	Mitigation Response	S.A.	Responsible (Other)	Mitigation Schedule	Implementation Procedures
Tentative Map (cont.)					
K.06 STRUCTURE PLACEMENT AND DESIGN TO MINIMIZE DANGERS OF FLOODING					
K.06. Structures in the Project Area should be designed and located in such a way to assure the reasonable safety of structures and shoreline protective devices built in the Bay or in low-lying shoreline areas from the dangers of tidal flooding, including consideration of a rise in relative sea level. Detailed construction specifications to mitigate against impacts of a sea-level rise, however, would require specific flood protection engineering and building analysis by a licensed engineer where structures are proposed below a 99-foot elevation (Mission Bay Datum). Measures include:	Owner, other developers		DBI; DPW	Submit as part of subdivision improvement plans; check elevation as part of Tentative Map review	1. Owner/other developers to include modifications required by mitigation measure to project site plan and submit plan for review by DBI and DPW. 2. DPI and DPW to review and approve modified site plan. 3. Owner/other developers to construct project with modifications. 4. DBI or DPW to inspect structures to ensure compliance with mitigation measure.
K.06a. Setback from the water's edge	Owner, other developers Owner, other developers		DBI; DPW	Submit as part of site permit review; check elevation as part of Tentative Map review	See implementation procedures identified for Mitigation Measure K.06. 2. DPI and DPW to review and approve modified site plan. 3. Owner/other developers to construct project with modifications. 4. DBI or DPW to inspect structures to ensure compliance with mitigation measure.
K.06b. Install seawalls, dikes, and/or berms during construction of infrastructure	Owner, other developers		DBI; DPW	Submit as part of site permit review; check elevation as part of Tentative Map review	See implementation procedures identified for Mitigation Measure K.06.
K.06c. Provide for dewatering basements	Owner, other developers		DBI; DPW	Submit as part of site permit review; check elevation as part of Tentative Map review	See implementation procedures identified for Mitigation Measure K.06.
K.06d. Construct streets and sidewalks above existing grades by reducing the amount of excavation for utilities or basements	Owner, other developers		DBI; DPW	Submit as part of site permit review; check elevation as part of Tentative Map review	See implementation procedures identified for Mitigation Measure K.06.

MISSION BAY MITIGATION MEASURES

Block 1

Mitigation Measures	Mitigation Response	S.A.	Responsible (Other)	Mitigation Schedule	Implementation Procedures
Tentative Map (cont.)					
K.06 STRUCTURE PLACEMENT AND DESIGN TO MINIMIZE DANGERS OF FLOODING (cont.)					
K.06e. Use topsoil to raise the level of public open spaces	Owner, other developers		DBI; DPW	Submit as part of site permit review; check elevation as part of Tentative Map review	See implementation procedures identified for Mitigation Measure K.06.
K.06f. Use half-basements and partially depressed garage levels to minimize excavation	Owner, other developers		DBI; DPW	Submit as part of site permit review; check elevation as part of Tentative Map review	See implementation procedures identified for Mitigation Measure K.06.
M.03 EXTEND AUXILIARY WATER SUPPLY SUSTEM					
M.03. Extend the Auxiliary Water Supply System (High-Pressure System) through the interior of the Project Area. The routing, design and implementation of the AWSS extensions shall be determined by the Fire Department and the Department of Public Works.	Owner	S.A.	DPW	Include in site permit plans.	1. See mitigation measure for obtaining specific implementation procedures. 2. DPW and Fire Department to review the routing, design and implementation of the AWSS during the site permit process. 3. DPW to inspect the project area after project construction to ensure compliance with mitigation measure.
M.04 SEWERS AND WASTEWATER TREATMENT					
M.04. Construct a fence around any interim surface detention basins.	Owner	S.A.	DPW During construction and operation of basins	During construction and operations of basins	1. DPW to impose requirement of mitigation measure as part of project-level and/or site permit approval. 2. Owner to construct project according to requirements. 3. DPW to inspect site to ensure compliance with mitigation measure.
M.05 STORMWATER RUNOFF CONTROL AND DRAINAGE					
M.05. Drain stormwater runoff (up to a 5-year event) from newly constructed buildings and permanently covered surfaces in the Bay Basin into the City's combined sewer system until installation of a permanent sewer system.	Owner	S.A.	DPW	Include in subdivision improvement plans	1. DPW to impose requirement of mitigation measure as part of project-level and/or site permit approval. 2. Owner to construct project according to requirements. 3. DPW to inspect site to ensure compliance with mitigation measure.

MISSION BAY MITIGATION MEASURES

Block 1

Mitigation Measures	Mitigation Response	S.A.	Responsible (Other)	Mitigation Schedule	Implementation Procedures
Project Level Review					
D.01 LIGHTING AND GLARE					
D.01. Design parking structure lighting to minimize off-site glare. The design could include 45-degree cutoff angles on light fixtures to focus light within the site, and specifications that spill lighting from parking areas would be 0.25 foot-candle or less at 5 feet from the property line of the parking areas. Applies to individual sites within the Project Area.	Owner, other developers	S.A.	DBI	Submit design specifications as part of plan review and site permit processes	1. Owner/other developers to submit draft lighting plan to DBI during plan review. 2. DBI to review draft lighting plan and provide comments/proposed revisions to owner/other developers. 3. Owner/other developers to revise plans accordingly and submit final lighting plan for DBI review and approval. 4. Owner/other developers to construct project structures and implement lighting plan. 5. DBI to inspect project structures and lighting for light and glare impacts.
D.07 PEDESTRIAN-LEVEL WINDS					
D.07. Require a qualified wind consultant to review specific designs for buildings 100 feet or more in height for potential wind effects. The Redevelopment Agency would conduct wind review of high-rise structures above 100 ft. Wind tunnel testing would also be required unless, upon review by a qualified wind consultant, and with concurrence by the Agency, it is determined that the exposure, massing and orientation of the buildings are such that impacts, based on a 26-mile-perhour hazard for a single hour of the year criterion, will not occur. The purpose of the wind tunnel studies is to determine design-specific impacts and to provide a basis for design modifications to mitigate these impacts. Projects within Mission Bay, including UCSF, would be require to meet this standard or to mitigate exceedances through building design.	Owner, other developers	S.A.			1. Condition Major Phase to require wind evaluation and provide any required study and documentation of findings as part of Project-level submission. 2. Refer to mitigation measure for obtaining specific implementation procedures. 3. Owner/other developers to submit building design modifications to mitigate pedestrian-level wind impacts to City during project review. 4. Agency to review and approve building design modifications. 5. Owner/other developers to construct buildings implementing design modifications. 6. Agency to inspect buildings and ensure that 26-mile-per-hour wind tunnel hazard for a single hour threshold is not exceeded.

MISSION BAY MITIGATION MEASURES

Block 1

Mitigation Measures	Mitigation Response	S.A.	Responsible (Other)	Mitigation Schedule	Implementation Procedures
Project Level Review (cont.)					
D.08 SHADOWS					
D.08. The Redevelopment Plan documents would require analysis of potential shadows on existing and proposed open spaces during the building design and review process when exceptions to certain standards governing the shape or locations of buildings are requested that would cause over 13% of Mission Creek Park (either North or South), 20% of Bayfront Park, 17% of Triangle Square or 11% of Mission Bay Commons to be in continuous shadow for a period of one hour from March to September between 10:00 a.m. and 4:00 p.m.	Owner, other developers	S.A.		Provide any required documentation as part of Project-level submission	1. Shadow analysis to be required during building design review. 2. Agency to verify via review of the shadow analysis that over 13% of Mission Creek Park (either north or south), 20% of Bayfront Park, 17% of Triangle Square or 11% of Mission Commons are not located in continuous shadow per the standards identified in Mitigation Measure D.07. 3. If through the review of the shadow analysis, the agency determines that the buildings are not in compliance with the standards governing the shape and locations of buildings, the owner /other developers shall modify the building designs and/or location to comply with the appropriate standards, or the Agency shall make findings stating why an exception is appropriate. 4. Agency to inspect project sites to ensure compliance with mitigation measures.
G.01 NOISE REDUCTION IN PILE DRIVING					
G.01. Use noise-reducing pile driving techniques such as pre-drilling pile holes (if feasible, based on soils) to the maximum feasible depth, installing intake and exhaust mufflers on piledriving equipment, vibrating piles into place when feasible, installing shrouds around the piledriving hammer where feasible, and restricting the hours of operation.	Owner, other developers	S.A.	DPW/DBI	Provide information regarding compliance prior to piling driving	1. DPW and DBI to impose mitigation measure requirements during site permit process. 2. Owner/other developers to notify contractor of construction requirements. 3. DPW or DBI to inspect construction activities to ensure compliance with mitigation measure.
K.02 CHANGES IN SANITARY SEWAGE QUALITY					
K.02. In addition to developing and implementing a Stormwater Management Program for the Central/Bay Basin (see Mitigation Measure K.05), 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	Owner, other developers		Agency; DPW; SFPUC	Condition as part of Tentative Map	1. During project level review, DPW to consult with SFPUC to determine which sites need installation of wastewater sampling ports. 2. DPW to notify owner/other developers of sites that require ports. 3. Owner/other developers to modify (as may be necessary) project plans to comply with City's Water Pollution Prevention Program.

MISSION BAY MITIGATION MEASURES

Block 1

Mitigation Measures	Mitigation Response	S.A.	Responsible (Other)	Mitigation Schedule	Implementation Procedures
Project Level Review (cont.)					
K.02 CHANGES IN SANITARY SEWAGE QUALITY (cont.)					
Environmental Regulation and Management, and in locations as determined by the Water Pollution Prevention Program.					4. DPW/Agency to review and approve modified project plans. 5. Owner/other developers to construct project according to approved modified plans. 6. DPW to inspect constructed sites to ensure compliance with mitigation measure.
M.02 WATER CONSERVATION IN BUILDINGS AND IRRIGATION					
M.02. Include methods of water conservation in Mission Bay buildings and landscaping. Water Conservation methods include the following:					1. DBI and DPW to impose requirements of mitigation measure as part of site permit approval. 2. Owner/other developers to construct project according to requirements. 3. DBI or DPW to inspect site to ensure compliance with mitigation measure.
M.02a. Install water conserving dishwashers and washing machines in rental apartments and condominiums.	Owner, other developers		DPW; DBI	Include in site permit plans	See implementation measures identified for Mitigation Measure M.2.
M.02b. Install water conserving dishwashers and water efficient centralized cooling systems in office buildings.	Owner, other developers		DPW; DBI	Include in site permit plans	See implementation measures identified for Mitigation Measure M.2.
M.02c. Incorporate water efficient laboratory techniques in research facilities where feasible.	Owner, other developers		DPW; DBI	Include in site permit plans	See implementation measures identified for Mitigation Measure M.2.
M.02d. Provide information to residences and businesses advising methods to conserve water.	Owner, other developers		DPW; DBI	Include in site permit plans	See implementation measures identified for Mitigation Measure M.2.
M.02e. Install water conserving irrigation systems (e.g., drip irrigation).	Owner, other developers		DPW; DBI	Include in site permit plans	See implementation measures identified for Mitigation Measure M.2.
M.02f. Design landscaping using drought resistent and other low-water use plants.	Owner, other developers		DPW; DBI	Include in site permit plans	See implementation measures identified for Mitigation Measure M.2.

MISSION BAY MITIGATION MEASURES

Block 1

Mitigation Measures	Mitigation Response	S.A.	Responsible (Other)	Mitigation Schedule	Implementation Procedures
Improvement Plan – Plan Check					
J.01 RISK MANAGEMENT PLAN(S)					
J.01l. Post-Development – Except where testing demonstrates that native soils meet standards established by the RWQCB as being protective of human health and the aquatic environment, require that upon project completion, all native soils shall be capped, so as to preclude human contact by using buildings, paved surfaces (such as parking lots, sidewalks, or roadways), or fill of a kind and depth approved by the RWQCB.	Owner, Agency, other developers Owner, Agency, other developers	S.A.	RWQCB; DBI; DPW; DPH	As provided in the EIR or in RMPs.	See implementation procedures identified for Mitigation Measure J.01.
K.01 STORMWATER POLLUTION PREVENSION PROGRAM (SWPPP)					
K.01a. Minimize dust during demolition, grading, and construction by lightly spraying exposed soil on a regular basis.	Owner, other developers		DPW; DBI	Condition Tentative Map to require approval of SWPPP. Incorporate into plans and submit as part of Subdivision Improvement Plans approval.	See implementation procedures identified for Mitigation Measure K.01.
K.01b. Minimize wind and water erosion on temporary soil stockpiles by spraying with water during dry weather and covering with plastic sheeting or other similar material during the rainy season (November to April).	Owner, other developers		DPW; DBI	Condition Tentative Map to require approval of SWPPP. Incorporate into plans and submit as part of Subdivision Improvement Plans approval.	See implementation procedures identified for Mitigation Measure K.01.
K.01c. Minimize the area and length of time during which the site is cleared and graded.	Owner, other developers		DPW; DBI	Condition Tentative Map to require approval of SWPPP. Incorporate into plans and submit as part of Subdivision Improvement Plans approval.	See implementation procedures identified for Mitigation Measure K.01.
K.01d. Prevent the release of construction pollutants such as cement, mortar, paints and solvents, fuel and lubricating oils, pesticides, and herbicides by storing such materials in a bermed, or otherwise secured, area.	Owner, other developers		DPW; DBI	Condition Tentative Map to require approval of SWPPP. Incorporate into plans and submit as part of Subdivision Improvement Plans approval.	See implementation procedures identified for Mitigation Measure K.01.

Block 1

Mitigation Measures	Mitigation Response	S.A.	Responsible (Other)	Mitigation Schedule	Implementation Procedures
Improvement Plan – Plan Check (cont.)					
K.01 STORMWATER POLLUTION PREVENSION PROGRAM (SWPPP) (cont.)					
K.01e. As needed, install filter fences around the perimeter of the construction site to prevent off-site sediment discharge. Prior to grading the bank slopes of China Basin Channel for the proposed channel-edge treatments, install silt or filter fences to slow water and remove sediment. As needed, properly trench and anchor in the silt or filter fences so that they stand up to the forces of tidal fluctuation and wave action, and do not allow sediment-laden water to escape underneath them.	Owner, other developers		DPW; DBI	Condition Tentative Map to require approval of SWPPP. Incorporate into plans and submit as part of Subdivision Improvement Plans approval.	See implementation procedures identified for Mitigation Measure K.01.
K.01f. Follow design and construction standards found in the Manual of Standards for Erosion and Sediment Control Measures for placement of riprap and stone size.	Owner, other developers		DPW; DBI	Condition Tentative Map to require approval of SWPPP. Incorporate into plans and submit as part of Subdivision Improvement Plans approval.	See implementation procedures identified for Mitigation Measure K.01.
K.01g. Install and maintain sediment and oil and grease traps in local stormwater intakes during the construction period, or otherwise properly control oil and grease discharges.	Owner, other developers		DPW; DBI	Condition Tentative Map to require approval of SWPPP. Incorporate into plans and submit as part of Subdivision Improvement Plans approval.	See implementation procedures identified for Mitigation Measure K.01.
K.01h. Clean wheels and cover loads of trucks carrying excavated soils before they leave the construction site.	Owner, other developers		DPW; DBI	Condition Tentative Map to require approval of SWPPP. Incorporate into plans and submit as part of Subdivision Improvement Plans approval.	See implementation procedures identified for Mitigation Measure K.01.
K.01I. Implement a hazardous material spill prevention, control, and clean-up program for the construction period. As needed, the program would include measures such as constructing swales and barriers that would direct any potential spills away from the Channel and the Bay and into containment basins to prevent the movement of any materials from the construction site into water.	Owner, other developers		DPW; DBI	Condition Tentative Map to require approval of SWPPP. Incorporate into plans and submit as part of Subdivision Improvement Plans approval.	See implementation procedures identified for Mitigation Measure K.01.

MISSION BAY MITIGATION MEASURES

Block 1

Mitigation Measures	Mitigation Response	S.A.	Responsible (Other)	Mitigation Schedule	Implementation Procedures
Building Site Permit					
D.06 UNKNOWN ARCHAEOLOGICAL REMAINS					
D.06. The entire Mission Bay Project Area has at least some sensitivity for the presence of unknown archaeological remains. Prehistoric cultural deposits could be encountered in three identified areas and unknown historical features, artifact caches and debris areas could be located anywhere in the Project Area. Follow procedures for instructing excavation crews, notifying the ERO and President of the LPAB, and developing recovery measures, as described in Measure D.03, above. In addition, in the event that prehistoric archaeological deposits are discovered, consult local Native American organizations. Dialogue with the ERO, LPAB and the archaeological consultant would take place in developing acceptable archaeological testing & excavation procedures, particularly in regard to the disposition of cultural materials and Native American burials. (Condition Major Plan Accordingly to require on individual building sites or potential for single coordinated program for Block)	Owner, other developers	S.A.	Planning Department, ERO; LPAB President	Prior to excavation; ongoing implementation as required by measure	Prior to preparation of the work plan consultant shall consult with ERO and LPAB to develop a testing and excavation procedures.
F.02 CONSTRUCTION PM					
F.02. As conditions of construction contracts, require contractors to implement the following mitigation program, based on the instructions in the BAAQMD CEQA Guidelines, at all construction sites within the Project Area:	Owner, other developers		DPW; DBI	Implement through site permit process	1. Add note to construction plans which contain these air quality measures. 2. To be implemented upon initiation of construction. 3. DBI and DPW to monitor implementation success during construction activities.
F.02a. Water all active construction areas at least twice a day, or as needed to prevent visible dust plumes from blowing off-site.	Owner, other developers		DPW; DBI	Implement through site permit process	See Mitigation Measure F.02.
F.02b. Use tarpaulins or other effective covers for on-site storage piles and for haul trucks that travel on streets.	Owner, other developers		DPW; DBI	Implement through site permit process	See Mitigation Measure F.02.
F.02c. Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved parking areas and staging areas at construction sites.	Owner, other developers		DPW; DBI	Implement through site permit process	See Mitigation Measure F.02.
F.02d. Sweep all paved access routes, parking areas, and staging areas daily (preferably with water sweepers).	Owner, other developers		DPW; DBI	Implement through site permit process	See Mitigation Measure F.02.
F.02e. Sweep streets daily (preferably with water sweepers) if visible amounts of soil material are carried onto public streets	Owner, other developers		DPW; DBI	Implement through site permit process	See Mitigation Measure F.02.

Block 1

Mitigation Measures	Mitigation Response	S.A.	Responsible (Other)	Mitigation Schedule	Implementation Procedures
Building Site Permit (cont.)					
F.02 CONSTRUCTION PM (cont.)					
F.02f. Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more).	Owner, other developers		DPW; DBI	Implement through site permit process	See Mitigation Measure F.02.
F.02g. Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.).	Owner, other developers		DPW; DBI	Implement through site permit process	See Mitigation Measure F.02.
F.02h. Limit traffic speeds on unpaved roads to 15 mph.	Owner, other developers		DPW; DBI	Implement through site permit process	See Mitigation Measure F.02.
F.02I. Install sandbags or other erosion control measures to prevent silt runoff to public roadways.	Owner, other developers		DPW; DBI	Implement through site permit process	See Mitigation Measure F.02.
F.02j. Replant vegetation in disturbed areas as quickly as possible.	Owner, other developers		DPW; DBI	Implement through site permit process	See Mitigation Measure F.02.
F.02k. Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site.	Owner, other developers		DPW; DBI	Implement through site permit process	See Mitigation Measure F.02.
F.02l. Install wind breaks, or plant trees / vegetative wind breaks at windward side(s) of construction areas.	Owner, other developers		DPW; DBI	Implement through site permit process	See Mitigation Measure F.02.
F.02m. Suspend excavation and grading on large construction sites when winds (instantaneous gusts) exceed 25 mph.	Owner, other developers		DPW; DBI	Implement through site permit process	See Mitigation Measure F.02.
F.02n. Limit the area subject to excavation, grading and other construction activity at any one time.	Owner, other developers		DPW; DBI	Implement through site permit process	See Mitigation Measure F.02.
J.01 RISK MANANAGEMENT PLAN(S)					
J.01a. RMP Enforcement – Provide an enforcement structure for RMPs, to be in place and effective during construction and after project development, including: i. Develop and record a restrictive covenant as an Environmental Restriction and Covenant under California Civil Code Section 1471 that: a. Places limits on future uses in the Project Area consistent with the provisions in the RMP; b. Provides notice to current and future property owners that the RMP contains use restrictions and other requirements and obligates property owners to provide like notice to occupants; and	Owner, Agency, other developers	S.A.	RWQCB	As provided in the EIR or in RMPs.	See implementation procedures identified for Mitigation Measure J.01.

Block 1

Mitigation Measures	Mitigation Response	S.A.	Responsible (Other)	Mitigation Schedule	Implementation Procedures
Building Site Permit (cont.)					
J.01 RISK MANANAGEMENT PLAN(S) (cont.)					
c. Provides notice to current and future property owners that the RWQCB maintains residual regulatory enforcement authority over all portions of the Project Area sufficient to compel enforcement of the entire RMP ii. As part of any future transfer of property title of any portion of the Project Area, require current property owners to provide a copy of the RMP to each of their future transferees.					
J.01b. Pre-Development – Include, at a minimum, the following elements in the RMP: Limit direct access to areas with exposed native soils (defined as soils that exist at the site prior to project approval) and perform inspections to verify that measures taken to limit direct access are maintained. Alternatively, for each location with exposed native soils, provide risk management procedures for those areas. If this alternative is chosen, for each exposed soil location that would remain vacant and undeveloped at the initiation of development, and for each site that becomes vacant and includes exposed native soil, evaluate and document potential health risks to the general public that could occur before site development using the following process: Evaluate sampling results to determine constituents that could pose a risk to the general public. Identify populations who could be exposed to the constituents in soils based on land uses within and adjacent to the Project Area. Exposed populations that would be considered would include adult and child visitors/ trespassers, nearby residents (adults and children), and workers not involved in project construction within and adjacent to the Project Area. Using specific EPA and DTSC-recommended exposure assumptions, identify the appropriate exposure pathways and assumptions in consultation with the RWQCB. Using the specific exposure assumptions identified above, adopt contaminant specific interim target levels (ITLs) following regulatory risk assessment guidelines established by DTSC and EPA.	Owner, Agency, other developers	S.A.	RWQCB	As provided in the EIR or in RMPs.	See implementation procedures identified for Mitigation Measure J.01.

Block 1

Mitigation Measures	Mitigation Response	S.A.	Responsible (Other)	Mitigation Schedule	Implementation Procedures
Building Site Permit (cont.)					
J.01 RISK MANANAGEMENT PLAN(S) (cont.)					
Compare ITLs to the range of concentrations detected in exposed native soils to identify areas where ITLs are exceeded. No further action prior to development (other than that required under Article 20 or other applicable regulations) would be required in areas in which ITLs are not exceeded.					
J.01c. For areas where ITLs are exceeded, identify specific Interim Risk Management (IRM) measures that would reduce potential contamination-related risks to Project Area occupants and visitors during site build-out. Based on the results of the ITL evaluation and need for site controls, general IRM measures could include measures such as: i. Limit Direct Access to Uncovered Native Soil on Undeveloped Portions of the Project Area. To effectively limit access, install fencing or other physical barriers around the identified areas, and post “no trespassing” signs. ii. Hydroseed or Apply Other Vegetative or Other Cover to Uncovered Areas. Hydroseed or apply other vegetative or other cover to the uncovered areas to reduce the potential for windblown dusts to be generated, and to reduce the potential for individuals to have direct contact with the native soils. iii. Include Safety Notices in Leases. Notify tenants of occupied portions of the Project Areas of the potential risks involved with the disturbance of existing cover (asphalt, concrete, vegetation) or exposed native soil. iv. Conduct Periodic Inspections of Open Spaces. Conduct periodic inspections of the Project Area to reduce the illegal occupancy of open areas by transient populations, and to reduce the illegal dumping by unauthorized occupants or offsite populations. Implement additional security measures such as fencing and/or the use of security guards, if inspections show a need. v. Periodic Monitoring. Perform inspections verifying that risk management measures remain effective by identifying disturbances to cover materials that could result in the exposure of underlying native soil and by identifying areas where temporary fencing or other physical barriers might need to be reinstalled. If the inspections identify areas where measures have been rendered ineffective, implement corrective action.	Owner, Agency, other developers	S.A.	RWQCB	As provided in the EIR or in RMPs.	See implementation procedures identified for Mitigation Measure J.01.

Block 1

Mitigation Measures	Mitigation Response	S.A.	Responsible (Other)	Mitigation Schedule	Implementation Procedures
Building Site Permit (cont.)					
J.01 RISK MANANAGEMENT PLAN(S) (cont.)					
J.01d. Development – Include in the RMP, health and safety training and health protection objectives for workers who may directly contact contaminated soil during construction and/or maintenance, including Cal/OSHA worker safety regulations appropriate to the type of construction activity, location, and risk relative to the potential types of hazards associated with contaminated soil or groundwater, and where appropriate, compliance with Title 8, Group 16, requirements.	Owner, Agency, other developers	S.A.	RWQCB; DBI; DPW; DPH	As provided in the EIR or in RMPs.	See implementation procedures identified for Mitigation Measure J.01.
J.01e. Identify site access controls to be implemented during construction, such as: i. Secure construction site to prevent unauthorized pedestrian/vehicular entry with fencing or other barrier of sufficient height and structural integrity to prevent entry and based upon the degree of control required. ii. Post “no trespassing” signs. iii. Provide on-site meetings with construction workers to inform them about security measures and reporting/ contingency procedures.	Owner, Agency, other developers	S.A.	RWQCB; DBI; DPW	As provided in the EIR or in RMPs.	See implementation procedures identified for Mitigation Measure J.01.
J.01f. Identify protocols for managing soil during construction, which will include at a minimum: i. The dust controls found in Measure F.02 in Section VI.F, Mitigation Measures: Air Quality. ii. Standards for imported fill (defined as fill brought onto the site from outside the Project Area) that are protective of human health and the aquatic environment and an identified minimum depth of fill to be required for landscaped areas. iii. A requirement that prior to placement, if native soil in the Project Area is to be used on site in any manner that could result in direct human exposure, characterization of the soil be conducted to confirm that it meets appropriate standards approved by the RWQCB and would be appropriate for the intended use. iv. Protocols for managing stockpiled and excavated soils. v. A program for off-site dust monitoring, consisting of real-time monitoring for PM10 concentrations to demonstrate that the health and safety of all individuals not engaged in construction activities would not be adversely affected by chemicals that could be	Owner, Agency, other developers	S.A.	RWQCB; DBI; DPW	As provided in the EIR or in RMPs.	See implementation procedures identified for Mitigation Measure J.01.

