Date: February 5, 2016

CANDLESTICK POINT
Proposed Project Revisions Associated with Development Plan Application for Sub-Phase 02-03-03 and Updates to Project Documents, Including:
CP Major Phase 1 Application, CP Design for Development (D4D),
CP Streetscape Master Plan, CP-HPS-Phase 2 MMRP, CP Transportation Plan

Proposed Revision	Existing Provision	Project Document(s) Revision
TIER 1: Substantive Project Revisions		
1. Tower Relocation: The sub-phase application proposes relocating Towers G, J and K. Tower G would be relocated within CP-02, but outside the approved tower zone. Tower J and K would be moved approximately 100 feet southeast. Tower K would remain in an approved tower zone and Tower K would be in a new fixed location.	D4D located Tower G in the approved tower location in the center of CP-02. D4D located Towers J and K in CP-South, approximately 100 feet north of the proposed location.	Major Phase 1 Application • Section 1.1 • Figure 6.1 • Figure 6.5 • Figure 6.6 • Figure 6.7 • Figure 6.8 D4D: • Table 4.3 • Figure 4.3 • Figure 8.1
2. Height Increase – CP Center at corner of Harney Way and Ingerson Avenue: The sub-phase application proposes to increase the height of the building at CP Center on the corner of Harney Way and Ingerson Avenue from 85 feet to 120 feet. The Film Arts Center will be developed at this location.	D4D limits height at this location to 85 feet.	Major Phase 1 Application • Section 1.1 • Figure 6.1 • Figure 6.3 • Figure 6.4 • Figure 6.5 • Figure 6.6 • Figure 6.7 • Figure 6.8 D4D: • Figure 4.3 • Figure 8.1

3. Height Increase – CP Center at corner of Arelious Walker Drive and Harney Way: The sub-phase application proposes to increase the height of the CP center at the corner of Arelious Walker Drive and Harney Way from 65 feet to 80 feet. A building containing a hotel, office and performance venue floor space will be developed at this location.	D4D limits height at this location to 65 feet.	Major Phase 1 Application • Section 1.1 D4D: • Figure 4.3 • Figure 8.1
4. Height Increase – CP Center on both Sides of Harney Way & Ingerson Avenue at CP Center: The sub-phase application proposes to increase the height of buildings along Harney Way and Ingerson Avenue from 65 feet to 80 feet. These buildings will be developed with retail land uses at ground floor, with a maximum of five stories of residential or commercial uses above. The D4D defines a maximum percentage of the block's developable area that can be built within the 80 ft height zone, and includes additional guidelines encouraging buildings to be designed with varied height to add architectural interest to the streetscape.	D4D limits height at this location to 65 feet.	Major Phase 1 Application • Section 1.1 • Figure 6.1 • Figure 6.3 • Figure 6.4 • Figure 6.5 • Figure 6.6 • Figure 6.7 • Figure 6.8 D4D: • Section 4.2.2 • Figure 4.3 • Section 5.2.2 • Figure 5.5 • Section 5.3.2 • Figure 5.7 • Section 5.4.2 • Figure 5.9 • Figure 8.1
5. Conversion of Office Space to Neighborhood Retail Space: The sub-phase application proposes to convert 15,500 square feet of entitled office space in Candlestick Point to 6,000 square feet of neighborhood retail space. This will result in the neighborhood retail floor space increasing from 125,000 square feet to 131,000 square feet, and the office floor space decreasing from 150,000 square feet to 134,500 square feet.	Project approvals provide for 150,000 square feet of office and 125,000 Square feet of neighborhood retail use at Candlestick Point	Major Phase 1 Application • Section 1.1 • Figure 6.1 • Table 6.1 Transportation Plan: • Table 4 • Table 14
6. Relocation of On-Street Parking: The sub-phase application proposes to relocate 269 on-street spaces of the planned 430 on-street spaces to the CP Center garage.	430 on-street spaces	Major Phase 1 Application • Section 1.1 • Section 8.6 • Figure 8.7

7. Harney Way Revised Off-Site Phasing: The sub-phase application proposes to divide construction of the off-site Harney Way roadway improvements into two phases: 1) from Arelious Walker Drive to Executive Park Boulevard East, and 2) from Executive Park Boulevard East to Thomas Mellon Drive. The sidewalk and cycle track along Harney Way would be completed as originally the planned from Arelious Walker Drive to Thomas Mellon Drive.	First phase of Harney Way improvements extended to Thomas Mellon Drive.	Major Phase 1 Application • Section 1.1 • Section 2.5 • Section 8.1 MMRP: • MM-TR-16 Infrastructure Plan: • Section 2.1.3 A • Figure 2.1.3
8. Gilman Avenue Revised Cross Section: The sub-phase application proposes to revise the cross section configuration to retain 15-foot sidewalks and on-street parking on both sides of street. Only one travel lane in each direction and a center turn lane would be provided.. The intersections between Third Street and Arelious Walker would be signal controlled.	Two lanes of travel in each direction; on- street parking on both sides of street; 12-foot sidewalks. All-way stop sign at the intersections between Third Street and Arelious Walker.	Major Phase 1 Application • Section 1.1 • Section 8.1 MMRP: • MM-TR-23.1 Transportation Plan: • Figure 7M Infrastructure Plan: • Section 2.1.3 E • Figure 2.1.5

Date: February 5, 2016

CANDLESTICK POINT
Tier 2 and Tier 3 Revisions Associated with Development Plan Application for Sub-Phase 02-03-03 and Updates to Project Documents, Including:
CP Major Phase 1 Application, CP Design for Development (D4D),
CP Streetscape Master Plan, CP-HPS-Phase 2 MMRP, CP Transportation Plan

Proposed Revision	Existing Provision	Project Document(s) Revision
TIER 2: D4D, Streetscape Plan, and Major Phase 1 Application Refinements and Clarifications		
1. Additional Signage Provisions: Provisions amended to provide a greater level of guidance for signage, specifically in relation to intent, variety, style, orientation, lighted signs, safety, new technology signs, temporary signage and prohibited signage. Specific standards for commercial and residential signage are removed.	D4D: • Existing provisions in Section 4.3.2 I	D4D: • Section 4.4, p. 138-139
2. Podium Heights: Add provisions to the D4D to clarify massing and bulk controls for tower podiums and add maximum podium heights for each tower.	D4D: • No existing provisions	D4D: • Table 4.3 (p. 84), • Section 4.3.2 (p. 87) • Table 4.5 (p. 87)
3. Ground Floor Retail Height In Mixed Use Residential District: Add provisions to the D4D minimum floor-to-floor height of 15 feet for non-residential uses.	D4D: • Figure 4.6 – Minimum retail height of 12 feet for Mixed Use High Rise • Section 4.3.1 B – All retail spaces shall be a minimum of 12 feet height	D4D: • Figures 4.7 to 4.12 (p 97 to 102) • Section 4.3.1 (A) (p. 110) • Section 4.3.1 (B) (p. 116) Major Phase 1 Application: • Section 1.1 (pp. 4-5) • Section 6.1 (p. 52)
4. Parking Garage Entry and Curb Cuts Widths: Revise D4D to allow a maximum of 27 foot width for garage entrance and curb cuts if needed to accommodate large service vehicles and emergency services.	D4D • Section 4.3.1 D (p. 128) – Maximum combined parking & loading entry width 24 ft • Section 4.4.3 (p. 152) – Maximum curb cut width 24 ft	D4D: • Section 4.3.1 D (p. 123) • Section 4.4.3 (p. 144) Major Phase 1 Application: • Section 1.1 (pp. 4-5) • Section 8.7 (p. 79)
5. CP Center Internal Access: Eliminate extension of Earl Street and 8th Street into CP Center and eliminate Bill Walsh Street. Add four pedestrian only corridors. Allow service vehicles to use one pedestrian corridor.	D4D: • Various figures, images and location plans show the extension of Earl Street and 8th Street into CP Center, with a new Bill Walsh Street.	D4D: • Figure 2.1 (p. 21) • Image: Density of residential and services is clustered around transit stops (p. 23)

Proposed Revision	Existing Provision	Project Document(s) Revision
		• Image: Parks and Open Space Illustrative Plan (p. 24) • Figure 2.2: Parks and Open Space Network (p. 25) • Figure 2.3 (p. 27) • Figure 2.4 (p. 29) • Figure 2.5 (p. 33) • Figure 2.6 (p. 37) • Figure 2.7 (p. 39) • Figure 3.1 (p. 47) • Figure 3.2 (p. 49) • Figure 3.3: Public Streets Network (p. 57) • Figure 3.4: Parks and Open Space (p. 64) • Figure 3.10: Conceptual Plan – Candlestick Point State Recreation Area (p. 72) • Figure 4.1: Development Blocks (p. 77) • Figure 4.2: Land Use Districts (p. 79) • Figure 4.3: Building Heights (p. 85) • Figure 4.4: Street Wall Conditions (p. 94) • Figure 4.15: On-Street Parking Locations (p. 143) • Figure 5.1: Character Neighborhoods (p. 155) • Figure 5.6: Candlestick Center Illustrative Site Plan (p. 177) • Figure 5.7: Candlestick Center Urban Design (p. 183) • Figure 7.1: Block Plan (p. 201) • Figure 7.2: Building Heights (p. 205) • Figure 7.3: Street Wall Conditions (p. 207) • Figure 7.4: Jamestown Urban Design (p. 209)

Proposed Revision	Existing Provision	Project Document(s) Revision
		• Figure 8.1: Building Heights – Shipyard South R&D Option (p. 214) • Figure 9.3: Candlestick Center Block Plan (p. 228) • Location Plan (p. 35) • Location Plan (p. 50) • Location Plan (p. 51) • Image: Location of Retail Streets (p. 59) • Image: Location of Boulevard Streets (p. 60) • Image: Location of Local Streets (p. 61) • Image: Location of Mid-block Breaks (p. 62) • Image: Location of Alice Griffith Community Park (p. 65) • Image: Location of Candlestick Community Park – Final location to be determined in the future (p. 66) • Image: Location of Bayview Gardens / Wedge Destination Park (p. 67) • Image: Location of Mini-wedge Community Park (p. 68) • Image: Location of Jamestown Hillside Community Park (p. 69) • Image: Location of State Recreation Area and Bay Trail (p. 70) • Location Plan (p. 95) • Location Plan (p. 96) • Location Plan (p. 97) • Location Plan (p. 98) • Location Plan (p. 99) • Location Plan (p. 100) • Location Plan (p. 101) • Location Plan (p. 102) • Location Plan (p. 103) • Location Plan (p. 104)

Proposed Revision	Existing Provision	Project Document(s) Revision
		• Image: Street block orientated at 45° to prevailing winds (p. 106) • Location Plan (p. 150) • Location Plan (p. 151) • Location Plan (p. 156) • Location Plan (p. 164) • Location Plan (p. 174) • Location Plan (p. 184) • Section 5.3.3: Candlestick Center – Urban Design (pp. 194-195) Major Phase 1 Application: • Section 1.1 (pp. 4-5) • Figure 2.1 (p. 10) • Figure 2.2 (p. 12) • Figure 2.3 (p. 14) • Figure 2.4 (p. 17) • Figure 2.5 (p. 18) • Figure 2.6 (p. 19) • Figure 2.7 (p. 20) • Figure 2.8 (p. 21) • Figure 2.9 (p. 22) • Figure 5.1 (p. 36) • Figure 5.2 (p. 37) • Figure 6.1 (p. 40) • Figure 6.2 (p. 42) • Figure 6.3 (p. 43) • Figure 6.4 (p. 44) • Figure 6.5 (p. 45) • Figure 6.6 (p. 46) • Figure 6.7 (p. 47) • Figure 6.8 (p. 48) • Figure 7.1 (p. 54)

Proposed Revision	Existing Provision	Project Document(s) Revision
		• Figure 8.1 (p. 67) • Figure 8.2 (p. 69) • Location Plan (p. 70) • Location Plan (p. 71) • Location Plan (p. 72) • Location Plan (p. 73) • Figure 8.3 (p. 74) • Figure 8.4 (p. 75) • Figure 8.5 (p. 76) • Figure 8.6 (p. 77) • Figure 9.1 (p. 83) • Figure 9.2 (p. 85) • Figure 9.3 (p. 86) • Figure 9.4 (p. 87) • Figure 9.5 (p. 88) • Figure 9.6 (p. 89) • Figure 9.7 (p. 90) • Figure 9.8 (p. 91) • Figure 10.1 (p. 94) • Figure 10.5 (p. 100)
6. Arelious Walker Entry Plaza: Add D4D provisions encouraging a vehicle/pedestrian entry plaza.	D4D: • No existing provisions	D4D • Section 5.3.2 S8 and G5 (p. 182) • Figure 5.7: Candlestick Center Urban Design (p. 183)
7. CP Enter Parking Garage Entry and Curb Cuts Widths: Add D4D provisions to allow garage entry and curb cuts widths up to 50 feet. All one parking garage entry and associated curb cut larger than 27 feet on Ingerson. Provide for a safe and comfortable pedestrian and bicyclist crossing.	D4D: • Section 4.3.1 D, p. 128 – Maximum combined parking & loading entry width 24 ft • Section 4.4.3, p. 152 – Maximum curb cut width 24 ft	D4D: • Section 4.3.1 D: Parking Structure (p. 123) • Section 4.4.3: Loading, Mechanical Equipment and Meters (p. 144) • Section 5.3.2 S7: Parking Structure

Proposed Revision	Existing Provision	Project Document(s) Revision
8. Grocery Store Garage Door and Curb Cut Widths: Add D4D provisions allowing a garage door and curb cut width greater than 27 feet for the grocery store to accommodate a loading dock. Incorporates requirements for screening and design features to ensure a safe and comfortable pedestrian and bicyclist crossing.	D4D: • Section 4.3.1 D (p. 128) – Maximum combined parking & loading entry width 24 ft • Section 4.4.3 (p. 152) – Maximum curb cut width 24 ft	D4D: • Section 5.2.2 G3: Grocery Store (p. 171)
9. Blank Building Facades: Revise D4D provisions to allow blank facades where floor area is below grade or for essential building service area and to avoid blank facades along paseos.	D4D: • Blank facades prohibited.	D4D: • Section 4.3.1: Retail and Mixed Use (p. 116) Major Phase 1 Application: • Section 6.6 (p. 52)
10. Remove Parking Space Dimensions: Remove D4D minimum parking space dimension requirements.	D4D: • Parallel parking spaces shall be a minimum of 7 ft by 22 ft; angled parking spaces shall be a minimum of 9 ft by 18 ft.	D4D: • Section 4.5.2: On-street Parking
11. Cinema and Grocery Store Parking Ratio: Update D4D to include off-street car parking ratios for Cinema and Grocery Store.	D4D: • No existing provisions	D4D: • Table 4.7 (p. 140) Major Phase 1 Application: • Table 8.3 (p. 87) Transportation Plan • Table 9 (p. 60)
12. Hotel Location: Update D4D to reflect new hotel location at the corner of Harney Way and Arelious Walker.	D4D:Hotel in location in middle of CP Center, but indicates the location may move. • Maximum of two curb-cuts allowed on Earl Street or 8th Street for the provision of passage drop off and loading.	D4D: • Section 4.3.1 B: Commercial – Hotel (p. 119) • Figure 5.6: Candlestick Center Illustrative Site Plan (p. 177) • Section 5.3.3 G3: Candlestick Center Urban Design (p. 195) • Figure 5.10: Candlestick Center Urban Design (p. 197)

Proposed Revision	Existing Provision	Project Document(s) Revision
		Major Phase 1 Application: • Section 1.1 (pp. 4-5) • Figure 2.2 (p. 12) • Figure 6.1 (p. 40) • Table 6.1 (p. 41) • Figure 6.6 (p. 45) • Figure 6.7 (p. 46) • Figure 6.8 (p. 47)
13. Width of Pedestrian Path to Water Mews in Mid-Block Breaks: D4D provision added to require a minimum 10 foot width for pedestrian path to water mews.	D4D: • No existing provisions	D4D: • Section 4.6.2: Mid-block Breaks (p. 147)
14. Alice Griffith Outdoor Seating: Add D4D provision to encourage outdoor seating in large sidewalk areas at the northern and southern ends of Egbert Avenue.	D4D: • No existing provisions	D4D: • Section 5.1.1: Alice Griffith General Description (p. 158)
15. Alice Griffith Setbacks: 9 foot setback to apply at Alice Griffith to properties fronting Donner Avenue, Fitzgerald Avenue and G Street	D4D: • 10 foot setback	D4D: • Section 5.1.2 S4: Setbacks to Donner Avenue, Fitzgerald Avenue & G Street
16. Wedge Park Phasing: Accelerate development of Wedge Park 2a to Major Phase 1. Wedge Park 2b would remain in Major Phase 2.	Major Phase 1 Application: • Figure 2.9	Major Phase 1 Application: • Section 2.5 (p. 22-23) • Figure 2.9 (p. 22)
17. Timing and Grading for Jamestown Avenue Improvements: Reconstruction of Jamestown Avenue will end approximately 1,000 feet sooner than originally contemplated in order to avoid significant grade differences between the road and adjoining properties. Resurfacing of this section of roadway will be occur in Major Phase 2 along with the resurfacing of Jamestown to Third Street originally planned for Major Phase 2.	Major Phase 1 Application: • Figure 2.9 Infrastructure Plan: • Section 2.1.3.C (no changes required)	Major Phase 1 Application: • Section 2.5 (p. 22-23) • Figure 2.9 (p. 22)

18. Bulb-outs: Several bulb-outs along Ingerson and Harney have been removed to accommodate SFFD and SFPUC concerns.	CP Streetscape Master Plan: • Figure 5.3 • Figure 5.4	Major Phase 1 Application: • Section 1.1 (pp. 4-5) CP Streetscape Master Plan: • Figure 5.4 • Figure 5.5
19. Adjustment to CP-04 Boundary: The block depth in CP-04 would be increased to accommodate townhomes and this would adjust the boundary of CP-04 approximately 100 feet southeast.	Major Phase 1 Application: Major Phase 1 Application: • Section 1.1 • Figure 2.1 • Figure 2.2 • Figure 2.3 • Figure 2.4 • Figure 2.5 • Figure 2.6 • Figure 2.7 • Figure 2.8 • Figure 2.9 • Figure 5.1 • Figure 5.2 • Figure 6.1 • Figure 6.2 • Figure 6.3 • Figure 6.4 • Figure 6.5 • Figure 6.6 • Figure 6.7 • Figure 6.8 • Figure 7.1 • Figure 8.1 • Figure 8.2 • Figure 8.3 • Figure 8.4 • Figure 8.5 • Figure 8.6 • Figure 9.1 • Figure 9.2	Major Phase 1 Application: • Section 1.1 (pp. 4-5) • Figure 2.1 (p. 10) • Figure 2.2 (p. 12) • Figure 2.3 (p. 14) • Figure 2.4 (p. 17) • Figure 2.5 (p. 18) • Figure 2.6 (p. 19) • Figure 2.7 (p. 20) • Figure 2.8 (p. 21) • Figure 2.9 (p. 22) • Figure 5.1 (p. 36) • Figure 5.2 (p. 37) • Figure 6.1 (p. 40) • Figure 6.2 (p. 42) • Figure 6.3 (p. 43) • Figure 6.4 (p. 44) • Figure 6.5 (p. 45) • Figure 7.1 (p. 54) • Figure 8.1 (p. 67) • Figure 8.2 (p. 69) • Location Plan (p. 70) • Location Plan (p. 71) • Location Plan (p. 72) • Location Plan (p. 73) • Figure 8.3 (p. 74) • Figure 8.4 (p. 75) • Figure 8.5 (p. 76) • Figure 8.6 (p. 77) • Figure 9.1 (p. 83)

	• Figure 9.3 • Figure 9.4 • Figure 9.5 • Figure 9.6 • Figure 9.7 • Figure 9.8 • Figure 9.9 • Figure 9.10 • Figure 10.1 • Figure 10.5 • Various Location Plans	• Figure 9.2 (p. 85) • Figure 9.3 (p. 86) • Figure 9.4 (p. 87) • Figure 9.5 (p. 88) • Figure 9.6 (p. 89) • Figure 9.7 (p. 90) • Figure 9.8 (p. 91) • Figure 10.1 (p. 94) • Figure 10.5 (p. 100)
20. Performance Venue Modification: The CP Center performance venue square footage would be divided between two locations. Approximately 42,000 square feet would be located at Harney Way and Ingerson for a 1,200 seat Film Arts Center and approximately 33,000 square feet would be located on the lot with the hotel at the corner of Arelious Walker and Harney Way.	Major Phase 1 Application: • Section 2.2 • Table 2.1 • Figure 2.2 • Table 6.1 • Figure 6.1 • Figure 6.6 • Figure 6.7 • Figure 6.8 • Depicts the 75,000 sf arena / performance venue entitlement Transportation Plan: • Table 2, p. 3 • Table 4, p. 20 • Table 14, p. 64	Major Phase Application: • Section 2.2 (p. 11) • Figure 2.2 (p. 12) • Figure 6.1 (p. 40) • Table 6.1 (p. 41) • Figure 6.6 (p. 45) • Figure 6.7 (p. 46) • Figure 6.8 (p. 47) Transportation Plan: • Table 2, p. 3 • Table 4, p. 20 • Table 14, p. 64
21. Street Width Changes: The width of right-of-ways at Candlestick Point were widened to ensure a 26 foot unobstructed access for SF Fire Department vehicles.	Transportation Plan: • Arelious Walker Drive between Ingerson Avenue and Gilman Avenue – 113 foot right-of-way • Arelious Walker Drive between Ingerson Avenue and Harney Way – 109 foot right-of-way • B Street – 51 foot right-of-way • Gilman Avenue, east of Harney Way – 51 foot right-of-way	Major Phase 1 Application: • Section 1.1 (pp. 4-5) • Section 8.2 (pp. 70-73) Transportation Plan: • Arelious Walker Drive between Ingerson Avenue and Gilman Avenue – 84 foot right-of-way • Arelious Walker Drive between Ingerson Avenue and Harney Way

	• Harney Way between Egbert Avenue and Donner Avenue – 58 foot right-of-way • Ingerson Avenue between Harney Way and West Harney Way – 51 foot right-of-way	• B Street – 56 foot right-of-way • Gilman Avenue, east of Harney Way – 59 foot right-of-way • Harney Way between Egbert Avenue and Donner Avenue – 78.5 foot right-of-way • Ingerson Avenue between Harney Way and West Harney Way – 70 foot right-of-way
22. Building Height Percentages for Blocks with Multiple Height Zones: Clarify building height massing for blocks with multiple height zones by including a percentage of the developable block area that the higher height zone(s) cannot exceed.	D4D: • No existing provision	D4D: • Section 4.2.2 • Figure 4.3
Tier 3: Editorial Revisions to the D4D, Streetscape Plan, and Major Phase 1 Application		
1. D4D Updates/Approvals Since 2010: Remove reference to stadium, reflect implementation of Variant 2A, updates to reflect changes analyzed in Addendum 1, add certain mitigation measures from the FEIR, add neighborhood retail parking ratio previously approved in Transportation Plan, and other similar revisions documented in attached change log sheet.	Refer to detailed attachment	D4D: • Refer to attached change logs
2. D4D Relocation of Text: Jamestown provisions consolidated in new section 7. Shipyard South R&D variant consolidated in new section 8. Block plans moved from section 5 to the Appendix.	Refer to detailed attachment	D4D: • Refer to attached change logs
3. Clarifying Changes to Text, Tables, Figures, and Images in D4D: Clarify descriptions of project elements, interpretations of certain standards, add cross-reference, update text and graphics to reflect current plan, delete repetition, add definitions and other minor changes that do not affect the location, type, density, or intensity of the development. See attached change log sheet.	Refer to detailed attachment	D4D: • Refer to attached change logs
4. Updates and Edits to the Streetscape Master Plan: See attached change log sheet, including street furnishings and paving selections and the substitution of a deciduous rather than coniferous trees.	Refer to detailed attachment	Streetscape Master Plan: • Refer to attached change logs
5. Updates and Edits to the Major Phase 1 Application: See attached change log sheet, including update of Affordable Housing from 1025 units to 1560 units.	Refer to detailed attachment	Major Phase 1 Application: • Refer to attached change logs

Notes:

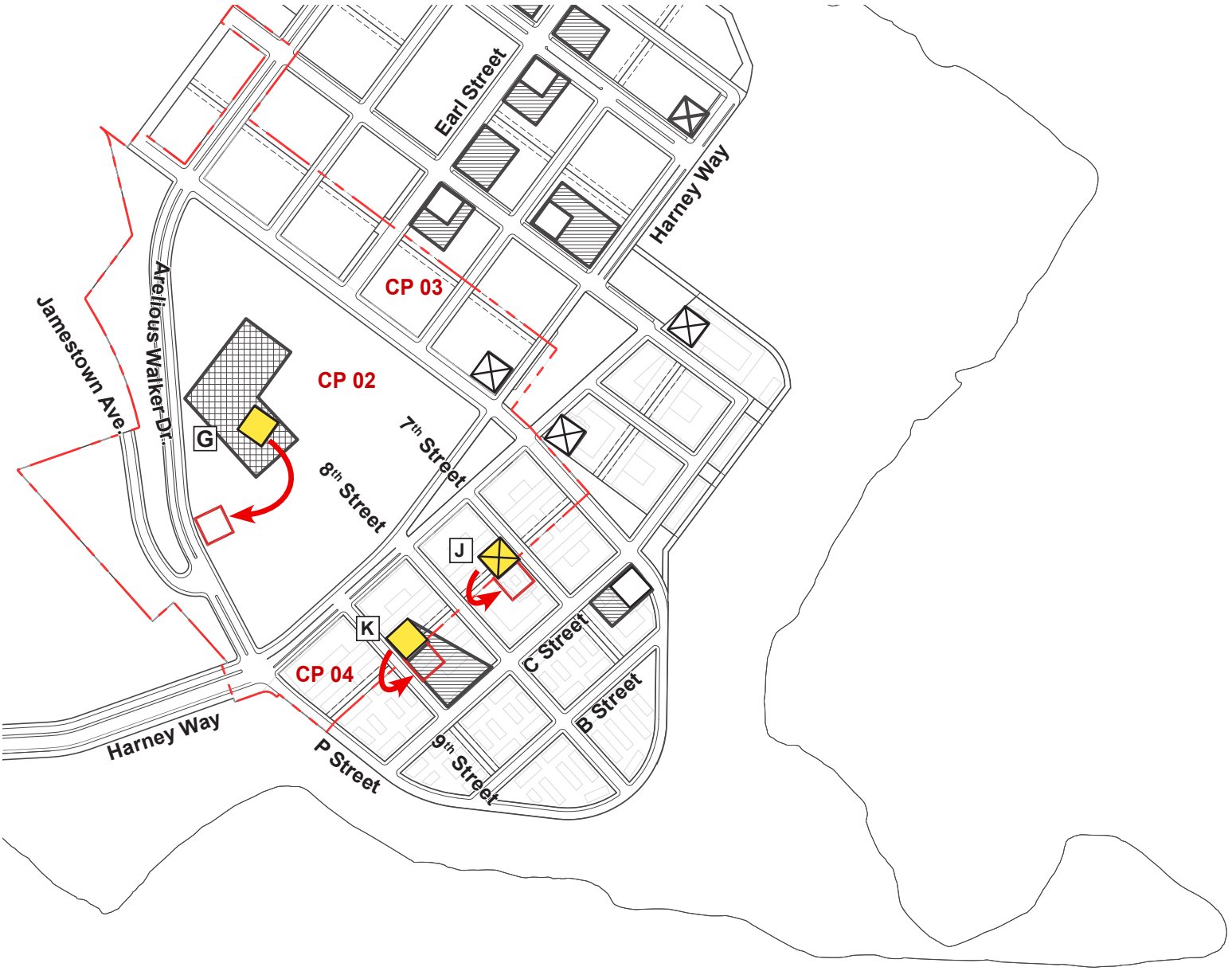
1. The Transportation Plan and Infrastructure Plan were updated in July 2014 to reflect modifications to street cross sections and these modifications were approved by the San Francisco Municipal Transportation Agency (8/3/14 letter from Edward Reiskin, Director of Transportation).\, San Francisco Public Utilities Commission (11/ 7/ 2014 letter from Michael Carlin, Deputy General Manager), and the San Francisco Fire Department (7/31/2014 letter from Joanne Hayes-White) in accordance with the approval process in the Interagency Cooperation Agreement.

2. As part of approval, obtain authority to update as necessary the FEIR tables and figures for the non-stadium variant 2a.

Exhibit C: Tower Location Analysis

Candlestick Point Design For Development _ Figure 4.3 Building Heights

August 05, 2015



Legend

- Fixed high-rise location
- Encouraged high-rise location
- Allowable high-rise location zone
- Proposed high-rise location, 2015
- CP 02-03-04 SUB-PHASE BOUNDARY

Exhibit D: Candlestick Center Mixed Use Height Visuals

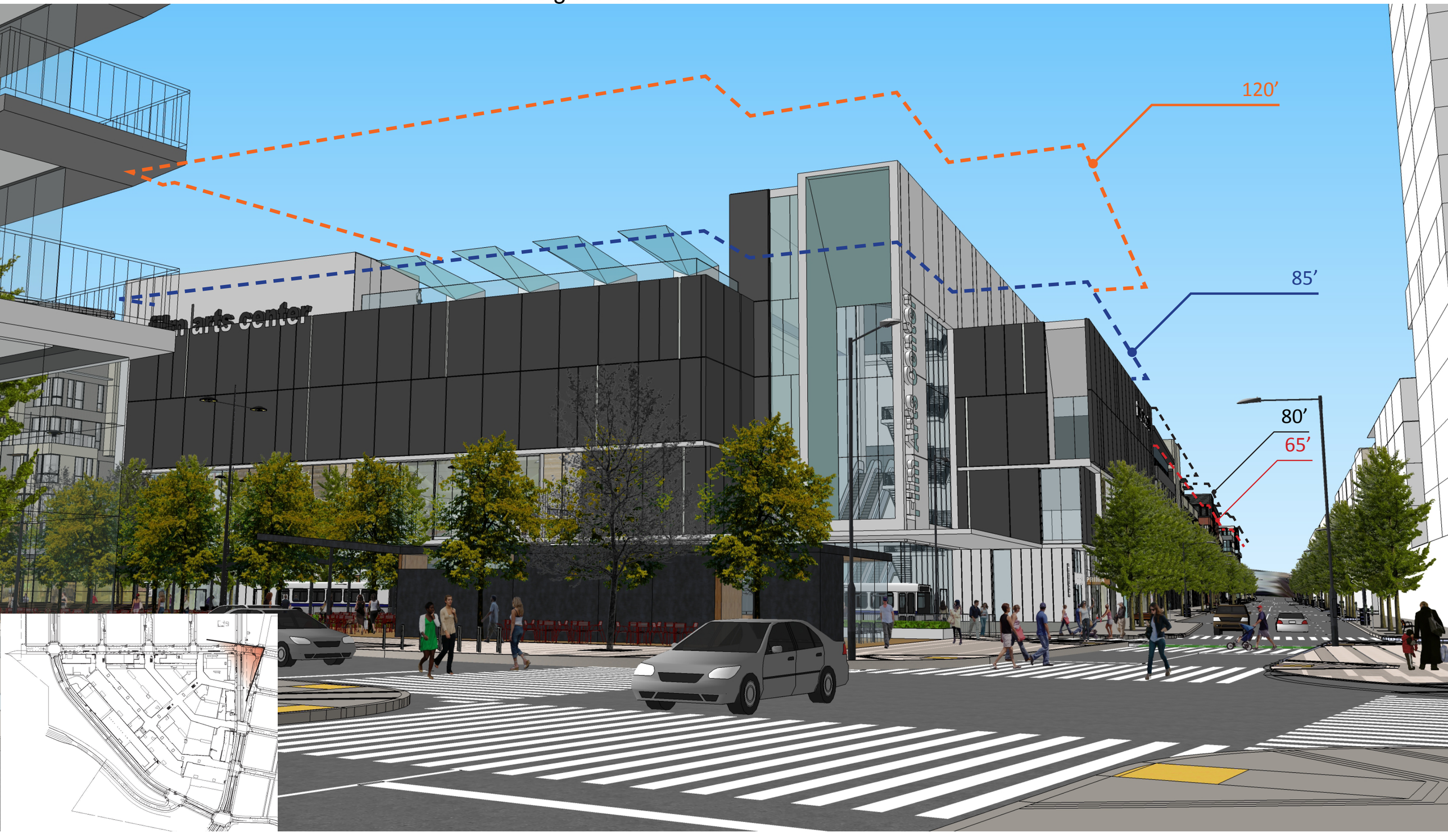


Exhibit D: Candlestick Center Mixed Use Height Visuals

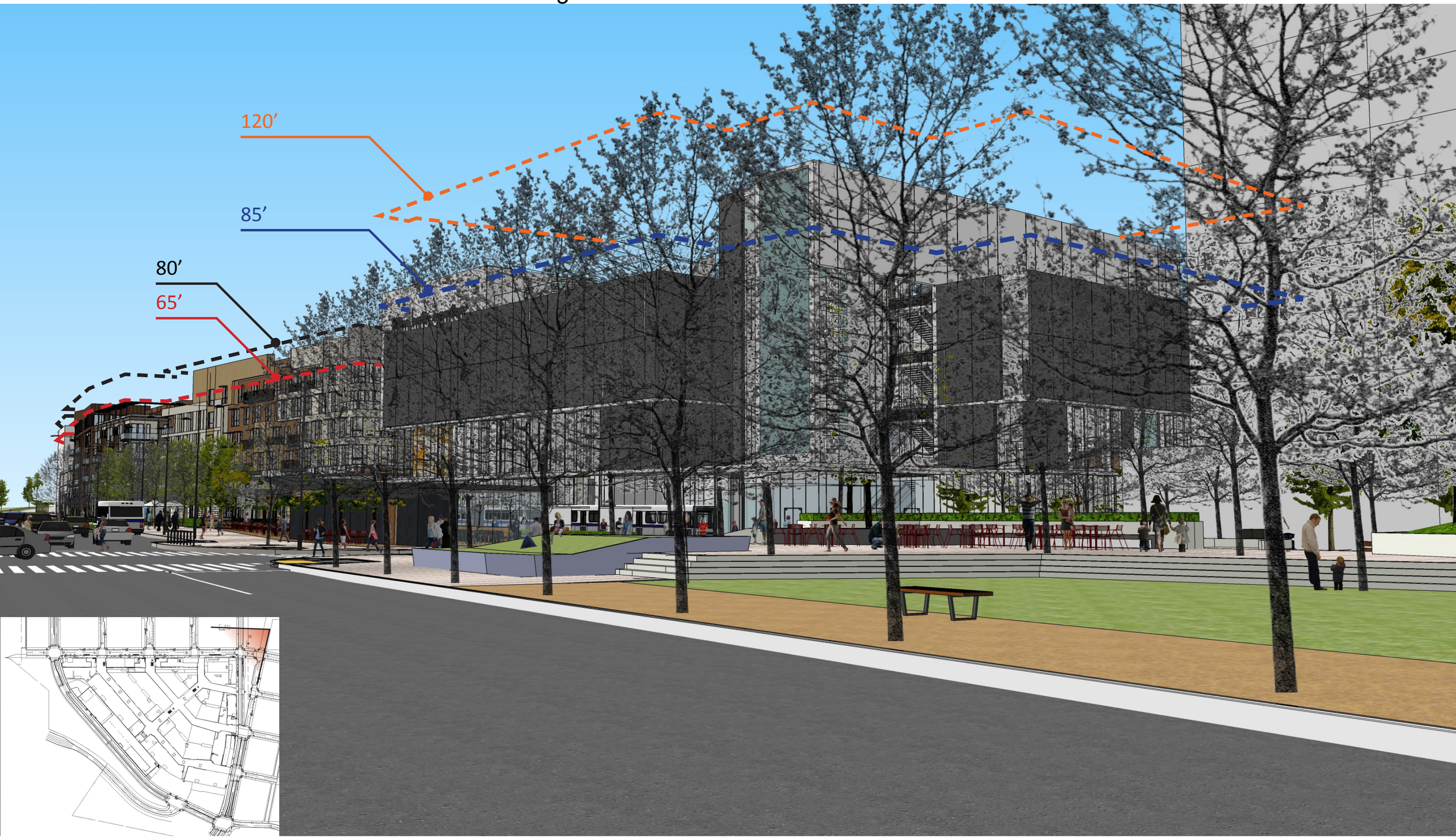


Exhibit D: Candlestick Center Mixed Use Height Visuals

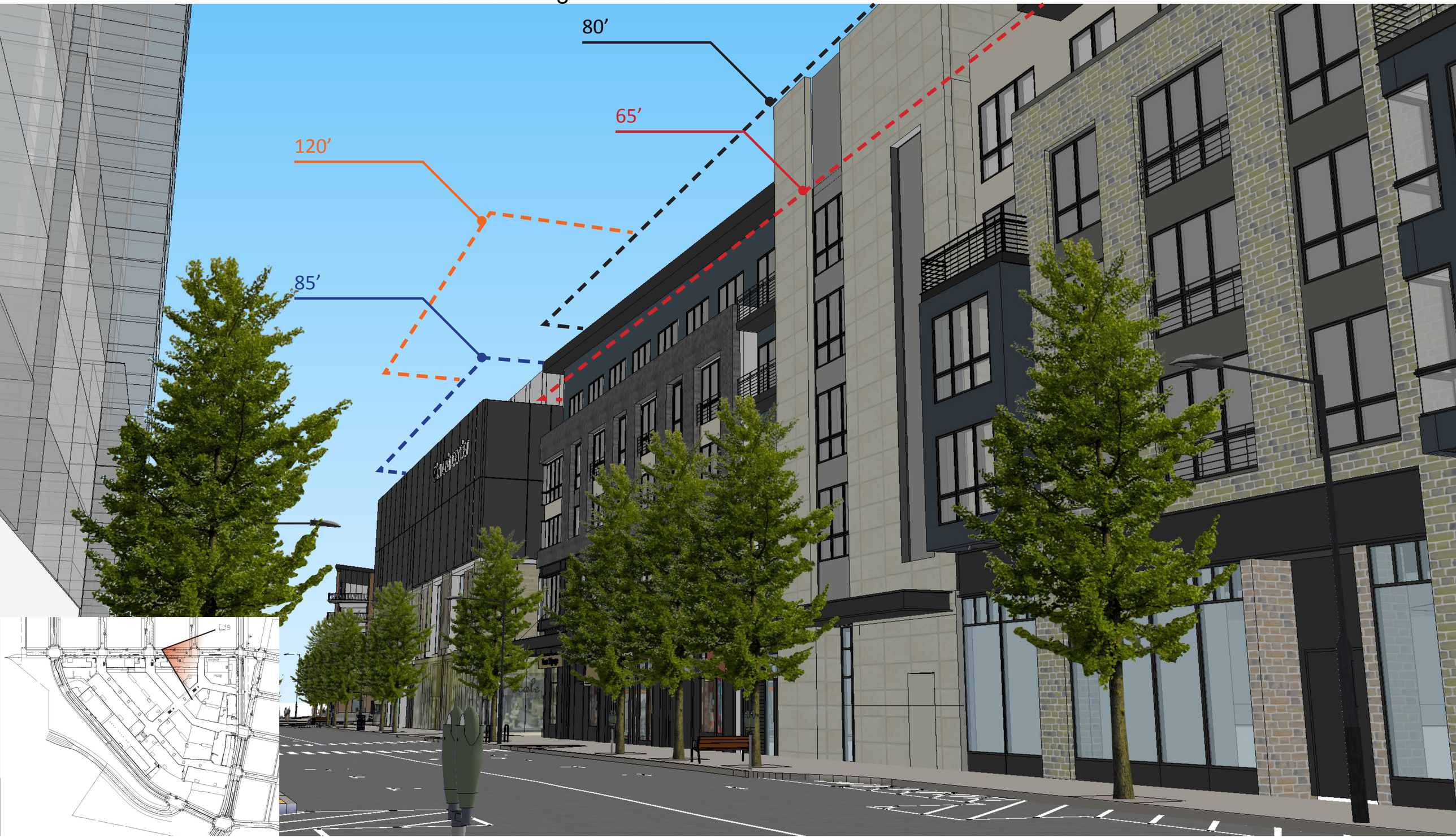


Exhibit E: Candlestick Center Hotel Height Visual

Proposed building height at 71'-0"