Block 1

Mitigation Measures	Mitigation Response	S.A.	Responsible (Other)	Mitigation Schedule	Implementation Procedures
Building Site Permit (cont.)					
J.01 RISK MANANAGEMENT PLAN(S) (cont.)					
contained in dust generated by soil-disturbing activities. If monitoring shows dust levels exceeding 250 g/m3, implement additional dust control measures, such as continuous misting of exposed areas with water, until concentrations are reduced below the action level.					
J.01g. Identify protocols for managing groundwater, which will include at a minimum: i. Procedures to prevent unacceptable migration of contamination from defined plumes during dewatering, such as monitoring, counter-pumping, or installing sheetpiles down to Bay Mud before dewatering. ii. Procedures for the installation of subsurface pipelines and other utilities, where necessary, to prevent lateral transmission of chemicals in groundwater. Such procedures could include, but would not be limited to, selection of proper backfill materials and thickness and installation of clay plugs or barrier collars.	Owner, Agency, other developers	S.A.	RWQCB; DBI; DPW; DPH	As provided in the EIR or in RMPs.	See implementation procedures identified for Mitigation Measure J.01.
J.01h. Include SWPPP requirements and BMPs as described in Mitigation Measure K.1 in Section VI.K, Mitigation Measures: Hydrology and Water Quality.	Owner, Agency, other developers	S.A.	RWQCB; DBI; DPW; DPH	As provided in the EIR or in RMPs.	See implementation procedures identified for Mitigation Measure J.01.
J.01I. Include a requirement that construction personnel be trained to recognize potential hazards associated with underground features that could contain hazardous materials, previously unidentified contamination, or buried hazardous debris.	Owner, Agency, other developers	S.A.	RWQCB; DBI; DPW; DPH	As provided in the EIR or in RMPs.	See implementation procedures identified for Mitigation Measure J.01.
J.01j. Develop and describe procedures for implementing a contingency plan, including appropriate notification and control procedures, in the event unanticipated subsurface hazards are discovered during construction. Control procedures could include, but would not be limited to, further investigation and removal of USTs or other hazards.	Owner, Agency, other developers	S.A.	RWQCB; DBI; DPW; DPH	As provided in the EIR or in RMPs.	See implementation procedures identified for Mitigation Measure J.01.
J.01k. Establish procedures, as necessary, so that construction activities avoid interfering with any RWQCB-required site investigation and remediation in the free product area.	Owner, Agency, other developers	S.A.	RWQCB	As provided in the EIR or in RMPs.	See implementation procedures identified for Mitigation Measure J.01.

MISSION BAY MITIGATION MEASURES

Block 1

Mitigation Measures	Mitigation Response	S.A.	Responsible (Other)	Mitigation Schedule	Implementation Procedures
Cert. of Occupancy					
F.03 TOXIC AIR CONTAMINANTS (TACs)					
F.03. Prior to issuing a certificate of occupancy for a facility containing potential toxic air contamination sources, obtain written verification from BAAQMD either that the facility has been issued a permit from BAAQMD, if required by law, or that permit requirements do not apply to the facility.	Owner, other owners		DBI; DPH	Prior to issuance of Certificate of Occupancy for relevant facilities	1. Owner/other owners to obtain and submit written verification from BAAQMD to DBI. 2. DBI reviews BAAQMD verification to ensure that the facility has been issued a permit, or to ensure that permit requirements do not apply to the facility. 3. DBI issues Certificate of Occupancy as long as all applicable conditions are met.
H.01 HEAVY EQUIPMENT STORAGE					
H.01. During the build-out period, store heavy construction equipment in the Project Area during the buildout period that is capable of traveling on damaged roads, clearing debris, and opening access to, and within, the Project Area after a major earthquake.	Owner, other developers	S.A.	Office of Emergency Services (OES)	Include in emergency response plan; update as necessary	1. Owner/other developers to prepare emergency response plan for the Project Area and include Mitigation Measure H.01. 2. OES to review emergency response plan before City issues Certificate of Occupancy. 3. OES to inspect Project Area to ensure compliance with mitigation measure. 4. Agency to ensure review by OES prior to issuing Certificate of Occupancy. 5. OES to require periodic updates of emergency response plan to review and approve.
H.02 EMERGENCY PREPAREDNESS AND EMERGENCY RESPONSE					
H.02. Following build-out, coordinate emergency response plans with the City regarding use of heavy equipment from the City storage yard in the vicinity of the Project Area	Owner, other developers	S.A.	Office of Emergency Services (OES)	Include in emergency response plan; update as necessary	1. Owner/other developers to adhere to mitigation measure during preparation of emergency response plan for Project Area. 2. OES to review completed emergency response plan before City issues Certificate of Occupancy. 3. OES to require periodic updates of emergency response plan to review and approve.
J.01 RISK MANAGEMENT PLAN(S)					
J.01m. Prohibit residences with unrestricted access to soils in front yards or backyards anywhere in the Project Area.	Owner, Agency, other developers	S.A.	RWQCB; DBI; DPW; DPH	As provided in the EIR or in RMPs.	See implementation procedures identified for Mitigation Measure J.01.

MISSION BAY MITIGATION MEASURES

Block 1

Mitigation Measures	Mitigation Response	S.A.	Responsible (Other)	Mitigation Schedule	Implementation Procedures
Cert. of Occupancy (cont.)					
J.01 RISK MANAGEMENT PLAN(S) (cont.)					
J.01n. Prohibit access to native soils for private use. If disturbance of native subsurface soils or groundwater dewatering is planned, carry out these activities in accordance with the elements of the RMP called for in Measures J.01d through J.01k. Following construction or excavation or soil disturbance, restore the cap in accordance with the provisions of the RMP as called for in Measure J.01l.	Owner, Agency, other developers	S.A.	RWQCB; DBI; DPW; DPH	As provided in the EIR or in RMPs.	See implementation procedures identified for Mitigation Measure J.01.
J.01o. Prohibit the use of shallow groundwater within the Project Area for domestic, industrial, or irrigation purposes. Permit installation of groundwater wells within the Project Area only for environmental monitoring purposes. Secure and lock environmental wells installed within the Project Area to prevent unauthorized access to the groundwater. In the event the use of shallow groundwater is proposed, perform an assessment of the risks from direct exposure to the groundwater prior to use and obtain RWQCB or other appropriate regulatory agency approval of the results of the assessment and proposed uses.	Owner, Agency, other developers	S.A.	RWQCB; DBI; DPW; DPH	As provided in the EIR or in RMPs.	See implementation procedures identified for Mitigation Measure J.01.

Abbreviations:

BAAQMD: Bay Area Air Quality Management District
DBI: San Francisco Department of Building Inspection
DPH: San Francisco Department of Public Health
DPW: San Francisco Department of Public Works
EIR: Environmental Impact Report
ERO: Environmental Review Officer
MTA/SSD: San Francisco Municipal Transportation Agency, Sustainable Streets Division (formerly Department of Parking and Traffic)
OES: Office of Emergency Services
PC: San Francisco Planning Commission
RMP: Resource Management Plan
RWQCB: San Francisco Bay Area Regional Water Quality Control Board
SFPUC: San Francisco Public Utilities Commission
S.A.; Agency: City and County of San Francisco as Successor to Redevelopment Agency
SWPPP: Stormwater Pollution Prevention Plan
TMA: Transportation Management Association

Exhibit B
Transportation Analysis

Adavant Consulting

Memorandum

To: Wade Wietgrefe – San Francisco Planning Department

Catherine Reilly – Successor Agency to the San Francisco Redevelopment Agency

Karl Heisler – Environmental Science Associates

From: José I. Farrán, PE

Date: May 15, 2013 – Final Version

Re: Transportation assessment for the proposed development of a mixed-use project located in Block 1 of the Mission Bay South area of San Francisco

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This technical memorandum summarizes the data, analysis, and conclusions of a transportation assessment prepared by Adavant Consulting for the San Francisco Planning Department and the Successor Agency to the San Francisco Redevelopment Agency (SFRA) for the re-entitlement of Block 1 in the Mission Bay South Plan Area for a proposed mixed-use project within the residential subarea in the Mission Bay South Plan Area in San Francisco (See Figure 1, p. 2). The Mission Bay South Plan Area is bounded by the Mission Bay Creek to the north, Mariposa Street to the South, the San Francisco Bay to the east and the Caltrain tracks (Mississippi and Seventh streets) to the west. The Mission Bay South Plan Area excludes Seawall Lot 337, also known as Lot A, which is under the Port of San Francisco jurisdiction and is currently used as surface parking.

The Mission Bay South Area is further subdivided into five planning subareas, Central, East, West, UCSF Campus and UCSF Medical Center[1] (See Figure 2, p. 3). The project site is within the Central subarea (Blocks 1 through 13) which includes mostly residential uses with some retail on the ground floor, a public safety building (Block 8), and the proposed hotel in Block 1, which is part of the proposed re-entitlement project.

This transportation assessment has been prepared according to the scope of work approved by the San Francisco Planning Department and the Successor Agency on May 13, 2013, which is included in Appendix A.

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[1] The 1998 Final Mission Bay Subsequent Environmental Impact Report (Mission Bay FSEIR) defines only four planning subareas, Central, East, West, and UCSF Campus. The UCSF Medical Center was not envisioned at the time and the corresponding development blocks were considered part of the West subarea.

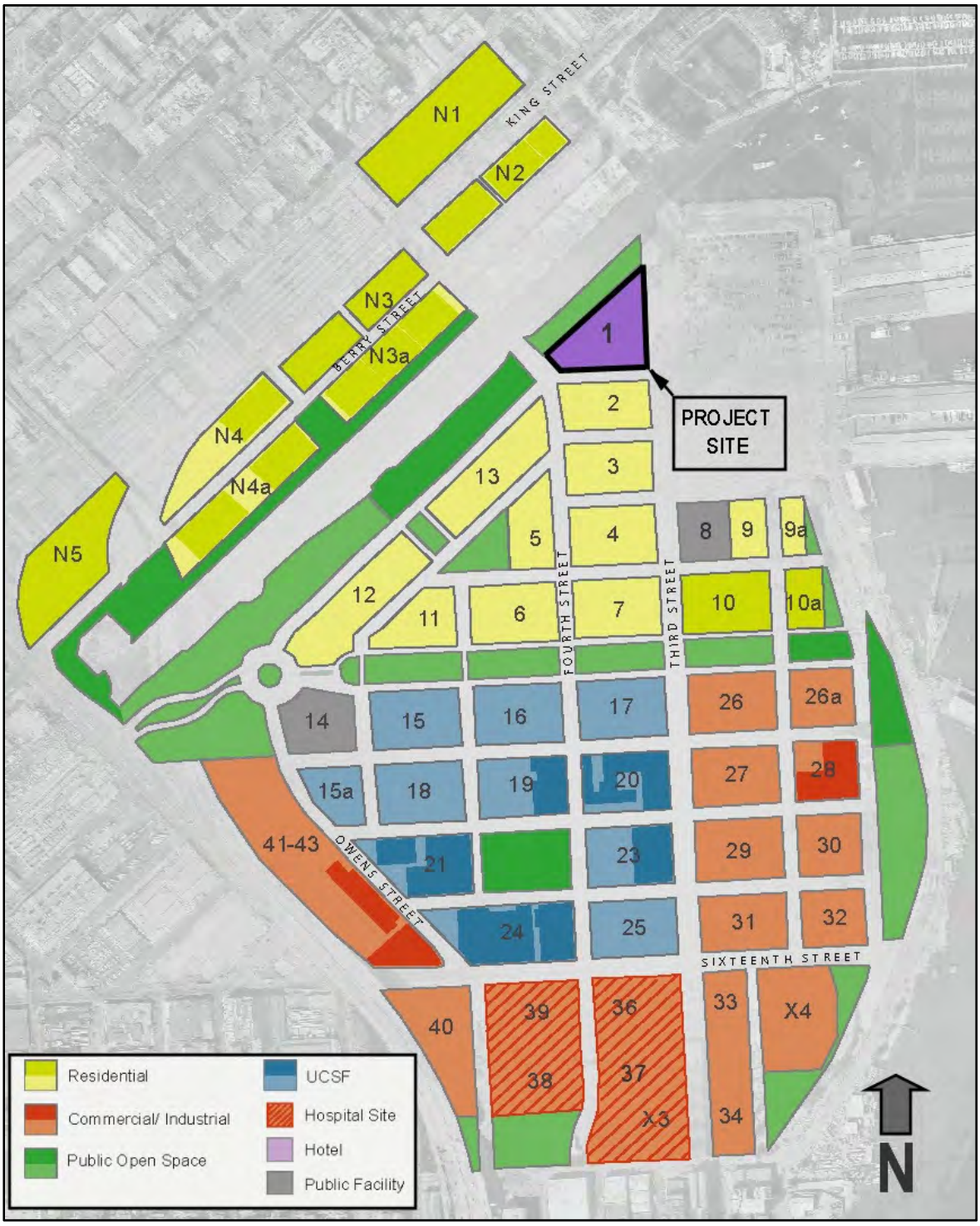

Figure 1
Mission Bay North and South Plan Areas
Proposed Re-entitlement of Block 1 Project Site

Figure 2
Mission Bay South Planning Subareas
Proposed Re-entitlement of Block 1 Project Site

PROJECT DESCRIPTION

Block 1 is located in the Mission Bay South Plan Area and encompasses a triangular 2.7-acre undeveloped block bounded by the Mission Creek Channel and Park P1 to the north, Third Street to the east, Channel Street to the south, and Fourth Street to the west. Before 1998, Mission Bay was characterized by low-intensity industrial development and vacant land. Since adoption of the South Plan in 1998, Mission Bay has undergone redevelopment into a mixture of residential, commercial (light industrial, research and development, labs and offices), and

educational/institutional uses and open space. The project site is currently vacant and is used during baseball season as overflow parking for the nearby AT&T Park.

Block 1 is currently entitled for a 500-room hotel, 50,000 square feet (sq ft) of retail and 191 off-street parking spaces. The Block 1 project sponsor has submitted a request for an Amendment to the Mission Bay South Redevelopment Plan ("Plan Amendment") and an Amendment to the Mission Bay South Owner Participation Agreement (OPA Amendment") ("Block 1 re-entitlement project") for Block 1 to the Successor Agency and is seeking approval that would permit the development of up to 350 dwelling units, 250 hotel rooms and 25,000 sq ft of retail; the 350 dwelling units would represent an increase in the total number of dwelling units currently permitted within the South Plan Area. In addition, although the details are not known at this time, a number of off-street vehicle parking, bicycle parking, motor-coach parking, and commercial loading spaces would be provided on-site, in accordance with the Mission Bay Design for Development South requirements.

Vehicular access into the garages would be expected to be provided via Third and Channel Streets. Per the Mission Bay Infrastructure Plan, vehicles on Third Street would have full access to the site from both the southbound and northbound directions. From Channel Street, vehicles would have access in or out of the site from the westbound direction only (right-turn in / right-turn-out).

EXISTING TRANSPORTATION CONDITIONS

This section provides a description of the existing transportation conditions in the vicinity of the Block 1. Included in this chapter are descriptions of the existing roadway traffic, transit, pedestrian and bicycle conditions in the area. Figure 3 on the next page presents the existing roadway and transit network in the vicinity of the project site. Appendix B includes a description of the approved roadway configuration and roadway categories that are called for at full build-out by the Mission Bay South Infrastructure Plan and the Mission Bay Design for Development–South documents.

ROADWAY NETWORK

The Project site is accessible by local streets with connections to and from regional freeways and highways in the State system.

Interstate 280 (I-280) provides regional access to the project site from western San Francisco and the South Bay/Peninsula, and to and from downtown San Francisco. In the vicinity of Block 1, I-280 is a six-lane freeway. I-280 and U.S. 101 intersect to the southwest of Block 1. Nearby northbound and southbound on- and off-ramps are located at the intersection of King Street and Sixth Street; alternative on- and off-ramps are located further south between Indiana and Pennsylvania Streets at Mariposa Street and at 18th Street.

Third Street is the principal north-south arterial in the southeastern section of San Francisco, extending northerly from Bayshore Boulevard to Market Street. In the Mission Bay South Area, Third Street generally has two lanes each way, 10-foot wide sidewalks and no parking allowed on either side of the street.

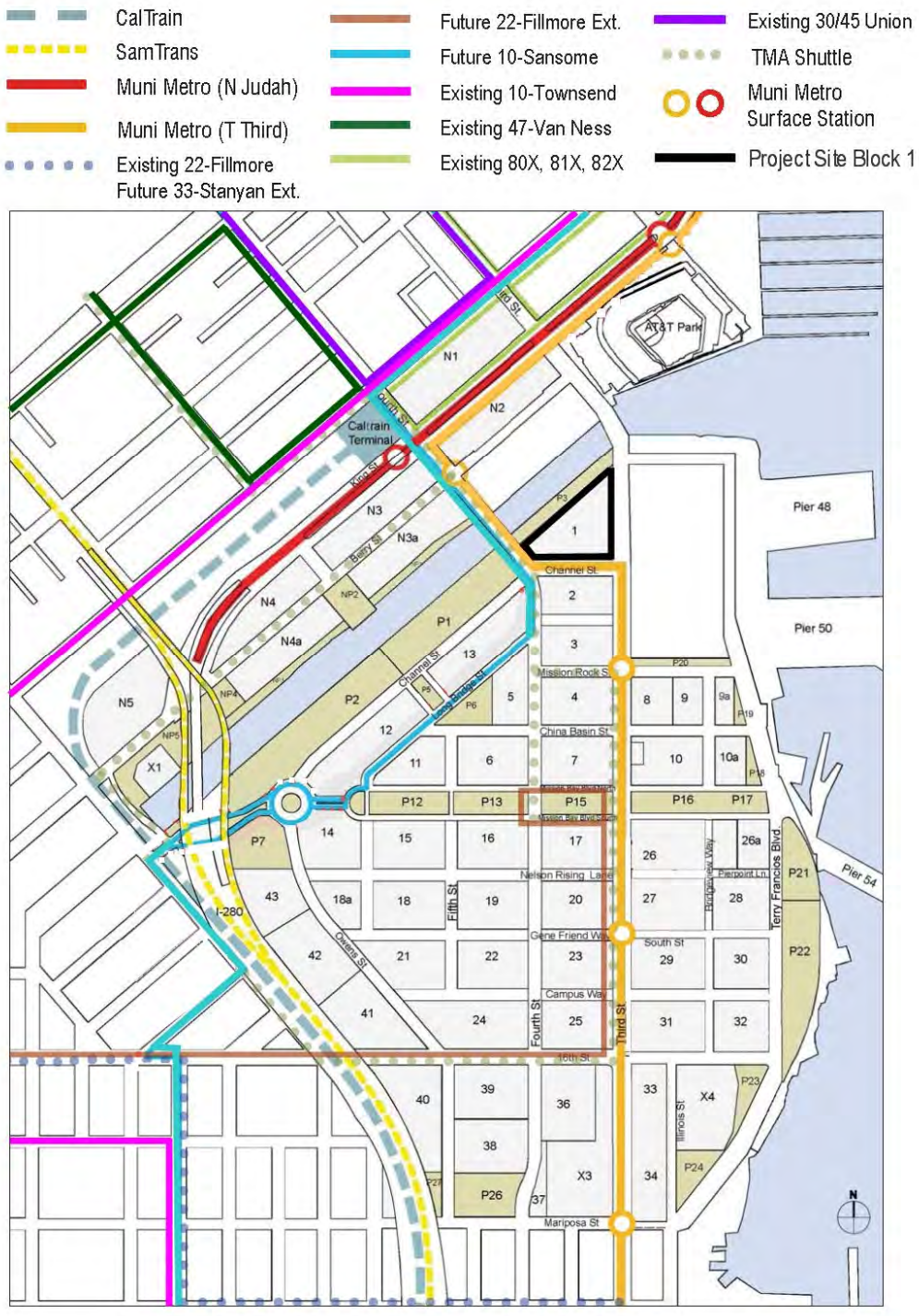

Figure 3
Roadway and Transit Network in the Vicinity of Block 1

The Mission Bay Master Developer (Mission Bay Development Group, MBDG) will reconstruct Third Street adjacent to the project site as part of the Mission Bay South Infrastructure Plan (see Appendix B) at the time Block 1 is constructed between Channel and Terry François Boulevard to accommodate two travel lanes each way with a northbound/ southbound left-turn lane located in the median. The northbound and southbound travel lanes will be 12 to 13 feet wide, while the center left-turn lane will be 12 feet wide. A 12-foot wide sidewalk will be built on the west side of the Third Street, adjacent to Block 1. A 14.5-wide sidewalk will be provided by the developers of Seawall Lot 337 on the west side of the street. Third Street will be expected to provide vehicular and pedestrian access to the hotel, residential and commercial uses in Block 1.

The San Francisco General Plan designates Third Street as a Major Arterial in the Congestion Management Network, a Metropolitan Transportation System Street, a Primary Transit Street (Transit Important), a Neighborhood Commercial Street, and a Citywide Bicycle Route (Route #536, Class III) from Townsend Street to Terry François Boulevard. The San Francisco Better Streets Plan identifies Third Street in the Mission Bay Area as a Residential Throughway. The Mission Bay Design for Development–South defines Third Street as an arterial street.

Fourth Street is a new north-south two-way street that bisects the Mission Bay South Area and currently connects Channel Street with 16th Street, its terminus. Fourth Street accommodates MUNI's T-Third Street Light Rail Transit service in its median between King Street and Channel; south of Channel, Fourth Street provides vehicle and bicycle travel to the residential area in Mission Bay South and the UCSF Campus. From Channel to 16th Street, Fourth Street has already been built to its ultimate configuration per the Mission Bay Infrastructure Plan to accommodate one travel lane plus one striped bicycle lane each way; on-street parking is generally allowed on both sides of the street. An exclusive left-turn lane is provided on the northbound approach to the Channel intersection. A bicycle and pedestrian way will be provided on Fourth Street between 16th and Mariposa Streets.

The San Francisco General Plan identifies Fourth Street north of Channel Street as a Major Arterial in the Congestion Management Network, a Metropolitan Transportation System Street, a Primary Transit Street (Transit Important), and a Neighborhood Commercial Street. The San Francisco Better Streets Plan identifies Fourth Street within Mission Bay as a as a Residential Throughway from King Street to Channel, as a Neighborhood Commercial Street from Channel to Mission Bay Boulevard, and as a Mixed Use Street from Mission Bay Boulevard to 16th Street. The Mission Bay Design for Development–South defines Fourth Street as a collector street.

Channel Street is an existing street that connects Fourth Street to Third Street along the south side of Block 1 and has already been built to its final configuration. It provides two 11-foot travel lanes each way with a 26-foot wide median in the center, to accommodate two tracks for MUNI's T-Third Street light rail transit service; the Muni tracks right of way is physically separated from the travel lanes by a raised curb. No on-street parking is allowed on this segment of Channel Street. A 12-foot sidewalk is provided on the north and south sides of the street. Channel will be expected to provide vehicular and pedestrian access to the residential and retail uses in Block 1, as well as vehicular access to the hotel. MBDG will extend Channel Street west as part of the Mission Bay South Infrastructure Plan to connect with Owens Street, Mission Bay Boulevard, and Mission Bay Drive. The Mission Bay Design for Development–South defines Channel Street as a minor arterial street.

INTERSECTION LEVEL OF SERVICE

Existing intersection operating conditions were evaluated for the peak hour of the weekday PM peak commute period (4:00 to 6:00 PM); all of the study intersections are controlled by traffic signals. Intersection turning movement counts were collected at seven study intersections in October 2011 and April 2012.

The operating characteristics of signalized and unsignalized intersections are described by the concept of Level of Service (LOS). LOS is a qualitative description of the performance of an intersection based on the average delay per vehicle. Intersection levels of service ranges from LOS A, which indicates free flow or excellent conditions with short delays, to LOS F, which indicates congested or overloaded conditions with extremely long delays. LOS A through LOS D are considered excellent to satisfactory service levels, LOS E is undesirable, and LOS F conditions are unacceptable. Appendix C presents LOS descriptions for signalized intersections. In San Francisco, LOS E and F are considered unacceptable operating conditions for signalized intersections.

The study intersections have been evaluated using the 2000 Highway Capacity Manual (HCM) methodology. For signalized intersections, this methodology determines the capacity of each lane group approaching the intersection. The LOS is then based on average delay (in seconds per vehicle) for the various movements within the intersection. A combined weighted average delay and LOS are presented for the intersection.

Table 1 presents the results of the intersection LOS analysis for the existing weekday PM peak hour conditions; detailed calculations are included in Appendix C. During the weekday peak hour, six of the seven existing study intersections operate at acceptable LOS (LOS D or better), with average delays per vehicle of about 40 seconds or less. The intersection of King Street and Fourth Street experiences the worst conditions (LOS E) with an average delay of 67 seconds per vehicle.

Table 1
Intersection Level of Service
Existing Conditions –Weekday PM Peak Hour [a]

	Intersection Name	Traffic Control Device	Delay [b]	Level of Service
1	16th St. / Third St.	Traffic Signal	27.0	C
2	16th St. / Owens St.	Traffic Signal	25.7	C
3	Mission Rock. St. / Third St.	Traffic Signal	27.9	C
4	Channel St. / Third St.	Traffic Signal	28.8	C
5	Channel St. / Fourth St.	Traffic Signal	12.7	B
6	King St. / Third St.	Traffic Signal	40.2	D
7	King St. / Fourth St.	Traffic Signal	**67.0**	**E**

Notes:
[a] Data in **bold** indicates intersection operating at LOS E or F.
[b] Intersection delay presented in seconds per vehicle.
Source: Adavant Consulting – January 2013.

TRANSIT NETWORK AND SERVICE

The project site is served by a combination of public transit provided by the San Francisco Municipal Railway (Muni), with shuttle bus service provided by UCSF and the Mission Bay Transportation Management Association. Regional service is provided by BART (East and Peninsula), SamTrans (South Bay/Peninsula), AC Transit (East Bay), and Golden Gate Transit (North Bay) all located in the vicinity of the Transbay Transit Terminal and the Ferry Building, approximately two miles to the north of the project site. In addition, rail service to and from the South Bay/Peninsula is provided by Caltrain from its Depot at the corner of King and Fourth streets, approximately ½ mile to the north of the project site.

San Francisco Municipal Railway (Muni) provides transit service within the City and County of San Francisco, including bus (both diesel and electric), light rail (Muni Metro), cable car, and electric streetcar lines. Muni Metro N-Judah and T-Third light rail lines are located in close proximity to Block 1. The N-Judah connects the Sunset district in San Francisco with the Caltrain Depot via Market Street and running on a semi-exclusive median along The Embarcadero and King Street; it operates daily with headways of approximately 10 minutes on weekdays and weekends (owl service is provided with buses at 30-minute headways). The T-Third connects downtown with the southeastern part of the city running on a semi-exclusive median along The Embarcadero, King Street, Fourth Street and Third Street; it operates daily between 5 AM and midnight with weekday headways of approximately 10 minutes, and 15 minutes on weekends.

In addition, the 30 Stockton, 45 Union-Stockton, and 47 Van Ness trolley bus lines operate on Townsend Street, approximately ¼ of a mile to the north of Block 1. The 30 Stockton and 45 Union-Stockton connect the Marina district with the Caltrain Depot, with headways of approximately 8 and 12 minutes during the AM and PM peak commute periods, respectively. The 47 Van Ness connects Fisherman's Wharf area with the Caltrain Depot at 10-minute headways during the AM and PM peak commute periods.

As previously shown in Figure 3 (p. 5), the closest stop for the N-Judah is located at the Caltrain Depot. The closest northbound stop for the T-Third is located at the intersection of Fourth and Berry Streets, while the closest southbound stop is located at the intersection of Third and Mission Rock Streets. The closest stop for the 30 Stockton, 45 Union-Stockton, and 47 Van Ness is located at the intersection of Fourth and King Streets.

Table 2 summarizes the utilization of the Muni light rail and bus lines operating in the vicinity of the project during the weekday PM peak hour based on ridership and capacity data provided by Muni at the maximum load point (MLP). The MLP is the location where the route has its highest number of passengers relative to capacity. Muni assigns a maximum capacity estimate to each line based on the seated plus standing capacity of each vehicle type operating on a transit line. In addition, Muni's Short-Range Transit Plan (SRTP) defines a maximum utilization factor to be used for planning purposes, which is 85 percent of the maximum vehicle capacity. As shown in Table 2, all the nearby lines currently operate below Muni's maximum utilization factor (85 percent) and both have available capacity at the MLP to accommodate additional passengers.

Table 2
Existing Muni Service Utilization – Weekday PM Peak Hour

Route	Direction toward	Maximum Load Point (MLP)			
		Location	Ridership [a]	Capacity [a]	Utilization
N Judah	Caltrain Depot	Carl/Cole	880	1,904	46%
	Sunset	Van Ness Station	1,773	2,131	83%
T Third	Bayshore	The Embarcadero/Folsom	508	714	71%
	Downtown	Van Ness Station	601	830	72%
30 Stockton	Caltrain Depot	Chestnut/Octavia	705	1,224	58%
	Marina	Stockton/Sutter	660	1.248	53%
45 Union-Stockton	Caltrain Depot	Stockton/Sacramento	240	315	76%
	Marina	Stockton/Sutter	260	315	83%
47 Van Ness	Caltrain Depot	Van Ness/McAllister	276	378	73%
	Fisherman's Wharf	Van Ness/O'Farrell	258	378	68%

Note:
[a] Data collected in 2010 (rail) and 2011 (bus) by Muni.
Source: SF Planning Department, Transit Data for Transportation Impact Studies, Table: Route Load and Capacity by Time Period and Direction of Travel, December 18, 2012.

UCSF provides free bus services to transport UCSF faculty, staff, students, patients and visitors between the Mission Bay campus and other major campus sites (Parnassus Heights, Mt Zion, SF General Hospital) and secondary destinations (e.g., 654 Minnesota Street). The shuttle system is primarily designed to facilitate work-related travel between UCSF locations and reduce single-occupancy inter-campus trips during the day, but it also offers linkages to major transit service providers such as BART and Caltrain. The buses operate on a regular schedule Monday through Friday throughout the year, excluding campus holidays at 15- to 20-minute headways; some shuttles pick up after hours and on weekends.

Mission Bay Transportation Management Association (MBTMA), formed several years ago, in conformance with mitigation measures identified in the Mission Bay FSEIR, provides two shuttle bus route services (east and west) between Mission Bay and the Powell BART Station and the Caltrain Depot; they are free of charge and open to all employees, residents, and visitors to the Mission Bay Area and the China Basin Landing building. The west route serves Seventh and Owens Streets, while the east route serves Third Street and Terry François Boulevard; both operate at 15-minute intervals from 7 to 10 AM and 3:45 to 8:15 PM.

PEDESTRIANS AND BICYCLISTS

Sidewalks are provided on both sides along Third Street, Channel Street, and Fourth Street. The intersections of Channel Street with Third Street and with Fourth Street are signalized and equipped with pedestrian countdown signal heads. Sidewalks and crosswalks were observed to operate at free-flow conditions due to the relatively low level of development in the area, with pedestrians moving at normal walking speeds and with freedom to bypass other pedestrians.

No streets adjacent to the project site have been designated as Citywide Bicycle Routes in the San Francisco Bicycle Plan (see Figure 4).

Figure 4
Bicycle Network in the Vicinity of Block 1

On the other hand, the Mission Bay Redevelopment Plan designates Fourth Street as Class II bicycle route between Channel Street and 16th Street, and as a Class III bicycle route between 16th Street and Mariposa Street (which UCSF plans to upgrade to a Class I bicycle route as part of the UCSF MCMB/Fourth Street Pedestrian Plaza projects).[2]

TRAVEL DEMAND

Project travel demand refers to the new person- and vehicle-trips that would be generated by or attracted to the proposed project. This section provides an estimate of the travel demand that would be expected to/from the re-entitlement of Block 1 based on the appropriate rates and factors provided in the San Francisco Planning Department's *Transportation Impact Analysis Guidelines for Environmental Review* (SF Guidelines), published in October 2002. Block 1 is located in the Southeast Quadrant (Superdistrict 3 or SD3) of San Francisco. A summary of the travel demand analysis is presented in the next sub-section below; more detailed information is included in Appendix D.

TRIP GENERATION

The daily and peak hour person-trip generation for the proposed development in Block 1 includes residents, employees and visitors and is based on the appropriate rates as provided by Table C-1 in the SF Guidelines. Detailed information about the sizes of the proposed residential units in Block 1 is not available at this time, thus for trip generation purposes it has conservatively been assumed that all units would have two or more bedrooms. Table 3 presents the weekday daily and PM peak hour person-trip generation for the proposed re-entitlement of Block 1; overall, the Block 1 project would generate approximately 9,000 person-trips on a daily basis and 1,120 person-trips during the weekday PM peak hour.

Table 3
Block 1 Re-entitlement Project Number of Person-Trips Generated by Land Use

Land Use Type	Size (gsf)	Person Trip Rate		Person-Trips	
		Daily	PM peak hour	Daily	PM peak hour
Residential	364,000 [a]	10 per unit [b]	1.7 per unit [b]	3,500	606
Hotel	363,000 [c]	7 per room	0.7 per room	1,750	175
Retail [d]	25,000	150 per 1,000 gsf	13.5 per 1,000 gsf	3,750	338
Total	**752,000**			**9,000**	**1,119**

Notes:
[a] 350 dwelling units.
[b] Conservatively assumes that all residential units would have two or more bedrooms.
[c] 250 hotel rooms.
[d] Assumes a general retail use with standard rates taken from the SF Guidelines.
Source: SF Guidelines, Adavant Consulting – April 2013.

[2] Class I bicycle facilities are physically separated and generally on a separate path from motor vehicle traffic, Class II bicycle facilities are delineated bicycle lanes adjacent to the curb lane, and Class III bicycle facilities are signed routes only, where bicyclists share travel lanes with vehicles (some on narrow streets, and some on streets with wide curb lanes).

MODAL SPLIT AND AVERAGE VEHICLE OCCUPANCY RATES

The Block 1 land use-generated person-trips were allocated among different travel modes in order to determine the number of auto, transit and other trips going to and from the project site. The "Other" category includes walk, bicycle, motorcycle and additional modes, such as taxis. Mode split assumptions for work and non-work trips for the residential use are based on U.S. 2007-2011 American Community Survey 5-Year Estimates Data for the census tract where Block 1 is located (Tract 607). Mode of travel assumptions for the hotel and retail uses are based on information contained in the SF Guidelines for employee and visitor trips to the SD3 District.

Table 4 summarizes the typical weekday PM peak hour trip generation by mode of travel for the land uses being proposed for Block 1. During the weekday PM peak hour, the re-entitlement of Block 1 would generate 575 person-trips by automobile (51 percent), 279 person-trips by transit (25 percent), and 265 person-trips by other modes, including walking (24 percent).

Table 4
Block 1 Re-entitlement Project Trip Generation by Mode and Land Use
Weekday PM Peak Hour

Land Use Type	Person-Trips				Vehicle Trips
	Auto	Transit	Other[a]	Total	
Residential	243	204	159	606	217
Hotel	114	34	27	175	76
Retail	218	41	79	338	117
Total	**575**	**279**	**265**	**1,119**	**410**
	51%	25%	24%	100%	208 in / 202 out

Note:
[a] "Other" includes walk, bicycle, motorcycle, and additional modes such as taxis.
Sources: U.S. Census 2007-2011 American Community Survey, SF Guidelines, Adavant Consulting – January 2013.

As also shown in Table 4, Block 1 would generate 410 vehicle trips during the peak hour, 208 of which would be inbound (50.7 percent) and 202 outbound (49.3 percent).

TRIP DISTRIBUTION/ASSIGNMENT

The distribution of trips for the land uses being proposed for Block 1 was obtained from the U.S. Census Bureau and the SF Guidelines for the proposed land uses within SD3 where the project site is located. The distribution is based on the origins and destinations of trips for each specific land use, which are assigned to the four quadrants of San Francisco (Superdistricts 1 through 4), East Bay, North Bay, South Bay and Out of Region. The results are summarized in Table 5.

Table 5
Block 1 Re-entitlement Project Trip Distribution Patterns by Land Use

Place of Trip Origin	Residential	Hotel		Retail		Block 1 Project [a]
	Residents & Visitors	Workers	Visitors	Workers	Visitors	
San Francisco						
Superdistrict 1	56.8%	8.3%	13.0%	8.3%	6.0%	32.2%
Superdistrict 2	8.1%	10.6%	14.0%	10.6%	9.0%	9.8%
Superdistrict 3	8.1%	23.9%	44.0%	23.9%	61.0%	23.2%
Superdistrict 4	8.1%	7.9%	7.0%	7.9%	5.0%	7.8%
East Bay	8.6%	14.3%	9.0%	14.3%	3.0%	7.8%
North Bay	2.6%	5.6%	1.0%	5.6%	2.0%	3.4%
South Bay	7.6%	26.9%	9.0%	26.9%	9.0%	13.9%
Out of Region	0.0%	2.5%	3.0%	2.5%	5.0%	2.0%
Total	**100.0%**	**100.0%**	**100%**	**100.0%**	**100%**	**100.0%**

Note:
[a] Aggregated values for the combined land uses during the PM peak hour.
Sources: U.S. Census 2006-2010 American Community Survey, SF Guidelines, Adavant Consulting – January 2013.

As shown in Table 5, approximately three fourths (73 percent) of the Block 1 land use generated trips would come from areas within San Francisco; 32 percent to/from SD1 (downtown) and 23 percent to/from SD3 (where the project is located). Approximately 14 percent of the trips would be to/from the South Bay. The trip distribution presented in Table 5 was used as the basis for assigning project- land use generated/ attracted trips to the local streets and transit service providers in the study area.

FREIGHT LOADING DEMAND

Freight delivery and service vehicle demand was estimated based on the methodology and truck trip generation rates presented in the SF Guidelines (See Appendix E). As shown in Table 6, the Block 1 re-entitlement would generate on average 49 delivery/service vehicle trips per day, which correspond to 2.3 loading spaces during an average hour or 2.8 loading spaces during the peak hour of loading activities. It is anticipated that most of the delivery/service vehicles that would be generated in Block 1 would consist of small delivery trucks and vans.

Table 6
Block 1 Re-entitlement Project Freight Delivery and Service Vehicle Demand by Land Use

Land Use Type	Size (gsf)	Daily Truck Trips	Demand for Loading Spaces	
			Peak Hour [a]	Average Hour
Residential	364,000 [b]	10.9	0.6	0.5
Hotel	363,000 [c]	32.7	1.9	1.5
Retail	25,000	5.5	0.3	0.3
Total	**752,000**	**49.1**	**2.8**	**2.3**

Notes:
[a] Peak hour truck trip generation generally occurs between 10 AM and 1 PM, and is unrelated to the PM peak hour used in the other transportation analyses.
[b] 350 dwelling units; conservatively assumes that all residential units would have two or more bedrooms.
[c] 250 hotel rooms.
Source: SF Guidelines, Adavant Consulting – January 2013.

Passenger loading/unloading demand associated with the hotel use was estimated based on the methodology presented in the SF Guidelines (See Appendix E). Based on the PM peak hour trip generation estimates, the peak passenger vehicle loading/unloading demand during the peak 15 minutes was estimated to be four vehicles.

PARKING DEMAND

Parking demand for the re-entitlement of Block 1 was determined based on methodology presented in the SF Guidelines. Parking demand consists of both long-term demand (typically residents and employees) and short-term demand (typically visitors). Long-term parking demand for the residential uses was estimated assuming 1.5 spaces for every residential unit, and then applying a midday or evening peak demand percentage.

For the hotel use, it was estimated that hotels generate long-term demand only for hotel guests and employees. Hotel guests would generate long-term demand at a rate of one space per four rooms, while the employee long-term demand was calculated by determining the number of daytime employees and applying the average mode split and vehicle occupancy from the trip generation estimation.

Long-term parking demand for the retail uses was estimated by applying the average mode split and the 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 visitor trips and average daily parking turnover rate (5.5 vehicles per space per day). Table 7 summarizes the estimated midday and evening peak new parking demand for the proposed re-entitlement of Block 1. More detailed parking demand calculations are presented in Appendix E.

Overall, the Block 1 project would generate a parking demand of 656 spaces during the midday and 801 spaces in the evening. The residential use would generate a total parking demand for 446 long-term spaces during the midday and 525 spaces in the evening, the hotel use would generate a total parking demand of 87 long-term spaces (25 of them for guests) during the midday and 125 spaces (63 of them for guests) in the evening, and the retail use would generate a total parking demand of 123 spaces (83 short-term and 40 long-term) during the midday and 151 spaces (111 short-term and 40 long-term) in the evening.

Table 7
Block 1 Re-entitlement Project Weekday Parking Demand by Land Use

Land Use Type	Midday (1 PM - 3 PM)			Evening (7 PM - 9 PM)		
	Short-term Spaces	Long-term Spaces	Total Spaces	Short-term Spaces	Long-term Spaces	Total Spaces
Residential	0	446	446	0	525	525
Hotel	0	87 [a]	87	0	125 [b]	125
Retail	83	40	123	111	40	151
Total	**83**	**573**	**656**	**111**	**690**	**801**

Notes:
[a] Includes hotel guest parking demand of 25 spaces, and employee parking demand of 62 spaces
[b] Includes hotel guest parking demand of 63 spaces, and employee parking demand of 62 spaces
Source: SF Guidelines, Adavant Consulting – January 2013.

CUMULATIVE TRAVEL DEMAND COMPARISON

As indicated in the Project Description, the Block 1 site is currently entitled for a 500-room hotel and 50,000 gsf of retail as part of the Mission Bay FSEIR; this sub-section provides a comparison between the travel demand estimates included in the Mission Bay FSEIR for Block 1, with those of the proposed re-entitlement for Block 1 as presented in the previous sub-sections for the purposes of the cumulative analysis. The proposed re-entitlement of Block 1 calls for 350 residential units, a 250-room hotel, and approximately 25,000 gsf of ground floor retail space, therefore, the difference between the original and the proposed re-entitlements would be the addition of 350 residential units, and the elimination of 250 hotel rooms (50 percent of the value assumed in the Mission Bay FSEIR) and 25,000 gsf of retail space (50 percent of the value assumed in the Mission Bay FSEIR). The results of the land use and travel demand comparison are shown in Table 8; it should be noted that the Mission Bay FSEIR used different travel demand rates based on the set of SF Guidelines for Environmental Review that were applicable at the time the transportation analysis was conducted (1991 SF Guidelines).

Table 8
Cumulative Land Use and Travel Demand Comparison for Block 1

	Mission Bay FSEIR		Proposed Block 1 Re-entitlement		Difference in Entitlement	
Land Use						
Residential	0 units		350 units		350 units	
Hotel	500 rooms		250 rooms		-250 rooms	
Retail	50,000 gsf		25,000 gsf		-25,000 gsf	
Person Trips All Modes	**Daily [a]**	**PM Peak Hour [a]**	**Daily [b]**	**PM Peak Hour [b]**	**Daily**	**PM Peak Hour**
Residential	0	0	3,500	606	3,500	606
Hotel	3,325	316	1,750	175	-1,662 [c]	-158 [c]
Retail	6,523	262	3,750	338	-3,262 [d]	-131 [d]
Total	**9,848**	**578**	**9,000**	**1,119**	**-1,424**	**317**
PM Peak Hour Vehicle Trips	**Number of Vehicles [e]**		**Number of Vehicles [f]**		**Number of Vehicles**	
Residential	0		217		217	
Hotel	131		76		-66 [c]	
Retail	89		117		-45 [d]	
Total	**220**		**410**		**106**	
Peak Parking Demand	**Number of Spaces [g]**		**Number of Spaces [h]**		**Number of Spaces**	
Residential	0		525		525	
Hotel	83		125		-42 [c]	
Retail	222		151		-111 [d]	
Total	**305**		**801**		**372**	

Notes:

[a] Assumes a retail trip generation of 150 daily trips and 6 PM peak hour trips per 1,000 gsf and a hotel trip generation of 6.9 daily trips and 0.7 PM peak hour trips per room. These trip generation rates were further adjusted in the 1998 Mission Bay FSEIR to account for internal trips, which correlate to an overall assumption that approximately 10 percent of total person trips for the Mission Bay Plan Area would be internal trips. See 1998 Mission Bay FSEIR, Volume I, Table V.E.6, p. V.E.58. and Volume IV, Table D.3, p. D.31.

[b] See Table 3 (p. 12) in this document.

[c] Reflects the elimination of 250 hotel rooms in accordance with the 1998 Mission Bay FSEIR assumptions, which used a different set of travel demand rates based on the 1991 SF Guidelines (see note a); the number shown in this cell represents 50% of the value assumed in the 1998 Mission Bay FSEIR.

[d] Reflects the elimination of 25,000 gsf of retail use in accordance with the 1998 Mission Bay FSEIR assumptions, which used a different set of travel demand rates based on the 1991 SF Guidelines (see note a); the number shown in this cell represents 50% of the value assumed in the 1998 Mission Bay FSEIR.

[e] See 1998 Mission Bay FSEIR, Table V.E.8, p. V.E.62.

[f] See Table 4 (p. 13) in this document.

[g] See 1998 Mission Bay FSEIR, Table V.E.17, p. V.E.97.

[h] See Table 7 (p. 15) in this document.

Source: SF Guidelines, U.S. Census, Adavant Consulting – April 2013.

As shown in Table 8, the proposed re-entitlement of Block 1 compared with the assumptions in the Mission Bay FSEIR would decrease the total daily travel demand by approximately 1,420 person trips in the cumulative scenario. At the same time, the travel demand during the PM

peak hour would increase by 317 person trips and 106 vehicle trips; overall peak parking demand would increase by 372 parking spaces in the cumulative scenario.

PROJECT IMPACT ANALYSIS

This section presents the assessment of potential transportation impacts due to the travel demand generated by the proposed re-entitlement of Block 1. The assessments of transportation impacts are grouped into eight areas: traffic, transit, pedestrian, bicycle, loading, emergency vehicle access, and construction. Parking analysis is also presented at the end of this section for informational purposes. The assessment of potential cumulative impacts is presented in the next section, Cumulative Mission Bay Area Impacts.

SIGNIFICANT CRITERIA

The following are the significance criteria used by the Planning Department for the determination of impacts associated with a proposed project:

- In San Francisco, the threshold for a significant adverse impact on traffic has been established as deterioration in the level of service (LOS) at a signalized intersection 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 Caltrans signal warrants would be met, or causes Caltrans signal warrants to be met when the worst approach is already at LOS E or LOS F.

- For an intersection that operates at LOS E or LOS F under existing conditions, there may be a significant adverse impact depending upon the magnitude of the project's contribution to the worsening of delay. In addition, a project would have a significant adverse effect if it would cause major traffic hazards, or would contribute considerably to the cumulative traffic increases that would cause the deterioration in LOS to unacceptable levels (i.e., to LOS E or LOS F).

- 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 operating costs or delays such that significant adverse impacts in transit service levels could result. With the Muni and regional transit screenlines 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 project would have a significant effect on the environment if it would result in substantial overcrowding on public sidewalks, 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.

- The 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 the proposed on-site loading facilities or within convenient on-street loading zones, and if it would create potentially hazardous traffic conditions or significant delays affecting traffic, transit, bicycles or pedestrians.
- A project would have a significant effect on the environment if it would result in inadequate emergency vehicle access.
- Construction-related impacts generally would not be considered significant due to their temporary and limited duration.

TRAFFIC IMPACTS

During the weekday PM peak hour, 410 new vehicles (208 inbound and 202 outbound) would access Block 1 under the proposed re-entitlement project. Table 9 presents a comparison of the weekday peak hour intersection LOS for the Existing-plus-Project conditions. Appendix C contains the detailed turning movement volume and calculations of intersection LOS analyses.

Table 9
Intersection Level of Service
Existing and Existing plus Project Conditions
Weekday PM Peak Hour [a]

	Intersection Name	Traffic Control Device	Existing		Existing plus Block 1 Re-entitlement Project	
			Delay [b]	Level of Service	Delay [b]	Level of Service
1	16th St. / Third St.	Traffic Signal	27.0	C	27.6	C
2	16th St. / Owens St.	Traffic Signal	25.7	C	25.7	C
3	Mission Rock. St. / Third St.	Traffic Signal	27.9	C	29.4	C
4	Channel St. / Third St.	Traffic Signal	28.8	C	29.7	C
5	Channel St. / Fourth St.	Traffic Signal	12.7	B	14.6	B
6	King St. / Third St.	Traffic Signal	40.2	D	40.9	D
7	King St. / Fourth St.	Traffic Signal	**67.0**	**E**	**67.9**	**E**

Notes:
[a] Data in **bold** indicates intersection operating at LOS E or F.
[b] Intersection delay presented in seconds per vehicle.
Source: Adavant Consulting – February 2013.

The addition of Block 1 re-entitlement project -generated traffic would result in minor increases in the average delay per vehicle at most of the study intersections, but all study intersections would continue to operate at the same LOS as under Existing conditions. Six of the seven study intersections would continue to operate at LOS D or better while the intersection of intersection of King Street and Fourth Street would continue to operate at LOS E.

The contribution of the Block 1 re-entitlement project traffic to the critical movements at the intersection of King Street and Fourth Street during the PM peak hour[3] would be below five percent; the percent contribution calculations are shown in Appendix C. Therefore, the Block 1 re-entitlement project would have a less-than-significant traffic impact.

TRANSIT IMPACTS

The Block 1 re-entitlement project would generate 279 PM peak hour transit trips (160 inbound and 119 outbound). All these transit trips to and from Block 1 would utilize the nearby Muni lines and regional transit lines, and may include transfers to other Muni bus lines and light rail lines, or other regional transit providers. Based on the trip distribution patterns presented in Table 5 (p. 13), it is estimated that of the 119 outbound transit trips, 107 trips would travel by Muni (including those transferring to regional transit service providers), and that 26 trips would utilize the regional transit lines. Of the 160 total inbound transit trips, it is estimated that 148 trips would travel by Muni (including those transferring to regional transit providers), and that 29 trips would utilize the regional transit lines.

Table 10 presents a comparison of the Existing and Existing plus project ridership and capacity utilization for the Muni lines in the vicinity of Block 1 during the weekday PM peak hour at the MLP based on the project trip generation patterns presented in a previous section. Table 10 includes all the Muni riders that would be expected to travel through an MLP, excluding those who would get on or off after or before the MLP stop (for example the Block 1 outbound riders getting off near Market Street to connect to a regional transit carrier, or the Block 1 riders coming from the south on the T Third line). Detailed calculations are shown in Appendix F.