80'-0" Height Outline

Proposed building height at 63'-0"

65'-0" Height Outline

Stepback 20% occurs above 20'-6"

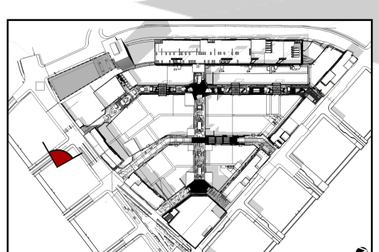


Exhibit E: Candlestick Center Hotel Height Visual

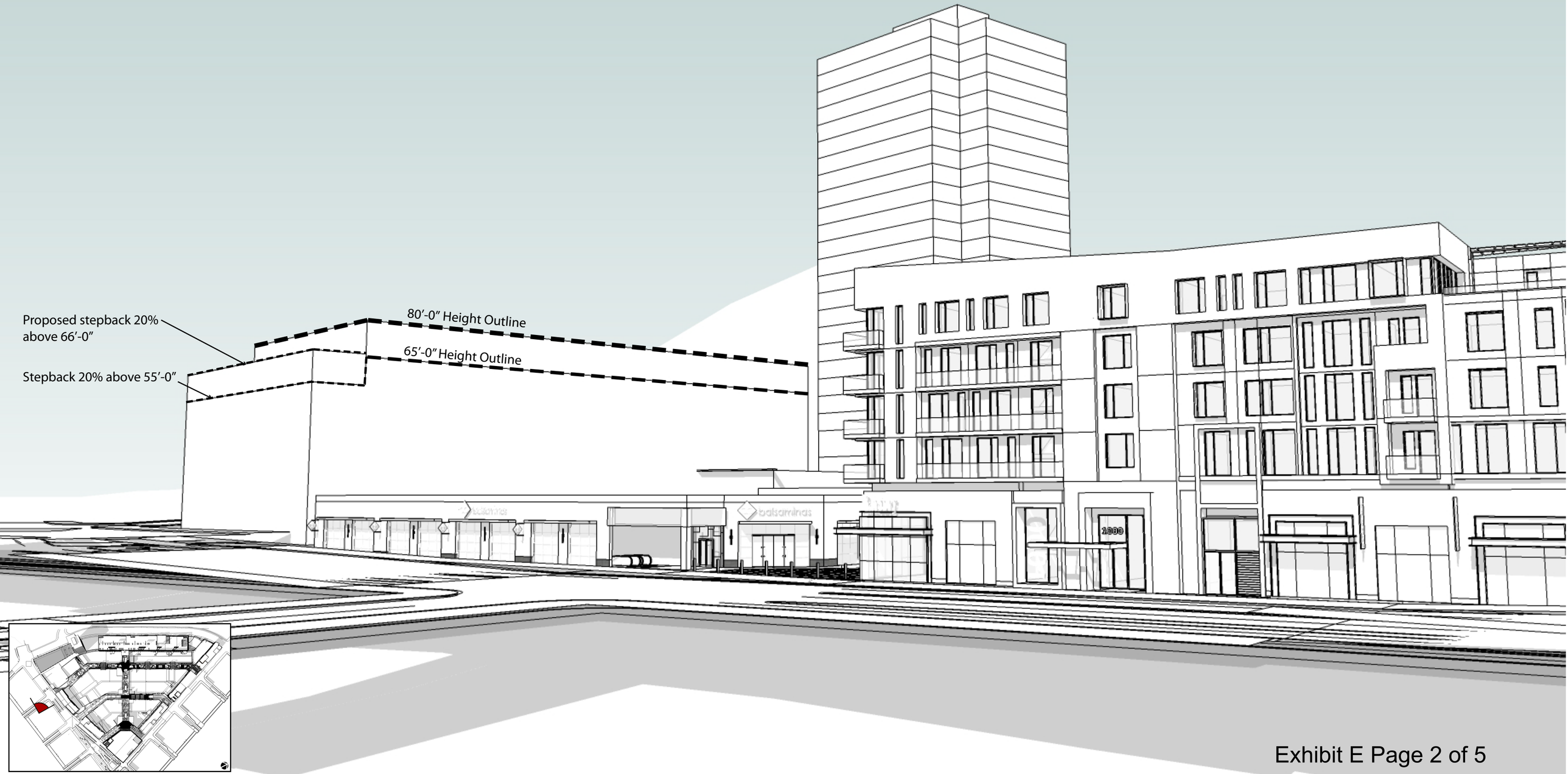
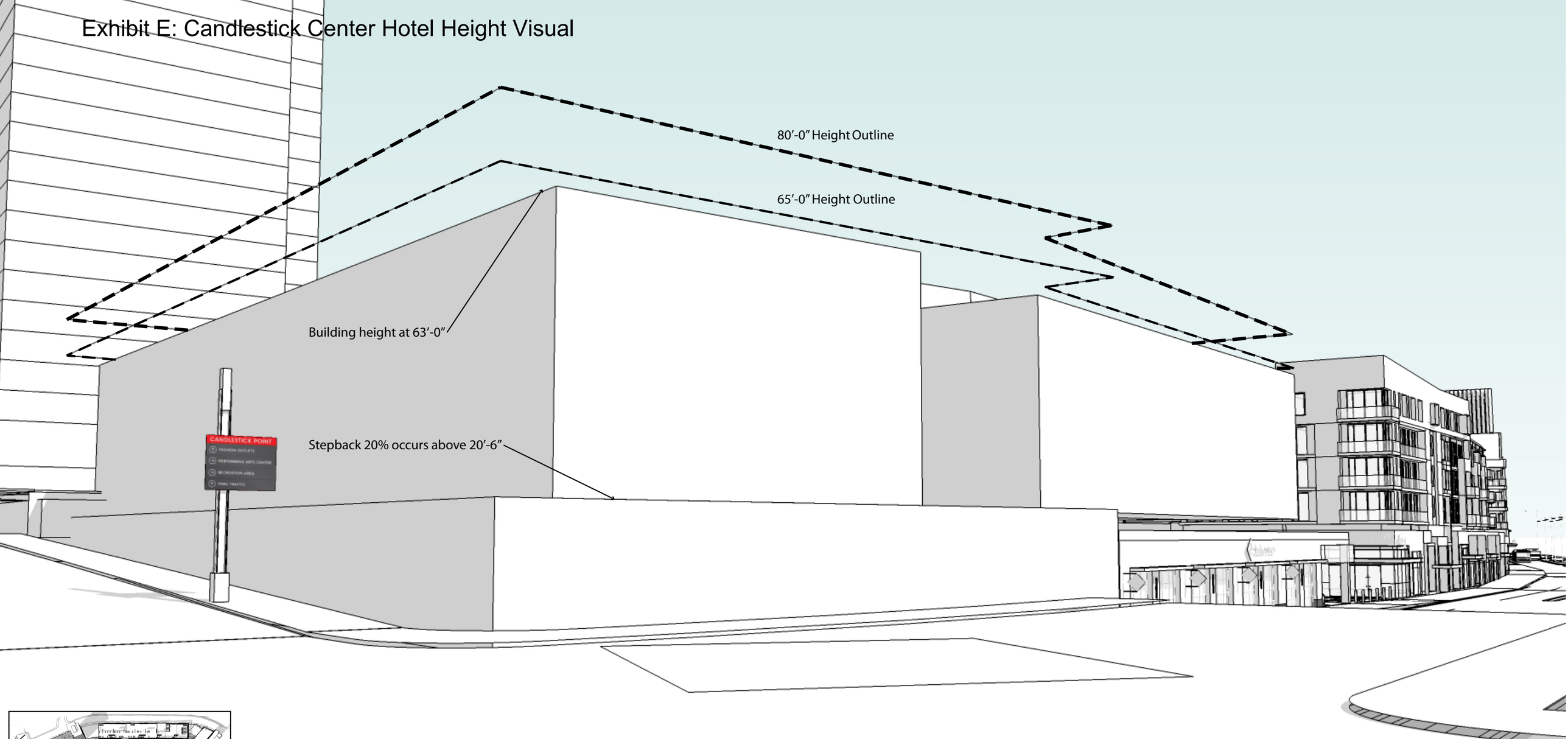


Exhibit E: Candlestick Center Hotel Height Visual



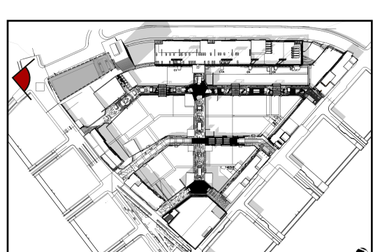
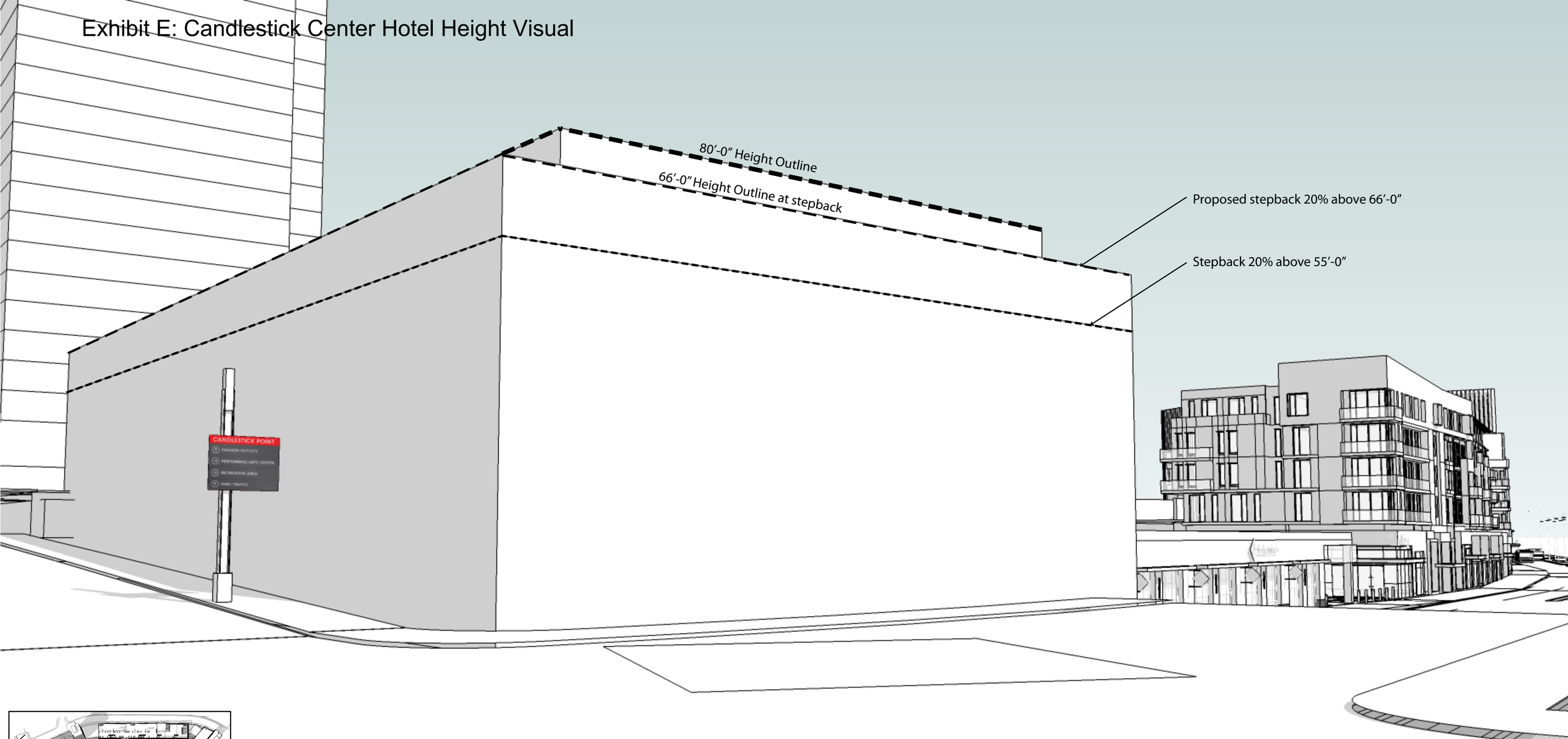


Exhibit E: Candlestick Center Hotel Height Visual



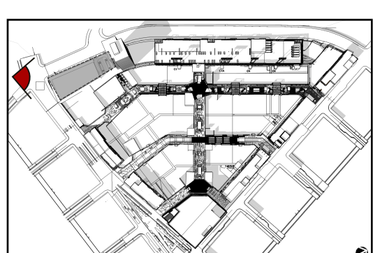
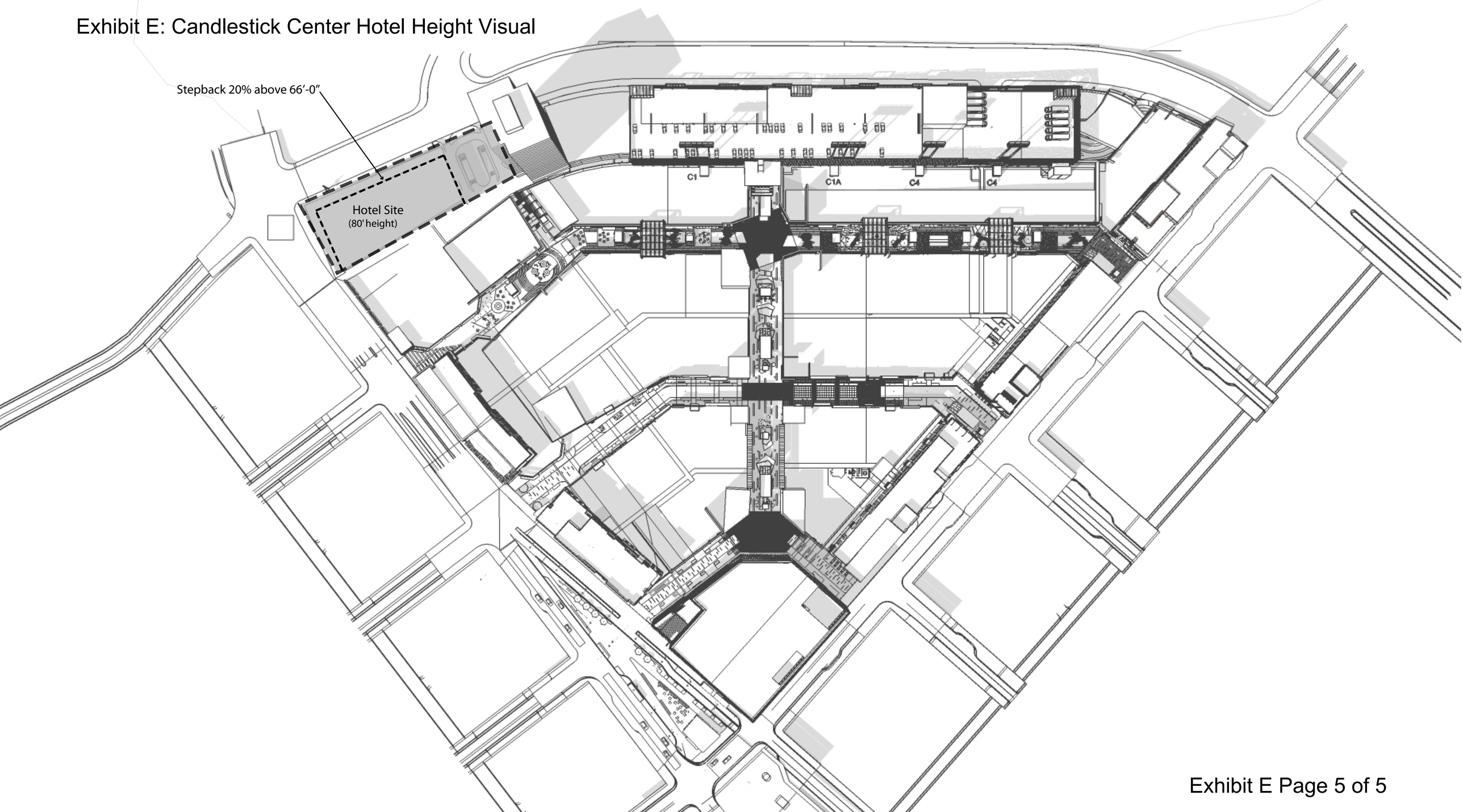


Exhibit E: Candlestick Center Hotel Height Visual



June 25, 2015 *(Updated December 14, 2015)*

Ms. Joy Navarette
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

Ms. Lila Hussain
Office of Community Investment and Infrastructure
One South Van Ness, 5th Floor
San Francisco, CA 94103

Subject: Candlestick Point – Office to Local Serving Retail Conversion

Dear Joy and Lila,

The *Candlestick Point/Hunters Point Shipyard Phase II Project Final EIR* (herein referred to simply as "EIR") was certified by the San Francisco Planning Commission and the San Francisco Redevelopment Commission in June 2010. Since that time, the Housing/R&D Variant (Variant 2A) has been advanced as the project. Variant 2A assumed the Candlestick Point site would include:

- 150,000 square feet of office
- 6,225 residential dwelling units (includes replacement of 256 then-existing units at Alice Griffith)
- 635,000 square feet of regional retail
- 125,000 square feet of neighborhood-serving retail
- 220 room hotel
- 50,000 square feet of community-serving uses
- 10,000-seat arena[1]

Since the Project has been approved, the project sponsor has requested that we study the conversion of office to 6,000 square feet of local serving retail.

To maintain the same number of peak hour vehicle trips as was forecasted in the EIR's transportation analysis, the proposed size of office to be converted to neighborhood-serving retail has been based on the number of PM peak hour vehicle trips 6,000 square feet of local

[1] The Draft Sub-Phase CP 02 03 04 Application proposes to replace the arena with a proposed performance venue/nightclub with no more than 5,000 seats. However, since it is uncertain whether this represents a negligible change in the project, or whether that must undergo a separate review and approval process, this analysis evaluates the currently-approved land uses, which include an arena and not the performance venue.

serving retail space would generate. **Table 1** documents the number of PM peak hour vehicle trips. The PM peak hour was chosen for this analysis because it represents the period when the retail space would be most active. As shown, based on the rates used in the EIR, 6,000 square feet of local serving retail would generate 19 peak hour trips. The same number of trips would be generated by 15,500 square feet of office space. Therefore, the proposed change would result in a total of 131,000 square feet of local serving retail and 134,500 square feet of office at the Candlestick Point site.

TABLE 1: OFFICE TO NEIGHBORHOOD-SERVING RETAIL CONVERSION

Land Use	Size (ksf)	PM Peak Hour Trip Rate[1]	PM Peak Hour Trips
Local Serving Retail	6	3.22	19
Office	15.5	1.25	19

Notes:

1. Based on the effective vehicle trip generation rate used in the EIR, accounting for some internalization of trips that may occur within the development. This provides a conservative assumption by lowering the "credit" for external trip generation associated with the office and by using a "blended" rate for retail, which includes local serving and regional retail, resulting in a higher rate than simply using the effective rate for local serving retail only.

Fehr & Peers, 2015

For questions or comments please contact Chris Mitchell or Sarah Nadiranto.

Sincerely,

FEHR & PEERS

Chris Mitchell, PE
Principal

Sarah Nadiranto, PE
Transportation Engineer

SF08-0407

January 22, 2016

Ms. Joy Navarette
San Francisco Planning Department
1650 Mission Street, 4th Floor
San Francisco, CA 94103

Subject: Candlestick Point / Hunters Point Shipyard Phase II
Revised Parking Ratio Assessment (SF08-0407)

Dear Joy:

As you know, the Candlestick Point/Hunters Point Shipyard Phase II Redevelopment Plan EIR was certified in July 2010. The Project's Transportation Plan and EIR outlined specific maximum off-street parking supply ratios that could be constructed associated with various land uses. The Project's EIR also included a discussion of forecasted peak parking demand and a forecast of the on- and off-street parking supply that would be constructed if the maximum amount of on- and off-street parking were constructed.

Since that time, as project plans and details have been developed, the amount of on-street parking has been substantially reduced compared to what was described in the EIR to accommodate better clearance for emergency vehicles as well as the sidewalk amenities that will be provided (e.g., fire hydrants, transit stops and shelters, ADA facilities, etc.) where parking may be precluded. Further, the proposed off-street parking supply has been modified to reflect more specific land use development proposals. Because of this reduction in the overall amount of parking, the project sponsor has requested additional spaces be provided in the parking structure for the CP Retail Center equal to the number of off-street parking spaces that have been removed from the plan. The purpose of this letter is to describe the effect that this change would have on the analysis described in the Project's EIR.

On-Street Parking Supply

As part of the application for construction of CP-02-03-04, the project's street plans have been designed to a greater level of detail than available when the original EIR analysis was performed. The more detailed designs have resulted in a reduction from the original estimates of on-street parking. For those streets proposed to be constructed as part of CP 02-03-04, the original EIR estimates assumed that 430 on-street parking spaces could be constructed. Design considerations such as ADA design standards, fire hydrants, and utility equipment, would limit the number of on-street parking spaces and result in decreasing on-street parking supply from 430 to 161 parking spaces (a decrease of 269 parking spaces) just for those streets that comprise CP 02-03-04. This represents a reduction in overall parking supply at Candlestick Point compared to what was assumed in the EIR.

Off-Street Parking Supply

The project sponsor is currently in the application process for Sub-phases CP-02-03-04. Table 1 presents the maximum amount of off-street parking supply permitted as part of CP-02-03-04 based on the original 2010 plan for Variant 2A as described in the EIR. The maximum off-street parking supply was calculated by multiplying the maximum parking ratios in the project's Transportation Plan and Design for Development document by the total amount of approved development by land use type.

The current application for CP-02-03-04 includes some refinements to the land uses within the CP Center, including:

- replacing 15.5 ksf of office space with 6 ksf of local serving retail
- the addition of a grocery store (which is considered part of the local-serving retail square footage already approved)
- the change from the originally contemplated arena to a smaller performance venue and movie theater, and
- the addition of 540 more housing units in this sub-phase (with a corresponding decrease in housing units to be supplied in future sub-phases, such that the total number of residential units in Candlestick Point remains the same).

For the cinema and grocery store, current Planning Code ratios from Planning Code Table 151.1 are applied. In the case of the grocery store, the current Planning Code ratio is the same as the ratio for regional retail. The Project Sponsor also requests that the loss of the 269 on-street parking spaces be supplied in the CP Center garage. Table 2 summarizes the proposed new parking calculation:

TABLE 1 CALCULATION OF MAXIMUM PERMITTED SUPPLY AT CP-02-03-04 (ORIGINAL 2010 PLAN)

Land Use	Proposed Amount	Maximum Supply Rate	Maximum Number of Spaces
Non-Residential Parking – CP Center (2010 Plan)			
Office	150 ksf	1 space / ksf	150 spaces
Hotel	220 rooms	0.25 spaces / room	55 spaces
Performance Arena	10,000 seats	1 space / 15 seats	667 spaces
Regional Retail	635 ksf	2.7 spaces / ksf	1,715 spaces
Local-Serving Retail	125 ksf	1 space / ksf[1]	125 spaces
		Non-Residential Subtotal	*2,712 spaces*
Residential Parking – CP Center (2010 Plan)			
Housing Units – CP Center	280	1 space / unit	280 spaces
Housing Units – Elsewhere in Subphase	745	1 space / unit	745 spaces
		Residential Subtotal	*1,025 spaces*
		Grand Total	***3,737 spaces***

1. The Design for Development document states that parking for local-serving retail would be "shared with" parking for regional retail; however, it does not include a specific rate. The project's Transportation Plan and EIR transportation analysis was based on a maximum rate of 1 space per 1,000 square feet for local-serving retail. Therefore, that ratio is used in this calculation.

TABLE 2 CALCULATION OF MAXIMUM PERMITTED SUPPLY AT CP-02-03-04 (REVISED 2015 PLAN)

Land Use	Proposed Amount	Maximum Supply Rate[1]	Maximum Number of Spaces
CP Center Parking (Retail/Entertainment)			
Regional Retail	635 ksf	2.7 spaces / ksf	1,715 spaces
Local Serving Retail	96 ksf[2]	1 space / ksf	96 spaces
Office[3]	134.5 ksf	1 space / ksf	35 spaces
International African Market Place and CPSRA Welcome Center	8 ksf	1 space / 2 ksf	4
Performance Venue	4,400 seats/standing (33 ksf)	1/15 seats[4]	147 spaces
Movie Theater	1,200 seats (42 ksf)	1/8/10 seats[5]	145 spaces
Lost On-Street Parking Spaces			269 spaces
		Subtotal for Retail/Entertainment Uses	*2,411 spaces*
CP Center Residential & Community Services Parking			
Harney/Ingerson Housing	265 units	1 space / unit	265 spaces
SFPD	1 ksf	1 / 2 ksf	1
		Subtotal for CP Center Residential & Community Services Uses	*266 spaces*
Other CP 02-03-04 Uses Provided Separately by Site Developers			
Community Uses (e.g. Fire Station/School)	41 ksf	1 / 2 ksf	21
Grocery	35 ksf	2.7 / 1 ksf	95
Residential Tower at CP Center	220 units	1 space / unit	220 spaces
Other Residential	1,080 units	1 space / unit	1,080 spaces
Hotel	220 rooms	0.25 spaces / room	55 spaces
Office Parking to be made available to future development sites on CP[3]			100 spaces
		Subtotal CP 02-03-04 Uses Provided Separately by Site Developers	*1,570 spaces*
		Grand Total[6]	***4,246 spaces***

TABLE 2 CALCULATION OF MAXIMUM PERMITTED SUPPLY AT CP-02-03-04 (REVISED 2015 PLAN)

1. Some maximum rates have been revised from what was in the 2010 Transportation Plan, based on more specificity in proposed uses now compared to 2010. Detailed explanation for the revisions is included in the Subphase CP-02-03-04 Application.
2. Includes originally-approved 125 ksf of local-serving retail, less 35 ksf grocery store (which are considered a part of the local-serving retail) plus additional 6 ksf of local-serving retail proposed as a result of eliminating 15.5 ksf of approved office space (see letter to Planning Department and OCII, dated June 25, 2015).
3. Office parking shared with retail and entertainment. Number of parking spaces within the structure is reduced by approximately 75% (from 135 spaces to 35 spaces). The balance of entitled parking (100 spaces) will be made available for future development sites on Candlestick Point, provided by the site developer(s).
4. Assumes performance venue patrons will share parking with retail patrons. Reduce maximum number of spaces by half.
5. 1/8/10 seats = 1 parking space / 8 seats up to 1,000 seats + 1 parking space / 10 seats above 1,000 seats
6. Grand total excludes car-share parking spaces. A total of 50 car-share parking spaces will be in the CP Center parking structure and an additional 9 spaces will be provided separately by site developers, totaling 63 car-share spaces.

The revised proposed land uses and off-street parking supply for CP-02-03-04 would yield up to 509 more off-street parking spaces in this sub-phase than if the original land uses and parking ratios were used. However, the 2010 original plan did not account for the 25 Community Uses parking spaces and the grocery store, considered a local serving use, is now using a higher parking rate (2.7 parking space / 1 ksf compared to 1 parking space / 1 ksf). When adjusted for the fact that this sub-phase includes 540 additional housing units and their associated spaces (which are simply being relocated into this sub-phase from another future sub-phase, and do not affect the overall site total), the proposed parking supply would be nearly identical to the amount of off-street spaces previously proposed at the same time that the on-street parking supply has also been reduced by 269 spaces. In fact, the revised 2015 parking supply is less than the 2010 total with the added 540 housing units by approximately 30 parking spaces.

Given that further reductions to the on-street parking supply are likely as additional more detailed plans are developed for future sub-phases, we expect the overall on- and off-street parking supply to be lower than what was contemplated in the 2010 EIR. The reduction to overall parking supply would not result in new significant impacts nor would it substantially worsen any significant impacts identified in the EIR. If anything, fewer people would drive to the site and transit capacity is adequate to accommodate minor increases associated with less driving, if that were to materialize. The relocation of on-street parking does not affect the total trips generated or trip patterns assumed in the EIR because the primary paths of travel would remain the same. For questions or comments please contact Chris Mitchell or Sarah Nadiranto at (415) 348-0300.