Table 10
Existing and Existing plus Project Muni Service Utilization at the MLP
Weekday PM Peak Hour

Route	Direction toward	Location of the MLP	Existing		Block 1 Re-entitlement Trips	Existing plus Block 1 Re-entitlement	
			Ridership	Utilization [a]		Ridership	Utilization [a]
N Judah	Caltrain Depot	Carl/Cole	880	46%	11	891	47%
	Sunset	Van Ness Station	1,773	83%	8	1,781	84%
T Third	Bayshore	Embarcadero/Folsom	508	71%	70	578	81%
	Downtown	Van Ness Station	601	72%	46	647	78%
30 Stockton	Caltrain Depot	Chestnut/Octavia	705	58%	22	727	59%
	Marina	Stockton/Sutter	660	53%	3	663	53%
45 Union-Stockton	Caltrain Depot	Stockton/Sacramento	240	76%	7	247	79%
	Marina	Stockton/Sutter	260	83%	1	261	83%
47 Van Ness	Caltrain Depot	Van Ness/McAllister	276	73%	3	279	74%
	F. Wharf	Van Ness/O'Farrell	258	68%	1	259	69%

Note:
[a] Transit line capacity is shown in Table 2 (p. 9); more detailed calculations are presented in Appendix F.
Sources: SF Planning Department – December 2012; Adavant Consulting – April 2013.

[3] The four critical movements at this location during the PM peak hour are the northbound left-turn, the southbound right-turn, the eastbound left-turn and the westbound through movements.

As shown in Table 10, the capacity utilization on all the Muni lines would increase with the addition of Block 1-generated transit trips for the Existing plus Project conditions in the inbound and outbound northbound directions. The capacity utilization at the MLP for all lines would continue to be below Muni's maximum value of 85 percent.

The 26 outbound transit trips traveling on the regional transit service providers during the PM peak hour would distribute as ten trips on BART, one trip on AC Transit, ten trips on Caltrain, and five trips on GGT buses and ferries, well within the daily variations of transit ridership for each system; Table 11 presents the utilization calculations a comparison of the Existing and Existing plus project ridership and capacity utilization for the regional transit lines during the weekday PM peak hour in the outbound direction. As shown in Table 11, the capacity utilization at all lines would be virtually unchanged as a result of the Block 1 re-entitlement and all screenlines would continue to be below the maximum value of 100 percent.

Table 11
Existing and Existing plus Project Regional Transit Service Utilization
Weekday PM Peak Hour – Outbound Direction

Regional Screenline	Regional Transit Service	Existing			Block 1 Re-entitlement Trips	Existing plus Block 1 Re-entitlement	
		Ridership	Ridership	Utilization		Ridership	Utilization
East Bay							
	BART	19,716	22,050	89%	10	19,726	89%
	AC Transit	2,256	3,926	57%	1	2,257	57%
	Ferries	805	1,615	50%	0	805	50%
	Subtotal	22,777	27,591	83%	11	22,788	83%
North Bay							
	GGT Bus	1,384	2,817	49%	3	1,387	49%
	Ferries	968	1,959	49%	2	970	50%
	Subtotal	2,352	4,776	49%	5	2,357	49%
South Bay							
	BART	10,682	14,910	72%	0	10,682	72%
	Caltrans	2,377	3,100	77%	10	2,387	77%
	SamTrans	141	320	44%	0	141	44%
	Subtotal	13,200	18,330	72%	10	13,210	72%
Total Regional Screenlines		**38,329**	**50,697**	**76%**	**26**	**38,355**	**76%**

Sources: SF Planning Department – December 2012; Adavant Consulting – April 2013.

Therefore, the Block 1 re-entitlement project would have a less-than-significant transit impact on Muni or the regional transit service.

PEDESTRIAN IMPACTS

In accordance with the Mission Bay Infrastructure Plan, the Block 1 re-entitlement project would provide minimum 12-foot wide sidewalks on all streets adjacent to Block 1. The Mission Bay

Pedestrian and Jogging Path will parallel the north side of Block 1 on a new open space proposed as part of the Mission Bay Plan (Park P3).

During the PM peak hour, there would be 208 outbound and 281 inbound pedestrian trips (210 walk trips plus 279 transit trips) generated/attracted by the Block 1 re-entitlement project. These estimates are based on the mode split information described in the previous section and include walk trips, as well as trips by public transit that would walk from the nearby stops to the project site.

Given the existing low pedestrian volumes on the sidewalks and crosswalks adjacent to Block 1, the Block 1 re-entitlement project would not be expected to result in overcrowding on the sidewalks. In addition, the Mission Bay Design for Development–South standards address issues to avoid potentially hazardous conditions or interference with accessibility to the site or other areas that could be caused by project driveway locations and curb cuts. Therefore, the potential impacts of the Block 1 re-entitlement on pedestrian conditions would be less than significant.

BICYCLE IMPACTS

The Block 1 project would provide a sufficient number of secured bicycle parking spaces on site in accordance with the Mission Bay Design for Development–South standards. The standards call for a minimum of one secure bicycle parking space to be provided for every 20 vehicular parking spaces or fraction thereof.

It is anticipated that a portion of the 55 "other" trips generated by Block 1 project would be bicycle trips. As previously shown on Figure 4 (p. 11) there are several bicycle facilities in the project vicinity along Fourth Street, 16th Street and Terry François Boulevard; the Block 1 re-entitlement project would not be expected to result in overcrowding of these facilities. In addition, although the Block 1 re-entitlement project would result in an increase in the number of vehicles in the vicinity of Block 1, these new trips would not be modify the existing traffic conditions (as previously shown in Table 9, p. 18) and would not be substantial enough to affect bicycle travel in the area, and therefore, the impact on bicyclists would be less than significant.

LOADING IMPACTS

The Block 1 re-entitlement project would provide at least the minimum number of commercial loading spaces and tour bus parking spaces on-site in accordance with the Mission Bay Design for Development–South standards.

Based on the Mission Bay Design for Development–South standards, two off-street loading spaces would be required for the residential uses, two for the hotel uses, and one for the retail use, for a total of five commercial loading spaces. In addition, since the hotel would provide between 201 and 350 rooms, the project would be required to provide one tour bus parking space. The dimensions of each off-street commercial loading space shall be at least 10 feet wide by 35 feet long, with a minimum height clearance of 14 feet high; the minimum dimensions of the tour bus parking space shall be at least 9 feet wide by 45 feet long, with a minimum height clearance of 14 feet.

Thus the Block 1 re-entitlement project would generate a commercial vehicle demand of 2.3 loading spaces during an average hour or 2.8 loading spaces during the peak hour of loading activities (see Table 6, p. 14). This demand would be accommodated at the five loading spaces required by the Mission Bay Design for Development–South. Therefore, the commercial activities related to the Blok 1 re-entitlement would not have a significant effect on the environment.

CONSTRUCTION IMPACTS

Plans for construction of Block 1 have not been developed at this time, but it is expected that it would entail four overlapping major construction phases: excavation and shoring, foundation, base building, and exterior and interior finishing. Typical construction-related activities would be expected to occur Monday through Friday, between 7 AM and 3 PM. The actual hours of construction would be stipulated by the Department of Building Inspection, and the contractor(s) would be required to follow the most recent version of SFMTA Regulations for Working in San Francisco Streets manual (the "Blue Book"), which establish rules and permit requirements so that construction activities can be done safely and with the lowest level of possible conflicts with pedestrians, bicyclists, transit and vehicular traffic.

Construction staging would be expected to occur primarily within Block 1 and along the adjacent sidewalks on Fourth, Channel and Third Streets. Although the sidewalks adjacent to the project site could be closed for periods of time during project construction, these closures would be temporary in nature and alternative pedestrian circulation routes along those streets would be provided throughout the construction duration; it appears unlikely that traffic lanes would need to be closed during construction. If it is determined that any temporary traffic lane, parking lane or sidewalk closures would be needed, the closures should be coordinated with City staff in order to minimize the effects on local traffic and circulation. In general, lane and sidewalk closures are subject to review and approval by the City's Transportation Advisory Staff Committee (TASC) that consists of representatives of City departments including SFMTA, DPW, Fire, Police, Public Health, Port and the Taxi Commission.

There are no Muni bus stops adjacent to Block 1 that would be necessary to relocate, but the project sponsor and construction contractor(s) should contact Muni's Street Operations and Special Events Office to coordinate construction activities and minimize any potential delays to transit service near the project site.

Throughout the construction period, there would be a flow of construction-related trucks and worker vehicles into and out of Block 1. The impact of such traffic, particularly of construction trucks, would be a temporary lessening of the capacities of local streets. The actual number of construction trucks or construction worker vehicles to and from Block 1 is not known at this time. However, it is anticipated that the addition of the construction-related vehicles or worker transit-trips would not substantially affect transportation conditions, as any impacts on local intersections or the transit network would be less than those associated with the project.

The Mission Bay FSEIR (Volume I, p. V.E.118) evaluated the potential construction impacts for the construction of a 500-room hotel in Block 1, defined as the most intense construction impact in the Mission Bay Area, and found that no significant impacts would be created. Therefore, the potential construction-related transportation impacts of the Block 1 re-entitlement project which involves a smaller hotel and residential housing would be considered less than significant.

EMERGENCY VEHICLE ACCESS

No transportation-related issues such as traffic congestion, street widths or roadway alignments, have been identified that would result in a significant impact to San Francisco Police Department (SFPD), San Francisco Fire Department (SFFD), or other emergency vehicles accessing Block 1. Block 1 is served by the SFFD and is located within Emergency Response District 8. The nearest existing SFFD station is at 36 Bluxome Street at Fourth Street, about five blocks northwest of the project site. In addition, SFFD Station 29 at 299 Vermont Street at 16th Street is located approximately one mile southwest of Block 1. SFPD Southern Station is located at 800 Bryant Street between Sixth and Seventh Streets, about one mile to the northeast of the site.

A new Public Safety Building for the SFFD and SFPD is currently under construction in Mission Bay Block 8, at the southeast corner of the intersection of Third and Mission Rock Streets, approximately one block south of Block 1. The Public Safety Building will provide a replacement facility for the SFPD Headquarters and the Southern District Police Station, and a new fire station. Construction started in December 2011 and is estimated to be completed in summer of 2014.[4]

While the Block 1 re-entitlement project would increase the number of pedestrians and vehicles in the vicinity of the site, the project would not substantially modify existing traffic conditions in the area and would therefore not be expected to cause unacceptable future operating conditions that could obstruct SFFD, SFPD or other emergency vehicles access to the area. Thus, the Block 1 re-entitlement project would not result in a significant impact to emergency vehicle access.

PARKING CONDITIONS

San Francisco does not consider parking supply as part of the permanent physical environment and therefore, does not consider changes in parking conditions to be environmental impacts as defined by CEQA. The San Francisco Planning Department acknowledges, however, that parking conditions may be of interest to the public and the decision makers. Therefore, this report presents a parking analysis for information purposes.

Parking conditions are not static, as parking supply and demand varies from day to day, from day to night, from month to month, etc. Hence, the availability of parking spaces (or lack thereof) is not a permanent physical condition, but changes over time as people change their modes and patterns of travel. Parking deficits are considered to be social effects, rather than impacts on the physical environment as defined by CEQA. Under CEQA, a project's social impacts need not be treated as significant impacts on the environment. Environmental documents should, however, address the secondary physical impacts that could be triggered by a social impact (CEQA Guidelines § 15131(a)). The social inconvenience of parking deficits, such as having to hunt for scarce parking spaces, is not an environmental impact, but there may be secondary physical environmental impacts, such as increased traffic congestion at intersections, air quality impacts, safety impacts, or noise impacts caused by congestion. In the experience of San Francisco

[4] http://www.buildsfpsb.com/; web page consulted February 2013.

transportation planners, however, the absence of a ready supply of parking spaces, combined with available alternatives to auto travel (e.g., transit service, taxis, bicycles or travel by foot) and a relatively dense pattern of urban development, induces many drivers to seek and find alternative parking facilities, shift to other modes of travel, or change their overall travel habits. Any such resulting shifts to transit service in particular, would be in keeping with the City's *Transit First Policy*. The City's *Transit First Policy* established in the City's Charter Article 8A, Section 8A.115 provides that "parking policies for areas well served by public transit shall be designed to encourage travel by public transportation and alternative transportation."

The transportation analysis accounts for potential secondary effects, such as cars circling and looking for a parking space in areas of limited parking supply, by assuming that all drivers would attempt to find parking at or near the project site and then seek parking farther away if convenient parking is unavailable. Moreover, the secondary effects of drivers searching for parking is typically offset by a reduction in vehicle trips due to others who are aware of constrained parking conditions in a given area. Hence, any secondary environmental impacts which may result from a shortfall in parking in the vicinity of the proposed project would be minor, and the traffic assignments used in the transportation analysis, as well as in the associated air quality, noise and pedestrian safety analyses, reasonably addresses potential secondary effects.

In summary, changes in parking conditions are considered to be social impacts rather than impacts on the physical environment. Accordingly, the following parking analysis is presented for informational purposes only.

On-street parking or commercial loading/unloading will not be allowed on the streets surrounding Block 1 in accordance with the Mission Bay South Infrastructure Plan. Off-street parking would be provided on site at Block 1 for the hotel, residential and commercial uses. The Block 1 re-entitlement project would provide a number of off-street parking spaces on site in accordance with the Mission Bay Design for Development–South requirements. Vehicular access into the site would be expected to be provided via Third Street (with all turning movements allowed) and Channel Street (right turn in/right turn out movements only).

Per the Mission Bay Design for Development–South standards, off-street accessory parking may be provided for up to one space per residential unit, up to one space per 16 hotel rooms, and up to one space for each 500 gsf retail use up to 20,000 gsf plus on space for each 250 gsf over 20,000 gsf of retail use. Thus, a maximum total of 426 off-street parking spaces would be permitted in Block 1.

The Mission Bay FSEIR (Volume I, Table V.E.17, p. V.E.97) estimated a total peak parking demand for Block 1 of 305 spaces (221 spaces for retail and 83 spaces for the hotel) and estimated a parking demand of 139 spaces (108 spaces for retail and 31 spaces for the hotel); that is, an overall peak parking deficit of 166 spaces.

As previously shown in Table 7 (p. 15), the Block 1 re-entitlement project would generate a total parking demand for 656 spaces during the weekday midday and 801 spaces in the evening. Thus, the Block 1 re-entitlement project expected parking demand would not be accommodated within the maximum supply of off-street parking spaces allowed by the Mission Bay Design for Development–South standards (426 spaces), with a shortfall of 230 spaces during the weekday midday period and a shortfall of 375 spaces during the weekday evening period.

There is currently sufficient midday and evening parking availability at the existing off-street parking lot across from Block 1 (Lot A at Seawall Lot 337) when the SF Giants do not play at AT&T Park. Lot A is planned for development by the SF Giants and the Port of San Francisco, which would include the replacement of the approximately 2,800 existing parking spaces in a multi-story garage. Due to the potential difficulty in finding parking during the midday in the future, when Lot A is developed and the parking spaces will be more utilized, motorists might try to park further away from the immediate area or carpool, or alternatively, because the project area is well served by transit, bicycle and pedestrian facilities, motorists might switch to transit, walking or bicycling.

CUMULATIVE MISSION BAY AREA IMPACTS

This section provides a description of the future cumulative development in the Mission Bay Area being planned as part of the Mission Bay Area Plan and the UCSF Long-Range Development Plan (LRDP), and provides a comparison between the expected future travel demand generated/attracted by the Block 1 re-entitlement project with the overall demand for the Mission Bay South Redevelopment Plan Area. The comparison will show that the contribution of the Block 1 re-entitlement project to the overall demand in the area is below the typical values that can be expected due to daily variations in traffic.

MISSION BAY PLAN

The Mission Bay Development Plan covers approximately 300 acres of land and is near the eastern shoreline of San Francisco, about one mile south of the downtown Financial District. The Mission Bay Area is bounded by Townsend Street on the north, Interstate 280 on the west, Mariposa Street on the south, and San Francisco Bay on the east. The San Francisco Board of Supervisors certified the FSEIR for the Mission Bay plan in September 1998 and established the Mission Bay North and South Redevelopment Plan Areas two months later. The approved Mission Bay Development Plan calls for a mixed-use development, which includes the following:

- Approximately 6,000 residential units on the north and south sides of China Basin Channel;
- About 500,000 gsf of city- and neighborhood-serving retail space;
- A 43-acre UCSF site, containing 2.65 million gsf of instruction, research, and support space;
- A mix of approximately 6.5 million gsf of life sciences research and development, technology, and office space, surrounding the UCSF site to its west, south, and east;
- A 500-room hotel in Block 1;

- A 500-student public school, a public library, and a new police and fire station; and
- Approximately 47 acres of open space, including eight acres within the UCSF site.

The Mission Bay FSEIR evaluated the potential impacts of several alternatives and variants to the Mission Bay Plan ("Proposed Project"), as it was originally conceived in 1997 when the environmental studies were initiated. The plan approved by the Board of Supervisors in 1998 is virtually the same as what is described in the Mission Bay FSEIR as the "Combination of Variants".[5]

UCSF Mission Bay

As described in the previous section, the Mission Bay Redevelopment Plan includes a UCSF campus site. It comprises 12 blocks west of Third Street, east of Owens Street, and north of 16th Street and at completion it would contain 2.65 million gsf for instruction, research, and support uses. In 2002, UCSF amended its 1996 Long-Range Development Plan (LRDP) and added housing as an approved use within the Mission Bay campus and removed an equivalent amount of approved support uses. The LRDP Amendment #1 EIR[6] showed that the proposed replacement of support uses by student housing would represent an overall increase in vehicle-trips of 0.4 percent for the entire Mission Bay South Plan Area during the PM peak hour, which would fall well within the margin of error of the original estimates in the Mission Bay FSEIR.

In 2008, UCSF initiated the environmental review for a proposed UCSF Medical Center to be located in the Mission Bay South Plan Area (MCMB). The center would consist of a hospital, an ambulatory care center (ACC), an energy center, and parking. The site for the proposed MCMB is bounded by 16th Street on the north, Mariposa Street on the south, Owens Street on the east, and Third Street on the west. Fourth Street runs parallel to Third Street and Owens Street, bisecting the site. UCSF has proposed as part of the MCMB to construct and maintain a public plaza on a portion of the Fourth Street right-of-way between 16th and Mariposa Streets that would result in the closure of the street to non-emergency vehicular through-traffic; the pedestrian access and bicycle route on the Fourth Street right-of-way designated by the Mission Bay Plan would be maintained. The MCMB project would be constructed in two major phases, with the first phase (LRDP Phase) being completed by 2015, and the second (Future Phase) assumed to be completed by 2025 or later.

[5] Mission Bay FSEIR, Volume II, pp. VII.46 to VII.66, San Francisco Planning Department, September 1998.

[6] UCSF LRDP Amendment #1 Final SEIR, Tables 3-3 and 3-4, pp. 3-14 and 3-15, January 17, 2002.

The first MCMB phase, currently under construction, includes the Children's, Women's and Cancer Hospitals with a total of 289 beds, an Outpatient Building, a Cancer Outpatient Building, and a central utilities plant on the east side of future Fourth Street totaling approximately 993,500 gsf in size; structured and surface parking is being built on the parcels to the west of future Fourth Street. The second MCMB phase would provide an additional 793,500 gsf of Medical Center development, including an additional 261 beds, hospital support facilities and parking accommodations. Upon completion of both phases, the Medical Center at Mission Bay project would provide a 550-bed hospital, an outpatient facility, cancer outpatient facility, and associated support space and parking (1,300 to 2,000 spaces), totaling approximately 1,787,000 gsf, excluding parking.

UCSF has recently started planning for a potential expansion of the existing Mission Bay campus site north of 16th Street as part of a new LRDP. The expansion would include up to 990,000 gsf of housing and research/office space above the 2,650,000 gsf planned in the 1996 LRDP to be built within the existing UCSF campus site north of 16th Street.

PUBLIC SAFETY BUILDING

In 2009, the City initiated the process of planning a Public Safety Building on Block 8 in Mission Bay South. Block 8 is an approximately 1.5-acre site bounded by Mission Rock, Third, and China Basin Streets, which is located across Third Street and to the north of the proposed Family House project. The Public Safety Building consists of the development of a six-story public facility of approximately 320,200 gsf and the reuse of the existing 6,200-gsf Fire House No. 30, built in 1928 located in Block 8. The Public Safety Building will incorporate a local police station, the police headquarters (administrative functions), a local fire station, and parking.

In January 2010, the SFRA determined that the Mission Bay Public Safety Building did not entail any substantial changes that would require major revisions to the Mission Bay FSEIR[7], nor would there be new significant environmental effects or a substantial increase in the severity of previously identified significant effects. The building is currently under construction and is expected to be completed in summer 2014.

FAMILY HOUSE

Family House, Inc., an independent non-profit organization, is proposing to construct a services facility to provide subsidized temporary housing for families whose members are being treated for cancer and other life-threatening illnesses located primarily at UCSF. The project, to be located on the eastern portion of Block 7 in the Mission Bay South Plan Area, includes a built area of approximately 92,000 gsf, with 80 private bedrooms, shared kitchens, dining rooms, living areas, office space, two conference rooms, and one workout room. The ground floor would also contain a private parking garage with 46 spaces for staff and residents.

[7] Mission Bay FSEIR Addendum ER-919-97, Addendum # 7, San Francisco Redevelopment Agency, January 7, 2010.

A transportation assessment prepared in 2013 by Adavant Consulting[8] for the Successor Agency to the SFRA determined that the proposed Family House Mission Bay project would represent a very modest increase in the number of person or vehicle-trips occurring in the Mission Bay South Plan Area, and therefore, its implementation would not expected to create any significant transportation impacts beyond what was identified in the Mission Bay FSEIR.

MISSION BAY TRAVEL DEMAND

Table 12 on the next page provides a summary of the travel demand for the Mission Bay Approved Project (Mission Bay FSEIR Combination of variants), as well as the various developments added to the Approved Project since that time in terms of person-trips and vehicle-trips for the weekday PM peak hour conditions.

As shown in Table 12, the travel demand generated by the proposed Block 1 re-entitlement project combined with the other proposed development changes in Mission Bay represents a reduction in the number of auto person and vehicle trips generated in the Mission Bay South Plan Area during the PM peak hour, compared to the Mission Bay Approved Project (a reduction of 190 person trips and 50 vehicle trips). The number of transit trips during the PM peak hour would be expected to increase by 140 person trips compared to the Mission Bay Approved Project values, as indicated in the table, albeit by less than two percent, which could be considered within the expected daily or seasonal variations of transit ridership.

Thus, the proposed re-entitlement of Block 1 would still represent a reduction in the number of auto person and vehicle trips and a modest increase in the number of transit trips occurring in the Mission Bay South Plan Area, compared to the Mission Bay Approved Project, and therefore, its implementation would not be expected to create any significant cumulative transportation impacts beyond what was identified in the Mission Bay FSEIR.

[8] Transportation assessment for a social services facility to be located in the Mission Bay South Plan Area of San Francisco, prepared for the Successor Agency to the San Francisco Redevelopment Agency and the San Francisco Planning Department, May 15, 2013.

Table 12
Mission Bay South Plan Area Plan Travel Demand
Cumulative Weekday PM Peak Hour Trips Comparison

Scenario	Person-trips		Vehicle Trips
	Auto	Other Modes [a]	
Mission Bay Approved Project (FSEIR Combination of Variants Alternative) [b]	12,845	7,180	9,670
Office/R&D at Blocks 36-39 and X3 per the FSEIR [c]	-2,097	-1,033	-1,490
UCSF Medical Center at Blocks 36-39 and X3 [d]	1,591	740	1,014
Public Safety Building in Block 8 [e]	259	106	195
Family House Project in Block 7 East [f]	28	39	18
Total 1 - Mission Bay Approved Project with UCSF Medical Center plus Public Safety Building and Family House Project [g]	12,626	7,032	9,407
Re-entitlement of Block 1 [h]			
- Addition of 350 residential units	243	363	217
- Subtraction of 250 hotel rooms	-127	-31	-66
- Subtraction of 25,000 sq. ft. of retail	-87	-44	-45
Total net change for re-entitlement of Block 1	29	288	106
Re-entitlement of Block 1 as a percentage of the Mission Bay FSEIR Proposed Project	0.2%	4.0%	1.1%
Total 2 - Mission Bay Approved Project with UCSF Medical Center, Public Safety Building, Family House Project, and Block 1 re-entitlement	12,655	7,320	9,513
Difference with Mission Bay FSEIR Approved Project	-190 -1.5%	140 1.9%	-157 -1.6%

Notes:

[a] Transit, walk, bicycle, taxi, etc.

[b] Defined in Mission Bay FSEIR, Volume II, Table VII.G.3, p. VII.56; virtually the same as the project approved by the Board of Supervisors in 1998.

[c] Derived from land uses assigned to the West Subarea; Mission Bay FSEIR, Volume I, Tables V.E.6 and V.E.8, pp. V.E.58 and V.E.62, and Volume II, Table VII.G.2, p. VII.51.

[d] UCSF Medical Center at Mission Bay FEIR (2008), Tables 4.6-5 through 4.6-13, pp. 4.6-19 through 4.6.23.

[e] 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.

[f] Technical Memorandum, Adavant Consulting; May 15, 2013.

[g] Although the proposed 990,000 gsf LRDP expansion of the UCSF Mission Bay campus site north of 16th Street is not included in this total, preliminary calculations indicate that the number of auto person and vehicle trips generated by the expanded campus would be below the totals assumed in the Mission Bay FSEIR for the currently approved 2.65 million gsf campus. Thus, these figures would represent a conservative value.

[h] See Table 8 (p. 16) in this technical memorandum.

Source: Adavant Consulting from various sources – May 2013

APPENDICES

APPENDIX A
SCOPE OF WORK

SAN FRANCISCO
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TRANSPORTATION STUDY
SCOPE OF WORK
ACKNOWLEDGEMENT AND APPROVAL

Date: May 13, 2013

Transmittal To: Adavant Consulting

The proposed scope of work for the Mission Bay, Block 1 dated May 10, 2013 is hereby

☐ Approved as submitted

☒ Approved as revised and resubmitted

☐ Approved subject to comments below

☐ Not approved, pending modifications specified below and resubmitted

Signed: _____
Transportation Planner

Note: A copy of this approval and the final scope of work are to be appended to the transportation study. The Department advises consultants and project sponsors that review of the draft transportation report may identify issues or concerns of other City agencies not addressed in the scope of work hereby approved, and that the scope of work may need to be modified to accommodate such additional issues.

Adavant Consulting

Scope of Work

Transportation Study in support of proposed development of a mixed-use project located in the Mission Bay South area of San Francisco

Final Version: May 10, 2013

Adavant Consulting is pleased to submit this draft scope of work for review by the SF Planning Department and Community Reinvestment Division of the City Administrator's Office ("CRD") as the successor to the San Francisco Redevelopment Agency (SFRA), to prepare a transportation study for a proposed mixed-use project at Block 1 plus construction of additional affordable housing units, all within the residential subarea in the Mission Bay South Plan Area in San Francisco.[1] (See Figure 1)

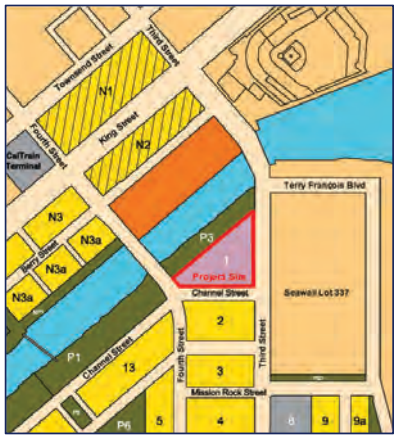


Figure 1
Project Site – Block 1, Mission Bay Area South

[1] The Mission Bay South Plan Area is bounded by the Mission Bay Creek to the north, Mariposa Street to the South, the San Francisco Bay to the east and the Caltrain tracks (Mississippi and Seventh streets) to the west. The Mission Bay South Plan Area excludes Seawall Lot 337, also known as Lot A, which is under the Port of San Francisco jurisdiction and is currently used as surface parking. (See map at the end of this document.)

Block 1 encompasses a triangular 2.7-acre undeveloped block bounded by the Mission Creek Channel and Park P1 to the north, Third Street to the east, Channel Street to the south, and Fourth Street to the west. The site is currently entitled for a 500-room hotel, 50,000 gross square feet (gsf) of retail and 191 off-street parking spaces. The proposed project would re-entitle Block 1 by substituting 250 of the 500 hotel rooms with 350 market rate residential units in one or more separate buildings, while keeping half (25,000 square feet) of the approved 50,000 square feet of retail and the remaining 250 hotel rooms. Vehicular access to Block 1 would generally be provided from Third Street (right/left in and right/left out), and from Channel Street (right in/right out only, due to the presence of Muni's LRT tracks in the center of the street).

Thus, the transportation study will address the existing transportation network in the vicinity of Block 1 and assess any potential transportation impacts associated with the decrease of 250 hotel rooms and 25,000 square feet of retail, combined with the addition of 350 market rate residential units in Block 1, herein referred to as the "proposed project". The transportation study will help to inform the City's determination as to what level of CEQA environmental review is required beyond the Final Mission Bay Subsequent Environmental Impact Report (FSEIR) certified in 1998.

This draft scope of work follows the San Francisco Planning Department's *Transportation Impact Analysis Guidelines for Environmental Review*, October 2002 (SF Guidelines), as applicable, and is subject to final approval by SF Planning Department.

Task 1 – Project Scoping

The SF Planning Department requires that the scope of work for the transportation study be reviewed and approved by the Division's designated transportation planner and environmental staff coordinator prior to commencement of any work by the project sponsor transportation consultant. Adavant Consultant's project manager has consulted with Planning Department and CRD staff to discuss and modify this draft scope of work prior to final approval. The discussions have focused on items such as:

- Data collection (need for new counts, locations, time periods, etc.);
- Assumptions (study area, land use types, cumulative growth, etc.);
- Methodology (trip generation methodology and appropriate sources, travel forecasts, etc.); and
- Proposed project relationship with the Mission Bay South Area project.

Comments from City staff have been incorporated into the final version of the scope of services.

Task 2 – Background and Project Description

Adavant Consulting will prepare a Background and Project Description sections that describe the relationship between the proposed project and the overall Mission Bay South Area, and summarizes the transportation studies conducted in the area since the completion of the Mission Bay FSEIR. This section will also include a brief description of the existing uses on Block 1 and the adjacent land uses, and a description of the proposed project, including the location, land use types and intensities. The description will also include the number and type of off-street parking spaces that would be provided and vehicular access to those spaces, as provided by the project sponsor. If

known, the location and access to freight loading/unloading facilities and driveways, including dimensions, for the proposed construction in Block 1 will also be described. A site plan of the proposed project for Block 1 will be included as provided by the project sponsor.

Task 3 – Data Collection

Traffic: Adavant Consulting will collect turning movement counts during the weekday evening peak period (4:00 to 6:00 p.m.) for the following six study intersections:

- Third St. / King St.
- Fourth St. / King St.
- Third. St. / Channel St.
- Fourth St. / Channel St.
- Third. St. / Mission Rock St.
- Third St. / 16th St.
- Owens St. / 16th St.

Adavant Consulting may assess conditions at additional intersections, as warranted.

Transit: Adavant Consulting will compile data on Muni routes and stop locations, including motor coach, trolley coach and streetcar service, within a study area generally bounded by King Street to the north, the San Francisco Bay to the east, 16th Street to the South and Seventh Street to the west. This will include a description of Muni's transit route service hours, peak periods, stops and headways for the lines within the study area. The latest available weekday ridership at the maximum load points (MLP) for the Muni routes within the study area for the p.m. peak analysis period (4:00 to 6:0 p.m.) will be obtained from Muni.

Adavant Consulting will also compile data on shuttle bus services (UCSF and Mission Bay) and regional transit operators (BART, AC Transit, Golden Gate Transit bus and ferry service, SamTrans, WETA and Caltrain) including their nearest transit stop location and their latest scheduled operations on weekdays.

Pedestrians and Bicycles: Adavant Consulting will observe existing pedestrian and bicycle conditions in the vicinity of Block 1 during the weekday p.m. peak period (4 to 6 p.m.).

Freight and Passenger Loading/Unloading: Adavant Consulting will observe existing on-street passenger and commercial loading operations along Third, Fourth and Channel streets in the vicinity of the project site.

Parking: Adavant Consulting will observe parking conditions in the vicinity of Block 1.

Task 4 – Document Existing Conditions

Using the data collected in Task 3, Adavant Consulting will document existing evening street traffic, transit, parking, pedestrian bicycle and emergency vehicle access conditions within the project study area generally bounded by King Street to the north, the San Francisco Bay to the east, 16th Street to the South and Seventh Street to the west, including:

- A base map and text for the study area, describing the street designations, street names, number of lanes and traffic flow directions.
- A description of existing uses and vehicular access to the project site, as known.
- Intersection level of service (LOS) conditions during the weekday p.m. peak hour at the study intersections identified in Task 3 using the 2000 Highway Capacity Manual Operations Methodology, (HCM 2000).
- Graphics indicating the existing weekday p.m. peak hour traffic volumes and lane configuration at the study intersections identified in Task 3.
- A map and discussion of Muni, regional and shuttle transit services within the study area, including bus routes and bus stop locations, as well as conditions at each route maximum load point. Changes to Muni service in the area being proposed by the Transit Effectiveness Program (TEP) will also be described. Identification of any operational conflicts between buses or streetcars and other vehicles, if any, will be identified.
- Qualitative discussion of general pedestrian and bicycle circulation conditions and the identification of any safety and right-of-way issues in the vicinity of the project site, including the availability and dimensions of existing sidewalks, a description and mapping of bicycle routes, and a description of changes to the bicycle network on the vicinity of the project site being considered by the San Francisco Bicycle Plan.
- Qualitative assessment of existing passenger and commercial loading conditions within the project study area.
- Description of the existing emergency vehicle access routes to the project study area.
- Qualitative assessment of parking conditions near Block 1.

Task 5 – Determine Project Travel Demand

The net change in travel demand for the proposed project (the decrease of 250 hotel rooms and 25,000 gsf of retail plus the addition of 350 market rate residential units, as well as the proposed re-entitlement of Block 1 (350 market rate residential units, 250 hotel rooms, and 25,000 gsf of retail) will be calculated and compared with the information presented in the Mission Bay FSEIR for Block 1 and the surrounding residential area.

Since one of the purposes of this work will be to compare the travel demand for the proposed re-entitlement with that of the Mission Bay FSEIR, it seems most appropriate for the transportation analysis to use the proposed re-entitlement for the analysis of Existing plus Project conditions, while the proposed project will be used for the analysis of future cumulative conditions.]

Trip Generation: Adavant Consulting will estimate the number of person- and vehicle-trips that would result from the proposed project on a weekday daily and p.m. peak hour basis. Trip generation rates for the proposed land use changes will be estimated as follows:

Proposed Re-entitlement

- New residential uses – 7.5 person trips per unit per day for studios and 1-bedroom units, 10.0 trips per unit per day for 2 and 2+ bedroom units, 17.3 percent of daily trips occur during the weekday p.m. peak hour, per the SF Guidelines.

- Hotel use – 7 person trips per room per day; 10 percent of daily trips occur during the weekday p.m. peak hour, per the SF Guidelines.
- Retail use – 150 person trips per 1,000 gsf per day; 9 percent of daily trips occur during the weekday p.m. peak hour, per the SF Guidelines.

Proposed Project (for future cumulative conditions analysis purposes)

- Decrease in hotel use – 6.92 person trips per room per day; 9.5 percent of daily trips occur during the weekday p.m. peak hour, per the Mission Bay FSEIR.
- Decrease in retail use – 150 person trips per 1,000 gsf per day; 4 percent of daily trips occur during the weekday p.m. peak hour, per the Mission Bay FSEIR.

Trip Distribution/Mode Split: The proposed re-entitlement trip distribution and mode split percentages for work and visitor trips for the hotel rooms and retail uses will be based on the information contained in the SF Guidelines.

Trip distribution and mode split percentages for work and non-work trips for residential uses will be based on *U.S. 2006-2010 American Community Survey 5-Year Estimates Data* for the Census Tract where the proposed project is located (Tract 607).[2] Travel destinations outside of San Francisco will be aggregated by North, East and South Bay.

Average vehicle occupancy rates for hotel, retail and residential uses will be applied to the estimated number of auto person-trips, in accordance to the SF Guidelines to calculate the number of vehicle trips generated by the proposed re-entitlement.

Loading/Unloading Demand: The commercial and passenger loading demand for the proposed re-entitlement for Block 1 (350 market rate residential units, 250 hotel rooms, and 25,000 gsf of retail) will be compared to the demand estimated in the Mission Bay FSEIR for Block 1. The commercial loading demand for the proposed uses will be based on the methodology and truck trip generation rates presented in Appendix H of the SF Guidelines, at a rate of 0.03 daily truck trips per 1,000 gsf for the residential use, 0.09 daily truck trips per 1,000 gsf for the hotel use, and 0.22 daily truck trips per 1,000 gsf for the retail use. The estimation of passenger loading/unloading activities at the proposed hotel use will also be based on the SF Guidelines methodology (p. H-4, Appendix H).

Parking Demand: The parking demand for the proposed re-entitlement for Block 1 (350 residential units, 250 hotel rooms, and 25,000 gsf of retail) will be compared to the demand estimated in the Mission Bay FSEIR for Block 1 and the surrounding residential area. The parking demand for the proposed project will be assessed using standard rates as presented in the SF Guidelines. Long-term parking demand will be based on the number of residents and employees that are anticipated to be at the site and the short-term demand will be based on the total number of visitors and a parking turnover rate.

For residential units, the long-term parking demand is based on the number and size of the units at a rate of 1.1 and 1.5 spaces per unit for studios/one bedroom and two or more bedroom units, respectively.

[2] In addition to all of the Mission Bay South area, US Census Tract 607 also includes most of the Mission Bay North area, which is mostly residential and whose travel characteristics are thought to be comparable to those of the proposed project.

For the hotel and retail uses, the long-term parking demand will be derived by estimating the number of employees, and applying the trip mode split and average vehicle occupancy from the trip generation calculations. The short-term parking demand will be estimated from the total daily visitor trips by private automobile and an average turnover rate of 5.5 vehicles per parking space.

Task 6 – Transportation Impact Analysis

Adavant Consulting will identify transportation impacts associated with the proposed project. This will include impacts on the study intersections, impacts on transit, pedestrian circulation, passenger and freight loading supply and demand conditions, construction related activities, and emergency vehicle access to the site. A parking supply and demand analysis will also be presented for informational purposes.

The impact analysis of the full new proposed entitlement will be analyzed for the Existing plus Project conditions, while the incremental change between the proposed project and the project evaluated in the Mission Bay FSEIR will be used for the analysis of future cumulative conditions.

Task 6.1 – Traffic Impacts

Adavant Consulting will calculate intersection LOS for the weekday p.m. peak hour using the HCM 2000 Methodology for the study intersections identified in Task 3 for the Existing plus Project conditions (full new proposed entitlement). The project's contribution to the traffic volumes at the study intersections will be shown in an Existing-plus-Project traffic volume figure, which will also identify the critical movement at each location.

Adavant Consulting will also perform a comparison of land use development and travel demand between the results presented in the Mission Bay FSEIR and those resulting from the travel demand changes presented in Task 5, both at the local (residential subarea) and larger (MB South area) levels.[3] The comparison will also take into account other development changes in the Mission Bay South area that have been approved since the Mission Bay FSEIR was adopted, such as the provision of student housing at the UCSF Research campus, the replacement of R&D/Office use at Blocks X3 and 36 to 39 with the UCSF Medical Center, the Public Safety Building for SFPD and SFFD to be built in Block 8, or the proposed Family House project in Block 7 East.

It is likely, based on the definition of the proposed project, that the incremental change between the proposed project and the project evaluated in the Mission Bay FSEIR for Block 1 would represent only a modest increase in the number of person or vehicle trips occurring in the Mission Bay South area for the daily and PM peak hour periods. Therefore, it is expected that Adavant Consulting will be able to identify potential transportation impacts associated with the proposed project, if any, after both the Existing plus Project LOS analysis and the development comparison described above are completed without the need to perform further traffic impact analyses for 2040 Cumulative conditions.[4]

Adavant Consulting will present the results of this task to Planning Department staff for review to determine if further cumulative transportation impact analyses are necessary. Any additional work

[3] Similar to the work presented in the *Mission Bay Public Safety Building Transportation Assessment, Final Report*, prepared for the City and County of San Francisco Department of Public Works, Adavant Consulting, January 6, 2010.

[4] Year 2040 will soon become the official horizon year for the analysis of future cumulative transportation conditions.

that might be necessary would be considered outside of this scope of work and would be defined and conducted as part of a separate document.

Task 6.2 – Transit Impacts

Adavant Consulting will conduct a weekday p.m. peak hour screenline analysis for both Muni and regional transit providers for Existing-plus-Project (proposed re-entitlement for Block) and, if necessary 2035 Cumulative conditions (incremental change) using the latest information available from the Planning Department. The analysis will include a capacity and utilization assessment of Muni's T-Third line at its maximum load point.

Task 6.3 – Pedestrian Impacts

Adavant Consulting will qualitatively evaluate the weekday p.m. peak hour pedestrian conditions in the vicinity of the project site. Potential pedestrian safety issues will be identified, including vehicular-pedestrian conflicts, interruption of pedestrian circulation and potential safety issues.

Task 6.4 – Bicycle Impacts

Adavant Consulting will qualitatively evaluate the bicycle conditions in the vicinity of the project site. Potential bicycle circulation safety issues will be identified, including bicyclist-vehicular conflicts, interruption of bicycle flow and potential safety issues. In addition, the Mission Bay South Design for Development requirements for bicycle parking and related facilities for the proposed re-entitlement for Block 1 will be identified and compared to the proposed supply.

Task 6.5 – Loading Impacts

Adavant Consulting will prepare a loading supply/demand analysis for the proposed re-entitlement for Block 1. The proposed on-site loading supply will be compared to the Mission Bay South Design for Development requirements in terms of their location, number of spaces and minimum dimensions. The loading supply will also be compared to the estimated demand generated by the proposed project.

Task 6.6 – Emergency Access Impacts

Adavant Consulting will assess any potential impacts to the emergency access that could be generated by the proposed project.

Task 6.7 – Construction Impacts

Adavant Consulting will qualitatively assess any potential short-term construction impacts that would be generated by the proposed re-entitlement for Block 1. Construction impact evaluation will address the staging and duration of construction activity, truck routings, estimated daily truck volumes, street and/or sidewalk closures, impacts on Muni operations, and construction worker parking.

Task 6.8 – Parking Analysis

Adavant Consulting will prepare a parking supply/demand analysis for the proposed re-entitlement for Block 1. The proposed parking supply will be compared to the requirements of the Mission Bay South Design for Development. Any exceptions to the document will be noted, as appropriate.

The weekday parking demand generated by the proposed re-entitlement for Block 1 will be compared to the supply, if known. Any deficit or surplus of parking spaces will be quantified, and discussed in relation to the effect on the parking supply in the area surrounding the project site.

Task 7 – Develop Mitigation/Improvement Measures

Mitigation measures will be proposed to improve operations if significant project-related impacts have been identified, and improvement measures will be proposed where no significant impacts have been identified. In accordance with City guidelines, the report will clearly distinguish between mitigation measures required under CEQA and transportation improvements not related to CEQA requirements. Responsibility for implementation of identified measures will be identified. If there are no impacts associated with the proposed project, this will be noted in the transportation report.

Any transportation mitigation measures and project improvements identified in the FSEIR that have yet to be built or implemented and could be relevant to the proposed project will be disclosed, and their applicability will be assessed.

Task 8 – Prepare Transportation Report

Adavant Consulting will prepare a Preliminary Draft Transportation Report, incorporating data, analysis, and conclusions from the above tasks. Five printed and bound copies and one electronic copy of the draft report will be submitted to the San Francisco Planning Department for review by Planning, CRD, and SFMTA staff. Adavant Consulting will incorporate the comments received from the City agencies and prepare a second Draft Transportation Report.

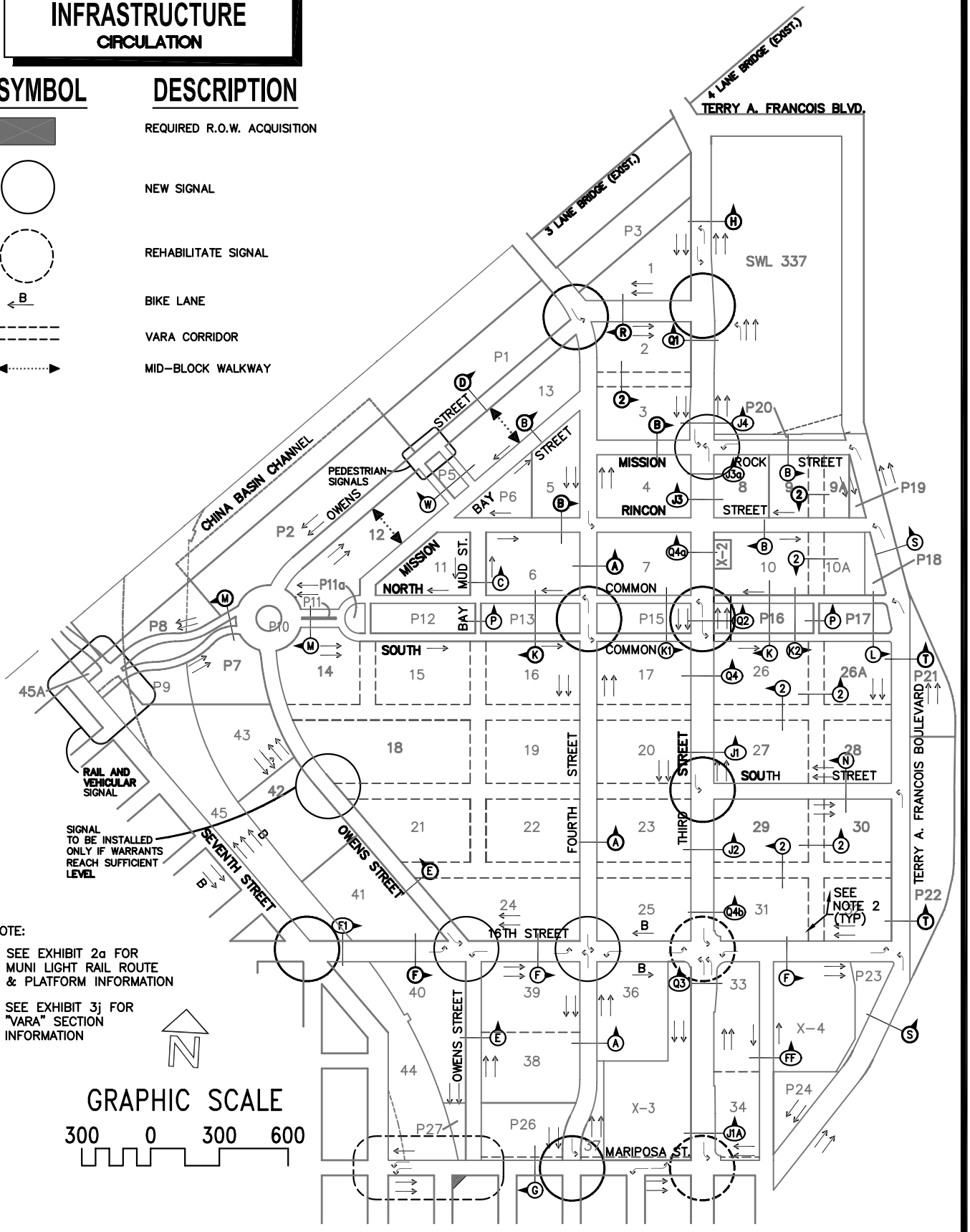
Five printed and bound copies of the second Draft Transportation Report and one electronic copy will be submitted to Planning for review by Planning, CRD and SFMTA staff. A Draft Final Report will be prepared after receiving comments on the Second Draft and will be submitted electronically to Planning and the CRD as a screen check for final approval. Five printed and bound copies and one electronic copy of the Final Transportation Report will be provided to Planning after receiving comments on the screen check. Adavant will also provide one printed and bound copy and one electronic copy of the Final Transportation Report to the CRD.

Adavant Consulting

APPENDIX B
M. BAY PLAN ROADWAY CONFIGURATION

SOUTH OF CHANNEL
INFRASTRUCTURE
CIRCULATION

SYMBOL	DESCRIPTION
	REQUIRED R.O.W. ACQUISITION
	NEW SIGNAL
	REHABILITATE SIGNAL
B	BIKE LANE
	VARA CORRIDOR
	MID-BLOCK WALKWAY



NOTE:

1. SEE EXHIBIT 2a FOR MUNI LIGHT RAIL ROUTE & PLATFORM INFORMATION
2. SEE EXHIBIT 3j FOR "VARA" SECTION INFORMATION

GRAPHIC SCALE

300 0 300 600

97.0191 / L

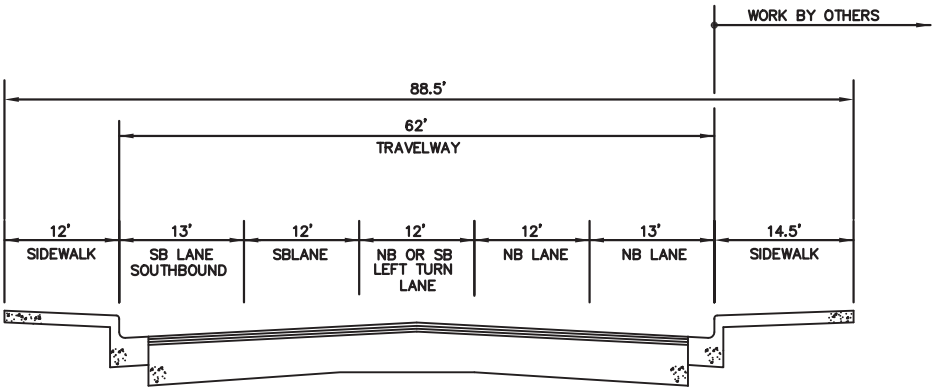
INF-004B

A PROJECT OF CATELLUS DEVELOPMENT CORPORATION

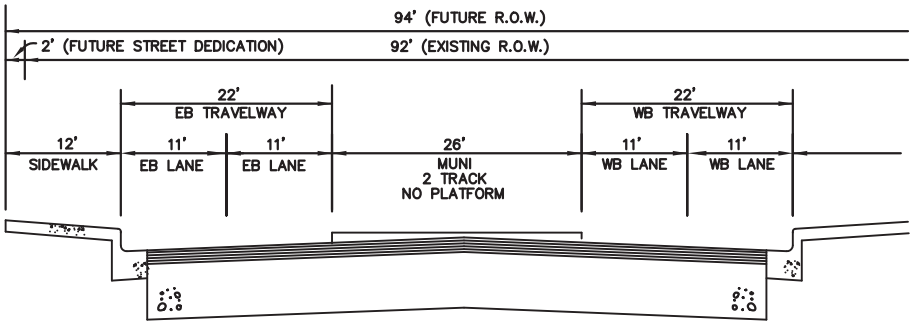
2

9/19/01

REVISED 02/16/04 BY F&L, Inc.