Sincerely,
FEHR & PEERS

Chris Mitchell, PE
Principal

Sarah Nadiranto, PE
Transportation Engineer

Commission on Community Investment and Infrastructure

RESOLUTION NO. 1-2014
Adopted January 7, 2014

ADOPTING ENVIRONMENTAL FINDINGS PURSUANT TO THE CALIFORNIA ENVIRONMENTAL QUALITY ACT AND APPROVING THE STREETSCAPE PLAN AND THE SIGNAGE PLAN FOR CANDLESTICK POINT AND THE MAJOR PHASE APPLICATION FOR MAJOR PHASE 1 AND CONFORMING CHANGES TO THE PROJECT DOCUMENTS PURSUANT TO THE DISPOSITION AND DEVELOPMENT AGREEMENT WITH CP DEVELOPMENT CO., LP, SUBJECT TO APPROVAL FROM THE AFFECTED CITY DEPARTMENTS AND MAYOR UNDER AND TO THE EXTENT REQUIRED BY THE ICA AND THE PLANNING COOPERATION AGREEMENT; BAYVIEW HUNTERS POINT AND HUNTERS POINT SHIPYARD PROJECT AREAS

WHEREAS, Under Chapter 5, Statutes of 2011, Assembly Bill No. 1X26 (Chapter 5, Statutes of 2011-12, First Extraordinary Session), and Assembly Bill No. 1484 (Chapter 26, Statutes of 2011-12, Regular Session) (collectively, as amended from time to time, the "Dissolution Law"), the Redevelopment Agency of the City and County of San Francisco ("SFRA" or the "Redevelopment Agency") was dissolved and the non-affordable housing assets and obligations of SFRA were transferred to 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"), by operation of law; and,

WHEREAS, Subsequent to the adoption of AB 1484, on October 2, 2012 the Board of Supervisors of the City, acting as the legislative body of the Successor Agency, adopted Ordinance No. 215-12 (the "Implementing Ordinance"), which Implementing Ordinance was signed by the Mayor on October 4, 2012, and which, among other matters: (a) acknowledged and confirmed that, as of the effective date of AB 1484, the Successor Agency is a separate legal entity from the City, and (b) established the Successor Agency Commission (the "Commission") and delegated to it the authority to (i) act in place of the Redevelopment Commission to, among other matters, implement, modify, enforce and complete the Redevelopment Agency's enforceable obligations, (ii) approve all contracts and actions related to the assets transferred to or retained by the Successor Agency, including, without limitation, the authority to exercise land use, development, and design approvals, consistent with applicable enforceable obligations, and (iii) take any action that the Dissolution Law requires or authorizes on behalf of the Successor Agency and any other action that this Successor Agency Commission deems appropriate, consistent with the Dissolution Law, to comply with such obligations; and,

WHEREAS, The Board of Supervisors' delegation to the Commission includes the authority to grant approvals under specified land use controls for the Candlestick Point and Phase 2 of the Hunters Point Shipyard Project (the "Project"); and,

WHEREAS, In connection with the Project, the Board of Supervisors on August 3, 2010, approved amendments to the Hunters Point Shipyard Redevelopment Plan and the Bayview Hunters Point Redevelopment Plan by ordinances 210-10 and 211-10, respectively (the "Redevelopment Plans"), the SFRA approved the Candlestick Point Design for Development and the Hunters Point Shipyard Phase 2 Design for Development (as more particularly defined in the Phase 2 DDA, the "Design for Development") by Resolution 62-2010 and the SFRA and CP Development Co., LP (as more particularly

defined in the Phase 2 DDA,"Developer") entered into a Disposition and Development Agreement (Candlestick Point and Phase 2 of the Hunters Point Shipyard), dated for reference purposes as of June 3, 2010 (as amended and as the same may be further amended from time to time, the "Phase 2 DDA") by Resolution 69-2010. The Phase 2 DDA was amended on December 18, 2012 by a First Amendment to the Phase 2 DDA, pursuant to OCII Resolution No. 3-2012. Capitalized terms used but not otherwise defined in this Resolution have the meanings ascribed to or provided for them in the Phase 2 DDA; and,

WHEREAS, The Phase 2 DDA establishes Developer's rights to develop within the parameters of the Redevelopment Plans and Design for Development and incorporates through exhibits and attachments various Project Documents including the Design Review and Document Approval Procedure ("DRDAP"), the Below -Market Rate Housing Plan, the Transportation Plan, the Infrastructure Plan, the Community Benefits Plan, the Design for Development, the Parks and Open Space Plan and the Incorporated Sustainability Requirements and Sustainability Goals and other documents (all as more particularly described in the Phase 2 DDA, together, the "Project Documents"); and,

WHEREAS, The Phase 2 DDA is an enforceable obligation under the Dissolution Law and shown on line HPSY 30 of the Recognized Obligation Payment Schedule for January to June 2014, which was approved by the Oversight Board and the California Department of Finance ("DOF"). On December 14, 2012, DOF issued a final and conclusive determination under California Health and Safety Code § 34177.5 (i) that the Phase 2 DDA and the HPS Phase 1 DDA are enforceable obligations that survived the dissolution of the Redevelopment Agency; and,

WHEREAS, The Interagency Cooperation Agreement (Candlestick Point and Phase 2 of the Hunters Point Shipyard) (as more particularly defined in the Phase 2 DDA, the "ICA") between OCII and the City establishes procedures for interdepartmental coordination related to the implementation of the Project. The ICA was executed by the Redevelopment Agency and the City, including by and through the San Francisco Port Commission, the San Francisco Public Utility Commission, the Department of Public Works, the San Francisco Fire Chief and Fire Marshall, the San Francisco Municipal Transportation Agency, the City Administrator, the Controller, the Mayor and the Clerk of the Board of Supervisors, and was consented to by Developer as a third party beneficiary thereof; and,

WHEREAS, The Planning Cooperation Agreement (Candlestick Point and Phase 2 of the Hunters Point Shipyard) (as more particularly defined in the Phase 2 DDA, the "Planning Cooperation Agreement") between OCII and the Planning Department of the City and County of San Francisco establishes procedures for coordination between OCII and the Planning Department related to the implementation of the Project, including with respect to the review and approval of Major Phase Applications; and,

WHEREAS, In accordance with the Phase 2 DDA (including the DRDAP), Developer must submit a Streetscape Plan, a Signage Plan, a Major Phase Application and a Sub-Phase Application before commencing construction on any phase of the Project; and,

WHEREAS, Developer has submitted a Streetscape Plan and a Signage Plan for Candlestick Point and a Major Phase Application for Major Phase 1 (collectively, the "CP Plans"). As part of the submittal of the CP Plans and as contemplated by the Phase 2 DDA, Developer has proposed refinements to the Project Documents that were adopted in 2010, including to the Phasing Plan, the Infrastructure Plan and the Transportation Plan (collectively, the "Project Refinements"). The Project Refinements are

described in Attachment 6A-6N in the OCII memorandum prepared in connection with the approval of this Resolution; and,

WHEREAS, The Signage Plan includes historic content to illustrate how the history of Candlestick Point and Hunters Point Shipyard may be conveyed through signage. Historic narratives reported in interpretive displays signs shall rely on resources such as the Bayview Library's Oral Histories Project and allow for additional community input through a process defined in collaboration with OCII and the Hunters Point Shipyard CAC; and,

WHEREAS, Final approval of the CP Plans and conforming changes to the Project Documents, including the Project Refinements, under this Resolution is subject to approval from the affected City departments and Mayor under and to the extent required by the ICA and the Planning Cooperation Agreement; and,

WHEREAS, OCII staff has determined that the CP Plans are complete under, and are consistent with, the Phase 2 DDA, the Project Documents, and the Redevelopment Plans, with the only modifications to the Project Documents being the Project Refinements; and,

WHEREAS, The affected City departments have completed a thorough review of the CP Plans and conforming changes to the Project Documents, including the Project Refinements, under and in accordance with the ICA and the Planning Cooperation Agreement; OCII staff expects that the CP Plans and conforming changes to the Project Documents, including the Project Refinements, will be approved by the affected City departments under and to the extent required by the ICA and the Planning Cooperation Agreement; and,

WHEREAS, OCII staff seeks approval of the Project Refinements as part of the approval of the CP Plans. Subsequent to the adoption of this Resolution and approval of the CP Plans and conforming changes to the Project Documents, including the Project Refinements, by the affected City departments under and to the extent required by the ICA and the Planning Cooperation Agreement, OCII staff and Developer will make conforming changes to the applicable Project Documents; and,

WHEREAS, Once the CP Plans and conforming changes to the Project Documents, including the Project Refinements, have been approved by the affected City departments under and to the extent required by the ICA and the Planning Cooperation Agreement, the CP Plans and conforming changes to the Project Documents, including the Project Refinements, will be deemed finally approved by the Commission without further action from the Commission; and,

WHEREAS, On June 3, 2010, the SFRA Commission by Resolution No. 58-2010 and the San Francisco Planning Commission by Motion No. 18096, certified the Final Environmental Impact Report ("FEIR") for the Project as adequate, accurate, and objective and in compliance with the California Environmental Quality Act (California Public Resources Code Sections 21000 et seq.) ("CEQA") and the CEQA Guidelines (14 California Code of Regulations Sections 15000 et seq.); the Board of Supervisors affirmed the Planning Commission's certification of the FEIR by Motion No. 10-110 on July 14, 2010; and,

WHEREAS, As part of its approval of the Project on June 3, 2010, in addition to certifying the FEIR, the SFRA Commission, by Resolution No. 59-2010 adopted findings pursuant to CEQA, regarding the alternatives, mitigation measures, and significant environmental effects analyzed in the FEIR, including a Mitigation Monitoring and

Reporting Program and a Statement of Overriding Considerations for the Project, which findings are incorporated into this Resolution by this reference; and,

WHEREAS, Subsequent to the certification of the FEIR, the Planning Department, at the request of OCII and in response to the proposed Project Refinements as part of the first Major Phase and Sub-Phase Applications, issued an addendum to the FEIR ("Addendum No. 1"); and,

WHEREAS, Addendum No. 1 addresses changes to the phasing schedule for the Project and corresponding changes to the schedules for implementation of related transportation system improvements in the Transportation Plan, including the Transit Operating Plan, the Infrastructure Plan and other public benefits; and minor proposed revisions in two adopted mitigations measures, TR-16 Widen Harney Way , and UT-2 Auxiliary Water Supply System; and,

WHEREAS, Mitigation Measure TR-16 Widen Harney Way is proposed to be amended to provide for implementation prior to issuance of the occupancy permit for the Candlestick Point Sub-Phase CP-02, instead of the first grading permit for Major Phase 1 of the Project, and to provide for a two-way cycle track on Harney Way rather than the previously proposed bicycle lane; and,

WHEREAS, Mitigation Measure UT-2 Auxiliary Water Supply System (AWSS) is proposed to be amended to no longer specify a loop system for the AWSS; and,

WHEREAS, Based on the analysis in Addendum No. 1, the Planning Department concludes that the analyses conducted and the conclusions reached in the FEIR on June 3, 2010, remain valid and the proposed Project Refinements and the amendments to the two adopted mitigation measures will not cause new significant impacts not identified in the FEIR, and no new mitigation measures will be necessary to reduce significant impacts; further, other than as described in the Addendum No. 1, no Project changes have occurred, and no changes have occurred with respect to circumstances surrounding the proposed Project that will cause significant environmental impacts to which the Project will contribute considerably, and no new information has become available that shows that the Project will cause significant environmental impacts and, therefore, no supplemental environmental review is required under CEQA beyond the Addendum No. 1 to approve the first Major Phase and Sub-Phase Applications; and,

WHEREAS, OCII staff has reviewed and considered the FEIR, Addendum No. 1, and supporting documentation in preparing necessary findings for the Commission's consideration, and has made the FEIR, Addendum No. 1, and supporting documentation available for review by the Commission and the public and these files are part of the record before the Commission; and,

WHEREAS, Copies of the FEIR and Addendum No. 1 and supporting documentation are on file with the Commission Secretary and are incorporated in this Resolution by this reference; and,

WHEREAS, The FEIR and the CEQA Findings adopted by the SFRA Commission by Resolution No. 59-2010 on June 3, 2010 reflected the independent judgment and analysis of the SFRA Commission, were and, except for the proposed minor amendments to Mitigation Measures TR-16 and UT-2, remain adequate, accurate and objective, and were prepared and adopted following the procedures required by CEQA; and,

WHEREAS, OCII staff has reviewed the CP Plans and finds that they are acceptable and recommends approval of the CP Plans; and,

WHEREAS, As noted above, the Phase 2 DDA is an enforceable obligation under the Dissolution Law. Review and approval of the CP Plans is an implementing action under the Phase 2 DDA; and,

WHEREAS, Under the Phase 2 DDA, Developer is expected to propose Insurance Requirements as part of each Major Phase Application. Developer and OCII staff have substantially completed the Insurance Requirements for Major Phase 1 CP and are in final discussions regarding same, including with their respective insurance consultants. The OCII Director and Developer will agree upon the final Insurance Requirements for Major Phase 1 CP prior to commencement of construction. The Insurance Requirements include the form, amount, type, terms and conditions; and,

WHEREAS, The Hunters Point Shipyard Citizen's Advisory Committee ("CAC"), the Alice Griffith Tenants, and the Bayview Hunters Point community generally have participated in the review of the CP Plans through a series of workshops held at Alice Griffith, the Hunters Point Shipyard and the Southeast Community Facility; and,

WHEREAS, The CAC, at its meeting of December 9, 2013 reviewed and endorsed the CP Plans and conforming changes to the Project Documents, including the Project Refinements; now, therefore, be it

RESOLVED, That the Commission has reviewed and considered the FEIR, together with Addendum No. 1 and any additional environmental documentation in the OCII's files, and adopts the CEQA Findings set forth in 59-2010 and amends them to incorporate the minor modifications to the Mitigation Measures TR-16 and UT-2, as set forth in Addendum 1 and in these findings as follows:

MM TR-16 Widen Harney Way as shown in Figure 5 in the Transportation Study. Prior to issuance of the ~~*grading*~~ *occupancy* permit for ~~*Development Phase 1 of the Project,*~~ *Candlestick Point Sub-Phase CP-02,* the Project Applicant shall widen Harney Way as shown in Figure 5 in the Transportation Study, *with the modification to include a two-way cycle track, on the southern portion of the project right of way*. Prior to the issuance of grading permits for *Candlestick Point Major* Phases 2, 3 and 4, the Project Applicant shall fund a study to evaluate traffic conditions on Harney Way and determine whether additional traffic associated with the next phase of development would result in the need to modify Harney Way to its ultimate configuration, as shown in Figure 6 in the Transportation Study, unless this ultimate configuration has already been built. This study shall be conducted in collaboration with the SFMTA, which would be responsible for making final determinations regarding the ultimate configuration. The ultimate configuration would be linked to intersection performance, and it would be required when study results indicate intersection LOS at one or more of the three signalized intersection on Harney Way at mid-LOS D (i.e., at an average delay per vehicle of more than 45 seconds per vehicle). If the study and SFMTA conclude that reconfiguration would be necessary to accommodate traffic demands associated with the next phase of development, the Project Applicant shall be responsible to fund and complete construction of the improvements prior to occupancy of the next phase.

MM UT-2 Auxiliary Water Supply System. Prior to issuance of occupancy permits, as part of the Infrastructure Plan to be approved, the Project Applicant shall construct an Auxiliary Water Supply System (AWSS) ~~*loop*~~ within Candlestick Point to connect to the City's planned extension of the offsite system off-site on Gilman Street from Ingalls Street to Candlestick Point. The Project Applicant shall construct an additional AWSS ~~*loop*~~ on HPS Phase II to connect to the existing system at Earl Street and Innes

Avenue and at Palou and Griffith Avenues, with ~~*looped*~~ service along Spear Avenue/Crisp Road.

The Commission finds that these amendments are supported by the analysis in Addendum 1 and incorporates such analysis in these findings by this reference; and be it further

RESOLVED, That the Streetscape Plan and the Signage Plan for Candlestick Point and the Major Phase Application for Major Phase 1, each dated January 7, 2014, are hereby approved, including approval of the Project Refinements; and be it further

RESOLVED, That the Streetscape Plan and the Signage Plan for Candlestick Point and the Major Phase Application for Major Phase 1 will not be deemed finally approved by the Commission until the CP Plans and conforming changes to the Project Documents, including the Project Refinements, have been approved by the affected City departments under and to the extent required by the ICA and the Planning Cooperation Agreement. No further action is required by the Commission with respect to the Streetscape Plan or the Signage Plan for Candlestick Point or the Major Phase Application for Major Phase 1 or conforming changes to the Project Documents as approved by this Resolution, and this Resolution shall constitute Approval of the Streetscape Plan and the Signage Plan for Candlestick Point and Major Phase Approval for Major Phase 1 under the Phase 2 DDA, unless the conforming changes to Project Documents are not made consistent with this Resolution, in which case Developer will propose an alternative solution to ensure the conformity of the CP Plans to the Project Documents in accordance with the Phase 2 DDA; and be it further

RESOLVED, That the Commission hereby authorizes and directs the OCII Director and such OCII staff as the OCII Director may designate, upon approval by the affected City departments of the CP Plans and conforming changes to the Project Documents, including the Project Modifications, under and to the extent required by the ICA and the Planning Cooperation Agreement, to together with Developer make changes to the Project Documents so that they conform to the CP Plans, including the Project Refinements, and to take such additional actions as the OCII Director deems necessary or appropriate in connection therewith, including approving the Insurance Requirements under the Phase 2 DDA, provided, however, that the OCII Director determines that such additional actions are not inconsistent with this Resolution and do not materially increase the burdens and responsibilities of OCII or materially decrease the benefits to OCII with respect of the Project; and be it further

RESOLVED, That the Commission hereby authorizes and directs the OCII Director to take all actions as needed, to the extent permitted under applicable law and subject to the Project Documents (as modified pursuant hereto), to effectuate OCII's performance under the Project Documents (as modified pursuant hereto).

I hereby certify that the foregoing resolution was adopted by the Commission at its meeting of January 7, 2014.

Natasha Jones

_____

Commission Secretary

December 9, 2015

Ms. Joy Navarette
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

Subject: Candlestick Point/Hunters Point Shipyard Phase II: Implementaiton Phasing for Mitigation Measure MM TR-16 (Widening of Harney Way)

Dear Joy:

The *Candlestick Point/Hunters Point Shipyard Phase II Project Final EIR* (herein referred to as "EIR") was certified by the San Francisco Planning Commission and the San Francisco Redevelopment Commission in June 2010. Subsequently, the San Francisco Planning Commission and the Commission on Community Investment and Infrastructure certified an addendum to the EIR, dated December 11, 2013. Both the EIR and the Addendum include Mitigation Measure MM TR-16, which calls for the widening and reconfiguration of Harney Way west of the development area, between Arelious Walker Drive and Thomas Mellon Drive.

Currently, this section of Harney Way provides two auto travel lanes in each direction and an eight-foot sidewalk on the north side of the street. No sidewalk is provided along the south side of the street, although a parallel Class I shared use path is provided as part of the San Francisco Bay Trail within State Parks lands, just south of Harney Way.

Mitigation Measure MM TR-16 calls for an initial widening of Harney Way that would maintain two travel lanes in each direction, add two BRT lanes on the north side, add a center median to accommodate left-turn lanes at intersections, and add a median between the westbound travel lanes and the BRT lanes to accommodate a dedicated westbound right turn lane at Executive Park Boulevard East and an eastbound BRT stop just west of Executive Park Boulevard. The 2013 Addendum maintained this general configuration and called for provision of a 12-foot sidewalk on the north side of Harney Way and a 13-foot two-way Class I bicycle facility on the south side, separated from traffic by a five-foot median.

A long-term configuration for Harney Way was also included as part of Mitigation Measure MM TR-16 that would replace the cycletrack with an on-street Class II bicycle lane in the westbound direction and an additional westbound travel lane. Eastbound bicyclists (and westbound cyclists who wish not to ride in the roadway) would be directed to the existing Class I shared use path through State Parks. The long-term configuration for Harney Way is illustrated in the Project's Transportation Plan and the Transportation Impact Study.[1]

The Addendum also clarified the timing of implementation of this measure. The Addendum calls for the initial configuration to be constructed prior to occupancy of the Candlestick Point retail center (Candlestick Point Sub-Phase CP-02), with ongoing monitoring of traffic congestion levels that may ultimately trigger implementation of the longer-term configuration. The Addendum also specifies that the BRT service is not scheduled to begin for several years after completion of the initial configuration, until Major Phase 2, Subphase CP-07 and HP-04, which are currently anticipated by 2023.

It is our understanding that there is currently some uncertainty regarding the timing of the Geneva Avenue extension and replacement of the US 101 / Harney Way interchange. It is likely that the interchange will not be constructed prior to operation of the BRT system, which would preclude the originally conceived BRT alignment from operating in the early stages of development of the project.

As a result, the San Francisco County Transportation Authority (SFCTA) is currently conducting a study to define an alternate interim BRT alignment that uses some combination of existing tunnels underneath US 101 at Blanken Avenue and Alana Way. Because that alignment may affect the way in which the BRT lanes are constructed along Harney Way, the SFCTA and the City propose to construct the initial Harney Way Configuration in two phases. Phase 1, shown on **Figure 1**, would construct the initial Harney Way improvements between Arelious Walker and Executive Park Boulevard East, although the sidewalk and Class I cycletrack would be completed all the way to Thomas Mellon Drive. **Figure 2** details the intersection configuration and striping at the Harney Way and Executive Park Boulevard East intersection that would be constructed as part

[1] The City is currently performing an evaluation of the Geneva Avenue extension and replacement of the US 101 / Harney Way interchange in collaboration with the City of Brisbane as part of several ongoing studies. The long-term configuration of Harney Way may need to be revised in the future based on the recommended configuration of the US 101 / Harney Way interchange. However, because those other studies are ongoing, no changes to the long-term configuration of Harney Way are currently proposed. Refer to the EIR for illustrations of the long-term configuration of Harney Way.

of Phase 1 of the initial configuration. It also illustrates the way in which the new Phase 1 striping will conform to the existing striping just west of Executive Park Boulevard East. Phase 2 of the initial improvements would construct the remaining portion of Harney Way, between Executive Park Boulevard and Thomas Mellon Drive, at a later time, prior to operation of the BRT, and in a way that matches the BRT alignment recommended in the SFCTA's study (and accommodates future permanent alignment).

Exhibit I: 12/9/15 Fehr & Peers Harney Way letter

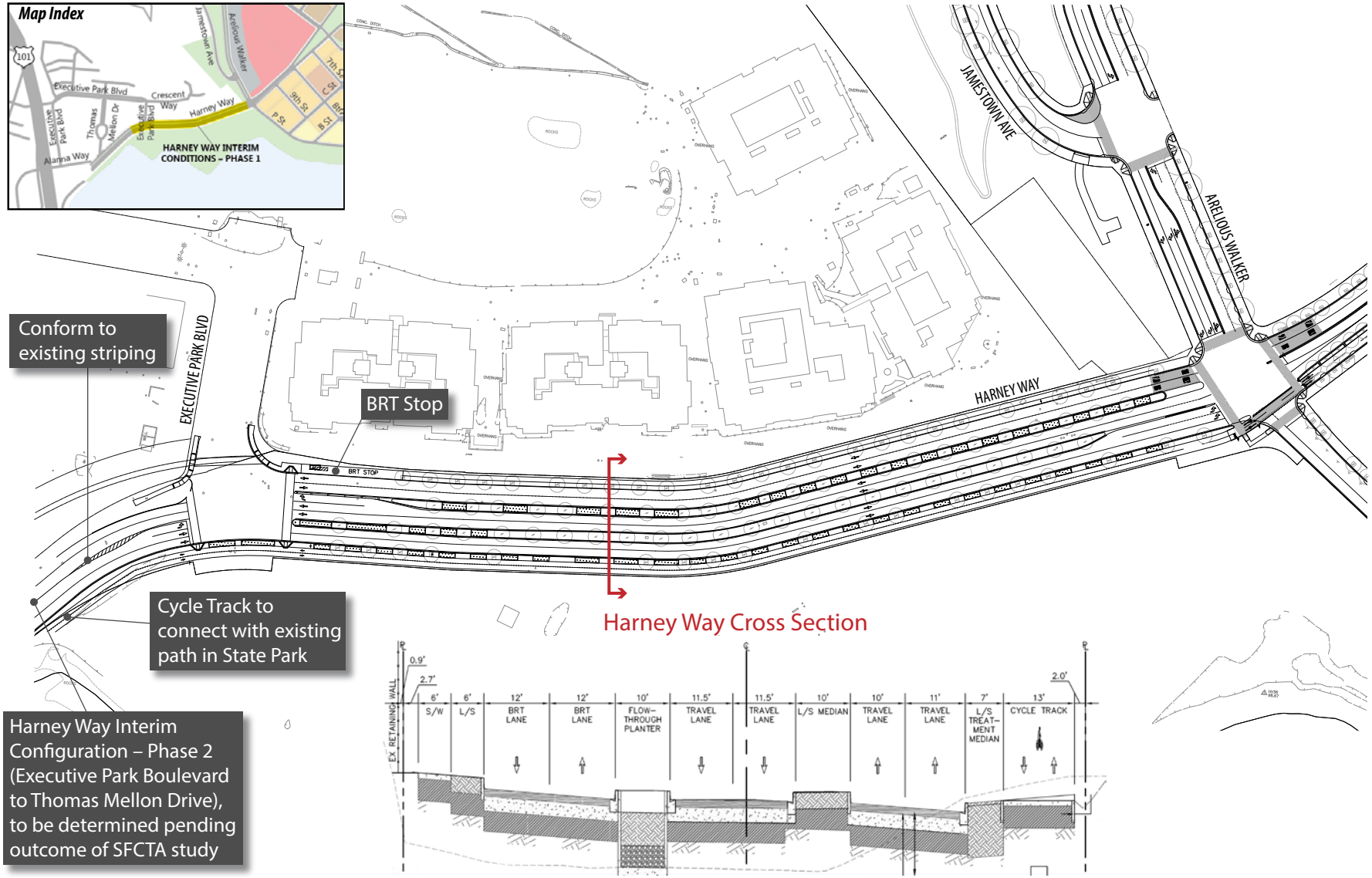


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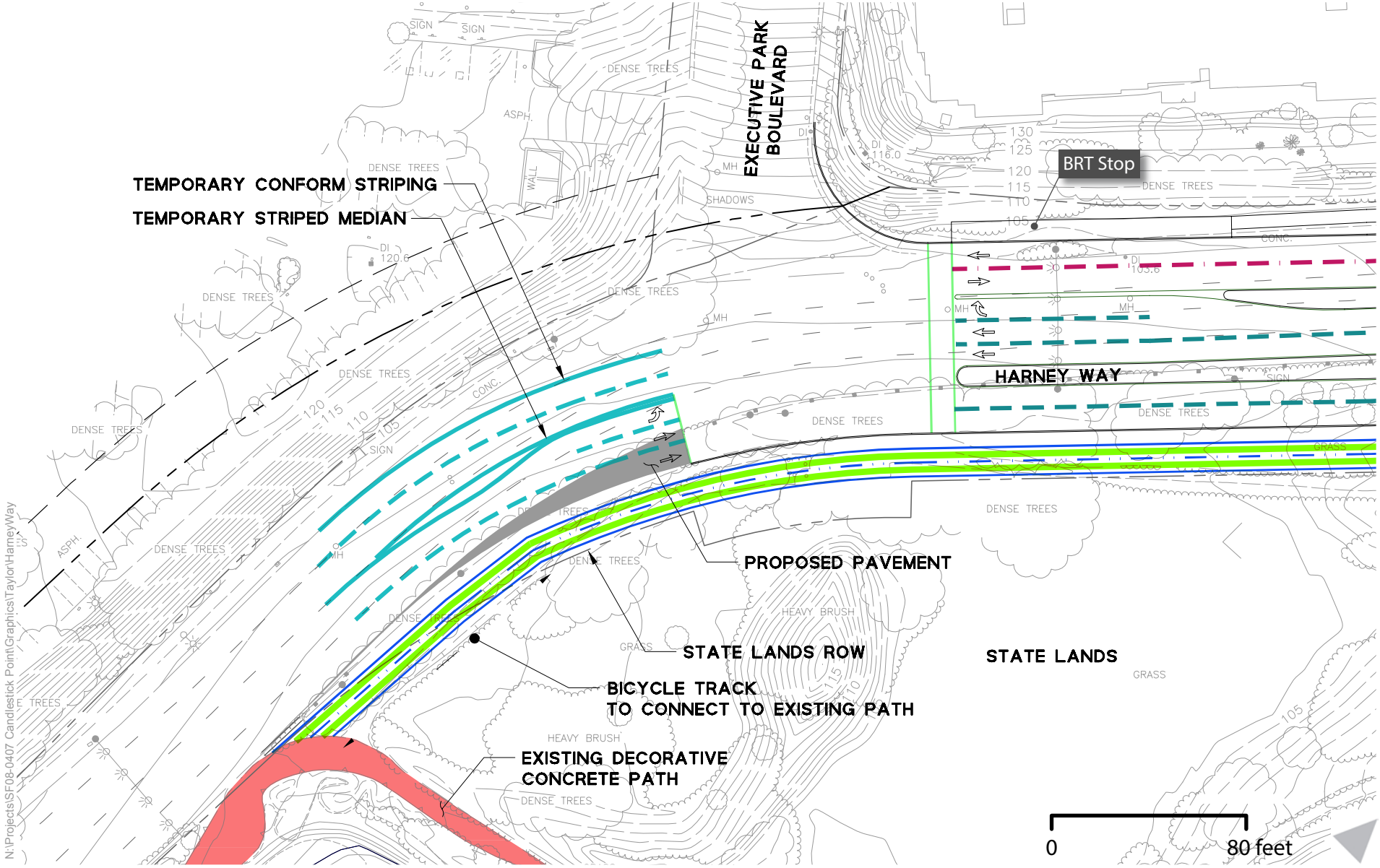
Figure 1

Harney Way Interim Configuration – Phase 1

Exhibit I: 12/9/15 Fehr & Peers Harney Way letter



Source: BKF Engineers

Figure 2

Harney Way Interim Configuration – Phase 1 Detail

Under this proposed phasing for the initial configuration of Harney Way, there would be no additional transportation impacts, as described below:

1. **Traffic.** There would continue to be two lanes of travel in both directions at all times until monitoring required construction of the ultimate configuration, as envisioned by Mitigation Measure TR-16. The initial phase would also include construction of the westbound left-turn lane at Executive Park Boulevard East. Thus, even with the phased implementation of the near-term configuration for Harney Way, the roadway would continue to have the same number of lanes and traffic capacity at all times.
2. **Transit.** The proposed phasing would require that the BRT facilities be constructed in a manner consistent with the alternative BRT alignment determined by the SFCTA and SFMTA prior to operation of the BRT system. Therefore, transit service would not be affected by the proposed phasing of improvements to Harney Way.
3. **Bicycles.** The phased approach proposed would include the full two-way cycletrack on the south side of Harney Way for the extent of the project's responsibility for improvements to Harney Way, between Arelious Walker Drive and Thomas Mellon Drive, as part of the very first phase. Therefore, the phasing will have no effect to bicycle conditions compared to what was described in the EIR Addendum.
4. **Pedestrians.** There would be a continuous sidewalk on the north side of the street. Between Arelious Walker Drive and Executive Park Boulevard East, the sidewalk would be widened to 12-feet including 6' of landscaping. However, the existing eight-foot sidewalk on the north side of Harney Way between Executive Park Boulevard East and Thomas Mellon Drive would remain, and would instead be widened to 12-feet simultaneously with the construction of the BRT lanes, prior to operation of the BRT route. Despite the fact that widening of a portion of the northern sidewalk would not occur for several years after opening of the Candlestick Point retail center, the retail center is not expected to generate a substantial number of new pedestrian trips along Harney Way and the existing facilities are expected to be adequate.
5. **Parking.** Although parking conditions are not considered an impact by the City of San Francisco, information is provided for informational purposes only. There is no on-street parking on Harney Way under existing conditions and none of the proposals for reconfiguration and widening of Harney Way would provide parking. Therefore, the phased approach proposed would have no effect on parking in the area.

6. **Loading.** Similar to parking, there are currently no loading facilities on Harney Way, and none of the proposals would add loading. Therefore, the phased approach proposed would have no effect on parking in the area.
7. **Emergency Vehicle Access.** Because the phased implementation approach would maintain the same number of traffic lanes as the approach envisioned in the Addendum, there would be no effect to emergency vehicle access by using the proposed phased implementation.

We hope you have found this useful. Please do not hesitate to call if you have any questions.

Sincerely,

FEHR & PEERS

Chris Mitchell, PE
Principal

SF08-0407

FEHR PEERS

August 13, 2015

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Subject: Draft Analysis of Transportation Effects of Proposed Revisions to Configuration of Gilman Avenue in Candlestick Point – Hunters Point Shipyard Phase II Development Plan

Dear Joy and Lila,

As you know, the *Candlestick Point/Hunters Point Shipyard Phase II Project Final EIR* (herein referred to simply as "EIR") was certified by the San Francisco Planning Commission and the San Francisco Redevelopment Commission in June 2010. Since that time, the Housing/R&D Variant (Variant 2A) has been advanced as the project. Some refinements to the project were proposed in late 2013, resulting in an EIR Addendum certified in December 2013.

One of the most substantial changes contemplated in the December 2013 Addendum was a change to the project phasing, such that the CP Retail Center would be advanced much sooner than originally contemplated. As part of this, certain off-site roadway infrastructure and transit service was proposed to occur sooner than originally contemplated to ensure that the near term transportation system would be adequate to serve the CP Retail Center. One key aspect of the infrastructure required to be constructed commensurate with the Candlestick Point (CP) Retail Center is improvements to Gilman Avenue.

Gilman Avenue has historically served not just as a neighborhood street, but also as one of three primary access routes to and from large events at Candlestick Park. As a result, it is currently configured to facilitate egress from the Park, with one lane eastbound and two lanes westbound (when Candlestick Park was in operation, parking was prohibited on the north side of the street on game days such that a third westbound lane was provided for stadium egress). The originally-proposed and approved concept for Gilman Avenue as part of the project EIR would make the

street cross section more symmetric, providing on-street parking on both sides and two travel lanes in each direction. Sidewalks would be narrowed from 15 feet to 12 feet. The originally-proposed configuration is shown in in **Figure 1(A)**. At some point in the longer-term future, one of the travel lanes in each direction may be converted to transit-only as part of a mitigation measure for project impacts to transit travel times, as shown in **Figure 1(B)**.

Although a cross-section for Gilman Avenue had been developed in collaboration with the community during the project's planning process prior to the EIR, the City and project team felt it would be appropriate to re-engage the community prior to preparation of more detailed design to confirm the concept. Based on an initial round of outreach, the neighborhood, SMFTA, and the Planning Department all expressed concerns regarding the proposed reduction in sidewalk widths. Further, the originally-proposed changes would require relocation of existing utilities, and no funding is available for this work.

As a result, the project team has begun to test a new concept that would retain the existing sidewalk widths, and instead provide on-street parking and one travel lane in each direction, with a center turn lane. Far-side bus stops with bulb-outs would be located at Ingalls Street and Griffith Street. To compensate for the reduction in capacity associated with the reduction in auto lanes, the existing all-way stop controlled intersections would be converted to signalized intersections, which generally have a much higher throughput.

This letter documents Fehr & Peers' analysis findings associated with a revised concept for Gilman Avenue and incorporates some minor adjustment to traffic forecasts at the intersection of Arelious Walker Drive/Gilman Avenue associated with newly defined details for the CP Retail Center.

SUMMARY

The assessment indicates that the proposed design changes result in similar or better conditions than those presented in the EIR for all modes; therefore, no additional impacts are anticipated and no additional mitigation is required.

TRAVEL DEMAND

Although the land uses proposed as part of the project have not changed, the designs for the CP retail center have been developed to a more detailed level than when prior analyses were

conducted. As a result, we now have better information regarding the size of the proposed parking structure and the relative size and location of the access points on the surrounding network. This more detailed information suggests that revisions to the overall traffic assignment associated with the CP Retail Center may be warranted.

Original EIR Assumptions

The parking structure associated with the CP retail center was intended to serve the following uses:

- 150,000 square feet of office
- 472 residential dwelling units
- 635,000 square feet of regional retail
- 125,000 square feet of neighborhood-serving retail
- 220 room hotel
- 10,000-seat arena[1]

The EIR forecasted that these uses would generate 3,257 PM peak hour vehicle trips, including 1,490 inbound and 1,767 outbound trips. However, since further design of the CP retail center, an additional 192 residential units have been proposed for the CP center site (relocated from elsewhere in the CP site). Parking for 210 of the residential units and the hotel will be accessed from a separate entrance, adjacent to the retail center. Furthermore, the office is no longer proposed to be constructed at the CP center and instead will be proposed at some other location within CP.

Overall, the total number of vehicle trips generated from the Project will remain the same; however, the number of Project trips destined for the CP retail center garage (i.e., excluding trips associated with the office, the hotel, and 210 of the 472 residential units) would decrease to 2,969 PM peak hour trips, including 1,381 inbound and 1,588 outbound trips.

The proposed parking structure will accommodate approximately 2,900 spaces, which suggests that if all project trips for uses the structure is intended to serve were to use the garage, each

[1] The Draft Sub-Phase CP 02 03 04 Application proposes to replace the arena with a proposed 45,000 square foot performance venue/nightclub. However, since it is uncertain whether this represents a negligible change in the project, or whether that must undergo a separate review and approval process, this analysis evaluates the currently-approved land uses, which include an arena and not the performance venue.

space would have to turn over more than once per hour. This is not a realistic scenario; instead, the limited parking supply will likely cause travelers to switch modes to transit, bicycles, and walking. However, for purposes of this analysis, we have assumed that the originally-forecasted vehicle trips use the proposed parking structure.

Revised Design Assumptions

Figure 2 shows the Cumulative Plus Project volume assumptions used in the EIR. Note that of the intersections presented, only Third Street / Gilman Avenue and Arelious Walker / Gilman Avenue were analyzed in the EIR; intersection analyses at the other, smaller internal intersections were not evaluated in detail in the EIR. The analysis in the EIR assumed that the majority of project trips using the parking garage would access the site from Arelious Walker Drive. However, since completing the EIR, the CP Retail Center parking garage design has been designed to greater level of detail to include and define access points, including:

- Arelious Walker Drive (Primary, signalized, full access)
- Arelious Walker Drive (Secondary, right-in/right-out only)
- Harney Way (Signalized, egress only)
- Ingerson Avenue (Stop-controlled, right-in/right-out only)

Figure 3 shows the latest parking garage design and four access points.

Based on the current understanding of parking stall locations and access points, Fehr & Peers has refined the anticipated trip assignment through local intersections to better align with the current proposed layout. In addition, it has been determined that due to BRT operations along Harney Way, vehicles traveling southbound will not be able to turn right onto Arelious Walker Drive. This will not result in an adverse impact to intersection operations.

Figure 4 shows the trip assignment for trips associated with the parking structure based on the trip generation and distribution forecasts from the EIR and the most recent proposed layout of the parking structure.

Gilman Avenue Corridor

As described above, the EIR assumed conversion of Gilman Avenue to a four-lane roadway with a parking lane in each direction. To accomplish this, existing sidewalks would be reduced to 12 feet – still consistent with Better Streets Plan standards, but less than the existing 15 feet. Upon

completing the EIR, the study team conducted several meetings with the neighborhood and City staff to review and discuss the Gilman Avenue corridor. Based on these discussions, it was more desirable to keep existing sidewalk widths and modify the travel way to accommodate the future traffic and transit. The Project team worked with SFMTA and others to define a potential revision to the cross-section that would keep the current 15-foot sidewalks and retain on-street parking. As noted earlier, the revised cross section would provide one lane of travel in each direction with a center turn lane and intersections between Third Street and Arelious Walker would be modified from all-way-stop-control (AWSC) to signal control. In addition, far-side bus stops with bulb-outs would be located on the corridor at Ingalls Street and Griffith Street. **Figure 1(C)** shows the revised cross section and Figure 4 shows the revised PM peak hour intersection volumes. As a result of the revised Gilman Avenue cross section and detailed access points to the CP Retail Center garage, the lane configuration and volume at Gilman Avenue / Arelious Walker has changed, though the total number of vehicles along the Gilman Avenue corridor has remained the same. The eastbound and westbound approach on Gilman Avenue would result in a one left turn lane, one through lane, and one right-turn lane. The northbound approach on Arelious Walker would provide one left turn lane, one through lane, and one shared through-right lane. The southbound approach would remain the same.