H THIRD STREET NEAR CHANNEL



R OWENS STREET BETWEEN FOURTH STREET AND THIRD STREET

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A PROJECT OF CATELLUS DEVELOPMENT CORPORATION

9/19/01

Street System

The Mission Bay South Street Grid system shall be generally as described and illustrated in the Mission Bay Street Grid Diagram provided herein.

Street	Description
Arterial Streets	
Third Street	Existing arterial connecting to the South of Market and Bayview Districts. Bus and Light Rail.
Sixteenth Street	Major east-west arterial. Main link to Potrero Hill under I-280.
Minor Arterial Streets	
Mariposa Street	Minor arterial linking Potrero Hill to the Bayfront and providing Freeway access.
Owens Street	Minor north-south arterial. UCSF campus service street. Link to I-280 exit south of Mariposa.
Seventh Street (& Seventh Street Connection)	Minor arterial linking Mission Bay to South of Market and downtown.
Terry Francois Boulevard	Bayfront scenic boulevard providing access to water-edge uses, Bayfront Open Space, and the Bay Trail.
Collector Streets	
Fourth Street	Local collector and bicycle commute street that serves as a connector to the South of Market District, UCSF, and the core of the Mission Bay South Neighborhood Commercial District
Illinois Street	Local collector south from Sixteenth Street.
South Street	Local collector south from Third Street to Terry Francois Boulevard.
Neighborhood Streets	
Fifth Street	Minor residential/neighborhood street with open space and segments for pedestrian use.
Mission Bay Commons	Couplet of neighborhood streets running east-west along the Mission Bay Commons from Owens Street to Terry Francois Boulevard.
Residential Streets	Minor streets in the residential district designed to be pedestrian-friendly and discourage through traffic.

Street Hierarchy

Map 10

APPENDIX C
INTERSECTION TRAFFIC AND LOS ANALYSIS

Table 1

MB Block 1 Mixed Use Projec

Weekday PM Peak Hour

#	Intersection Name	TABLE 1A - INTERSECTION TURNING MOVEMENTS																
		Northbound				Southbound				Eastbound				Westbound				Total All
		Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Approaches
Existing Base Counts																		
5	16th St. / Third St.	270	540	2	812	10	422	139	571	127	34	268	429	5	64	36	105	1,917
7	16th St. / Owens St.	0	0	0	0	120	0	193	313	137	314	0	451	0	470	108	578	1,342
13	Mission Rock St. / Third St.	5	725	7	737	10	204	5	219	5	14	14	33	11	4	32	47	1,036
14	Channel St. / Third St.	24	732	6	762	4	108	13	125	16	16	76	108	35	10	66	111	1,106
15	Channel St. / Fourth St.	10	58	6	74	90	123	12	225	23	12	16	51	2	8	37	47	397
16	King St. / Third St.	59	751	278	1,088	0	0	0	0	716	873	14	1,603	135	949	24	1,108	3,799
17	King St. / Fourth St.	16	42	53	111	46	280	536	862	96	1,504	13	1,613	17	971	20	1,008	3,594
Project Trips - Existing Network																		
5	16th St. / Third St.	0	65	0	65	0	51	0	51	17	0	0	17	0	0	0	0	133
7	16th St. / Owens St.	0	0	0	0	0	0	0	0	0	17	0	17	0	15	0	15	32
13	Mission Rock St. / Third St.	0	82	0	82	0	51	0	51	0	0	0	0	0	0	0	0	133
14	Channel St. / Third St.	41	41	0	82	0	51	0	51	81	0	0	81	0	0	0	0	214
15	Channel St. / Fourth St.	0	0	0	0	81	0	0	81	0	0	0	0	15	0	28	43	124
16	King St. / Third St.	0	32	32	64	0	0	0	0	0	0	0	0	45	5	0	50	114
17	King St. / Fourth St.	0	0	0	0	0	50	0	50	0	0	0	0	5	0	0	5	55
Existing Network plus Project																		
5	16th St. / Third St.	270	605	2	877	10	473	139	622	144	34	268	446	5	64	36	105	2,050
7	16th St. / Owens St.	0	0	0	0	120	0	193	313	137	331	0	468	0	485	108	593	1,374
13	Mission Rock St. / Third St.	5	807	7	819	10	255	5	270	5	14	14	33	11	4	32	47	1,169
14	Channel St. / Third St.	65	773	6	844	4	159	13	176	97	16	76	189	35	10	66	111	1,320
15	Channel St. / Fourth St.	10	58	6	74	171	123	12	306	23	12	16	51	17	8	65	90	521
16	King St. / Third St.	59	783	310	1,152	0	0	0	0	716	873	14	1,603	180	954	24	1,158	3,913
17	King St. / Fourth St.	16	42	53	111	46	330	536	912	96	1,504	13	1,613	22	971	20	1,013	3,649
Project Contribution to Existing plus Project																		
5	16th St. / Third St.	0.0%	10.7%	0.0%	7.4%	0.0%	10.8%	0.0%	8.2%	11.8%	0.0%	0.0%	3.8%	0.0%	0.0%	0.0%	0.0%	6.5%
7	16th St. / Owens St.	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.1%	0.0%	3.6%	0.0%	3.1%	0.0%	2.5%	2.3%
13	Mission Rock St. / Third St.	0.0%	10.2%	0.0%	10.0%	0.0%	20.0%	0.0%	18.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.4%
14	Channel St. / Third St.	63.1%	5.3%	0.0%	9.7%	0.0%	32.1%	0.0%	29.0%	83.5%	0.0%	0.0%	42.9%	0.0%	0.0%	0.0%	0.0%	16.2%
15	Channel St. / Fourth St.	0.0%	0.0%	0.0%	0.0%	47.4%	0.0%	0.0%	26.5%	0.0%	0.0%	0.0%	0.0%	88.2%	0.0%	43.1%	47.8%	23.8%
16	King St. / Third St.	0.0%	4.1%	10.3%	5.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	25.0%	0.5%	0.0%	4.3%	2.9%
17	King St. / Fourth St.	0.0%	0.0%	0.0%	0.0%	0.0%	15.2%	0.0%	5.5%	0.0%	0.0%	0.0%	0.0%	22.7%	0.0%	0.0%	0.5%	1.5%

Table C-1
Level of Service Criteria and Definitions for Signalized Intersections

Level of Service	Stopped Delay (seconds/vehicle)	Typical Traffic Condition
A	≤ 10.0	**Very Low Delays:** Progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all.
B	> 10.0 and ≤ 20.0	**Minimal Delays:** Generally good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of average delay. Drivers begin to feel restricted.
C	> 20.0 and ≤ 35.0	**Acceptable Delays:** Fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear, though many still pass through the intersection without stopping. Most drivers feel somewhat restricted.
D	> 35.0 and ≤ 55.0	**Tolerable Delays:** The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable. Queues may develop but dissipate rapidly, without excessive delays.
E	> 55.0 and ≤ 80.0	**Significant Delays:** Considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences. Vehicles may wait through several signal cycles and long queues of vehicles form upstream.
F	> 80.0	**Excessive Delays:** Considered to be unacceptable to most drivers. Often occurs with over saturation, that is, when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes to such delay levels. Queues may block upstream intersections.

Source: Highway Capacity Manual 2000, Transportation Research Board, 2000.

INTERSECTION ANALYSIS

As part of the *Highway Capacity Manual, 2000* methodology (*HCM*), adjustments are typically made to the capacity of each intersection to account for various factors that reduce the ability of the streets to accommodate vehicles. These adjustments are performed to ensure that the LOS analysis results reflect the operating conditions that are observed in the field.

The following are the standard *HCM* adjustments that were applied in the intersection analyses conducted for this project:

1. Area type
2. Lane width
3. Grade
4. Heavy vehicles
5. Parking
6. Bus blockages
7. Conflicting pedestrians
8. Vehicle arrival type

EXISTING CONDITIONS

Block 1 Mixed-Use Project
Mission Bay South Area
Existing PM Peak Hour Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 16th Street and Third Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.424
Loss Time (sec):	5	Average Delay (sec/veh):	27.0
Optimal Cycle:	100	Level Of Service:	C

Street Name:	Third Streeet						16th Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	20	41	41	10	30	30	34	34	34	34	34	34
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0 1	1 0	1	0 1	1 0	1	0 1	1 0	1	0 0	1 0
Volume Module:												
Base Vol:	270	540	2	10	422	139	127	34	268	5	64	36
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	270	540	2	10	422	139	127	34	268	5	64	36
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	270	540	2	10	422	139	127	34	268	5	64	36
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	290	581	2	11	454	149	137	37	288	5	69	39
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	290	581	2	11	454	149	137	37	288	5	69	39
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	290	581	2	11	454	149	137	37	288	5	69	39
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.86	0.86	0.93	0.83	0.79	0.60	0.75	0.69	0.48	0.79	0.77
Lanes:	2.00	1.99	0.01	1.00	1.49	0.51	1.00	1.00	1.00	1.00	0.63	0.37
Final Sat.:	3432	3257	12	1769	2343	772	1136	1419	1317	910	948	533
Capacity Analysis Module:												
Vol/Sat:	0.08	0.18	0.18	0.01	0.19	0.19	0.12	0.03	0.22	0.01	0.07	0.07
Crit Moves:		****		****					****			
Green/Cycle:	0.20	0.41	0.41	0.10	0.31	0.31	0.44	0.44	0.44	0.44	0.44	0.44
Volume/Cap:	0.41	0.43	0.43	0.06	0.63	0.63	0.27	0.06	0.50	0.01	0.16	0.16
Delay/Veh:	36.4	22.2	22.2	41.4	33.1	33.1	19.2	16.1	22.8	15.8	17.5	17.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	36.4	22.2	22.2	41.4	33.1	33.1	19.2	16.1	22.8	15.8	17.5	17.5
LOS by Move:	D	C	C	D	C	C	B	B	C	B	B	B
HCM2kAvgQ:	4	7	7	0	9	9	3	1	7	0	2	2

Block 1 Mixed-Use Project
Mission Bay South Area
Existing PM Peak Hour Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 16th Street and Owens Street

Cycle (sec):	110	Critical Vol./Cap.(X):	0.150
Loss Time (sec):	9	Average Delay (sec/veh):	25.7
Optimal Cycle:	110	Level Of Service:	C

Street Name:	Owens Street						16th Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	45	45	45	15	55	55	35	35	35
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0 0	0 0	2	0 0	0 1	1	0 2	0 0	0	0 1	1 0
Volume Module:												
Base Vol:	0	0	0	120	0	193	137	314	0	0	470	108
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	120	0	193	137	314	0	0	470	108
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	120	0	193	137	314	0	0	470	108
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	126	0	203	144	331	0	0	495	114
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	126	0	203	144	331	0	0	495	114
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	126	0	203	144	331	0	0	495	114
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	0.61	0.93	0.86	1.00	1.00	0.84	0.79
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.61	0.39
Final Sat.:	0	0	0	3432	0	1150	1769	3272	0	0	2557	588
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.04	0.00	0.18	0.08	0.10	0.00	0.00	0.19	0.19
Crit Moves:				****				****		****		
Green/Cycle:	0.00	0.00	0.00	0.41	0.00	0.41	0.15	0.51	0.00	0.00	0.36	0.36
Volume/Cap:	0.00	0.00	0.00	0.09	0.00	0.43	0.53	0.20	0.00	0.00	0.54	0.54
Delay/Veh:	0.0	0.0	0.0	20.0	0.0	24.0	45.1	14.8	0.0	0.0	28.8	28.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	20.0	0.0	24.0	45.1	14.8	0.0	0.0	28.8	28.8
LOS by Move:	A	A	A	B	A	C	D	B	A	A	C	C
HCM2kAvgQ:	0	0	0	1	0	5	5	3	0	0	9	9

Block 1 Mixed-Use Project
Mission Bay South Area
Existing PM Peak Hour Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #13 Mission Rock Street/Third Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.346
Loss Time (sec):	16	Average Delay (sec/veh):	27.9
Optimal Cycle:	101	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	15	37	37	15	37	37	33	33	33	33	33	33
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0 1	1 0	1	0 1	1 0	0	0 1!	0 0	0	0 1!	0 0
Volume Module:												
Base Vol:	5	725	7	10	204	5	5	14	14	11	4	32
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	5	725	7	10	204	5	5	14	14	11	4	32
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	725	7	10	204	5	5	14	14	11	4	32
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	5	763	7	11	215	5	5	15	15	12	4	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	763	7	11	215	5	5	15	15	12	4	34
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	5	763	7	11	215	5	5	15	15	12	4	34
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.84	0.83	0.93	0.83	0.83	0.70	0.72	0.66	0.65	0.68	0.59
Lanes:	1.00	1.98	0.02	1.00	1.95	0.05	0.15	0.41	0.44	0.22	0.08	0.70
Final Sat.:	1769	3150	30	1769	3095	76	199	558	558	271	98	788
Capacity Analysis Module:												
Vol/Sat:	0.00	0.24	0.24	0.01	0.07	0.07	0.03	0.03	0.03	0.04	0.04	0.04
Crit Moves:		****		****							****	
Green/Cycle:	0.15	0.37	0.37	0.15	0.37	0.37	0.33	0.33	0.33	0.33	0.33	0.33
Volume/Cap:	0.02	0.66	0.66	0.04	0.19	0.19	0.08	0.08	0.08	0.13	0.13	0.13
Delay/Veh:	36.9	29.7	29.7	37.1	22.2	22.2	23.9	23.9	23.9	24.6	24.6	24.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	36.9	29.7	29.7	37.1	22.2	22.2	23.9	23.9	23.9	24.6	24.6	24.6
LOS by Move:	D	C	C	D	C	C	C	C	C	C	C	C
HCM2kAvgQ:	0	11	11	0	2	2	1	1	1	1	1	1

Note: Queue reported is the number of cars per lane.

Block 1 Mixed-Use Project
Mission Bay South Area
Existing PM Peak Hour Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #14 Channel Street/Third Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.411
Loss Time (sec):	16	Average Delay (sec/veh):	28.8
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	15	36	36	16	37	37	32	32	32	32	32	32
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0 1	1 0	1	0 1	1 0	0	1 0	0 1	0	0 1!	0 0
Volume Module:												
Base Vol:	24	732	6	4	108	13	16	16	76	35	10	66
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	24	732	6	4	108	13	16	16	76	35	10	66
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	24	732	6	4	108	13	16	16	76	35	10	66
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	25	771	6	4	114	14	17	17	80	37	11	69
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	25	771	6	4	114	14	17	17	80	37	11	69
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	25	771	6	4	114	14	17	17	80	37	11	69
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.84	0.84	0.93	0.82	0.81	0.83	0.86	0.59	0.64	0.65	0.61
Lanes:	1.00	1.98	0.02	1.00	1.78	0.22	0.51	0.49	1.00	0.31	0.09	0.60
Final Sat.:	1769	3155	26	1769	2791	336	802	802	1127	373	107	704
Capacity Analysis Module:												
Vol/Sat:	0.01	0.24	0.24	0.00	0.04	0.04	0.02	0.02	0.07	0.10	0.10	0.10
Crit Moves:		****		****							****	
Green/Cycle:	0.15	0.36	0.36	0.16	0.37	0.37	0.32	0.32	0.32	0.32	0.32	0.32
Volume/Cap:	0.10	0.68	0.68	0.01	0.11	0.11	0.07	0.07	0.22	0.31	0.31	0.31
Delay/Veh:	37.4	30.3	30.3	35.5	20.9	20.9	23.9	23.9	26.3	27.8	27.8	27.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.4	30.3	30.3	35.5	20.9	20.9	23.9	23.9	26.3	27.8	27.8	27.8
LOS by Move:	D	C	C	D	C	C	C	C	C	C	C	C
HCM2kAvgQ:	1	12	12	0	1	1	1	1	2	3	3	3

Note: Queue reported is the number of cars per lane.

Block 1 Mixed-Use Project
Mission Bay South Area
Existing PM Peak Hour Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #15 Channel Street/Fourth Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.157
Loss Time (sec):	10	Average Delay (sec/veh):	12.7
Optimal Cycle:	100	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0 1	0	1	0 0 1	0	0	1! 0	0	1	0 0 1
Volume Module:												
Base Vol:	10	58	6	90	123	12	23	12	16	2	8	37
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	58	6	90	123	12	23	12	16	2	8	37
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	58	6	90	123	12	23	12	16	2	8	37
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	61	6	95	129	13	24	13	17	2	8	39
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	61	6	95	129	13	24	13	17	2	8	39
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	11	61	6	95	129	13	24	13	17	2	8	39
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.56	0.77	0.76	0.60	0.77	0.76	0.64	0.67	0.60	0.90	0.96	0.58
Lanes:	1.00	0.90	0.10	1.00	0.91	0.09	0.45	0.22	0.33	0.21	0.79	1.00
Final Sat.:	1067	1329	137	1133	1338	130	543	283	378	359	1437	1095
Capacity Analysis Module:												
Vol/Sat:	0.01	0.05	0.05	0.08	0.10	0.10	0.04	0.04	0.04	0.01	0.01	0.04
Crit Moves:					****			****				
Green/Cycle:	0.62	0.62	0.62	0.62	0.62	0.62	0.28	0.28	0.28	0.28	0.28	0.28
Volume/Cap:	0.02	0.07	0.07	0.14	0.16	0.16	0.16	0.16	0.16	0.02	0.02	0.13
Delay/Veh:	7.4	7.8	7.8	8.1	8.2	8.2	27.1	27.1	27.1	25.8	25.8	26.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	7.4	7.8	7.8	8.1	8.2	8.2	27.1	27.1	27.1	25.8	25.8	26.8
LOS by Move:	A	A	A	A	A	A	C	C	C	C	C	C
HCM2kAvgQ:	0	1	1	1	2	2	1	1	1	0	0	1

Note: Queue reported is the number of cars per lane.

Block 1 Mixed-Use Project
Mission Bay South Area
Existing PM Peak Hour Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 King Street/Third Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.811
Loss Time (sec):	10	Average Delay (sec/veh):	40.2
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	26	26	26	0	0	0	20	46	46	13	39	39
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	1	3 0 1	0	0	0 0 0	3	0	1 1 0	2	0	1 1 0
Volume Module:												
Base Vol:	59	751	278	0	0	0	718	873	14	135	949	24
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	59	751	278	0	0	0	718	873	14	135	949	24
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	59	751	278	0	0	0	718	873	14	135	949	24
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	61	774	287	0	0	0	740	900	14	139	978	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	61	774	287	0	0	0	740	900	14	139	978	25
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	61	774	287	0	0	0	740	900	14	139	978	25
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.87	0.87	0.62	1.00	1.00	1.00	0.89	0.82	0.82	0.89	0.57	0.81
Lanes:	0.29	3.71	1.00	0.00	0.00	0.00	3.00	1.97	0.03	2.00	1.96	0.04
Final Sat.:	481	6119	1172	0	0	0	5053	3070	49	3369	2141	54
Capacity Analysis Module:												
Vol/Sat:	0.13	0.13	0.24	0.00	0.00	0.00	0.15	0.29	0.29	0.04	0.46	0.46
Crit Moves:	****						****				****	
Green/Cycle:	0.26	0.26	0.40	0.00	0.00	0.00	0.20	0.50	0.50	0.14	0.44	0.44
Volume/Cap:	0.49	0.49	0.61	0.00	0.00	0.00	0.73	0.59	0.59	0.29	1.04	1.04
Delay/Veh:	32.3	32.3	29.5	0.0	0.0	0.0	42.2	19.4	19.4	40.0	67.4	67.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.3	32.3	29.5	0.0	0.0	0.0	42.2	19.4	19.4	40.0	67.4	67.4
LOS by Move:	C	C	C	A	A	A	D	B	B	D	E	E
HCM2kAvgQ:	6	6	8	0	0	0	9	11	11	2	24	32

Note: Queue reported is the number of cars per lane.

Block 1 Mixed-Use Project
Mission Bay South Area
Existing PM Peak Hour Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 King Street/Fourth Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.704
Loss Time (sec):	13	Average Delay (sec/veh):	67.0
Optimal Cycle:	125	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	28	28	28	28	28	28	10	42	42	14	45	45
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0	0 1	1 0	1	1 1	1 0	2	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	16	42	53	46	280	536	96	1504	13	17	971	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	16	42	53	46	280	536	96	1504	13	17	971	20
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	16	42	53	46	280	536	96	1504	13	17	971	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	17	44	56	48	295	564	101	1583	14	18	1022	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	17	44	56	48	295	564	101	1583	14	18	1022	21
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	17	44	56	48	295	564	101	1583	14	18	1022	21
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.97	0.97	0.52	0.93	0.78	0.59	0.93	0.83	0.83	0.93	0.84	0.83
Lanes:	0.28	0.72	1.00	1.00	1.00	2.00	1.00	2.97	0.03	1.00	1.96	0.04
Final Sat.:	506	1329	985	1769	1488	2252	1769	4699	41	1769	3110	64
Capacity Analysis Module:												
Vol/Sat:	0.03	0.03	0.06	0.03	0.20	0.25	0.06	0.34	0.34	0.01	0.33	0.33
Crit Moves:	****					****		****		****		
Green/Cycle:	0.22	0.22	0.22	0.22	0.22	0.22	0.08	0.34	0.34	0.11	0.37	0.37
Volume/Cap:	0.15	0.15	0.25	0.12	0.88	1.12	0.70	1.00	1.00	0.09	0.90	0.90
Delay/Veh:	39.7	39.7	42.6	39.3	58.5	118.6	80.7	64.7	64.7	50.7	48.2	48.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	39.7	39.7	42.6	39.3	58.5	118.6	80.7	64.7	64.7	50.7	48.2	48.2
LOS by Move:	D	D	D	D	E	F	F	E	E	D	D	D
HCM2kAvgQ:	2	2	2	1	15	19	5	29	29	1	23	23

Note: Queue reported is the number of cars per lane.

EXISTING PLUS PROJECT CONDITIONS

Block 1 Mixed-Use Project
Mission Bay South Area
Existing plus Project - PM Peak Hour Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 16th Street and Third Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.447
Loss Time (sec):	5	Average Delay (sec/veh):	27.6
Optimal Cycle:	100	Level Of Service:	C

Street Name:	Third Streeet						16th Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	20	41	41	10	30	30	34	34	34	34	34	34
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0 1	1 0	1	0 1	1 0	1	0 1	1 0	1	0 0	1 0
Volume Module:												
Base Vol:	270	605	2	10	473	139	144	34	268	5	64	36
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	270	605	2	10	473	139	144	34	268	5	64	36
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	270	605	2	10	473	139	144	34	268	5	64	36
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	290	651	2	11	509	149	155	37	288	5	69	39
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	290	651	2	11	509	149	155	37	288	5	69	39
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	290	651	2	11	509	149	155	37	288	5	69	39
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.86	0.86	0.93	0.83	0.80	0.60	0.75	0.69	0.48	0.79	0.77
Lanes:	2.00	1.99	0.01	1.00	1.53	0.47	1.00	1.00	1.00	1.00	0.63	0.37
Final Sat.:	3432	3262	11	1769	2419	711	1136	1419	1317	910	948	533
Capacity Analysis Module:												
Vol/Sat:	0.08	0.20	0.20	0.01	0.21	0.21	0.14	0.03	0.22	0.01	0.07	0.07
Crit Moves:		****		****					****			
Green/Cycle:	0.20	0.41	0.41	0.10	0.31	0.31	0.44	0.44	0.44	0.44	0.44	0.44
Volume/Cap:	0.41	0.49	0.49	0.06	0.69	0.69	0.31	0.06	0.50	0.01	0.16	0.16
Delay/Veh:	36.4	23.0	23.0	41.4	34.5	34.5	19.8	16.1	22.8	15.8	17.5	17.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	36.4	23.0	23.0	41.4	34.5	34.5	19.8	16.1	22.8	15.8	17.5	17.5
LOS by Move:	D	C	C	D	C	C	B	B	C	B	B	B
HCM2kAvgQ:	4	8	8	0	11	10	3	1	7	0	2	2

Block 1 Mixed-Use Project
Mission Bay South Area
Existing plus Project - PM Peak Hour Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 16th Street and Owens Street

Cycle (sec):	110	Critical Vol./Cap.(X):	0.156
Loss Time (sec):	9	Average Delay (sec/veh):	25.7
Optimal Cycle:	110	Level Of Service:	C

Street Name:	Owens Street						16th Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	45	45	45	15	55	55	35	35	35
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0 0	0 0	2	0 0	0 1	1	0 2	0 0	0	0 1	1 0
Volume Module:												
Base Vol:	0	0	0	120	0	193	137	331	0	0	485	108
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	120	0	193	137	331	0	0	485	108
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	120	0	193	137	331	0	0	485	108
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	126	0	203	144	348	0	0	511	114
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	126	0	203	144	348	0	0	511	114
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	126	0	203	144	348	0	0	511	114
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	0.61	0.93	0.86	1.00	1.00	0.84	0.79
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	1.00	2.00	0.00	0.00	1.62	0.38
Final Sat.:	0	0	0	3432	0	1150	1769	3272	0	0	2576	574
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.04	0.00	0.18	0.08	0.11	0.00	0.00	0.20	0.20
Crit Moves:				****				****		****		
Green/Cycle:	0.00	0.00	0.00	0.41	0.00	0.41	0.15	0.51	0.00	0.00	0.36	0.36
Volume/Cap:	0.00	0.00	0.00	0.09	0.00	0.43	0.53	0.21	0.00	0.00	0.56	0.56
Delay/Veh:	0.0	0.0	0.0	20.0	0.0	24.0	45.1	14.9	0.0	0.0	29.0	29.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	20.0	0.0	24.0	45.1	14.9	0.0	0.0	29.0	29.0
LOS by Move:	A	A	A	B	A	C	D	B	A	A	C	C
HCM2kAvgQ:	0	0	0	1	0	5	5	3	0	0	9	9

Block 1 Mixed-Use Project
Mission Bay South Area
Existing plus Project - PM Peak Hour Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #13 Mission Rock Street/Third Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.378
Loss Time (sec):	16	Average Delay (sec/veh):	29.4
Optimal Cycle:	101	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	15	37	37	15	37	37	33	33	33	33	33	33
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 0	1!	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	5	807	7	10	255	5	5	14	14	11	4	32
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	5	807	7	10	255	5	5	14	14	11	4	32
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	807	7	10	255	5	5	14	14	11	4	32
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	5	849	7	11	268	5	5	15	15	12	4	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	849	7	11	268	5	5	15	15	12	4	34
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	5	849	7	11	268	5	5	15	15	12	4	34
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.84	0.83	0.93	0.84	0.83	0.70	0.72	0.66	0.65	0.68	0.59
Lanes:	1.00	1.98	0.02	1.00	1.96	0.04	0.15	0.41	0.44	0.22	0.08	0.70
Final Sat.:	1769	3153	27	1769	3113	61	199	558	558	271	98	788
Capacity Analysis Module:												
Vol/Sat:	0.00	0.27	0.27	0.01	0.09	0.09	0.03	0.03	0.03	0.04	0.04	0.04
Crit Moves:		****		****							****	
Green/Cycle:	0.15	0.37	0.37	0.15	0.37	0.37	0.33	0.33	0.33	0.33	0.33	0.33
Volume/Cap:	0.02	0.74	0.74	0.04	0.24	0.24	0.08	0.08	0.08	0.13	0.13	0.13
Delay/Veh:	36.9	31.9	31.9	37.1	22.7	22.7	23.9	23.9	23.9	24.6	24.6	24.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	36.9	31.9	31.9	37.1	22.7	22.7	23.9	23.9	23.9	24.6	24.6	24.6
LOS by Move:	D	C	C	D	C	C	C	C	C	C	C	C
HCM2kAvgQ:	0	13	13	0	3	3	1	1	1	1	1	1

Note: Queue reported is the number of cars per lane.

Block 1 Mixed-Use Project
Mission Bay South Area
Existing plus Project - PM Peak Hour Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #14 Channel Street/Third Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.430
Loss Time (sec):	16	Average Delay (sec/veh):	29.7
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	15	36	36	16	37	37	32	32	32	32	32	32
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	0 1	0 0	1!	0 0
Volume Module:												
Base Vol:	65	773	6	4	159	13	97	16	76	35	10	66
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	65	773	6	4	159	13	97	16	76	35	10	66
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	65	773	6	4	159	13	97	16	76	35	10	66
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	68	814	6	4	167	14	102	17	80	37	11	69
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	68	814	6	4	167	14	102	17	80	37	11	69
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	68	814	6	4	167	14	102	17	80	37	11	69
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.84	0.84	0.93	0.83	0.82	0.62	0.67	0.59	0.62	0.64	0.60
Lanes:	1.00	1.98	0.02	1.00	1.85	0.15	0.87	0.13	1.00	0.31	0.08	0.61
Final Sat.:	1769	3156	24	1769	2908	238	1027	169	1127	365	104	688
Capacity Analysis Module:												
Vol/Sat:	0.04	0.26	0.26	0.00	0.06	0.06	0.10	0.10	0.07	0.10	0.10	0.10
Crit Moves:		****		****							****	
Green/Cycle:	0.15	0.36	0.36	0.16	0.37	0.37	0.32	0.32	0.32	0.32	0.32	0.32
Volume/Cap:	0.26	0.72	0.72	0.01	0.16	0.16	0.31	0.31	0.22	0.32	0.32	0.32
Delay/Veh:	39.9	31.4	31.4	35.5	21.3	21.3	27.8	27.8	26.3	27.9	27.9	27.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	39.9	31.4	31.4	35.5	21.3	21.3	27.8	27.8	26.3	27.9	27.9	27.9
LOS by Move:	D	C	C	D	C	C	C	C	C	C	C	C
HCM2kAvgQ:	2	13	13	0	2	2	3	3	2	3	3	3

Note: Queue reported is the number of cars per lane.

Block 1 Mixed-Use Project
Mission Bay South Area
Existing plus Project - PM Peak Hour Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #15 Channel Street/Fourth Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.290
Loss Time (sec):	10	Average Delay (sec/veh):	14.6
Optimal Cycle:	100	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0 1	0	1	0	0	0 1!	0 0	0	1	0 0 1
Volume Module:												
Base Vol:	10	58	6	171	123	12	23	12	16	17	8	65
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	58	6	171	123	12	23	12	16	17	8	65
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	58	6	171	123	12	23	12	16	17	8	65
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	61	6	180	129	13	24	13	17	18	8	68
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	61	6	180	129	13	24	13	17	18	8	68
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	11	61	6	180	129	13	24	13	17	18	8	68
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.55	0.77	0.76	0.59	0.77	0.76	0.55	0.67	0.61	0.69	0.85	0.36
Lanes:	1.00	0.90	0.10	1.00	0.91	0.09	0.49	0.21	0.30	0.72	0.28	1.00
Final Sat.:	1050	1329	137	1112	1337	130	507	264	352	950	447	689
Capacity Analysis Module:												
Vol/Sat:	0.01	0.05	0.05	0.16	0.10	0.10	0.05	0.05	0.05	0.02	0.02	0.10
Crit Moves:				****								****
Green/Cycle:	0.56	0.56	0.56	0.56	0.56	0.56	0.34	0.34	0.34	0.34	0.34	0.34
Volume/Cap:	0.02	0.08	0.08	0.29	0.17	0.17	0.14	0.14	0.14	0.06	0.06	0.29
Delay/Veh:	9.9	10.3	10.3	11.9	10.9	10.9	22.9	22.9	22.9	22.1	22.1	24.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.9	10.3	10.3	11.9	10.9	10.9	22.9	22.9	22.9	22.1	22.1	24.7
LOS by Move:	A	B	B	B	B	B	C	C	C	C	C	C
HCM2kAvgQ:	0	1	1	3	2	2	1	1	1	1	1	2

Note: Queue reported is the number of cars per lane.

Block 1 Mixed-Use Project
Mission Bay South Area
Existing plus Project - PM Peak Hour Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 King Street/Third Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.819
Loss Time (sec):	10	Average Delay (sec/veh):	40.9
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	26	26	26	0	0	0	20	46	46	13	39	39
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	1	3 0 1	0	0	0 0 0	3	0	1 1 0	2	0	1 1 0
Volume Module:												
Base Vol:	59	783	310	0	0	0	716	873	14	180	954	24
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	59	783	310	0	0	0	716	873	14	180	954	24
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	59	783	310	0	0	0	716	873	14	180	954	24
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	61	807	320	0	0	0	738	900	14	186	984	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	61	807	320	0	0	0	738	900	14	186	984	25
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	61	807	320	0	0	0	738	900	14	186	984	25
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.87	0.87	0.62	1.00	1.00	1.00	0.89	0.82	0.82	0.89	0.57	0.81
Lanes:	0.28	3.72	1.00	0.00	0.00	0.00	3.00	1.97	0.03	2.00	1.97	0.03
Final Sat.:	462	6137	1169	0	0	0	5053	3070	49	3369	2141	54
Capacity Analysis Module:												
Vol/Sat:	0.13	0.13	0.27	0.00	0.00	0.00	0.15	0.29	0.29	0.06	0.46	0.46
Crit Moves:		****					****				****	
Green/Cycle:	0.26	0.26	0.40	0.00	0.00	0.00	0.20	0.50	0.50	0.14	0.44	0.44
Volume/Cap:	0.51	0.51	0.68	0.00	0.00	0.00	0.73	0.59	0.59	0.39	1.04	1.04
Delay/Veh:	32.6	32.6	32.5	0.0	0.0	0.0	42.1	19.4	19.4	41.5	69.1	69.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.6	32.6	32.5	0.0	0.0	0.0	42.1	19.4	19.4	41.5	69.1	69.1
LOS by Move:	C	C	C	A	A	A	D	B	B	D	E	E
HCM2kAvgQ:	7	7	9	0	0	0	9	11	11	3	24	33

Note: Queue reported is the number of cars per lane.

Block 1 Mixed-Use Project
Mission Bay South Area
Existing plus Project - PM Peak Hour Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #17 King Street/Fourth Street

****

Cycle (sec):	100	Critical Vol./Cap.(X):	0.700
Loss Time (sec):	13	Average Delay (sec/veh):	67.9
Optimal Cycle:	125	Level Of Service:	E

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	28	28	28	28	28	28	10	42	42	14	45	45
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0	0 1	1	0 1	1 1	1	0 2	1 0	1	0 1	1 0
Volume Module:												
Base Vol:	16	42	53	46	330	536	96	1504	13	22	971	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	16	42	53	46	330	536	96	1504	13	22	971	20
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	16	42	53	46	330	536	96	1504	13	22	971	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	17	44	56	48	347	564	101	1583	14	23	1022	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	17	44	56	48	347	564	101	1583	14	23	1022	21
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	17	44	56	48	347	564	101	1583	14	23	1022	21
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.97	0.97	0.52	0.93	0.79	0.61	0.93	0.83	0.83	0.93	0.84	0.83
Lanes:	0.28	0.72	1.00	1.00	1.00	2.00	1.00	2.97	0.03	1.00	1.96	0.04
Final Sat.:	506	1329	985	1769	1497	2309	1769	4699	41	1769	3110	64
Capacity Analysis Module:												
Vol/Sat:	0.03	0.03	0.06	0.03	0.23	0.24	0.06	0.34	0.34	0.01	0.33	0.33
Crit Moves:	****					****		****		****		
Green/Cycle:	0.22	0.22	0.22	0.22	0.22	0.22	0.08	0.34	0.34	0.11	0.37	0.37
Volume/Cap:	0.15	0.15	0.25	0.12	1.04	1.09	0.70	1.00	1.00	0.12	0.90	0.90
Delay/Veh:	39.7	39.7	42.6	39.3	88.4	107.3	80.7	64.7	64.7	51.1	48.2	48.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	39.7	39.7	42.6	39.3	88.4	107.3	80.7	64.7	64.7	51.1	48.2	48.2
LOS by Move:	D	D	D	D	F	F	F	E	E	D	D	D
HCM2kAvgQ:	2	2	2	1	20	18	5	29	29	1	23	23

****

Note: Queue reported is the number of cars per lane.

APPENDIX D
TRAVEL DEMAND

Mission Bay South Plan Area

BLOCK 1 TRIP GENERATION - WEEKDAY

FINAL SUMMARY OF TRIPS

	Daily Person Trips					PM Peak Hour Person Trips						Percent of Daily vs PM Peak Hour				
Mode	Residential	Hotel	Not Used	Retail	Total	Residential	Hotel	Not Used	Retail	Total		Residential	Hotel	Not Used	Retail	Total
Auto	1,398	1,013	0	2,413	4,824	243	114	0	218	575	51.4%	17.4%	11.3%	0.0%	9.0%	11.9%
Transit	1,178	331	0	451	1,960	204	34	0	41	279	24.9%	17.3%	10.3%	0.0%	9.1%	14.2%
Walk	690	269	0	815	1,774	119	18	0	73	210	18.8%	17.2%	6.7%	0.0%	9.0%	11.8%
Other	234	137	0	71	442	40	9	0	6	55	4.9%	17.1%	6.6%	0.0%	8.5%	12.4%
All Modes	**3,500**	**1,750**	**0**	**3,750**	**9,000**	**606**	**175**	**0**	**338**	**1,119**	**100.0%**	**17.3%**	**10.0%**	**0.0%**	**9.0%**	**12.4%**
Vehicle Trips	1,251	499	0	1,300	3,050	217	76	0	117	410		17.3%	15.2%	0.0%	9.0%	13.4%
Avg. veh occup.	*1.12*	*2.03*	*0.00*	*1.86*	*1.58*	*1.12*	*1.50*	*0.00*	*1.86*	*1.40*						

	Total	PM Peak Hour Person-Trips					PM Peak Hour Transit-Trips					PM Peak Hour Vehicle-Trips				
Distribution	**Daily PTs**	Residential	Hotel	Not Used	Retail	Total	Residential	Hotel	Not Used	Retail	Total	Residential	Hotel	Not Used	Retail	Total
SF Superdistrict 1	2,435	345	18	0	21	384	115	5	0	6	126	122	5	0	5	132
SF Superdistrict 2	862	49	21	0	31	101	17	4	0	5	26	18	9	0	13	40
SF Superdistrict 3	3,244	49	55	0	200	304	17	11	0	19	47	18	17	0	60	95
SF Superdistrict 4	600	49	13	0	17	79	17	3	0	2	22	18	6	0	8	32
East Bay	600	52	21	0	12	85	18	6	0	2	26	19	8	0	5	32
North Bay	199	16	7	0	7	30	5	1	0	1	7	6	4	0	4	14
South Bay	825	46	35	0	33	114	15	3	0	3	21	16	25	0	16	57
Out of Region	235	0	5	0	17	22	0	1	0	3	4	0	2	0	6	8
All Origins	**9,000**	**606**	**175**	**0**	**338**	**1,119**	**204**	**34**	**0**	**41**	**279**	**217**	**76**	**0**	**117**	**410**

SF Guidelines	**Residential**		**Athletic Club**		**Not Used**		**Retail**	
Table C-2 (PM peak)	Work	Non-work	Work	Non-work	Work	Non-work	Work	Non-work
Inbound	100%	33%	0%	50%	0%	50%	0%	50%
Outbound	0%	67%	100%	50%	100%	50%	100%	50%

PM Peak Hour	**Inbound**					**Outbound**					**Total Inbound+Outboubd**				
Auto Trips	Residential	Hotel	Not Used	Retail	Total	Residential	Hotel	Not Used	Retail	Total	Residential	Hotel	Not Used	Retail	Total
SF Superdistrict 1	91	2	0	4	97	46	6	0	6	58	137	8	0	10	155
SF Superdistrict 2	12	3	0	9	24	7	11	0	10	28	19	14	0	19	52
SF Superdistrict 3	13	7	0	59	79	7	22	0	61	90	20	29	0	120	169
SF Superdistrict 4	13	2	0	7	22	7	8	0	8	23	20	10	0	15	45
East Bay	14	2	0	4	20	7	12	0	5	24	21	14	0	9	44
North Bay	4	0	0	3	7	2	5	0	3	10	6	5	0	6	17
South Bay	12	3	0	13	28	6	28	0	16	50	18	31	0	29	78
Out of Region	1	1	0	5	7	1	2	0	5	8	2	3	0	10	15
All Origins	**160**	**20**	**0**	**104**	**284**	**83**	**94**	**0**	**114**	**291**	**243**	**114**	**0**	**218**	**575**

Mission Bay South Plan Area

BLOCK 1 TRIP GENERATION - WEEKDAY

FINAL SUMMARY OF TRIPS

PM Peak Hour Transit Trips	Inbound					Outbound					Total Inbound+Outboubd				
	Residential	Hotel	Not Used	Retail	Total	Residential	Hotel	Not Used	Retail	Total	Residential	Hotel	Not Used	Retail	Total
SF Superdistrict 1	77	1	0	3	81	39	4	0	3	46	116	5	0	6	127
SF Superdistrict 2	11	1	0	2	14	6	4	0	3	13	17	5	0	5	27
SF Superdistrict 3	11	3	0	9	23	6	8	0	10	24	17	11	0	19	47
SF Superdistrict 4	11	0	0	1	12	5	2	0	1	8	16	2	0	2	20
East Bay	12	1	0	1	14	5	5	0	1	11	17	6	0	2	25
North Bay	4	0	0	0	4	2	1	0	2	5	6	1	0	2	9
South Bay	10	0	0	1	11	5	3	0	2	10	15	3	0	3	21
Out of Region	0	0	0	1	1	0	1	0	1	2	0	1	0	2	3
All Origins	**136**	**6**	**0**	**18**	**160**	**68**	**28**	**0**	**23**	**119**	**204**	**34**	**0**	**41**	**279**

PM Peak Hour Walk/Other Trips	Inbound					Outbound					Total Inbound+Outboubd				
	Residential	Hotel	Not Used	Retail	Total	Residential	Hotel	Not Used	Retail	Total	Residential	Hotel	Not Used	Retail	Total
SF Superdistrict 1	60	2	0	3	65	30	4	0	3	37	90	6	0	6	102
SF Superdistrict 2	9	2	0	3	14	4	2	0	2	8	13	4	0	5	22
SF Superdistrict 3	9	5	0	30	44	4	10	0	30	44	13	15	0	60	88
SF Superdistrict 4	9	0	0	0	9	4	1	0	0	5	13	1	0	0	14
East Bay	9	0	0	1	10	5	0	0	1	6	14	0	0	2	16
North Bay	3	0	0	0	3	1	0	0	0	1	4	0	0	0	4
South Bay	8	0	0	1	9	4	1	0	1	6	12	1	0	2	15
Out of Region	0	0	0	2	2	0	0	0	2	2	0	0	0	4	4
All Origins	**107**	**9**	**0**	**40**	**156**	**52**	**18**	**0**	**39**	**109**	**159**	**27**	**0**	**79**	**265**

PM Peak Hour All Modes Person Trips	Inbound					Outbound					Total Inbound+Outboubd				
	Residential	Hotel	Not Used	Retail	Total	Residential	Hotel	Not Used	Retail	Total	Residential	Hotel	Not Used	Retail	Total
SF Superdistrict 1	228	5	0	10	243	115	14	0	12	141	343	19	0	22	384
SF Superdistrict 2	32	6	0	14	52	17	17	0	15	49	49	23	0	29	101
SF Superdistrict 3	33	15	0	98	146	17	40	0	101	158	50	55	0	199	304
SF Superdistrict 4	33	2	0	8	43	16	11	0	9	36	49	13	0	17	79
East Bay	35	3	0	6	44	17	17	0	7	41	52	20	0	13	85
North Bay	11	0	0	3	14	5	6	0	5	16	16	6	0	8	30
South Bay	30	3	0	15	48	15	32	0	19	66	45	35	0	34	114
Out of Region	1	1	0	8	10	1	3	0	8	12	2	4	0	16	22
All Origins	**403**	**35**	**0**	**162**	**600**	**203**	**140**	**0**	**176**	**519**	**606**	**175**	**0**	**338**	**1,119**

PM Peak Hour Vehicle-Trips	Inbound					Outbound					Total Inbound+Outboubd				
	Residential	Hotel	Not Used	Retail	Total	Residential	Hotel	Not Used	Retail	Total	Residential	Hotel	Not Used	Retail	Total
SF Superdistrict 1	81	1	0	2	84	41	4	0	3	48	122	5	0	5	132
SF Superdistrict 2	12	2	0	6	20	6	7	0	7	20	18	9	0	13	40
SF Superdistrict 3	12	3	0	29	44	6	15	0	30	51	18	18	0	59	95
SF Superdistrict 4	12	1	0	4	17	6	5	0	4	15	18	6	0	8	32
East Bay	12	1	0	3	16	6	7	0	3	16	18	8	0	6	32
North Bay	4	0	0	2	6	2	4	0	2	8	6	4	0	4	14
South Bay	11	1	0	6	18	6	24	0	9	39	17	25	0	15	57
Out of Region	0	0	0	3	3	0	1	0	4	5	0	1	0	7	8
All Origins	**144**	**9**	**0**	**55**	**208**	**73**	**67**	**0**	**62**	**202**	**217**	**76**	**0**	**117**	**410**

Mission Bay South Plan Area

BLOCK 1 TRIP GENERATION - WEEKDAY

LAND USE: RESIDENTIAL (WORK TRIPS)

Proposed Size:		**350 units**			
DAILY			**PM PEAK HOUR**		
Person-trip Generation Rate [1]:		10.0 trips/unit	Person-trip Generation Rate [1]:	17.3%	1.7 trips/unit
Total Person-trips:		3,500 person-trips	Total Person-trips:		606 person-trips
Work Trips [2]:	33%	1,155 person-trips	Work Trips [2]:	50%	303 person-trips

Place of Origin	Percent Distribution [3]	Mode of Travel	Percent Distribution [4]	Average Vehicle Occupancy [4]	Daily Person Trips	Daily Vehicle-Trips	PM Peak Hour Person Trips	PM Peak Hour Vehicle-Trips
SF Superdistrict 1	56.8%	Auto	40.0%	1.12	262	234	69	61
		Transit	33.6%		221		58	
		Walk	19.7%		129		34	
		Other	6.7%		44		11	
		All Modes	100.0%		656	234	172	61
SF Superdistrict 2	8.1%	Auto	40.0%	1.12	37	33	10	9
		Transit	33.6%		32		8	
		Walk	19.7%		18		5	
		Other	6.7%		6		2	
		All Modes	100.0%		94	33	25	9
SF Superdistrict 3	8.1%	Auto	40.0%	1.12	37	33	10	9
		Transit	33.6%		32		8	
		Walk	19.7%		18		5	
		Other	6.7%		6		2	
		All Modes	100.0%		94	33	25	9
SF Superdistrict 4	8.1%	Auto	40.0%	1.12	37	33	10	9
		Transit	33.6%		32		8	
		Walk	19.7%		18		5	
		Other	6.7%		6		2	
		All Modes	100.0%		94	33	25	9
East Bay	8.6%	Auto	40.0%	1.12	40	36	10	9
		Transit	33.6%		34		9	
		Walk	19.7%		20		5	
		Other	6.7%		7		2	
		All Modes	100.0%		100	36	26	9
North Bay	2.6%	Auto	40.0%	1.12	12	11	3	3
		Transit	33.6%		10		3	
		Walk	19.7%		6		2	
		Other	6.7%		2		1	
		All Modes	100.0%		30	11	8	3
South Bay	7.6%	Auto	40.0%	1.12	35	31	9	8
		Transit	33.6%		30		8	
		Walk	19.7%		17		5	
		Other	6.7%		6		2	
		All Modes	100.0%		88	31	23	8
Out of Region	0.0%	Auto	40.0%	1.12	0	0	0	0
		Transit	33.6%		0		0	
		Walk	19.7%		0		0	
		Other	6.7%		0		0	
		All Modes	100.0%		0	0	0	0
All Origins	**100.0%**	**Auto**	**40.0%**	**1.12**	**462**	**413**	**121**	**108**
		Transit	**33.6%**		**389**		**102**	
		Walk	**19.7%**		**228**		**60**	
		Other	**6.7%**		**77**		**20**	
		All Modes	**100.0%**		**1,155**	**413**	**303**	**108**

Notes:
[1] SF Guidelines, Appendix C - Table C-1 (Residential)
[2] SF Guidelines, Appendix C - Table C-2 (Residential)
[3] 2000 U.S. Census journey-to-work data for San Francisco and Tract 607
[4] 2007-2011 American Community Survey 5-Year Estimate for Tract 607

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Mission Bay South Plan Area

BLOCK 1 TRIP GENERATION - WEEKDAY

LAND USE: RESIDENTIAL (NON-WORK TRIPS)

Proposed Size:		**350 units**			
DAILY			**PM PEAK HOUR**		
Person-trip Generation Rate [1]:		10.0 trips/unit	Person-trip Generation Rate [1]:	17.3%	1.7 trips/unit
Total Person-trips:		3,500 person-trips	Total Person-trips:		606 person-trips
Non-Work Trips [2]:	67%	2,345 person-trips	Non-Work Trips [2]:	50%	303 person-trips

Place of Origin	Percent Distribution [3]	Mode of Travel	Percent Distribution [4]	Average Vehicle Occupancy [4]	Daily Person Trips	Daily Vehicle-Trips	PM Peak Hour Person Trips	PM Peak Hour Vehicle-Trips
SF Superdistrict 1	56.8%	Auto	40.0%	1.12	532	476	69	61
		Transit	33.6%		448		58	
		Walk	19.7%		263		34	
		Other	6.7%		89		11	
		All Modes	100.0%		1,332	476	172	61
SF Superdistrict 2	8.1%	Auto	40.0%	1.12	76	68	10	9
		Transit	33.6%		64		8	
		Walk	19.7%		38		5	
		Other	6.7%		13		2	
		All Modes	100.0%		190	68	25	9
SF Superdistrict 3	8.1%	Auto	40.0%	1.12	76	68	10	9
		Transit	33.6%		64		8	
		Walk	19.7%		38		5	
		Other	6.7%		13		2	
		All Modes	100.0%		190	68	25	9
SF Superdistrict 4	8.1%	Auto	40.0%	1.12	76	68	10	9
		Transit	33.6%		64		8	
		Walk	19.7%		38		5	
		Other	6.7%		13		2	
		All Modes	100.0%		190	68	25	9
East Bay	8.6%	Auto	40.0%	1.12	81	72	10	9
		Transit	33.6%		68		9	
		Walk	19.7%		40		5	
		Other	6.7%		14		2	
		All Modes	100.0%		203	72	26	9
North Bay	2.6%	Auto	40.0%	1.12	25	22	3	3
		Transit	33.6%		21		3	
		Walk	19.7%		12		2	
		Other	6.7%		4		1	
		All Modes	100.0%		62	22	8	3
South Bay	7.6%	Auto	40.0%	1.12	71	64	9	8
		Transit	33.6%		60		8	
		Walk	19.7%		35		5	
		Other	6.7%		12		2	
		All Modes	100.0%		178	64	23	8
Out of Region	0.0%	Auto	40.0%	1.12	0	0	0	0
		Transit	33.6%		0		0	
		Walk	19.7%		0		0	
		Other	6.7%		0		0	
		All Modes	100.0%		0	0	0	0
All Origins	**100.0%**	**Auto**	**40.0%**	**1.12**	**937**	**838**	**121**	**108**
		Transit	**33.6%**		**789**		**102**	
		Walk	**19.7%**		**462**		**60**	
		Other	**6.7%**		**157**		**20**	
		All Modes	**100.0%**		**2,345**	**838**	**303**	**108**