ANALYSIS

Transit Operations

This section describes the transit travel time analysis methodology and results, comparing the revised Gilman Avenue cross-section proposal with the originally-proposed section from the EIR. Consistent with the methodology presented in the EIR, transit travel time is the sum of three components: travel delay, transit re-entry delay, and passenger boarding delay.

There are several measures that can be used to reduce traffic congestion delay or transit re-entry delay, as described below.

Transit signal priority (TSP) modifies the timing at signalized intersections to prioritize the movement of transit vehicles through an intersection. If TSP is implemented at an intersection, consistent with the EIR methodology, the traffic congestion delay for transit is assumed to be eliminated.

Queue jump lanes are bus priority lanes that are installed at signalized intersections (either as a separate pocket lane or in an existing right turn pocket lane) that, in conjunction with a special signal phase, allow a bus to enter the intersection before other traffic is allowed to proceed. If queue jump lanes are implemented at an intersection and co-located with a right turn, the traffic congestion delay for transit is assumed to be equal to the vehicle delay for the right turn movement.

Bus bulb-outs are extensions of the sidewalk curb at the corner of intersections that allow buses to stop without needing to exit the travel lane. Bus bulb-outs eliminate transit re-entry delay for each stop at which they are implemented.

Transit-dedicated lanes are travel lanes on a roadway that permit only transit vehicles to operate. The exception to this is at some intersections, where other vehicles wishing to make a right turn can use the transit lane as a pocket lane. Therefore, when co-located with right turn movements at an intersection, the traffic congestion delay for transit is assumed to be equal to the vehicle delay for the right turn movement.

Far-side stops are transit stops that are placed downstream of an intersection such that a transit vehicle is able to pass through an intersection before stopping to allow passengers to board and alight. It is generally accepted that a far-side bus stop would result in time-savings benefit compared to a near-side stop. Based on a VISSIM simulation assessment completed for AC Transit, it was found that moving a near-side to far-side bus stop resulted in travel time savings of 15 to 40 seconds[2]. Although this strategy was not considered in the EIR, for the purpose of this assessment, it was assumed that moving a near-side stop to a far-side stop at a signalized intersection resulted in a travel time savings of 15 seconds, the most conservative of the identified range.

Significance Criteria

As noted in the EIR, the Project would cause a significant impact if it would increase travel times such that additional transit vehicles would be required to maintain the proposed headways. This was assumed to be the case if the Project would increase the transit travel time along a given route by more than ½ of the proposed headway for the route. Route 29 Sunset, which will continue to travel along Gilman Avenue under Project conditions, has a proposed headway of 5

[2] Fehr & Peers, *Line 51 Corridor Delay Reduction & Sustainability Project,* 2013

minutes. Therefore, if the increase in transit travel time associated with the Project is more than 2.5 minutes, the Project would cause a significant impact that requires mitigation.

Analysis Results

The EIR compared the increase in transit travel time from 2030 No Project conditions to the Proposed Project (and Project Variants) in order to identify significant impacts. The EIR identified that there would be a significant impact to transit travel time under Project Variant 2A, and that even with mitigation the impact would be significant and unavoidable. As mentioned earlier, since the completion of the EIR, some of the mitigations proposed for Gilman Avenue have been deemed infeasible. Therefore, the purpose of this analysis is to define the changes to the transit travel time analysis associated with the revised Gilman Avenue cross-section and identify feasible mitigation measures that can reduce the transit travel time to at least the same level as what was presented under mitigated conditions in the EIR. **Table 1** presents the transit travel time associated with Project Variant 2A from the EIR and the revised, unmitigated Gilman Avenue cross-section.

TABLE 1 PROJECT TRANSIT TRAVEL TIME – WEEKDAY PM PEAK HOUR

Time (min:sec)	EIR (Project Variant 2A)		EIR (PPV2A) – Mitigated		Revised Gilman (No Mitigation)	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
Travel Delay	14:45	18:36	10:45	14:36	13:25	17:44
Transit Re-Entry	3:52	1:43	2:13	1:20	2:13	1:34
Passenger Boarding	9:55	9:19	9:55	9:19	9:55	9:19
Total Time	***28:32***	***29:38***	***22:54***	***25:17***	***25:33***	***28:37***

Notes:
For Muni Route 29 Sunset only.
Source: Fehr & Peers, 2015

Table 1 shows that the revised Gilman Avenue cross-section has a better (i.e., lower) transit travel time than the unmitigated Project Variant 2A from the EIR, but is still approximately three minutes higher than the mitigated EIR scenario. Therefore, mitigation measures that could be

implemented at some point in the future need to be implemented to bring the transit travel time to a level consistent with the mitigated Project Variant 2A scenario from the EIR.

The following is a revision to Mitigation Measure MM-TR-23.1 to bring the transit travel times for the 29 Sunset to levels consistent with the mitigated EIR scenario:

- Implement TSP at the intersections of Arelious Walker / Gilman Avenue, San Bruno Avenue / Paul Avenue, and Bayshore Boulevard / Paul Avenue.
- Implement a far-side stop in the eastbound and westbound directions at the intersection of Third Street / Gilman Avenue and a far-side stop in the westbound direction at the intersection of San Bruno Avenue / Paul Avenue.
- Implement a peak period, transit-dedicated lane in the westbound direction along Paul Avenue between Third Street and Bayshore Boulevard. The transit lane would begin on Gilman Avenue about 200 feet prior to Third Street and extend through the intersection to Paul Avenue. (Note that this component of the mitigation measures was included in the original mitigation measure for the 29 Sunset. Changes to the proposed cross-section on Gilman Avenue do not affect this component and it remains feasible).

Figures 5 and **6** depict the revised mitigation measure along Route 29.

Using the transit travel time saving methodologies discussed above for the mitigation measures, **Table 2** compares the transit travel time for the revised Gilman Avenue cross-section with the mitigated Project Variant 2A from the EIR.

TABLE 2 PROJECT TRANSIT TRAVEL TIME – WEEKDAY PM PEAK HOUR (MITIGATED)

Time (min:sec)	EIR – Mitigated		Revised Gilman - Mitigated	
	Eastbound	Westbound	Eastbound	Westbound
Travel Delay	10:45	14:36	10:45	6:55
Transit Re-Entry	2:13	1:20	1:58	1:20
Passenger Boarding	9:55	9:19	9:55	9:19
Total Time	***22:54***	***25:17***	***22:38***	***17:34***

Notes:
For Muni Route 29 Sunset only.
Source: Fehr & Peers, 2015

Since passenger ridership is assumed to remain the same (and therefore the time associated with passenger boarding), the proposed mitigation measures focus on reducing traffic congestion delay and transit re-entry delay where feasible. Most travel time savings are from reductions in traffic congestion delay through the implementation of TSP, far-side stops, and transit-dedicated lanes. As **Table 2** shows, the proposed mitigation measures for the revised Gilman cross-section would reduce the total travel time due to the proposed project to slightly below the mitigated conditions under the original EIR in the eastbound direction and about eight minutes lower in the westbound direction.

Traffic Operations

This section describes the methodology and traffic analysis results comparing the revised Gilman Avenue cross-section proposal with the originally-proposed section, and also accounting for shifts in traffic associated with the more detailed CP Center garage proposal.

Methodology

To remain consistent with transportation studies completed as part of the EIR in 2009, the study intersections were evaluated using the HCM 2000 methodology. For signalized intersections, this methodology determines the capacity for each lane group approaching the intersection. The LOS is then based on average delay per vehicle (in seconds per vehicle) for the various movements within the intersection. A combined weighted average delay and LOS is presented for the intersection. In San Francisco, LOS E and F are considered unacceptable operating conditions for

signalized intersections. For unsignalized intersections, average delay and LOS operating conditions are calculated by approach (e.g., northbound) and movement (e.g., northbound left-turn), for those movements that are subject to delay. For the purpose of this analysis, the operating conditions (LOS and delay) for unsignalized intersections are presented for the worst approach (i.e., the approach with the highest average delay per vehicle) for side-street STOP-sign controlled intersections, and average intersection delay is presented for all-way STOP controlled intersections. LOS calculation sheets are included in **Attachment A**.

Significance Criteria

The significance criteria used to evaluate the proposed revisions are the same as those stated in the EIR, Section 4.4 and summarized below.

The Project would result in a significant impact if:

- An intersection would result in a change in intersection operations from LOS D or better under the 2030 No Project condition to LOS E or LOS F, or from LOS E to LOS F, with the proposed Project
- If at an intersection that would operate at LOS E or LOS F under 2030 No Project conditions, and would continue to operate at LOS E or LOS F under Project conditions, the Project trips were reviewed to determine whether the increase would contribute considerably to critical movements operating at LOS E or LOS F.
- If it would increase travel times such that additional transit vehicles would be required to maintain the proposed headways. This was assumed to be the case if the Project would increase the transit travel time along a given route by more than ½ of the proposed headway for the route.

Analysis Results

The EIR analyzed two of the five intersections along this corridor; this analysis evaluates all five intersections along Gilman Avenue to assess the overall throughput of the corridor under the original proposal and the revised proposal. **Table 3** shows the intersection LOS and delay results and **Table 4** describes the arterial LOS results from the assessment.

As shown in **Table 3**, under the original concept, the smaller AWSC intersections between Third Street and Arelious Walker Drive are projected to operate at LOS E or F with an average delay exceeding 55 seconds per vehicle. With the revised alternative, reducing Gilman Avenue to a

single through lane in each direction with a shared turn lane and installing signals throughout, intersection operations improve substantially, compared to the originally proposed configuration.

The intersection of Gilman Avenue / Third Street is still projected to operate at LOS F, the revised proposal does not propose to change any lane configurations or affect travel demand at this intersection, so the revised proposal for Gilman Avenue has no effect on the EIR impact analysis. The remaining intersections operate at LOS D or better, which represents a substantial improvement from what was projected in the EIR.

TABLE 3 LOS AND DELAY RESULTS ALONG GILMAN AVENUE CORRIDOR (CUMULATIVE PLUS PROJECT)

Intersection	Original Design (AWSC)			Revised Design (Signals)		
	Control	Avg Delay (s)	LOS	Control	Avg Delay (s)	LOS
Third Street / Gilman Avenue	Signal	**>80**	**F**	Signal	**>80**	**F**
Jennings Street / Gilman Avenue	AWSC	**>80**	**F**	Signal	31	C
Ingalls Street / Gilman Avenue	AWSC	**>80**	**F**	Signal	16	B
Hawes Street / Gilman Avenue	AWSC	**36**	**E**	Signal	<10	A
Arelious Walker / Gilman Avenue	Signal	36	D	Signal	40	D

Bold indicates intersection operates at LOS E or LOS F.
Sources: Fehr & Peers, 2015

Impact Analysis

Impact TR-1: On-Site and Off-Site Construction Impacts

As described in the EIR, construction of the Project would result in transportation impacts in the Project vicinity due to construction vehicle traffic and roadway construction and would contribute to cumulative construction impacts in the Project vicinity. The EIR concluded implementation of mitigation measure MM TR-1, which would require the Applicant to develop and implement a construction traffic management plan to reduce the impact of construction activity on transportation facilities, would reduce the impacts caused by construction, but not to a less-than-significant level.

The overall amount of construction anticipated to occur as part of the modified Project will be the same as originally conceived and described in the EIR or less because the proposed design does not relocate the existing curb or utilities. Instead the Project will resurface existing pavement, stripe new lane configurations, and construct new signals.

It is anticipated that the Project phasing would follow the assumed phasing documented in the December 2013 addendum (Analysis of Transportation Effects of Project Refinements to the Candlestick Point/Hunters Point Shipyard Phase II Project since Certification of the Project's Final EIR). Overall, although the timing and location of construction activities may vary within the site compared to what was originally anticipated, the construction activities are expected to create similar significant and unavoidable localized construction-related traffic impacts as were originally described in Impact TR-1 the EIR. Mitigation measure MM-TR-1, development of a Construction Traffic Management Program, would still apply, although impacts would continue to remain significant and unavoidable.

Therefore, construction of the modified project would not result in any new significant effects to transportation beyond those identified in the EIR or a substantial increase in the severity of a significant impact, and no new mitigation measures would be required.

Impacts TR-2 through TR-16: Traffic Impacts to Regional and Local Roadway System, Study Intersections, and Freeway Facilities

As described in the EIR, the Project would generate substantial amounts of new vehicular traffic resulting in a number of significant impacts and mitigation measures. More specifically, the EIR

identified Impact TR-2, a significant impact related to the Project's overall increase in traffic generation in relation to the current roadway system capacity. The EIR identified Mitigation Measure MM TR-2, the development and implementation of the Project's Transportation Demand Management (TDM) plan as a means to lessen the severity of Project-generated traffic impact; however, Impact TR-2 would remain significant and unavoidable with mitigation. The EIR identified Impacts TR-3 through TR-8, which described locations where the Project would create new project-related impacts or contribute to significant cumulative impacts at study intersections. Mitigation Measures MM TR-4 (restriping at the intersection of Tunnel/Blanken), MM TR-6 (participating in the bi-county study and paying a fair share contribution toward improvements near the Geneva Avenue/US 101 interchange), MM TR-7 (restriping at the Amador/Cargo Way intersection), and MM TR-8 (participating in the bi-county study and paying a fair share contribution toward improvements near the Bayshore/Geneva intersection) were recommended to reduce the severity of Project-related impacts. However, due to uncertainty regarding implementation of mitigation measures, Impacts TR-3 through TR-8 were determined to remain significant and unavoidable with mitigation. The FIER also identified Impact TR-9, which described the project's less than significant impact to a number of other study intersections.

At a slightly larger scale, the EIR identified Impact TR-10, which describes the effect of Project-related traffic spilling over into nearby residential neighborhood streets. The EIR determined this impact to be significant, and referenced other mitigation measures described elsewhere in the EIR (including Mitigation Measure MM TR-2, the development and implementation of a TDM Plan) as appropriate strategies to reduce the severity of Impact TR-10. However, the EIR determined that the impact would remain significant and unavoidable with mitigation.

The EIR also identified a number of significant Project-related impacts to freeway facilities, including Impacts TR-11 through TR-15. No feasible mitigation measures were identified for Impacts TR-11 through TR-13 and these impacts would be significant and unavoidable. Mitigation Measures MM TR-14 and MM TR-15, which called for participation in the bi-county study and payment of a fair share contribution toward improvements near the Geneva Avenue / US 101 interchange area, were identified to reduce the severity of Impacts TR-14 and TR-15; however, since the implementation of these measures was uncertain, Impacts TR-14 and TR-15 would also remain significant and unavoidable.

Finally, the EIR identified Impact TR-16, a significant impact associated with the Project's contribution to traffic on Harney Way, which will be a primary access route for all modes between

the Project site and regional transportation facilities (US 101, Bayshore Caltrain, Balboa Park BART, the Bay Trail, etc.). Mitigation Measure MM TR-16 called for the project to construct the initial phase of Harney Way at the outset of construction of the first major phase, which would reduce the Project's impact to less than significant.

The primary factors that influence the Project's travel demand have not changed; therefore, the modified Project's travel demand forecasts for buildout conditions will be identical to those described in the EIR. Based on the traffic analysis above, the revisions to the Project would not result in any additional impacts as the results indicate similar or better intersection delay and travel times.

Impacts TR-17 through TR-30: Impacts to Local and Regional Transit Operations and Capacity

Transit ridership demand and frequency is expected to be the same under the revised proposal as under the Proposed Project. Therefore, the proposed changes do not affect the EIR analysis and conclusions related to Impacts TR-17 through TR-22, or Impacts TR-24 through TR-30. However, the EIR identified Impact TR-23, which concluded that traffic congestion on Gilman Avenue would result in a significant impact for transit. The EIR states that the City and Project Applicant shall develop a monitoring program to determine the implementation extent and schedule to maintain transit proposed headways. When transit travel times degrade to a certain point, Mitigation Measure MM-TR-23 should be implemented. The adopted mitigation measure is as follows:

> *Convert one of the two travel lanes in each direction and narrow the existing sidewalks on Gilman Avenue from Third Street to Griffith Street (four blocks) from 15 feet to 12 feet in width. The resulting 12-foot-wide sidewalks would be consistent with the Better Streets Plan guidelines. The reduction in sidewalk width would allow for the provision of a 7-foot-wide on-street parking lane, an 11-foot-wide transit-only lane, and a 10-foot-wide mixed-flow lane in each direction on Gilman Avenue. This would preserve on-street parking along the corridor and provide four-block transit-only lanes on Gilman Avenue between Griffith Street and Third Street. Treatment for transit-only lanes can range from striping to physical elevation changes to protect right-of-way from mixed-flow traffic.*[3]

The EIR noted that additional outreach and analysis may be required to assess the feasibility of Mitigation Measure MM-TR-23, and therefore, the EIR found the impact to be significant and unavoidable. However, if the revised proposal for Gilman Avenue is adopted, implementing

[3] The Draft EIR included several optional mitigation measures. However, based on further analysis, SFMTA determined that the other options were not feasible or desirable due to right of way constraints.

Mitigation MM-TR-23 will be infeasible. Therefore, MM-TR-23 has been revised to include feasible mitigations measures that would result in better transit operations than the original MM-TR-23. Mitigation Measure MM-TR-23 should be revised, as follow:

- Implement TSP at the intersections of Arelious Walker / Gilman Avenue, San Bruno Avenue / Paul Avenue, and Bayshore Boulevard / Paul Avenue.
- Implement a far-side stop in the eastbound and westbound directions at the intersection of Third Street / Gilman Avenue and a far-side stop in the westbound direction at the intersection of San Bruno Avenue / Paul Avenue.
- Implement a peak period, transit-dedicated lane in the westbound direction along Paul Avenue between Third Street and Bayshore Boulevard. The transit lane would begin on Gilman Avenue about 200 feet prior to Third Street and extend through the intersection to Paul Avenue.
- ~~Convert one of the two travel lanes in each direction and narrow the existing sidewalks on Gilman Avenue from Third Street to Griffith Street (four blocks) from 15 feet to 12 feet in width. The resulting 12-foot-wide sidewalks would be consistent with the Better Streets Plan guidelines. The reduction in sidewalk width would allow for the provision of a 7-foot-wide on-street parking lane, an 11-foot-wide transit-only lane, and a 10-foot-wide mixed-flow lane in each direction on Gilman Avenue. This would preserve on-street parking along the corridor and provide four-block transit-only lanes on Gilman Avenue between Griffith Street and Third Street. Treatment for transit-only lanes can range from striping to physical elevation changes to protect right-of-way from mixed-flow traffic~~

Implementing revised Mitigation Measure MM-TR-23 would result in a significant and unavoidable impact; however, the revised MM-TR-23 would result in better operations than what was reported in the approved EIR. Therefore, since the revisions do not propose more severe impacts to transit, the proposed changes and the revised Mitigation Measure MM-TR-23 do not result in any new significant impacts to transit operations and capacity.

<u>Impacts TR-31 and TR-32: Bicycle Circulation</u>

Neither the originally proposed configuration nor the revised configuration proposed dedicated bicycle facilities on Gilman Avenue. Both proposals continue to designate Gilman Avenue as a Class III facility. Therefore, since the revisions do not propose changes to the designation of

bicycle routes nor to any physical infrastructure dedicated for bicycles, the proposed changes will have less than a significant impact to bicycle circulation.

Impacts TR-33 and TR-34: Pedestrian Circulation

Sidewalks will remain at 15' thereby keeping existing pedestrian facilities instead of decreasing the width. This will result in improved conditions compared to the scenario that was originally proposed, and therefore the changes do not result in any new significant impact to pedestrian circulation.

Impacts TR-35 and TR-36: Parking

The proposed changes will not affect parking supply in the proposed project nor along Gilman Avenue. Therefore, the changes do not result in any new significant impacts to parking conditions.

Impact TR-37: Loading

The EIR identified Impact TR-37 and determined that the Project would provide adequate loading supply and therefore concluded that impacts related to loading would be less than significant, and that no mitigation measures would be required. As the revised design does not change the overall loading requirements, implementation of the revised design would not result in any new significant impacts related to loading and no new mitigation measures would be required.

Impacts TR-38 through TR-50: Stadium Impacts

The EIR included a number of impacts related to operation of the proposed new NFL stadium in the Hunters Point Shipyard site. The revised design does not change the operation or travel demand of the proposed Stadium, therefore the implementation of the revised design would not result in any new significant impacts related to the Stadium and no new mitigation measures would be required.

Impact TR-51 through TR-55: Arena Impacts

The EIR included a number of impacts related to operation of the proposed Arena in the Hunters Point Shipyard site. The revised design does not change the operation or travel demand of the

proposed Arena, therefore the implementation of the revised design would not result in any new significant impacts related to the Arena and no new mitigation measures would be required.

Impact TR-56: Air Traffic Impacts

The EIR determined that the Project would have a less than significant impact on air traffic. The revised design would contain the same overall land uses and general development form and would not change the EIR's conclusion regarding air traffic. The revised design would not create any new significant impacts with respect to air traffic and no additional mitigation measures are required.

Impact TR-57: Hazards due to Design Features

The EIR determined that the Project's transportation infrastructure would be designed in accordance with City standards, and would be reviewed and approved by the City prior to construction. As a result the Project's impacts to hazards would be less than significant. The revised design would also be designed accordance with City standards and would be reviewed and approved by the City. Therefore, no new significant impacts to design features have been identified and no mitigation measures are required.

Impact TR-58: Emergency Access

The EIR determined that the Project's transportation infrastructure would adequately facilitate emergency access and be designed to City standards, which include provisions that address emergency vehicles. The revised design would also be designed accordance with City standards and would be reviewed and approved by the City. Therefore, no new significant impacts to emergency access have been identified and no mitigation measures are required.

Cumulative Impacts

As noted in the EIR, the discussion of cumulative impacts was included with the discussion of project-related impacts in Impacts TR-1 through TR-58 and no additional cumulative impact discussion is necessary. Similar to what is described above and in the EIR, since the revised design would generate the same levels of travel demand at buildout and would have a similar transportation infrastructure, the modified Project's contribution to cumulative impacts would be the same as what is described in the EIR.

CONCLUSION

In conclusion, the revised design, including proposed revisions to MM-TR-23, would not change or alter any of the EIR's findings with respect to transportation impacts. All impacts would remain less than significant, less than significant with mitigation, or significant and unavoidable, as previously identified, and no new mitigation measures would be required. Additionally, the EIR's transportation cumulative impact conclusions would not be altered.

For questions or comments, please contact Chris Mitchell or Sarah Nadiranto.

Sincerely,

FEHR & PEERS

Chris Mitchell, PE
Principal

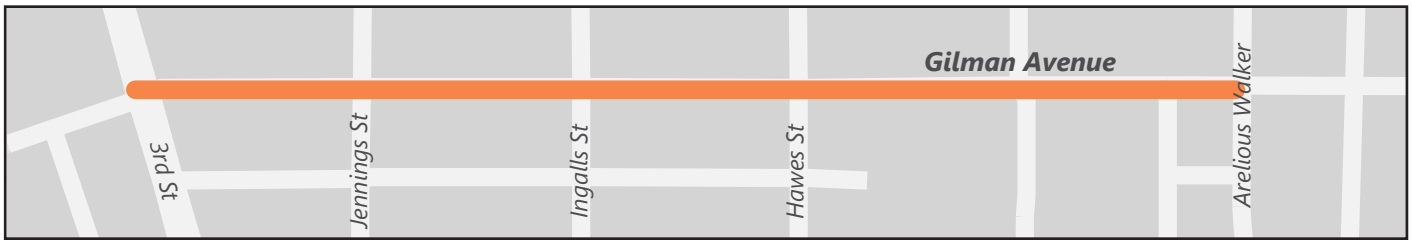
Sarah Nadiranto, PE
Transportation Engineer

SF08-0407

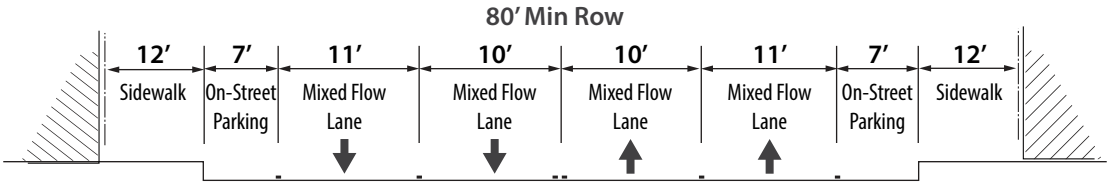
Figures

Attachments

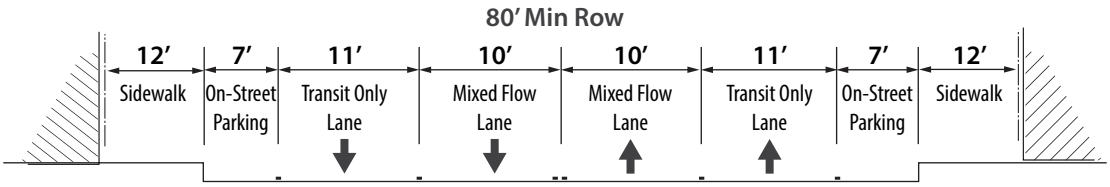
GILMAN AVENUE



A) EIR Proposed Conditions:



B) EIR Mitigated Conditions:



C) New Proposed Conditions:

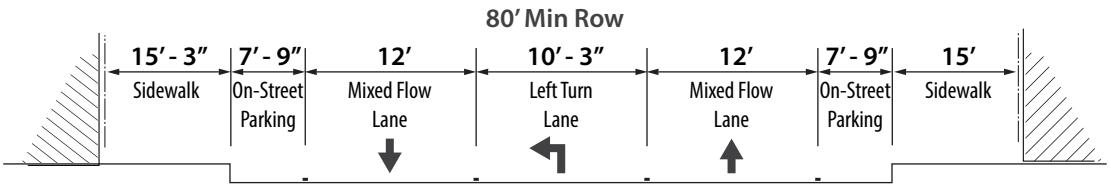
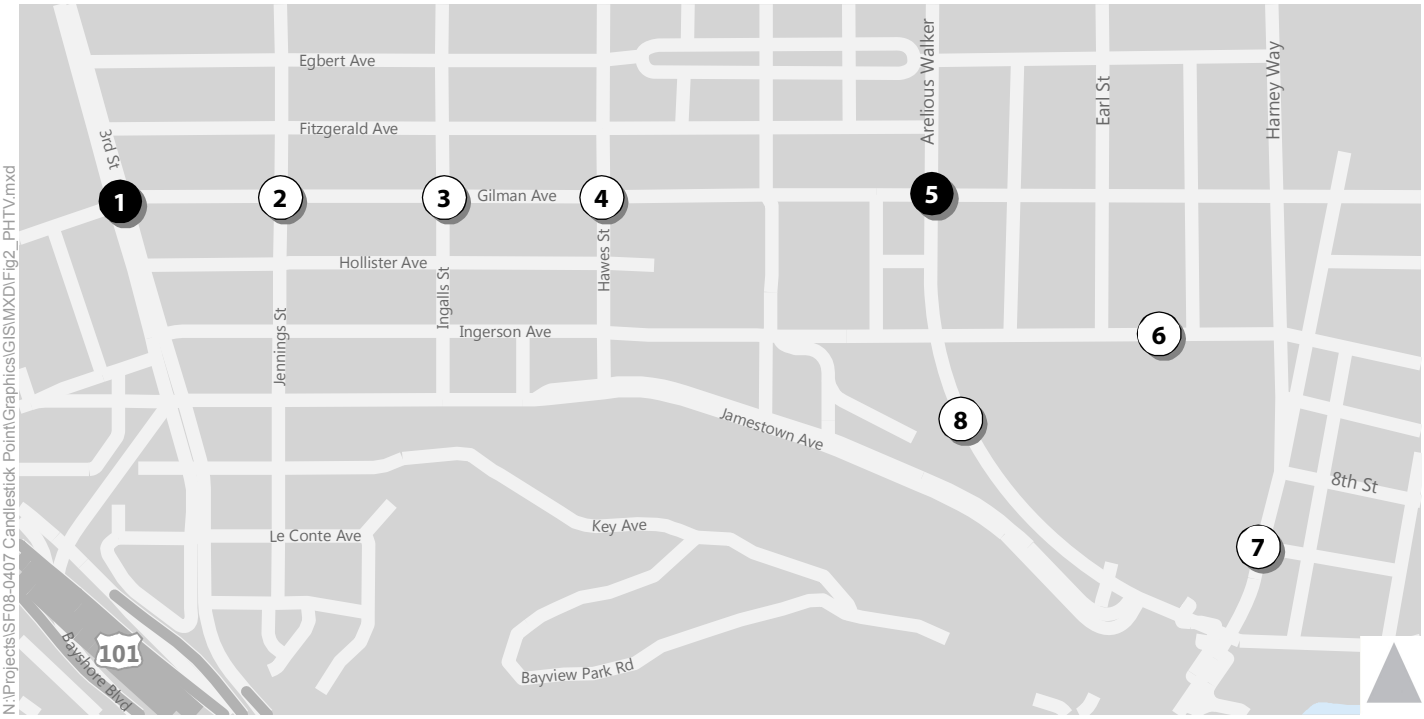
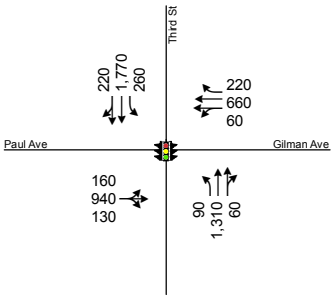
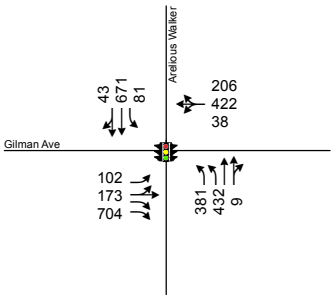


Figure 1

Proposed Cross-Sections: Gilman Avenue



1. Third St/Gilman Ave	2. Jennings St/Gilman Ave	3. Ingalls St/Gilman Ave	4. Hawes St/Gilman Ave
	INTERSECTION NOT STUDIED IN EIR	INTERSECTION NOT STUDIED IN EIR	INTERSECTION NOT STUDIED IN EIR
5. Arelious Walker/Gilman Ave	**6. Ingerson Ave/Parking Garage**	**7. Harney Way/Parking Garage**	**8. Arelious Walker/Parking Garage**
	INTERSECTION NOT STUDIED IN EIR	INTERSECTION NOT STUDIED IN EIR	INTERSECTION NOT STUDIED IN EIR

X EIR Study Intersection

X Intersection Not Studied in EIR

Turn Lane

XXX Peak Hour Traffic Volume

Traffic Signal

Stop Sign

Figure 2

EIR Assumed Volumes and Study Intersection Locations

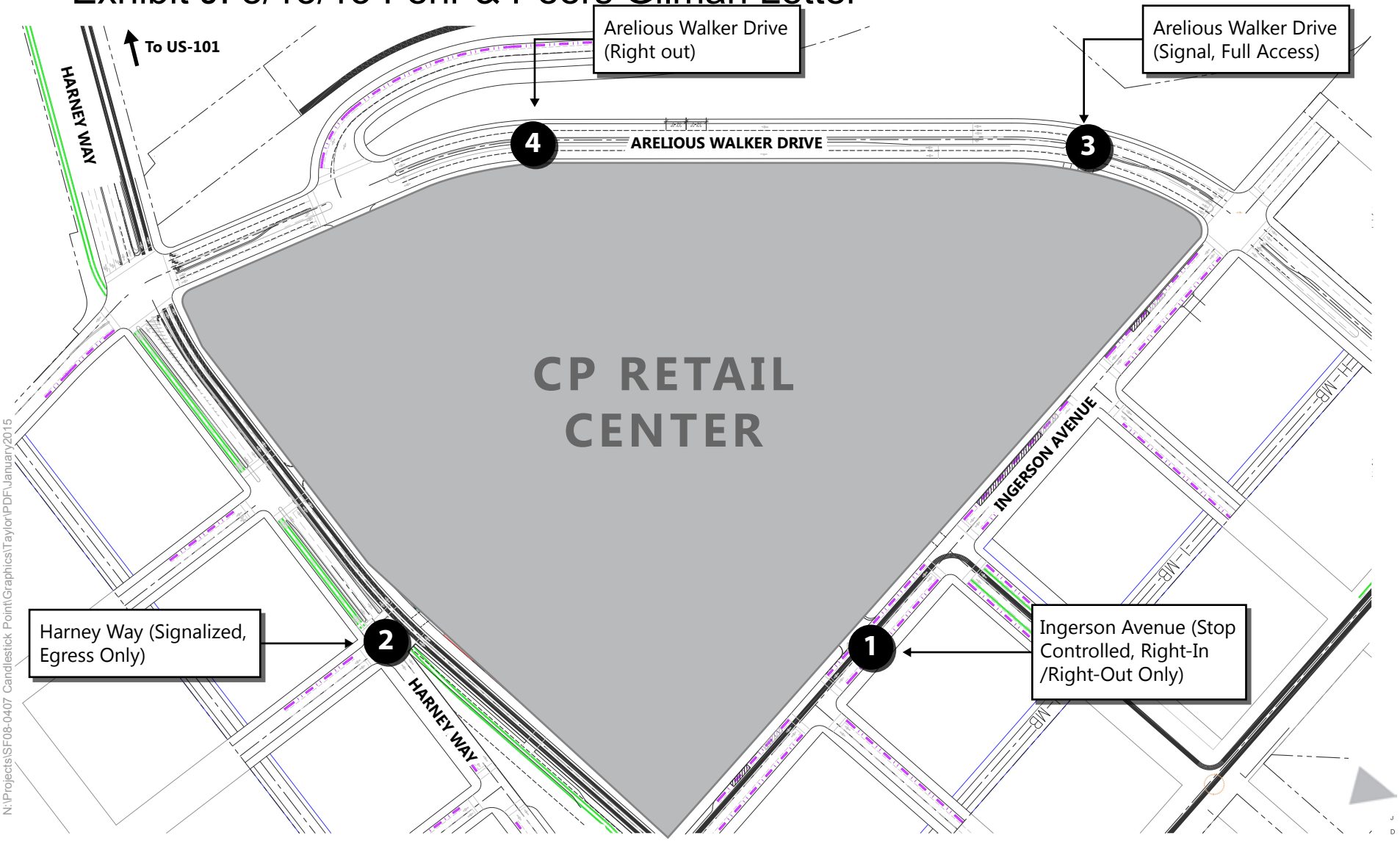
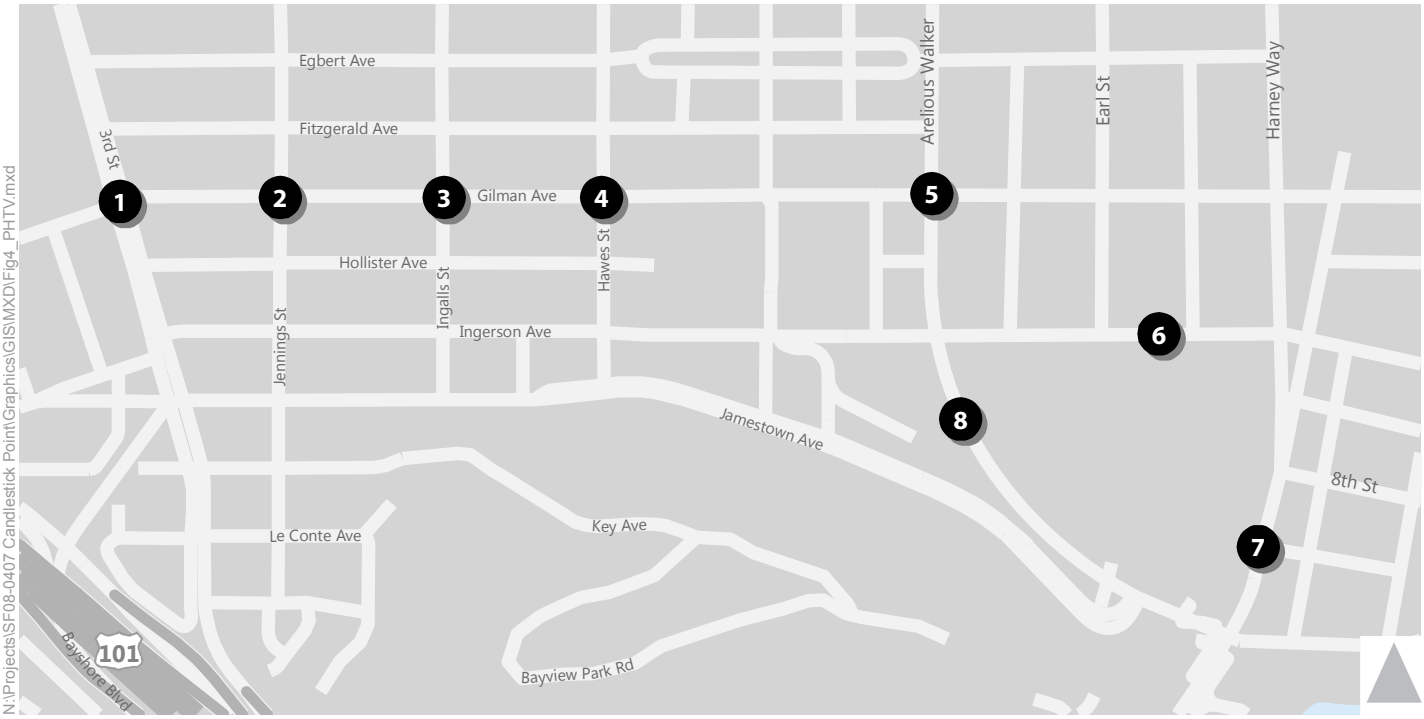
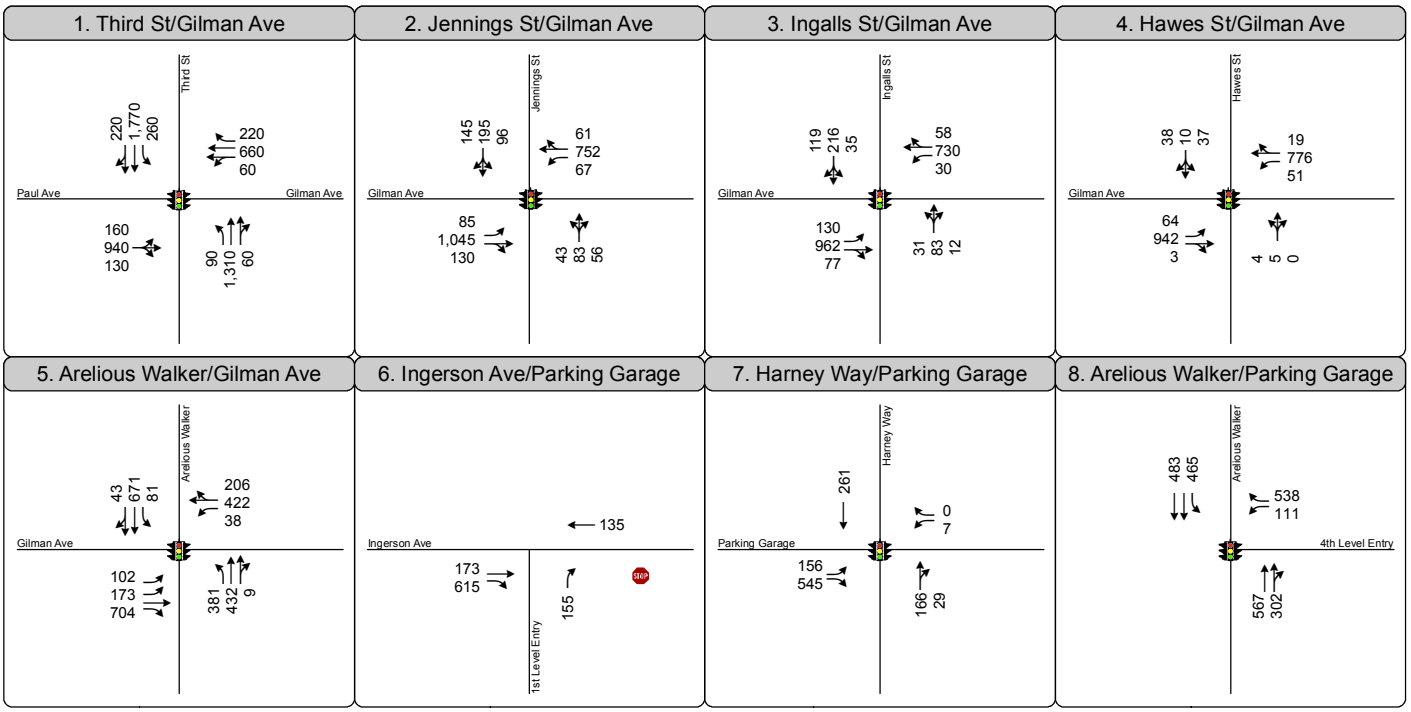


Figure 3

CP Retail Center Parking Garage Site Plan





X Study Intersection

XXX Peak Hour Traffic Volume

Traffic Signal

Turn Lane

Stop Sign

Figure 4

Study Intersection Volumes and Lane Configuration

EXISTING CONDITIONS

Third Street

Existing near-side bus stop

Paul Avenue

Existing near-side bus stop

Gilman Avenue

PROPOSED CONDITIONS

Third Street

Existing near-side bus stop

Transit only lane

Bus far-side stop

Move Bus Stop

Provide approximately 200' transit-only queue jump lane

11'

8'

11'

Move Bus Stop

Existing near-side bus stop

Gilman Avenue

Bus far-side stop

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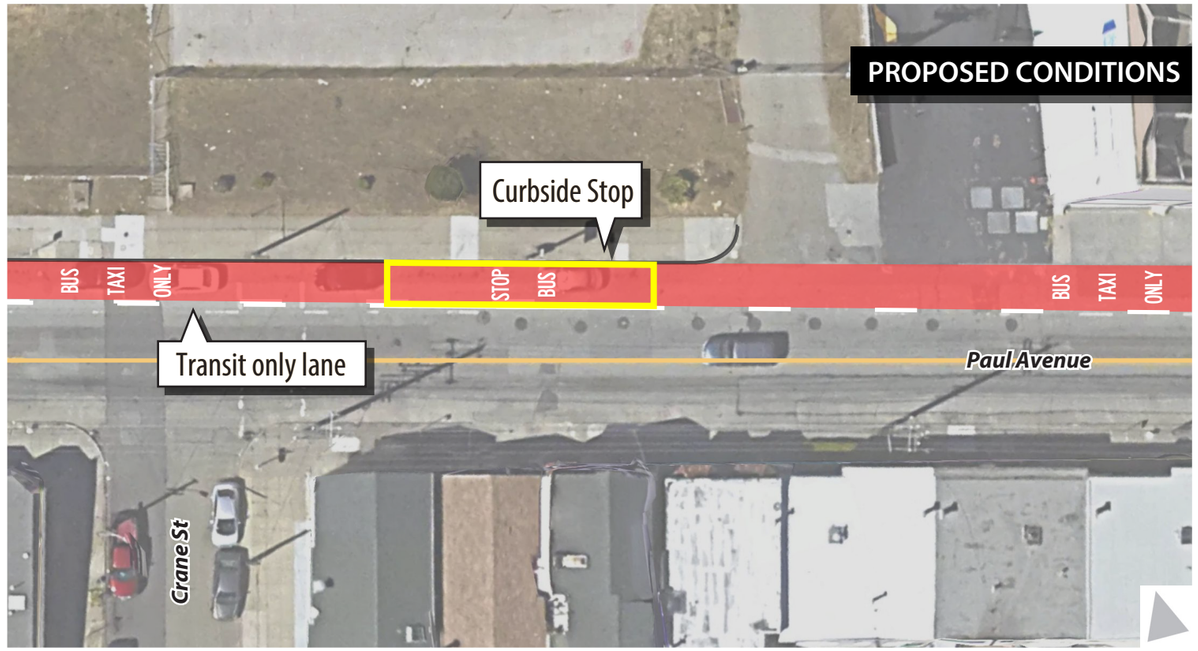
Figure 5

Gilman Avenue



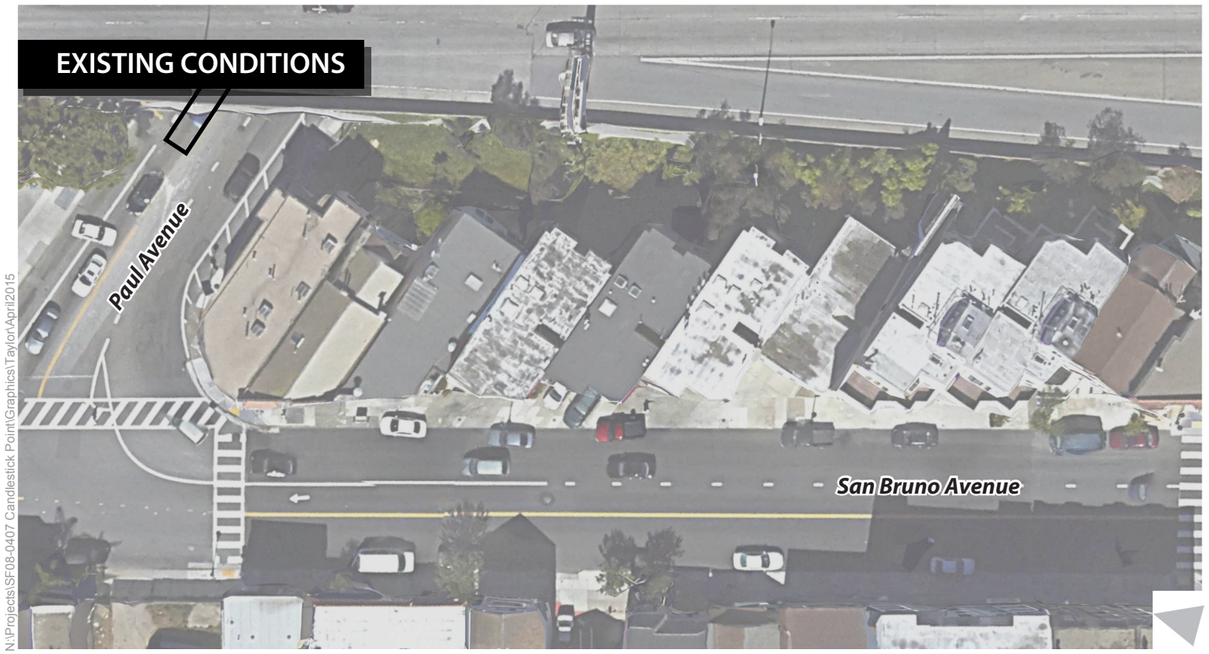


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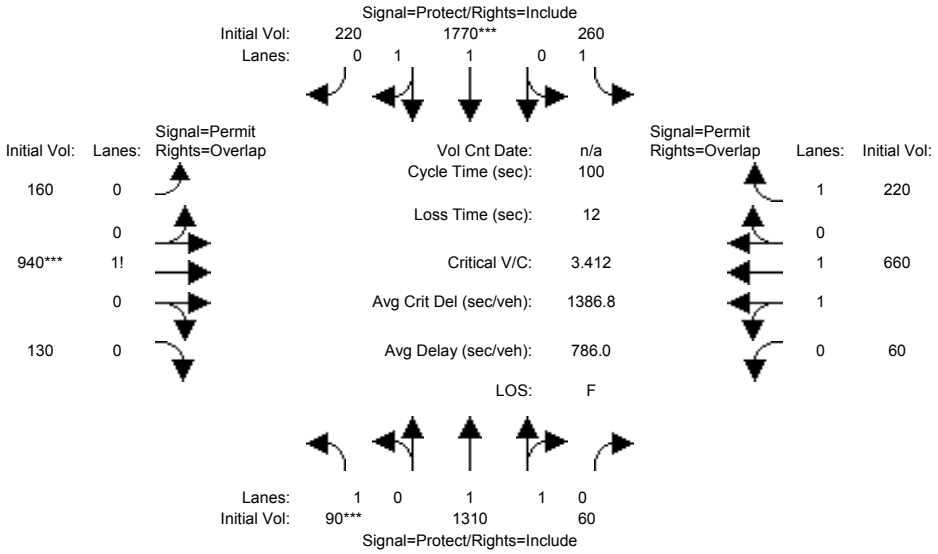
Figure 6

Paul Avenue / San Bruno Avenue Transit Mitigations

ATTACHMENT A – LOS CALCULATIONS

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
PP Variant 2A PM

Intersection #1009: 3rd St / Paul Ave / Gilman Ave

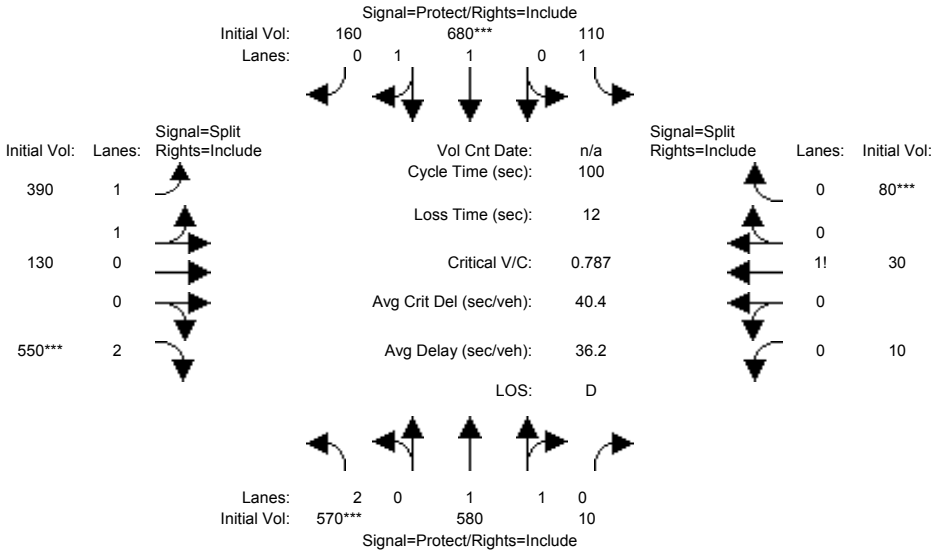


Street Name:	3rd St						Paul Ave / Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	12	49	49	12	49	49	24	24	24	24	24	24
Y+R:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Volume Module:												
Base Vol:	90	1310	60	260	1770	220	160	940	130	60	660	220
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:	90	1310	60	260	1770	220	160	940	130	60	660	220
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:	90	1310	60	260	1770	220	160	940	130	60	660	220
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:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	92	1337	61	265	1806	224	163	959	133	61	673	224
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	92	1337	61	265	1806	224	163	959	133	61	673	224
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:	92	1337	61	265	1806	224	163	959	133	61	673	224
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.88	0.88	0.90	0.89	0.89	0.28	0.28	0.28	0.61	0.61	0.80
Lanes:	1.00	1.91	0.09	1.00	1.78	0.22	0.13	0.76	0.11	0.17	1.83	1.00
Final Sat.:	1718	3198	146	1718	3005	373	70	409	57	194	2137	1519
Capacity Analysis Module:												
Vol/Sat:	0.05	0.42	0.42	0.15	0.60	0.60	2.35	2.35	2.35	0.32	0.32	0.15
Crit Moves:	****				****			****				
Green/Cycle:	0.12	0.49	0.49	0.12	0.49	0.49	0.27	0.27	0.39	0.27	0.27	0.39
Volume/Cap:	0.45	0.85	0.85	1.29	1.23	1.23	8.69	8.69	6.02	1.17	1.17	0.38
Uniform Del:	40.9	22.3	22.3	44.0	25.5	25.5	36.5	36.5	30.5	36.5	36.5	21.8
IncremntDel:	6.8	5.9	5.9	160.5	108	107.6	3477	3477	2269	91.6	91.6	1.8
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay 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
Delay/Veh:	47.7	28.2	28.2	204.5	133	133.1	3513	3513	2300	128.1	128	23.7
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:	47.7	28.2	28.2	204.5	133	133.1	3513	3513	2300	128.1	128	23.7
LOS by Move:	D	C	C	F	F	F	F	F	F	F	F	C
HCM2kAvgQ:	3	22	22	18	59	59	174	174	166	22	22	5

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

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
PP Variant 2A PM

Intersection #1034: Arelious Walker Dr / Gilman Ave

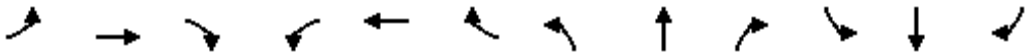


Street Name:	Arelious Walker Dr						Gilman Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	570	580	10	110	680	160	390	130	550	10	30	80
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:	570	580	10	110	680	160	390	130	550	10	30	80
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:	570	580	10	110	680	160	390	130	550	10	30	80
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:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	582	592	10	112	694	163	398	133	561	10	31	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	582	592	10	112	694	163	398	133	561	10	31	82
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:	582	592	10	112	694	163	398	133	561	10	31	82
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.93	0.93	0.93	0.90	0.90	0.94	0.94	0.73	0.89	0.89	0.89
Lanes:	2.00	1.97	0.03	1.00	1.62	0.38	1.50	0.50	2.00	0.08	0.25	0.67
Final Sat.:	3432	3467	60	1769	2784	655	2692	897	2786	141	422	1125
Capacity Analysis Module:												
Vol/Sat:	0.17	0.17	0.17	0.06	0.25	0.25	0.15	0.15	0.20	0.07	0.07	0.07
Crit Moves:	****				****				****			****
Green/Cycle:	0.22	0.39	0.39	0.14	0.32	0.32	0.26	0.26	0.26	0.09	0.09	0.09
Volume/Cap:	0.79	0.44	0.44	0.44	0.79	0.79	0.58	0.58	0.79	0.79	0.79	0.79
Uniform Del:	37.1	22.6	22.6	39.1	31.1	31.1	32.5	32.5	34.7	44.4	44.4	44.4
IncremntDel:	5.6	0.2	0.2	1.2	3.9	3.9	0.9	0.9	5.8	22.9	22.9	22.9
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay 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
Delay/Veh:	42.7	22.8	22.8	40.3	35.0	35.0	33.4	33.4	40.5	67.3	67.3	67.3
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:	42.7	22.8	22.8	40.3	35.0	35.0	33.4	33.4	40.5	67.3	67.3	67.3
LOS by Move:	D	C	C	D	C	C	C	C	D	E	E	E
HCM2kAvgQ:	11	7	7	4	14	14	8	8	11	6	6	6

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

HCM Unsignalized Intersection Capacity Analysis
2: Jennings Street & Gilman Avenue

Original EIR Gilman Design (AWSC)
3/26/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	85	1045	130	67	752	61	43	83	56	68	195	145
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	89	1100	137	71	792	64	45	87	59	72	205	153

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	639	687	466	460	192	429
Volume Left (vph)	89	0	71	0	45	72
Volume Right (vph)	0	137	0	64	59	153
Hadj (s)	0.10	-0.11	0.11	-0.06	-0.10	-0.15
Departure Headway (s)	8.8	8.6	8.8	8.6	9.4	8.1
Degree Utilization, x	1.0	1.0	1.0	1.0	0.50	0.97
Capacity (veh/h)	412	423	412	428	369	432
Control Delay (s)	287.5	319.5	117.2	103.6	21.4	64.2
Approach Delay (s)	304.1		110.4		21.4	64.2
Approach LOS	F		F		C	F

Intersection Summary				
Delay	187.0			
Level of Service	F			
Intersection Capacity Utilization	97.9%	ICU Level of Service		F
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
3: Ingalls Street & Gilman Avenue

Original EIR Gilman Design (AWSC)
3/26/2015

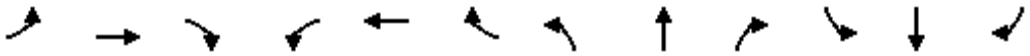
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	130	962	77	30	730	58	31	83	12	35	216	119
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	137	1013	81	32	768	61	33	87	13	37	227	125

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	643	587	416	445	133	389
Volume Left (vph)	137	0	32	0	33	37
Volume Right (vph)	0	81	0	61	13	125
Hadj (s)	0.14	-0.06	0.07	-0.06	0.03	-0.14
Departure Headway (s)	8.4	8.2	8.2	8.1	9.1	7.7
Degree Utilization, x	1.0	1.0	0.95	1.0	0.34	0.83
Capacity (veh/h)	438	447	432	445	365	389
Control Delay (s)	262.2	192.1	59.2	70.5	16.6	38.2
Approach Delay (s)	228.7		65.1		16.6	38.2
Approach LOS	F		F		C	E

Intersection Summary				
Delay	135.7			
Level of Service	F			
Intersection Capacity Utilization	88.3%	ICU Level of Service		E
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
4: Hawes Street & Gilman Avenue

Original EIR Gilman Design (AWSC)
3/26/2015



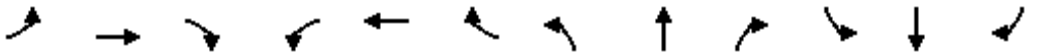
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	64	942	3	51	776	19	4	5	0	37	10	38
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	67	992	3	54	817	20	4	5	0	39	11	40

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	563	499	462	428	9	89
Volume Left (vph)	67	0	54	0	4	39
Volume Right (vph)	0	3	0	20	0	40
Hadj (s)	0.09	0.03	0.09	0.00	0.12	-0.15
Departure Headway (s)	6.2	6.1	6.4	6.3	7.5	6.8
Degree Utilization, x	0.97	0.85	0.82	0.75	0.02	0.17
Capacity (veh/h)	576	580	551	556	463	512
Control Delay (s)	53.2	33.0	31.4	24.8	10.6	11.2
Approach Delay (s)	43.7		28.2		10.6	11.2
Approach LOS	E		D		B	B

Intersection Summary				
Delay	35.4			
Level of Service	E			
Intersection Capacity Utilization	67.7%	ICU Level of Service		C
Analysis Period (min)	15			

HCM Signalized Intersection Capacity Analysis
1: 3rd Street & Gilman Avenue

Revised Gilman Cross-Section
3/26/2015

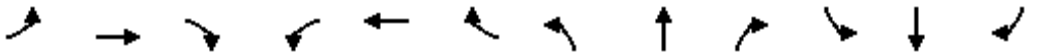


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	940	130	60	660	220	90	1310	60	260	1770	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00			0.95	1.00	1.00	0.95		1.00	0.95	
Frt		0.99			1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected		0.99			1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1824			3525	1583	1770	3516		1770	3480	
Flt Permitted		0.36			0.64	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		667			2257	1583	1770	3516		1770	3480	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	168	989	137	63	695	232	95	1379	63	274	1863	232
RTOR Reduction (vph)	0	4	0	0	0	43	0	4	0	0	9	0
Lane Group Flow (vph)	0	1290	0	0	758	189	95	1438	0	274	2086	0
Turn Type	Perm	NA		Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		2			6	3	7	4		3	8	
Permitted Phases	2			6		6						
Actuated Green, G (s)		28.5			28.5	44.0	8.1	41.0		15.5	48.4	
Effective Green, g (s)		28.5			28.5	44.0	8.1	41.0		15.5	48.4	
Actuated g/C Ratio		0.28			0.28	0.44	0.08	0.41		0.16	0.48	
Clearance Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		190			643	775	143	1441		274	1684	
v/s Ratio Prot						0.04	0.05	c0.41		0.15	c0.60	
v/s Ratio Perm		c1.93			0.34	0.08						
v/c Ratio		6.79			1.18	0.24	0.66	1.00		1.00	1.24	
Uniform Delay, d1		35.8			35.8	17.6	44.6	29.5		42.2	25.8	
Progression Factor		1.00			1.04	1.18	1.00	1.00		1.00	1.00	
Incremental Delay, d2		2615.6			91.1	0.1	11.1	23.3		54.4	112.6	
Delay (s)		2651.4			128.3	20.8	55.7	52.8		96.6	138.4	
Level of Service		F			F	C	E	D		F	F	
Approach Delay (s)		2651.4			103.1			52.9			133.6	
Approach LOS		F			F			D			F	

Intersection Summary			
HCM 2000 Control Delay	635.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	3.10		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	163.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
2: Jennings Street & Gilman Avenue

Revised Gilman Cross-Section
3/26/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	1045	130	67	752	61	43	83	56	68	195	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.98		1.00	0.99			0.96			0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1770	1832		1770	1842			1764			1759	
Flt Permitted	0.21	1.00		0.06	1.00			0.69			0.88	
Satd. Flow (perm)	394	1832		111	1842			1238			1569	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	89	1100	137	71	792	64	45	87	59	72	205	153
RTOR Reduction (vph)	0	5	0	0	3	0	0	16	0	0	20	0
Lane Group Flow (vph)	89	1232	0	71	853	0	0	175	0	0	410	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	67.0	67.0		67.0	67.0			25.0			25.0	
Effective Green, g (s)	67.0	67.0		67.0	67.0			25.0			25.0	
Actuated g/C Ratio	0.67	0.67		0.67	0.67			0.25			0.25	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	263	1227		74	1234			309			392	
v/s Ratio Prot		c0.67			0.46							
v/s Ratio Perm	0.23			0.64				0.14			c0.26	
v/c Ratio	0.34	1.00		0.96	0.69			0.57			1.05	
Uniform Delay, d1	7.0	16.5		15.2	10.1			32.8			37.5	
Progression Factor	0.13	0.83		0.70	0.69			1.00			1.00	
Incremental Delay, d2	0.3	8.8		78.6	2.3			2.4			57.8	
Delay (s)	1.2	22.5		89.2	9.4			35.2			95.3	
Level of Service	A	C		F	A			D			F	
Approach Delay (s)		21.1			15.5			35.2			95.3	
Approach LOS		C			B			D			F	

Intersection Summary			
HCM 2000 Control Delay	31.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	104.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
3: Ingalls Street & Gilman Avenue

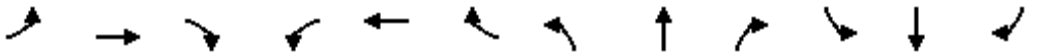
Revised Gilman Cross-Section
3/26/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	962	77	30	730	58	31	83	12	35	216	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.99			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1770	1842		1770	1842			1816			1774	
Flt Permitted	0.23	1.00		0.09	1.00			0.71			0.96	
Satd. Flow (perm)	433	1842		169	1842			1309			1712	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	137	1013	81	32	768	61	33	87	13	37	227	125
RTOR Reduction (vph)	0	3	0	0	3	0	0	4	0	0	17	0
Lane Group Flow (vph)	137	1091	0	32	826	0	0	129	0	0	372	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	68.0	68.0		68.0	68.0			24.0			24.0	
Effective Green, g (s)	68.0	68.0		68.0	68.0			24.0			24.0	
Actuated g/C Ratio	0.68	0.68		0.68	0.68			0.24			0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	294	1252		114	1252			314			410	
v/s Ratio Prot		c0.59			0.45							
v/s Ratio Perm	0.32			0.19				0.10			c0.22	
v/c Ratio	0.47	0.87		0.28	0.66			0.41			0.91	
Uniform Delay, d1	7.5	12.6		6.3	9.3			32.0			36.9	
Progression Factor	0.27	0.29		0.62	0.78			1.00			1.00	
Incremental Delay, d2	1.3	2.3		5.3	2.4			0.9			23.0	
Delay (s)	3.3	5.9		9.2	9.6			32.9			59.9	
Level of Service	A	A		A	A			C			E	
Approach Delay (s)		5.7			9.6			32.9			59.9	
Approach LOS		A			A			C			E	

Intersection Summary			
HCM 2000 Control Delay	16.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
4: Hawes Street & Gilman Avenue

Revised Gilman Cross-Section
3/26/2015

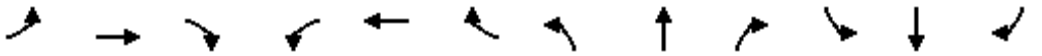


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	64	942	3	51	776	19	4	5	0	37	10	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			1.00			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.98	
Satd. Flow (prot)	1770	1862		1770	1856			1822			1714	
Flt Permitted	0.31	1.00		0.24	1.00			0.91			0.86	
Satd. Flow (perm)	575	1862		456	1856			1693			1499	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	67	992	3	54	817	20	4	5	0	39	11	40
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	0	0	31	0
Lane Group Flow (vph)	67	995	0	54	836	0	0	9	0	0	59	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	83.8	83.8		83.8	83.8			8.2			8.2	
Effective Green, g (s)	83.8	83.8		83.8	83.8			8.2			8.2	
Actuated g/C Ratio	0.84	0.84		0.84	0.84			0.08			0.08	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	481	1560		382	1555			138			122	
v/s Ratio Prot		c0.53			0.45							
v/s Ratio Perm	0.12			0.12				0.01			c0.04	
v/c Ratio	0.14	0.64		0.14	0.54			0.07			0.48	
Uniform Delay, d1	1.5	2.8		1.5	2.4			42.4			43.9	
Progression Factor	1.35	0.98		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.3	1.0		0.8	1.3			0.2			3.0	
Delay (s)	2.3	3.7		2.3	3.7			42.6			46.9	
Level of Service	A	A		A	A			D			D	
Approach Delay (s)		3.6			3.6			42.6			46.9	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	5.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
5: Gilman Avenue & Arelious Walker Drive

Revised Gilman Cross-Section
3/26/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	102	173	704	38	422	206	381	432	9	81	671	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3529		1770	3507	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	3529		1770	3507	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	107	182	741	40	444	217	401	455	9	85	706	45
RTOR Reduction (vph)	0	0	39	0	0	93	0	1	0	0	5	0
Lane Group Flow (vph)	107	182	702	40	444	124	401	463	0	85	746	0
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	1	6	7	5	2		7	4		3	8	
Permitted Phases			6			2						
Actuated Green, G (s)	8.1	34.9	63.9	3.6	30.4	30.4	29.0	47.2		8.3	26.5	
Effective Green, g (s)	8.1	34.9	63.9	3.6	30.4	30.4	29.0	47.2		8.3	26.5	
Actuated g/C Ratio	0.07	0.32	0.58	0.03	0.28	0.28	0.26	0.43		0.08	0.24	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	130	591	977	57	514	437	466	1514		133	844	
v/s Ratio Prot	c0.06	0.10	c0.19	0.02	c0.24		c0.23	0.13		0.05	c0.21	
v/s Ratio Perm			0.25			0.08						
v/c Ratio	0.82	0.31	0.72	0.70	0.86	0.28	0.86	0.31		0.64	0.88	
Uniform Delay, d1	50.2	28.4	16.6	52.7	37.8	31.2	38.6	20.6		49.4	40.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	32.6	0.3	2.5	32.3	14.0	0.4	18.4	0.1		9.7	10.9	
Delay (s)	82.8	28.7	19.1	85.0	51.9	31.6	57.0	20.7		59.1	51.2	
Level of Service	F	C	B	F	D	C	E	C		E	D	
Approach Delay (s)		27.4			47.5			37.6			52.0	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	40.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Exhibit K: Candlestick Point Tower Analysis from CPSRA

Exhibit K: Candlestick Point Tower Analysis from CPSRA

Exhibit K: Candlestick Point Tower Analysis from CPSRA

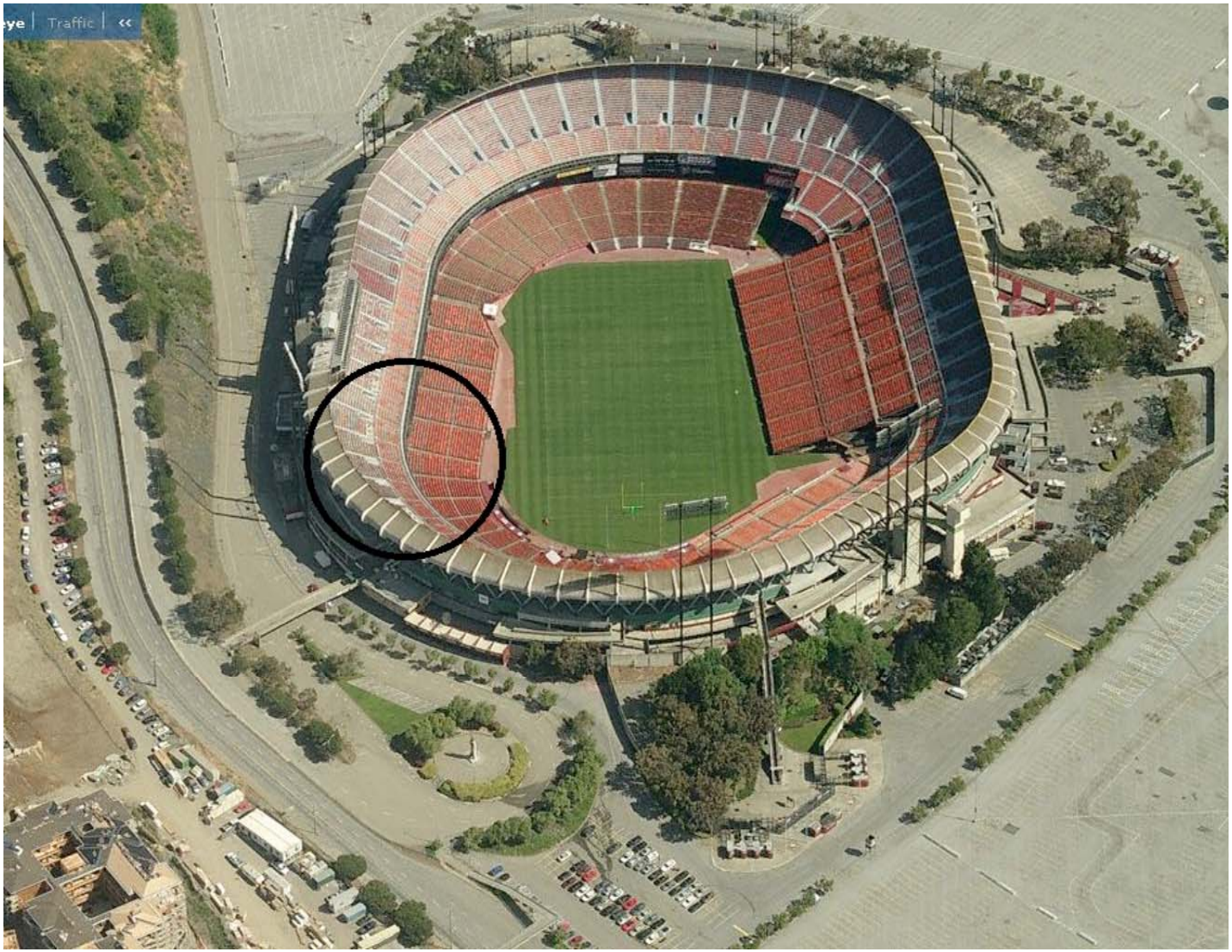


Exhibit K: Candlestick Point Tower Analysis from CPSRA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Resolution 1-2013
Adopted by the
CALIFORNIA STATE PARK AND RECREATION COMMISSION
at its regular meeting in Brisbane, California
January 18, 2013

General Plan and Final Environmental Impact Report for Candlestick Point State Recreation Area

WHEREAS, the Director of California State Parks has presented to this Commission for approval the proposed General Plan and Final Environmental Impact Report ("Plan") for Candlestick Point State Recreation Area ("Park"); and

WHEREAS, the Park is the first and one of the few intensely urban units in the State Park System, surrounded by industrial and residential uses and Candlestick Park stadium; and

WHEREAS, the Park is located in an urban area surrounded by the proposed Candlestick Point-Hunters Point Shipyard Phase II project, which will dramatically alter the neighborhood surrounding the park, replacing the existing Candlestick Park stadium, vacant lands, and other areas with a large, mixed-use development; and

WHEREAS, California State Parks entered into a land exchange agreement with the City and County of San Francisco that will reconfigure the park boundary, adding land in some of the narrowest areas and removing it from others and in exchange, California State Parks will receive funding to improve and enhance Candlestick Point State Recreation Area, and

WHEREAS, this general plan will guide the development and management of the Park for public use and resource protection for the next 20 or more years, by establishing goals and guidelines to assist in the daily and long-term management of the park to ensure that its resources are protected, while encouraging a variety of recreation activities; and

WHEREAS, the Plan is subject to the California Environmental Quality Act (CEQA) and includes the Environmental Impact Report (EIR) as a part of a General Plan, pursuant to Public Resources Code (PRC) Section 5002.2 and the California Code of Regulations (CCR) Section 15166 (CEQA Guidelines), providing discussion of the probable impacts of future development, establishing goals, policies and objectives, and addressing all the requirements of an EIR; and

WHEREAS, the Plan and EIR function as a "tiered EIR" pursuant to PRC 21093, covering general goals and objectives of the Plan, and that the appropriate level of CEQA review will be conducted for each project relying on the Plan; and

WHEREAS, the Plan establishes a foundation to designate the remaining portions of lands at Candlestick Point State Recreation Area for park priority use in the Bay Plan managed and maintained by the San Francisco Bay Conservation and Development Commission (BCDC);

CONTINUED ON PAGE 2

CONTINUED FROM PAGE 1

NOW, THEREFORE BE IT RESOLVED: That this Commission has reviewed and considered the information and analysis in the Plan prior to approving the Plan, and this Commission finds and certifies that the Plan reflects the independent judgment and analysis of this Commission and has been completed in accordance with the California Environmental Quality Act; and be it

RESOLVED: In connection with its review of the Plan prior to approving the General Plan, this Commission independently finds that the environmental conclusions contained in the Environmental Analysis Section of the Plan are supported by facts therein and that each fact in support of the findings is true and is based on substantial evidence in the record and that mitigation measures or other changes or alterations have been incorporated into the Plan which will avoid or substantially lessen the potential impacts identified in the Plan; and be it

RESOLVED: The location and custodian of the Plan and other materials which constitute the record of proceedings on which the Commission's decision is based is: State Park and Recreation Commission, P.O. Box 942896, Sacramento, California 94296-0001, Phone 916/653-0524, Facsimile 916/653-4458; and be it

RESOLVED: The California State Park and Recreation Commission hereby approves the Department of Parks and Recreation's General Plan and certifies the Environmental Impact Report prepared for Candlestick Point State Recreation Area, dated January 2012; and be it

FURTHER RESOLVED: That a Notice of Determination will be filed with the Office of Planning and Research within five days of this approval.