Notes:
[1] SF Guidelines, Appendix C - Table C-1 (Residential)
[2] SF Guidelines, Appendix C - Table C-2 (Residential)
[3] 2000 U.S. Census journey-to-work data for San Francisco and Tract 607
[4] 2007-2011 American Community Survey 5-Year Estimate for Tract 607

Block 1 Trip Generation v7.xlsx 2/26/2013

Mission Bay South Plan Area

BLOCK 1 TRIP GENERATION - WEEKDAY
LAND USE: RETAIL (WORK TRIPS)

Proposed Size:		**25,000 sq.ft.**			
DAILY			**PM PEAK HOUR**		
Person-trip Generation Rate [1]:		150.0 trips/1,000 gsf	Person-trip Generation Rate [1]:	9.0%	13.5 trips/1,000 gsf
Total Person-trips:		3,750 person-trips	Total Person-trips:		338 person-trips
Work Trips [2]:	4%	150 person-trips	Work Trips [2]:	4%	14 person-trips

Place of Origin	Percent Distribution [3]	Mode of Travel	Percent Distribution [3]	Average Vehicle Occupancy [3]	Daily Person Trips	Daily Vehicle-Trips	PM Peak Hour Person Trips	PM Peak Hour Vehicle-Trips
		Auto	46.9%	1.30	6	4	1	0
		Transit	32.7%		4		0	
SF Superdistrict 1	8.3%	Walk	17.7%		2		0	
		Other	2.7%		0		0	
		All Modes	100.0%		12	4	1	0
		Auto	64.6%	1.26	10	8	1	1
		Transit	26.4%		4		0	
SF Superdistrict 2	10.6%	Walk	6.9%		1		0	
		Other	2.1%		0		0	
		All Modes	100.0%		16	8	1	1
		Auto	59.7%	1.25	21	17	2	2
		Transit	20.6%		7		1	
SF Superdistrict 3	23.9%	Walk	15.1%		5		0	
		Other	4.6%		2		0	
		All Modes	100.0%		36	17	3	2
		Auto	75.7%	1.48	9	6	1	1
		Transit	21.5%		3		0	
SF Superdistrict 4	7.9%	Walk	0.0%		0		0	
		Other	2.8%		0		0	
		All Modes	100.0%		12	6	1	1
		Auto	68.8%	1.61	15	9	1	1
		Transit	29.7%		6		1	
East Bay	14.3%	Walk	0.0%		0		0	
		Other	1.5%		0		0	
		All Modes	100.0%		21	9	2	1
		Auto	86.9%	1.44	7	5	1	0
		Transit	10.5%		1		0	
North Bay	5.6%	Walk	0.0%		0		0	
		Other	2.6%		0		0	
		All Modes	100.0%		8	5	1	0
		Auto	88.5%	1.13	36	32	3	3
		Transit	8.8%		4		0	
South Bay	26.9%	Walk	0.0%		0		0	
		Other	2.7%		1		0	
		All Modes	100.0%		40	32	4	3
		Auto	61.8%	1.56	2	1	0	0
		Transit	35.3%		1		0	
Out of Region	2.5%	Walk	0.0%		0		0	
		Other	2.9%		0		0	
		All Modes	100.0%		4	1	0	0
		Auto	**71.0%**	**1.28**	**107**	**83**	**10**	**7**
		Transit	**20.2%**		**30**		**3**	
All Origins	**100.0%**	**Walk**	**5.8%**		**9**		**1**	
		Other	**2.9%**		**4**		**0**	
		All Modes	**100.0%**		**150**	**83**	**14**	**7**

Notes:
[1] SF Guidelines, Appendix C - Table C-1 (General Retail)
[2] SF Guidelines, Appendix C - Table C-2 (Retail)
[3] SF Guidelines, Appendix E - Table E-5 Work Trips to SD3 (All)

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Mission Bay South Plan Area

BLOCK 1 TRIP GENERATION - WEEKDAY
LAND USE: RETAIL (NON-WORK TRIPS)

Proposed Size:		**25,000 sq.ft.**			
DAILY			**PM PEAK HOUR**		
Person-trip Generation Rate [1]:		150.0 trips/1,000 gsf	Person-trip Generation Rate [1]:	9.0%	13.5 trips/1,000 gsf
Total Person-trips:		3,750 person-trips	Total Person-trips:		338 person-trips
Non-Work Trips [2]:	96%	3,600 person-trips	Non-Work Trips [2]:	96%	324 person-trips

Place of Origin	Percent Distribution [3]	Mode of Travel	Percent Distribution [3]	Average Vehicle Occupancy [3]	Daily Person Trips	Daily Vehicle-Trips	PM Peak Hour Person Trips	PM Peak Hour Vehicle-Trips
		Auto	45.0%	1.76	97	55	9	5
		Transit	29.0%		63		6	
SF Superdistrict 1	6.0%	Walk	22.0%		48		4	
		Other	4.0%		9		1	
		All Modes	100.0%		216	55	19	5
		Auto	61.8%	1.52	200	132	18	12
		Transit	15.3%		50		4	
SF Superdistrict 2	9.0%	Walk	19.8%		64		6	
		Other	3.1%		10		1	
		All Modes	100.0%		324	132	29	12
		Auto	60.4%	2.04	1,326	650	119	59
		Transit	9.5%		209		19	
SF Superdistrict 3	61.0%	Walk	28.7%		630		57	
		Other	1.4%		31		3	
		All Modes	100.0%		2,196	650	198	59
		Auto	84.7%	1.78	152	86	14	8
		Transit	9.7%		17		2	
SF Superdistrict 4	5.0%	Walk	2.8%		5		0	
		Other	2.8%		5		0	
		All Modes	100.0%		180	86	16	8
		Auto	75.0%	1.77	81	46	7	4
		Transit	12.5%		14		1	
East Bay	3.0%	Walk	12.5%		14		1	
		Other	0.0%		0		0	
		All Modes	100.0%		108	46	10	4
		Auto	87.5%	1.44	63	44	6	4
		Transit	12.5%		9		1	
North Bay	2.0%	Walk	0.0%		0		0	
		Other	0.0%		0		0	
		All Modes	100.0%		72	44	6	4
		Auto	86.4%	1.98	280	141	25	13
		Transit	9.1%		29		3	
South Bay	9.0%	Walk	3.2%		10		1	
		Other	1.3%		4		0	
		All Modes	100.0%		324	141	29	13
		Auto	59.2%	1.69	107	63	10	6
		Transit	16.9%		30		3	
Out of Region	5.0%	Walk	19.7%		35		3	
		Other	4.2%		8		1	
		All Modes	100.0%		180	63	16	6
		Auto	**64.1%**	**1.90**	**2,307**	**1,217**	**208**	**110**
		Transit	**11.7%**		**421**		**38**	
All Origins	**100.0%**	**Walk**	**22.4%**		**806**		**73**	
		Other	**1.8%**		**66**		**6**	
		All Modes	**100.0%**		**3,600**	**1,217**	**324**	**110**

Notes:
[1] SF Guidelines, Appendix C - Table C-1 (General Retail)
[2] SF Guidelines, Appendix C - Table C-2 (Retail)
[3] SF Guidelines, Appendix E - Table E-14 Visitor Trips to SD3 (Retail)

Block 1 Trip Generation v7.xlsx 2/26/2013

Mission Bay South Plan Area

BLOCK 1 TRIP GENERATION - WEEKDAY
LAND USE: HOTEL (WORK TRIPS)

Proposed Size:		**250 rooms**			
DAILY			**PM PEAK HOUR**		
Person-trip Generation Rate [1]:		7.0 trips/room	Person-trip Generation Rate [1]:	10.0%	0.7 trips/room
Total Person-trips:		1,750 person-trips	Total Person-trips:		175 person-trips
Work Trips [2]:	12%	210 person-trips	Work Trips [2]:	60%	105 person-trips

Place of Origin	Percent Distribution [3]	Mode of Travel	Percent Distribution [3]	Average Vehicle Occupancy [3]	Daily Person Trips	Daily Vehicle-Trips	PM Peak Hour Person Trips	PM Peak Hour Vehicle-Trips
		Auto	46.9%	1.30	8	6	4	3
		Transit	32.7%		6		3	
SF Superdistrict 1	8.3%	Walk	17.7%		3		2	
		Other	2.7%		0		0	
		All Modes	100.0%		17	6	9	3
		Auto	64.6%	1.26	14	11	7	6
		Transit	26.4%		6		3	
SF Superdistrict 2	10.6%	Walk	6.9%		2		1	
		Other	2.1%		0		0	
		All Modes	100.0%		22	11	11	6
		Auto	59.7%	1.25	30	24	15	12
		Transit	20.6%		10		5	
SF Superdistrict 3	23.9%	Walk	15.1%		8		4	
		Other	4.6%		2		1	
		All Modes	100.0%		50	24	25	12
		Auto	75.7%	1.48	13	8	6	4
		Transit	21.5%		4		2	
SF Superdistrict 4	7.9%	Walk	0.0%		0		0	
		Other	2.8%		0		0	
		All Modes	100.0%		17	8	8	4
		Auto	68.8%	1.61	21	13	10	6
		Transit	29.7%		9		4	
East Bay	14.3%	Walk	0.0%		0		0	
		Other	1.5%		0		0	
		All Modes	100.0%		30	13	15	6
		Auto	86.9%	1.44	10	7	5	4
		Transit	10.5%		1		1	
North Bay	5.6%	Walk	0.0%		0		0	
		Other	2.6%		0		0	
		All Modes	100.0%		12	7	6	4
		Auto	88.5%	1.13	50	44	25	22
		Transit	8.8%		5		2	
South Bay	26.9%	Walk	0.0%		0		0	
		Other	2.7%		2		1	
		All Modes	100.0%		56	44	28	22
		Auto	61.8%	1.56	3	2	2	1
		Transit	35.3%		2		1	
Out of Region	2.5%	Walk	0.0%		0		0	
		Other	2.9%		0		0	
		All Modes	100.0%		5	2	3	1
		Auto	**71.0%**	**1.28**	**149**	**116**	**75**	**58**
		Transit	**20.2%**		**42**		**21**	
All Origins	**100.0%**	**Walk**	**5.8%**		**12**		**6**	
		Other	**2.9%**		**6**		**3**	
		All Modes	**100.0%**		**210**	**116**	**105**	**58**

Notes:
[1] SF Guidelines, Appendix C - Table C-1 (Hotel rate)
[2] SF Guidelines, Appendix C - Table C-2 (Hotel/Motel)
[3] SF Guidelines, Appendix E - Table E-5 Work Trips to SD3 (All)

Adavant Consulting

Mission Bay South Plan Area

BLOCK 1 TRIP GENERATION - WEEKDAY
LAND USE: HOTEL (NON-WORK TRIPS)

Proposed Size:		**250 rooms**			
DAILY			**PM PEAK HOUR**		
Person-trip Generation Rate [1]:		7.0 trips/room	Person-trip Generation Rate [1]:	10.0%	0.7 trips/room
Total Person-trips:		1,750 person-trips	Total Person-trips:		175 person-trips
Non-Work Trips [2]:	88%	1,540 person-trips	Non-Work Trips [2]:	40%	70 person-trips

Place of Origin	Percent Distribution [3]	Mode of Travel	Percent Distribution [3]	Average Vehicle Occupancy [3]	Daily Person Trips	Daily Vehicle-Trips	PM Peak Hour Person Trips	PM Peak Hour Vehicle-Trips
		Auto	36.0%	2.03	72	36	3	2
		Transit	19.2%		38		2	
SF Superdistrict 1	13.0%	Walk	33.3%		67		3	
		Other	11.5%		23		1	
		All Modes	100.0%		200	36	9	2
		Auto	68.6%	1.97	148	75	7	3
		Transit	14.5%		31		1	
SF Superdistrict 2	14.0%	Walk	2.4%		5		0	
		Other	14.5%		31		1	
		All Modes	100.0%		216	75	10	3
		Auto	43.7%	2.43	296	122	13	6
		Transit	21.5%		146		7	
SF Superdistrict 3	44.0%	Walk	25.4%		172		8	
		Other	9.4%		64		3	
		All Modes	100.0%		678	122	31	6
		Auto	67.4%	2.51	73	29	3	1
		Transit	16.3%		18		1	
SF Superdistrict 4	7.0%	Walk	7.0%		8		0	
		Other	9.3%		10		0	
		All Modes	100.0%		108	29	5	1
		Auto	68.4%	2.59	95	37	4	2
		Transit	29.8%		41		2	
East Bay	9.0%	Walk	1.8%		2		0	
		Other	0.0%		0		0	
		All Modes	100.0%		139	37	6	2
		Auto	100.0%	2.11	15	7	1	0
		Transit	0.0%		0		0	
North Bay	1.0%	Walk	0.0%		0		0	
		Other	0.0%		0		0	
		All Modes	100.0%		15	7	1	0
		Auto	94.6%	2.28	131	58	6	3
		Transit	3.6%		5		0	
South Bay	9.0%	Walk	1.8%		2		0	
		Other	0.0%		0		0	
		All Modes	100.0%		139	58	6	3
		Auto	73.6%	1.68	34	20	2	1
		Transit	21.1%		10		0	
Out of Region	3.0%	Walk	0.0%		0		0	
		Other	5.3%		2		0	
		All Modes	100.0%		46	20	2	1
		Auto	**56.1%**	**2.26**	**864**	**383**	**39**	**17**
		Transit	**18.8%**		**289**		**13**	
All Origins	**100.0%**	**Walk**	**16.7%**		**256**		**12**	
		Other	**8.5%**		**130**		**6**	
		All Modes	**100.0%**		**1,540**	**383**	**70**	**17**

Notes:
[1] SF Guidelines, Appendix C - Table C-1 (Hotel rate)
[2] SF Guidelines, Appendix C - Table C-2 (Hotel/Motel)
[3] SF Guidelines, Appendix E - Table E-15 Visitor Trips to SD3 (All Other)

APPENDIX E
PARKING AND LOADING ANALYSIS

Mission Bay South Plan Area

BLOCK 1 TRIP GENERATION - WEEKDAY
PARKING DEMAND AND CODE REQUIREMENT CALCULATIONS

PROJECT SIZE

Residential:	0	studio/1-bedroom units
	350	2 or more bedroom units
Total	**350**	**total residential units**
Hotel:	250	rooms
Retailt:	25,000	gsf

PARKING SUPPLY

Residential	350	spaces
Hotel/Retail	24	spaces
Total	**374**	**spaces**

MIDDAY PARKING DEMAND

Residential:		
Short-Term	0	spaces
Long-Term	1.1	per studio/1-bedroom unit
	85%	of the peak demand [b]
	0	spaces
	1.5	per 2+ bedroom unit
	85%	of the peak demand [b]
	446	spaces
Subtotal	**446**	**spaces**
Hotel:		
Short-Term	0	spaces [c]
Long-Term		
Guests:	0.25	spaces per room
	40%	of the peak demand [d]
	25	spaces
Employees:	0.9	employees per room
	50%	of employees work in daytime
	113	daytime employees
	62	spaces
Subtotal	**87**	**spaces**
Retail:		
Short-Term	2,307	daily visitor auto-trips
	1.90	avg. veh occupancy
	1217	daily visitor vehicle-trips
	5.5	turn-over rate
	75%	of the peak demand [f]
	83	spaces
Long-Term	350	sq.ft. per employee
	71	daytime employees
	40	spaces
Subtotal	**123**	**spaces**

EVENING PARKING DEMAND

Residential:		
Short-Term	0	spaces
Long-Term	1.1	per studio/1-bedroom unit
	100%	of the peak demand [b]
	0	spaces
	1.5	per 2+ bedroom unit
	100%	of the peak demand [b]
	525	spaces
Subtotal	**525**	**spaces**
Hotel:		
Short-Term	0	spaces [c]
Long-Term		
Guests	0.25	spaces per room
	100%	of the peak demand [d]
	63	spaces
Employees	0.9	employees per room
	50%	of employees work in daytime
	113	daytime employees
	62	spaces
Subtotal	**125**	**spaces**
Retail:		
Short-Term	2,307	daily visitor auto-trips
	1.90	avg. veh occupancy
	1217	daily visitor vehicle-trips
	5.5	turn-over rate
	100%	of the peak demand [f]
	111	spaces
Long-Term	350	sq.ft. per employee
	71	daytime employees
	40	spaces
Subtotal	**151**	**spaces**

Total Midday Demand:

Short-Term	83	spaces
Long-Term	573	spaces
TOTAL	**656**	**spaces**

Total Evening Demand:

Short-Term	111	spaces
Long-Term	690	spaces
TOTAL	**801**	**spaces**

PROJECT REQUIREMENTS
Mission Bay South Project Area

Off-street Parking Design for Development Standards (pp. 42 and 43)

Residential:	1	space maximum per dwelling unit
	350	spaces permitted
Hotel:	1	space maximum per 16 rooms
	16	spaces permitted
Retail:	1	space maximum for each 500 gsf up t
	plus 1	space maximum for each 250 gsf over
	60	spaces permitted
TOTAL	**426**	**maximum spaces permitted**

Handicap-Accessible Requirements (§155):

	1	handicap-accessible parking space fo
	25	parking spaces provided
Residential	14	spaces required
Hotel/Retail	1	spaces required
Total	**15**	**spaces required**

Bicycle Spaces Required (p. 42):

	1	secured bicycle parking space for eac
	20	parking spaces provided
Total	**19**	**bicycle spaces required**

Notes

[b] Midday residential parking demand represents up to 85% of the maximum, which typically occurs between 6 p.m. and 6 a.m.
[c] No short-term parking demand assumed since no conference room or simialr facilities would be provied at the hotel.
[d] Midday hotel parking demand represents up to 40% of the maximum, which typically occurs after 6 p.m.
[e] Assimilated to retail; evening commercial parking demand typically represents about 85% of the maximum, which typically occurs between noon and 4 p.m.
[f] Midday restaurant parking demand represents about 75% of the maximum, which typically occurs between 6 p.m. and 10 p.m.

Sources: SF Guidelines, ULI Shared Parking (Exhibit 28), Design for Development for the Mission Bay South Project Area (approved March 16, 2004)

Mission Bay South Plan Area

BLOCK 1 TRIP GENERATION - WEEKDAY
LOADING DEMAND AND CODE REQUIREMENT CALCULATIONS

PROJECT SIZE

Residential:	364,000	gsf
Hotel:	363,000	gsf (250 rooms)
Retail:	25,000	gsf
Total	**752,000**	**gsf**

SUPPLY

6	loading spaces on ground floor (minimum 10' W x 35' L x 14' H)
1	tour bus loading space (minimum 9' W x 45' L x 14' H; can be provided at adjacent curbs)

FREIGHT LOADING DEMAND

Residential:	R [a] =	0.03
Daily Trips	10.9	truck trips
Average Hour	0.5	spaces
Peak Hour [b]	0.6	spaces
Hotel:	R [c] =	0.09
Daily Trips	32.7	truck trips
Average Hour	1.5	spaces
Peak Hour [b]	1.9	spaces
Retail:	R [d] =	0.22
Daily Trips	5.5	truck trips
Average Hour	0.3	spaces
Peak Hour [b]	0.3	spaces
Total Demand:		
Daily Trips	**49.1**	**truck trips**
Average Hour	**2.3**	**spaces**
Peak Hour [b]	**2.8**	**spaces**

Freight Loading Demand Equations

Daily Trips = (GSF / 1,000) * R

Average Hour = (GSF / 1,000) * R / 9 / 2.4

Peak Hour [b] = (GSF / 1,000) * (R * 1.25) / 9 / 2.4

Mission Bay South Project Area
Off-street Loading Design for Development Standards (p. 44)

Residential:	up to 100,000 gfa		0 spaces	
	100,001	to 200,000 gfa	1 spaces	
	200,001	to 500,000 gfa	2 spaces	
	Over 500,000 gfa		3 spaces	plus 1 space
	per additional 400,000 gfa			
	2	loading spaces required		
Hotel:	up to 100,000 gfa		0 spaces	
	100,001	to 200,000 gfa	1 spaces	
	200,001	to 500,000 gfa	2 spaces	
	Over 500,000 gfa		3 spaces	plus 1 space
	per additional 400,000 gfa			
	2	loading spaces required		
Retail:	up to 10,000 gfa		0 spaces	
	10,001	to 60,000 gfa	1 spaces	
	60,001	to 100,000 gfa	2 spaces	
	Over 100,000 gfa		3 spaces	plus 1 space
	per additional 80,000 gfa			
	1	loading spaces required		
Total	**5**	**loading spaces required**		

HOTEL GUESTS LOADING/UNLOADING ACTIVITIES (Appendix H)

76	PM peak hour inbound plus outbound vehicles
38	vehicle arrivals during peak 15-minute period
4	**PCE; peak demand during any one minute of the 15-minute period**
100	feet; minimum curb space requirement

Off-Street Tour Bus Loading Spaces Required (p. 44):

up to 200	hotel rooms	0 spaces
201	to 350 hotel rooms	1 spaces
351	to 500 hotel rooms	2 spaces
1	**tour bus off-street parking space required**	

Hotel Guests Loading/Unloading Demand Equations

PM Peak Hour Arrivals = inbound plus outbound vehicle trips during the PM peak hour

Vehicles arriving during peak 15-minute period = (PM peak arrivals * 2) / 4

PCEs during peak minute = (arrivals during peak 15-minute * 1.5) / 15

Curb space requirement (feet) = PCEs during peak minute * 25

Notes

[a] *SF Guidelines* , Appendix H, Table H-1, Residential daily truck trip generation rate

[b] Peak hour truck generation generally occurs between 10 a.m. and 1 p.m

[c] *SF Guidelines* , Appendix H, Table H-1, Hotel daily truck trip generation rate

[d] *SF Guidelines* , Appendix H, Table H-1, Restaurant daily truck trip generation rate

APPENDIX F
TRANSIT ANALYSIS

BLOCK 1 MIXED USE PROJECT

Muni Service Utilization – Weekday PM Peak Hour

Route	Direction toward		Maximum Load Point (MLP)				Proposed Project		
			Location	Ridership [a]	Capacity [a]	Utilization	Trips	Ridership	Utilization
N Judah	Inbound	Caltrain Depot	Carl/Cole	880	1,904	46%	11	891	47%
	Outbound	Sunset	Van Ness Station	1,773	2,131	83%	8	1,781	84%
T Third	Inbound	Bayshore	The Embarcadero/Folsom	508	714	71%	70	578	81%
	Outbound	Ingleside	Van Ness Station	601	830	72%	46	647	78%
30 Stockton	Inbound	Caltrain Depot	Chestnut/Octavia	705	1,224	58%	22	727	59%
	Outbound	Marina	Stockton/Sutter	660	1,248	53%	3	663	53%
45 Union-Stockton	Inbound	Caltrain Depot	Stockton/Sacramento	240	315	76%	7	247	79%
	Outbound	Marina	Stockton/Sutter	260	315	83%	1	261	83%
47 Van Ness	Inbound	Caltrain Depot	Van Ness/McAllister	276	378	73%	3	279	74%
	Outbound	F. Wharf	Van Ness/O'Farrell	258	378	68%	1	259	69%
TOTAL	Inbound			2,609	4,535	58%	113	2,722	60%
	Outbound			3,552	4,902	72%	59	3,611	74%

Note: [a] Data collected in 2010 (rail) and 2011 (bus) by Muni.

Source: SF Planning Department, Transit Data for Transportation Impact Studies, Table: Route Load and Capacity by Time Period and Direction of Travel, December 18, 2012

	Inbound			Outbound		
	from downtown only	bynd dwntwn	total	to downtown	bynd dwntwn	total
Muni from the North	18	95	113	16	59	75
Muni from the South			35			32
Total Muni			**148**			**107**
Caltrain			11			10
BART South Bay			0			0
BART East Bay			12			10
AC Transit			1			1
East Bay ferries			0			0
GGT Buses			2			3
GGT Ferries			2			2
Total Regional			**29**			**26**

Regional Transit Service Utilization – Weekday PM Peak Hour - Outbound Direction

		EXISTING				PROPOSED PROJECT		
		Ridership		Capacity	Utilization	Trips	Ridership	Utilization
East Bay								
	BART	19,716	87%	22,050	89%	10	19,726	89%
	AC Transit	2,256	10%	3,926	57%	1	2,257	57%
	Ferry	805	4%	1,615	50%	0	805	50%
	Subtotal	***22,777***	***59%***	***27,591***	***83%***	***11***	***22,788***	***83%***
North Bay								
	GGT Buses	1,384	59%	2,817	49%	3	1,387	49%
	Ferry	968	41%	1,959	49%	2	970	50%
	Subtotal	***2,352***	***6%***	***4,776***	***49%***	***5***	***2,357***	***49%***
South Bay								
	BART	10,682	81%	14,910	72%	0	10,682	72%
	Caltrain	2,377	18%	3,100	77%	10	2,387	77%
	SamTrans	141	1%	320	44%	0	141	44%
	Subtotal	***13,200***	***34%***	***18,330***	***72%***	***10***	***13,210***	***72%***
TOTAL REGIONAL		**38,329**	**100%**	**50,697**	**76%**	**26**	**38,355**	**76%**

Source: SF Planning Department, Transit Data for Transportation Impact Studies, Table: Route Load and Capacity by Time Period and Direction of Travel, December 18, 2012

	BLOCK 1 TRANSIT TRIPS		
Origin	**Inbound**	**Outbound**	**Total**
SD1	81.0	46.0	127.0
SD2	14.0	13.0	27.0
SD3	23.0	24.0	47.0
SD4	12.0	8.0	20.0
EB	14.0	11.0	25.0
NB	4.0	5.0	9.0
SB	11.0	10.0	21.0
Other	1.0	2.0	3.0
Total	**160.0**	**119.0**	**279.0**