Attest: This Resolution was duly adopted by the California State Park and Recreation Commission on January 18, 2013 at the Commission's duly-noticed public meeting at Brisbane, California.

By: *ORIGINAL SIGNED BY* Date: *1-18-13*

Louis Nastro
Assistant to the Commission
For Major General Anthony L. Jackson, USMC (Ret), Director
Secretary to the Commission

S. Executive Summary

S.1 Park Description

Candlestick Point State Recreation Area (CPSRA, or the park) is located in the City and County of San Francisco along the southeastern waterfront, adjacent to San Francisco Bay. It occupies 151 acres within San Francisco's Bayview Hunters Point neighborhood, and is surrounded by industrial uses, residential uses, and Candlestick Park stadium. As California's first urban state park, CPSRA provides access to open space, the Bay, and recreational opportunities in a highly urbanized and industrial area of San Francisco.

The shoreline of CPSRA is perhaps its most defining feature. The park skirts the western shore of San Francisco Bay for approximately 3.4 miles, offering access to the Bay and long-range scenic views. Visitors from the local and regional community engage in a wide range of day-use recreation activities, including trail use, picnicking, windsurfing, wildlife viewing, and beach use, among others.

Although CPSRA is built entirely on reclaimed land, the park conserves important natural and cultural resources. A rare open space resource in San Francisco's southeastern corner, CPSRA provides habitat for birds, small mammals, and other wildlife. The park's position along the Pacific flyway makes it a valuable stopover for migrating birds. CPSRA's history of use, from the Ohlone people, to Chinese fishing camps, to the filling of the Bay, enriches its story as the state's first urban state park.

- U.S. Environmental Protection Agency (USEPA)
- U.S. Department of the Navy (USNA)
- California State Lands Commission (SLC)
- California Department of Boating and Waterways (DBW)
- Ohlone Indian Tribe
- California State Parks Foundation
- San Francisco Bay Trail
- Literacy for Environmental Justice
- Sierra Club, San Francisco Bay Chapter
- Golden Gate Audubon Society
- California Native Plant Society
- Nature in the City
- Bay Access

Public outreach included a variety of methods: four public workshops; a webpage on State Parks' website; and mailing materials, including emails, postcards, flyers, and newsletters. Notices of the public meetings were placed at CPSRA and in local business storefronts.

S.4 Park Vision

The park vision describes the future desired outcome of CPSRA, expressing what the park represents and its role as a state park. The vision for CPSRA is as follows:

> *The vision of Candlestick Point SRA, California's first urban state park, is to bring state park values and mission into an urban setting. Visitors from the local community, state of California and farther afield will enjoy a range of opportunities to participate in recreational activities and experience nature along the San Francisco Bay. Sweeping views of the Bay, native coastal landscapes, tidal marshes, beaches, and areas for community gathering and activity will all contribute to the character of CPSRA. The park will encourage active, healthy lifestyles while at the same time serving as a respite from the urban surroundings of San Francisco and the larger Bay Area. Recreation programs and facilities will maximize access to the Bay and be developed in concert with CPSRA's natural surroundings, treading lightly on the land. CPSRA will enhance the public's understanding of the Bay – its natural history, stories of settlement and development, and future challenges related to sea level rise. The park will foster community and encourage stewardship, and in doing so, become a destination along the Bay for visitors both near and far.*

1.4 Sense of Place

What characteristics make CPSRA distinctive, and draw users to this unit? What inherent qualities should be protected, highlighted, and enhanced? The first response must be the relationship of the site with San Francisco Bay, with over three miles of coastline, and ever-changing, sweeping Bay views that include distant mountains and ridges to the east. The presence of the Bay can be sensed throughout the entire unit, either through direct recreational activities with the water, or as a backdrop sensed through the taste of salty cool air, the sounds of water birds, gusting winds, and lapping waves, or the open and bright expanse beyond a tree-protected meadow. The changing shoreline offers a variety in Bay experience, from wind-driven choppy waves, to quieter protected coves and beaches, to the inlet of Yosemite Slough, where the water is a narrow channel marked by the presence of the bird-covered “Double Rock” feature.

Also idiosyncratic are the often-present strong winds, traveling from the Pacific Ocean through the Alemany Gap and swirling around the adjacent Bayview Hill. While the wind poses challenges for human comfort, it is undeniably a distinct characteristic of the site, and is what makes CPSRA a world famous windsurfing area. Despite being an urban site, with the influence of the Bay, the wind, and the backdrop of the undeveloped Bayview Hill, the park offers a sense of being in contact with natural forces. It is seen as a source of respite and renewal, although at times a bracing one.

Nonetheless, CPSRA is an urban state park. Its urban edge is as long as its shoreline, with CPSRA as the intermediary where these very different environments meet and blend. The existing urban context of acres of parking lot and a rarely used stadium means the park is rather isolated, and often with few visitors. This factor in itself contributes to the sense of being an “urban getaway” for a quiet walk alone.

The land, which is almost entirely fill, is a created landscape, characterized by features that were either placed there or that naturalized over time. Large areas of the park are undeveloped, and apart from the natural factors previously mentioned, offer a sense of place that resembles an open canvas. The shape of the shoreline follows the tidal lots where the Bay was sold off in rectangular blocks to be filled for new land. The very shape of the park offers an authentic story that is part of the spirit of the area.

The proposed redevelopment surrounding the park will greatly change the character of the urban edge. The park will provide a “green front lawn” for the planned community of townhomes, high rises, and shopping districts. There will be many more people visiting the park, looking to enjoy the incredible water’s edge recreation, as well as contact with nature and a respite from city life. Thus, future development of the park must carefully navigate this intermediary nature between the city and shoreline edges. CPSRA’s spirit of place will continue to evolve, as a gradient of these urban and natural experiences.

December 21, 2015

Ms. Joy Navarette
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

Ms. Lila Hussain
Office of Community Investment and Infrastructure
One South Van Ness, 5th Floor
San Francisco, CA 94103

Subject: Candlestick Point – Revised Project Description

Dear Joy and Lila,

The *Candlestick Point/Hunters Point Shipyard Phase II Project Final EIR* (herein referred to simply as "EIR") was certified by the San Francisco Planning Commission and the San Francisco Redevelopment Commission in June 2010. Following the approval, the Housing/R&D Variant (Variant 2A) has been advanced as the project.

Since the Project has been approved, the project sponsor has proposed minor revisions to the approved land uses. Specifically, the sponsor is proposing to construct a portion of the previously-approved arena/performance venue space as a new movie theater, while retaining the balance of the previously-approved square footage for future performance venue. This letter summarizes the transportation analysis results conducted to determine whether this modification would result in changes to the conclusions from the EIR.

PROJECT LAND USE ASSUMPTIONS

As described in the EIR, Variant 2A (the Project) assumed the Candlestick Point site would include:

- 150,000 square feet of office
- 6,225 residential dwelling units (includes replacement of 256 then-existing units at Alice Griffith)
- 635,000 square feet of regional retail

- 125,000 square feet of neighborhood-serving retail
- 220 room hotel
- 50,000 square feet of community-serving uses
- 10,000-seat arena

Since the Project was approved, the project sponsor proposed to replace 15,500 square feet of office space with 6,000 square feet of local serving retail. This change resulted in either a net decrease or no net change to peak hour trip generation for the peak hours evaluated in the EIR (see memo to SF Planning Department and Office of Community Investment and Infrastructure, dated June 25, 2015).

Currently, the project sponsor is proposing to replace a portion of the approved arena with a movie theater; the remaining portion would be left as a performing arts theater/arena. **Table 1** summarizes the land use assumptions.

TABLE 1: LAND USE ASSUMPTIONS

Land Use	Units	Total [1]		
		EIR / Variant 2A	Revised Land Uses with No Office[5]	Revised Project to Include Movie Theater
Regional Retail	ksf	635,000	635,000	635,000
Local Serving Retail	ksf	125,000	**131,000**	183,000
Office	ksf	150,000	**134,500**	0
Performance Venue / Arena [2]	seats	10,000	10,000	**4,400**
Recreational Community Center	ksf	50,000	50,000	50,000
County Park	acres	97	97	97
Hotel	rooms	220	220	220
Residential Units [3]	dwelling units	6,225	6,225	6,225
Movie Theater [4]	seats	0	0	**1,200**

Notes:

1. **Bold** indicates a change in land use assumption.
2. EIR and revised Project assume 75,000 sf arena and 33,000 sf arena, respectively. Number of Arena seats interpolated based on square-feet to seat ratio used in the EIR.
3. Residential units includes replacement of 256 then-existing units at Alice Griffith that would be replaced.
4. The revised Project movie theater is 42,000 sf.
5. See memo to SF Planning Department and Office of Community Investment and Infrastructure, dated June 25 2015 (Updated December 14, 2015).

This letter assesses the impacts of converting a portion of the originally-approved arena into a movie theater and includes the conversion of office to local serving retail.

PROJECT TRAVEL DEMAND

The EIR forecasted weekday AM (8:00 to 9:00 AM) and PM (5:00 to 6:00 PM) peak hour[1] trip generation by calculating person trips generated by each land use. Peak hour person trips were distributed to geographical origins/destinations throughout the Bay Area and by mode split. For this analysis, the trip rates, trip distribution, including internalization, and mode splits methodology are consistent with those used in the EIR.

The movie theater is a specific land use that was not included in the original traffic generation forecasts (although the trip generation rates for "shopping center" in the EIR analysis do include movie theaters). In this case, the analysis is based on the specific "movie theater" rates since the specific use is known. Trip generation rates provided by the Institute of Transportation Engineers (ITE), *Trip Generation Manual, 9th Edition*, were used to forecast movie theater trips. AM peak hour trip generation rates were assumed to be zero because it is unlikely that a movie theater would generate traffic during the AM peak hour and because the ITE data did not provide AM peak hour data. Movie Theater trips are likely to behave similarly to retail uses; therefore, the mode splits and geographic distribution originally forecasted for retail were applied to the theater trips as well.

Performance Venue (Arena) Travel Demand

The EIR analyzed traffic generation associated with the arena under conditions with and without an event. The "with event" analysis evaluates pre-event conditions for the weekday PM peak hour to address transportation impacts associated with sold-out events. As described in the EIR, the arena travel demand assumes that weekday evening events would begin at 7:00 PM. and about half of arena attendees (2,200 attendees) would arrive during the PM peak hour. The EIR forecasted that 20 percent of attendees would arrive by transit and the remaining 80 percent would arrive by car.

[1] In addition to the weekday AM and PM peak hours, the EIR evaluated the weekday daily and Sunday PM peak hour trip generation. For this study, only the weekday AM and PM peak hours were evaluated because they are the critical peak periods.

This results in approximately 440 transit users and 587 vehicles (assumes 3 spectators per auto) during the weekday PM peak hour associated with a sold-out event.

Table 2 describes the total AM and PM peak hour person and vehicle trip generation.

TABLE 2: WEEKDAY AM AND PM PEAK HOUR PERSON AND VEHICLE TRIPS

Scenario	Person Trips		Vehicle Trips	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
EIR No Event [1]	6,578	12,632	2,235	4,981
EIR With Event [1, 2]	6,578	22,632	2,235	6,315
Revised Project No Event	6,530	12,798	2,219	5,050
Revised Project With Event [2]	6,530	17,198	2,219	5,637

Notes:

1. These numbers include the conversion of approved office space to retail, as described earlier. This land use change results in a slight change in AM and PM peak hour person trips to what was reported in the EIR.
2. Assumes no trips during the AM peak hour associated with a major event; however, does account for arena employees.

Source: Fehr & Peers, 2015

As shown in the table above, with the movie theater and without an event, the revised Project would generate 16 fewer vehicle trips during the weekday AM peak hour and 69 more vehicle trips during the weekday PM peak hour. With the movie theater and an event, the revised Project would generate 678 fewer vehicle trips during the weekday PM peak hour.

IMPACT ANALYSIS

The remainder of this report discusses the extent to which the proposed project revision would change any impact conclusions from the EIR.

TR1-1: ON-SITE AND OFF-SITE CONSTRUCTION IMPACTS

As described in the EIR, construction of the Project would result in transportation impacts in the Project vicinity due to construction vehicle traffic and roadway construction and would contribute to cumulative construction impacts in the Project vicinity. The EIR concluded implementation of mitigation measure MM TR-1, which would require the Applicant to develop and implement a

construction traffic management plan to reduce the impact of construction activity on transportation facilities, would reduce the impacts caused by construction, but not to a less-than-significant level.

The overall amount of construction anticipated to occur as part of the revised Project will be approximately the same as originally conceived and described in the EIR. The revised Project anticipates constructing the proposed movie theater with construction of sub-phases 02-03-04, while the event space venue may be constructed at a later time, within the CP-02 boundary. Overall, although the timing and location of construction activities may vary within the site compared to what was originally anticipated, the construction activities are expected to create similar significant and unavoidable localized construction-related traffic impacts as were originally described in Impact TR-1 the EIR. Mitigation measure MM-TR-1, development of a Construction Traffic Management Program, would still apply, although impacts would continue to remain significant and unavoidable.

Therefore, construction of the revised Project would not result in any new significant effects to transportation beyond those identified in the EIR or a substantial increase in the severity of a significant impact, and no new mitigation measures would be required.

IMPACTS TR-2 THROUGH TR-16: TRAFFIC IMPACTS TO REGIONAL AND LOCAL ROADWAY SYSTEM, STUDY INTERSECTIONS, AND FREEWAY FACILITIES

The EIR evaluated 60 intersections throughout the Project site and surrounding area. As described in the EIR, the Project would generate substantial amounts of new vehicular traffic resulting in a number of significant impacts and mitigation measures. More specifically, the EIR identified Impact TR-2, a significant impact related to the Project's overall increase in traffic generation in relation to the current roadway system capacity. The EIR identified Mitigation Measure MM TR-2, the development and implementation of the Project's Transportation Demand Management (TDM) plan as a means to lessen the severity of Project-generated traffic impact; however, Impact TR-2 would remain significant and unavoidable with mitigation. The EIR identified Impacts TR-3 through TR-8, which described locations where the Project would create new project-related impacts or contribute to significant cumulative impacts at study intersections. Mitigation Measures MM TR-4 (restriping at the intersection of Tunnel/Blanken), MM TR-6 (participating in the bi-county study and paying a fair share contribution toward improvements near the Geneva Avenue/US 101

interchange), MM TR-7 (restriping at the Amador/Cargo Way intersection), and MM TR-8 (participating in the bi-county study and paying a fair share contribution toward improvements near the Bayshore/Geneva intersection) were recommended to reduce the severity of Project-related impacts. However, due to uncertainty regarding implementation of mitigation measures, Impacts TR-3 through TR-8 were determined to remain significant and unavoidable with mitigation. The FIER also identified Impact TR-9, which described the project's less than significant impact to a number of other study intersections.

At a slightly larger scale, the EIR identified Impact TR-10, which describes the effect of Project-related traffic spilling over into nearby residential neighborhood streets. The EIR determined this impact to be significant, and referenced other mitigation measures described elsewhere in the EIR (including Mitigation Measure MM TR-2, the development and implementation of a TDM Plan) as appropriate strategies to reduce the severity of Impact TR-10. However, the EIR determined that the impact would remain significant and unavoidable with mitigation.

The EIR also identified a number of significant Project-related impacts to freeway facilities, including Impacts TR-11 through TR-15. No feasible mitigation measures were identified for Impacts TR-11 through TR-13 and these impacts would be significant and unavoidable. Mitigation Measures MM TR-14 and MM TR-15, which called for participation in the bi-county study and payment of a fair share contribution toward improvements near the Geneva Avenue / US 101 interchange area, were identified to reduce the severity of Impacts TR-14 and TR-15; however, since the implementation of these measures was uncertain, Impacts TR-14 and TR-15 would also remain significant and unavoidable.

Finally, the EIR identified Impact TR-16, a significant impact associated with the Project's contribution to traffic on Harney Way, which will be a primary access route for all modes between the Project site and regional transportation facilities (US 101, Bayshore Caltrain, Balboa Park BART, the Bay Trail, etc.). Mitigation Measure MM TR-16 called for the project to construct the initial phase of Harney Way at the outset of construction of the first major phase, which would reduce the Project's impact to less than significant.

The proposed land use revisions would likely result in localized changes to traffic volumes, because the change in traffic generation is relatively small compared to the project, and the relatively small increases would disperse relatively quickly farther away from the project. As a result, for the purpose of this analysis, a subset of 25 of the 60 EIR intersections was evaluated representing those

intersections most likely to experience a measurable change to traffic volumes as a result of the proposed changes. Specifically, this analysis examined the following intersections (intersection numbers are consistent with the numbering from the EIR):

1. Third Street / 25th Street
2. Third Street / Cesar Chavez
3. Third Street / Cargo Way
4. Third Street / Evans Avenue
5. Third Street / Oakdale Avenue
6. Third Street / Palou Avenue
7. Third Street / Reverse Avenue
8. Third Street / Carroll Avenue
9. Third Street / Paul Avenue
10. Third Street / Ingerson Avenue
11. Third Street / Jamestown Avenue
12. Third Street / Le Conte / US 101 Northbound Off-Ramp
19. Bayshore Boulevard / Paul Avenue
26. Tunnel Avenue / Blanken Avenue
27. Geneva Avenue / US 101 Southbound Ramps (Alana Way / Beatty Road)
28. Harney Way / US 101 Northbound Ramps (Alana Way / Harney Way / Thomas Mellon)
29. Harney Way / Jamestown Avenue
30. Crisp Road / Palou Avenue / Griffith Street
34. Arelious Walker / Gilman Avenue
35. Amador Street / Cargo Way / Illinois Street
49. Bayshore Boulevard / Geneva Avenue
56. Third Street / Williams Avenue / Van Dyke Avenue
57. Third Street / Jerrold Avenue
59. Harney Way / Executive Park East
60. Harney Way / Thomas Mellon Drive

Weekday AM and PM peak hour intersection level of service (LOS) and delay are summarized in **Tables 3 and 4**, respectively. The tables compare the results for the 2030 No Project, 2030 Plus Project Variant 2A, and 2030 Plus revised Project. **Appendix A** summarizes intersection operations including delay, LOS, and volume-to-capacity (v/c) ratios for the AM and PM peak hours. Additionally, Appendix A includes the critical movement's Project's contribution at intersections operating at LOS E or F.

TABLE 3: INTERSECTION LOS WEEKDAY AM PEAK HOUR – 2030 CONDITIONS (NO ARENA EVENT)						
Intersection[1]	**No Project**		**Project – Variant 2A**		**Revised Project**	
	Delay[2]	**LOS[3]**	**Delay[2]**	**LOS[3]**	**Delay[2]**	**LOS[3]**
1. Third Street / 25th Street	**>80**	**F**	**>80**	**F**	**>80**	**F**
2. Third Street / Cesar Chavez	**>80**	**F**	**>80**	**F**	**>80**	**F**
3. Third Street / Cargo Way	**>80**	**F**	**>80**	**F**	**>80**	**F**
4. Third Street / Evans Avenue	**>80**	**F**	**>80**	**F**	**>80**	**F**
5. Third Street / Oakdale Avenue	21	C	24	C	23	C
6. Third Street / Palou Avenue	**>80**	**F**	**>80**	**F**	**>80**	**F**
7. Third Street / Reverse Avenue	35	C	48	D	43	D
8. Third Street / Carroll Avenue	12	B	18	B	18	B
9. Third Street / Paul Avenue	**>80**	**F**	**>80**	**F**	**>80**	**F**
10. Third Street / Ingerson Avenue	5	A	6	A	6	A
11. Third Street / Jamestown Avenue	29	C	53	D	51	D
12. Third Street / Le Conte / US 101 Northbound Off-Ramp	50	D	50	D	48	D
19. Bayshore Boulevard / Paul Avenue	**>80**	**F**	**>80**	**F**	**>80**	**F**
26. Tunnel Avenue / Blanken Avenue	43	D	**>80**	**F**	**>80**	**F**
27. Geneva Avenue / US 101 Southbound Ramps (Alana Way / Beatty Road)	**>80**	**F**	**>80**	**F**	**>80**	**F**
28. Harney Way / US 101 Northbound Ramps (Alana Way / Harney Way / Thomas Mellon)	**>80**	**F**	**>80**	**F**	**>80**	**F**

TABLE 3: INTERSECTION LOS
WEEKDAY AM PEAK HOUR – 2030 CONDITIONS (NO ARENA EVENT)

Intersection[1]	No Project		Project – Variant 2A		Revised Project	
	Delay[2]	LOS[3]	Delay[2]	LOS[3]	Delay[2]	LOS[3]
29. Harney Way / Jamestown Avenue[5]	12	B	23	C	22	C
30. Crisp Road / Palou Avenue / Griffith Street	**57**	**E**	46	D	45	D
34. Arelious Walker / Gilman Avenue[5]	**>50 (EB)**	**F**	30	C	30	C
35. Amador Street / Cargo Way / Illinois Street	**65**	**E**	**61**	**E**	**57**	**E**
49. Bayshore Boulevard / Geneva Avenue	**>80**	**F**	**>80**	**F**	**>80**	**F**
56. Third Street / Williams Avenue / Van Dyke Avenue	18	B	29	C	28	C
57. Third Street / Jerrold Avenue	49	D	**>80**	**F**	**>80**	**F**
59. Harney Way / Executive Park East	25	C	25	C	25	C
60. Harney Way / Thomas Mellon Drive	30	C	34	C	33	C

Notes:

1. Based on intersection numbers identified in the EIR.
2. Delay in seconds per vehicle.
3. Intersections operating at LOS E or LOS F conditions highlighted in bold.
4. Year 2030 analysis includes signalization as part of Executive Park Development or new Harney Interchange.
5. Year 2030 analysis includes signalization as part of Project.

Source: Fehr & Peers, 2015

TABLE 4: INTERSECTION LOS WEEKDAY PM PEAK HOUR – 2030 CONDITIONS (NO ARENA EVENT)						
Intersection[1]	**No Project**		**Project – Variant 2A**		**Revised Project**	
	Delay[2]	**LOS[3]**	**Delay[2]**	**LOS[3]**	**Delay[2]**	**LOS[3]**
1. Third Street / 25th Street	**>80**	**F**	**>80**	**F**	**>80**	**F**
2. Third Street / Cesar Chavez	**>80**	**F**	**>80**	**F**	**>80**	**F**
3. Third Street / Cargo Way	**>80**	**F**	**>80**	**F**	**>80**	**F**
4. Third Street / Evans Avenue	**>80**	**F**	**>80**	**F**	**>80**	**F**
5. Third Street / Oakdale Avenue	30	C	**62**	**E**	**56**	**E**
6. Third Street / Palou Avenue	**>80**	**F**	**>80**	**F**	**>80**	**F**
7. Third Street / Reverse Avenue	37	D	**>80**	**F**	**>80**	**F**
8. Third Street / Carroll Avenue	14	B	**63**	**E**	**62**	**E**
9. Third Street / Paul Avenue	**>80**	**F**	**>80**	**F**	**>80**	**F**
10. Third Street / Ingerson Avenue	7	A	54	D	55	D
11. Third Street / Jamestown Avenue	30	C	**>80**	**F**	**>80**	**F**
12. Third Street / Le Conte / US 101 Northbound Off-Ramp	24	C	23	C	22	C
19. Bayshore Boulevard / Paul Avenue	**>80**	**F**	**>80**	**F**	**>80**	**F**
26. Tunnel Avenue / Blanken Avenue	**>80**	**F**	**>80**	**F**	**>80**	**F**
27. Geneva Avenue / US 101 Southbound Ramps (Alana Way / Beatty Road)	**>80**	**F**	**>80**	**F**	**>80**	**F**
28. Harney Way / US 101 Northbound Ramps (Alana Way / Harney Way / Thomas Mellon)	**>80**	**F**	**>80**	**F**	**>80**	**F**
29. Harney Way / Jamestown Avenue[5]	**40**	**E**	44	D	42	D

TABLE 4: INTERSECTION LOS
WEEKDAY PM PEAK HOUR – 2030 CONDITIONS (NO ARENA EVENT)

Intersection[1]	No Project		Project – Variant 2A		Revised Project	
	Delay[2]	LOS[3]	Delay[2]	LOS[3]	Delay[2]	LOS[3]
30. Crisp Road / Palou Avenue / Griffith Street	**58**	**E**	**67**	**E**	**63**	**E**
34. Arelious Walker / Gilman Avenue[5]	**>50 (WB)**	**F**	36	D	36	D
35. Amador Street / Cargo Way / Illinois Street	**60**	**E**	**66**	**E**	**62**	**E**
49. Bayshore Boulevard / Geneva Avenue	**>80**	**F**	**>80**	**F**	**>80**	**F**
56. Third Street / Williams Avenue / Van Dyke Avenue	17	B	**>80**	**F**	**>80**	**F**
57. Third Street / Jerrold Avenue	**>80**	**F**	**>80**	**F**	**>80**	**F**
59. Harney Way / Executive Park East	25	C	26	C	26	C
60. Harney Way / Thomas Mellon Drive	19	B	26	C	25	C

Notes:

1. Based on intersection numbers identified in the EIR.
2. Delay in seconds per vehicle.
3. Intersections operating at LOS E or LOS F conditions highlighted in bold.
4. Year 2030 analysis includes signalization as part of Executive Park Development or new Harney Interchange.
5. Year 2030 analysis includes signalization as part of Project.

Source: Fehr & Peers, 2015

As shown in Tables 3 and 4, with the addition of the movie theater, the study intersections will continue to operate at the same LOS compared to Project Variant 2A during the AM and PM peak hour. 19 of the 25 study intersections would continue to operate at LOS E or F during the weekday AM or PM peak hour and 18 of those intersections would continue to experience a significant project impact. One of the intersections operating at LOS E or F, Bayshore Boulevard / Hester Avenue, was not projected to experience a significant project impact in the original EIR because the Project would not significantly contribute[2] to the intersection's critical movements. The revised Project would contribute additional traffic to the intersection; however, the revised Project's contribution would not significantly contribute to the intersection's critical movement. Thus, the revised Project would not cause any additional intersections operating acceptably under the no project condition to operate unacceptably beyond those identified in the EIR.

Further, the revised Project will not make a considerable contribution to critical movements operating unacceptably beyond those identified in the EIR. The revised Project's contribution would not substantially worsen the intersections operations, as shown in Appendix A, by the negligible change in volume-to-capacity (v/c) ratios and percent contribution to the critical movements.[3]

The revised Project will not create any new significant impacts compared to those identified in the EIR, nor would it substantially worsen the severity of those significant impacts that were identified in the EIR. Therefore, the results and conclusions from the EIR remain applicable to the Revised Project.

Traffic Analysis Results with Event

The revised Project includes a 4,400 seat arena in the Candlestick Hunters Point area, compared to the 10,000 seat arena approved in the EIR. The transportation analysis in the EIR assumed the worst-case scenario, in which a 10,000 person event is held on a weekday evening.

[2] An intersection was considered a significant contribution if with the Project, the intersection was operating at LOS E or F and the Project was to contribute greater than 5-percent of Project traffic to a critical movement operating at LOS E or F.

[3] As shown in Appendix A, the revised Project would increase the Project's contribution by 1-percent or less at study intersections operating at LOS E or F during the AM and PM peak hour, except at 2 intersections. At Third Street / Carroll Avenue and Third Street / Paul Avenue, the revised Project would contribute an additional 15 and 30 trips, respectively, during the weekday PM peak hour. However, the intersection's v/c ratio would remain approximately the same as reported in the EIR. Therefore, the revised Project's contribution would not substantially worsen the intersection's operations.

Since the revised Project would result in congested traffic prior to an arena event, traffic impacts associated with the arena during arena events would be *significant*. However, as shown in Tables 2 and 3, the revised Project will generate less trips than the approved Project Variant 2A with a sold-out arena event. Therefore the impacts associated with an Arena Event in the revised Project scenario will be less than the impacts reported in the EIR. Furthermore, the results and conclusions stated in the EIR are applicable to the revised Project.

As described in the section above, the revised Project will decrease the Project travel demand during the AM peak hour and increase the Project travel demand during the PM peak hour under conditions with no arena event. However, based on the traffic analysis described above, the revisions to the Project would not result in any additional impacts as the results indicate similar intersection delay and levels of service to what was described in the EIR.

IMPACTS TR-17 THROUGH TR-30: IMPACTS TO LOCAL AND REGIONAL TRANSIT OPERATIONS AND CAPACITY

The EIR described the Project's impacts to transit in Impacts TR-17 through TR-30. Impacts TR-17 through TR-20 identified that, with implementation of the Project's Transit Operating Plan (identified as Mitigation Measure MM TR-17), the Project would provide adequate transit capacity locally, at the standard Downtown screenlines, and regionally to meet its projected demand. With implementation of MM TR-17, Impacts TR-17 through TR-20 were determined to be less than significant.

The EIR also identified Impacts TR-21 through TR-27, which describe impacts to transit travel time associated with Project-generated traffic congestion on specific corridors affecting specific transit lines. Mitigation Measures MM TR-21 through MM TR-27 were identified and consist of three parts:

- Transit travel times should be monitored throughout the course of project buildout to determine whether Project-generated traffic is decreasing transit travel speeds.
- If speeds are decreasing, travel time reduction measures should be implemented on the affected corridors. These measures typically involve dedication of transit-only lanes.
- If reduction measures are either infeasible or not effective at improving travel speeds, new vehicles should be purchased to allow SFMTA to maintain planned service frequencies.

However, because implementation of these measures requires substantial additional outreach and design, the feasibility of these measures is uncertain, and Impacts TR-21 through TR-27 were determined to be significant and unavoidable.[4]

The EIR also identifies Impact TR-28, a significant and unavoidable impact to SFMTA transit express routes using US 101 that may be slowed down by Project-generated freeway traffic for which no mitigation measures were identified. Impact TR-29 was identified as a less than significant impact to SFMTA transit express routes using I-280 because project-generated traffic on this route would not be as substantial. Impact TR-30 would be a significant and unavoidable impact to other regional transit routes (such as SamTrans express routes) using regional facilities to which the Project would contribute substantial amounts of traffic congestion.

Transit ridership is expected to slightly increase under the revised proposal compared to Project Variant 2A. However, the increase in transit ridership is less than one percent, and is not likely to result in a measurable change to ridership, as described in **Table 5** below.

TABLE 5: WEEKDAY AM AND PM PEAK HOUR TRANSIT PERSON TRIPS

Scenario	AM Peak Hour	PM Peak Hour
EIR	884	1,801
Revised Project	878	1,818
Delta	***-6 (<-1%)***	***+17 (<+1%)***

Notes:

1. Office to retail land use change results in slight change in AM and PM peak hour vehicle trips then reported in the EIR.
2. Assumes no major event during the AM peak hour, however does account for arena employees.

Source: Fehr & Peers, 2015

Additionally, the revised Project's impacts to traffic operations are expected to be similar to those described in the EIR, and the revised Project is not likely to result in any new significant impacts to

[4] Since the EIR was approved, TR-23 and TR-MM-23 were reviewed and a revised TR-MM-23 was proposed. The revised mitigation measure would result in better operations along Gilman Avenue than what was reported in the approved EIR, however, would still result in a significant and unavoidable impact. Detailed analysis and discussion are included in an addendum addressed to the SF Planning Department and Office of Community Investment and Infrastructure in August 2015, titled *Draft Analysis of Transportation Effects of Proposed Revisions to Configuration of Gilman Avenue in Candlestick Point – Hunters Point Shipyard Phase II Development Plan.*

transit operations. Therefore, the revised Project is not expected to change the results of the impacts described in TR-17 through TR-30 in the EIR.

IMPACTS TR-31 AND TR-32: BICYCLE CIRCULATION

The EIR described impacts to bicycle circulation in Impacts TR-31 and TR-32. Impact TR-31 identified that through the implementation of the Project, bicycle facilities in the form of off-street Class I pathways, bicycle lanes (Class II facilities), or signed routes (Class III facilities) would be expanded to serve additional users, resulting in a beneficial impact of the Project or no impact. TR-31 concluded that the overall bicycle access and bicycling environment would improve within and in the vicinity of the Project and the proposed facilities would be adequate to meet the bicycle demand associated with the Project uses.

Impact TR-32 identified that the Project's proposed transit treatments and the increase in traffic volumes on Palou Avenue would result in impacts on bicycle travel between Griffith Street and Third Street (Bicycle Routes #70 and #170). Implementation of Mitigation Measure TR-32 (MM TR-32), determine the feasibility of relocating Bicycle Routes #70 and #170), would result in a significant and unavoidable impact because the feasibility of the relocation of the routes is uncertain at the time of the EIR. Since the EIR has been approved, SFMTA has studied possible alternatives, although the results of that study have yet to be determined; therefore TR-32 remains a significant and unavoidable impact.

The revised Project would include additional development within Candlestick Point with the addition of the movie theater and may increase bicycle travel within and adjacent to the Project area. The revised Project will not remove or add bicycle facilities to the proposed network. However, because the revised Project is only slightly changing the total peak hour traffic generation within the Project site and is not affecting the bicycle infrastructure proposed as part of the Project, the revised Project is not likely to result in any new significant impacts to bicycle circulation. Therefore, the revised Project is not expected to change the results of the impacts described in TR-31 and TR-32.

IMPACTS TR-33 AND TR-34: PEDESTRIAN CIRCULATION

The EIR described impacts of pedestrian circulation in TR-33 and TR-34. Similar to TR-31, the implementation of the Project would expand pedestrian facilities in the form of sidewalks and

connecting the Project site to existing neighborhoods, resulting in a beneficial impact of the Project or no impact. TR-34 identified that implementation of the Project would result in an increase in traffic volumes in the Project vicinity that could increase pedestrian-vehicle and pedestrian-bicycle conflicts. However, the existing and proposed pedestrian facilities would be adequate to meet the pedestrian demand associated with the project land uses and the Project impacts on pedestrian circulation within and in the vicinity of the Project would be less than significant.

The revised Project would include additional development within Candlestick Point with the addition of the movie theater and may increase pedestrian travel within and adjacent to the Project area. However, the revised Project is not likely to result in any new significant impacts to pedestrian circulation; therefore, the revised Project is not expected to change the results of the impacts described in TR-33 and TR-34.

IMPACTS TR-35 AND TR-36: PARKING

The EIR identified Impacts TR-35 and TR-36, which determined that although the Project would result in a shortfall of parking spaces compared to its projected demand and would remove some existing on-street parking spaces, the Project's impacts to parking conditions would be less than significant. The EIR concluded there would be a range of between approximately 2,800 spaces and 20,000 spaces in the entire development area. The revised Project would include additional off-street parking supply in CP 02-03-04 as documented in **Table 6** below.

TABLE 6: SUMMARY OF PARKING SUPPLY COMPARISON IN CP 02-03-04 (ORIGNAL 2010 PLAN VS REVISED PROJECT)

Land Use	Maximum Supply Rate	Original 2010 Plan		Revised Project	
		Proposed Amount	Maximum Number of Spaces	Proposed Amount	Maximum Number of Spaces
Office	1 space / ksf	150 ksf	150	134.5	135
Regional Retail	2.7 space / ksf	635 ksf	1,715	635 ksf	1,715
Local Serving Retail					
Grocery Store	2.7 space / ksf	--	--	35 ksf	95
Other Local Serving Retail	1 space / ksf	125 ksf	125	96 ksf	96
International African Market Place & CPSRA Welcome Center	1 space / 2 ksf	--	--	8 ksf	4
Performance Venue	1 space / 15 seats	10,000 seats	667	4,400 seats	147
Movie Theater	1 space / 8/10 seats[1]	--	--	1,200 seats	145
Harney/Ingerson Housing	1 space / unit	--	--	265 units	265
SFPD	1 space / 2 ksf	--	--	1 ksf	1
Community Serving Uses	1 space / 2 ksf	--	--	41 ksf	21
Residential Tower	1 space / unit	280 units	280	220 units	220
Other Residential	1 space / unit	745 units	745	1,080 units	1,080
Hotel	0.25 spaces / room	220 rooms	55	220 rooms	55
	Lost On-Street Parking	--	--	--	*-269*
	Grand Total		***3,737***		***4,245***

Notes:

1. 1/8/10 seats = 1 parking space / 8 seats up to 1,000 seats + 1 parking space / 10 seats above 1,000 seats

Source: Fehr & Peers, 2015

The revised Project would include additional development within Candlestick Point with the addition of the movie theater and may increase parking demand within and adjacent to the Project area. However, the revised Project is not likely to result in any new significant impacts to parking; therefore, the revised Project is not expected to change the results of the impacts described in TR-35 and TR-36.

IMPACT TR-37: LOADING

The EIR identified Impact TR-37 and determined that the Project would provide adequate loading supply and therefore concluded that impacts related to loading would be less than significant, and that no mitigation measures would be required.

The revised Project would include additional development within Candlestick Point with the addition of the movie theater and may increase daily and peak hour loading space demand within the Project area. However, the revised Project is not likely to result in any new significant impacts to loading; therefore, the revised Project is not expected to change the results of the impacts described in TR-37.

IMPACTS TR-38 THROUGH TR-50: STADIUM IMPACTS

The revised Project does not include construction of a new stadium. Furthermore, the existing stadium at Candlestick Point has already been demolished and the 49ers games are played elsewhere. Game day impacts for the revised Project are not applicable.

IMPACT TR-51 THROUGH TR-55: ARENA IMPACTS

The EIR included a 10,000 seat arena in the Candlestick Point area. As described in the section above, the revised Project would substantially reduce the capacity of the proposed event space from 10,000 seats to 4,400 seats. As shown in Table 2, above, the peak hour travel demand associated on conditions with an arena event would be lower with the revised Project compared to the project described in the EIR. Therefore, the implementation of the revised Project would not result in any new significant impacts and no new mitigation measures would be required.

IMPACT TR-56: AIR TRAFFIC IMPACTS

The EIR determined that the Project would have a less than significant impact on air traffic. The revised Project would contain the same overall land uses and general development form and would not change the EIR's conclusion regarding air traffic. The revised Project would not create any new significant impacts with respect to air traffic and no additional mitigation measures are required.

IMPACT TR-57: HAZARDS DUE TO DESIGN FEATURES

The EIR determined that the Project's transportation infrastructure would be designed in accordance with City standards, and would be reviewed and approved by the City prior to construction. As a result the Project's impacts to hazards would be less than significant. The revised Project would also be designed accordance with City standards and would be reviewed and approved by the City. Therefore, no new significant impacts to design features have been identified and no mitigation measures are required.

IMPACT TR-58: EMERGENCY ACCESS

The EIR determined that the Project's transportation infrastructure would adequately facilitate emergency access and be designed to City standards, which include provisions that address emergency vehicles. The revised Project would also be designed accordance with City standards and would be reviewed and approved by the City. Therefore, no new significant impacts to emergency access have been identified and no mitigation measures are required.

CUMULATIVE IMPACTS

As noted in the EIR, the discussion of cumulative impacts was included with the discussion of project-related impacts in Impacts TR-1 through TR-58 and no additional cumulative impact discussion is necessary. Similar to what is described above and in the EIR, since the revised design would generate similar levels of travel demand at buildout and would have a similar transportation infrastructure, the modified Project's contribution to cumulative impacts would be the same as what is described in the EIR.

CONCLUSION

In conclusion, the revised Project would not change or alter any of the EIR's findings with respect to transportation impacts. All impacts would remain less than significant, less than significant with mitigation, or significant and unavoidable, as previously identified, and no new mitigation measures would be required. Additionally, the EIR's transportation cumulative impact conclusions would not be altered.

For questions or comments please contact Chris Mitchell or Sarah Nadiranto.

Sincerely,

FEHR & PEERS

Chris Mitchell, PE
Principal

Sarah Nadiranto, PE
Transportation Engineer

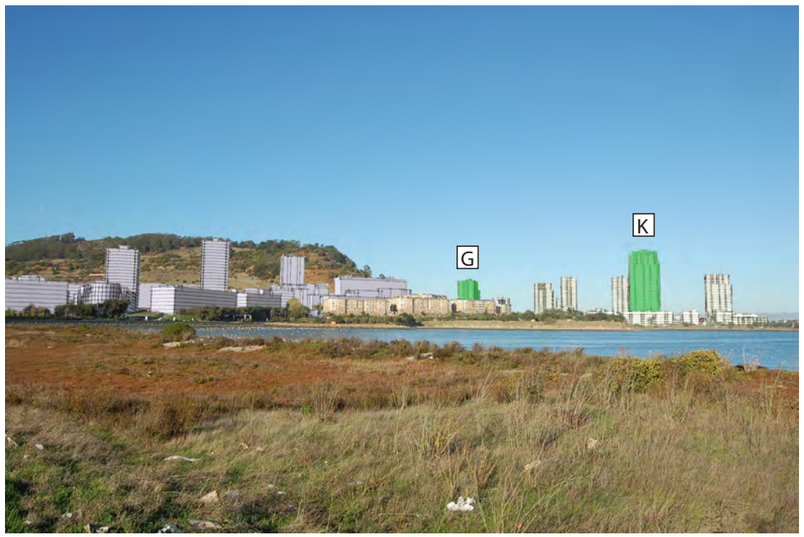
SF08-0407

Attachments
Appendix A – AM and PM Peak Hour Results Summary

Exhibit N: Candlestick Point Tower Visual Analysis

Keymap

Existing



Proposed - October 26 2010

Proposed - August 06 2015

CPHPS PHASE II
OTHER PROJECTS:
• EXECUTIVE PARK
2010 RESIDENTIAL TOWER
2015 RESIDENTIAL TOWER

Exhibit N: Candlestick Point Tower Visual Analysis

Existing

Exhibit N: Candlestick Point Tower Visual Analysis

Proposed October 26 2010

LENNAR URBAN | Candlestick Point
EIR Visual Simulations
August 10, 2015

06 – NB 101 Harney Way Off-Ramp

IBI

Exhibit N: Candlestick Point Tower Visual Analysis

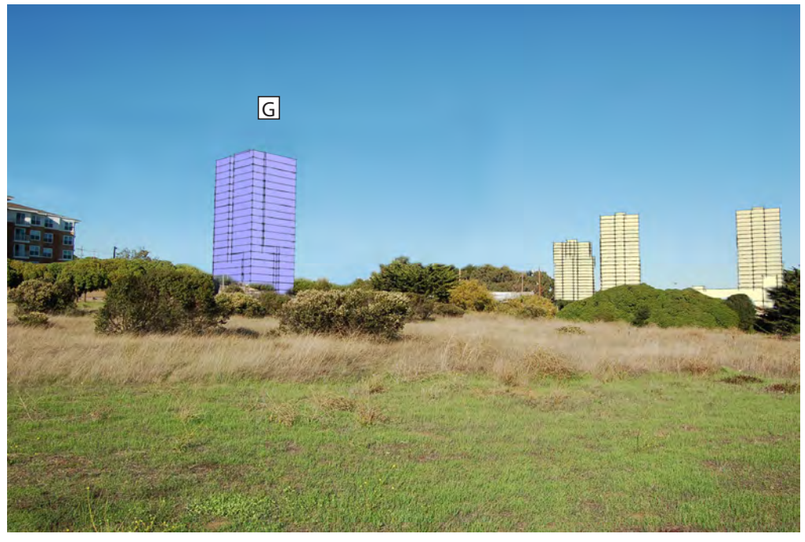
Proposed June 03 2010

Exhibit N: Candlestick Point Tower Visual Analysis

Keymap

Existing

Proposed - October 26 2010



Proposed - August 06 2015

CPHPS PHASE II
2010 Residential Tower
2015 Residential Tower

Exhibit N: Candlestick Point Tower Visual Analysis

Existing

Exhibit N: Candlestick Point Tower Visual Analysis

Proposed October 26, 2010

Exhibit N: Candlestick Point Tower Visual Analysis

Distance between CPSRA and Proposed Tower G Location

Exhibit N: Candlestick Point Tower Visual Analysis

Tower Design Scenario #1 - Tower G: East-West Orientation

Exhibit N: Candlestick Point Tower Visual Analysis

Tower Design Scenario #2 - Tower G: North-South Orientation

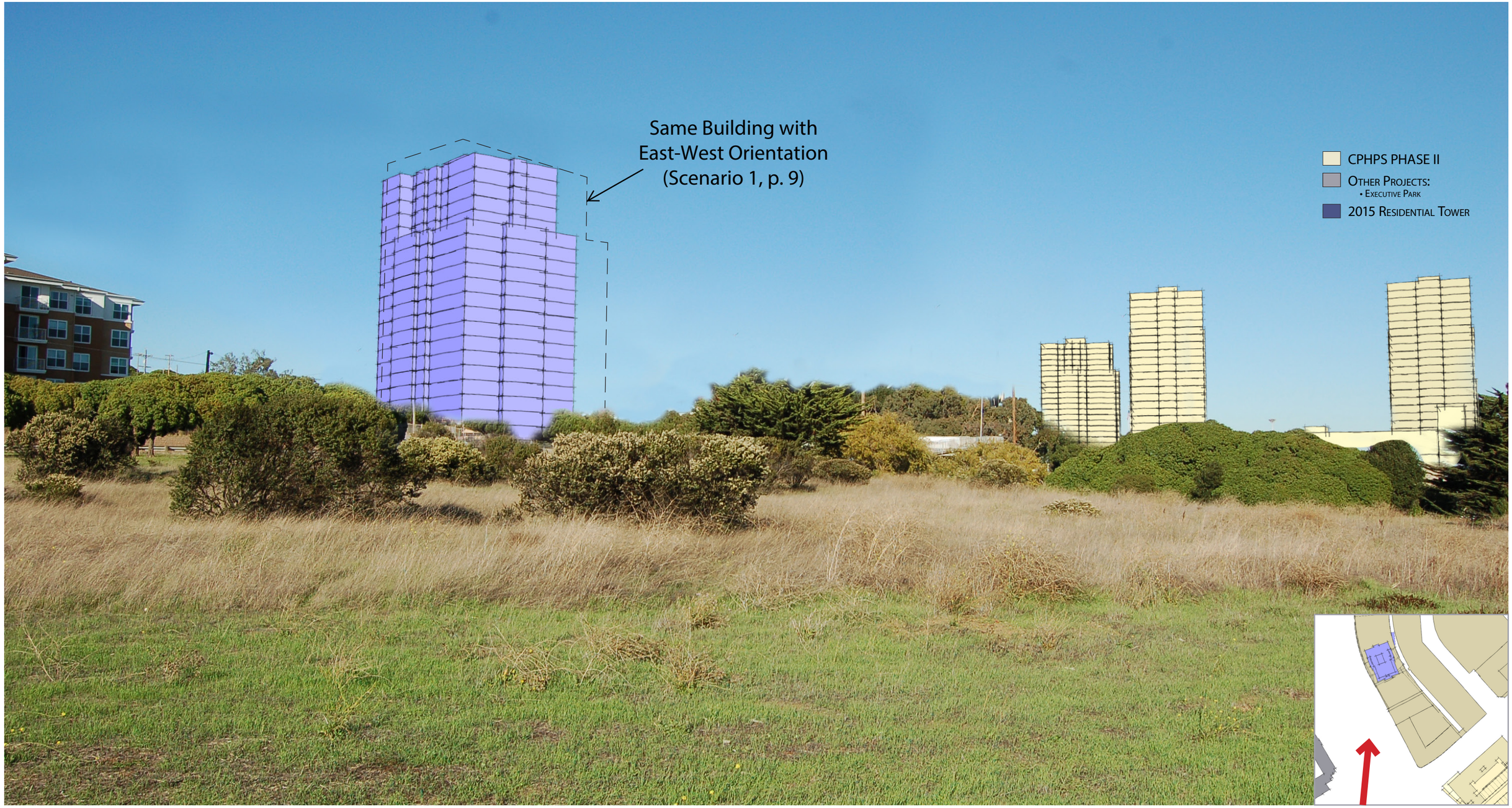


Exhibit N: Candlestick Point Tower Visual Analysis

Keymap

Existing

Proposed - October 26 2010

Proposed - August 06 2015

CPHPS PHASE II
OTHER PROJECTS:
• EXECUTIVE PARK
2010 RESIDENTIAL TOWER
2015 RESIDENTIAL TOWER

Exhibit N: Candlestick Point Tower Visual Analysis

Existing

Exhibit N: Candlestick Point Tower Visual Analysis

Proposed October 26 2010

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EIR Visual Simulations
August 10, 2015

11 – SRA Towards Candlestick

IBI

Exhibit N: Candlestick Point Tower Visual Analysis

Proposed June 03, 2015

Exhibit N: Candlestick Point Tower Visual Analysis

Keymap

Existing

Proposed - October 26 2010

Proposed - August 06 2015

CPHPS PHASE II

OTHER PROJECTS:
- EXECUTIVE PARK

2010 RESIDENTIAL TOWER

2015 RESIDENTIAL TOWER

Exhibit N: Candlestick Point Tower Visual Analysis

Existing

Exhibit N: Candlestick Point Tower Visual Analysis

Proposed October 26 2010

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EIR Visual Simulations
August 10, 2015

17 – Mariner Village Towards Candlestick

IBI

Exhibit N: Candlestick Point Tower Visual Analysis

Proposed June 03, 2015

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Candlestick Point
EIR Visual Simulations
August 10, 2015

17 – Mariner Village Towards Candlestick

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February 5, 2016

SHADOW STUDY OVERVIEW

Purpose

This shadow analysis has been prepared in order to identify the shadow impact from project changes at Candlestick Point on City parks outside of the Candlestick redevelopment project boundary. Specifically, these parks are Bayview Hill Park and Gilman Park. In addition, the analysis considers shadow impacts of the parks within the project boundary, including:

- Candlestick Point State Recreation Area (CPSRA), which is under State jurisdiction
- Bayview Gardens / Wedge Destination Park (BGWDP)
- Mini-Wedge Community Park (MWCP)
- Jamestown Hillside Community Park (JHCP)

The project changes that require shadow analysis are:

- Revised locations of Towers G, J, and K
- Revised building heights along Harney Way and Ingerson Avenue:
  - Mixed-use Residential – from 65' max height to 80' max height
  - Film Arts Center – from 85' max height to 120' max height

These changes are described in more detail in Addendum 4 to the Candlestick Point - Hunters Point Phase 2 Final Environmental Impact Report (FEIR).

Process

The shadow impacts were measured at three times during the day on Winter Solstice (10 am, 12 pm and 3 pm), which is consistent with the Shadow Analysis in the FEIR.

Methodology

The shadows from both the 2010 layout and 2016 layout were generated in Google Sketchup. The topography within the model is based upon the survey of surrounding lands at 5 foot contour intervals, and the proposed topography within the site at 1 foot contour intervals.

Shadow differences have been measured by creating the shadows from the 2010 model in a different colour than those in the 2016 model, and using Photoshop to indicate areas where there is no overlap (i.e. there is a difference in shadow). Those areas that are consistent are not indicated, resulting in a clear picture that identifies shadow differences between the two models, seen by differing colors.

Two analyses are prepared as part of the analysis:

1. The first examines the shadow impact from all buildings at Candlestick. This analysis has been prepared to ensure there is clarity on the overall project shadow impact, beyond those that result from the design changes.
2. The second examines only the shadows from the building design changes. This analysis has been prepared to assist in the review of the impact based solely on the specific changes.

Results

The results of the analysis are based on a qualitative assessment of the shadow impact, focusing on the City parks outside of the project boundary, and the CPSRA and City parks noted above within the project boundary. The vast majority of increased shadow impact, especially in relation to the increased building height of the Mixed-use Residential buildings from 65' to 80', results in additional shadows cast on city streets at all three times analyzed (10am; 12pm; 3pm). Specific park related shadow impacts are discussed below.

City Parks outside Project Boundary

There are no shadow impacts on parks outside of the project boundary at any of the times analyzed when compared to the 2010 building layout.

CPSRA

There are no changes to the shadow impact on the CPSRA at 10am or 12pm. At 3 pm, there is a change in impact based on the relocation of Tower J, which shifted south due to a revision of the overall streets and blocks pattern within CP South. The relocation of Tower J results in a slight increase in shadow on the CPSRA at 3 pm when examining the shadows cast from all buildings (~10,000 sq.ft / 0.2 ac of additional shadow); however, when considering the shadows from only those blocks that have resulted in changes in tower locations and/or building heights, there is a sight decrease of shadow. The discrepancy in shadowing is because, when considering only those blocks that have changed, the shift in location of the tower to the south results in a net decrease in shadow, as more shadow was cast by Tower J at the north side in 2010 than at the south side in 2016. However, when considering all buildings, most of the shadow at the north from the 2010 placement falls within the shadow cast from other towers within CP South, and is therefore cancelled out by the other tower shadows. As a result, when considering the shadow cast from all buildings, there is a net increase in shadow.

It is noted that there has always been modest shadow impacts on the CPSRA, generally in the late afternoon / early evening, as described in the FEIR, and the new Tower J shift results in a very small impact on these results (0.2% extra shadow across the entire CPSRA area).

City Parks within Project Boundary

The 2016 tower locations show both an increase and decrease in overall shadow impact, dependent on the park and the time of the day.

At 10am, there is a no significant change in shadow across the BGWDP. At JHCP, the shifting of Tower G southwest has resulted in a minor increase of shadowing; however, the shadows in 2016 fall upon a very steep section of the park, well away from any areas suitable for outdoor activity. There is no net impact of shadows across the MWCP.

At 12pm, the shifting of Tower J southwest has resulted in a minor increase in the shadowing on BGWDP. Despite the increase in shadowing, the shadow has shifted from the location of the proposed Bus Rapid Transit, which will be a high-pedestrian zone, to a different section of the park that is less likely to be as heavily used. The shifting of Tower K to the southeast and the increased height of mid-rise buildings along CP South block 8a results in an increase of shadowing across the western most portion of the BGWDP, representing a band that is ~15-18' wide by approximately 200' in length. This shadow lies in the central portion of the park, keeping the northern end out of shadow. At the MWCP, there is an insignificant increase in shadowing at the western tip of the Park due to the shifting of Tower J eastward.

At 3pm, there is an increase in shadow impact on the MWCP resulting from the shifting of Tower J to the southeast. This increased shadow results in the entirety of the park being shadowed; however, it should be noted that in the 2010 building locations, the vast majority of the park was shadowed.

Other Considerations

Finally, though not related to the shadow impact on City Parks or the CPSRA specifically, the shift in the location of tower G results in the following positive changes to the experience of users within the City Parks:

- Significantly increases the distance of the tower from Gilman Park, resulting in a less visible tower skyline and visual impact from the park; and
- Greatly improves the view to the Bay from the primary lookout point atop the Bayview Hill.

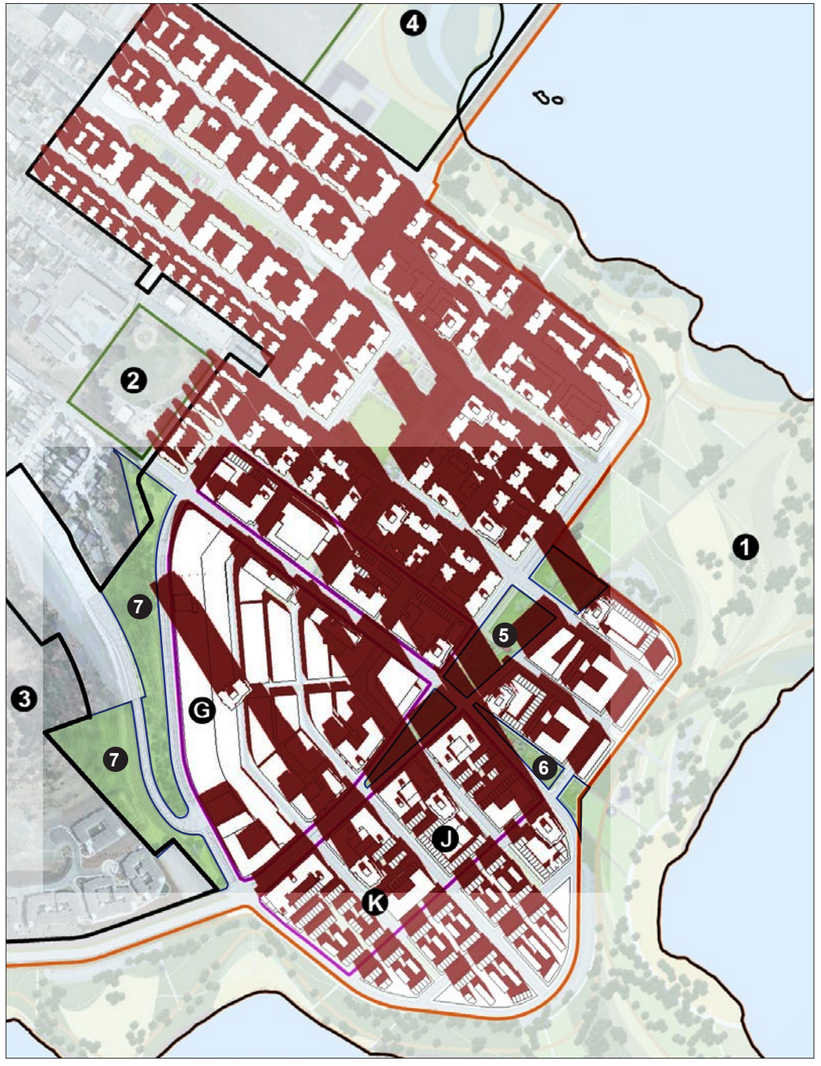
In addition, the shifting of Tower G results in less shadow across the primary pedestrian pathways within CP Center – the regional retail center – which will improve the pedestrian experience.

Gavin Blackstock, MCIP RPP

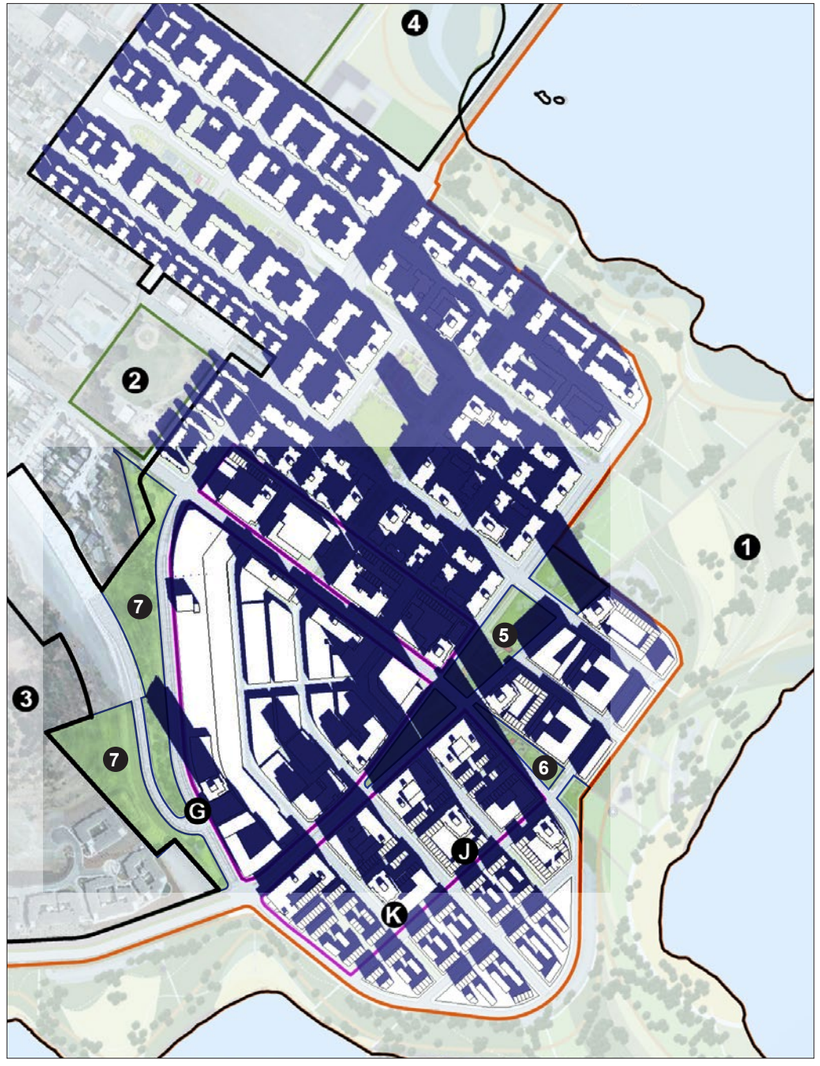
Date: February 5, 2016

SHADOW STUDY: DECEMBER 21 - 10 AM

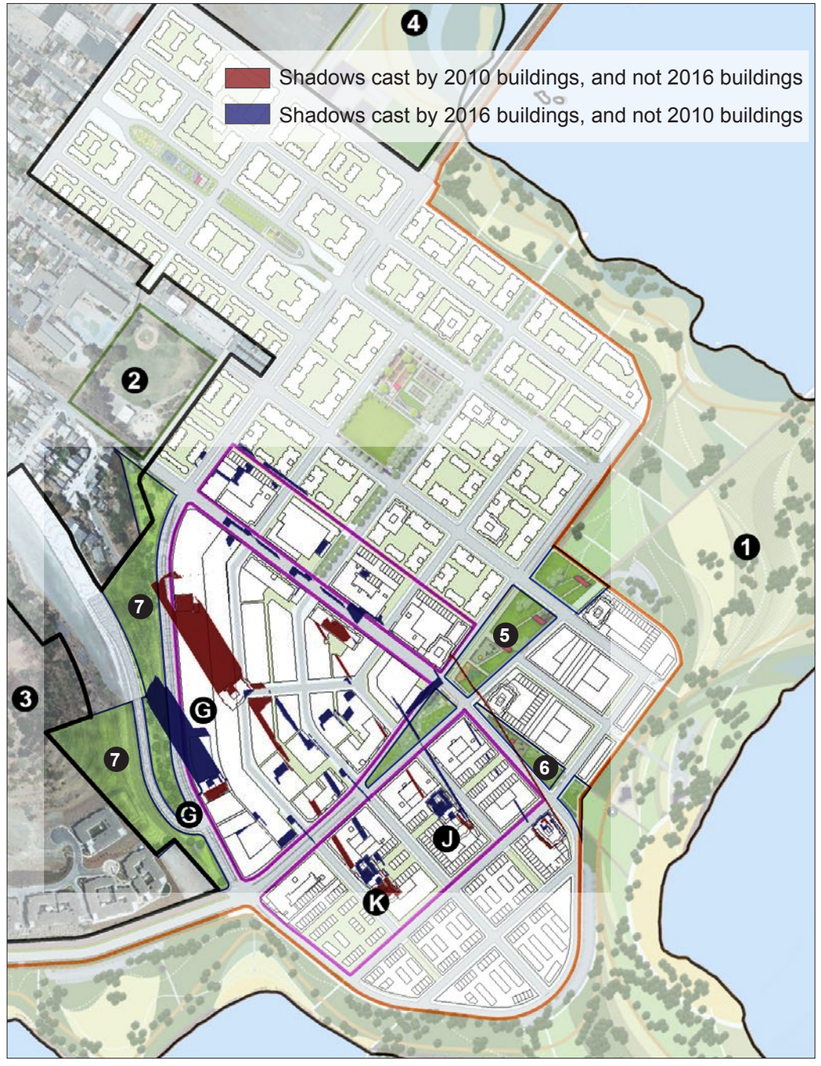
2010 Tower Locations/ Building Heights



2016 Tower Locations/ Building Heights



Difference



Shadow Study Based on Building Heights of 2010 D4D

Shadow Study Based on Building Heights of 2016 D4D

1. CP State Recreation Area
2. Gilman Park (outside project)
3. Bayview Hill Park (outside project)
4. Yosemite Slough (outside project)
5. Bayview Gardens / Wedge Destination Park
6. Mini-wedge Community Park
7. Jamestown Hillside Community Park

G. Tower Name

- Project Boundary
- State Recreation Area Boundary
- City Park Boundary (outside project)
- City Park Boundary (inside project)
- Boundaries of Revised Blocks in 2016

Analysis

- No impact to City Parks outside of the project boundary (Gilman Park and Bayview Hill Park) or the CPSRA.
- Tower J results in a minor increase in park shadowing across the Bayview Gardens Wedge Park (~10' wide shadow band).
- Tower G relocation results in a minor increase of shadow on the to Jamestown Hillside Community Park (~ 3%); however, the shadowing has shifted to the steepest portion of the park, which will not be usable due to grades.

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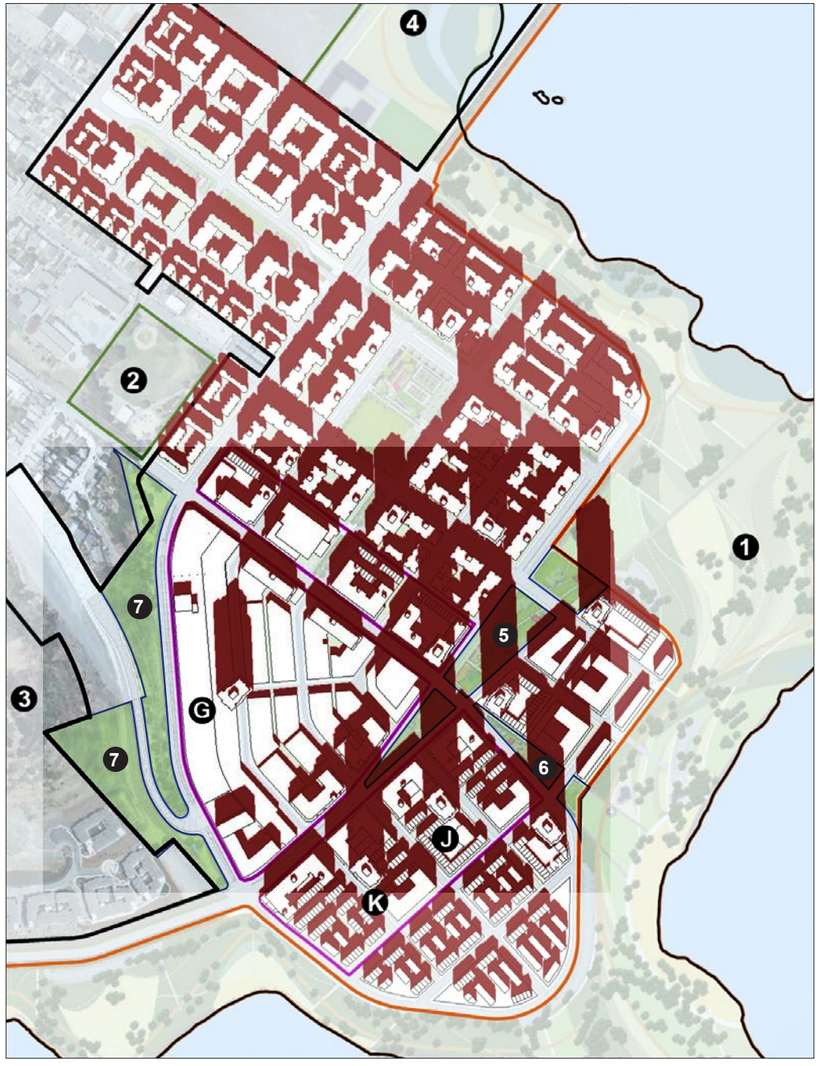
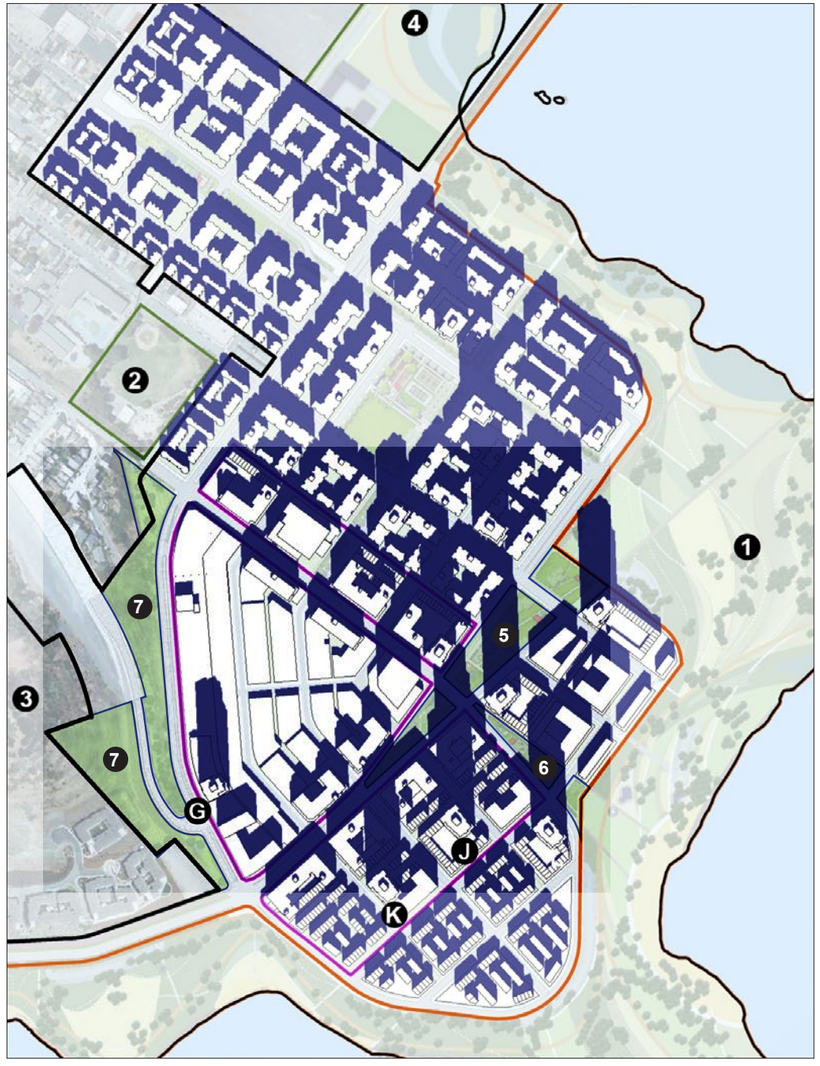
Candlestick Point
Shadow Study
February 5, 2016

SHADOW STUDY: DECEMBER 21 - 12PM

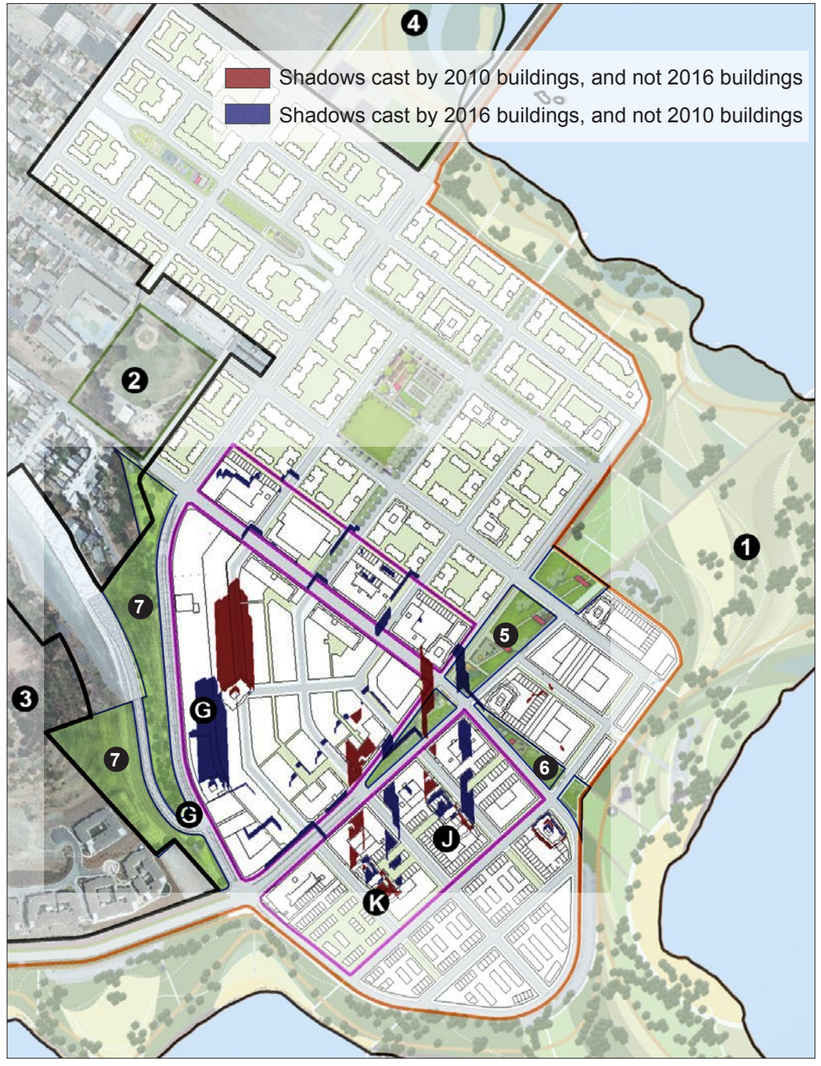
2010 Tower Locations/ Building Heights



2016 Tower Locations/ Building Heights



Difference



Shadow Study Based on Building Heights of 2010 D4D

Shadow Study Based on Building Heights of 2016 D4D

1. CP State Recreation Area
2. Gilman Park (outside project)
3. Bayview Hill Park (outside project)
4. Yosemite Slough (outside project)
5. Bayview Gardens / Wedge Destination Park
6. Mini-wedge Community Park
7. Jamestown Hillside Community Park

G. Tower Name

- Project Boundary
- State Recreation Area Boundary
- City Park Boundary (outside project)
- City Park Boundary (inside project)
- Boundaries of Revised Blocks in 2016

Analysis

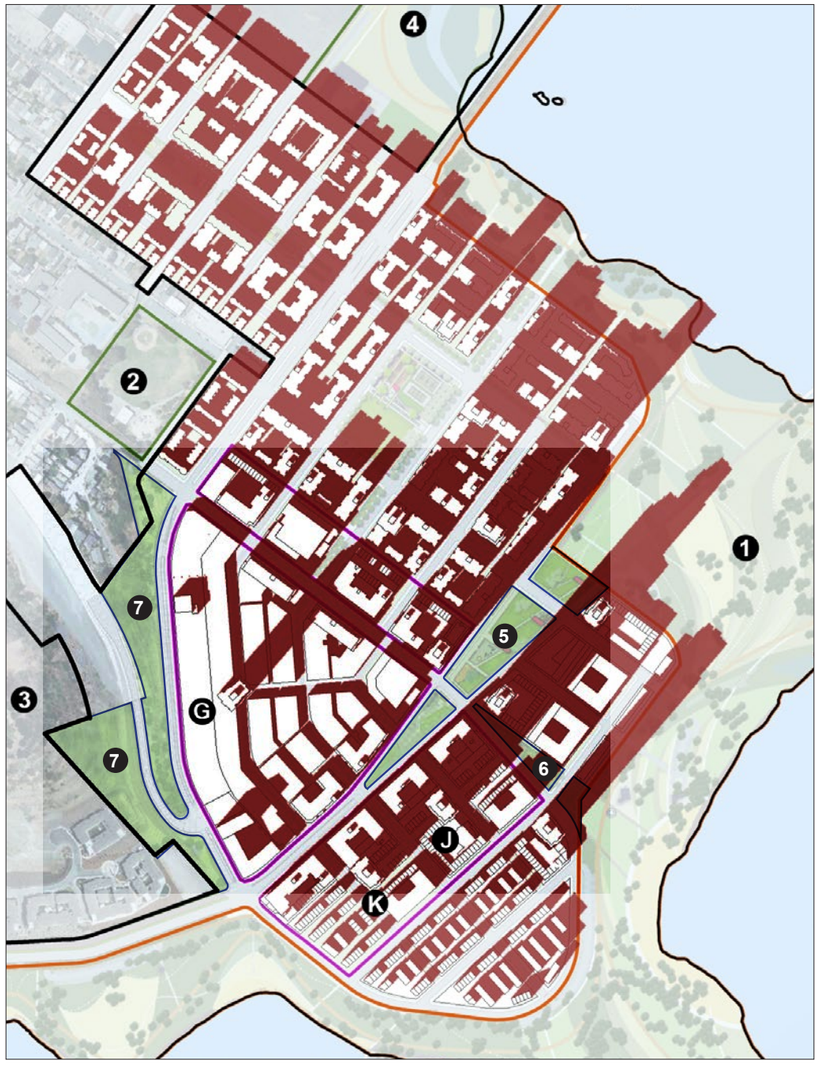
- No impact to City Parks outside of the project boundary (Gilman Park and Bayview Hill Park) or the CPSRA.
- Shadowing from Tower J on the Bayview Gardens Wedge Park has shifted from the proposed BRT stop (Harney Way @ Ingerson) to a less activated portion of the park, east of Ingerson.
- Tower J results in an insignificant increase in shadowing to the Mini-wedge Park at the northwest end.
- Tower K and the midrise building along Harney Way (CP South Block 8a) result in an increase of shadowing to the Bayview Gardens Wedge Park of ~15-18' for one block length (~200').

LENNAR URBAN | IBI

Candlestick Point
Shadow Study
February 5, 2016

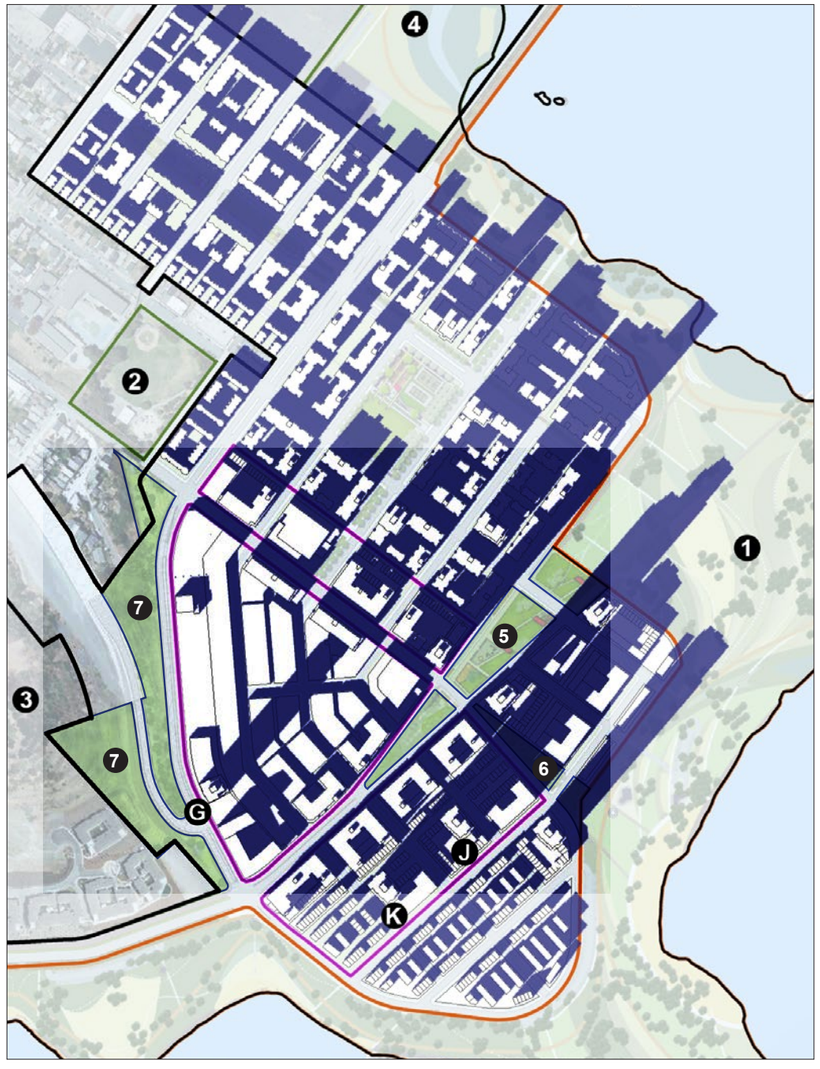
SHADOW STUDY: DECEMBER 21 - 3 PM

2010 Tower Locations/ Building Heights



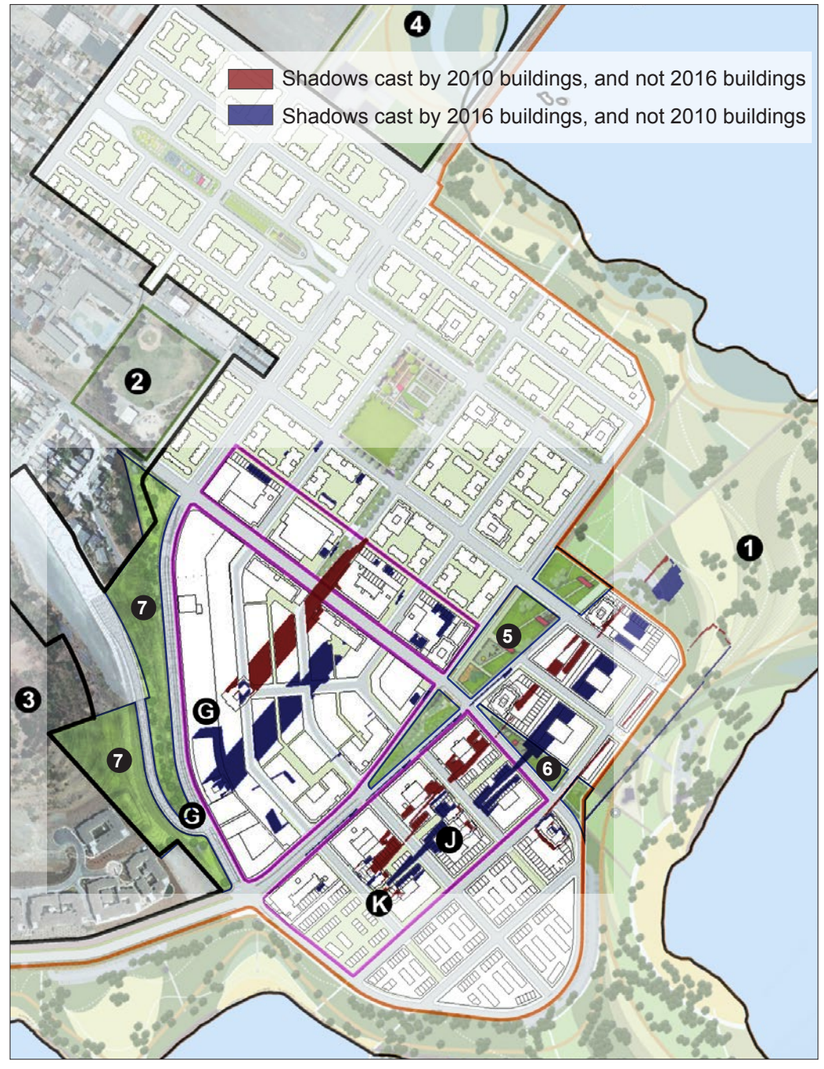
Shadow Study Based on Building Heights of 2010 D4D

2016 Tower Locations/ Building Heights



Shadow Study Based on Building Heights of 2016 D4D

Difference



1. CP State Recreation Area
2. Gilman Park (outside project)
3. Bayview Hill Park (outside project)
4. Yosemite Slough (outside project)
5. Bayview Gardens / Wedge Destination Park
6. Mini-wedge Community Park
7. Jamestown Hillside Community Park

G. Tower Name

- Project Boundary
- State Recreation Area Boundary
- City Park Boundary (outside project)
- City Park Boundary (inside project)
- Boundaries of Revised Blocks in 2016

Analysis

- No impact to City Parks outside of the project boundary (Gilman Park and Bayview Hill Park).
- Minor increase in shadow within the CPSRA based on shift in location of Tower J due to road realignment within CP South.
- Towers J relocation results in minor increase of shadow to Mini-wedge Park; however, the shadow impact results in virtually no solar access onto the entirety of the Park.

LENNAR URBAN | IBI

Candlestick Point
Shadow Study
February 5, 2016

Via electronic mail

Joy Navarrete
Senior Environmental Planner
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103
joy.navarrete@sfgov.org

RE: EVALUATION OF AIR QUALITY AND CLIMATE CHANGE IMPACTS OF PROPOSED PROJECT REVISIONS ASSOCIATED WITH DEVELOPMENT PLAN APPLICATION FOR CP SUB-PHASE 02-03-04, CANDLESTICK POINT/HUNTERS POINT SHIPYARD PHASE II PROJECT, SAN FRANCISCO, CALIFORNIA

Dear Ms. Navarrete:

The *Candlestick Point/Hunters Point Shipyard Phase II Project Final EIR* (herein referred to as "EIR") was certified by the San Francisco Redevelopment Commission and the San Francisco Planning Commission in June 2010. We understand that the City and Office of Community Investment & Infrastructure are evaluating several Project Revisions associated with the development plan application for Sub-Phase 02-03-04 at Candlestick Point (CP). These Project Revisions include:

1. Relocation of three towers (Towers G, J and K);
2. Height increases for several locations in CP Center, specifically
   (a) Increasing the height of buildings on both sides of Harney Way and Ingerson Avenue from 65 feet to 80 feet;
   (b) Increasing the height of the building at the corner of Harney Way and Ingerson Avenue from 85 feet to 120 feet; and
   (c) Increasing the height for the building at the corner of Arelious Walker and Harney Way from65 feet to 80 feet.
3. Conversion of 15,500 square feet approved office space to 6,000 square feet of local-serving retail;
4. Relocation of on-street parking spaces to the CP Center garage;
5. Dividing the construction the first phase of Harney Way improvements into two phases; and
6. Revising the cross-section of Gilman Avenue to reduce travel lanes and provide larger sidewalks.

This memorandum evaluates whether the air quality and greenhouse gas (GHG) impacts disclosed in the EIR are affected by these changes.

1. Relocation of Towers

The relocation of three towers would not affect the analysis of criteria air pollutant (CAP) and GHG emissions in the EIR as the overall square footage of the Project would not be altered. This Project revision would also have a negligible effect on the health risk assessment (HRA) from construction emissions as the towers would be relocated within the same sub-phases as previously analyzed. The HRA analysis in the EIR assumes construction emissions are distributed throughout the sub-phase, so relocation of the towers within the respective sub-phases would not change the analysis.

2. Height Increases in CP Center

The increase in maximum building height for three locations in CP Center would not affect the analysis of CAP and GHG emissions in the EIR because the overall square footage of the Project would not be altered. We understand that this would change the massing of the buildings; however, not the overall floor space for entitlements. Because the models used in the EIR to estimate construction emissions are based on square footage and not overall area; there would not be a material difference in the way the emissions are estimated. Therefore, this overall emissions for the Project revision would not change and therefore the revised analysis would be identical to the analysis in the EIR. This Project revision would also have a negligible effect on the HRA because total construction emissions would be unchanged from the EIR.

3. Conversion Office Floor Space to Local-Serving Retail

This analysis evaluates the proposed conversion of office floor space to local-serving retail floor space. The analysis is structured to determine the necessary reduction in the amount of office square footage that would be required to allow a 6,000 square foot increase in Local-serving Retail without increasing any of the Project criteria air pollutant (CAP) and greenhouse gas (GHG) emissions evaluated in the EIR. The detailed evaluation of operational criterial pollutant emission, operational GHG emissions, and construction emissions are discussed below.

3.1 Operational Criterial Pollutant Emissions

To evaluate the minimum size of office land use to be converted to 6,000 square feet of local-serving retail without increasing the total Project operational criteria pollutant emissions, Ramboll Environ estimated 2030 criteria pollutant emissions associated with the proposed 6,000 square feet of local-serving retail using California Emission Estimator Model version 2013.2.2 (CalEEMod®).[1] The proposed local-serving retail is modeled as "Strip Mall", which is consistent with the land use category used for the Local-serving Retail in the EIR. The mobile source emission factors generated using California Air Resources Board (ARB)'s EMFAC2014 model are used to replace the CalEEMod® default that was based on EMFAC2011. EMFAC2014 incorporates new vehicle emissions standards and rules and regulations (e.g., Advanced Clean Cars and Truck & Bus Rule).

[1] CalEEMod® is a statewide program designed to calculate both criteria and GHG emissions from development projects in California. It was developed in collaboration with California air districts led by South Coast Air Quality Management District (SCAQMD) and is currently supported by several lead agencies for use in quantifying the emissions associated with development projects undergoing environmental review.

The Project criteria pollutant emissions presented in the EIR were previously modeled using URBEMIS 2007 version 9.2.4 for year 2030.[2] The minimum square footage of the previously approved office floor space entitlement that would be converted and its associated CAP emissions were scaled from the previous calculation presented Appendix H1 of the EIR by matching the worst case pollutant (i.e., NOx) of the local-serving retail emissions discussed above. The emission comparison is summarized in Table 1.

As presented in Table 1, adding 6,000 square feet local-serving retail development to the Project without increasing the emissions of any criteria pollutant previously estimated in the EIR would require a removal of at least 10,300 square feet of office.

The proposed local-serving retail development is designed to offer the community retail services (e.g., dry clean, barbershop, grocery and other businesses) within walking distance. The mobile source emissions in this analysis were evaluated using CalEEMod® default trip rates based on ITE Trip Generation, which does not reflect low trip generation rate due to the transit-oriented nature of the development plan. Therefore, the estimated emissions for the proposed local-serving retail uses are conservative. If a detailed site specific trip generation rate were available, it would be likely that less office space would need to be replaced due to lower emissions from mobile sources.

3.2 Operational Greenhouse Gas Emissions

To evaluate the minimum size of office land use to be converted to 6,000 square feet of local-serving retail without increasing the total Project operational GHG emissions, Ramboll Environ estimated the 2020 GHG emissions associated with proposed 6,000 square feet of local-serving retail using CalEEMod®. The mobile source emission factors generated using California Air ARB's EMFAC2014 model are used to replace the CalEEMod® default as discussed in the previous section. In addition, the GHG emissions associated with energy incorporate the 2013 California Building Energy Efficiency Standards (Title 24) and Pacific Gas and Electric's 2020 carbon intensity factor.

The Project GHG emissions presented in the 2009 EIR were previously calculated for year 2020. In this analysis, the minimum square footage of the previously approved office land use that would be converted and its associated GHG emissions are calculated using the same methodology presented in Appendix S (Climate Change Technical Report) and are summarized in Table 2.

As presented in Table 2, an addition of 6,000 square feet local-serving retail development to the Project without increasing the GHG emissions previously estimated would require a removal of at least 9,200 square feet of previously approved office land use.

As discussed earlier, the CalEEMod® default trip rates does not reflect low trip generation rate due to the nature of the development plan. Therefore, the estimated GHG emissions for the proposed local-serving retails are conservative.

3.3 Construction Emissions

The construction emissions presented in the EIR were calculated based on the Project specific construction schedule and equipment list. It is reasonable to assume the proposed local-serving retail

[2] URBEMIS was the land use emissions inventory model recommended used for the EIR. It was widely used before the development of CalEEMod®.

would be constructed over the same construction duration with the same equipment list. In addition, based on the operational criteria pollutant and GHG emission comparison discussed above, the equivalent local-serving retail would be smaller in size. Therefore, converting office into local-serving retail would not generate increased criteria pollutant emissions, GHG emissions, cancer risks, noncancer chronic hazard index (HI), or acute HI associated with the construction activities presented in the EIR.

3.4 Summary

Based on the results of the comparison, the proposed addition of 6,000 square feet of local-serving retail would require a reduction of office floor space of at least 10,300 square feet to avoid increasing criteria pollutant emissions, or 9,200 square feet to avoid increasing GHG emissions. Criteria pollutant emissions would be the limiting factor for determining the size of the converted office land use. Therefore, a minimum of 10,300 square feet of office evaluated in the EIR is recommended as a like-for-like replacement for the proposed addition of 6,000 square feet of local-serving retail. The developer is proposing to convert 15,500 square feet of office, which would not increase the Project air quality or GHG impacts anticipated in the EIR.

4. Relocation of on-street parking spaces

The developer is proposing to relocate on-street parking to the CP Center garage. This is expected to have negligible effect on construction activity because we understand that the overall building envelope of the CP Center garage will not change from the garage size anticipated in the EIR. As such, there would be no change in the overall CAP and GHG emissions from that evaluated in the EIR. This would also have a negligible effect on the HRA as total construction emissions are unchanged from the EIR.

5. Dividing Harney Way improvements into two phases

We understand that this modification results from the need to bifurcate construction on Harney Way into two phases in order to harmonize phasing with other transportation improvements planned for this area. This would not change the overall work planned for the Harney Way improvements; it would merely mean the same amount of work spread over a longer time. As this revision only splits the Harney Way improvements into two phases and does not increase the amount of activity, there is no change in the overall CAP and GHG emissions. This would also have a negligible effect on the HRA as total construction emissions are unchanged from the EIR.

6. Revising Gilman Avenue cross-section

We understand that this modification will result in less construction. The original cross-section proposed to widen the Gilman to accommodate two lanes in each direction, whereas under the revised proposal there will be one lane in each direction plus a left turn lane in the middle – the curb to curb width will be 49 feet 9 inches instead of 56 feet. As this revision reflects a reduction in the construction activity (i.e., building a smaller roadway), the construction activity will be lower than that which was analyzed in the EIR. As such, there would be no increase in the overall CAP and GHG emissions. This would also have a negligible effect on the HRA as total construction emissions are reduced from the EIR.

7. Conclusion

As discussed for each change above, the Project Revisions are not expected to materially change the results of the analyses conducted in support of the EIR.

If you have any questions about this analysis, please feel free to contact me. Thank you for the opportunity to assist you with this matter.

Yours sincerely

Michael Keinath, PE
Principal

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kaizhao@ramboll.com

Kai Zhao
Manager

mkeinath@ranboll.com

Attachments:

Tables

Table 1. Conversion of Office to Local-serving Retail with Equivalent Worst Case Criterial Pollutant Emissions

Table 2. Conversion of Office to Local-serving Retail with Equivalent GHG Emissions

TABLES

Table 1
Conversion of Office to Local-Serving Retail with Equivalent Worst Case Criterial Pollutant Emissions
Candlestick Point-Hunters Point Shipyard Phase II Development Plan
San Francisco, California

Land Use	Size (KSF)	Criteria Pollutant Emissions[4] (lb/day)					
		ROG	NOx[3]	CO	SO_2	PM_{10}	$PM_{2.5}$
Local Retail[1]	6	0.27	**0.32**	1.6	0.008	0.88	0.24
Office (to be replaced)[2,3]	-10.3	-0.34	**-0.32**	-3.54	-0.010	-1.69	-0.32

Notes:
1. The criteria pollutant emissions associated with proposed local-serving retail land use are modeled for operation year 2030 using CalEEMod® with the incorporation of the mobile emissions factor generated using ARB's EMFAC 2014 model. The local-serving retail is modeled as a strip mall, which was consistent with the land used category for local-serving retail used in the EIR (see Appendix H1).

2. The criteria pollutant emissions associated with the office land use to be placed (presented as negative emissions) are scaled from the URBEMIS model output presented in Appendix H1 of the Candlestick Point-Hunters Point Shipyard Phase II Development Plan Project EIR by matching the emissions of the worst case pollutant (i.e., NOx) from the proposed local retail. The office land use was modeled as an office park in the URBEMIS model.

3. Based on the analysis, an addition of 6 KSF local-serving retail to the Project without exceeding the emissions of any criteria pollutant previously estimated in the EIR would require a removal of 10.3 KSF of previously approved office land use.

Abbreviations:
ARB: California Air Resources Board
CalEEMod®: California Emissions Estimator Model
CO: carbon monoxide
EIR: Environmental impact Report
KSF: thousand square feet
lb: pound
NOx: nitrogen oxides
ROG: reactive organic gas
SO_2: sulfur dioxide
URBEMIS: Urban Emissions Model

References:
San Francisco Redevelopment Agency and San Francisco Planning Commission. Candlestick Point-Hunters Point Shipyard Phase II EIR: Volume IV Appendix H1.
Available at: http://www.sf-planning.org/modules/ShowDocument.aspx?documentid=334

Table 2
Conversion of Office to Local-Serving Retail with Equivalent GHG Emissions
Candlestick Point-Hunters Point Shipyard Phase II Development Plan
San Francisco, California

Source	GHG Emissions (tonnes CO_2e/year)	
	Local Retail[1]	**Office (to be replaced)[2]**
Energy	10.1	-41.3
Mobile	137	-108
Water	1.0	-0.9
Area	0	0
Waste	2.9	-0.5
Total (annual emissions)	**151**	**-151**
Size (KSF)[3]	**6**	**-9.2**

Notes:
1. The greenhouse gas emissions associated with proposed local-serving retail land use are modeled for year 2020 using CalEEMod® with the incorporation of the most recent carbon intensity factor published by PG&E, 2013 California Building Efficiency Standards (Title 24), and mobile emissions factor generated using ARB's EMFAC 2014 model. The local-serving retail is modeled as a strip mall, which was consistent with the land used category for local-serving retail used in the EIR.

2. The greenhouse gas emissions associated with the office land use to be replaced (presented as negative emissions) are calculated for year 2020 using the same methodology presented in Appendix S (Climate Change Technical Report).

3. Based on the comparison, an addition of 6 KSF local-serving retail to the Project without exceeding the greenhouse gas emissions previously estimated in the EIR would require a removal of 9.2 KSF of previously approved office land use.

Abbreviations:
ARB: California Air Resources Board
CalEEMod®: California Emissions Estimator Model
CO_2e: carbon dioxide equivalent
EIR: Environmental impact Report
KSF: thousand square feet
lb.: pound

References:
San Francisco Redevelopment Agency and San Francisco Planning Commission. Candlestick Point-Hunters Point Shipyard Phase II EIR: Volume IV Appendix S.
Available at: http://www.sf-planning.org/modules/ShowDocument.aspx?documentid=316

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MEMORANDUM

To: Joy Navarette
Senior Environmental Planner
San Francisco Planning Department

From: B.H. Bronson Johnson
Director of Land Development
CP Development Co., LP

Date: January 26, 2016

Subject: Excavation Quantities at Candlestick Point

Per the request of the City Planning Department, we have prepared the following memorandum to provide an update on excavation quantities at the Candlestick Point Redevelopment Project ("CP") as they compare to the certified Candlestick Point-Hunters Point Shipyard Phase II Development Plan Environmental Impact Report (the "EIR"). The design of the CP Retail Center ("CP Center"), which includes an underground parking structure, is still in schematic design and is subject to change prior to issuance of the final permit. Nonetheless, the information presented herein is based on the most recent design information we as the Master Developer, CP Development Co., LP have received from the CP Retail Center Developer.

EXCAVATION QUANTITY

There are currently 18 Sub-phases in the Candlestick Point Redevelopment Plan.

Page II-54 of the EIR presents Table II-12, *Summary of Project Site Grading Requirements*. At Candlestick Point, the estimated excavation quantity in Development Areas is 1,111,000 CY and the estimated excavation quantity in Open Space Areas is 156,000 CY. As an overall project analysis, we will compare the total estimated excavated quantity of 1,267,000 CY per the EIR, to the current estimated excavation quantities of each Sub-Phase of Development.

The current estimated quantities of excavation are shown in Table 1 below:

Table 1: Estimated quantities of Excavation at Candlestick Point.

Sub-Phase	Excavation Quantity	Construction Status
CP-01 Excavation	14,390 CY	Complete
CP-02 Pad Grading	571,000 CY	Approx. 30% Complete
CP-02 Soil Nail Wall Excavation	137,300 CY	Not Started
CP-02 Jamestown Re-Alignment	35,000 CY	Not Started
CP-05 Excavation	22,100 CY	Not Started
CP-08 Excavation	415,350 CY	Not Started
CP-09 Excavation	74,450 CY	Not Started
Total	**1,269,590 CY**	

All other Sub-phases not listed in this table have only fill quantities associated with the grading plan and no additional excavation is proposed.

Based on these current design quantities, we are within 0.2% of the estimated quantities of excavation contemplated in the EIR.

EXCAVATION DEPTH

Page III.L-25 of the EIR presents Table III.L-5, *Grading and Fill Conditions for Candlestick Point Geotechnical Subparcels.* This Table shows that Geotech Subparcel K1 (Candlestick Point Center) was estimated to have cuts up to 40 ft. The current grading design for the CP Center includes cuts between 15 feet and 25 feet in depth on the majority of the site, and up to approximately 46 ft in select areas where the existing site grades had been built up around the western perimeter of the former football stadium to provide access.

It is not anticipated that this increased excavation depth in a centralized location at CP Center will result in any additional impacts beyond what was considered in the EIR. The increased depth will occur in an area that has the same San Franciscan rock formations present in other areas of excavation within the Project site, and no new soil type is anticipated to be encountered. Additionally, although the excavation depth at this localized area would have a minor increase over the EIR estimate, the overall excavation volume for the site has not increased, resulting in no new impacts due to excavation quantity. Moreover, the minor increase in excavation depth would not require any additional mitigation measures because all impacts associated with excavation would be addressed through the requirement for site specific geotechnical investigations and resulting requirements for excavation and structural protective measures.

CONCLUSION

In conclusion, it is our opinion that the proposed excavation at Candlestick Point remains consistent with the approved EIR, will not generate any additional adverse environmental impacts nor necessitate any additional mitigation measures.

FEHR PEERS

February 18, 2016

Ms. Joy Navarette
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

Ms. Lila Hussain
Office of Community Investment and Infrastructure
One South Van Ness, 5th Floor
San Francisco, CA 94103

Cc: Therese Brekke, Lennar Urban
Chris O'Conner, Lennar Urban
Maria Pracher, Sheppard Mullin

Subject: Candlestick Point – Office to Local Serving Retail Conversion

Dear Joy and Lila,

The *Candlestick Point/Hunters Point Shipyard Phase II Project Final EIR* (herein referred to simply as "EIR") was certified by the San Francisco Planning Commission and the San Francisco Redevelopment Commission in June 2010. Since that time, the Housing/R&D Variant (Variant 2A) has been advanced as the project. Variant 2A assumed the Candlestick Point site would include:

- 150,000 square feet of office
- 6,225 residential dwelling units (includes replacement of 256 then-existing units at Alice Griffith)
- 635,000 square feet of regional retail
- 125,000 square feet of neighborhood-serving retail
- 220 room hotel
- 50,000 square feet of community-serving uses
- 10,000-seat arena

Since the Project has been approved, the project sponsor has proposed to replace 15,500 square feet of office with 6,000 square feet of local serving retail and replace the 10,000 seat arena with a 4,400 seat performing arts venue and a 1,200 seat theater. This letter assesses the effects of converting a portion of the approved land uses as it relates to loading demand. **Table 1** summarizes the loading demand calculations for daily and peak hour truck trips and **Table 2** compares the daily truck trip generation and peak hour loading demand.

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www.fehrandpeers.com

TABLE 1: CANDLESTICK POINT LOADING DEMAND				
Land Use	**Size**	**Daily Truck Trip Generation Rate[1]**	**Daily Truck Trips**	**Peak Hour Loading Space**
Regional Retail	635 ksf	0.22	140	9
Local Serving Retail	131 ksf	0.22	29	2
Office	134.5 ksf	0.21	29	2
Performing Arts Venue[2]	4,400 seats	0.22	8	1
Community Center	50 ksf	0.22	11	1
County Park[3]	97 acres	0.00	0	0
Hotel[4]	220 rooms	0.09	14	1
Residential Units[5]	6,225 dwelling units	0.03	234	14
Movie Theater[6]	1,200 seats	0.22	10	1
		Total	***475***	***31***

Notes:

1. Daily Truck Trip Generation Rates based on rates determined in the SF Guidelines. Rates based on 1,000 gross square feet of use.
2. Performing Arts Venue: 4,400 seats = 33 ksf
3. It was assumed that the County Park would not generate daily truck trips; therefore, was not included in this analysis.
4. Hotel: 220 rooms = 150 ksf
5. Residential Units: 6,225 dwelling units = 7,800 ksf
6. Movie Theater: 1,200 seats = 42 ksf

Fehr & Peers, 2015

TABLE 2: PROJECT LOADING DEMAND COMPARISON IN CANDLESTICK POINT [1]		
Scenario	**Daily Truck Trip Generation**	**Peak Hour Loading Space Demand**
Project Proposal (2010)[1]	507	29
Project Variant 2A[2]	448	25
Current Proposal	475	31

Notes:

1. Information based on EIR results presented in Table III.D-22 (2010).
2. Information based on Project Variant 2A Memorandum provided by LCW Consulting (March 2010).

Fehr & Peers, 2015

Daily and peak hour truck trip generation, summarized in Table 1, are based on rates and equations provided in the *SF Guidelines* and is consistent with the methodology used in the EIR. As shown in Table 1, the total daily and peak hour truck trips generated in Candlestick Point are estimated to be 475 and 31, respectively.

Impact TR-37 of the EIR states that loading operations would not result in a significant impact associated with a lack of adequate supply. Additionally, the EIR states that if the loading demand is not met on site and could not be accommodated within on-street loading zones, trucks would temporarily double-park and partially block local streets while loading and unloading goods which would result in disruptions and impacts to traffic and transit operations, as well as bicycles and pedestrians. However, because any effects of unmet loading demand would be a temporary inconvenience, any excess demand would not be significant.

As shown in Table 2, the estimated daily truck trip generation will decrease from the total estimated in the EIR and increase from Project Variant 2A. The peak hour loading space demand would slightly increase from the EIR and Project Variant 2A by 2 and 6 loading spaces, respectively. Neither the EIR nor Project Variant 2A included the Arena as part of the Candlestick Point loading demand calculations because Arena loading estimates were provided separate from the rest of the Project. Therefore, the slight increase in peak hour demand is a result of the inclusion of the revised land uses in Candlestick Point. The peak loading demand will likely be met on site, although trucks may temporarily double park for convenience, which would be a short-term inconvenience and would not be significant. Therefore, the Project's impacts related to loading operations would continue to be less than significant.

For questions or comments please contact Chris Mitchell or Sarah Nadiranto.

Sincerely,

FEHR & PEERS

Chris Mitchell, PE
Principal

Sarah Nadiranto, PE
Transportation Engineer

SF08-0407